Worcester Regional Airport
CAT-III Instrument Landing System and Taxiway Project

Environmental Notification Form

Prepared for
Massachusetts Port Authority
East Boston, Massachusetts

Prepared by
Vanasse Hangen Brustlin, Inc.
Watertown, Massachusetts

Jacobs
Boston, Massachusetts

January 15, 2014
This page intentionally left blank.
January 15, 2014

Secretary Richard K. Sullivan Jr.
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900,
Boston, Massachusetts 02114

Re: Worcester Regional Airport CAT-III Instrument Landing System and Taxiway Project

Dear Secretary Sullivan:

On behalf of the Massachusetts Port Authority (Massport), I am pleased to submit for your review the Environmental Notification Form (ENF) for the Worcester Regional Airport CAT-III Instrument Landing System and Taxiway Project.

Massport is proposing to upgrade the existing instrument landing system (ILS) capabilities and to construct a partial parallel taxiway at the Worcester Regional Airport (ORH) to enhance aviation safety and increase aeronautical access and the reliability of air service during low visibility weather conditions. The project would upgrade the existing Runway 11 Category I Precision Approach to a Category III (CAT III) Precision Approach. Currently when conditions at ORH restrict visibility to less than 1/4 of a mile, the airport is closed for landings. The proposed new CAT III ILS equipment and infrastructure upgrades would allow for aircraft to land on Runway 11 under virtually all weather conditions when the visibility conditions are below the current ceiling height of 200 feet and less than 1,800-foot runway visibility. The ENF describes the purpose of, and need for, the proposed upgrades, the alternatives considered, and the reasonably expected environmental impacts.

Massport requests that you agree to an extended 30-day public comment period for the ENF to begin on January 22, 2014, the publication date of the next Environmental Monitor, and to end on February 21, 2014. All parties on the distribution list will be sent a copy of the ENF. The ENF will be available for inspection at the Worcester Regional Airport as well as a number of public libraries (as shown on the ENF distribution list) and on Massport’s website (www.massport.com).

As we described in earlier discussions with your staff, the proposed improvements are also subject to review under the National Environmental Policy Act (NEPA). The Federal Aviation Administration (FAA) has determined that an Environmental Assessment (EA) will be prepared for the project and has recommended concurrent review under MEPA and NEPA. For that reason, the ENF includes a proposed scope for a joint EA/EIR for use by FAA and the MEPA Office in determining an appropriate scope for the joint document.

Massport hopes that you and other reviewers of the ENF find the document informative. We look forward to your review of this document and to close consultation with you and other reviewers in the coming weeks.
In coordination with your staff, a public consultation session is scheduled with the MEPA Office for 6:00 p.m. on Thursday, February 6, 2014, in the Board Room at Worcester Regional Airport, 375 Airport Drive, Worcester, to receive comments on the project. FAA has informed Massport that it will also attend that meeting in support of determining the scope for a combined federal and state Environmental Assessment/Environmental Impact Report (EA/EIR).

Please feel free to contact me at (617) 568-3524 or at sdalzell@massport.com if you have any questions.

Sincerely,

Massachusetts Port Authority

[Signature]

Stewart Dalzell, Deputy Director
Economic Planning and Development

Enclosures

CC: R. Doucette/FAA
    A. Davis, R. Leger, F. Leo/Massport
    L. Standley/VHB
Environmental Notification Form

For Office Use Only
EEA#: _______________________
MEPA Analyst: ________________

The information requested on this form must be completed in order to submit a document electronically for review under the Massachusetts Environmental Policy Act, 301 CMR 11.00.

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>Worcester Regional Airport CAT III ILS and Taxiway Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street Address:</td>
<td>375 Airport Drive, Worcester</td>
</tr>
<tr>
<td>Municipality:</td>
<td>Worcester/Leicester</td>
</tr>
<tr>
<td>Watershed:</td>
<td>Blackstone</td>
</tr>
<tr>
<td>Universal Transverse Mercator Coordinates:</td>
<td>261537 E 4683548 N</td>
</tr>
<tr>
<td>Latitude:</td>
<td>42.2677</td>
</tr>
<tr>
<td>Longitude:</td>
<td>-71.8914</td>
</tr>
<tr>
<td>Estimated commencement date:</td>
<td>2015</td>
</tr>
<tr>
<td>Estimated completion date:</td>
<td>2017</td>
</tr>
<tr>
<td>Project Type:</td>
<td>Airport Improvement</td>
</tr>
<tr>
<td>Status of project design:</td>
<td>5% complete</td>
</tr>
<tr>
<td>Proponent:</td>
<td>Massachusetts Port Authority (Massport)</td>
</tr>
<tr>
<td>Street Address:</td>
<td>One Harborside Drive, 200F</td>
</tr>
<tr>
<td>Municipality:</td>
<td>Boston</td>
</tr>
<tr>
<td>State:</td>
<td>MA</td>
</tr>
<tr>
<td>Zip Code:</td>
<td>02128</td>
</tr>
<tr>
<td>Name of Contact Person:</td>
<td>Stewart Dalzell</td>
</tr>
<tr>
<td>Firm/Agency:</td>
<td>Massport</td>
</tr>
<tr>
<td>Street Address:</td>
<td>One Harborside Drive</td>
</tr>
<tr>
<td>Municipality:</td>
<td>Boston</td>
</tr>
<tr>
<td>State:</td>
<td>MA</td>
</tr>
<tr>
<td>Zip Code:</td>
<td>02128</td>
</tr>
<tr>
<td>Phone:</td>
<td>617-568-3524</td>
</tr>
<tr>
<td>Fax:</td>
<td></td>
</tr>
<tr>
<td>E-mail:</td>
<td><a href="mailto:sdalzell@massport.com">sdalzell@massport.com</a></td>
</tr>
</tbody>
</table>

Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?

- [ ] Yes  [x] No

POSSIBLE—FILL SLOPE ALTERNATIVE WOULD REQUIRE A VARIANCE; RETAINING WALL OPTION MAY NOT

If this is an Expanded Environmental Notification Form (ENF) (see 301 CMR 11.05(7)) or a Notice of Project Change (NPC), are you requesting:

- [ ] a Single EIR? (see 301 CMR 11.06(8))  [x] Yes  [x] No
- [ ] a Special Review Procedure? (see 301CMR 11.09)  [x] Yes  [x] No
- [ ] a Waiver of mandatory EIR? (see 301 CMR 11.11)  [x] Yes  [x] No
- [ ] a Phase I Waiver? (see 301 CMR 11.11)  [x] Yes  [x] No

(Note: Greenhouse Gas Emissions analysis must be included in the Expanded ENF.)

Which MEPA review threshold(s) does the project meet or exceed (see 301 CMR 11.03)?

The proposed project is undertaken by a state agency, would alter more than 2 acres of priority habitat of state-listed species, and may require a variance under the Wetlands Protection Act.

Which State Agency Permits will the project require?
Order of Conditions (Leicester Conservation Commission/MassDEP)
401 Water Quality Certification (MassDEP)
Conservation and Management Permit (NHESP)—to be determined

Identify any financial assistance or land transfer from an Agency of the Commonwealth, including the Agency name and the amount of funding or land area in acres:
Project will be funded by Massport
### Summary of Project Size & Environmental Impacts

<table>
<thead>
<tr>
<th></th>
<th>Existing</th>
<th>Change</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LAND</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total site acreage (entire airport)</td>
<td>964.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New acres of land altered</td>
<td></td>
<td>11.7</td>
<td></td>
</tr>
<tr>
<td>Acres of impervious area (project area)</td>
<td>16.9</td>
<td>2.2</td>
<td>19.1</td>
</tr>
<tr>
<td>Square feet of new bordering vegetated wetlands alteration</td>
<td></td>
<td>100 sf to 29,255 sf (range of impacts for two alternatives)</td>
<td></td>
</tr>
<tr>
<td>Square feet of new other wetland alteration</td>
<td></td>
<td>Riverfront Area: Temporary: 2,700 sf Permanent: 100 sf</td>
<td></td>
</tr>
<tr>
<td>Acres of new non-water dependent use of tidelands or waterways</td>
<td></td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>STRUCTURES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross square footage</td>
<td>150</td>
<td>1,680</td>
<td>1,830</td>
</tr>
<tr>
<td>Number of housing units</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Maximum height (feet)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>TRANSPORTATION</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vehicle trips per day</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Parking spaces</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>WASTEWATER</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Use (Gallons per day)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Water withdrawal (GPD)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Wastewater generation/treatment (GPD)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Length of water mains (miles)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Length of sewer mains (miles)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Has this project been filed with MEPA before?  
☑ Yes (EEA # 7845, 6873) ☐ No

Has any project on this site been filed with MEPA before?  
☑ Yes (EEA # 13330, 7845, 6873, 6419, 3111, 2574, 1655, 851) ☐ No
The Massachusetts Port Authority (Massport) proposes to upgrade the existing instrument landing system (ILS) capabilities at the Worcester Regional Airport (ORH) to enhance aviation safety and increase aeronautical access and the reliability of air service during low visibility weather conditions. The project would upgrade the existing Runway 11 Category I Precision Approach to a Category III (CAT III) Precision Approach. Currently, when conditions at ORH restrict visibility to less than 1/4 of a mile, the airport is unavailable for landings. The proposed new CAT III ILS equipment and infrastructure upgrades would allow for aircraft to land on Runway 11 during virtually all weather conditions.

To implement these upgrades, Massport proposes to install additional ILS equipment and a new partial parallel taxiway. The existing ILS towers extend approximately 2,400 feet west of Runway 11 and are at 200-foot intervals. The new CAT III ILS equipment would not lengthen the light tower array; rather, it would upgrade the existing towers and add approximately 12 new light towers between the existing light towers, at 100-foot intervals. Additional CAT III Navigational Aid improvements will include a midpoint Runway Visibility Range monitor (RVR), an upgrade (or replacement) to the Runway 11 localizer platform, and installation of buried conduits for power and communications. Massport also proposes to construct a support building with a backup generator for an Approach Light System with Sequenced Flashing Lights (ALSF-2) and Precision Approach Path Indicators (PAPI) located at the 1,000-foot bar on Runway 11. In addition to the ILS upgrades, current Federal Aviation Administration (FAA) standards require a parallel taxiway for any runway approved for CAT III operations. The CAT I approaches at ORH are not currently served by a parallel taxiway. With a proposed upgrade to a CAT III approach, the FAA is requiring that some form of parallel taxiway be constructed.

In consideration of environmental factors, costs, and current and projected aircraft activity levels, the Massport/FAA Study Team has proposed to construct a partial parallel taxiway that would meet their safety and design requirements for the foreseeable future. Accordingly, in addition to the ILS upgrades, and based on review of a range of alternatives for the parallel taxiway, Massport proposes to construct a partial taxiway approximately 1,000 feet in length on the north side of the Runway 11 end. FAA and Massport are evaluating opportunities to implement some of the ILS improvements that would have immediate safety benefits and independent utility, prior to taxiway construction. These would include equipment that may have little or no adverse environmental impacts and would not, taken individually or collectively, exceed any MEPA review thresholds.

The proposed project is subject to MEPA review because it is undertaken by a state agency, would potentially alter more than two acres of priority habitat of state-listed rare species, and may require a variance under the Massachusetts Wetlands Protection Act. If a variance is not required, the project would not automatically require an Environmental Impact Report (EIR). The Secretary may require other MEPA review if the Natural Heritage and Endangered Species Program determines that the project will result in a take of a state-listed endangered or threatened species or species of special concern. The proposed project also requires approval by the FAA and therefore requires review under the National Environmental Policy Act (NEPA). This ENF describes the proposed project, the alternatives evaluated, and the potential impacts and permit requirements. A proposed scope for a combined Environmental Assessment (EA) and EIR is also included. Massport anticipates that a single document would be prepared to satisfy the requirements of both NEPA and MEPA. The proposed EA/EIR scope is contained in Attachment D.

A similar project was previously reviewed by MEPA (EEA #6873 and 7845) and FAA. The MEPA Certificate on the Final Supplemental EIR was issued on January 29, 1996. The FAA Record of Decision on a re-evaluation of the Final Environmental Impact Statement was issued on August 5, 1999. The project proposed in the FSEIR/FSEIS included a CAT III ILS system and a full parallel taxiway, among other airport improvements. The parallel taxiway was anticipated to be constructed in two phases: Phase 1 was a short aircraft holding apron at the Runway 11 end, and Phase 2 was a full parallel taxiway which would have resulted in 3.7 acres of wetland loss. Massport is initiating a new MEPA/NEPA review at this time due to the lapse of time and changes in the project.
EXISTING CONDITIONS

The proposed ILS and taxiway improvements would be constructed within the portion of the Airport that is in the Town of Leicester, although some new or upgraded Navigational Aids would be located in Worcester. Key environmental considerations include wetlands, the drinking water supply watershed, state-listed species, and construction impacts. ORH was constructed in 1944 (opened in 1946) on top of Stonehouse Hill in Worcester and Little Asnebumskit Hill in Leicester, spanning the Lynde Brook valley. Runway 11-29 was constructed on fill, as much as 100 feet above the valley, and was extended in the 1960s. The current terminal was completed in 1994. As recently as 1988, annual operations at ORH averaged over 130,000, with commercial air service using older noiser and higher-emitting aircraft than are in the current fleet. Lynde Brook, which connects the City of Worcester’s Kettle Brook Reservoirs with the Lynde Brook Reservoir, is now culverted under Runway 11-29. Wetlands and floodplains are present on both sides of the runway, at the bottom of the slope. All of the wetlands and waterways are designated by the Massachusetts Department of Environmental Protection (MassDEP) as Class A Outstanding Resource Waters associated with the public drinking water supply. The airfield is habitat for state-listed grassland bird species.

ALTERNATIVES EVALUATED

The range of project alternatives evaluated by FAA and Massport is summarized below.

Approach Light System
Twelve new light towers would need to be installed between the existing light towers. While there are no alternatives to the location and spacing of the light towers, Massport will evaluate construction alternatives to minimize impacts to wetland resources from the new towers and access connections.

Parallel Taxiway
Using FAA design guidelines, Massport has undertaken several feasibility studies to evaluate parallel taxiway alternatives, including locational alternatives (north or south of the runway, in close proximity, or separated “cross-country”); construction alternatives (conventional fill or retaining walls); and design alternatives. The initial design alternatives included either a 50-foot-wide or 75-foot-wide taxiway with either a 400-foot or 500-foot separation between the runway and taxiway centerlines. The initial study evaluated a “full parallel” taxiway segment extending the entire length of Runway 11-29, as well as a partial taxiway extending from Taxiway Delta to the Runway 11 end. The estimated wetland impacts ranged from 1 acre (single retaining wall) to 21 acres (cross-country), with floodplain impacts ranging from 0 to 19 acres and rare species habitat impacts ranging from 11 to 39 acres. The amount of fill material needed ranged from less than 1 million cubic yards to more than 3 million cubic yards, and costs of taxiway construction ranged from $22 million to $52 million. Massport also evaluated options for a pile-supported concrete taxiway deck to minimize the placement of fill in wetlands; however, the estimated costs for the deck-supported options were approximately an order of magnitude higher than for the fill options, and these options did not fully avoid wetland impacts. The southern alternatives were eliminated because a southern taxiway would require aircraft to cross the active runway, again without the benefit of substantially minimizing resource impacts. The 75-foot taxiway widths, the 500-foot centerline separation alternatives, and the two cross-country alternatives were eliminated due to their greater potential environmental effects and costs. Three partial taxiway alternatives were retained for further study, and were subsequently dismissed because of cost and wetland and habitat impacts. FAA supports a modification to standards to allow a taxiway design based on projected levels of operations and aircraft types over the next 10 to 15 years.

Prior analysis demonstrated that partial and full taxiways on either the north or south sides are not practicable, have greater environmental impacts, or are not warranted based on the level of aircraft operations. Shorter “jug handle” or “hammerhead” taxiways were developed to reduce wetland impacts, reduce the amount of fill material required, and reduce construction cost. Massport proposes to evaluate a 1,000-foot-long jug handle taxiway on the north side of Runway 11-29. In the EA/EIR, Massport will evaluate further design and construction refinements to avoid and minimize adverse effects to wetlands and rare species habitat, and to minimize construction-period impacts.
AREAS OF CRITICAL ENVIRONMENTAL CONCERN:

Is the project within or adjacent to an Area of Critical Environmental Concern?
☐ Yes (Specify _____________________________) ☐ No
If yes, does the ACEC have an approved Resource Management Plan? ☐ Yes ☐ No;
If yes, describe how the project complies with this plan.
Will there be stormwater runoff or discharge to the designated ACEC? ☐ Yes ☐ No;
If yes, describe and assess the potential impacts of such stormwater runoff/discharge to the designated ACEC. _______________________________________________

RARE SPECIES:

Does the project site include Estimated and/or Priority Habitat of State-Listed Rare Species? (see http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/priority_habitat/priority_habitat_home.htm) ☒ Yes (Specify: PH.373) ☐ No

HISTORICAL /ARCHAEOLOGICAL RESOURCES:

Does the project site include any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?
☐ Yes (Specify__________________________) ☐ No
If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources? ☐ Yes (Specify__________________________) ☐ No

WATER RESOURCES:

Is there an Outstanding Resource Water (ORW) on or within a half-mile radius of the project site?
☒ Yes ☐ No; if yes, identify the ORW and its location.

(Note: Outstanding Resource Waters include Class A public water supplies, their tributaries, and bordering wetlands; active and inactive reservoirs approved by MassDEP; certain waters within Areas of Critical Environmental Concern, and certified vernal pools. Outstanding resource waters are listed in the Surface Water Quality Standards, 314 CMR 4.00.)

The project site is within ORWs for Lynde Brook Reservoir and Kettle Brook Reservoir No. 1, both of which are elements of the City of Worcester Public Water supply.

Are there any impaired water bodies on or within a half-mile radius of the project site? ☐ Yes ☒ No; if yes, identify the water body and pollutant(s) causing the impairment: ________________________.

Is the project within a medium or high stress basin, as established by the Massachusetts Water Resources Commission? ☐ Yes ☒ No

STORMWATER MANAGEMENT:

Generally describe the project's stormwater impacts and measures that the project will take to comply with the standards found in MassDEP's Stormwater Management Regulations:

The project will result in approximately 2.2 acres of additional impervious surface for the taxiway improvements. The project design will include measures to comply with the Stormwater Regulations.

MASSACHUSETTS CONTINGENCY PLAN:
Has the project site been, or is it currently being, regulated under M.G.L.c.21E or the Massachusetts Contingency Plan? ☐ Yes ☒ No; if yes, please describe the current status of the site (including Release Tracking Number (RTN), cleanup phase, and Response Action Outcome classification):

Is there an Activity and Use Limitation (AUL) on any portion of the project site? ☐ Yes ☒ No; if yes, describe which portion of the site and how the project will be consistent with the AUL:
Are you aware of any Reportable Conditions at the property that have not yet been assigned an RTN? □Yes ☒No; if yes, please describe:____________________________________

SOLID AND HAZARDOUS WASTE:
If the project will generate solid waste during demolition or construction, describe alternatives considered for re-use, recycling, and disposal of, e.g., asphalt, brick, concrete, gypsum, metal, wood:

The proposed project is not anticipated to generate solid waste unless pavement is removed. This is anticipated to result in a minor amount of excess pavement. Any unsuitable earth excavated from the project area is anticipated to be retained on-site.

NOTE: Asphalt pavement, brick, concrete and metal are banned from disposal at Massachusetts landfills and waste combustion facilities and wood is banned from disposal at Massachusetts landfills. See 310 CMR 19.017 for the complete list of banned materials.)

Will your project disturb asbestos containing materials? □Yes ☒No; if yes, please consult state asbestos requirements at http://mass.gov/MassDEP/air/asbhom01.htm

Describe anti-idling and other measures to limit emissions from construction equipment:

Construction contractors would be required to adhere to all applicable regulations regarding control of construction vehicle emissions. Construction specifications would require that all diesel construction equipment used on-site would be fitted with after-engine emissions controls, and contractors would be required to utilize ultra-low sulfur diesel fuel and minimize idling time.

DESIGNATED WILD AND SCENIC RIVER:

Is this project site located wholly or partially within a defined river corridor of a federally designated Wild and Scenic River or a state designated Scenic River? □Yes ☒No; if yes, specify name of river and designation:

If yes, does the project have the potential to impact any of the “outstandingly remarkable” resources of a federally Wild and Scenic River or the stated purpose of a state designated Scenic River? □Yes ☒No; if yes, specify name of river and designation: _____________;

if yes, will the project result in any impacts to any of the designated “outstandingly remarkable” resources of the Wild and Scenic River or the stated purposes of a Scenic River? □Yes ☒No; if yes, describe the potential impacts to one or more of the “outstandingly remarkable” resources or stated purposes and mitigation measures proposed.

ATTACHMENTS:

1. List of all attachments to this document.
2. U.S.G.S. map (good quality color copy, 8-½ x 11 inches or larger, at a scale of 1:24,000) indicating the project location and boundaries.
3. Plan, at an appropriate scale, of existing conditions on the project site and its immediate environs, showing all known structures, roadways and parking lots, railroad rights-of-way, wetlands and water bodies, wooded areas, farmland, steep slopes, public open spaces, and major utilities.
4. Plan, at an appropriate scale, depicting environmental constraints on or adjacent to the project site such as Priority and/or Estimated Habitat of state-listed rare species, Areas of Critical Environmental Concern, Chapter 91 jurisdictional areas, Article 97 lands, wetland resource area delineations, water supply protection areas, and historic resources and/or districts.
5. Plan, at an appropriate scale, of proposed conditions upon completion of project (if construction of the project is proposed to be phased, there should be a site plan showing conditions upon the completion of each phase).
6. List of all agencies and persons to whom the proponent circulated the ENF, in accordance with 301 CMR 11.16(2).
7. List of municipal and federal permits and reviews required by the project, as applicable.
**LAND SECTION** – all proponents must fill out this section

I. Thresholds / Permits
   A. Does the project meet or exceed any review thresholds related to land (see 301 CMR 11.03(1))
      □ Yes □ No; if yes, specify each threshold:

II. Impacts and Permits
   A. Describe, in acres, the current and proposed character of the project site, as follows:

<table>
<thead>
<tr>
<th></th>
<th>Existing</th>
<th>Change</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Footprint of buildings</td>
<td>0.003</td>
<td>0.039</td>
<td>0.042</td>
</tr>
<tr>
<td>Internal roadways (gravel)</td>
<td>0</td>
<td>0.15</td>
<td>0.15</td>
</tr>
<tr>
<td>Parking and other paved areas in the immediate vicinity of the runway end</td>
<td>14.6</td>
<td>2.2</td>
<td>16.8</td>
</tr>
<tr>
<td>Other altered areas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Existing EMAS bed</td>
<td>2.3</td>
<td>0</td>
<td>2.3</td>
</tr>
<tr>
<td>Proposed Retaining Wall</td>
<td>0</td>
<td>9.5</td>
<td>9.5</td>
</tr>
<tr>
<td>Undeveloped areas (entire airport)</td>
<td>947.6</td>
<td>-11.9</td>
<td>935.7</td>
</tr>
<tr>
<td><strong>Total: Airport Acreage</strong></td>
<td>964.5</td>
<td>0</td>
<td>964.5</td>
</tr>
</tbody>
</table>

B. Has any part of the project site been in active agricultural use in the last five years?
   □ Yes □ No; if yes, how many acres of land in agricultural use (with prime state or locally important agricultural soils) will be converted to nonagricultural use?

C. Is any part of the project site currently or proposed to be in active forestry use?
   □ Yes □ No; if yes, please describe current and proposed forestry activities and indicate whether any part of the site is the subject of a forest management plan approved by the Department of Conservation and Recreation:

D. Does any part of the project involve conversion of land held for natural resources purposes in accordance with Article 97 of the Amendments to the Constitution of the Commonwealth to any purpose not in accordance with Article 97? □ Yes □ No; if yes, describe:

E. Is any part of the project site currently subject to a conservation restriction, preservation restriction, agricultural preservation restriction or watershed preservation restriction?
   □ Yes □ No; if yes, does the project involve the release or modification of such restriction?
   □ Yes □ No; if yes, describe:

F. Does the project require approval of a new urban redevelopment project or a fundamental change in an existing urban redevelopment project under M.G.L.c.121A? □ Yes □ No; if yes, describe:

G. Does the project require approval of a new urban renewal plan or a major modification of an existing urban renewal plan under M.G.L.c.121B? □ Yes □ No; if yes, describe:

III. Consistency
   A. Identify the current municipal comprehensive land use plan
      Title: Town of Leicester Master Plan  
      Date: 2009  
      (No City of Worcester Master Plan available)

   B. Describe the project’s consistency with that plan with regard to:
      1) **economic development**: Worcester Regional Airport (ORH) is identified in the Leicester Master Plan as a facility that has potential to generate economic development for Leicester.
      2) **adequacy of infrastructure**: ORH is expected to operate as an active corporate/general aviation airport with commercial airline activity targeted to business and leisure markets.
3) **open space impacts**: The project will be built within existing areas utilized by airport operations; no open space impacts are anticipated.

4) **compatibility with adjacent land uses**: The Master Plan identifies surrounding land uses as “suburban agriculture.”

C. **Identify the current Regional Policy Plan of the applicable Regional Planning Agency (RPA)**

**RPA**: Central Massachusetts Regional Planning Commission

**Title**: Greater Worcester Area Comprehensive Economic Development Strategy (CEDS)

**Date**: 2012

D. **Describe the project’s consistency with that plan with regard to:**

1) **economic development**: Worcester Regional Airport is identified within the CEDS as a regional economic development project that will support economic growth and provide general, corporate, and private aviation services in the region. The CEDS aims to fulfill the region’s economic potential by building on its existing transportation network.

2) **adequacy of infrastructure**: Worcester Regional Airport is identified within the CEDS as an important part of the transportation infrastructure within the region.

3) **open space impacts**: N/A (This CEDS does not have an open space component.)
RARE SPECIES SECTION

I. Thresholds / Permits
   A. Will the project meet or exceed any review thresholds related to rare species or habitat (see 301 CMR 11.03(2))?  ☑ Yes ☐ No; if yes, specify, in quantitative terms: Greater than 2 acres of grasslands disturbance.

   (NOTE: If you are uncertain, it is recommended that you consult with the Natural Heritage and Endangered Species Program (NHESP) prior to submitting the ENF.)

   B. Does the project require any state permits related to rare species or habitat?
      ☑ Yes ☐ No

   C. Does the project site fall within mapped rare species habitat (Priority or Estimated Habitat?) in the current Massachusetts Natural Heritage Atlas (attach relevant page)?  ☑ Yes ☐ No.

   D. If you answered "No" to all questions A, B and C, proceed to the Wetlands, Waterways, and Tidelands Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Rare Species section below.

II. Impacts and Permits
   A. Does the project site fall within Priority or Estimated Habitat in the current Massachusetts Natural Heritage Atlas (attach relevant page)?  ☑ Yes ☐ No. If yes,

      1. Have you consulted with the Division of Fisheries and Wildlife Natural Heritage and Endangered Species Program (NHESP)?  ☑ Yes ☐ No; if yes, have you received a determination as to whether the project will result in the “take” of a rare species?  ☑ Yes ☐ No; if yes, attach the letter of determination to this submission.

      2. Will the project "take" an endangered, threatened, and/or species of special concern in accordance with M.G.L. c.131A (see also 321 CMR 10.04)?  ☐ Yes ☑ No; if yes, provide a summary of proposed measures to minimize and mitigate rare species impacts.

      To be determined. During design, Massport will work with NHESP to minimize impacts to habitat for the listed species to the extent compatible with airport Wildlife Hazard rules. The project will strive to balance or add grasslands for no net loss by removing existing pavement or converting existing vegetated areas to grassland.

      3. Which rare species are known to occur within the Priority or Estimated Habitat?

         Grasshopper Sparrow (Ammodramus savannarum)

      4. Has the site been surveyed for rare species in accordance with the Massachusetts Endangered Species Act?  ☑ Yes ☐ No

      5. If your project is within Estimated Habitat, have you filed a Notice of Intent or received an Order of Conditions for this project?  ☑ Yes ☐ No; if yes, did you send a copy of the Notice of Intent to the Natural Heritage and Endangered Species Program, in accordance with the Wetlands Protection Act regulations?  ☐ Yes ☑ No
B. Will the project "take" an endangered, threatened, and/or species of special concern in accordance with M.G.L. c.131A (see also 321 CMR 10.04)? ☐ Yes ☐ No; if yes, provide a summary of proposed measures to minimize and mitigate impacts to significant habitat:

To be determined. During design, Massport will work with NHESP to minimize impacts to habitat and to improve habitat quality for the listed species to the extent compatible with airport Wildlife Hazard rules. The project would not alter any designated Significant Habitat.
WETLANDS, WATERWAYS, AND TIDELANDS SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to wetlands, waterways, and tidelands (see 301 CMR 11.03(3))? ☑Yes ☐No; if yes, specify, in quantitative terms:

310 CMR 11.03(3)(a)2. Alteration requiring a variance in accordance with the Wetlands Protection Act. (To be determined—the project may require a variance.)

310 CMR 11.03(3)(b)d. Alteration of 5,000 or more sf of bordering vegetated wetlands. (Fill slope alternative would result in greater than 5,000 sf of alteration within bordering vegetated wetlands.)

B. Does the project require any state permits (or a local Order of Conditions) related to wetlands, waterways, or tidelands? ☑Yes ☐No; if yes, specify which permit:

Local Order of Conditions (Town of Leicester); Water Quality Certificate

C. If you answered "No" to both questions A and B, proceed to the Water Supply Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Wetlands, Waterways, and Tidelands Section below.

II. Wetlands Impacts and Permits

A. Does the project require a new or amended Order of Conditions under the Wetlands Protection Act (M.G.L. c.131A)? ☑Yes ☐No; if yes, has a Notice of Intent been filed? ☑Yes ☐No; if yes, list the date and MassDEP file number: ;

if yes, has a local Order of Conditions been issued? ☑Yes ☐No; Was the Order of Conditions appealed? ☑Yes ☐No.

Will the project require a Variance from the Wetlands regulations? ☑Yes ☐No.

To be determined—the project may require a Variance.

B. Describe any proposed permanent or temporary impacts to wetland resource areas located on the project site:

The jug handle taxiway with a retaining wall would result in reduced impacts to vegetated wetlands compared to the traditional slope fill alternative. The table below summarizes the expected temporary and permanent wetland impacts for each alternative.

<table>
<thead>
<tr>
<th>Estimated Temporary and Permanent Wetland Impacts (square feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cat III Lights</td>
</tr>
<tr>
<td>Taxiway and Fill Slope</td>
</tr>
<tr>
<td>Taxiway and Retaining Wall</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
C. Estimate the extent and type of impact that the project will have on wetland resources, and indicate whether the impacts are temporary or permanent:

<table>
<thead>
<tr>
<th>Coastal Wetlands</th>
<th>Area (square feet) or Length (linear feet)</th>
<th>Temporary or Permanent Impact?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Under the Ocean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Designated Port Areas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coastal Beaches</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coastal Dunes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barrier Beaches</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coastal Banks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rocky Intertidal Shores</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salt Marshes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land Under Salt Ponds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land Containing Shellfish</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish Runs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land Subject to Coastal Storm Flowage</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NO TEMPORARY OR PERMANENT IMPACTS TO COASTAL WETLANDS

<table>
<thead>
<tr>
<th>Inland Wetlands</th>
<th>Bank (lf)</th>
<th>Bordering Vegetated Wetlands</th>
<th>Isolated Vegetated Wetlands</th>
<th>Land under Water</th>
<th>Isolated Land Subject to Flooding</th>
<th>Bordering Land Subject to Flooding</th>
<th>Riverfront Area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>see table</td>
<td>see table</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>see table</td>
</tr>
</tbody>
</table>

D. Is any part of the project:
1. proposed as a limited project? □ Yes ☐ No; if yes, what is the area (in sf)?
2. the construction or alteration of a dam? □ Yes ☐ No; if yes, describe:
3. fill or structure in a velocity zone or regulatory floodway? □ Yes ☐ No
4. dredging or disposal of dredged material? □ Yes ☐ No; if yes, describe the volume of dredged material and the proposed disposal site:
5. a discharge to an Outstanding Resource Water (ORW) or an Area of Critical Environmental Concern (ACEC)? □ Yes ☐ No
6. subject to a wetlands restriction order? □ Yes ☐ No;
   if yes, identify the area (in sf):
7. located in buffer zones? □ Yes ☐ No; if yes, how much (in sf)

Retaining Wall 19,471 permanent; 11,511 temporary
Traditional Fill Slope 68,987 permanent; 6,085 temporary
Navigational Aids 5,994 permanent; 11,246 temporary

E. Will the project:
1. be subject to a local wetlands ordinance or bylaw? □ Yes ☐ No
2. alter any federally-protected wetlands not regulated under state law? □ Yes ☐ No;
   if yes, what is the area (sf)?
III. Waterways and Tidelands Impacts and Permits

A. Does the project site contain waterways or tidelands (including filled former tidelands) that are subject to the Waterways Act, M.G.L.c.91? ☐ Yes ☐ No;
if yes, is there a current Chapter 91 License or Permit affecting the project site? ☐ Yes ☐ No; if yes, list the date and license or permit number and provide a copy of the historic map used to determine extent of filled tidelands:

B. Does the project require a new or modified license or permit under M.G.L.c.91? ☐ Yes ☐ No; if yes, how many acres of the project site subject to M.G.L.c.91 will be for non-water-dependent use? Current ___ Change ___ Total ___
If yes, how many square feet of solid fill or pile-supported structures (in sf)?

C. For non-water-dependent use projects, indicate the following:
Area of filled tidelands on the site:_______________
Area of filled tidelands covered by buildings:_____________
For portions of site on filled tidelands, list ground floor uses and area of each use:

Does the project include new non-water-dependent uses located over flowed tidelands? ☐ Yes ☐ No
Height of building on filled tidelands_____________

Also show the following on a site plan: Mean High Water, Mean Low Water, Water-dependent Use Zone, location of uses within buildings on tidelands, and interior and exterior areas and facilities dedicated for public use, and historic high and historic low water marks.

D. Is the project located on landlocked tidelands? ☐ Yes ☐ No; if yes, describe the project’s impact on the public’s right to access, use and enjoy jurisdictional tidelands and describe measures the project will implement to avoid, minimize or mitigate any adverse impact:

E. Is the project located in an area where low groundwater levels have been identified by a municipality or by a state or federal agency as a threat to building foundations? ☐ Yes ☐ No; if yes, describe the project's impact on groundwater levels and describe measures the project will implement to avoid, minimize or mitigate any adverse impact:

F. Is the project non-water-dependent and located on landlocked tidelands or waterways or tidelands subject to the Waterways Act and subject to a mandatory EIR? ☐ Yes ☐ No;

(Note: If yes, then the project will be subject to Public Benefit Review and Determination.)

G. Does the project include dredging? ☐ Yes ☐ No; if yes, answer the following questions:
What type of dredging? Improvement ___ Maintenance ___ Both ___
What is the proposed dredge volume, in cubic yards (cys) ___________
What is the proposed dredge footprint ___length (ft) ___width (ft) ___depth (ft);
Will dredging impact the following resource areas?
Intertidal ☐ Yes ☐ No; if yes, ___ sq ft
Outstanding Resource Waters ☐ Yes ☐ No; if yes, ___ sq ft
Other resource area (i.e. shellfish beds, eel grass beds) ☐ Yes ☐ No;
if yes, ___ sq ft
If yes to any of the above, have you evaluated appropriate and practicable steps to: 1) avoidance; 2) if avoidance is not possible, minimization; 3) if either avoidance or minimize is not possible, mitigation?
If no to any of the above, what information or documentation was used to support this determination?
Provide a comprehensive analysis of practicable alternatives for improvement dredging in accordance with 314 CMR 9.07(1)(b). Physical and chemical data of the sediment shall be included in the comprehensive analysis.

**Sediment Characterization**
- Existing gradation analysis results?  
  - [ ] Yes  
  - [ ] No: if yes, provide results.
- Existing chemical results for parameters listed in 314 CMR 9.07(2)(b)?  
  - [ ] Yes  
  - [ ] No: if yes, provide results.

Do you have sufficient information to evaluate feasibility of the following management options for dredged sediment? If yes, check the appropriate option.

- Beach Nourishment ___
- Unconfined Ocean Disposal ___
- Confined Disposal:
  - Confined Aquatic Disposal (CAD) ___
  - Confined Disposal Facility (CDF) ___
- Landfill Reuse in accordance with COMM-97-001 ___
- Shoreline Placement ___
- Upland Material Reuse____
- In-State landfill disposal____
- Out-of-state landfill disposal ____

*(NOTE: This information is required for a 401 Water Quality Certification.)*

**IV. Consistency:**

A. Does the project have effects on the coastal resources or uses, and/or is the project located within the Coastal Zone?  
  - [ ] Yes  
  - [ ] No; if yes, describe these effects and the projects consistency with the policies of the Office of Coastal Zone Management:

B. Is the project located within an area subject to a Municipal Harbor Plan?  
  - [ ] Yes  
  - [ ] No; if yes, identify the Municipal Harbor Plan and describe the project's consistency with that plan:
WATER SUPPLY SECTION

I. Thresholds / Permits
   A. Will the project meet or exceed any review thresholds related to water supply (see 301 CMR 11.03(4))? ☐Yes ☐No; if yes, specify, in quantitative terms:

   B. Does the project require any state permits related to water supply? ☐Yes ☐No; if yes, specify which permit:

   C. If you answered "No" to both questions A and B, proceed to the Wastewater Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Water Supply Section below.

II. Impacts and Permits
   A. Describe, in gallons per day (gpd), the volume and source of water use for existing and proposed activities at the project site:

<table>
<thead>
<tr>
<th>Existing</th>
<th>Change</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipal or regional water supply</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Withdrawal from groundwater</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Withdrawal from surface water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interbasin transfer</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(NOTE: Interbasin Transfer approval will be required if the basin and community where the proposed water supply source is located is different from the basin and community where the wastewater from the source will be discharged.)

   B. If the source is a municipal or regional supply, has the municipality or region indicated that there is adequate capacity in the system to accommodate the project? ☐Yes ☐No

   C. If the project involves a new or expanded withdrawal from a groundwater or surface water source, has a pumping test been conducted? ☐Yes ☐No; if yes, attach a map of the drilling sites and a summary of the alternatives considered and the results. ________________

   D. What is the currently permitted withdrawal at the proposed water supply source (in gallons per day)? _____Will the project require an increase in that withdrawal? ☐Yes ☐No; if yes, then how much of an increase (gpd)? __________________

   E. Does the project site currently contain a water supply well, a drinking water treatment facility, water main, or other water supply facility, or will the project involve construction of a new facility? ☐Yes ☐No. If yes, describe existing and proposed water supply facilities at the project site:

<table>
<thead>
<tr>
<th>Permitted Flow</th>
<th>Existing Avg Daily Flow</th>
<th>Project Flow</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity of water supply well(s) (gpd)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity of water treatment plant (gpd)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   F. If the project involves a new interbasin transfer of water, which basins are involved, what is the direction of the transfer, and is the interbasin transfer existing or proposed?

   G. Does the project involve:
      1. new water service by the Massachusetts Water Resources Authority or other agency of the Commonwealth to a municipality or water district? ☐Yes ☐No
2. a Watershed Protection Act variance?  □ Yes □ No; if yes, how many acres of alteration?
3. a non-bridged stream crossing 1,000 or less feet upstream of a public surface drinking water supply for purpose of forest harvesting activities?  □ Yes □ No

III. Consistency
Describe the project’s consistency with water conservation plans or other plans to enhance water resources, quality, facilities and services:
WASTEWATER SECTION

I. Thresholds / Permits
   A. Will the project meet or exceed any review thresholds related to wastewater (see 301 CMR 11.03(5))? □ Yes □ No; if yes, specify, in quantitative terms:

   B. Does the project require any state permits related to wastewater? □ Yes □ No; if yes, specify which permit:

   C. If you answered "No" to both questions A and B, proceed to the Transportation—Traffic Generation Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Wastewater Section below.

II. Impacts and Permits
   A. Describe the volume (in gallons per day) and type of disposal of wastewater generation for existing and proposed activities at the project site (calculate according to 310 CMR 15.00 for septic systems or 314 CMR 7.00 for sewer systems):

<table>
<thead>
<tr>
<th>Discharge</th>
<th>Existing</th>
<th>Change</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discharge of sanitary wastewater</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharge of industrial wastewater</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Discharge</th>
<th>Existing</th>
<th>Change</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discharge to groundwater</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharge to outstanding resource water</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharge to surface water</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharge to municipal or regional wastewater facility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   B. Is the existing collection system at or near its capacity? □ Yes □ No; if yes, then describe the measures to be undertaken to accommodate the project’s wastewater flows:

   C. Is the existing wastewater disposal facility at or near its permitted capacity? □ Yes □ No; if yes, then describe the measures to be undertaken to accommodate the project’s wastewater flows:

   D. Does the project site currently contain a wastewater treatment facility, sewer main, or other wastewater disposal facility, or will the project involve construction of a new facility? □ Yes □ No; if yes, describe as follows:

<table>
<thead>
<tr>
<th>Permitted</th>
<th>Existing Avg Daily Flow</th>
<th>Project Flow</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wastewater treatment plant capacity (in gallons per day)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   E. If the project requires an interbasin transfer of wastewater, which basins are involved, what is the direction of the transfer, and is the interbasin transfer existing or new?

   (NOTE: Interbasin Transfer approval may be needed if the basin and community where wastewater will be discharged is different from the basin and community where the source of water supply is located.)
F. Does the project involve new sewer service by the Massachusetts Water Resources Authority (MWRA) or other Agency of the Commonwealth to a municipality or sewer district?  □Yes □No

G. Is there an existing facility, or is a new facility proposed at the project site for the storage, treatment, processing, combustion or disposal of sewage sludge, sludge ash, grit, screenings, wastewater reuse (gray water) or other sewage residual materials?  □Yes □No; if yes, what is the capacity (tons per day):

<table>
<thead>
<tr>
<th></th>
<th>Existing</th>
<th>Change</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Processing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combustion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disposal</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

H. Describe the water conservation measures to be undertaken by the project, and other wastewater mitigation, such as infiltration and inflow removal.

III. Consistency
A. Describe measures that the proponent will take to comply with applicable state, regional, and local plans and policies related to wastewater management:

B. If the project requires a sewer extension permit, is that extension included in a comprehensive wastewater management plan?  □Yes □No; if yes, indicate the EEA number for the plan and whether the project site is within a sewer service area recommended or approved in that plan:
TRANSPORTATION SECTION (TRAFFIC GENERATION)

I. Thresholds / Permit
   A. Will the project meet or exceed any review thresholds related to traffic generation (see 301 CMR 11.03(6))? ☐Yes ☒No; if yes, specify, in quantitative terms:

   B. Does the project require any state permits related to state-controlled roadways?
      ☐Yes ☒No; if yes, specify which permit:

   C. If you answered "No" to both questions A and B, proceed to the Roadways and Other Transportation Facilities Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Traffic Generation Section below.

II. Traffic Impacts and Permits
   A. Describe existing and proposed vehicular traffic generated by activities at the project site:
      Number of parking spaces  _______  ________  _______
      Number of vehicle trips per day  ________  ________  ________
      ITE Land Use Code(s):

   B. What is the estimated average daily traffic on roadways serving the site?
      Roadway  Existing  Change  Total
      1. ___________________  ________  ________  ________
      2. ____________________  ________  ________  ________
      3. ____________________  ________  ________  ________

   C. If applicable, describe proposed mitigation measures on state-controlled roadways that the project proponent will implement:

   D. How will the project implement and/or promote the use of transit, pedestrian and bicycle facilities and services to provide access to and from the project site?

   E. Is there a Transportation Management Association (TMA) that provides transportation demand management (TDM) services in the area of the project site? ☐Yes ☒No; if yes, describe if and how will the project participate in the TMA:

   F. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation facilities? ☐Yes ☒No; if yes, generally describe:

   G. If the project will penetrate approach airspace of a nearby airport, has the proponent filed a Massachusetts Aeronautics Commission Airspace Review Form (780 CMR 111.7) and a Notice of Proposed Construction or Alteration with the Federal Aviation Administration (FAA) (CFR Title 14 Part 77.13, forms 7460-1 and 7460-2)?

III. Consistency
   Describe measures that the proponent will take to comply with municipal, regional, state, and federal plans and policies related to traffic, transit, pedestrian and bicycle transportation facilities and services:
TRANSPORTATION SECTION (ROADWAYS AND OTHER TRANSPORTATION FACILITIES)

I. Thresholds
   A. Will the project meet or exceed any review thresholds related to roadways or other transportation facilities (see 301 CMR 11.03(6))? ☑Yes ☐No; if yes, specify, in quantitative terms:

   301 CMR 11.03(6)(b)4. Construction of a New taxiway at an airport.

   B. Does the project require any state permits related to roadways or other transportation facilities? ☑Yes ☐No; if yes, specify which permit:

   C. If you answered "No" to both questions A and B, proceed to the Energy Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Roadways Section below.

II. Transportation Facility Impacts
   A. Describe existing and proposed transportation facilities in the immediate vicinity of the project site:

   Construction materials are anticipated to be transported to the site via Mulberry Street in Leicester, MA. Although construction routes have not yet been determined, trucks traveling to the site via I-90 or I-395 could access Mulberry Street via Route 20 and Route 56. Trucks traveling to the site via I-290 or Route 146 could access Mulberry Street via Cambridge Street and Route 9 or Route 12 and Highland Street/Pleasant Street, depending on their origin.

   No permanent additional auto traffic or scheduled aircraft operations are associated with the project; therefore increased traffic demands are limited to the construction vehicle trips noted below plus any additional vehicles required to move equipment to/from the site.

   B. Will the project involve any
      1. Alteration of bank or terrain (in linear feet)? No
      2. Cutting of living public shade trees (number)? No
      3. Elimination of stone wall (in linear feet)? No

III. Consistency—Describe the project’s consistency with other federal, state, regional, and local plans and policies related to traffic, transit, pedestrian and bicycle transportation facilities and services, including consistency with the applicable regional transportation plan and the Transportation Improvements Plan (TIP), the State Bicycle Plan, and the State Pedestrian Plan:

   Enhancements to taxiways at Worcester Regional Airport are listed on the 2013–2017 Massport Capital Improvement Program. ORH is also identified within the Central Massachusetts Regional Planning Commission’s 2012 Comprehensive Economic Development Strategy as an important part of the transportation infrastructure within the region. The 2012 Regional Transportation Plan suggests that improved landing equipment at ORH would improve efficiency, convenience, and dependability for airlines and passengers.
ENERGY SECTION

I. Thresholds / Permits
   A. Will the project meet or exceed any review thresholds related to energy (see 301 CMR 11.03(7))? ☐Yes ☒No; if yes, specify, in quantitative terms:

   B. Does the project require any state permits related to energy? ☐Yes ☒No; if yes, specify which permit:

   C. If you answered "No" to both questions A and B, proceed to the Air Quality Section. If you answered “Yes“ to either question A or question B, fill out the remainder of the Energy Section below.

II. Impacts and Permits
   A. Describe existing and proposed energy generation and transmission facilities at the project site:

      | Existing | Change | Total |
      |----------|--------|-------|
      | Capacity of electric generating facility (megawatts) | | |
      | Length of fuel line (in miles) | | |
      | Length of transmission lines (in miles) | | |
      | Capacity of transmission lines (in kilovolts) | | |

   B. If the project involves construction or expansion of an electric generating facility, what are:
      1. the facility's current and proposed fuel source(s)?
      2. the facility's current and proposed cooling source(s)?

   C. If the project involves construction of an electrical transmission line, will it be located on a new, unused, or abandoned right of way? ☐Yes ☒No; if yes, please describe:

   D. Describe the project's other impacts on energy facilities and services:

III. Consistency
    Describe the project's consistency with state, municipal, regional, and federal plans and policies for enhancing energy facilities and services:
AIR QUALITY SECTION

I. Thresholds
   A. Will the project meet or exceed any review thresholds related to air quality (see 301 CMR 11.03(8))? □ Yes □ No; if yes, specify, in quantitative terms:
   
   B. Does the project require any state permits related to air quality? □ Yes □ No; if yes, specify which permit:
   
   C. If you answered "No" to both questions A and B, proceed to the Solid and Hazardous Waste Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Air Quality Section below.

II. Impacts and Permits
   A. Does the project involve construction or modification of a major stationary source (see 310 CMR 7.00, Appendix A)? □ Yes □ No; if yes, describe existing and proposed emissions (in tons per day) of:

<table>
<thead>
<tr>
<th>Compound</th>
<th>Existing</th>
<th>Change</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate matter</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carbon monoxide</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfur dioxide</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volatile organic compounds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxides of nitrogen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any hazardous air pollutant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   B. Describe the project's other impacts on air resources and air quality, including noise impacts:

III. Consistency
   A. Describe the project's consistency with the State Implementation Plan:
   
   B. Describe measures that the proponent will take to comply with other federal, state, regional, and local plans and policies related to air resources and air quality:
SOLID AND HAZARDOUS WASTE SECTION

I. Thresholds / Permits
   A. Will the project meet or exceed any review thresholds related to solid or hazardous waste (see 301 CMR 11.03(9))? ☐Yes ☑No; if yes, specify, in quantitative terms:

   B. Does the project require any state permits related to solid and hazardous waste?
      ☐Yes ☑No; if yes, specify which permit:

   C. If you answered "No" to both questions A and B, proceed to the Historical and Archaeological Resources Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Solid and Hazardous Waste Section below.

II. Impacts and Permits
   A. Is there any current or proposed facility at the project site for the storage, treatment, processing, combustion or disposal of solid waste? ☐Yes ☑No; if yes, what is the volume (in tons per day) of the capacity:

      | Storage | Change | Total |
      |________|________|_______|
      | Treatment, processing | _______ | _______ | _______ |
      | Combustion | _______ | _______ | _______ |
      | Disposal | _______ | _______ | _______ |

   B. Is there any current or proposed facility at the project site for the storage, recycling, treatment or disposal of hazardous waste? ☐Yes ☑No; if yes, what is the volume (in tons or gallons per day) of the capacity:

      | Storage | Change | Total |
      |________|________|_______|
      | Recycling | _______ | _______ | _______ |
      | Treatment | _______ | _______ | _______ |
      | Disposal | _______ | _______ | _______ |

   C. If the project will generate solid waste (for example, during demolition or construction), describe alternatives considered for re-use, recycling, and disposal:

   D. If the project involves demolition, do any buildings to be demolished contain asbestos? ☐Yes ☑No

   E. Describe the project’s other solid and hazardous waste impacts (including indirect impacts):

III. Consistency
    Describe measures that the proponent will take to comply with the State Solid Waste Master Plan:
HISTORICAL AND ARCHAEOLOGICAL RESOURCES SECTION

I. Thresholds / Impacts

A. Have you consulted with the Massachusetts Historical Commission? ☐ Yes ☐ No; if yes, attach correspondence. For project sites involving lands under water, have you consulted with the Massachusetts Board of Underwater Archaeological Resources? ☐ Yes ☐ No; if yes, attach correspondence

B. Is any part of the project site a historic structure, or a structure within a historic district, in either case listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth? ☐ Yes ☐ No; if yes, does the project involve the demolition of all or any exterior part of such historic structure? ☐ Yes ☐ No; if yes, please describe:

C. Is any part of the project site an archaeological site listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth? ☐ Yes ☐ No; if yes, does the project involve the destruction of all or any part of such archaeological site? ☐ Yes ☐ No; if yes, please describe:

D. If you answered "No" to all parts of both questions A, B and C, proceed to the Attachments and Certifications Sections. If you answered "Yes" to any part of either question A or question B, fill out the remainder of the Historical and Archaeological Resources Section below.

II. Impacts

Describe and assess the project’s impacts, direct and indirect, on listed or inventoried historical and archaeological resources:

In 2011 and 2012, the Public Archaeology Laboratory (PAL) conducted historical research and reconnaissance level archaeological surveys for Worcester Regional Airport’s Vegetation Management Program (VMP). The results are described below.

Historic Resources

There are no historic resources within one-half-mile of the proposed project that are currently listed in the National Register of Historic Places (National Register) or the State Register, or included in MACRIS or the Inventory maintained by the Massachusetts Historical Commission (MHC). Research completed for the project indicates that the land around the airport was historically a peripheral farming area with low-density development. One property is listed in MACRIS, LEI.259, Maple Hill Farm, 132 Marshall Street in Leicester, which is a 2.5-story, federal style house built in the early nineteenth century. Additional survey and evaluation for listing in the National Register may be needed for LEI.259 in Leicester. Otherwise, no further historic resources survey is recommended for any areas in Leicester or Worcester outside the airport property for the proposed taxiway project.

Archaeological Resources

The MHC reviewed the VMP and noted that one potentially significant archaeological site (LEI-HA-5) was located within the study area in Leicester and that research conducted by the Leicester Historical Commission indicated many historical period residences were once located in the project area. PAL’s survey was conducted in response to a request from the MHC to identify, flag, avoid and protect any surface stone walls, cellar holes, etc. during vegetation cutting and recommendation for a reconnaissance archaeological survey (950 CR 70) to provide information to property managers to avoid impacting archaeologically sensitive areas during vegetation management and other projects. The survey included research, informant interviews, and field review of 53 areas, and resulted in assigning general sensitivity rankings of low, moderate, and high to specific areas within the study area. The pre-contact Native American archaeological
sensitivity for the Worcester Regional Airport study area is based primarily on proximity to water, slope, soils, and subsequent disturbance. The post-contact archaeological sensitivity is derived primarily from proximity to known sites, proximity to historic roads, and proximity to stones walls, slope, and drainage. Potential archaeological resources were identified in eleven areas, all off-airport, in the form of stone walls, foundations, or cellar holes.

The proposed taxiway is located immediately north of the existing Runway 11. The current grade in this location is flat, before sloping steeply down on both sides of the runway to a wetland associated with Lynde Brook. The steep grade is the result of past filling and construction episodes conducted to facilitate airport improvements. A review of historical aerial photographs depicting the proposed runway location indicates that between 1960 and 1963 this portion of the Lynde Brook wetland was filled and graded. Between 1963 and 1971 the runway was extended and the remaining graded areas were landscaped.

The approach lights and the navaids west of Mulberry Street will be located in and around VMAs 13-15 which were surveyed as part of the VMP. Elements of the airport’s MALSF light system and access road to serve them are present in these VMAs. These areas are characterized by topography that exhibits sharp changes in elevation and slope. Vegetation is predominantly deciduous forest with dense undergrowth. A large pond and associated wetlands lie immediately west of Mulberry Street. The 1870 Beers and 1898 Richards maps of Leicester identify what is believed to be several farmsteads west of and adjacent to Mulberry Street and north of Earle Street. The general area where these farmsteads were located has been disturbed by roadway and airport maintenance activities and no evidence of former structures remains. Based on the presence of steep slopes, predominately poorly-drained soils, and prior disturbance in the area, the proposed location of the additional approach lights and navaids are assigned low archaeological sensitivity for pre- and post-contact period sites and no further archaeological investigations are warranted.

III. Consistency
Describe measures that the proponent will take to comply with federal, state, regional, and local plans and policies related to preserving historical and archaeological resources:

Historic Resources
No further historic resources survey is recommended for any areas in Leicester or Worcester outside the airport property for the proposed taxiway and ILS project.

Archaeological Resources
Based on extent of prior disturbance associated with airport construction and maintenance activities that have compromised the integrity of soils and consequently any archaeological deposits that may be present, the airport proper is considered to have low pre-contact and post-contact archaeological sensitivity and no additional archaeological investigations are warranted for either the taxiway or approach lights.
CERTIFICATIONS:

1. The Public Notice of Environmental Review has been/will be published in the following newspapers in accordance with 301 CMR 11.15(1):

   (Name)  Worcester Telegram and Gazette   (Date)  1/14/2014

2. This form has been circulated to Agencies and Persons in accordance with 301 CMR 11.16(2).

Signatures:

<table>
<thead>
<tr>
<th>Date</th>
<th>Signature of Responsible Officer or Proponent</th>
<th>Date</th>
<th>Signature of person preparing ENF (if different from above)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/13/14</td>
<td>Stewart Dalzell</td>
<td>1/13/14</td>
<td>Lisa Standley</td>
</tr>
</tbody>
</table>

Name (print or type)  
Massachusetts Port Authority  
Firm/Agency  
One Harborside Drive, #200F  
Street  
Boston, MA 02128  
Municipality/State/Zip  
617-568-3524  
Phone

Name (print or type)  
Vanasse Hangen Brustlin, Inc.  
Firm/Agency  
101 Walnut Street  
Street  
Watertown, MA 02472  
Municipality/State/Zip  
617-924-1770  
Phone
List of Attachments

A—USGS Locus Map

B—Existing Conditions
   B1: Environmental Constraints
   B2: Existing Conditions

C—Proposed Conditions Plans
   C1: Proposed CAT III Approach Light System
   C2: Proposed Jug Handle Taxiway—Fill Slope
   C3: Proposed Jug Handle Taxiway—Retaining Wall
   C4: Runway 11 Navigational Aid Upgrades—Mid-Point RVR and Localizer

D—Proposed EA/EIR Scope

E—Circulation List
Vanasse Hangen Brustlin, Inc.

Attachment A
USGS Map

Environmental Notification Form
Worcester Regional Airport
Figure 2
Environmental Notification Form
Worcester Regional Airport

Legend
- Wetlands
- Perennial Streams
- Intermittent Stream
- 100-Year Floodplain
- Riverfront Area
- Drainage Feature
- Property Lines
- Existing ILS
- 3m Contour

Source: Jacobs, MassGIS

Vanasse Hangen Brustlin, Inc.
Attachment B2
Existing Conditions
Figure 2
Environmental Notification Form
Worcester Regional Airport

Lynde Brook
Mulberry Street
Attachment C4
Runway 11 Navigational Aid Upgrades
Mid-Point RVR and Localizer
Environmental Notification Form
Worcester Regional Airport
Vanasse Hangen Brustlin, Inc.

Attachment C3
Proposed Jug Handle Taxiway
Concept with Retaining Wall
Environmental Notification Form
Worcester Regional Airport

Source: Jacobs
Vanasse Hangen Brustlin, Inc.

Attachment C1
Proposed CAT III Instrument Landing System
Environmental Notification Form
Worcester Regional Airport

PROPOSED 12' WIDE GRAVEL ACCESS ROAD

PROPOSED (40' x 12') GENERATOR ENCLOSURE

PROPOSED (40' x 30') REGULATOR SUBSTATION

PROPOSED ALSF-2 APPROACH LIGHT (TYP.)

EXISTING APPROACH LIGHT (TYP.)

PROPOSED FAR FIELD MONITOR ANTENNAE

LEGEND:

+ = PROPOSED ALSF-2 APPROACH LIGHT

○ = EXISTING APPROACH LIGHT

= WETLAND AREAS

Source: Jacobs
Attachment D

Proposed Scope for the EA/EIR

Massport plans to prepare a combined EA/EIR to meet the requirements of both the National Environmental Policy Act (NEPA) and the Massachusetts Environmental Policy Act (MEPA). This attachment provides a proposed scope for that document.

1.1 Introduction/Summary

A summary will be included in the EA/EIR that adequately and accurately summarizes the document. The summary will contain the following:

- The name and location of the project, including the Executive Office of Energy and Environmental Affairs (EEA) File Number;
- A brief description of the project, including the purpose of and need for the project, and the alternatives considered, including identify any changes made to the project since completion of the ENF;
- A summary of the potential environmental impacts of the project;
- A list of any land transfer, permit, license, certificate, variance, approval, or financial assistance required for the project; and
- A list of project mitigation measures.

1.2 Purpose and Need

The EA/EIR will specify the underlying purpose and need to which Massport and FAA are responding.

The purpose of the project is to enhance aviation safety and increase aeronautical access and the reliability of air service to the Worcester Regional Airport (ORH) during the low visibility weather conditions that frequently occur due to the Airport’s unique location and elevation.

The proposed safety and operational improvements including an upgraded Instrument Landing System (ILS) and partial parallel taxiway are needed to address an overriding public need for enhanced safety and increased reliability of ORH. These improvements will enable airport to provide and sustain viable commercial air service and enhanced general aviation (GA) and corporate service to the greater Worcester area, and will benefit the traveling public in Central Massachusetts and adjoining region.
Runway 11 currently has an FAA-approved CAT I instrument approach that allows aircraft to safely use the runway when the visibility conditions are 200-foot ceiling height and 1,800-foot runway visual range (RVR). However, low visibility conditions frequently result in ceiling and visibility well below these minimums. The proposed CAT III ILS equipment and infrastructure upgrades would allow for aircraft to land on Runway 11 during all-weather conditions.

### 1.3 Project Description/Alternatives

MEPA and NEPA both require a proponent to evaluate practicable alternatives to a proposed project to ensure that all feasible means to avoid, minimize, or mitigate environmental damage have been considered.

Massport proposes to upgrade the existing Category I Precision Approach to Runway 11 at Worcester Regional Airport to a CAT III Precision Approach. The current approach light system consists of 13 stations, spaced 200 feet apart. A CAT III Precision Approach requires a set of lights every 100 feet (an Approach Lighting System with Sequenced Flashing Lights configuration, or ALSF-2), as shown in the plans in Attachment C. Additional CAT III Navigational Aid improvements will include a midpoint Runway Visibility Range monitor (RVR) and an upgrade to the Runway 11 localizer platform. Also included are a support building with a backup generator for the ALSF-2) and Precision Approach Path Indicators (PAPI) located at the 1,000-foot bar on Runway 11. The existing system extends approximately 2,000 feet west of Mulberry Street, and there are several wetlands interspersed between the existing towers. During design, Massport will evaluate design alternatives to minimize the impacts of new towers on wetland resources.

In addition to the approach lighting system, FAA standards require a parallel taxiway for any runway approved for CAT III. The parallel taxiway will minimize the need to taxi on an active runway, particularly during low visibility conditions that can create a potentially unsafe condition. The CAT I approaches at ORH are not currently served by a parallel taxiway. With a proposed upgrade to a CAT III approach, the FAA is requiring that some form of parallel taxiway be constructed.

Other improvements to navigational aids are also required as part of the CAT III ILS system. FAA and Massport are evaluating opportunities to implement some of the ILS improvements that would have immediate safety benefits and independent utility, prior to taxiway construction. These would include equipment that may have little or no adverse environmental impacts and would not, taken individually or collectively, exceed any MEPA review thresholds.

FAA and Massport have evaluated a range of alternatives for the parallel taxiway and, based on FAA guidance, Massport proposes to construct a short “jug handle” taxiway on the north side of the Runway 11 end, as shown in the plans in Attachment C. This 1,000-foot taxiway section would consist of a 90-degree stub taxiway on the west end and a 45-degree angled taxiway on the east end, and would maintain the FAA required 400-foot separation between the runway and taxiway centerlines.

Using FAA design guidelines, a range of taxiway alternatives were initially evaluated by the FAA and Massport, including:
Locational alternatives (north or south of Runway 11-19, in close proximity or “cross-country”); 

“Full parallel” taxiway; 

Partial parallel taxiway extending from Taxiway Delta to the Runway 11 end; 

Construction alternatives (conventional fill or retaining walls); and 

Design alternatives: 50-foot wide or 75-foot wide taxiway, 400-foot or 500-foot separation between the runway and taxiway centerlines. 

The initial study evaluated a “full-length parallel” taxiway segment as well as a partial-length parallel taxiway extending from Taxiway Delta to the Runway 11 end. Massport also evaluated pile-supported concrete decks to minimize the placement of fill in wetlands; however, the estimated costs for the deck-supported options were approximately an order of magnitude higher than the fill options. Shorter, “jughandle” or “hammerhead” taxiways were also considered that would reduce wetland impacts, reduce the amount of fill material required, reduce construction cost, and provide safe operation given the level of operation at ORH. 

Although the EA/EIR will describe all considered alternatives, including the No-Build alternative, Massport proposes to evaluate in detail only the proposed jughandle taxiway, on the north side of Runway 11-29, as previous analyses have demonstrated that partial and full taxiways on either the north or south sides are not practicable and not warranted based on the level of aircraft operations. 

In the EA/EIR, Massport will fully document the alternatives evaluation conducted in prior feasibility studies and will evaluate further design and construction refinements to avoid and minimize adverse effects to wetlands and rare species habitat, and to minimize construction-period traffic impacts. The proposed 1,000-foot jughandle taxiway will be evaluated for a traditional fill-slope construction and a retaining wall construction. 

The EA/EIR will include: 

- The location and extent of the proposed CAT III ILS, taxiway and other navigation improvements, including overall dimensions and elevations, illustrated with a location map and site plan at an appropriate scale and level of detail. 

- A description of the prior alternatives analysis, and document why alternatives were dismissed from further review; 

- A description of the alternatives evaluated in detail in the EA/EIR, including design, construction methods, duration of construction, volume of material required, and cost; and 

- Measures incorporated into the design to avoid and minimize environmental impacts.
1.4 List of Permits

The proposed project will likely require the following permits:

- Order of Conditions under the Massachusetts Wetlands Protection Act
- Water Quality Certification
- MESA Conservation and Management Permit

1.5 Existing Environment and Environmental Impacts

The EA/EIR will describe the existing environment and the environmental impacts of the proposed ILS and taxiway improvements in accordance with applicable environmental categories identified in the FAA’s NEPA Orders (Order 1050.1E, 5050.4B) and MEPA regulations.

1.5.1 Wetlands

The EA/EIR will identify and map all wetland resource areas by type, including adjacent off-site wetlands that could be adversely affected by the project. The resource maps will include information on wetlands that are subject to federal and state jurisdiction and will be accompanied by a narrative description of each wetland resource area that identifies the significance of its resource values. Massport has already completed some of this work, having identified and delineated wetlands and submitted an Abbreviated Notice of Intent to the Leicester Conservation Commission for verification of wetland resource areas.

The EA/EIR will quantify all direct impacts to wetland resources including bordering land subject to flooding, bordering vegetated wetland, bank, land under a waterway, and riverfront area. Impacts evaluated will include direct impacts from filling, excavation, dredging, or installation of structures.

Massport has formed an interagency Working Group to focus on issues related to wetland, water quality and rare species impacts and mitigation strategies. In addition to Massport and FAA, the working group is initially comprised of representatives from the USEPA, MassDEP, and NHESP, and the Worcester Department of Public Works & Parks and will meet periodically throughout the duration of the project. The Leicester and Worcester Conservation Commissions have also been invited to participate. The EA/EIR will document this coordination.

Impacts to the aquatic environment will be assessed based on the amount of fill, amount of excavation required to remove unsuitable substrate, installation of structures, and the potential indirect effects of stormwater discharge on water quality.

The proposed taxiway and ILS may alter bordering vegetated wetlands in excess of 5,000 square feet and therefore may require a Variance under the Wetlands Protection Act regulations. A Variance under the Water Quality Certification standards would also be required if fill was placed in Outstanding Resource Waters associated with the City of Worcester water supply. The EA/EIR will address the requirements of a Variance, including documenting the public interest met by the proposed enhancements, the absence of other feasible alternatives that would avoid or minimize the impacts, and the mitigation measures proposed to compensate for the loss of bordering vegetated wetlands. Massport will coordinate with the
Leicester Conservation Commission and MassDEP during preparation of the EA/EIR and will document this coordination in the EA/EIR. The EA/EIR will:

- Include a comprehensive qualitative and quantitative assessment of impacts to wetland resource areas, including direct, indirect, temporary and permanent impacts;
- Include a detailed description of the methodology used for the assessment of wetland functions and values;
- Provide maps and plans to show the specific location and extent of wetland impacts;
- Include tables to summarize wetland impacts for each alternative;
- Evaluate impacts to wetland resource areas based on delineations that have been reviewed and approved by the Leicester Conservation Commission/MassDEP CERO;
- Identify potential vernal pools, using maps and aerial photography and verify in the field, according to the NHESP vernal pool certification criteria, and include the results of these investigations in the EA/EIR.
- Identify any changes to vegetation management associated with the proposed action;
- If a wetland variance is required, describe how the proposed project will meet the regulatory standards for a variance provided in 310 CMR 10.05(10), including the need to demonstrate that there are no reasonable conditions or alternatives that would allow the project to proceed in compliance with 310 CMR 10.54 through 10.60; that mitigating measures are proposed that will allow the project to be conditions so as to contribute to the protection of the interests identified in the Act; and that the variance is necessary to accommodate an overriding community, regional, state or national public interest.
- If a Section 401 Water Quality Certification is required, the EA/EIR will demonstrate how the project will avoid impacts to wetlands to the maximum extent practicable, and where impacts are unavoidable, that impacts have been minimized.
- The EA/EIR will identify and describe any discharges to Outstanding Resource Waters requiring a variance pursuant to 310 CMR 4.00. If a Variance is required, the EA/EIR will provide supporting documentation for the variance request.

The EA/EIR will also provide information on mitigation for wetland impacts and losses, to the extent that permanent or temporary wetland impacts cannot be avoided by the selected alternative. Massport will identify potential compensatory wetland sites and design mitigation measures in compliance with MassDEP performance standards and the MassDEP Inland Wetland Replication Guidelines, to the extent feasible. FAA safety standards preclude wetland mitigation in close proximity to runways or other aircraft operating areas that would exacerbate or create a hazardous wildlife attractant. To maintain safe operations, it may be necessary to seek off-site locations for compensatory wetland mitigation. Massport will work with local, state and federal resource agencies during the development of the EA/EIR to identify appropriate wetland mitigation sites and designs. In the EA/EIR, Massport will provide:

- A detailed description of measures to avoid and minimize wetland impacts;
- A comprehensive mitigation plan addressing permanent and temporary impacts;
- A description of proposed wetland mitigation areas with locations identified on maps or graphics;
- A description of how mitigation sites will be designed to preserve critical functions;
- Details on any compensatory mitigation including the timeframe anticipated and the methods proposed to achieve successful replication; and
- A monitoring and contingency plan to ensure success.

1.5.2 Water Quality

Lynde Brook, which connects the City of Worcester’s Kettle Brook Reservoirs with the Lynde Brook Reservoir, is now culverted under the airfield. Wetlands and floodplains are present on both sides of the airfield, at the bottom of the slope. All of the wetlands and waterways are designated as Class A Outstanding Resource Waters associated with the public drinking water supply. The EA/EIR will provide a drainage analysis and a detailed description of the proposed stormwater management measures for the proposed taxiway and will demonstrate how the projects will meet MassDEP’s Stormwater Management Standards, consistent with FAA’s design standards for runways and taxiways. As described above for wetland mitigation, FAA considers open stormwater detention and retention basins with greater than 48-hour detention periods to be hazardous wildlife attractants that are prohibited in close proximity to runways and taxiways. The EA/EIR will identify the size and location of stormwater system features and will demonstrate how the proposed taxiway is consistent with Worcester Regional Airport’s stormwater management practices and the requirements of the NPDES Multi-Sector General Permit under which the airport operates.

1.5.3 Rare Species

The proposed taxiway would include work within areas mapped by NHESP as Priority Habitat for grassland bird species. Massport will coordinate with the NHESP to determine if the proposed work would alter the habitat of a protected species, evaluate the effects on the local population, and determine if a Conservation and Management Permit is required for the proposed work. In preliminary coordination, NHESP advised that no additional field surveys would be necessary. The EA/EIR will document this coordination and will:

- Quantify and analyze impacts on state-listed species and their habitats;
- Quantify new areas of habitat created;
- Describe how potential impacts would be avoided and minimized to the maximum extent feasible;
- Include a detailed analysis of mitigation measures; and
- Describe the endangered species permitting process.
1.5.4 Cultural Resources

In 2011 and 2012, the Public Archaeology Laboratory (PAL) conducted a reconnaissance level archaeological survey for Worcester Regional Airport’s Vegetation Management Program. The Massachusetts Historical Commission (MHC) had reviewed the plan and noted that one potentially significant archaeological site (LEI-HA-5) was located within the study area in Leicester and that research conducted by the Leicester Historical Commission indicated many historical period residences were once located in the study area. The survey included research, informant interviews, and field review of 53 areas, and resulted in assigning general sensitivity rankings of low, moderate, and high to specific areas. The pre-contact Native American archaeological sensitivity for the Worcester Regional Airport study area is based primarily on proximity to water, slope, soils, and subsequent disturbance. The post-contact archaeological sensitivity is derived primarily from proximity to known sites, proximity to historic roads, and proximity to stones walls, slope, and drainage. Potential archaeological resources were identified in eleven areas, all off-airport, in the form of stonewalls, foundations, or cellar holes.

The proposed taxiway is located immediately north of the existing Runway 11. The current grade in this location is flat, before sloping steeply down on both sides of the runway to a wetland associated with Lynde Brook. The steep grade is the result of past filling and construction episodes conducted to facilitate airport improvements. A review of historical aerial photographs depicting the proposed runway location indicates that between 1960 and 1963 this portion of the Lynde Brook wetland was filled and graded. Between 1963 and 1971 the runway was extended and the remaining graded areas were landscaped. Based on extent of prior disturbance associated with airport construction and maintenance activities that have compromised the integrity of soils and consequently any archaeological deposits that may be present, the airport proper is considered to have low pre-contact and post-contact archaeological sensitivity and no additional archaeological investigations are warranted.

The approach light system area was surveyed as part of the VMP. These areas are characterized by topography that exhibits sharp changes in elevation and slope. Based on the presence of steep slopes, predominately poorly-drained soils, and prior disturbance in the area, the proposed location of the additional approach lights was assigned low archaeological sensitivity for pre- and post-contact period sites and no further archaeological investigations are warranted.

There are no historic resources within one-half-mile area of the project that are currently listed in the National Register of Historic Places or the State Register, or included in MACRIS or the Inventory maintained by the MHC. Research completed for the project indicates that the land around the airport was historically a peripheral farming area with low density development. No further historic resources survey is recommended for any areas in Leicester or Worcester outside the airport property for the proposed project.

During preparation of the EA/EIR, FAA will evaluate cultural resources and consult with the MHC as required under Section 106 of the National Historic Preservation Act and will provide this documentation in the EA/EIR.

1.5.5 Visual and Lighting

Because the proposed project would add new approach lights and structures in the existing approach light system between Mulberry Street and Manville Street, visible from these public ways, the EA/EIR
will include an analysis of the visual effects in accordance with FAA guidance. The analysis will evaluate the visual characteristics of the additional light structures and whether the additional lights would have any effect on residents.

1.5.6 Air Quality

The proposed project will not change airport operations and will not generate any new vehicle trips. Energy consumption will be negligible for the CAT III ILS. CO₂ emissions would be minimal and would occur during construction and to run the ALSF-2 generator during CAT III conditions. The proposed project therefore meets the *de minimis* standards under the MEPA Greenhouse Gas Policy; however, an emissions analysis will be conducted to determine the applicability of general federal conformity requirements.

1.5.7 Construction Impacts

The EA/EIR will include a draft Construction Management Plan (CMP) describing project activities and their schedule and sequencing for the proposed construction activities. The CMP will include Best Management Practices (BMPs) that would be used to avoid and minimize adverse environmental impacts, and will address potential impacts and mitigation related to land disturbance, wetlands and rare species impacts, noise, dust, vehicle emissions, and construction debris. Massport’s construction mitigation guidelines to contractors, as well as construction period mitigation measures employed on other airport projects and FAA’s guidance, will form the basis for developing mitigation strategies. The CMP will include a disposal plan for excess construction materials, including excavated soil, and will consider on-site recycling. Specific quantitative analysis of short-term construction period impacts will be conducted for traffic noise and air quality as described below.

1.5.7.1 Traffic

Construction materials are likely to be transported to the site via Mulberry Street in Leicester. Although construction routes have not yet been determined, trucks traveling to the site via I-90 or I-395 could access Mulberry Street from Route 20 and Route 56. Trucks traveling to the site via I-290 or Route 146 could access Mulberry Street from Cambridge Street and Route 9 or Route 12 and Highland Street/Pleasant Street, depending on their origin.

Mulberry Street is a local roadway along the west side of ORH. The road is primarily bordered by wooded areas and wetlands, and there are several residences along the street. The average roadway width is 27 feet and there is no centerline or shoulder striping. There are no formal pedestrian or bicycle accommodations. The road has a fairly winding horizontal alignment.

No other additional traffic is associated with the project; therefore increased traffic demands are limited to the construction vehicle trips noted below plus any additional vehicles required to move equipment to/from the site. The analysis presented in the EA/EIR will:

- Identify appropriate locations for traffic data collection dependent on the fill donor sites selected;
- Evaluate existing traffic operations and safety at these locations and within the chosen study area;
- Identify truck haul routes from each donor site to the airport;
Identify any temporary traffic detours or other traffic maintenance measures necessary to support the movement of materials and construction equipment to the site;

Quantify construction impacts to roadway network along these routes. This includes level of service, potential impacts to pavement, and a qualitative assessment of whether traffic currently using Mulberry Street would divert to other neighborhood streets to avoid trucks;

Identify whether pedestrian and/or bicycle activity would be affected along construction routes;

Review sight distance along Mulberry Street and other major truck route roadways;

Determine whether any horizontal or vertical obstructions exist along Mulberry Street or routes to the site that would prevent trucks or equipment from utilizing the assigned route; and

Propose mitigation measures to offset impacts during construction and analyze effectiveness of measures.

1.5.7.2 Noise
The EA/EIR will characterize noise and vibration impacts associated with construction activities, particularly with truck activities on Mulberry Street and any other residential streets used as construction routes. The analysis will characterize noise and vibration impacts associated with trucking, discuss consistency with applicable state and federal guidelines and regulations, and identify mitigation measures as appropriate. Since the project will not change how ORH operates, changes in operational noise impacts are not expected and an operational noise analysis will not be conducted.

1.5.7.3 Air Quality
Since the project will employ standard construction language requiring contractors to fit all diesel construction equipment with after-engine emissions controls, use ultra-low-sulfur fuel, and minimize idling time, an air quality analysis will not be conducted. However, the EA/EIR will present an emissions inventory of construction-related emissions, including emissions from heavy construction equipment, and emissions from running the generator during CAT III conditions. The emissions inventory will consider carbon monoxide (CO), volatile organic compounds (VOCs), nitrogen oxides (NOx), sulfur oxides (SOx), and particulate matter (PM10 and PM2.5). Mitigation measures for potential fugitive dust from construction operations will also be evaluated. The proposed project meets the de minimis standards under the MEPA Greenhouse Gas (GHG) Emissions Policy and does not require a GHG analysis. GHGs will therefore not be included in the construction emissions inventory.

1.5.7.4 Water Quality
The EA/EIR will describe proposed mitigation measures to protect water quality during the construction period. Because the adjacent wetlands and surface waters are part of the Worcester water supply, these resources are highly sensitive to turbidity and require stringent erosion and sedimentation control measures and an elevated level of monitoring during construction.
1.6 Cumulative Impacts

The cumulative impact analysis will focus on the immediate vicinity of ORH and will primarily address cumulative impacts to wetlands, water quality, and rare species habitat as a result of past and reasonably foreseeable future changes resulting from construction projects at ORH and surrounding areas, including the recently-implemented Vegetation Management Plan.

1.7 Mitigation and Section 61 Findings

The EA/EIR will identify opportunities for mitigation of unavoidable permanent impacts to each resource. Mitigation measures will be identified for the “build” alternatives considered in the EA/EIR. This section will also discuss the impacts and mitigation associated with the Preferred Alternative. This will form the basis for Massport’s Draft Section 61 Findings as required by MEPA and FAA’s findings under NEPA. Draft Section 61 Findings will include identifying proposed mitigation measures, implementation schedule, monitoring measures during construction, and post-construction monitoring. The EA/EIR will include Draft Section 61 Findings.

1.8 Comments

The EA/EIR will include copies of all comment letters received and responses provided. The EA/EIR will present any additional narrative or quantitative analysis necessary to respond to the comments received.

1.9 Distribution

Massport will circulate the EA/EIR to all who submitted comments on the ENF, in accordance with Section 11.16 of the MEPA regulations, and to those state and federal agencies from which the proponent will seek permits or approvals in accordance with NEPA regulations. Copies will be provided to City of Worcester and Town of Leicester library branches for public review. Massport will also provide copies of the EA/EIR to any agency or member of the public that requests a copy. Copies of the EA/EIR will be available for download on Massport website www.massport.com.

Massport will present its plans for ORH to a wide range of stakeholders, and will participate in ongoing inter-agency planning sessions and workshops. Regular updates about the project will be provided to public agencies, community representatives, advocacy groups, and other interested parties. These information sessions will become important forums for public feedback.
# Attachment E
## Circulation List

<table>
<thead>
<tr>
<th>Department</th>
<th>Address</th>
</tr>
</thead>
</table>
| DEP/Wetlands and Waterways | Attn: Michael J. Stroman  
One Winter Street  
Boston, MA 02108 |
| DEP/Central Regional Office | Attn: Marielle Stone  
627 Main Street  
Worcester, MA 01608 |
| Federal Aviation Administration | Attn: Richard Doucette  
12 New England Executive Park  
Burlington, MA 01803 |
| Federal Aviation Administration | Attn: Ralph Nicosia-Rusin  
12 New England Executive Park  
Burlington, MA 01803 |
| MassDOT | Attn: MEPA Coordinator  
100 Cambridge Street, 10th floor  
Boston, MA 02114 |
| Massachusetts Historical Commission | Attn: Richard Doucette  
12 New England Executive Park  
Burlington, MA 01803 |
| Central Mass. Regional Planning Commission | Attn: MEPA Coordinator  
100 Cambridge Street, 10th floor  
Boston, MA 02114 |
| U.S. EPA Region 1 | Attn: Tim Timmerman  
John F. Kennedy Building  
Boston, MA 02203-0001 |
U.S. Army Corps of Engineers
New England District
Regulatory Division
Attn: John Sargent
696 Virginia Road
Concord, MA 01742-2751

Senator Harriette L. Chandler
State House, Room 312C
Boston, MA 02133

Senator Michael Moore
State House, Room 109-B
Boston, MA 02133

Representative Mary Keefe
State House, Room 473F
Boston, MA 02133

Representative John Binienda
State House, Room 166
Boston, MA 02133

Representative John Mahoney
State House, Room 134
Boston, MA 02133

Representative James O'Day
State House, Room 167
Boston, MA 02133

Representative Daniel Donahue
State House, Room 122
Boston, MA 02133

Attn: Kathleen Polanowicz
Congressman James McGovern
12 East Worcester Street, Suite 1
Worcester, MA 01604

Attn: Roger Lau
Senator Elizabeth Warren
2400 JFK Federal Building
15 New Sudbury Street
Boston, MA 02203

Attn: Mark Gallagher
Senator Edward Markey
10 Causeway Street, Suite 559
Boston, MA 02222

Attn: John Sargent
State House, Room 312C
Boston, MA 02133

Leicester Board of Selectmen
3 Washburn Square
Leicester, MA 01524

Leicester Planning Board
3 Washburn Square
Leicester, MA 01524

Leicester Conservation Commission
3 Washburn Square
Leicester, MA 01524

Leicester Board of Health
3 Washburn Square
Leicester, MA 01524

Leicester Public Library
1136 Main Street
Leicester, MA 01524

Worcester City Council
City Hall Room 206
455 Main Street
Worcester, MA 01608

Worcester Conservation Commission
Div. of Planning & Regulatory Services
City Hall Room 404
455 Main Street
Worcester, MA 01608

Worcester Public Health Division
25 Meade Street
Worcester, MA 01610

Worcester Department of
Public Works and Parks
18 East Worcester Street
Worcester MA 01604-3699
<table>
<thead>
<tr>
<th>Organization</th>
<th>Name</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worcester Planning Board</td>
<td>Ms. Beth Proko</td>
<td>2 Holden Street</td>
</tr>
<tr>
<td>Div. of Planning &amp; Regulatory Services</td>
<td></td>
<td>Worcester, MA 01609</td>
</tr>
<tr>
<td>City Hall Room 404</td>
<td>Mr. Michael Amir</td>
<td>48 Hickory Drive</td>
</tr>
<tr>
<td>455 Main Street</td>
<td></td>
<td>Worcester, MA 01609</td>
</tr>
<tr>
<td>Worcester, MA 01608</td>
<td>Mr. George Allen</td>
<td>69 Elmwood Street</td>
</tr>
<tr>
<td>Worcester Water/Sewer Division</td>
<td></td>
<td>Millbury, MA 01527</td>
</tr>
<tr>
<td>20 East Worcester Street</td>
<td>Mr. John Palamaro</td>
<td>46 North Parkway</td>
</tr>
<tr>
<td>Worcester, MA 01604</td>
<td>Mr. Raul Porras</td>
<td>334 Massasoit Road</td>
</tr>
<tr>
<td>Worcester, MA 01605</td>
<td>Mr. Doug Belanger</td>
<td>3 Washburn Square</td>
</tr>
<tr>
<td>Worcester Public Library</td>
<td></td>
<td>Leicester, MA 01524</td>
</tr>
<tr>
<td>3 Salem Square</td>
<td>Ms. Dianna Provencher</td>
<td></td>
</tr>
<tr>
<td>Worcester, MA 01608</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worcester Regional Chamber of Commerce</td>
<td>Attn: Timothy P. Murray</td>
<td></td>
</tr>
<tr>
<td>Chamber of Commerce</td>
<td></td>
<td></td>
</tr>
<tr>
<td>446 Main Street, Suite 200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worcester, MA 01608</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Bernard Iandoli</td>
<td></td>
<td></td>
</tr>
<tr>
<td>83 Flagg Street</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worcester, MA 01602</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Jay Finlay</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 North Bend Road</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worcester, MA 01609</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>