

PREPARED FOR



Massachusetts Port Authority

FINAL ENVIRONMENTAL IMPACT REPORT/
ENVIRONMENTAL ASSESSMENT
EEA# 15665

Logan Airport Parking Project

Boston Logan International Airport
EAST BOSTON, MASSACHUSETTS

PREPARED BY



IN ASSOCIATION WITH

WSP USA

Arrowstreet

DECEMBER 2019

***Final Environmental Impact Report/
Environmental Assessment***

EEA No. 15665

Logan Airport Parking Project

Boston-Logan International Airport

East Boston, Massachusetts

Prepared for **Massachusetts Port Authority**

Prepared by



In association with **WSP USA
Arrowstreet**

December 16, 2019

This environmental assessment becomes a Federal document when evaluated, signed, and dated by the Responsible FAA Official.

A handwritten signature in blue ink that reads "R. Dorell".

Responsible FAA Official
Environmental Program Manager
FAA New England Region

December 16, 2019

Date

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

FINDING OF NO SIGNIFICANT IMPACT

**Logan Airport Parking Project
Boston Logan International Airport, Boston, Massachusetts**

Proposed Action

The Massachusetts Port Authority (Massport) is the sponsor of the Logan Airport Parking Project (the Proposed Action or the Project) at Boston Logan International Airport. Massport is proposing to construct 5,000 new commercial parking spaces in structured parking facilities at two on-Airport sites, both of which are currently used for parking. Approximately 2,000 spaces would be sited in a new garage on existing surface parking lots in front of Terminal E and approximately 3,000 spaces would be accommodated at the Economy Garage through an expansion of the existing facility.

The Proposed Action is consistent with the recently amended Logan Airport Parking Freeze (310 CMR 7.30) and will help Massport meet the parking needs of its users. The project is intended to reduce vehicle miles traveled and associated air emissions at Logan Airport. By increasing the quantity of available on-Airport parking, the Project aims to decrease the number of private vehicles that access the Airport via environmentally undesirable drop-off/pick-up modes, which generate up to four vehicle trips per passenger compared to two vehicle trips for passengers who drive and park. The Project responds to increasing air passenger travel and anticipated increases in parking demand over time.

Details of the components of the Project are as follows:

New Garage in front of Terminal E:

- A new structured multi-story parking garage in the current location of existing surface parking lots in front of Terminal E. Two sections located on either side of the pedestrian bridge that connects Terminal E to the Central Garage complex (inclusive of the Central and West Garages). Five parking levels would be placed on the west side and six levels on the east side.
- Separated primary access/egress points for public vehicles and limousines along the Terminal E Arrivals Level roadway.
- A secondary access point for public vehicles along the Terminal E Arrivals Level roadway on the facility's west side and co-located with the public vehicle exit, to further reduce on-Airport circulation.
- Modifications to the Terminal E Arrivals Level roadway to accommodate garage access/egress.
- A vehicular bridge connection to the Central Garage complex from the fourth level of the facility's east side to increase Massport operational efficiencies to reposition vehicles during peak periods.
- Pedestrian circulation accommodations, including three crosswalks connecting the facility to the outer curb at Terminal E and connections to the pedestrian bridge that connects Terminal E to the Central Garage complex.
- Eleven dual-port electric vehicle (EV) charging stations.
- A solar photovoltaic system to offset a significant portion of the facility's energy consumption, including all lighting and EV charging stations. Infrastructure to allow the future expansion of solar PV to the facility's maximum rooftop potential and the doubling of the initially planned EV charging stations to accommodate 150 percent of demand within the facility.

Economy Garage Expansion:

- Three additional parking levels within the facility’s existing footprint. An addition on the facility’s south side with a footprint of approximately 18,000 square feet to include both parking spaces and additional vertical circulation.
- Associated improvements to garage entrance/exit plaza and along Prescott Street.
- The relocation of the existing solar PV system to the top of the facility’s new highest level or replacing it with a more efficient system as feasible.
- Infrastructure to allow the future expansion of solar PV to its maximum potential and EV charging stations to accommodate 150 percent of demand within the facility.

A revision to the Airport Layout Plan, which is necessitated to show the proposed garage additions, requires Federal Aviation Administration approval. Massport and the FAA prepared an Environmental Impact Report/Environmental Assessment (EIR/EA) to assess the Proposed Action under the Massachusetts Environmental Policy Act (MEPA) and National Environmental Policy Act (NEPA), respectively. The Project will require an Individual Permit and Construction General Permit under the National Pollutant Discharge Elimination System. See Table 1-4 in the Final EIR/EA for a list of the anticipated permits and approvals along with their status.

Alternatives Considered

Massport assessed several Action Alternatives and a No-Action Alternative for the Proposed Action. Massport conducted an initial site selection and screening process, with significant input from the community. Massport initially considered six on-Airport sites before recommending two specific locations for the new structured parking facilities, as one site alone would not provide the required 5,000 parking spaces. The Action Alternatives were considered according to their ability to meet the Proposed Action’s purpose and need (see Chapter 1, *Project Description/Purpose and Need* of the Draft EIR/EA), as well as operational and environmental considerations relating to massing, access, and design. Each of the on-Airport sites is comparable in terms of regional vehicle miles traveled and emissions reduction since regional access routes generally would not vary. All sites considered are already paved and currently used for parking or vehicle storage and, therefore, each has similar, negligible environmental impacts.

Based on discussions with members of the East Boston Logan Airport Impact Advisory Group and other community discussions, in addition to the aforementioned operational and environmental considerations, Massport is proposing to construct 5,000 new commercial parking spaces split between two sites: existing surface parking lots in front of Terminal E with a parking capacity of approximately 2,000 spaces and the Economy Garage with an added capacity of approximately 3,000 spaces. Refer to Chapter 2, *Alternatives Analysis* of the DEIR/EA for a detailed description of alternatives.

Public Comment

The Proposed Action was presented at a public meeting held on June 25, 2019. The DEIR/EA was made available for an extended 47-day public review period. Local public libraries received a copy for public review and an electronic version was posted on Massport’s website. Legal notices were published in local newspapers in English and Spanish on June, 12, June 13, June 19 and June 20, 2019.

In addition to the Massachusetts Secretary of the Executive Office of Energy and Environmental Affairs’ August 2, 2019 Certificate, which determined that the Draft EIR/EA “adequately and properly complies with MEPA and its implementing regulations,” eight public comment letters were received. Massport received and responded to the individual comments in each letter (see Chapter 2, *Responses to Comments on the DEIR/EA* in the Final EIR/EA). Among these comments, the U.S. Environmental Protection Agency requested the Project’s conformity determination. As reported in the Draft EIR/EA in Section 4.5.2, *Air Quality*, the Proposed Action would be in conformance with the General Conformity Rule, established under the Federal Clean Air Act.

Related emissions would be below (i.e., within) *de minimis* thresholds. Project construction would generate temporary construction vehicle and equipment emissions; however, such emissions would be well within the General Conformity thresholds. Many of the remaining comments focused on Airport-wide concerns rather than the Project. Massport addresses Airport-wide comments through the annual Logan Airport Environmental Data Report (EDR) and Environmental Status and Planning Report (ESPR) filings under MEPA.

Assessment and Mitigation

As detailed in Chapter 4, *Assessment of Impacts/Environmental Consequences* in the EIR/EA, the Proposed Action would result in environmental benefits without creating any long-term adverse environmental impacts. Only minor, temporary construction-period impacts affecting air, noise, and traffic are expected to occur. Massport commits to follow appropriate construction best management practices to minimize these impacts. Together with the proposed mitigation, all adverse impacts to resource categories are anticipated to be less than significant based on significance thresholds defined in FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*.

Implementation of the Proposed Action would allow Massport to avoid long-term adverse environmental impacts that would occur if no action were taken. These avoidable impacts include higher regional vehicle miles traveled and associated air emissions from an increasing drop-off/pick-up mode share resulting from an inadequate parking supply at the Airport. Chapter 3, *Beneficial Measures/Mitigation* of the EIR/EA details additional environmental benefits of the Proposed Action, including the incorporation of sustainable and resilient features (such as solar PV installations to offset a significant portion of the energy consumption at the proposed garages along with other select measures associated with the U.S. Green Building Council's Parksmart rating system), and construction period mitigation.

Beginning with the initial year of construction, and continuing through the end of construction of the Logan Parking Project garage(s), Massport will submit a brief annual report to the FAA on the progress implementing the measures detailed in Chapter 3, *Beneficial Measures/Mitigation*.

Finding of No Significant Impact

I have carefully and thoroughly considered the facts contained in the EIR/EA. Based on that information, I find the proposed Federal action is consistent with the existing national environmental policies and objectives of Section 101(a) of NEPA and other applicable environmental requirements. I also find the proposed Federal action will not significantly affect the quality of the human environment or include any condition requiring consultation pursuant to Section 102(2)(C) of NEPA. As a result, the FAA will not prepare an Environmental Impact Statement (EIS) for this action.

APPROVED:



Richard Doucette,
Environmental Program Manager,
FAA New England Region

Date: December 16, 2019



Massachusetts Port Authority
One Harborside Drive
East Boston, MA 02128-2909
Telephone (617) 568-5000
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December 16, 2019

The Honorable Kathleen A. Theoharides, Secretary
Executive Office of Energy and Environmental Affairs
Attn: MEPA Office
100 Cambridge Street, Suite 900,
Boston, Massachusetts 02114

Richard Doucette
Federal Aviation Administration
New England Region
1200 District Avenue
Burlington, MA 01803

Re: Logan Airport Parking Project, Final EIR/EA (EEA No. 15665), East Boston, MA

Dear Secretary Theoharides and Mr. Doucette:

On behalf of the Massachusetts Port Authority (Massport), we are pleased to submit for your review the **Final Environmental Impact Report/Environmental Assessment (Final EIR/EA)** for the **Logan Airport Parking Project (the Project)**. This Final EIR/EA was prepared in accordance with the Massachusetts Environmental Policy Act (MEPA) and its implementing regulations (301 CMR 11.00 *et seq.*), and the National Environmental Policy Act (NEPA), and the Federal Aviation Administration's (FAA's) implementing procedures (Order 1050.1F and Order 5050.4B). This joint state/federal document fulfills the requirements of both MEPA and NEPA. FAA's involvement in the Project is tied primarily to its need to approve a change to the Airport Layout Plan (ALP) showing the proposed garage additions.

Chapter 1, *Introduction* of this Final EIR/EA, provided in both English and Spanish, primarily offers an updated and detailed Project description, and identifies, describes, and assesses the environmental impacts of the changes in the Project that have occurred since the filing of the Draft EIR/EA. As directed by the Secretary's Certificate on the Draft EIR/EA issued on August 2, 2019, and consistent with NEPA, this Final EIR/EA also includes copies of the eight comment letters submitted on the Draft EIR/EA (see Appendix A, *Secretary's Certificate and Public Comments on the DEIR/EA*) and Massport's responses to those comments (see Chapter 2, *Responses to Comments on the DEIR/EA*). Chapter 3, *Beneficial Measures/Mitigation* updates the description of the environmental benefits of the Project and construction period mitigation. Additionally, updated draft Section 61 Findings, including greenhouse gas commitments and related self-certification language, can be found in Appendix C, *Updated Draft Section 61 Findings*.

Since the Draft EIR/EA, the FAA has provided its draft Finding of No Significant Impact (FONSI). A copy of this FONSI is included following this letter.

As discussed in the Draft EIR/EA, this Project would add 5,000 new on-Airport commercial parking spaces at Boston Logan International Airport (Logan Airport or the Airport). The Project itself constitutes mitigation, designed to complement Massport's other ground access strategies that aim to reduce the number of trips to/from the Airport, and thus reduce vehicle miles traveled (VMT) and associated air emissions.

As originally described in the Project's Environmental Notification Form and Draft EIR/EA, the constrained parking supply at Logan Airport continues to cause an avoidable increase in the drop-off/pick-up activity at Logan Airport. Because they can generate up to four vehicle trips (and VMT and associated emissions), as compared to two vehicle trips for passengers who drive and park at the Airport, drop-off/pick-up modes are the least desirable mode choices from environmental and ground access perspectives.

Since no single current on-Airport site could efficiently accommodate all 5,000 spaces, Massport plans to construct the additional parking in two locations: approximately 2,000 spaces are proposed to be added where there are existing surface parking lots in a new garage in front of Terminal E; and an additional 3,000 spaces are planned to be added to the existing Economy Garage. Although this Final EIR/EA and the preceding Draft EIR/EA fully address both phases of the Project, Massport will reevaluate the need for the additional 3,000 parking spaces planned as part of the Economy Garage expansion prior to the start of its construction, anticipated in mid-2023. Massport plans to commence construction of the new garage in front of Terminal E in 2020.

As modes of ground access to Logan Airport continue to evolve, the need for additional on-Airport parking persists. In 2017, with continued growth in air passenger activity and insufficient on-Airport parking, Massport diverted or valet-parked just over 40,000 passenger vehicles on 81 days. Vehicle diversions are anticipated to increase as air passenger travel at the Airport increases over time. In 2018, Logan Airport reached a new passenger record of 40.9 million annual passengers, and passenger volume continues to increase through 2019. Furthermore, many temporary locations used during peak travel periods continue to be unavailable as a result of ongoing construction.

This Project is fully consistent with and responds to the Massachusetts Department of Environmental Protection's amendment to the Logan Airport Parking Freeze Regulation (310 CMR 7.30), approved on June 30, 2017, that allows for 5,000 more on-Airport parking spaces. The United States Environmental Protection Agency has also approved the Parking Freeze amendment and memorialized those changes in its update to the Massachusetts State Implementation Plan (SIP) under the Federal Clean Air Act (42 U.S.C. §7401 *et seq.* [1970]) on March 6, 2018 with the rule going into effect on April 5, 2018.

Consistent with prior amendments, the 2017 Parking Freeze Amendment specified that Massport was to conduct three ground access studies to aid in the continual development of its Logan Airport Ground Access and Trip Reduction Strategy. Since the filing of the Draft EIR/EA, Massport published these studies, known as the *Logan Airport Parking Freeze Amendment Ground Access and Trip Reduction Strategy Studies* (MassDEP studies), on September 30, 2019. This Final EIR/EA provides a summary of these studies, describes how their results have informed Massport's long-range efforts to address VMT and associated air emissions of different ground access modes to/from the Airport, and identifies the recommendations that Massport has already implemented. The Executive Summary and Introduction of the MassDEP studies are provided in Appendix D, *Executive Summary and Introduction to the MassDEP Studies*. The full report and studies can be found on Massport's website: <http://www.massport.com/media/3370/final-massport-dep-report.pdf>.

As identified in the MassDEP studies, Massport has already made progress on implementing the following study recommendations.

- Relocating Back Bay Logan Express service to the Massachusetts Bay Transportation Authority's (MBTA's) Back Bay Station, eliminating the fare from the Airport to Back Bay, and reducing the fare from Back Bay to the Airport from \$7.50 to \$3.00. This has already resulted in a substantial increase in ridership since the relocation in May 2019.
- Increasing peak-hour frequency on the Logan Express Braintree service from 30-minute to 20-minute headways.

- Advancing a new urban Logan Express service at North Station with free service from the Airport. Buses for the service have been ordered.
- Offering priority access at the Airport Security Line to customers who take Back Bay Logan Express or any mode of water transportation to the Airport.
- Initiating studies of a new suburban Logan Express location with parking.
- Implementing a new Ride App drop-off fee of \$3.25 (in addition to the current \$3.25 pick-up fee) and providing a discounted fee of \$1.50 for shared-ride (such as UberPool and Lyft Line) customers.
- Implementing parking pricing that discourages short-term parking that is associated with pick-up and drop-off uses.
- Piloting use of the South Boston Waterfront Emergency Access Ramp to reduce travel time on the MBTA Silver Line (SL1) service to help encourage use.
- Consolidating Ride App operations at dedicated areas on the ground floor of the Central Garage to make it easier for drivers to pick up arriving air passengers after dropping off departing passengers without having to circulate around the Airport.

The public comment period for the Final EIR/EA will begin on December 23, 2019, the publication date of the next *Environmental Monitor*, and conclude on January 23, 2020. A decision on the Final EIR/EA would be due on January 30, 2020.

All parties on the distribution list will be sent a printed copy of the Final EIR/EA or a Notice of Availability. The Final EIR/EA will be available for review at a number of public libraries (as shown on the distribution list) and on Massport's website (<http://www.massport.com/massport/about-massport/project-environmental-filings/>). Massport will also make available hard copies or CDs of the Final EIR/EA to any additional reviewers upon request.

We look forward to your review of this document. Please feel free to contact me at (617) 568-3524, if you have any questions about this Project or the Final EIR/EA.

Sincerely,

Massachusetts Port Authority



Stewart Dalzell, Deputy Director
Environmental Planning and Permitting
Strategic & Business Planning Department

cc: Distribution List (Chapter 4)
J. Barrera, H. Morrison, D. Gallagher, S. Sleiman, R. King/Massport

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Acronyms

| | |
|-----------------|--|
| A4A | Airlines for America |
| Air, Inc. | Airport Impact Relief, Incorporated |
| ALP | Airport Layout Plan |
| CFR | Code of Federal Regulations |
| CHP | Central Heating Plant |
| CLF | Conservation Law Foundation |
| CMR | Code of Massachusetts Regulations |
| CNG | Compressed natural gas |
| CO ₂ | Carbon dioxide |
| dBA | A-weighted decibels |
| DEIR | Draft Environmental Impact Report |
| DERA | Diesel Emission Reduction Act |
| DOER | Massachusetts Department of Energy Resources |
| EA | Environmental Assessment |
| EDR | Environmental Data Report |
| EEA | Massachusetts Executive Office of Energy and Environmental Affairs |
| ENF | Environmental Notification Form |
| EPA | U.S. Environmental Protection Agency |
| ESPR | Environmental Status and Planning Report |
| EV | Electric vehicle |
| FAA | Federal Aviation Administration |
| FEIR | Final Environmental Impact Report |
| FONSI | Finding of No Significant Impact |
| GSE | Ground service equipment |
| HOV | High-occupancy vehicle |
| IECC | International Energy Conservation Code |
| kWh | Kilowatt-hour |
| LED | Light emitting diode |
| LEED® | Leadership in Energy and Environmental Design |

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| | |
|-----------------|--|
| LIAG | Logan Impact Advisory Group |
| MACP | Metropolitan Area Planning Council |
| MassDEP | Massachusetts Department of Environmental Protection |
| Massport | Massachusetts Port Authority |
| MBTA | Massachusetts Bay Transportation Authority |
| MCP | Massachusetts Contingency Plan |
| MEPA | Massachusetts Environmental Policy Act |
| MWRA | Massachusetts Water Resources Authority |
| NEPA | National Environmental Policy Act |
| NO _x | Nitrogen oxides |
| NPDES | National Pollutant Discharge Elimination System |
| PV | Photovoltaic |
| SIP | State Implementation Plan |
| Tpy | Tons per year |
| ULSD | Ultra Low Sulfur Diesel Fuel |
| USGBC | U.S. Green Building Council |
| VALE | Voluntary Airport Low Emissions |
| VMT | Vehicle miles traveled |
| VOC | Volatile organic compounds |

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East Boston, Massachusetts

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Introduction

1.1 Introduction

This *Final Environmental Impact Report/Environmental Assessment* (FEIR/EA) for the Logan Airport Parking Project (the Proposed Project) was prepared in accordance with the Massachusetts Environmental Policy Act (MEPA), and its implementing regulations (301 CMR 11.00), and the National Environmental Policy Act (NEPA), and the Federal Aviation Administration’s (FAA’s) implementing procedures (Order 1050.1F and Order 5050.4B). This joint state/federal document fulfills the requirements of both MEPA and NEPA.

As per the Massachusetts Secretary of the Executive Office of Energy and Environmental Affairs’ August 2, 2019 Certificate on the Draft EIR/EA (DEIR/EA), which was noticed in the Environmental Monitor on June 10, 2019, this FEIR/EA primarily includes responses to comments filed on the DEIR/EA (see Chapter 2, *Responses to Comments on the DEIR/EA*). It also includes updated mitigation measures (see Chapter 3, *Beneficial Measures/Mitigation*) and updated draft Section 61 Findings (see Appendix C, *Updated Draft Section 61 Findings*). The remaining contents of this FEIR/EA are summarized in Section 1.9, *Contents of this FEIR/EA*. Since the filing of the DEIR/EA, the FAA has provided its draft Finding of No Significant Impact (FONSI). A copy of this is included at the beginning of this FEIR/EA, prior to the Table of Contents.

The Proposed Project is designed to complement the Massachusetts Port Authority’s (Massport’s) other ground access strategies that aim to reduce the number of trips to/from Boston Logan International Airport (the Airport). In addition to Massport’s high-occupancy vehicle (HOV) promotion efforts, the Logan Airport Parking Project serves segments of users that either do not have convenient access to the Massachusetts Bay Transportation Authority (MBTA) system or other HOV modes, or would not use such modes even if access were available. While Logan Airport’s ground access modes are evolving, as evidenced by Ride Apps such as Uber and Lyft, increasing passenger levels continue to result in unmet and growing parking demand. In 2018, the Airport reached a new passenger record of 40.9 million annual air passengers, an upward trend that has continued through 2019.

1.2 Updated Project Description

As the DEIR/EA described, as one element of Massport’s multi-strategy approach to reducing vehicle miles traveled (VMT) and associated air emissions at the Airport, the Authority is proposing the phased construction of 5,000 new commercial parking spaces in structured parking facilities at two on-Airport sites selected with

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Boston Logan International Airport
East Boston, Massachusetts

significant community input. The initial approximately 2,000 spaces would be sited in a new garage on existing surface parking lots in front of Terminal E and the remaining approximately 3,000 spaces would be accommodated at the Economy Garage through an expansion of the existing facility. The Proposed Project includes the following.

New Garage in front of Terminal E

- A new structured multi-story parking garage in the current location of existing surface parking lots in front of Terminal E.
- Two sections located on either side of the pedestrian bridge that connects Terminal E to the Central Garage complex (inclusive of the Central and West Garages). Five parking levels would be placed on the west side and six levels on the east side (see **Figure 1-3**).
- Separated primary access/egress points for public vehicles and limousines along the Terminal E Arrivals Level roadway. Public vehicles would enter the garage just beyond the split with the main terminal roadway and exit on the facility's west side, north of the Central Heating Plant entrance/exit, while limousines would enter and exit at the facility's northeast corner.
- A secondary access point for public vehicles along the Terminal E Arrivals Level roadway on the facility's west side and co-located with the public vehicle exit, to further reduce on-Airport circulation.
- Minor modifications to the Terminal E Arrivals Level roadway to accommodate garage access/egress.¹
- A vehicular bridge connection to the Central Garage complex from the fourth level of the facility's east side to increase Massport operational efficiencies with respect to repositioning vehicles during peak periods.
- Pedestrian circulation accommodations, including three crosswalks connecting the facility to the outer curb at Terminal E and connections to the pedestrian bridge that connects Terminal E to the Central Garage complex.
- Eleven dual-port electric vehicle (EV) charging stations.
- A rooftop solar photovoltaic (PV) system to offset 50 percent of the facility's energy consumption, including all lighting and power required for its EV charging stations. The proposed solar PV system has been expanded from that proposed in the DEIR/EA.
- Infrastructure to allow the future expansion of solar PV to the facility's maximum rooftop potential and the doubling of the initially planned EV charging stations to accommodate future demand; Massport will ensure 150 percent of demand for EV charging stations within the facility at all times.

Economy Garage Expansion

- Three additional parking levels within the facility's existing footprint.

¹ Modifications would incorporate a main entrance along the easterly face at the southern corner of the proposed garage. The entry drive incorporates a pull off that allows emergency vehicles easterly access to the Central Heating Plant via a drive corridor along the garage's southern face. The easterly curb line near the garage's northeast corner allows entrance/egress for limousine parking. The northerly face of the garage would be curbed with raised pedestrian sidewalk access points to/from Terminal E. The westerly curb line would be modified to provide vehicle exit from the garage as well as a recirculation entrance. At the southwest side of the garage, the Central Heating Plant main entrance/egress gate along the Arrivals Level curb line would be modified to shift the point of entry/egress further south.

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- An addition on the facility's south side with a footprint of approximately 18,000 square feet to include both parking spaces and additional vertical circulation.
- Associated improvements to garage entrance/exit plaza and along Prescott Street.²
- The relocation of the existing solar PV system to the top of the facility's new highest level or replacing it with a more efficient system as feasible.
- Infrastructure to allow the future expansion of solar PV to its maximum potential and EV charging stations to accommodate 150 percent of demand within the facility.

Existing site conditions at the Proposed Project Areas (see **Figure 1-1**) are unchanged from that presented in the DEIR/EA. **Figure 1-2** provides an updated site/floor plan of the new garage in front of Terminal E that shows the specific planned locations of the EV charging spaces along with minor alterations to the primary access/egress and emergency fire truck access at the Central Heating Plant. **Figure 1-3** provides the same general massing concept of the new garage in front of Terminal E as the DEIR/EA, while also denoting the facility's major sustainability and resiliency beneficial measures, including the expanded solar PV installation. **Figure 1-4** illustrates the additional parking levels proposed as part of the Economy Garage expansion, which are unchanged from that presented in the DEIR/EA.

1.3 Project Changes Since the DEIR/EA

Through the progression of the preliminary design of the new garage in front of Terminal E and informed by the Secretary's Certificate on the DEIR/EA as well as by comments received from the Massachusetts Department of Energy Resources (DOER), the Proposed Project has undergone changes from its presentation in the DEIR/EA. The following changes pertain solely to the new garage in front of Terminal E, which is expected to generate 40 percent less greenhouse gas emissions compared to the original concept.

- **Expanded solar PV:** As presented in the DEIR/EA, Massport initially proposed a 10,000-square foot solar PV installation on the east side of the new garage in front of Terminal E. This system would be capable of producing approximately 250,000 kilowatt-hours (kWh) per year assuming a panel efficiency of approximately 15 percent. Based on the latest energy model for the proposed garage (see Section 1.4.1, *Energy Consumption*), this level of electricity generation would be enough to offset approximately 95 percent of consumption associated with the garage's interior lighting or about 27 percent of total facility consumption.³

Massport has further evolved facility design with two key results: (1) greater efficiency in facility power demands and (2) increased PV coverage. The current plan is to install an approximately 20,000-square foot solar PV installation on the garage's east side. This expanded solar PV system would be capable of producing approximately 467,000 kWh per year, or about 217,000 kWh per year more than the system initially proposed. Assuming the same panel efficiency, this expanded system would be enough to offset 50 percent of the proposed garage's total energy (i.e., electricity and natural gas) consumption, including all

² Improvements to the existing Economy Garage structure would involve a reconfigured entrance/exit plaza that shifts the entry/egress point easterly along Prescott Street. Roadway improvements would incorporate a garage entry lane after entering Prescott Street from the Service Road.

³ The DEIR/EA reported that solar PV electrical offsets at the new garage in front of Terminal E were estimated at 60 percent of the garage's interior lighting or about 15 percent of total facility consumption. Changes to these estimations reported in this FEIR/EA are primarily due to increased lighting efficiencies.

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lighting and power required for its EV charging stations.⁴ Appendix B, *Solar PV Analysis for the New Garage in Front of Terminal E* discusses the assessments that Massport undertook as part of this decision-making.

- **Increased lighting efficiency:** Massport has further reduced the garage’s interior lighting power density from 0.09 watts per square foot, as presented in the DEIR/EA, to a maximum of 0.05 watts per square foot.
- **Additional EV charging stations:** The DEIR/EA suggested that Massport would install 15 single-port charging stations at the new garage in front of Terminal E. With the evolution of the Proposed Project’s design, Massport is now planning to install 11 double-port stations to accommodate 22 dedicated EV charging parking spaces. The location of these spaces is shown in **Figure 1-2**. As previously mentioned, the facility will be designed to add more EV charging stations based on evolving demand.

To offset a portion of the cost associated with the expansion of solar PV at the new garage in front of Terminal E, Massport no longer anticipates redirecting stormwater collected at the new garage in front of Terminal E to offset a small portion (i.e., about 0.5 percent) of cooling tower water consumption at the Central Heating Plant, but will continue to explore harvesting stormwater at this facility for landscaping or other purposes.

Minor alterations have been made to the primary access/egress and emergency fire truck access at the Central Heating Plant (see **Figure 1-2**). Such changes were made to maximize the efficiency of Central Heating Plant operations and do not have appreciable effects on the Proposed Project or its environmental impact/benefit.




The only significant change to the design of the Economy Garage expansion since the filing of the DEIR/EA pertains to advancing installation of the additional EV charging stations. The additional EV infrastructure has been accelerated to take place at the existing Economy Garage; construction began in 2019. Massport will increase the number of EV charging stations as part of the Economy Garage expansion to accommodate 150 percent of demand, as necessary. As with all its projects and consistent with responsible asset management, Massport will reevaluate the need for the additional 3,000 parking spaces planned as part of the Economy Garage expansion prior to beginning that facility’s design and construction process.

⁴ Both the new garage in front of Terminal E and the Economy Garage expansion will be designed to accommodate the facilities’ respective maximum solar PV potential. They will be constructed based on current building codes, and will not require structural, geotechnical, or seismic retrofits at the time of potential solar PV expansion. Further, appropriate electrical conduits will be installed to allow for the future expansion and integration to the voltage systems.



FIGURE 1-1 Proposed Project Areas

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-  New Garage in Front of Terminal E
-  Economy Garage Expansion
-  Select Roadways



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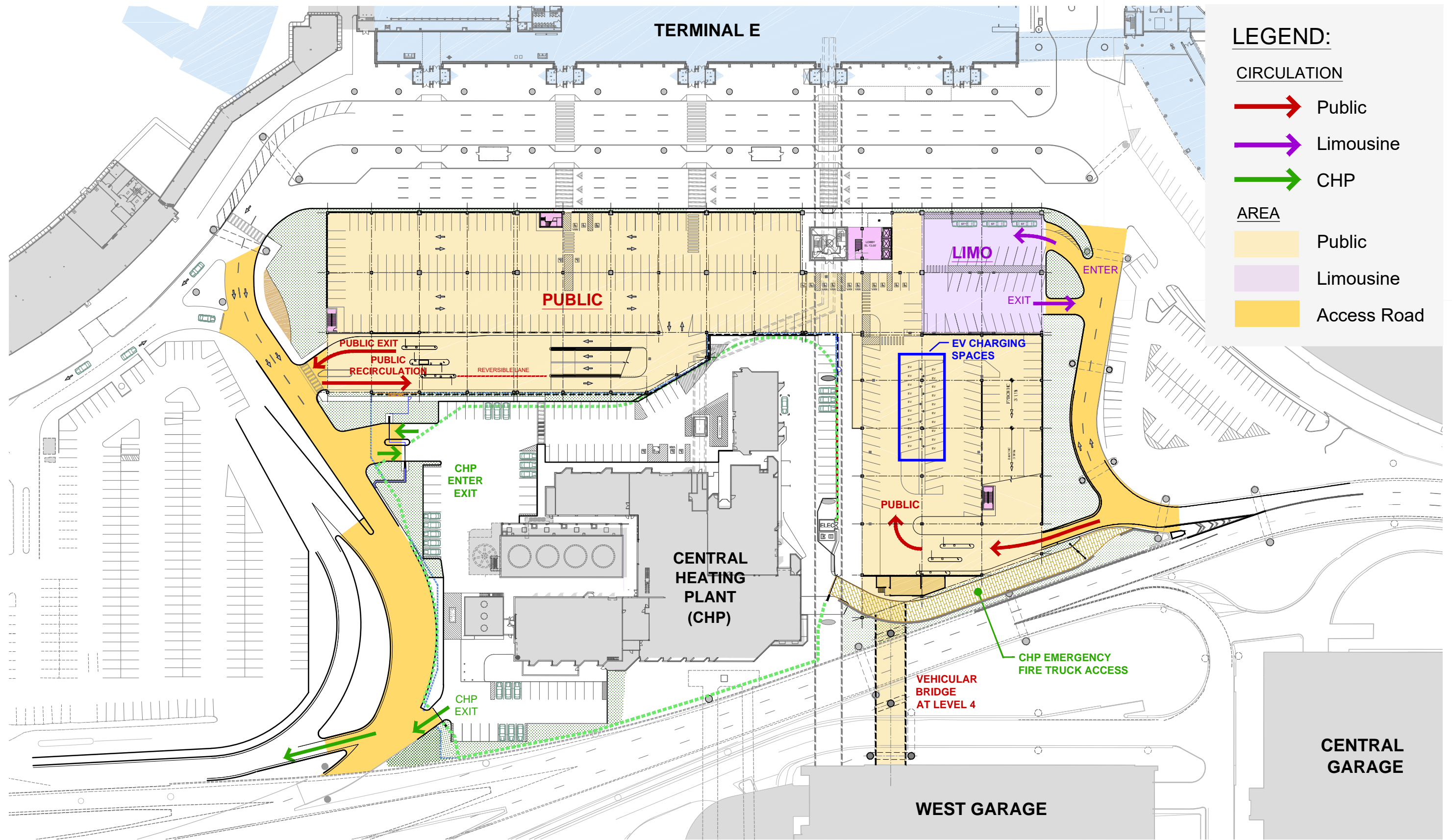


FIGURE 1-2 New Garage in Front of Terminal E: Access and Circulation

Source: WSP

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- ① Various measures from the U.S. Green Building Council's (USGBC) Parksmart rating system (see Chapter 3, Beneficial Measures/Mitigation).
- ② Solar photovoltaic (PV) system capable of offsetting 50 percent of the facility's total energy consumption, including all lighting and electric vehicle (EV) charging stations.
- ③ Infrastructure to allow the future expansion of solar PV to the facility's maximum rooftop potential.
- ④ Reduced lighting power densities from a base of 0.19 watts per square foot to a maximum of 0.05 watts per square foot.
- ⑤ Naturally ventilated, open air parking decks, negating the need for ventilation systems.
- ⑥ Vertical landscaping integrated into the façade.
- ⑦ 11 electric vehicle charging stations (22 ports) with expansion capacity to meet 150 percent of demand.
- ⑧ Reserved parking spaces for alternative fuel vehicles (e.g., EVs) amounting to at least 1 percent of total spaces and assigned preferred parking spaces for other low-emitting and fuel-efficient vehicles amounting to at least another 1 percent of total spaces.
- ⑨ Tire inflation service to promote increased fuel efficiency and vehicle safety.
- ⑩ No- or low-volatile organic compound (VOC) coatings, paints, and sealants.
- ⑪ Compliance with Massport's *Floodproofing Design Guide* and elevated critical equipment and systems above the designated design flood elevations.
- ⑫ Water-conserving ground landscapes that apply the principles of xeriscaping (e.g., use of native plants).

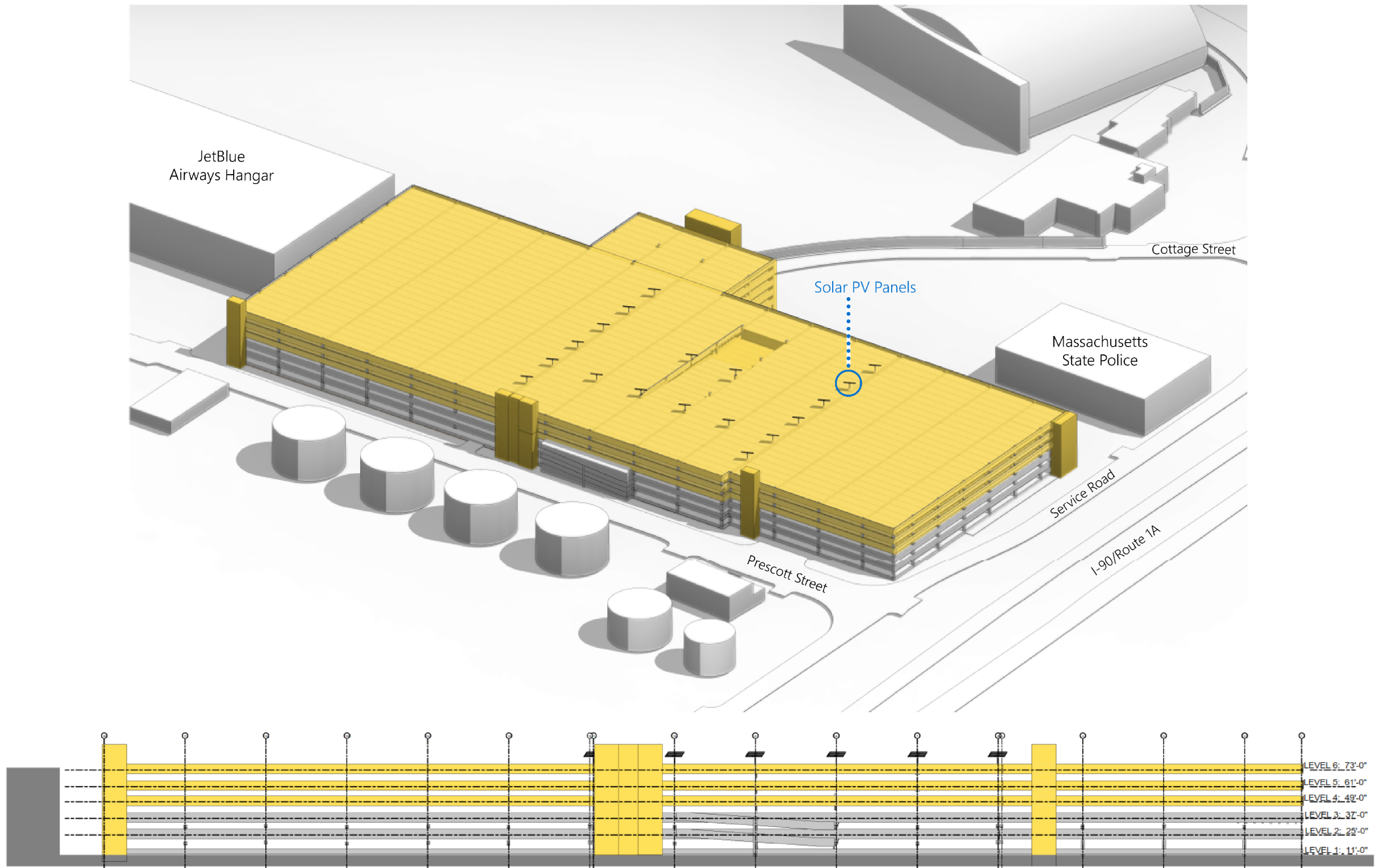
Source: WSP

FIGURE 1-3 New Garage in Front of Terminal E, Proposed Massing and Major Sustainability Enhancements

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Source: WSP

FIGURE 1-4 Economy Garage Expansion (View from the North Side)

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New Parking Levels

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1.4 Updated Project Impact Analyses

Based primarily on the improvements to the Proposed Project as outlined in the previous section, updated (reduced) energy consumption and greenhouse gas emissions estimates for the new garage in front of Terminal E are provided below. With respect to energy consumption, the new garage in front of Terminal E is 32 percent more efficient than the concept presented in the DEIR/EA. In addition, it is expected this facility will generate 40 percent less greenhouse gas emissions compared to the original concept.

The following sections present energy consumption and greenhouse gas emissions estimates for both the new garage in front of Terminal E and the Economy Garage expansion. Though Massport has made no significant changes to the Economy Garage expansion, it will extend energy efficiency measures implemented at the new garage in front of Terminal E to the Economy Garage expansion, where applicable. Such measures would be expected to produce corresponding reductions in that facility’s greenhouse gas emissions.

1.4.1 Energy Consumption

As currently designed, the annual energy consumption of the new garage in front of Terminal E would be approximately 904,000 kWh. This represents a reduction in consumption of approximately 32 percent from the estimated 1.3 million kWh reported in the DEIR/EA. Based on the latest energy model, the updated design case for the new garage in front of Terminal E is approximately 42 percent more efficient than the updated base case, defined by the minimum high standards required by the International Energy Conservation Code (IECC) 2015. The difference between the design and base cases is now 8 percent higher (i.e., more efficient) for the Proposed Project than what the DEIR/EA reported.

Since there is very little conditioned space, the significant improvement to the proposed garage’s energy efficiency is primarily due to more efficient lighting (i.e., 0.05 watts per square foot compared to 0.09 watts per square foot). Section 1.5, *Summary of Beneficial Measures/Mitigation* provides the beneficial measures that Massport has integrated into the Proposed Project that contribute to the proposed garage’s high energy efficiency.

As **Table 1-1** shows, the Proposed Project is approximately 32 percent more energy efficient than the revised base case. This difference is 3 percent higher (i.e., more efficient) than the 29 percent difference reported in the DEIR/EA.

Table 1-1 Updated Project Energy Consumption: Base Case versus Design Case

| Facility | Scenario | Estimated Energy Consumption (kWh/year) ¹ | Estimated Energy Savings (kWh/year) | Percent Reduction from Base Case (%) |
|---------------------------------------|-------------|--|-------------------------------------|--------------------------------------|
| New Garage in Front of Terminal E | Base Case | 1,569,113 | - | - |
| | Design Case | 904,239 | 664,874 | 42.4 |
| Economy Garage Expansion ² | Base Case | 1,726,736 | - | - |
| | Design Case | 1,341,866 | 384,870 | 22.3 |

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Table 1-1 Updated Project Energy Consumption: Base Case versus Design Case (Continued)

| Facility | Scenario | Estimated Energy Consumption (kWh/year) ¹ | Estimated Energy Savings (kWh/year) | Percent Reduction from Base Case (%) |
|----------|-------------|--|-------------------------------------|--------------------------------------|
| Total | Base Case | 3,295,849 | - | - |
| | Design Case | 2,246,105 | 1,049,744 | 31.9 |

Source: WSP.

Notes:

kWh kilowatt hour

1 Estimated energy consumption includes electricity use at both proposed garages as well as natural gas use at the new garage in front of Terminal E.

2 Energy consumption estimates at the Economy Garage expansion remain unchanged from the DEIR/EA though Massport will extend energy efficiency measures implemented at the new garage in front of Terminal E to the Economy Garage expansion, where applicable. Such measures would be expected to produce corresponding reductions in that facility's greenhouse gas emissions.

Concerning the natural gas boilers that would provide hot water to the air handling units in the elevator core at the new garage in front of Terminal E, Massport plans to install a unit model with a design efficiency of 0.95 (i.e., 95 percent annual fuel utilization), compared to a base efficiency of 0.8 (i.e., 80 percent annual fuel utilization). Estimated natural gas consumption associated with these high-efficiency boilers, which is represented in the above calculations, is approximately 6,710 therms per year. This is 15 percent lower (i.e., more efficient) than the base efficiency model at nearly 7,890 therms.

1.4.2 Greenhouse Gas Emissions

Greenhouse gas emissions associated with the Logan Airport Parking Project were calculated in compliance with the *MEPA Greenhouse Gas Emissions Policy and Protocol* and for this NEPA review. **When considering all anticipated emissions savings and impacts, as compared to the No-Action Alternative, the Proposed Project would have a net benefit of 1,049 tons per year (tpy) of carbon dioxide (CO₂). This net benefit is nearly 22 percent greater than that reported in the DEIR/EA, which was just 861 tpy CO₂.**

One of the primary purposes of the Proposed Project is to reduce the number of trips to/from the Airport, and thus reduce associated air emissions. As discussed in the DEIR/EA, with the new garage in front of Terminal E and the Economy Garage expansion operational, Massport would reduce greenhouse gas emissions from mobile sources (i.e., cars and trucks traveling to and from Logan Airport) by 1,812 tpy CO₂ compared to the No-Action Alternative.

As shown in **Table 1-2**, based on the revised energy consumption values presented in the previous section, the new garage in front of Terminal E would be responsible for (either directly in the case of the on-site combustion of natural gas or indirectly in the case of the facility's electricity consumption) approximately 287 tpy CO₂. This compares to the estimated 475 tpy CO₂ presented in the DEIR/EA, a reduction in emissions of nearly 40 percent. Greenhouse gas emissions savings anticipated for the Economy Garage expansion, which at 476 tpy CO₂ is 22.3 percent more efficient than the base case, remains unchanged from the DEIR/EA though Massport will extend the energy efficiency measures it implements at the new garage in front of Terminal E to the Economy Garage expansion, where applicable.

These greenhouse gas emissions benefits do not account for the estimated offsets associated with the expanded solar PV installation at the new garage in front of Terminal E (166 tpy CO₂), which is nearly twice as large as what the DEIR/EA reported (89 tpy CO₂). They also do not include estimated offsets attributable to the

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relocation of the existing solar-panel structures as part of the Economy Garage expansion (28 tpy CO₂), which have not changed since the DEIR/EA. It is anticipated that solar PV at the Economy Garage expansion will be equal to or better than described in this document.

Table 1-2 Updated Parking Garages Stationary Source CO₂ Emissions Estimates

| Building | Scenario | Electricity Consumption (kwh/year) | Natural Gas Consumption (therms/year) | Greenhouse Gas Emissions (tons/year) | Greenhouse Gas Emissions Savings (tons/year) | Percent Reduction (%) |
|---------------------------------------|--------------------------------|------------------------------------|---------------------------------------|--------------------------------------|--|-----------------------|
| New Garage in Front of Terminal E | Base Case | 1,337,953 | 7,889 | 517 | - | - |
| | Design Case | 707,749 | 6,706 | 287 | 230 | 44.5 |
| Economy Garage Expansion ¹ | Base Case | 1,726,736 | - | 613 | - | - |
| | Design Case | 1,341,866 | - | 476 | 137 | 22.3 |
| Total | Base Case | 3,064,689 | 7,889 | 1,130 | - | - |
| | Design Case¹ | 2,049,615 | 6,706 | 763 | 367 | 32.5 |

Source: WSP.

Notes:

CO₂ Carbon Dioxide

kWh kilowatt hour

¹ Energy consumption estimates at the Economy Garage expansion remain unchanged from the DEIR/EA though Massport will extend energy efficiency measures implemented at the new garage in front of Terminal E to the Economy Garage expansion, where applicable. Such measures would be expected to produce corresponding reductions in that facility's greenhouse gas emissions.

1.5 Summary of Beneficial Measures/Mitigation

As detailed in the DEIR/EA, the Proposed Project itself constitutes mitigation, designed to complement Massport's other ground access strategies that aim to reduce the number of trips to/from the Airport, and thus reduce associated air emissions. It would create no long-term adverse environmental impacts; only minor, temporary construction-period impacts are expected to occur.

Table 1-3 provides a high-level summary of the beneficial measures and mitigation commitments that Massport would implement as part of the Logan Airport Parking Project. All measures would be implemented according to the Proposed Project's phased construction schedule or at the start of facility operations. The new garage in front of Terminal E would be operational in 2022 and the Economy Garage expansion would be operational by the end of 2025. Chapter 3, *Beneficial Measures/Mitigation* provides additional details on these measures.

Table 1-3 Summary of Logan Airport Parking Project Beneficial and Mitigation Measures

| Project Planning and Design | |
|---|--|
| <ul style="list-style-type: none"> ■ Accommodating existing and anticipated air passenger demand for parking to reduce the environmentally undesirable drop-off/pick-up mode share and its associated vehicle miles traveled (VMT) and on- and off-Airport air emissions ■ Reusing existing developed areas (i.e., the Project sites avoid undeveloped, greenfield lands) | <ul style="list-style-type: none"> ■ Selecting Project sites with community input that are in areas already used for parking (i.e., not introducing a new use), are on existing bus/shuttle routes, and are separated from nearby residential communities |

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Table 1-3 Summary of Logan Airport Parking Project Beneficial and Mitigation Measures (Continued)

| Project Planning and Design (Continued) | |
|---|--|
| <ul style="list-style-type: none"> ■ Providing added noise barrier benefits to nearby residences and recreation areas, in conjunction with the Terminal E Modernization Project, through the expansion of the existing Economy Garage ■ Providing drivers with important roadway and parking information through internal and external wayfinding systems to reduce on-Airport and in-garage circulation, as well as associated VMT and air emissions. Such systems will include: <ul style="list-style-type: none"> □ Dynamic signage/messaging □ A parking reservation system □ Parking guidance via electronic space occupancy detection ■ Providing convenient passenger access between the new garage in front of Terminal E and the terminal buildings and to the pedestrian bridge that connects Terminal E to the Central Garage complex (which includes the West and Central Garages) | <ul style="list-style-type: none"> ■ Incorporating the following ground access features into the design of the new garage in front of Terminal E: <ul style="list-style-type: none"> □ A secondary entrance for public parkers to reduce on-Airport recirculation and associated VMT □ A vehicular bridge connected to the Central Garage complex to enable more efficient operational movements by Massport's Ground Transportation Unit ■ Relying on existing roadway infrastructure, bus routes, and signage for the Economy Garage expansion ■ Encouraging parkers to pay their fees prior to returning to their vehicles via Massport's pay-by-foot system, which uses automated kiosks to enable the efficient flow of vehicles exiting the garages and reduce vehicle idling and associated air emissions |
| Sustainability and Resiliency | |
| <ul style="list-style-type: none"> ■ Incorporating measures from the U.S. Green Building Council's (USGBC) Parksmart rating system into the Proposed Project's technology, structural design, and operation ■ Reducing lighting power densities from a base of 0.19 watts per square foot to a maximum of 0.05 watts per square foot ■ Installing occupancy sensors and photocells on all applicable interior and exterior lighting ■ Installing programmable thermostats, where applicable (i.e., mechanical/electrical rooms) ■ Conditioning electrical and telecommunications rooms with split system heat pumps capable of operating at or below temperature of 0°F ■ Designing the parking decks to be open air, negating the need for ventilation systems ■ Performing building commissioning in accordance with ASHRAE Guideline 0-2005 and ASHRAE Guideline 1.1-2007 ■ Incorporating a solar photovoltaic (PV) system at the new garage in front of Terminal E capable of offsetting 50 percent of the facility's total energy consumption, including all lighting and power required for its electric vehicle (EV) charging stations ■ Relocating the existing solar PV system at the Economy Garage to the top of the facility's new highest level upon completion of Project construction (the installation of a newer, more efficient system will be evaluated for feasibility as that construction period gets closer) ■ Designing and building the proposed garages to accommodate expanded solar in the future as it becomes more cost effective/feasible ■ Reserving parking spaces for alternative fuel vehicles (e.g., EVs) amounting to at least 1 percent of total spaces and assigning preferred parking spaces for other low-emitting and fuel-efficient vehicles amounting to at least another 1 percent of total spaces ■ Installing 11 EV charging stations (22 ports) in the new garage in front of Terminal E ■ Designing and building the proposed garages to accommodate expanded EV charging infrastructure to accommodate 150 percent of demand | <ul style="list-style-type: none"> ■ Providing tire inflation services for each garage to promote increased fuel efficiency and vehicle safety ■ Integrating vertical landscaping into the façade of the new garage in front of Terminal E ■ Planting water-conserving ground landscapes that apply the principles of xeriscaping (e.g., use of native plants) ■ Specifying water efficient fixtures and faucets in a staff restroom at the new garage in front of Terminal E ■ Applying durable design principles to extend the facilities' lifespan and avoid greenhouse gas emissions caused by future large-scale construction and renovation activities ■ Preparing/adhering to a preventative maintenance plan to extend facility lifespan and avoid greenhouse gas emissions caused by future large-scale construction and renovation activities ■ Installing and applying only no- or low-volatile organic compound (VOC) coatings, paints, and sealants ■ Installing halon-free fire suppression systems in each garage ■ Complying with Massport's <i>Floodproofing Design Guide</i> and elevating critical equipment and systems above the designated design flood elevations ■ Ensuring redundant or back-up power sources to reduce disruption from extreme weather conditions that may cause power outage ■ Performing frequent sweeping (at least monthly) to reduce the need for constant pressure washing and associated water use ■ Implementing an active recycling program to reduce the amount of waste sent to regional landfills/incinerators and to reduce greenhouse gas emissions associated with material disposal ■ Displaying educational materials to convey the facilities' environmentally sustainable design and operations ■ Participating in a recognized sustainable purchasing buying program applicable to non-capital equipment/materials ■ Implementing environmentally safe cleaning supplies and providing necessary training to use, maintain, and dispose of these products |

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Table 1-3 Summary of Logan Airport Parking Project Beneficial and Mitigation Measures (Continued)

| Construction Period Mitigation | |
|--|---|
| <ul style="list-style-type: none"> ■ Providing on-Airport storage areas for construction materials ■ Coordinating the arrival of large construction equipment among various on-Airport projects and limiting their arrival or removal during peak travel hours (both Airport and commuter peaks) ■ Developing specific truck routing and/or staging plans for implementation by the various contractors ■ Requiring construction managers to prepare: <ul style="list-style-type: none"> □ Draft Soil Management Plan □ Draft Stormwater Pollution Prevention Plan □ Draft Management Plan for Dewatering, if needed □ Draft Health and Safety Plan ■ Employing a Construction Waste Management Plan that requires at least 85 percent of materials to be recycled or reused ■ Controlling rodents through routine inspection, monitoring, and treatment ■ Prioritizing the use of construction equipment and materials that are repurposed, reused, or recycled (or contain recycled content), where feasible ■ Prioritizing construction equipment and materials that are sourced regionally (i.e., within 300 miles of the Project sites) to reduce greenhouse gas emissions associated with their transport ■ Using regional (i.e., within 75 miles) labor to the greatest extent practicable ■ Encouraging construction companies to provide off-Airport parking for their employees and to provide shuttle services from these locations (shuttles are required to use the Coughlin Bypass road to access the Airport) ■ Requiring all construction vehicle/equipment to follow anti-idling procedures and all construction managers to provide associated training ■ Requiring the use of low- or zero-emissions equipment, where practicable ■ Requiring the retrofitting of appropriate diesel construction equipment with diesel oxidation catalyst and/or particulate filters ■ Requiring contractors to use Ultra Low Sulfur Diesel Fuel (ULSD) ■ Maintaining low on-site vehicle speeds | <ul style="list-style-type: none"> ■ Deploying air quality and fugitive dust management best practices, such as reducing exposed erodible surface areas through appropriate materials and equipment staging, covering exposed surface areas with pavement or vegetation in an expeditious manner, and stabilizing soil with cover or periodic watering ■ Using and maintaining construction equipment appropriately to avoid unnecessary noise and applying noise-reduction measures to reduce noise from pile driving by at least 5 A-weighted decibels (dBA) below their unmitigated levels⁵ ■ Requiring trucks to access the Project sites by Route 1A, Interstate 90, Coughlin Bypass road, and the main Airport roadway only or other routes in compliance with transportation safety requirements ■ Prohibiting trucks from using local streets ■ Specifying truck routes in contractors' construction specifications ■ Using concrete production and batching plants with access via Route 1A or Interstate 90 ■ Encouraging construction workers to use Massachusetts Bay Transportation Authority (MBTA) transit services, Logan Express, the water shuttle, and other high-occupancy modes of travel ■ Putting into place an Erosion and Sedimentation Control Program, in compliance with the Stormwater Pollution Prevention Plan, to protect water quality and to minimize construction phase impacts to Boston Harbor ■ Deploying spill prevention measures and sedimentation controls throughout the construction phases to prevent pollution from construction equipment and erosion ■ Using the following erosion and sedimentation controls throughout the construction phases: <ul style="list-style-type: none"> □ Perimeter barriers such as straw wattles or compost-filled "silt sock" barriers will be placed around upland work areas to trap sediment transported by runoff before it reaches the drainage system or leaves the construction site □ Existing catch basins within the work sites will be protected with barriers (where appropriate) or silt sacks □ Open soil surfaces will be stabilized within 14 days after grading or construction activities have temporarily or permanently ceased |

Appendix C, *Updated Draft Section 61 Findings* confirms the above beneficial measures and mitigation that Massport commits to incorporating into the Proposed Project, Massport's commitment to provide a self-certification that greenhouse gas emissions reduction measures have been incorporated, and additional ground access improvement, trip reduction, and emissions reduction initiatives.

1.6 Regulatory Requirements

Table 1-4, which updates Table 6-1 of the DEIR/EA, lists the anticipated state and federal permits and other approvals required for the Proposed Project along with their status. The only substantial change to this list is the

⁵ Sound levels from activities associated with the construction of the Proposed Project would be voluntarily consistent with the City of Boston's noise criteria; therefore, no construction noise mitigation is anticipated.

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removal of a modification to Massport’s existing Massachusetts Water Resources Authority (MWRA) Sewer Discharge Permit. Since the filing of the DEIR/EA, Massport coordinated with the MWRA and confirmed that no such modification is required for the Proposed Project. This permit only applies to industrial uses and the Proposed Project is not an industrial use.⁶ Chapter 6, *Regulatory Compliance and Public/Agency Coordination* of the DEIR/EA describes how the Proposed Project will comply with its regulatory requirements.

Table 1-4 Anticipated Permits and Approvals for the Proposed Project

| Issuing Agency | Approval or Permit | Status |
|--|---|---|
| Massachusetts Executive Office of Energy and Environmental Affairs | Secretary’s Certificate under the Massachusetts Environmental Policy Act | Final Environmental Impact Report (FEIR) submitted herein. |
| Federal Aviation Administration (FAA) | Finding of No Significant Impact (FONSI) under the National Environmental Policy Act (NEPA) | FONSI included at the beginning of this Final Environmental Assessment (EA). |
| | Airport Layout Plan Approval | Approval to be issued. |
| | Air Quality General Conformity Determination | Determination made in the Draft EA and restated in the FONSI. ¹ |
| | 14 Code of Federal Regulations Part 77, Form 7460-1 Construction or Alteration Requiring Notice | As required prior to construction. |
| U.S. Environmental Protection Agency Region 1 | National Pollutant Discharge Elimination System (NPDES) Individual Permit | The Proposed Project will meet the standards included in Logan Airport’s individual NPDES permit (No. MA0000787). See Chapter 4, <i>Assessment of Impacts/Environmental Consequences</i> of the DEIR/EA. |
| | NPDES Construction General Permit | A construction-related Stormwater Pollution Prevention Plan will be developed by the contractor. See Chapter 4, <i>Assessment of Impacts/Environmental Consequences</i> of the DEIR/EA. |
| Massachusetts Department of Environmental Protection (MassDEP) | Massachusetts Contingency Plan (MCP) | As required. If a release of hazardous materials is encountered during Project construction, then Massport would address the discovery in accordance with the applicable MCP regulations. See Chapter 4, <i>Assessment of Impacts/ Environmental Consequences</i> of the DEIR/EA. |

Note:

1 As reported in the DEIR/EA in Section 4.5.2, Air Quality, the Proposed Action would be in conformance with the General Conformity Rule, established under the Federal Clean Air Act. Related emissions would be below (i.e., within) de minimis thresholds. Project construction would generate temporary construction vehicle and equipment emissions; however, such emissions would be well within the General Conformity thresholds.

6 Communication between Tim Coffey (MWRA) and Jim Ferrara (WSP) on September 10, 2019.

1.7 Summary of Comments on the DEIR/EA

Eight public comment letters were submitted on the DEIR/EA by the following entities:

- U.S. Environmental Protection Agency (EPA)
- Massachusetts Department of Energy Resources (DOER)
- Massachusetts Department of Environmental Protection (MassDEP)
- Metropolitan Area Planning Council (MAPC)
- Airlines for America (A4A)
- Airport Impact Relief, Incorporated (AIR, Inc.)
- Conservation Law Foundation (CLF)
- John Vitagliano (member of the public/resident)

Massport reviewed the Secretary’s Certificate on the Draft EIR and the public comment letters to delineate specific comments and provide individual responses. These responses to comments are included in Chapter 2, *Responses to Comments on the DEIR/EA* of this FEIR/EA.

The comments received cover a range of topics:

- MEPA process
- Project description
- Purpose and need
- Alternatives analysis
- Regulatory framework
- Environmental impacts/mitigation
- Construction period impacts
- Ground access
- Air quality
- Greenhouse gas emissions reduction
- General sustainability

A number of comments submitted on the DEIR/EA focus on Airport-wide concerns rather than the Proposed Project. Massport addresses Airport-wide comments through the annual Logan Airport Environmental Data Report (EDR) and Environmental Status and Planning Report (ESPR) filings. As described in the Secretary’s Certificate on the DEIR/EA, Massport can address monitoring and reporting on its progress toward achieving its project-specific and Airport-wide ground access strategy goals in future EDRs and ESPRs.

1.8 Ground Access and Trip Reduction Strategy Studies

The number of commercial and employee parking spaces allowed at Logan Airport is regulated by the MassDEP through the Massport/Logan Airport Parking Freeze (310 CMR 7.30), an element of the Massachusetts State Implementation Plan (SIP) under the federal Clean Air Act. In 2016, Massport worked with the MassDEP on an amendment to the Parking Freeze. Massport filed the Environmental Notification Form (ENF) for the Logan Airport Parking Project with MEPA concurrent to MassDEP’s issuance of a draft regulation to amend the Parking Freeze to allow the creation of an additional 5,000 commercial parking spaces at the Airport. After the Certificate on the ENF was issued and following an extensive public involvement process, the MassDEP approved the requested parking increase and issued the amended regulation on June 30, 2018. On December 5, 2017, the EPA proposed a rule approving the revision of the SIP incorporating the amended

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Parking Freeze. The EPA approved the proposed rule on March 6, 2018 and the rule went into effect on April 5, 2018.

Consistent with prior amendments, the 2017 Parking Freeze Amendment specified that Massport was to conduct three ground access studies to aid in the continual development of its Logan Airport Ground Access and Trip Reduction Strategy. Massport published these studies, known as the *Logan Airport Parking Freeze Amendment Ground Access and Trip Reduction Strategy Studies* (MassDEP studies), on September 30, 2019.⁷ These studies are described below, while their Executive Summary and Introduction are provided as Appendix D, *Executive Summary and Introduction to the MassDEP Studies*. The full report can be found on Massport’s website: <http://www.massport.com/media/3370/final-massport-dep-report.pdf>.

- **Study #1: Logan Airport Ground Access HOV Services.** A study of the costs, feasibility, and effectiveness of potential measures to improve HOV access to the Airport. This study considers, among other things, possible improvements to Logan Express bus service and the benefits of increasing MBTA Silver Line buses with service to the Airport.
- **Study #2: Logan Airport Ground Access HOV Pricing.** A study of the costs and pricing for different modes of transportation to and from the Airport to identify a pricing structure and evaluate allocation of revenues generated to promote HOV modes of transportation by air travelers and visitors at the Airport. This study includes an evaluation of short- and long-term parking rates and their influence on different modes of ground access transportation to and from the Airport.
- **Study #3: Logan Airport Ground Access and Reducing Non-HOV Operations.** A study of the feasibility and effectiveness of potential operational measures to reduce non-HOV drop-off/pickup modes of transportation to the Airport, including an evaluation of emerging Ride App and other ride-hailing/ridesharing modes.

Massport has already utilized the results from the three studies to implement several recommendations. These are as follows:

- Relocating Back Bay Logan Express service to the MBTA’s Back Bay Station, eliminating the fare from the Airport to Back Bay, and reducing the fare from Back Bay to the Airport from \$7.50 to \$3.00. This has already resulted in a substantial increase in ridership since the relocation in May 2019.
- Increasing peak-hour frequency on the Logan Express Braintree service from 30-minute to 20-minute headways.
- Advancing a new urban Logan Express service at North Station with free service from the Airport. Buses for the service have been ordered.
- Offering priority access at the Airport Security Line to customers who take Back Bay Logan Express or any mode of water transportation to the Airport.
- Initiating studies of a new suburban Logan Express location with parking.

⁷ Recipients of the 2017 *ESPR*, filed with MEPA on July 30, 2019 and published in the Environmental Monitor on August 7, 2019 – EEA# 3247, were notified of the availability of the MassDEP studies at the time of their publishing. To allow the public adequate time to review these studies, the end date of the comment period for the 2017 *ESPR* was extended from October 11, 2019 to November 18, 2019, an additional 39 days.

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- Implementing a new Ride App drop-off fee of \$3.25 (in addition to the current \$3.25 pick-up fee) and providing a discounted fee of \$1.50 for shared-ride (such as UberPool and Lyft Line) customers.
- Implementing parking pricing that discourages short-term parking that is associated with pick-up and drop-off uses.
- Piloting use of the South Boston Waterfront Emergency Access Ramp to reduce travel time on the MBTA Silver Line (SL1) service to help encourage use.
- Consolidating Ride App operations at dedicated areas on the ground floor of the Central Garage to make it easier for drivers to pick up arriving air passengers after dropping off departing passengers without having to circulate around the Airport.

Specific to the Proposed Project, Massport will utilize the findings of Study #2 to inform parking pricing policies. Beyond this consideration and the above-mentioned measures, the MassDEP studies will continue to help inform the implementation and planning of HOV improvements and Massport’s overall ground access strategy. Such improvements will complement the Proposed Project, but will not diminish the need for this parking as it will serve segments of users that either do not have access to HOV modes or would not use such modes even if access were available. Further, while ground access modes are evolving, there is still growth in parking demand at the Airport with increasing passenger levels.

1.9 Contents of this FEIR/EA

The remainder of this FEIR/EA includes:

Chapter 2, *Responses to Comments on the DEIR/EA*: This chapter provides Massport’s responses to comments received on the DEIR/EA, including those presented in the Secretary’s Certificate and submitted by the public. Comments are presented by source and tagged by topic.

Chapter 3, *Beneficial Measures/Mitigation*: This chapter provides revised documentation of Massport’s beneficial measures and mitigation for the Proposed Project. Such measures are presented as clear commitments and are identified along with their general implementation schedules and responsible parties. Estimated costs for the Proposed Project’s major benefits (e.g., solar PV systems, light-emitting diode [LED] lighting, etc.) are also included, as well as for Massport’s ongoing and planned significant HOV mode share commitments not specifically associated with the Proposed Project.

Chapter 4, *Distribution*: This chapter provides the list of the interested parties and public libraries to which Massport provided a copy of this FEIR/EA.

The following supporting materials to this FEIR/EA are included as appendices:

Appendix A, *Secretary’s Certificate and Public Comments on the DEIR/EA*

Appendix B, *Solar PV Analysis for the New Garage in Front of Terminal E*

Appendix C, *Updated Draft Section 61 Findings*

Appendix D, *Executive Summary and Introduction to the MassDEP Studies*

1.10 FEIR/EA Review Period and Availability

Massport previously described the Logan Airport Parking Project in the Proposed Project's ENF and DEIR/EA. These documents, along with this FEIR/EA and other recent Logan Airport environmental filings, are available at: <http://www.massport.com/massport/about-massport/project-environmental-filings/logan-airport/>.

Following publication of the availability of this FEIR/EA in the *Environmental Monitor* on December 23, 2019, there will be a 30-day public comment period ending January 23, 2020. Community and agency outreach and coordination will continue through Project permitting, design, and construction.

Introducción

1.1 Introducción

Este *Informe Final de Impacto Ambiental/Evaluación Ambiental* (FEIR/EA, por sus siglas en inglés) para el Proyecto de Estacionamiento del Aeropuerto Logan (el Proyecto Propuesto) se preparó de conformidad con la Ley de Políticas Ambientales de Massachusetts (MEPA, por sus siglas en inglés) y con sus normas de implementación (Código de Normas de Massachusetts [CMR, por sus siglas en inglés]) 301 11.00), con la Ley Nacional de Políticas Ambientales (NEPA, por sus siglas en inglés) y con los procedimientos de implementación de la Administración Federal de Aviación (FAA, por sus siglas en inglés) (Resolución 1050.1F y Resolución 5050.4B). Este documento estatal/federal conjunto cumple con los requisitos de la MEPA y de la NEPA.

Según el Certificado del 2 de agosto de 2019 del Secretario de Massachusetts de la Oficina Ejecutiva de Energía y Asuntos Ambientales sobre el Informe de Impacto Ambiental (EIR, por sus siglas en inglés) Provisorio/Evaluación Ambiental (EA) (DEIR/EA, por sus siglas en inglés), que fue publicado en *Environmental Monitor* el 10 de junio de 2019, este FEIR/EA incluye principalmente respuestas a los comentarios presentados en el DEIR/EA (consultar el Capítulo 2, *Respuestas a los comentarios sobre el DEIR/EA*). También incluye medidas de mitigación actualizadas (consultar el Capítulo 3, *Medidas beneficiosas/de mitigación*) y los hallazgos provisionales de la Sección 61 actualizados (consultar el Apéndice C, *Hallazgos provisionales de la Sección 61*). El resto de los contenidos de este FEIR/esta EA se resumen en la Sección 1.9, *Contenidos de este FEIR/esta EA*. Desde la presentación del DEIR/de la EA, la FAA proporcionó su hallazgo de ningún impacto significativo (FONSI, por sus siglas en inglés) provisorio. Se incluye una copia de este al comienzo de este FEIR/EA, antes del índice.

El Proyecto Propuesto está diseñado para complementar otras estrategias de acceso de la Autoridad Portuaria de Massachusetts (Massport) que tienen como fin reducir la cantidad de viajes desde/hacia el Aeropuerto Internacional Logan de Boston (el Aeropuerto). Además de las iniciativas de promoción de los medios de transporte masivos (HOV, por sus siglas en inglés), el proyecto de estacionamiento del Aeropuerto Logan aborda segmentos de usuarios que no cuentan con un acceso práctico al sistema de la Autoridad de Transporte de la Bahía de Massachusetts (MBTA, por sus siglas en inglés) ni a otras modalidades de HOV, o que no usan esas modalidades incluso si dispusieran de acceso a estas. Si bien las modalidades de acceso terrestre al Aeropuerto Logan están evolucionando, como se evidencia por las aplicaciones de transporte, como Uber y Lyft, el aumento de niveles de pasajeros continua resultar en una demanda de estacionamiento insatisfecha. En 2018, el Aeropuerto alcanzó un nuevo récord de pasajeros de 40.9 millones de pasajeros aéreos anuales, una tendencia en aumento que se ha continuado en el año de 2019.

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1.2 Descripción del proyecto actualizada

Como se describió en el DEIR/la EA, como un elemento del enfoque multiestratégico de Massport para reducir las millas viajadas por vehículos (VMT, por sus siglas en inglés) y las emisiones atmosféricas asociadas en el Aeropuerto, la Autoridad propone la construcción en fases de 5,000 nuevas plazas de estacionamiento comerciales en instalaciones de estacionamiento estructuradas en dos emplazamientos en el Aeropuerto seleccionados con importantes aportes de la comunidad. Las 2,000 plazas iniciales se situarían en un nuevo estacionamiento estructurada en la superficie de estacionamiento existente frente a la Terminal E y las aproximadamente 3,000 plazas restantes se alojarían en Economy Garage mediante la ampliación de las instalaciones existentes. El Proyecto Propuesto incluye lo siguiente:

Nuevo estacionamiento frente a la Terminal E

- Un nuevo estacionamiento estructurada de varios pisos, en la ubicación actual de la superficie existente de espacios de estacionamiento frente a la Terminal E.
- Dos tramos situados a ambos lados del puente peatonal que conecta la Terminal E con el complejo de Central Garage (incluidos los estacionamientos Central y West Garage). Se colocarían cinco niveles de estacionamiento en el lado oeste y seis niveles en el lado este (consultar la **Figura 1-3**).
- Puntos de acceso y egreso principales separados para los vehículos públicos y las limusinas junto a la calle del nivel de arribos de la Terminal E. Los vehículos públicos ingresarían al estacionamiento justo después de la división con la calle de la terminal principal en el lado oeste de las instalaciones, al norte del ingreso/de la salida de la planta de calefacción central, mientras que las limusinas ingresarían y egresarían por la esquina noreste de las instalaciones.
- Un punto de acceso secundario para los vehículos públicos junto a la calle del nivel de arribos de la Terminal E en el lado oeste de las instalaciones y ubicada en el mismo lugar que la salida de vehículos públicos, para reducir aún más la circulación dentro del Aeropuerto.
- Modificaciones menores a la calle del nivel de arribos de la Terminal E para adaptar el acceso al estacionamiento y el egreso de este.¹
- Una conexión a través de un puente vehicular con el complejo Central Garage del cuarto nivel del lado este de las instalaciones para aumentar la eficiencia operativa de Massport con respecto a la reubicación de vehículos durante los períodos de máxima actividad.
- Adaptaciones de la circulación peatonal, incluidos tres cruces que conectan las instalaciones con el bordillo exterior de la Terminal E y conexiones con el puente peatonal que conecta la Terminal E con el complejo Central Garage.
- Once estaciones de carga para los vehículos eléctricos (EV, por sus siglas en inglés) de dos puertos.

¹ Las modificaciones incorporarían una entrada principal junto a la cara oriental en la esquina sur del estacionamiento propuesto. La calle de ingreso incorpora un lugar para detenerse y permitir el acceso oriental de los vehículos de emergencia a la planta de calefacción central a través de una calle lateral junto a la cara sur del estacionamiento. La línea de acera oriental cerca de la esquina noreste del estacionamiento permite el ingreso/egreso para el estacionamiento de limusinas. La cara norte del estacionamiento estaría edificada con puntos de acceso a través de una vereda elevada desde y hacia la Terminal E. La línea de edificación occidental se modificaría para proporcionar una salida del estacionamiento para los vehículos, así como una entrada de recirculación. En el lado suroeste del estacionamiento, la puerta de entrada y salida principal de la planta de calefacción central junto a la línea de edificación del nivel de arribos se modificaría para cambiar el punto de ingreso y egreso más al sur.

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- Un sistema de energía solar fotovoltaica (PV, por sus siglas en inglés) en la azotea para compensar el 50 por ciento del consumo energético de las instalaciones, incluida todas las iluminaciones y energía requerida para las estaciones de carga EV. El sistema PV solar propuesto se expandió con respecto al propuesto en el DEIR/la EA.
- Infraestructura para permitir la futura expansión de la energía solar PV hasta el máximo potencial de las instalaciones en la azotea y la duplicación de las estaciones de carga de EV inicialmente planificadas para abastecer demanda futura; Massport aseguraría 150 por ciento de la demanda para las estaciones de carga EV dentro de las instalaciones en todos momentos.

Ampliación de Economy Garage

- Tres niveles de estacionamiento adicionales dentro de la superficie existente de las instalaciones.
- Una adición en la superficie del lado sur de las instalaciones, de aproximadamente 18,000 pies cuadrados para incluir plazas de estacionamiento y circulación vertical adicional.
- Mejoras asociadas a la plaza de ingreso y egreso del estacionamiento, y a lo largo de Prescott Street.²
- Reubicación del sistema de energía solar PV existente a la parte superior del nuevo nivel más alto de las instalaciones o su sustitución por un sistema más eficiente en la medida de lo posible.
- Infraestructura para permitir la futura ampliación de la energía solar PV hasta el máximo potencial y estaciones de carga de EV para abastecer al 150 por ciento de la demanda dentro de las instalaciones.

No se modificaron las condiciones existentes del lugar en las áreas propuestas del proyecto (consultar la **Figura 1-1**) con respecto a las presentadas en el DEIR/la EA. **La figura 1-2** proporciona un plano actualizado del lugar/la planta del nuevo estacionamiento frente a la Terminal E que muestra las ubicaciones específicas previstas de los espacios de carga de vehículos eléctricos junto con menores alteraciones en el acceso/egreso principal y en el acceso para camiones de bomberos de emergencia en la planta de calefacción central. **La figura 1-3** proporciona el mismo concepto general de volumen del nuevo estacionamiento frente a la Terminal E que el DEIR/la EA y denota las mayores medidas beneficiosas de sostenibilidad y resiliencia de las instalaciones, incluida la instalación de energía solar PV ampliada. **La figura 1-4** ilustra los niveles de estacionamiento adicionales propuestos como parte de la ampliación de Economy Garage, que no se han modificado con respecto a los presentados en el DEIR/la EA.

1.3 Cambios en el Proyecto desde el DEIR/la EA

A través de la progresión del diseño preliminar del nuevo estacionamiento frente a la Terminal E e informado por el Certificado del Secretario sobre el DEIR/la EA, así como por los comentarios recibidos del Departamento de Recursos Energéticos de Massachusetts (DOER, por sus siglas en inglés), el Proyecto Propuesto ha sufrido cambios desde su presentación en el DEIR/la EA. Los siguientes cambios corresponden únicamente al nuevo estacionamiento frente la Terminal E, que esta esperado a generar 40 por ciento menos gases de efecto invernadero comparado con el concepto original.

² Las mejoras a la estructura existente de Economy Garage implicarían la reconfiguración de la plaza de ingreso y egreso que movería el punto de ingreso y egreso junto a Prescott Street hacia el lado este. Las mejoras a la calle incorporarían un camino de ingreso al estacionamiento después de ingresar a Prescott Street desde Service Road.

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- **Energía solar PV ampliada:** Tal como se presentó en el DEIR/la EA, Massport propuso inicialmente una instalación de energía solar PV de 10,000 pies cuadrados en el lado este del nuevo estacionamiento frente a la Terminal E. Este sistema sería capaz de producir aproximadamente 250,000 kilovatios-hora (kWh) por año suponiendo una eficiencia del panel de aproximadamente el 15 por ciento. En función del modelo energético más reciente para el estacionamiento propuesto (consultar la Sección 1.4.1, *Consumo energético*), este nivel de generación de electricidad sería suficiente para compensar aproximadamente el 95 por ciento del consumo asociado con la iluminación interior del estacionamiento o aproximadamente el 27 por ciento del consumo total de las instalaciones.³

Massport ha desarrollado aún más el diseño de las instalaciones con dos resultados clave: (1) mayor eficiencia en las demandas de energía de las instalaciones y (2) mayor cobertura PV. El plan actual consiste en una instalación de aproximadamente 20,000 pies cuadrado de energía solar PV en el lado este del estacionamiento. Este sistema de energía solar PV ampliado podría producir aproximadamente 467,000 kWh al año o alrededor de 217,000 kWh al año más que el sistema propuesto inicialmente. Suponiendo la misma eficiencia del panel, este sistema ampliado sería suficiente para compensar el 50 por ciento del consumo total de energía del estacionamiento propuesto (es decir, electricidad y gas natural), incluida todas las iluminaciones y energía requerida para las estaciones de carga EV.⁴ En el Apéndice B, *Análisis de la energía solar PV para el nuevo estacionamiento frente a la Terminal E* se analizan las evaluaciones que Massport llevó a cabo como parte de esta toma de decisiones.

- **Mayor eficiencia lumínica:** Massport ha reducido aún más la densidad de potencia de iluminación interior del estacionamiento de 0.09 vatios por pie cuadrado, tal como se presenta en el DEIR/la EA, a un máximo de 0.05 vatios por pie cuadrado.
- **Estaciones de carga para EV adicionales:** El DEIR/La EA indicó que Massport instalaría 15 estaciones de carga de un solo puerto en el nuevo estacionamiento frente a la Terminal E. Con la evolución del diseño del Proyecto Propuesto, Massport ahora planea instalar 11 estaciones de doble puerto para abastecer las 22 plazas de estacionamiento específicamente para la carga de EV. La ubicación de estas plazas se muestra en la **Figura 1-2**. Como se mencionó previamente, las instalaciones se diseñarán para agregar más estaciones de carga de EV en función de la evolución de la demanda.

Para compensar una parte del costo asociado con la ampliación de la energía solar PV en el nuevo estacionamiento frente a la Terminal E, Massport ya no prevé reenviar las aguas pluviales recogidas en el nuevo estacionamiento frente a la Terminal E para compensar una pequeña parte (es decir, alrededor del 0.5 %) del consumo de agua de la torre de refrigeración en la planta de calefacción central, pero continuaremos investigar la recolección de aguas pluviales en esta instalación para los paisajes u otros objetivos.

Se han realizado pequeñas modificaciones en el acceso y en el egreso principales y en el acceso a camiones de bomberos de emergencia en la planta de calefacción central (consultar la **Figura 1-2**). Se realizaron estos cambios

³ El DEIR/La EA informó que se calculaba que las compensaciones eléctricas solares PV en el nuevo estacionamiento frente a la Terminal E eran del 60 por ciento de la iluminación interior del estacionamiento o alrededor del 15 por ciento del consumo total de las instalaciones. Los cambios en estos cálculos informados en este FEIR/esta EA se deben principalmente al aumento de las eficiencias en la iluminación.

⁴ Tanto el nuevo estacionamiento frente a la Terminal E como la ampliación de Economy Garage se diseñarán para tener capacidad para el potencial de energía solar PV máximo correspondiente de las instalaciones. Se construirán sobre la base de los códigos de construcción actuales y no requerirán actualizaciones estructurales, geotécnicas o sísmicas en el momento de la posible ampliación de la energía solar PV. Además, se instalarán conductos eléctricos apropiados para permitir la futura ampliación e integración de los sistemas de tensión.

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para maximizar la eficiencia de las operaciones de la planta de calefacción central y no tienen efectos apreciables en el Proyecto Propuesto ni en su impacto/beneficio ambiental.

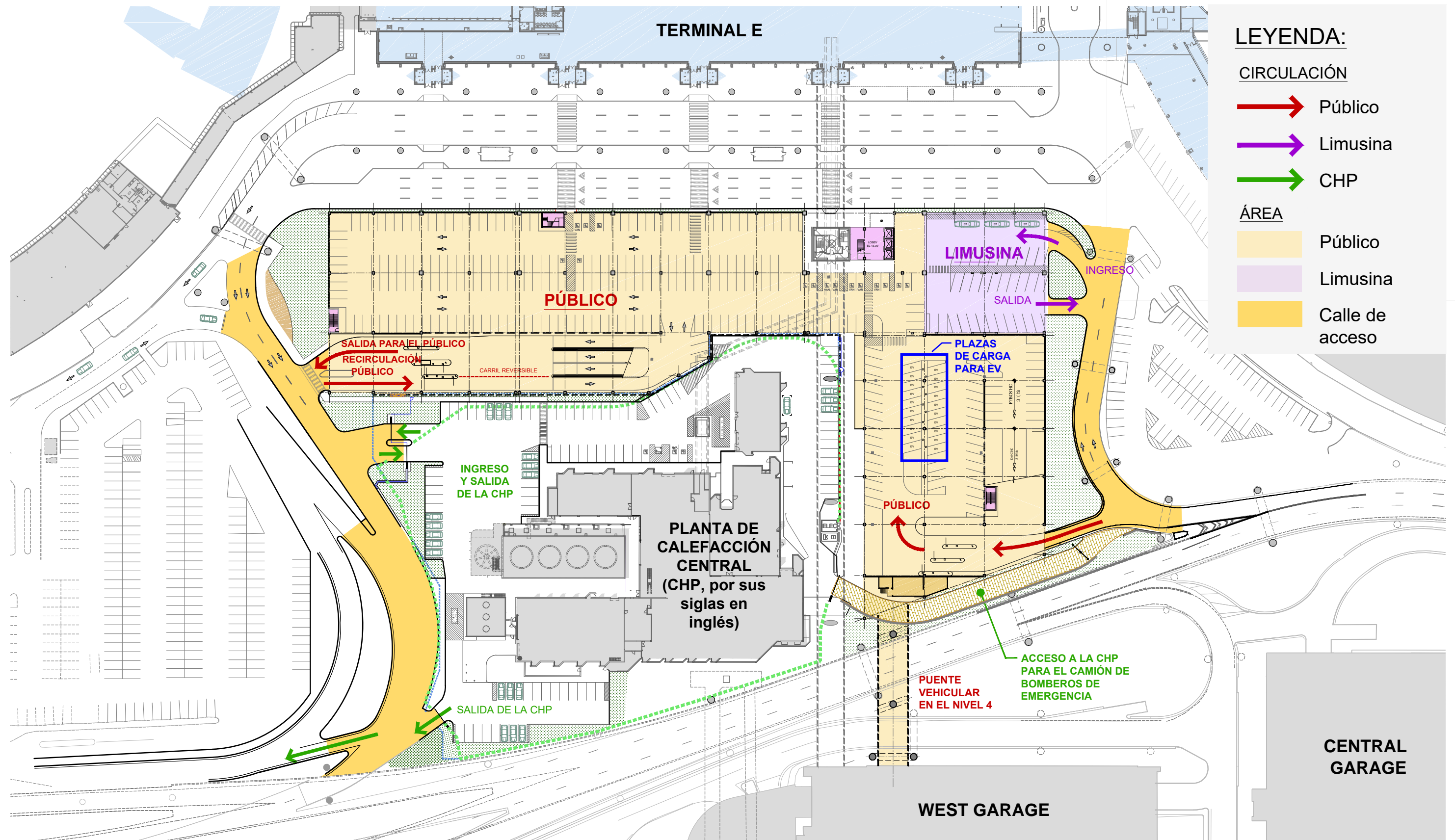
El único cambio significativo en el diseño de la ampliación de Economy Garage desde la presentación del DEIR/de la EA se refiere a la instalación en progreso de las estaciones de carga de EV adicionales. La infraestructura adicional de EV se ha adelantado para realizarse en el existente Economy Garage; construcción empezó en el año 2019. Massport aumentará el número de estaciones de carga de EV como parte de la ampliación de Economy Garage para abastecer al 150 por ciento de la demanda, según sea necesario. Al igual que con todos sus proyectos y en congruencia con una gestión responsable de activos, Massport reevaluará la necesidad de las 3,000 plazas de estacionamiento adicionales previstas como parte de la ampliación de Economy Garage antes de comenzar el proceso de diseño y construcción de esas instalaciones.



FIGURA 1-1 **Áreas propuestas del proyecto** **Proyecto de Estacionamiento del Aeropuerto Logan**

-  Nuevo estacionamiento frente a la Terminal E
-  Expansión de Economy Garage
-  Calles elegidas





Fuente: WSP

FIGURA 1-2 Nuevo estacionamiento frente a la Terminal E: acceso y circulación

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- ① Diferentes medidas del sistema de calificación del Consejo de Construcción Ecológica de los EE. UU. (USGBC, por sus siglas en inglés) (consultar el Capítulo 3, Medidas beneficiosas/de mitigación)
- ② Incorporar un sistema de energía solar fotovoltaica (PV) en el nuevo estacionamiento frente a la Terminal E que pueda compensar el 50 por ciento del consumo energético total de las instalaciones, incluida todas las iluminaciones y energía requerida para las estaciones de carga EV.
- ③ Infraestructura para permitir la futura ampliación de la energía solar PV al máximo potencial de la instalación en los techos
- ④ Reducción de las densidades de potencia de la iluminación de una base de 0.19 vatios por pie cuadrado a un máximo de 0.05 vatios por pie cuadrado.
- ⑤ Planta de estacionamiento al aire libre con ventilación natural, lo que elimina la necesidad de sistemas de ventilación mecánica
- ⑥ Paisajismo vertical integrado en la fachada
- ⑦ Once estaciones para carga de vehículos eléctricos (22 puertos) con capacidad de ampliación para abastecer al 150 por ciento de la demanda
- ⑧ Reserva de plazas de estacionamiento para vehículos con combustible alternativo (p. ej., vehículos eléctricos) que alcancen al menos el 1 por ciento del total de las plazas y asignación de plazas de estacionamiento preferencial para otros vehículos de bajas emisiones y que ahorran combustible, que alcancen al menos otro 1 por ciento del total de las plazas.
- ⑨ Proporcionar servicios para el inflado de neumáticos para cada estacionamiento para fomentar la eficiencia del combustible y la seguridad de los vehículos.
- ⑩ Revestimientos, pinturas y selladores sin compuestos volátiles orgánicos (VOC) o con baja cantidad de estos.
- ⑪ Cumplimiento con la Guía de diseño a prueba de inundaciones de Massport, y elevación del equipo y de los sistemas críticos por encima del nivel de diseño de inundación.
- ⑫ Paisajes con vegetación para la conservación del agua que apliquen los principios de la xerojardinería (p. ej., el uso de plantas nativas).



Fuente: WSP

Figura 1-3 Nuevo estacionamiento frente a la Terminal E: volumen propuesto y mejores sustanciales de sostenibilidad

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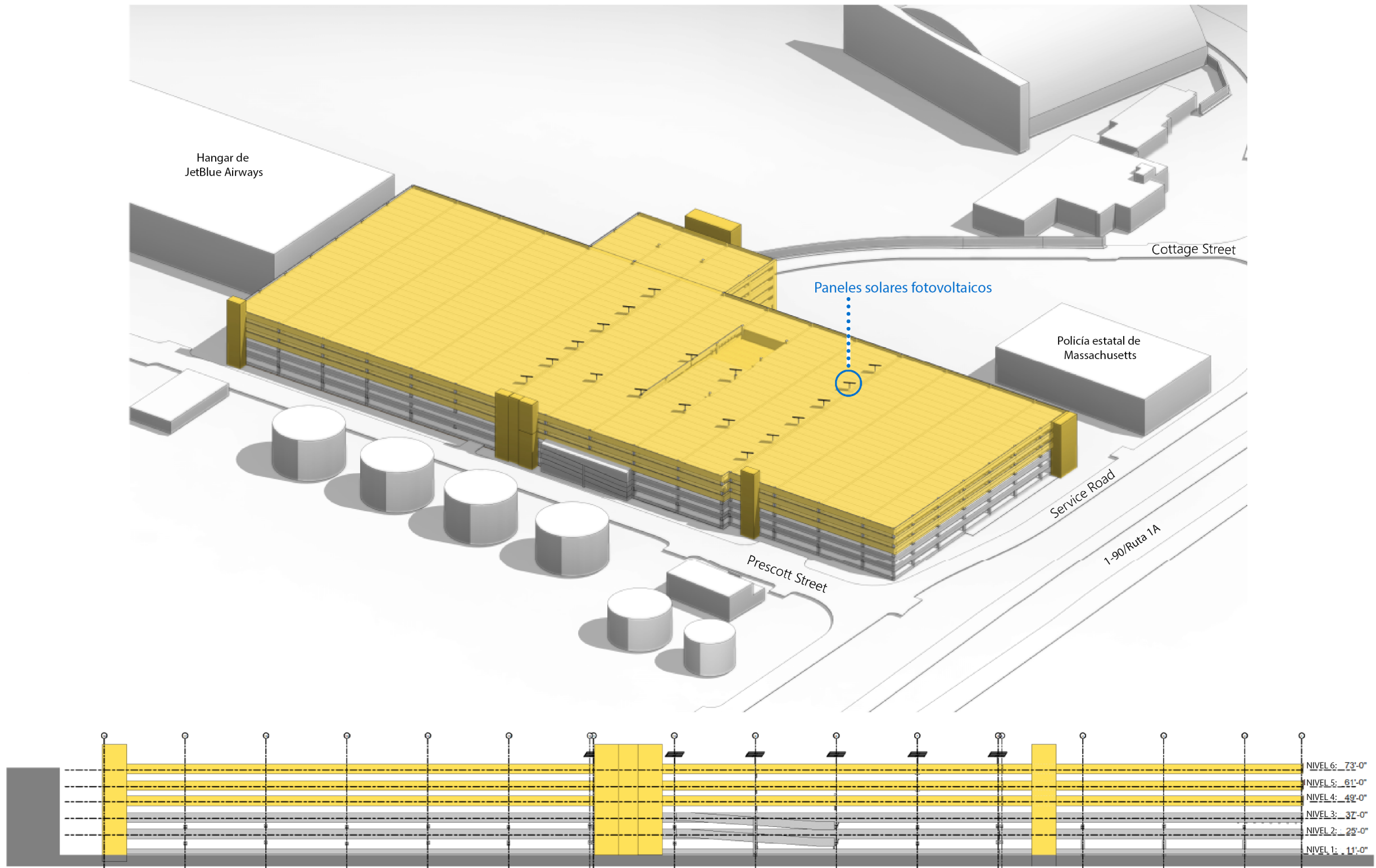


FIGURA 1-4 Expansión de Economy Garage (vista del lado norte)

Proyecto de Estacionamiento del Aeropuerto Logan

Fuente: WSP

Nuevos niveles de estacionamiento

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1.4 Análisis actualizado del impacto del Proyecto

En función de las mejoras introducidas en el Proyecto Propuesto, como se describe en la sección anterior, a continuación se presentan los cálculos actualizados (reducidos) del consumo energético y de las emisiones de gases de efecto invernadero para el nuevo estacionamiento frente a la Terminal E. En cuanto al consumo energético, el nuevo estacionamiento frente a la Terminal E es un 32 por ciento más eficiente que el concepto presentado en el DEIR/la EA. Además, se prevé que estas instalaciones generarán un 40% menos de emisiones de gases de efecto invernadero en comparación con el concepto original.

En las siguientes secciones se presentan los cálculos de consumo de energía y de emisiones de gases de efecto invernadero tanto para el nuevo estacionamiento frente a la Terminal E como para la ampliación de Economy Garage. Aunque Massport no ha realizado cambios significativos en la ampliación de Economy Garage, ampliará las medidas de eficiencia energética implementadas en el nuevo estacionamiento frente a la Terminal E a la ampliación de Economy Garage, cuando corresponda. Se prevé que estas medidas produzcan las reducciones correspondientes en las emisiones de gases de efecto invernadero en esas instalaciones.

1.4.1 Consumo energético

Tal como se ha diseñado actualmente, el consumo energético anual del nuevo estacionamiento frente a la Terminal E sería de aproximadamente 904,000 kWh. Esto representa una reducción en el consumo de aproximadamente el 32 por ciento de los 1.3 millones kWh informados en el DEIR/la EA. En función del modelo energético más reciente, el caso de diseño actualizado para el nuevo estacionamiento frente a la Terminal E es aproximadamente un 42 por ciento más eficiente que el caso base actualizado, definido por los altos estándares mínimos exigidos por el Código Internacional de Conservación de la Energía (IECC, por sus siglas en inglés) del 2015. La diferencia entre el diseño y los casos de base ahora es un 8 por ciento más alta (es decir, más eficiente) para el Proyecto Propuesto que lo informado por el DEIR/la EA.

Ya que el espacio acondicionado es muy pequeño, la mejora significativa a la eficiencia energética del estacionamiento propuesto se debe principalmente a una iluminación más eficiente (es decir, 0.05 watts por pie cuadrado en comparación con 0.09 watts por pie cuadrado). La Sección 1.5, *Resumen de Medidas beneficiosas/de mitigación* proporciona las medidas beneficiosas que Massport ha integrado en el Proyecto Propuesto que contribuyen a la alta eficiencia energética del estacionamiento propuesto.

Como muestra la **Tabla 1-1**, el Proyecto Propuesto es aproximadamente un 32 por ciento más eficiente que el caso base revisado. Esta diferencia es un 3 por ciento mayor (es decir, más eficiente) que la diferencia del 29 por ciento informada en el DEIR/la EA.

Tabla 1-1 Consumo energético del Proyecto actualizado: Caso base frente al caso de diseño

| Instalaciones | Supuesto | Consumo energético estimado (kWh/año)¹ | Ahorros energéticos estimados (kWh/año) | Reducción porcentual del caso base (%) |
|--|-----------------|--|--|---|
| Nuevo estacionamiento frente a la Terminal E | Caso base | 1,569,113 | - | - |
| | Caso de diseño | 904,239 | 664,874 | 42.4 |

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Tabla 1-1 Consumo energético del Proyecto actualizado: Caso base frente al caso de diseño (cont.)

| Instalaciones | Supuesto | Consumo energético estimado (kWh/año)¹ | Ahorros energéticos estimados (kWh/año) | Reducción porcentual del caso base (%) |
|---|-----------------------|--|--|---|
| Ampliación de Economy Garage ² | Caso base | 1,726,736 | - | - |
| | Caso de diseño | 1,341,866 | 384,870 | 22.3 |
| Total | Caso base | 3,295,849 | - | - |
| | Caso de diseño | 2,246,105 | 1,049,744 | 31.9 |

Fuente: WSP.

Notas:

kWh kilovatio-hora

- 1 El consumo energético estimado incluye el uso de la electricidad en ambos estacionamientos propuestos así como el uso del gas natural en el nuevo estacionamiento frente a la Terminal E.
- 2 Los cálculos del consumo energético de la ampliación de Economy Garage no han sufrido cambios con respecto al DEIR/la EA, aunque Massport ampliará las medidas de eficiencia energética implementadas en el nuevo estacionamiento frente a la Terminal E a la ampliación de Economy Garage, cuando corresponda. Se prevé que estas medidas produzcan las reducciones correspondientes en las emisiones de gases de efecto invernadero en esas instalaciones.

En cuanto a las calderas de gas natural que proporcionarían agua caliente a las unidades de tratamiento de aire en el núcleo del ascensor del nuevo estacionamiento frente a la Terminal E, Massport planea instalar un modelo de unidad con una eficiencia de diseño de 0.95 (es decir, un 95 % de utilización anual de combustible), en comparación con una eficiencia básica de 0.8 (es decir, 80 % de utilización anual de combustible). El consumo estimado de gas natural asociado con estas calderas de alta eficiencia, que se representa en los cálculos anteriores, es de aproximadamente 6,710 termias por año. Esto es un 15 por ciento más bajo (es decir, más eficiente) que el modelo de eficiencia base con casi 7,890 termias.

1.4.2 Emisiones de gases de efecto invernadero

Las emisiones de gases de efecto invernadero asociadas con el Proyecto de estacionamiento del Aeropuerto Logan se calcularon de conformidad con la *Política y Protocolo para las Emisiones de Gases de Efecto Invernadero de la MEPA* y para esta revisión de la NEPA. **Al considerar todos los ahorros e impactos previstos en las emisiones, en comparación con la alternativa de no realizar ninguna acción, el Proyecto Propuesto tendría un beneficio neto de 1,049 toneladas anuales (tpy, por sus siglas en inglés) de dióxido de carbono (CO₂). Este beneficio neto es prácticamente un 22 por ciento mayor que el informado en el DEIR/la EA, que fue solo 861 tpy de CO₂.**

Uno de los objetivos principales del Proyecto Propuesto es reducir la cantidad de viajes desde/hacia el aeropuerto y, de esta forma, reducir las emisiones atmosféricas asociadas. Como se analizó en el DEIR/la EA, con el nuevo estacionamiento frente a la Terminal E y la expansión de Economy Garage en funcionamiento, Massport reduciría las emisiones de gases de efecto invernadero de fuentes móviles (es decir, automóviles y camiones que viajan desde y hacia el Aeropuerto Logan) en 1,812 tpy de CO₂ en comparación con la alternativa de no realizar ninguna acción.

Como se indica en la **Tabla 1-2**, en función de los valores revisados de consumo energético presentados en la sección anterior, el nuevo estacionamiento frente a la Terminal E sería responsable (ya sea directamente en el

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caso de la combustión in situ de gas natural o indirectamente en el caso del consumo de electricidad de las instalaciones) de aproximadamente 287 tpy de CO₂. Esto comparado con las 475 tpy de Co₂ presentadas en el DEIR/la EA representa una reducción de las emisiones de prácticamente el 40 por ciento. El ahorro de emisiones de gases de efecto invernadero previsto para la expansión de Economy Garage, que a 476 tpy de CO₂ es un 22,3 por ciento más eficiente que el caso base, se mantiene sin cambios con respecto al DEIR/la EA, aunque Massport ampliará las medidas de eficiencia energética que implementará en el nuevo estacionamiento frente a la Terminal E a la ampliación de Economy Garage, cuando corresponda.

Estos beneficios de las emisiones de gases de efecto invernadero no tienen en cuenta las compensaciones estimadas asociadas con la ampliación de la instalación de energía solar PV en el nuevo estacionamiento frente a la Terminal E (166 tpy de CO₂), que es casi el doble de lo que se informó en el DEIR/la EA (89 tpy de CO₂). Tampoco incluyen las compensaciones estimadas atribuibles a la reubicación de las estructuras existentes de paneles solares como parte de la ampliación de Economy Garage (28 tpy de CO₂), que no han cambiado desde el DEIR/la EA. Se prevé que la energía solar PV de la ampliación de Economy Garage será igual o mejor que la descrita en este documento.

Tabla 1-2 Cálculos actualizados de las emisiones de CO₂ de fuentes estacionarias en los estacionamientos

| Edificio | Supuesto | Consumo de electricidad (kWh/año) | Consumo de gas natural (termias/año) | Emisiones de gases de efecto invernadero (toneladas/año) | Ahorros de emisiones de gases de efecto invernadero (toneladas/año) | Porcentaje de reducción (%) |
|--|-----------------------------------|--|---|---|--|------------------------------------|
| Nuevo estacionamiento frente a la Terminal E | Caso base | 1,337,953 | 7,889 | 517 | - | - |
| | Caso de diseño | 707,749 | 6,706 | 287 | 230 | 44.5 |
| Ampliación de Economy Garage ¹ | Caso base | 1,726,736 | - | 613 | - | - |
| | Caso de diseño | 1,341,866 | - | 476 | 137 | 22.3 |
| Total | Caso base | 3,064,689 | 7,889 | 1,130 | - | - |
| | Caso de diseño¹ | 2,049,615 | 6,706 | 763 | 367 | 32.5 |

Fuente: WSP.

Notas:

CO₂ dióxido de carbono

kWh kilovatio-hora

1 Los cálculos del consumo energético de la ampliación de Economy Garage no han sufrido cambios con respecto al DEIR/la EA, aunque Massport ampliará las medidas de eficiencia energética implementadas en el nuevo estacionamiento frente a la Terminal E a la ampliación de Economy Garage, cuando corresponda. Se prevé que estas medidas produzcan las reducciones correspondientes en las emisiones de gases de efecto invernadero en esas instalaciones.

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1.5 Resumen de medidas beneficiosas/de mitigación

Como se detalla en el DEIR/la EA, el Proyecto Propuesto en sí mismo constituye mitigación, diseñado para complementar otras estrategias de acceso terrestre de Massport que tienen como objetivo reducir el número de viajes desde/hacia el aeropuerto y así reducir las emisiones atmosféricas asociadas. No produciría efectos ambientales adversos a largo plazo; solo se espera que ocurran impactos menores y temporales durante el período de construcción.

La **Tabla 1-3** brinda un resumen de alto nivel de las medidas beneficiosas y de los compromisos de mitigación que Massport implementaría como parte del Proyecto de Estacionamiento del Aeropuerto Logan. Todas las medidas se implementarían de acuerdo con el cronograma de construcción en fases del Proyecto Propuesto o cuando comiencen las operaciones de las instalaciones. El nuevo estacionamiento frente a la Terminal E estaría en funcionamiento en 2022 y la ampliación de Economy Garage estaría en funcionamiento en 2025. En el Capítulo 3, *Medidas beneficiosas/de mitigación*, se proporcionan detalles adicionales sobre estas medidas.

Tabla 1-3, Resumen de las medidas beneficiosas y de mitigación del Proyecto de Estacionamiento del Aeropuerto Logan

Planificación y diseño del Proyecto

- Satisfacer la demanda de estacionamiento existente y prevista de los pasajeros aéreos, para reducir la modalidad de traslado particular para recoger o dejar pasajeros, que es perjudicial para el ambiente, y las millas viajadas por vehículos (VMT) asociadas a esto, y las emisiones atmosféricas dentro y fuera del Aeropuerto.
- Reutilizar las áreas desarrolladas existentes (es decir, en los lugares del Proyecto evitan terrenos no edificados, sin desarrollar).
- Seleccionar lugares para el proyecto con el aporte de la comunidad, que se encuentren en áreas que ya se usen para estacionamiento (es decir, no introducir un nuevo uso), que se encuentren en las rutas actuales de los autobuses/servicios de enlace y que estén separados de las comunidades residenciales cercanas.
- Brindar más beneficios de barrera acústica a las residencias cercanas y a las áreas de recreación, junto con el proyecto de modernización de la Terminal E, a través de la expansión de Economy Garage, existente.
- Brindar a los conductores importante información sobre calles y estacionamientos a través de sistemas de señalización internos y externos para reducir la circulación dentro del aeropuerto y del estacionamiento, así como las VMT y las emisiones atmosféricas. Dichos sistemas incluirán lo siguiente:
 - Señalización/Mensajes dinámicos
 - Un sistema de reserva de estacionamiento
 - Direcciones para el estacionamiento a través de la detección electrónica de las plazas ocupadas
- Brindar prácticos accesos para los pasajeros entre el nuevo estacionamiento frente a la Terminal E y los edificios de la terminal, y con el puente peatonal que conecta la Terminal E con el complejo Central Garage (que incluye West Garage y Central Garage).
- Incorporar las siguientes características de acceso terrestre al diseño del nuevo estacionamiento frente a la Terminal E:
 - Una segunda entrada para los conductores particulares para reducir la recirculación dentro del aeropuerto y las VMT asociadas.
 - Un puente vehicular conectado con el complejo Central Garage para que la Unidad de Transporte Terrestre de Massport pueda realizar movimientos operativos más eficientes.
- Basarse en la infraestructura de las calles, en las rutas de los autobuses y en las señalizaciones existentes para la ampliación de Economy Garage
- Alentar a las personas que utilizan el estacionamiento a que paguen las tarifas antes de regresar a los vehículos, a través del sistema de pago peatonal, que usa cabinas automáticas para permitir el flujo eficiente de vehículos en los estacionamientos existentes y para reducir los vehículos en marcha y las emisiones atmosféricas asociadas.

Sustentabilidad y resiliencia

- Incorporar medidas del sistema de calificación del Consejo de construcción ecológica de los EE. UU. (USGBC, por sus siglas en inglés) en la tecnología, en el diseño estructural y en la operación del Proyecto Propuesto.
- Reducir las densidades de potencia de la iluminación de una base de 0.19 vatios por pie cuadrado a un máximo de 0.05 vatios por pie cuadrado.

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Tabla 1-3, Resumen de las medidas beneficiosas y de mitigación del Proyecto de Estacionamiento del Aeropuerto Logan (cont.)

Sustentabilidad y resiliencia (cont.)

- Instalar sensores de ocupación y fotocélulas en todas las luminarias interiores y exteriores correspondientes.
- Instalar termostatos programables, en donde corresponda (p. ej., cuarto de maquinaria/sala eléctrica).
- Acondicionar las salas eléctricas y de telecomunicaciones con bombas de calor con sistemas separados capaces de funcionar a una temperatura de 0 °F o inferior a 0 °F.
- Diseñar las plantas de estacionamiento para que sean al aire libre y así evitar la necesidad de sistemas de ventilación.
- Puesta en marcha del edificio de conformidad con las Pautas 0-2005 y 1.1.1-2007 de la Sociedad Americana de Ingenieros de Calefacción, Refrigeración y Aire Acondicionado (American Society of Heating, Refrigerating and Air-Conditioning Engineers, ASHRAE).
- Incorporar un sistema de energía solar fotovoltaica (PV) en el nuevo estacionamiento frente a la Terminal E que pueda compensar el 50 por ciento del consumo energético total de las instalaciones, incluida todas las iluminaciones y energía requerida para las estaciones de carga EV.
- Reubicar el sistema de energía solar PV existente en Economy Garage en la parte superior del nuevo nivel más alto de las instalaciones, tras la finalización de la construcción del Proyecto (se evaluará la posibilidad de instalar un nuevo sistema más eficiente más cerca de ese período de la construcción).
- Diseñar y construir los estacionamientos propuestos para tener capacidad para la ampliación de la energía solar en el futuro cuando se vuelva más rentable/factible.
- Reservar espacios de estacionamiento para vehículos con combustible alternativo (p. ej., EV) que alcancen al menos el 1 por ciento del total de las plazas y asignar plazas de estacionamiento preferencial para otros vehículos de bajas emisiones y que ahorran combustible, que alcancen al menos otro 1 por ciento del total de las plazas.
- Instalar 11 estaciones de carga para EV (22 puertos) en el nuevo estacionamiento frente a la Terminal E.
- Diseñar y construir los estacionamientos propuestos para tener capacidad para la infraestructura de carga de vehículos eléctricos ampliada para satisfacer el 150 por ciento de la demanda.
- Proporcionar servicios para el inflado de neumáticos para cada estacionamiento para fomentar la eficiencia del combustible y la seguridad de los vehículos
- Integrar paisaje vertical en la fachada del nuevo estacionamiento frente a la Terminal E.
- Incorporar paisajes con vegetación para la conservación del agua que apliquen los principios de la xerojardinería (p. ej., el uso de plantas nativas).
- Especificar accesorios y grifos eficientes en el sanitario de los empleados en el nuevo estacionamiento frente a la Terminal E.
- Utilizar principios de diseño durable para extender la vida útil de las instalaciones y evitar las emisiones de gases de efecto invernadero provocadas por la futura construcción a gran escala y las actividades de renovación.
- Preparar un plan de mantenimiento preventivo y cumplirlo para extender la vida útil de las instalaciones y evitar las emisiones de gases de efecto invernadero provocadas por la futura construcción a gran escala y las actividades de renovación.
- Instalar y aplicar revestimientos, pinturas y selladores sin compuestos volátiles orgánicos (VOC, por sus siglas en inglés) o con baja cantidad de estos.
- Instalar sistemas de extinción de incendios sin haloalcanos en cada estacionamiento.
- Cumplir con la *Guía de diseño a prueba de inundaciones* de Massport, y elevar el equipo y los sistemas críticos por encima del nivel de diseño de inundación.
- Garantizar fuentes de energía redundantes o de seguridad para reducir las interrupciones que se pueden producir debido a las condiciones climáticas, lo que podría provocar un corte en el suministro de energía.
- Barrer frecuentemente (al menos una vez al mes) para reducir la necesidad del hidrolavado constante y del uso de agua asociado.
- Implementar un programa de reciclaje activo para reducir la cantidad de residuos enviados a los basurales/incineradores regionales y para reducir la emisión de gases de efecto invernadero asociados con la eliminación de materiales.
- Exponer materiales informativos para transmitir el diseño y las operaciones ambientalmente sostenibles de las instalaciones.
- Participar en un programa reconocido de compra sostenible aplicable a equipos/materiales que no sean de capital.
- Implementar suministros de limpieza ambientalmente inocuos y proporcionar la capacitación necesaria para usar, mantener y eliminar estos productos.

Mitigación del período de construcción

- Proporcionar áreas de almacenamiento para los materiales de construcción dentro del aeropuerto.
 - Coordinar la llegada de grandes equipos de construcción entre los diferentes proyectos dentro del Aeropuerto, y limitar el ingreso o egreso durante las horas pico de viajes (tanto las horas pico del Aeropuerto como la de los viajeros pendulares).
 - Desarrollar rutas para los camiones y/o planes de etapas para que los implementen los diferentes contratistas.
 - Solicitar a los directores de construcción que preparen lo siguiente:
 - Un plan preliminar para el manejo del suelo.
 - Un plan preliminar de prevención de contaminación de aguas pluviales.
 - Un plan preliminar de manejo de desecación, si es necesario.
 - Un plan preliminar de salud y seguridad.
 - Emplear un plan de gestión de residuos de construcción que requiere al menos el 85 % de los materiales para ser reciclados o reutilizados.
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Tabla 1-3, Resumen de las medidas beneficiosas y de mitigación del Proyecto de Estacionamiento del Aeropuerto Logan (cont.)

Mitigación del período de construcción (cont.)

- Controlar los roedores a través de inspección, monitoreo y tratamiento de rutina.
- Dar prioridad al uso de equipos y materiales de construcción a los que se les da otra utilidad, se reutilizan o reciclan (o cuentan con contenido reciclado), siempre que sea posible.
- Dar prioridad a los equipos y materiales de construcción de la región (es decir, a menos de 300 millas de los lugares del Proyecto) para reducir las emisiones de gases de efecto invernadero asociadas con su transporte.
- Utilizar mano de obra regional (es decir, a menos de 75 millas) en la mayor medida posible.
- Alentar a las empresas constructoras a que proporcionen estacionamiento fuera del Aeropuerto a sus empleados y que les proporcionen servicios desde estas ubicaciones (los servicios de enlace deberán usar la calle Coughlin Bypass para acceder al Aeropuerto).
- Exigir que todos los vehículos/equipos de construcción sigan los procedimientos para evitar dejar motores encendidos y que todos los directores de construcción proporcionen la capacitación correspondiente.
- Exigir el uso de equipos con emisiones atmosféricas nulas o bajas, cuando sea posible.
- Exigir la adaptación de los equipos de construcción que utilizan diésel adecuados con catalizador de oxidación diésel y/o filtros de partículas.
- Exigir que los contratistas utilicen combustible diésel con contenido ultra bajo de azufre (ULSD, por sus siglas en inglés)
- Mantener velocidades bajas de los vehículos dentro del sitio.
- Implementar las mejores prácticas para el manejo de la calidad del aire y del polvo, como reducir las superficies con tendencia a la erosión expuestas a través de materiales adecuados y de la utilización por etapas de los equipos, cubrir la superficie expuesta con pavimento o vegetación de manera rápida, y estabilizar el suelo con una cobertura o con riego periódico.
- Usar y mantener el equipo de construcción adecuadamente para evitar ruidos innecesarios y aplicar medidas de reducción de ruidos para reducir el ruido de los martinets en al menos 5 decibeles A (dBA) por debajo del nivel sin mitigación.⁵
- Exigir que los camiones accedan a los lugares del Proyecto solo por la Ruta 1A, la Interestatal 90, la calle Bypass Coughlin y la calle principal del Aeropuerto o por otras rutas en cumplimiento con los requisitos de seguridad de transporte.
- Prohibir que los camiones usen las calles locales.
- Especificar las rutas de los camiones en las especificaciones de construcción de los contratistas.
- Usar plantas existentes de producción y división con acceso a través de la Ruta 1A o de la Interestatal 90.
- Alentar a los trabajadores de la construcción a que usen los servicios de transporte de la Autoridad de Transporte de la Bahía de Massachusetts (MBTA), Logan Express, el servicio de enlace por agua y otros medios masivos de transporte.
- Poner en marcha un programa de control de la erosión y de la sedimentación, de conformidad con el Plan de prevención de la contaminación de aguas pluviales, para proteger la calidad del agua y para minimizar los impactos de las fases de construcción en el Puerto de Boston.
- Implementar medidas de prevención de derrames y controles de sedimentación en todas las fases de la construcción para evitar la contaminación por parte del equipo de construcción y la erosión.
- Usar los siguientes controles de erosión y sedimentación en todas las fases de la construcción:
 - Se colocarán barreras perimetrales, como mantos de paja o barreras con sacos de abono alrededor de las áreas de trabajo en tierras altas para atrapar el sedimento transportado por la escorrentía antes de que llegue al sistema de drenaje o abandone el lugar de la construcción.
 - Se protegerán las cuencas hidrográficas existentes con barreras (en donde corresponda) o con sacos para atrapar sedimentos.
 - Se estabilizarán las superficies de tierra expuestas en un plazo de 14 días después de que las actividades de nivelación o de construcción hayan finalizado de manera temporal o permanente.

El Apéndice C, *Hallazgos provisionales de la Sección 61* confirma las medidas beneficiosas y de mitigación mencionadas anteriormente que Massport se compromete a incorporar en el Proyecto Propuesto, el compromiso de Massport de proporcionar una autocertificación de que se han incorporado medidas de reducción de las emisiones de gases de efecto invernadero, y mejoras al acceso terrestre, reducción de viajes, e iniciativas de reducción de las emisiones.

⁵ Se mantendrán voluntariamente los niveles de ruido de las actividades asociadas con la construcción del Proyecto Propuesto congruentes con los criterios de niveles de ruido de la ciudad de Boston. Por lo tanto, no se prevé mitigación del ruido de la construcción.

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1.6 Requisitos regulatorios

La **Tabla 1-4**, que actualiza la **Tabla 6-1** del DEIR/la EA, enumera los permisos estatales y federales previstos y otras aprobaciones requeridas para el Proyecto Propuesto junto con su estado. El único cambio sustancial en esta lista es la eliminación de una modificación en el Permiso de descarga de desagües existente de la Autoridad de Recursos Hídricos de Massachusetts (MWRA, por sus siglas en inglés). Desde la presentación del DEIR/de la EA, Massport coordinó con la MWRA y confirmó que no se requiere dicha modificación para el Proyecto Propuesto. Este permiso solo se aplica a los usos industriales y el Proyecto Propuesto no implica un uso industrial.⁶ El Capítulo 6, *Cumplimiento normativo y Coordinación pública/con la agencia* del DEIR/de la EA describe cómo el Proyecto Propuesto cumplirá con sus requisitos reglamentarios.

Tabla 1-4 Permisos y aprobaciones anticipados para el Proyecto Propuesto

| Entidad emisora | Aprobación o permiso | Estado |
|---|--|---|
| Oficina Ejecutiva de Energía y Asuntos Ambientales de Massachusetts | Certificado del Secretario en virtud de la Ley de Políticas Ambientales de Massachusetts | Informe final de impacto ambiental (FEIR) presentado aquí. |
| Administración Federal de Aviación (FAA) | Hallazgo de ningún impacto significativo (FONSI) en virtud de la Ley Nacional de Políticas Ambientales (NEPA) | El FONSI se incluye al principio de esta Evaluación Ambiental (EA) Final. |
| | Aprobación del plan de disposición espacial del aeropuerto | Aprobación pendiente. |
| | Determinación de conformidad general de la calidad del aire | Determinación establecida en la EA preliminar y restablecida en el FONSI. ¹ |
| | Construcción o alteración que requiere aviso preliminar, título 14 del Código de Reglamentaciones Federales, Parte 77, Formulario 7460-1 | Según sea necesario antes de la construcción. |
| Agencia de Protección Ambiental, Región 1, de los EE. UU. | Permiso individual del Sistema Nacional de Eliminación de Descarga de Contaminantes (NPDES, por sus siglas en inglés) | El Proyecto Propuesto cumplirá los estándares incluidos en el permiso individual del NPDES (N.º MA0000787) del Aeropuerto Logan. Consultar el Capítulo 4, <i>Evaluación de los impactos/de las consecuencias ambientales</i> del DEIR/de la EA. |
| | Permiso de construcción general del NPDES | El contratista desarrollará un plan de prevención de contaminación del agua pluvial relacionado con la construcción. Consultar el Capítulo 4, <i>Evaluación de los impactos/de las consecuencias ambientales</i> del DEIR/de la EA. |

⁶ Comunicación entre Tim Coffey (MWRA) y Jim Ferrara (WSP) el 10 de septiembre de 2019.

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Tabla 1-4 Permisos y aprobaciones anticipados para el Proyecto Propuesto (cont.)

| Entidad emisora | Aprobación o permiso | Estado |
|---|---|---|
| Departamento de Protección Ambiental de Massachusetts (MassDEP) | Plan de Contingencia de Massachusetts (MCP, por sus siglas en inglés) | Según corresponda. En caso de encontrarse una liberación de materiales peligrosos durante la construcción del Proyecto, Massport abordaría el descubrimiento de acuerdo con las regulaciones del MCP correspondientes. Consultar el Capítulo 4, <i>Evaluación de los impactos/de las consecuencias ambientales</i> del DEIR/de la EA. |

Nota:

1 Como se informa en el DEIR/la EA, en la Sección 4.5.2, Calidad del aire, la acción propuesta cumpliría con la Regla de Conformidad General, establecida en virtud de la Ley de Aire Limpio. Las emisiones relacionadas serían bajas (es decir, dentro) de los umbrales mínimos. La construcción del Proyecto generaría emisiones atmosféricas temporarias por parte de los vehículos y de los equipos; sin embargo, estas emisiones estarían perfectamente dentro de los límites de la Regla de Conformidad General.

1.7 Resumen de comentarios sobre el DEIR/la EA

Se entregó ocho cartas de comentarios públicos sobre el DEIR/la EA por las siguientes entidades:

- Agencia de Protección Ambiental (EPA, por sus siglas en inglés) de los EE. UU.
- Departamento de Recursos Energéticos de Massachusetts (DOER, por sus siglas en inglés)
- Departamento de Protección Ambiental de Massachusetts (MassDEP)
- Consejo de Planificación del Área Metropolitana (MAPC, por sus siglas en inglés)
- Airlines for America (A4A)
- Airport Impact Relief, Incorporated (AIR, Inc.)
- Conservation Law Foundation (CLF)
- John Vitagliano (miembro de la comunidad/residente)

Massport examinó el Certificado del Secretario sobre el EIR preliminar y las cartas de comentarios del público para delinear observaciones específicas y proporcionar respuestas individuales. Las respuestas a los comentarios se incluyen en el Capítulo 2, *Respuestas a los comentarios sobre el DEIR/la EA* de este FEIR/esta EA.

Los comentarios recibidos abarcan diferentes temas:

- Proceso de la MEPA
- Descripción del proyecto
- Objetivo y necesidad
- Análisis de alternativas
- Marco normativo
- Impacto/Mitigación ambiental
- Impactos de los períodos de construcción
- Acceso terrestre
- Calidad del aire
- Reducción de las emisiones de gases de efecto invernadero
- Sustentabilidad general

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Unos cuantos de los comentarios presentados sobre el DEIR/la EA se centran en preocupaciones sobre todo el Aeropuerto en lugar de sobre el Proyecto Propuesto. Massport aborda los comentarios de todo el Aeropuerto a través de las presentaciones anuales del Informe de Datos Ambientales del Aeropuerto Logan (EDR, por sus siglas en inglés) y del Informe de Estado y Planificación Ambiental (ESPR, por sus siglas en inglés). Tal como se describe en el Certificado del Secretario sobre el DEIR/la EA, Massport puede abordar el seguimiento y la presentación de informes sobre sus progresos hacia el logro de los objetivos de la estrategia de acceso terrestre específicos para cada proyecto y para todo el Aeropuerto en los futuros EDR y ESPR.

1.8 Estudios de estrategias de acceso terrestre y reducción de viajes

La cantidad de plazas de estacionamiento comerciales y para empleados permitidos en el Aeropuerto Logan está regulada por MassDEP a través del Congelamiento de Estacionamiento (título 310 del CMR, 7.30), que es un elemento del Plan de Implementación Estatal (SIP, por sus siglas en inglés) de Massachusetts en virtud de la Ley de Aire Limpio federal. En 2016, Massport trabajó junto a MassDEP en una enmienda al Congelamiento del Estacionamiento. Massport presentó el Formulario de Notificación Ambiental (ENF, por sus siglas en inglés) para el Proyecto de Estacionamiento del Aeropuerto Logan ante la MEPA al mismo tiempo que MassDEP emitió un proyecto de reglamento para enmendar el Congelamiento del Estacionamiento para permitir la creación de 5,000 plazas de estacionamiento comerciales adicionales en el Aeropuerto. Tras la emisión del certificado del ENF y luego de un amplio proceso de participación pública, MassDEP aprobó el aumento de estacionamiento solicitado y emitió el reglamento modificado el 30 de junio de 2018. El 5 de diciembre de 2017, la EPA propuso una norma aprobando la revisión del SIP en la que se incorporó la enmienda al Congelamiento del Estacionamiento. La EPA aprobó la norma propuesta el 6 de marzo de 2018 y la nueva norma entró en vigor el 5 de abril de 2018.

De acuerdo con las enmiendas anteriores, la enmienda al Congelamiento del Estacionamiento de 2017 especificaba que Massport realizaría tres estudios de acceso terrestre para ayudar en el desarrollo continuo de su estrategia de acceso terrestre y reducción de viaje del Aeropuerto Logan. Massport publicó estos estudios, denominados *Estudios de estrategia de reducción de accesos terrestres y de reducción de viajes en el Aeropuerto Logan* (estudios de MassDEP), el 30 de septiembre de 2019.⁷ Estos estudios se describen a continuación, mientras que su resumen ejecutivo e introducción se presentan como Apéndice D, *Resumen ejecutivo e introducción* en los estudios de MassDEP. Se puede encontrar el informe completo en el sitio web de Massport:

<http://www.massport.com/media/3370/final-massport-dep-report.pdf>.

- **Estudio n.º 1: Servicios de HOV para el acceso terrestre al Aeropuerto Logan.** Estudio de los costos, la factibilidad y la efectividad de las posibles medidas para mejorar el acceso de HOV al Aeropuerto. Este estudio toma en cuenta, entre otras cosas, posibles mejoras al servicio de autobuses de Logan Express y los beneficios de la disminución de los autobuses de la línea Silver de la MBTA con servicio al Aeropuerto.
- **Estudio n.º 2: Precios del HOV para el acceso terrestre al Aeropuerto Logan.** Estudio de los costos y de los precios para diferentes modalidades de transporte desde y hacia el Aeropuerto para identificar una

⁷ Los destinatarios del *ESPR 2017*, presentado ante la MEPA el 30 de julio de 2019 y publicado en Environmental Monitor el 7 de agosto de 2019 (Asuntos energéticos y ambientales [EEA, por sus siglas en inglés] n.º 3247), fueron notificados de la disponibilidad de los estudios de MassDEP en el momento de su publicación. Para que la comunidad tenga tiempo suficiente para revisar estos estudios, la fecha de finalización del período de comentarios para el *ESPR 2017* se amplió del 11 de octubre de 2019 al 18 de noviembre de 2019; 39 días adicionales.

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estructura de precios y para evaluar la asignación de ingresos generados para fomentar las modalidades de HOV por parte de los pasajeros aéreos y de los visitantes del Aeropuerto. Este estudio incluye una evaluación a corto y a largo plazo de las tarifas de estacionamiento y su influencia en las diferentes modalidades de transporte para el acceso terrestre desde y hacia el Aeropuerto.

- **Estudio n.º 3: Acceso terrestre al Aeropuerto Logan y reducción de las operaciones que no corresponden a HOV.** Estudio de la factibilidad y efectividad de las posibles medidas operacionales para reducir las modalidades de transporte que no corresponden a HOV para dejar/retirar pasajeros en el Aeropuerto, incluida una evaluación de la reciente aplicación de transporte y otros modos de transporte compartido.

Massport ya ha utilizado los resultados de los tres estudios para implementar varias recomendaciones. Se detallan a continuación:

- Trasladar el servicio de Back Bay de Logan Express a la estación de Back Bay de la MBTA, eliminando la tarifa desde el Aeropuerto a Back Bay y reduciendo la tarifa de Back Bay al Aeropuerto de USD 7.50 a USD 3.00. Esto ya derivó en un aumento sustancial en los viajes desde la reubicación en mayo de 2019.
- Aumentar la frecuencia en las horas pico en el servicio de Braintree de Logan Express de 30 a 20 minutos.
- Avanzar con un nuevo servicio urbano de Logan Express en North Station con servicio gratuito desde el Aeropuerto. Se han pedido los autobuses para el servicio.
- Ofrecer acceso de prioridad en la fila de seguridad del aeropuerto a viajeros que utilizan el Back Bay Logan Express u cualquier modo de transporte acuático al aeropuerto.
- Iniciar estudios de una nueva ubicación suburbana para Logan Express con estacionamiento.
- Implementar una nueva tarifa para dejar pasajeros de USD 3.25 (además de la actual tarifa de recogida de USD 3.25) a través de una nueva aplicación de transporte y ofrecer una tarifa de descuento de USD 1.50 para clientes que realizan viajes compartidos (como UberPool y Lyft Line).
- Implementar precios de estacionamiento que desanimen el estacionamiento a corto plazo asociado con los usos para recoger y dejar pasajeros.
- Poner a prueba el uso de la rampa de acceso de emergencia de South Boston Waterfront para reducir el tiempo de viaje en el servicio de la línea Silver (SL1) de la MBTA para ayudar a fomentar el uso.
- Consolidar las operaciones de las aplicaciones de transporte en áreas específicas en la planta baja de Central Garage para facilitar a los conductores la recogida de los pasajeros aéreos que llegan después de dejar a los pasajeros que salen sin tener que circular por el Aeropuerto.

Específicamente para el Proyecto Propuesto, Massport utilizará los hallazgos del estudio n.º 2 para informar las políticas de precios de estacionamiento. Más allá de esta consideración y de las medidas mencionadas anteriormente, los estudios de MassDEP seguirán contribuyendo a la información de la implementación y de la planificación de las mejoras en los HOV y de la estrategia general de acceso terrestre de Massport. Estas mejoras complementarán el Proyecto Propuesto, pero no disminuirán la necesidad de este estacionamiento, ya que atenderá a segmentos de usuarios que no tienen acceso a las modalidades de HOV o que no las usarían incluso si el acceso estuviera disponible. Además, si bien las modalidades de acceso terrestre están evolucionando,

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todavía sigue creciendo la demanda de estacionamiento en el Aeropuerto, con un aumento de los niveles de pasajeros.

1.9 Contenido de este FEIR/esta EA

El resto de este FEIR/esta EA incluye lo siguiente:

Capítulo 2, *Respuestas a los comentarios sobre el DEIR/la EA:* Este capítulo proporciona las respuestas de Massport a los comentarios recibidos sobre el DEIR/la EA, incluidos los presentados en el Certificado del Secretario y los presentados por la comunidad. Los comentarios se presentan por fuente y están etiquetados por tema.

Capítulo 3, *Medidas beneficiosas/de mitigación:* Este capítulo proporciona documentación revisada de las medidas beneficiosas y de mitigación de Massport para el Proyecto Propuesto. Esas medidas se presentan como compromisos claros y se identifican junto con sus cronogramas generales de implementación y con las partes responsables. También se incluyen los costos estimados de los principales beneficios del Proyecto Propuesto (por ejemplo, sistemas de energía solar PV, iluminación con diodos emisores de luz [LED, por sus siglas en inglés], etc.), así como los compromisos compartidos significativos de Massport en cuanto a la modalidad de HOV, en curso y planificados, no relacionados específicamente con el Proyecto Propuesto.

Capítulo 4, *Distribución:* Este capítulo proporciona una lista de las partes interesadas y de las bibliotecas públicas a las que Massport les proporcionó una copia de este FEIR/esta EA.

Los siguientes materiales de apoyo a este FEIR/esta EA se incluyen como apéndices:

Apéndice A, *Certificado del Secretario y Comentarios de la comunidad sobre el DEIR/la EA*

Apéndice B, *Análisis de energía solar PV para el nuevo estacionamiento frente a la Terminal E.*

Apéndice C, *Hallazgos provisionales de la Sección 61 actualizados*

Apéndice D, *Resumen ejecutivo e introducción a los estudios de MassDEP*

1.10 Período de revisión y disponibilidad del FEIR/de la EA

Massport describió previamente el Proyecto para el estacionamiento del Aeropuerto Logan en el ENF y en el DEIR/la EA del Proyecto Propuesto. Estos documentos, junto con este FEIR/esta EA y otras presentaciones ambientales recientes del Aeropuerto Logan están disponibles en: <http://www.massport.com/massport/about-massport/project-environmental-filings/logan-airport/>.

Después de la publicación de la disponibilidad de este FEIR/esta EA en *Environmental Monitor*, el 23 de diciembre de 2019, habrá un período de 30 días para comentarios públicos que finalizará el 23 de enero de 2020. Continuará la difusión a la comunidad y a las agencias, y la coordinación con estas a través de permisos, de diseños y de la construcción del Proyecto.

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Responses to Comments on the DEIR/EA

2.1 Introduction

This chapter provides the Massachusetts Port Authority’s (Massport’s) responses to comments filed on the Logan Airport Parking Project Draft Environmental Impact Report/Environmental Assessment (DEIR/EA). The DEIR/EA was filed with the Massachusetts Environmental Policy Act (MEPA) Office and the Federal Aviation Administration (FAA) on May 31, 2019 and noticed in the *Environmental Monitor* on June 10, 2019. The responses were prepared in accordance with the Secretary of the Executive Office of Energy and Environmental Affairs’ DEIR/EA Certificate, issued August 2, 2019.

Section 2.2, *Summary of Comments on the DEIR/EA* summarizes these comments in terms of their sources and topics of focus, while Section 2.3, *Responses to Comments on the DEIR/EA* presents Massport’s responses to these comments organized by source. Appendix A, *Secretary’s Certificate and Public Comments on the DEIR/EA* provides the original comment letters received by the MEPA Office and the FAA.

2.2 Summary of Comments on the DEIR/EA

Eight public comment letters were submitted on the DEIR/EA by the following entities:

- U.S. Environmental Protection Agency (EPA)
- Massachusetts Department of Energy Resources (DOER)
- Massachusetts Department of Environmental Protection (MassDEP)
- Metropolitan Area Planning Council (MAPC)
- Airlines for America (A4A)
- Airport Impact Relief, Incorporated (AIR, Inc.)
- Conservation Law Foundation (CLF)
- John Vitagliano (member of the public/resident)

The comments received cover a range of topics:

- MEPA process
- Project description
- Purpose and need
- Construction period impacts
- Ground access
- Air quality

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- Alternatives analysis
- Regulatory framework
- Environmental impacts/mitigation
- Greenhouse gas emissions reduction
- General sustainability

A number of the comments submitted on the DEIR/EA focus on Airport-wide concerns rather than the Proposed Project. Massport addresses Airport-wide comments through the annual Logan Airport Environmental Data Report (EDR) and Environmental Status and Planning Report (ESPR) filings. As described in the Secretary’s Certificate on the DEIR/EA, Massport can address monitoring and reporting on its progress toward achieving its project-specific and Airport-wide ground access strategy goals in future EDRs and ESPRs.

2.3 Responses to Comments on the DEIR/EA

Table 2-1 includes responses to comments deriving from the Secretary’s Certificate, while **Table 2-2** includes responses to comments from other federal and state agencies, non-governmental organizations, and then individuals. The authors and topics of focus of these comments are provided.

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Table 2-1 Responses to Comments from the Secretary’s Certificate on the DEIR/EA

| Comment # | Author | Topic | Comment | Response |
|------------------|---|----------------------|---|---|
| C-1 | Kathleen A. Theoharides, Secretary, EEA | MEPA Process | I encourage Massport to amend the 2017 Environmental Status and Planning Report (ESPR), submitted to the MEPA office for publication in the August 7, 2019 <i>Environmental Monitor</i> , to include the completed studies and a summary of their findings. It should also describe how the results have informed Massport's long-range efforts to address VMT and air quality impacts of different ground access modes to/from the Airport and identify recommendations or findings that Massport has already implemented. The completed studies and information identified above should also be provided in the FEIR to support review of these measures. | Recipients of the <i>2017 Environmental Status and Planning Report</i> (ESPR), filed with MEPA on July 30, 2019 and published in the <i>Environmental Monitor</i> on August 7, 2019 – EEA# 3247, were notified of the availability of the <i>Logan Airport Parking Freeze Amendment Ground Access and Trip Reduction Strategy Studies</i> (MassDEP studies) that Massport made publicly available on September 30, 2019. To allow the public adequate time to review these studies, the close of the comment period for the <i>2017 ESPR</i> was extended from October 11, 2019 to November 18, 2019, an additional 39 days. The MassDEP studies discuss the implementation of study results, which include several recommendations that Massport has already started to put into action to effect high-occupancy vehicle (HOV) mode share increases at Logan Airport. Section 1.8, <i>Ground Access and Trip Reduction Strategy Studies</i> of this FEIR/EA summarizes these recommendations, along with the MassDEP studies more generally. The Executive Summary and Introduction of the MassDEP studies are provided as Appendix D, <i>Executive Summary and Introduction to the MassDEP Studies</i> in this FEIR/EA. The full report can be found on Massport's website at http://www.massport.com/media/3370/final-massport-dep-report.pdf . |
| C-2 | Kathleen A. Theoharides, Secretary, EEA | MEPA Process | I note monitoring and reporting on the progress towards achieving the goals and success of the mitigation program can be addressed in the Long-Term Parking Management Plan and future Environmental Status and Planning Reports (ESPRs) and Environmental Data Reports (EDRs) (EEA#3247/5146). | Massport will continue to monitor and report on its progress towards achieving the goals and success of its mitigation program in future EDRs and ESPRs (EEA#3247). |
| C-3 | Kathleen A. Theoharides, Secretary, EEA | Purpose and Need | I refer Massport to comments from MAPC which recommend constructing the Economy Garage expansion only if/when warranted by demand. | Massport will reevaluate the need for the additional 3,000 parking spaces planned as part of the Economy Garage expansion prior to the start of its construction, anticipated in mid-2023. |
| C-4 | Kathleen A. Theoharides, Secretary, EEA | MEPA Process | The FEIR should follow Section 11.07 of the MEPA regulations for outline and, content, as modified by this Scope. It should include a detailed description of the proposed project and identify, describe, and assess the environmental impacts of any changes in the project that have occurred since the filing of the DEIR. | This FEIR/EA follows Section 11.07 of the MEPA regulations for outline and, content, as modified by the Scope provided in the Secretary’s Certificate on the DEIR/EA. An updated Project description is provided in Section 1.2, <i>Updated Project Description</i> . A summary of changes to the Proposed Project that have occurred since the filing of the DEIR/EA is provided in Section 1.3, <i>Project Changes Since the DEIR/EA</i> and a summary of findings for updated environmental impact analyses is provided in Section 1.4, <i>Updated Project Impact Analyses</i> . |
| C-5 | Kathleen A. Theoharides, Secretary, EEA | Project Description | This [description of the proposed project and assessment of impacts of changes] should also identify any analysis that has been revised since the DEIR was filed based on updated data or projections. | This FEIR/EA provides a summary of findings for the environmental impact analyses that have been revised since the DEIR/EA. Section 1.4, <i>Updated Project Impact Analyses</i> updates the energy and greenhouse gas calculations for the new garage in front of Terminal E to reflect the increased efficiencies in lighting density, the expansion of the rooftop solar photovoltaic (PV) coverage, and inclusion of air handling units in the lobbies surrounding the elevator core supported by two small boilers providing hot water. Appendix B, <i>Solar PV Analysis for the New Garage in Front of Terminal E</i> describes additional solar PV options that Massport explored above the base option presented in the DEIR/EA and the expanded option presented in this FEIR/EA |
| C-6 | Kathleen A. Theoharides, Secretary, EEA | Project Description | The [FEIR] should include updated site plans for existing and post-development conditions at a legible scale. | Chapter 1, <i>Introduction</i> of this FEIR/EA provides the most up-to-date site plans for post-development conditions at a legible scale. Existing site conditions have not changed since the filing of the DEIR/EA. |
| C-7 | Kathleen A. Theoharides, Secretary, EEA | Regulatory Framework | The FEIR should provide a brief description and analysis of applicable statutory and regulatory standards and requirements, and describe how the project will meet those standards. | The applicable statutory and regulatory standards and requirements, along with how the Proposed Project will meet them, are presented in Chapter 6, <i>Regulatory Compliance and Public Agency Coordination</i> of the DEIR/EA. Upon further review, it has been determined that a modification to Massport’s existing Massachusetts Water Resource Authority (MWRA) Sewer Use Discharge Permit will not be required for the Proposed Project; all other standards and requirements are unchanged. |

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Table 2-1 Responses to Comments from the Secretary’s Certificate on the DEIR/EA (Continued)

| Comment # | Author | Topic | Comment | Response |
|------------------|---|------------------------|---|--|
| C-8 | Kathleen A. Theoharides, Secretary, EEA | Regulatory Framework | [The FEIR] should include a list of required State Permits, Financial Assistance, or other State approvals and provide an update on the status of each of these pending actions. | The list and status of required permits and approvals have not changed since the filing of the DEIR/EA, though Massport has confirmed that no modification to its existing MWRA Sewer Use Discharge Permit is required for the Proposed Project (see response to Comment C-9). Section 1.6, <i>Regulatory Requirements</i> of this FEIR/EA republishes the list and status of required permits and approvals. |
| C-9 | Kathleen A. Theoharides, Secretary, EEA | Regulatory Framework | The FEIR should confirm the need for a modified Sewer Use Discharge Permit from the MWRA. | Massport has coordinated with the MWRA and confirmed that no modification to its existing MWRA Sewer Use Discharge Permit is required for the Proposed Project, as it is not an industrial use and the permit only applies to industrial uses. ¹ The MWRA, however, will need to inspect the oil-water separators that Massport installs at the Project. |
| C-10 | Kathleen A. Theoharides, Secretary, EEA | Mitigation | [The FEIR should] include updated mitigation measures and draft Section 61 Findings, as appropriate. | Chapter 3, <i>Beneficial Measures/Mitigation</i> includes a list of updated mitigation measures, while Appendix C, <i>Updated Draft Section 61 Findings</i> , updates the draft Section 61 Findings. |
| C-11 | Kathleen A. Theoharides, Secretary, EEA | Project Description | The FEIR should include site plans for existing and post-development conditions at a legible scale including the proposed garage structures and any curbside improvements and changes to the on-airport roadways. | Section 1.2, <i>Updated Project Description</i> provides the most up-to-date site plans for post-development conditions at a legible scale. Existing site conditions have not changed since the filing of the DEIR/EA. No curbside improvements other than those described in the DEIR/EA are proposed as part of the Logan Airport Parking Project. |
| C-12 | Kathleen A. Theoharides, Secretary, EEA | General Sustainability | The project description should address access and revenue control systems; anticipated rate structures; and identify hybrid, alternative fuel, and EV parking locations. | As described in the DEIR/EA, the revenue control systems at both proposed garages will include a pay-by-foot option to encourage parkers to pay their fees prior to returning to their vehicles. These systems will be located within the terminals as well as at multiple points in the garages themselves. At least one staffed cashier booth will also be available at the garage exits. Rate structures at the new garage in front of Terminal E are expected to be similar to those in the Central Garage complex, adjusted for time and potential changes in program. Anticipated rate structures at the Economy Garage expansion are expected to be the same as those in the rest of the Economy Garage, also adjusted for time and potential changes in program. Current on-Airport commercial parking rates are provided in the <i>2017 ESPR</i> in Table 5-5 and updated as needed on Massport’s website. Massport’s parking pricing policies at Logan Airport, including in relation to the Proposed Project, will be informed by the findings of the MassDEP studies, specifically Study #2. |
| C-13 | Kathleen A. Theoharides, Secretary, EEA | MEPA Process | The FEIR should confirm that the analyses presented in the DEIR used the most recent data, projections, and assumptions presented in the 2017 ESPR or should include revised analyses, as necessary. | The analyses presented in the DEIR/EA are consistent with the data, projections, and assumptions presented in the <i>2017 ESPR</i> . |
| C-14 | Kathleen A. Theoharides, Secretary, EEA | Ground Access | [The FEIR] should also describe how the results [of the MassDEP studies] have informed Massport’s long-range efforts to address VMT and air quality impacts of different ground access modes to and from the Airport and identify measures that Massport has already implemented. | Section 1.8, <i>Ground Access and Trip Reduction Strategy Studies</i> of this FEIR/EA summarizes the development of the MassDEP studies and describes certain recommendations that Massport has begun to implement. The Executive Summary and Introduction of the MassDEP studies are provided as Appendix D, <i>Executive Summary and Introduction to the MassDEP Studies</i> in this FEIR/EA. The full report can be found on Massport’s website at http://www.massport.com/media/3370/final-massport-dep-report.pdf . |

¹ Communication between Tim Coffey (MWRA) and Jim Ferrara (WSP) on September 10, 2019.

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| Comment # | Author | Topic | Comment | Response |
|------------------|---|---------------|---|---|
| C-15 | Kathleen A. Theoharides, Secretary, EEA | Ground Access | The data and findings [MassDEP studies] should be integrated into the FEIR and mitigation commitments should be updated, as appropriate. | <p>Section 1.8, <i>Ground Access and Trip Reduction Strategy Studies</i> of this FEIR/EA summarizes the development of the MassDEP studies and describes certain recommendations that Massport has begun to implement. These studies do not affect the Proposed Project’s mitigation commitments. The Proposed Project is anticipated to have only minor and temporary construction impacts. Further, the Proposed Project itself represents mitigation, as it is one component within Massport’s larger strategy to reduce traffic congestion and associated air emissions.</p> <p>The Executive Summary and Introduction of the MassDEP studies are provided as Appendix D, <i>Executive Summary and Introduction to the MassDEP Studies</i> in this FEIR/EA. The full report can be found on Massport’s website at http://www.massport.com/media/3370/final-massport-dep-report.pdf.</p> |
| C-16 | Kathleen A. Theoharides, Secretary, EEA | Ground Access | The FEIR should describe how HOV mode share will be monitored to evaluate the effectiveness of the policies and programs in achieving this goal. | In past years, Massport conducted a passenger ground access survey every three years. Moving forward, Massport plans to conduct such studies on an annual basis and utilize the results to routinely evaluate the effectiveness of its policies and programs in achieving the Authority’s HOV mode share goals. Massport will summarize the results of the passenger ground access surveys in future EDRs and ESPRs. |
| C-17 | Kathleen A. Theoharides, Secretary, EEA | Ground Access | The FEIR should demonstrate that the HOV programs/policies and any proposed HOV improvement measures will provide the capacity to meet demand associated with growth. | <p>As discussed in Section 4.5.1.3 of the DEIR/EA, the Massachusetts Bay Transportation Authority’s (MBTA’s) Blue Line is expected to have adequate capacity at Airport Station to accommodate the anticipated increase in demand when Logan Airport reaches 50 million air passengers. With respect to Silver Line buses, Massport sizes the fleet according to demand in coordination with the MBTA and will continue to do so moving forward to meet customer service requirements. Similarly, Massport’s Logan Express and on-Airport shuttle services will also be expanded to maintain a high-level of service (e.g., increased frequencies, available seating, etc.). Though charter buses, scheduled buses, and courtesy buses are sized by their respective operating entities, their operations are also expected to increase commensurate with demand.</p> <p>A portion of Massport’s goal of achieving 40 percent HOV mode share by 2027 at Logan Airport is expected to be achieved by taxis and Ride Apps (e.g., Uber and Lyft) with vehicle occupancies of at least two passengers per vehicle. There is sufficient capacity of these modes to meet projected demand. To encourage high-occupancy use of this mode, Massport incentivizes shared-ride customers of Ride Apps with a discounted fee of \$1.50 for pick-ups and drop-offs, which otherwise cost \$3.25 each.</p> |
| C-18 | Kathleen A. Theoharides, Secretary, EEA | Ground Access | The FEIR should include an evaluation of measures to support HOV use and extend the associated air quality benefits of the program and identify to what extent these measures will contribute towards attaining the future mode share goal. This evaluation can be supported by the findings of the three studies required by the amended Parking Freeze regulations. | <p>The MassDEP studies evaluate opportunities to support HOV use with respect to services and pricing, as well as reducing non-HOV drop-off/pick-up modes through operational means. The overall report describes potential policies and their effects (i.e., their impact on the HOV mode share at Logan Airport), often by combining policy variables, to obtain optimal outcomes to establish a framework for policy development and decisions by Massport on what ground access strategies to next implement.</p> <p>The Executive Summary and Introduction of the MassDEP studies are provided as Appendix D, <i>Executive Summary and Introduction to the MassDEP Studies</i> in this FEIR/EA. The full report can be found on Massport’s website at http://www.massport.com/media/3370/final-massport-dep-report.pdf.</p> |

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| Comment # | Author | Topic | Comment | Response |
|------------------|---|--|--|---|
| C-19 | Kathleen A. Theoharides, Secretary, EEA | Greenhouse Gas Emissions Reduction – Solar Photovoltaics | As recommended by DOER, the FEIR should analyze the feasibility and GHG mitigation benefits of expanding the proposed canopy solar PV arrays. The analysis should estimate the area available for solar canopies on each of the top parking levels, state the assumed panel efficiency, estimate the electrical output of the system, and identify associated GHG reductions. The analysis should be supported by conceptual plans that identify the "usable areas" for potential solar PV canopy systems and other appurtenances. The analysis should evaluate the east and west sides of the Terminal E Garage and the entire top level of the Economy Garage. The analysis should include a narrative and data (such as a solar reflection study/glare analysis) to support the Proponent’s adoption (or dismissal) of solar PV as a feasible measure to avoid, minimize or mitigate project-related GHG emissions and Damage to the Environment. | <p>Appendix B, <i>Solar PV Analysis for the New Garage in Front of Terminal E</i> describes the assessment that Massport undertook to inform its decision-making regarding solar PV at the new garage in front of Terminal E, including analyses on usable roof areas, sun exposure, and glare. The proposed system, as discussed in Section 1.3, <i>Project Changes</i>, is double that proposed in the DEIR/EA. The expanded solar PV system is capable of offsetting 50 percent of the facility’s total energy consumption, including all lighting and power required for its EV stations.</p> <p>As described in the DEIR/EA, the Economy Garage expansion would include the relocation of the existing solar PV system to the top of the facility’s new highest level or replacing it with a more efficient system as feasible. Both facilities will include infrastructure to allow the future expansion of solar PV to their maximum potential.</p> <p>Section 1.4.2, <i>Greenhouse Gas Emissions</i> quantifies the emissions benefits of the solar PV installations at the proposed garages.</p> |
| C-20 | Kathleen A. Theoharides, Secretary, EEA | Greenhouse Gas Emissions Reduction – Solar Photovoltaics | As recommended by DOER, the project should be designed and built to accommodate solar in the future so as not to lose a significant rooftop asset in the event that issues effecting feasibility change. | Both the new garage in front of Terminal E and the Economy Garage expansion will be designed to accommodate the facilities’ respective maximum solar PV potential. They will be constructed based on current building codes, and will not require structural, geotechnical, or seismic retrofits at the time of potential solar PV expansion. Further, appropriate electrical conduits will be installed to allow for the future expansion and integration to the voltage systems. |
| C-21 | Kathleen A. Theoharides, Secretary, EEA | Greenhouse Gas Emissions Reduction – Alternative Fuel Vehicles | The FEIR should clarify whether this [electric charging stations] commitment to meet 150% of demand extends to all on-Airport demand or is limited to the Terminal E Garage and Economy Garage. | Massport’s commitment to meet 150 percent of demand for EV charging stations is determined on a facility-by-facility basis. This includes, but is not limited to, the new garage in front of Terminal E and the Economy Garage expansion. |
| C-22 | Kathleen A. Theoharides, Secretary, EEA | Greenhouse Gas Emissions Reduction – Alternative Fuel Vehicles | The FEIR should describe how demand for EV charging stations will be monitored and identify triggers for installation of additional EV stations. | Through its supplier of EV charging stations, ChargePoint, Massport continually monitors the use of EV charging infrastructure installed at Logan Airport. Massport will measure on an annual basis the number of ports by location that are utilized on average at least once per day. If this number exceeds 50 percent of installed ports, then Massport will make plans to increase the number of ports to maintain the 150 percent demand threshold at that location. |
| C-23 | Kathleen A. Theoharides, Secretary, EEA | Greenhouse Gas Emissions Reduction – Alternative Fuel Vehicles | The FEIR should clarify whether the parking garages will be constructed as "EV-ready" with conduit to support future installation of EV charging station or discuss how the construction and design of the garage could otherwise facilitate future expansion of EV charging stations if warranted by demand. | <p>The EV charging stations are planned to be installed on the ground floor. The electrical distribution system consisting of a dedicated panel and transformer are sized to allow 200 percent (doubling) of the planned installed EV charging stations. This would allow for an increase in the number of charging stations at the new garage in front of Terminal E from the initial 11 (22 ports) to 22 (44 ports). Massport will ensure 150 percent of demand for EV charging stations within the facility at all times.</p> <p>Though the DEIR/EA stated that Massport would install five EV charging stations at the Economy Garage expansion, such installations plus additional infrastructure to allow for future expansion will now be accelerated to take place at the existing Economy Garage. Massport will increase the number of EV charging stations as part of the Economy Garage expansion to accommodate 150 percent of demand, as necessary.</p> |
| C-24 | Kathleen A. Theoharides, Secretary, EEA | General Sustainability | The FEIR should identify the specific measures from the U.S. Green Building Council’s Parksmart program which will be incorporated into the structured parking facilities. | Specific Parksmart measures planned to be incorporated into the Proposed Project are discussed in Chapter 3, <i>Beneficial Measures/Mitigation</i> . |

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| Comment # | Author | Topic | Comment | Response |
|------------------|---|-----------------------------|--|---|
| C-25 | Kathleen A. Theoharides, Secretary, EEA | Air Quality | The FEIR should provide an updated emission table that compares base case GHG emissions with the Preferred Alternative showing the anticipated reduction in tpy and percentage by emissions source (stationary and mobile). | Section 1.4, <i>Updated Project Impact Analyses</i> updates the energy and greenhouse gas calculations for the new garage in front of Terminal E, which were necessitated by increased efficiencies in lighting density, the inclusion of air handling units in the lobbies surrounding the elevator core supported by two small boilers providing hot water, as well as by expanded solar PV. As currently designed, the new garage in front of Terminal E will generate 40 percent less greenhouse gas emissions compared to the original concept presented in the DEIR/EA. Mobile source emissions remain unchanged from those reported in the DEIR/EA. |
| C-26 | Kathleen A. Theoharides, Secretary, EEA | Construction Period Impacts | The FEIR should describe how construction will occur to avoid impacting the existing constrained parking supply. | While continuing to manage the Airport in accordance with the requirements of the amended Logan Airport Parking Freeze, Massport plans to stack and valet vehicles as necessary during construction to minimize the impact of the Proposed Project on the Airport’s existing constrained parking supply. Concurrently, Massport is sharing information on its ongoing Projects through “LoganForward” (http://www.massport.com/logan-forward), which includes travel tips. Information on Massport’s ground transportation strategy is also provided by highlighting the Proposed Project, along with the centralized Ride App pick-up/drop-off areas and Massport’s plans for improved Logan Express service. |
| C-27 | Kathleen A. Theoharides, Secretary, EEA | Construction Period Impacts | The FEIR should describe how it will comply with M.G.L. c. 21E during construction, including any applicable AULs. | If a release of hazardous materials is encountered during Project construction, then Massport would address the discovery in accordance with the applicable Massachusetts Contingency Plan (MCP) regulations. A Massachusetts Licensed Site Professional will be engaged to determine whether any excavated soils can be reused onsite and/or removed for off-site reuse, recycling, or disposal. Soils will be managed in accordance with a site-specific Soil Management Plan, or when appropriate, a Release Abatement Measure (e.g., existing Activity and Use Limitation areas). The Soil Management Plan will also identify regulatory procedures in the event that new areas of contamination are identified. |
| C-28 | Kathleen A. Theoharides, Secretary, EEA | Mitigation | As recommended by EPA, the FEIR should confirm that Massport will require its construction contractors to use Ultra Low Sulfur Diesel fuel, and discuss the use of after-engine emissions controls, such as oxidation catalysts or diesel particulate filters. | Massport will include the requirement for contractors to use Ultra Low Sulfur Diesel Fuel (ULSD) in the Project’s specifications. |
| C-29 | Kathleen A. Theoharides, Secretary, EEA | Mitigation | The FEIR should include a separate chapter summarizing proposed mitigation measures. | Chapter 3, <i>Beneficial Measures/Mitigation</i> of this FEIR/EA provides the Proposed Project’s beneficial measures and construction-period mitigation commitments. |
| C-30 | Kathleen A. Theoharides, Secretary, EEA | Mitigation | This chapter [summarizing proposed mitigation measures] should also include draft Section 61 Findings for each area of impact associated with Massport’s Preferred Alternative. | Appendix C, <i>Updated Draft Section 61 Findings</i> of this FEIR/EA updates the draft Section 61 Findings included in the DEIR/EA. |
| C-31 | Kathleen A. Theoharides, Secretary, EEA | Mitigation | [This chapter summarizing proposed mitigation measures] should include a draft Section 61 Finding for use by the MWRA in issuing the modified Sewer Use Discharge Permit (if required). | Massport has coordinated with the MWRA and confirmed that no modification to its existing MWRA Sewer Use Discharge Permit is required for the Proposed Project, as it is not an industrial use and the permit only applies to industrial uses. ² Accordingly, the MWRA will not require the use of a draft Section 61 Findings for the Project. |

² Communication between Tim Coffey (MWRA) and Jim Ferrara (WSP) on September 10, 2019.

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| Comment # | Author | Topic | Comment | Response |
|------------------|---|--------------|---|--|
| C-32 | Kathleen A. Theoharides, Secretary, EEA | Mitigation | The FEIR should contain clear commitments to implement these mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation (either funding design and construction or performing actual construction), and a schedule for implementation. | Chapter 3, <i>Beneficial Measures/Mitigation</i> of this FEIR/EA updates the Proposed Project’s beneficial measures and construction-period mitigation commitments, including associated parties responsible for implementation and schedule for implementation. Although the Proposed Project’s overall budget largely includes these measures and commitments, this chapter provides individual costs for some of the Proposed Project’s major sustainable design features (e.g., expanded solar PV system at the new garage in front of Terminal E, light-emitting diode [LED] lighting, etc.). Massport’s fiscal investments related to its ongoing and planned significant HOV mode share commitments, though they are not directly associated with the Proposed Project, are also generally provided. |
| C-33 | Kathleen A. Theoharides, Secretary, EEA | Mitigation | To ensure that all GHG emissions reduction measures adopted by the Proponent in the Preferred Alternative are actually constructed or performed by the Proponent, I require Proponents to provide a self-certification to the MEPA Office indicating that all of the required mitigation measures, or their equivalent, have been completed. The commitment to provide this self-certification in the manner outlined above should be incorporated into the draft Section 61 Findings included in the FEIR. | Massport will provide self-certification to the MEPA Office indicating that all required greenhouse gas emissions measures, or their equivalents, have been completed. This commitment has been incorporated into Chapter 3, <i>Beneficial Measures/Mitigation</i> and Appendix C, <i>Updated Draft Section 61 Findings</i> . Documentation will be provided in the EDR/ESPR filings. |
| C-34 | Kathleen A. Theoharides, Secretary, EEA | MEPA Process | The FEIR should contain a copy of this Certificate and a copy of each comment letter received on the DEIR. | This FEIR/EA contains a copy of the Secretary’s Certificate on the DEIR/EA, as well as copies of each comment letter submitted on the DEIR/EA. Please see Appendix A, <i>Secretary’s Certificate and Public Comments on the DEIR/EA</i> . |
| C-35 | Kathleen A. Theoharides, Secretary, EEA | MEPA Process | In order to ensure that the issues raised by commenters are addressed, the FEIR should include direct responses to these comments to the extent that they are within MEPA jurisdiction. | This FEIR/EA provides direct responses to public comments on the DEIR/EA (to the extent that they are within MEPA jurisdiction) in Chapter 2, <i>Responses to Comments</i> (this chapter). |
| C-36 | Kathleen A. Theoharides, Secretary, EEA | MEPA Process | The [direct] response [to the comments] can refer to future EDRs and/or ESPRs to address issues that are not within the FEIR Scope. | Comment noted. |
| C-37 | Kathleen A. Theoharides, Secretary, EEA | MEPA Process | I recommend that Massport employ an indexed response to comments format, supplemented as appropriate with direct narrative response. | Chapter 2, <i>Responses to Comments</i> (this chapter), presents Massport’s direct responses to public comments on the DEIR/EA. Comment responses are numbered and organized by comment author and subject matter. |
| C-38 | Kathleen A. Theoharides, Secretary, EEA | MEPA Process | Massport should circulate the FEIR to those parties who commented on the ENF and/or the DEIR, to any State Agencies from which the Proponent will seek permits or approvals, and to any parties specified in section 11.16 of the MEPA regulations. Massport may circulate copies of the FEIR to commenters other than State Agencies in a digital format (e.g., CD-ROM, USB drive) or post to an online website. | Massport will circulate copies of this FEIR/EA to each party who commented on the ENF and/or the DEIR/EA, as well as to any State and City Agency from which permits or approvals will be sought. FEIR/EA distribution will also include any other parties specified in Section 11.16 of the MEPA regulations. Parties other than State agencies will receive the FEIR/EA in a digital format and be notified by letter of the document’s posting to the Massport website. The full distribution list is presented in Chapter 4, <i>Distribution</i> . |
| C-39 | Kathleen A. Theoharides, Secretary, EEA | MEPA Process | Massport should make available a reasonable number of hard copies [of the FEIR] to accommodate those without convenient access to a computer to be distributed upon request on a first come, first served basis. | Persons may request CDs or printed copies of this FEIR/EA from Stewart Dalzell, telephone (617) 568-3524, email: sdalzell@massport.com. Massport will ensure that letters accompanying this FEIR/EA or providing notice of its availability indicate that hard copies are available upon request. Electronic and printed copies of this FEIR/EA will also be available for review at local public libraries including the Boston Public Library’s Main Branch, Charlestown Branch, and East Boston Branch, in addition to the Chelsea Public Library, Revere Public Library, and Winthrop Public Library. |
| C-40 | Kathleen A. Theoharides, Secretary, EEA | MEPA Process | Massport should send a letter accompanying the digital copy [of the FEIR] or identifying the web address of the online version of the FEIR indicating that hard copies are available upon request, noting relevant comment deadlines, and appropriate addresses for submission of comments. | Parties other than State agencies will receive the FEIR/EA in a digital format and be notified by letter of the document’s posting to the Massport website. This letter will identify the web address of the online version of the FEIR/EA, as well as indicate that hard copies are available upon request, note relevant comment deadlines, and provide appropriate addresses for the submission of comments. |
| C-41 | Kathleen A. Theoharides, Secretary, EEA | MEPA Process | The FEIR submitted to the MEPA office should include a digital copy of the complete document. | Distribution of this FEIR/EA to the MEPA office will include a digital copy of the complete document. |

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| Comment # | Author | Topic | Comment | Response |
|------------------|--|--------------|--|---|
| C-42 | Kathleen A. Theoharides, Secretary, EEA | MEPA Process | A copy of the FEIR should be made available for review at the following Libraries: Boston Public Library - Main, Orient Heights, and East Boston Branches, Chelsea Public Library, Winthrop Public Library, and Revere Public Library. | Electronic and printed copies of this FEIR/EA will be available for review at local public libraries including the Boston Public Library's Main Branch, Charlestown Branch, and East Boston Branch, in addition to the Chelsea Public Library, Revere Public Library, and Winthrop Public Library. Please note that the Orient Heights Branch closed in 2013 when it merged with the new East Boston Branch. |

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Table 2-2 Responses to Public Comments on the DEIR/EA

| Comment # | Author | Topic | Comment | Response |
|------------------|--|--|--|---|
| 1-1 | Timothy Timmermann, Director, Office of Environmental Review, US EPA | Air Quality | Project components located within nonattainment or maintenance areas need to be evaluated for applicability to the Federal General Conformity regulations. Specifically, if the total of direct and indirect emissions of a criteria pollutant or precursor in a nonattainment or maintenance area caused by a Federal action would equal or exceed the applicability thresholds established in 40 CFR 92.153, the requirements of general conformity must be satisfied. EPA will review and comment on the conformity determination once it is made available by the FAA. | As reported in the DEIR/EA, the Proposed Project would comply with the General Conformity Rule, established under the federal Clean Air Act, as related emissions would be below (i.e., within) <i>de minimis</i> thresholds. Project construction would generate temporary construction vehicle and equipment emissions; however, emissions would be well within the General Conformity thresholds. Please note that the FAA responded to the EPA comment directly and provided the specific locations of the Conformity Determination in the DEIR/EA. The FAA has expressly provided the Conformity Determination in this FEIR/EA (see its draft Finding of No Significant Impact/Record of Decision [FONSI/ROD] prior to this document's Table of Contents) and asked Massport to highlight that Determination. |
| 1-2 | Timothy Timmermann, Director, Office of Environmental Review, US EPA | Mitigation | EPA encourages Massport to commit to the use of newer vintage diesel engines where possible during all phases of project construction and operation. Alternatively, we encourage the project proponent to require diesel retrofits where practicable, require the use of cleaner fuels, and institute idle reduction measures to minimize emissions from diesel construction equipment. | As presented in Appendix C, <i>Updated Draft Section 61 Findings</i> , Massport will require all contractors to follow construction vehicle/equipment anti-idling procedures; use low- or zero-emissions equipment, where practicable; and retrofit appropriate diesel construction equipment with diesel oxidation catalysts and/or particulate filters. Further, Massport will include the requirement for contractors to use Ultra Low Sulfur Diesel Fuel in the Project's specifications. |
| 1-3 | Timothy Timmermann, Director, Office of Environmental Review, US EPA | Mitigation | Operator training to reduce unnecessary idling of equipment to supplement the adoption of these technologies is encouraged. | As presented in Appendix C, <i>Updated Draft Section 61 Findings</i> , Massport will require all contractors to follow construction vehicle/equipment anti-idling procedures. As part of this requirement, Massport will encourage contractors to provide the appropriate training. |
| 1-4 | Timothy Timmermann, Director, Office of Environmental Review, US EPA | Mitigation | We recommend that the project name specific exhaust emission mitigation measures and require a binding commitment from the applicant to implement these measures to help reduce and minimize air quality impacts from construction of the proposed project. | Appendix C, <i>Updated Draft Section 61 Findings</i> provides the specific exhaust emission mitigation measures planned to reduce and minimize air quality impacts from construction of the Project. Massport will provide a greenhouse gas emissions self-certification to the MEPA Office indicating that all required greenhouse gas emissions measures, or their equivalents, have been completed. This commitment has been incorporated into Appendix C, <i>Updated Draft Section 61 Findings</i> . Documentation will be provided in future Logan Airport Environmental Data Report (EDR) and Environmental Status and Planning Report (ESPR) filings. |
| 2-1 | Paul F. Ormond, P.E., Energy Efficiency Engineer, Mass DOER | Greenhouse Gas Emissions Reduction – Solar Photovoltaics | We recommend that the proponent evaluate more PV, including systems up to 4.5MW (total, for the two structures). This evaluation should include a meeting with the appropriate utility to assess interconnection and evaluations of SMART and potential grants from Massachusetts' Lead by Example program. | Appendix B, <i>Solar PV Analysis for the New Garage in Front of Terminal E</i> describes the assessment that Massport undertook to inform its decision-making regarding solar PV at the new garage in front of Terminal E. The proposed system, as discussed in Section 1.3, <i>Project Changes</i> , is double that proposed in the DEIR/EA. The expanded solar PV system is capable of offsetting 50 percent of the facility's total energy consumption, including all lighting and power required for its EV stations. As described in the DEIR/EA, the Economy Garage expansion would include the relocation of the existing solar PV system to the top of the facility's new highest level or replacing it with a more efficient system as feasible. Both facilities will include infrastructure to allow the future expansion of solar PV to their maximum potential. Massport will coordinate with various utilities, as necessary, as part of this Proposed Project. Please note that Massport is not eligible for SMART grants that support solar PV development. Massport is in the process of exploring the possibility of securing a Leading by Example grant as the Project design proceeds. |

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Table 2-2 Responses to Public Comments on the DEIR/EA (Continued)

| Comment # | Author | Topic | Comment | Response |
|------------------|---|--|--|---|
| 2-2 | Paul F. Ormond, P.E., Energy Efficiency Engineer, Mass DOER | Greenhouse Gas Emissions Reduction – Solar Photovoltaics | At a minimum, we recommend the project be designed and built to accommodate solar in the future so as not to lose a significant rooftop asset in the event that issues effecting feasibility today change. Accordingly, at a minimum, we recommend that both garages be built to be solar-ready. The new Terminal E garage should be solar-ready to accommodate 1.5 MW of solar PV and the economy garage expansion should be solar ready to accommodate 3 MW of solar PV. “Accommodate” in this context means that, if built in the future, the garages would not require structural, geotechnical, or seismic retrofit based on current building Codes. Electric services and connection pathways should also be preplanned. | Both the new garage in front of Terminal E and the Economy Garage expansion will be designed to accommodate the facilities’ respective maximum solar PV potential. They will be constructed based on current building codes, and will not require structural, geotechnical, or seismic retrofits at the time of potential solar PV expansion. Additionally, electrical infrastructure will be pre-planned. For PV systems sized 1.5 MW to 3MW, typically these are integrated at the medium voltage level. Empty electrical conduits will be installed to provide the required pathway to allow for future integration to the medium voltage systems. |
| 2-3 | Paul F. Ormond, P.E., Energy Efficiency Engineer, Mass DOER | Greenhouse Gas Emissions Reduction – Energy Use | We recommend that all space heating and any space cooling be done with cold-climate rated heat pumps and/or VRF | All electrical and telecommunications (i.e., Main Distribution Frame and Intermediate Distribution Facility) rooms are being conditioned with split system heat pumps capable of operating at or below temperature of 0°F. Mechanical rooms, water service rooms, and the bathroom will be heated only by an electric or hydronic unit heater. Each lobby surrounding the elevator core in the garage will be heated and cooled by small air handling units. These air handling units will have chilled water provided by the Central Heating Plant and hot water provided by two small boilers for redundancy. One additional air handling unit will serve as a dedicated outdoor air system unit to pretreat the outside air using a refrigerant cooling coil with an air-cooled condensing unit and hot water from the same boilers mentioned previously. The ability for the heat pumps to operate below 0°F does not impact the energy calculations. The option to perform below 0°F is a wind baffle and will not have an effect on energy consumed. |
| 2-4 | Paul F. Ormond, P.E., Energy Efficiency Engineer, Mass DOER | Greenhouse Gas Emissions Reduction – Energy Use | In the submission, reference is made to potential use of electric resistance heating, which is not recommended. | Electric unit heaters are still anticipated in certain remote locations in the new garage in front of Terminal E where hot water is not available. It is more practical to install electric unit heaters than to run two hot water pipes to the opposite end of the proposed garage. As currently designed, the new garage in front of Terminal E is 32 percent more energy efficient than the concept presented in the DEIR/EA. In addition, it is expected this facility will generate 40 percent less greenhouse gas emissions compared to the original concept. |
| 3-1 | Sharon Weber, Deputy Director, Division of Air & Climate Programs, Mass DEP | MEPA Process | MassDEP is not requesting further review of the project in a Supplemental Draft EIR. | Correct, comment noted. |
| 4-1 | Martin Pillsbury, Environmental Planning Director, MAPC | Ground Access | We are concerned to see that the DEIR/EA was filed with MEPA prior to the completion of these studies, which will provide useful information for evaluating the project and its mitigation. The availability of these studies will be critical to the Final Environmental Impact Report (FEIR) as they should be used to inform the mitigation measures for the project and identify ways to further support alternative transit options to and from the airport. These studies will also inform Massport’s long-range efforts to address VMT and air quality impacts of different ground access modes to and from Logan Airport. | The MassDEP studies were finalized and posted on Massport’s website (http://www.massport.com/media/3370/final-massport-dep-report.pdf) on September 30, 2019. These studies discuss the implementation of study results, which include several recommendations that Massport has already started to put into action to effect HOV mode share increases at Logan Airport. Section 1.8, <i>Ground Access and Trip Reduction Strategy Studies</i> of this FEIR/EA summarizes these recommendations, along with the MassDEP studies more generally. Appendix D, <i>Executive Summary and Introduction to the MassDEP Studies</i> of this FEIR/EA presents the Executive Summary and Introduction of the MassDEP studies. The MassDEP studies will continue to help inform the implementation and planning of complementary programs to the Proposed Project to reduce trips to the Airport. Massport will utilize the findings of Study #2 (Logan Airport Ground Access High-Occupancy Vehicle Pricing) to inform the parking pricing policies at the proposed garages. The MassDEP studies do not affect the Proposed Project’s mitigation commitments. The Proposed Project itself constitutes mitigation as it is one component within Massport’s larger strategy to reduce traffic congestion, vehicle miles traveled (VMT), and associated air emissions. Further, the Proposed Project is anticipated to have only minor and temporary construction impacts. |

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East Boston, Massachusetts

Table 2-2 Responses to Public Comments on the DEIR/EA (Continued)

| Comment # | Author | Topic | Comment | Response |
|------------------|---|------------------|---|---|
| 4-2 | Martin Pillsbury, Environmental Planning Director, MAPC | Ground Access | It is important that all three studies be finalized and available prior to the issuance of the FEIR, and that the data and findings be integrated into the FEIR and particularly the mitigation commitments as appropriate. In order to minimize adverse impacts and to keep the Commonwealth on track in meeting its regulatory and statutory goals, MAPC respectfully requests that the Secretary incorporate this recommendation as part of the Certificate on the Draft EIR. | <p>The MassDEP studies were finalized and posted on Massport's website (http://www.massport.com/media/3370/final-massport-dep-report.pdf) on September 30, 2019. These studies discuss the implementation of study results, which include several recommendations that Massport has already started to put into action to effect HOV mode share increases at Logan Airport. Section 1.8, <i>Ground Access and Trip Reduction Strategy Studies</i> of this FEIR/EA summarizes these recommendations, along with the MassDEP studies more generally. Appendix D, <i>Executive Summary and Introduction to the MassDEP Studies</i> of this FEIR/EA presents the Executive Summary and Introduction of the MassDEP studies.</p> <p>The MassDEP studies will continue to help inform the implementation and planning of complementary programs to the Proposed Project to reduce trips to the Airport. Massport will utilize the findings of Study #2 (Logan Airport Ground Access High-Occupancy Vehicle Pricing) to inform the parking pricing policies at the proposed garages.</p> <p>The MassDEP studies do not affect the Proposed Project's mitigation commitments. The Proposed Project itself constitutes mitigation as it is one component within Massport's larger strategy to reduce traffic congestion and associated air emissions. Further, the Proposed Project is anticipated to have only minor and temporary construction impacts.</p> |
| 4-3 | Martin Pillsbury, Environmental Planning Director, MAPC | Purpose and Need | MAPC respectfully requests that Massport monitor the performance of the first facility after it is in operation, and use that information to reevaluate the timing, and to what extent, there is a need to construct the second phase of 3,000 additional parking spaces. | Massport will reevaluate the need for the additional 3,000 parking spaces planned as part of the Economy Garage expansion prior to the start of its construction, anticipated in mid-2023. |
| 4-4 | Martin Pillsbury, Environmental Planning Director, MAPC | Purpose and Need | Plans for future adaptability of structured parking should be explored for potential productive reuse of the space, should parking demand decrease in the future due to changes in travel mode, Transportation Networking Companies (TNC), or other causes. | Massport would consider adaptive reuses of the proposed garages, as feasible and to the extent practicable, if the demand for parking at the Airport drops. |
| 4-5 | Martin Pillsbury, Environmental Planning Director, MAPC | Purpose and Need | Advancing the efficient management of TNC trips, promoting TNCs to carry passengers both when entering and exiting Logan Airport, and increasing shared-trips may even reduce the need for additional onsite parking. That is why MAPC is requesting that the actual performance of the system be monitored after the first phase of parking expansion in 2021, to determine if the assumptions underlying the plan for a second phase continue to be valid. | Massport will reevaluate the need for the additional 3,000 parking spaces planned as part of the Economy Garage expansion prior to the start of its construction, anticipated in mid-2023. Annual passenger ground access surveys, which Massport previously conducted every three years, will inform this reevaluation. |
| 5-1 | Tim A. Pohle, Senior Managing Director, Environmental Affairs, Airlines for America | MEPA Process | Together with our members we are pleased to support strongly the Logan Airport Parking Project (the "Project"), which will bring critically needed parking capacity to Boston Logan International Airport ("BOS") while also providing important regional air quality benefits. This type of project aligns with the commercial aviation industry's commitment to providing safe, reliable commercial air service that is a critical engine of strong, environmentally sustainable economic growth. | Comment noted. |
| 5-2 | Tim A. Pohle, Senior Managing Director, Environmental Affairs, Airlines for America | Mitigation | It is very important that the Final EIR/EA explicitly states and clarifies that GSE related programs to reduce emissions are not required to mitigate air emissions associated with the Project and/or to demonstrate conformity with the State Implementation Plan ("SIP) pursuant to Section 176(c) of the Clean Air Act. | Massport is committed to implementing its ground support equipment (GSE) electrification initiative, as outlined in the updated draft Section 61 findings and provided for in other commitments. Massport continues to collaborate with airlines, fixed base operators, and others on implementation of this initiative. Massport has begun to implement and is ahead of schedule meeting these commitments and has already received a robust response from Logan Airport's major airlines, who are taking maximum advantage of the EPA's Voluntary Airport Low Emissions (VALE) and Diesel Emission Reduction Act (DERA) Grant Programs to support expedited electrification of their GSE fleets. |

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| Comment # | Author | Topic | Comment | Response |
|------------------|---|--------------|--|---|
| 5-3 | Tim A. Pohle, Senior Managing Director, Environmental Affairs, Airlines for America | Mitigation | We respectfully request that the Draft Project §61 Findings for the Parking Project at Boston Logan International Airport (as presented in Appendix C of the Draft EIR/EA), be amended to reflect that any GSE program will be voluntary and exclude any provision relating to commercial aircraft taxiing. | Massport is committed to implementing its GSE electrification initiative, as outlined in the updated draft Section 61 findings and provided for in other commitments. Massport continues to collaborate with airlines, fixed base operators, and others on implementation of this initiative. Massport has begun to implement and is ahead of schedule meeting these commitments and has already received a robust response from Logan Airport’s major airlines, who are taking maximum advantage of the EPA’s VALE and DERA Grant Programs to support expedited electrification of their GSE fleets. Progress towards meeting these Section 61 commitments will be tracked through Massport’s annual EDR/ESPR filings, and Massport will take appropriate action going forward to ensure that eGSE targets continue to be met. |
| 5-4 | Tim A. Pohle, Senior Managing Director, Environmental Affairs, Airlines for America | Mitigation | If the Final Section 61 Findings document addresses GSE, it should provide for the development of a voluntary GSE program. | Massport is committed to implementing its GSE electrification initiative, as outlined in the updated draft Section 61 findings and provided for in other commitments. Massport continues to collaborate with airlines, fixed base operators, and others on implementation of this initiative. Massport has begun to implement and is ahead of schedule meeting these commitments and has already received a robust response from Logan Airport’s major airlines, who are taking maximum advantage of the EPA’s VALE and DERA Grant Programs to support expedited electrification of their GSE fleets. |
| 5-5 | Tim A. Pohle, Senior Managing Director, Environmental Affairs, Airlines for America | Mitigation | The Final Section 61 Findings must acknowledge that any mandate to deploy eGSE must also be predicated on findings that (a) sufficient infrastructure is in place to accommodate and support such equipment and (b) operation of eGSE is viable as a practical matter (i.e., that it is capable of performing the tasks of the equipment it will replace without compromising the safety and efficiency of aircraft operations). | Massport continues to work closely with airlines, fixed base operators, and others on implementation of its GSE electrification initiative. As part of this initiative, Massport is coordinating the installation of appropriate eGSE infrastructure, including sufficient charging infrastructure, and will phase in the installation of such infrastructure as necessary. Massport is committed to the safe and effective deployment of eGSE at Logan Airport. |
| 5-6 | Tim A. Pohle, Senior Managing Director, Environmental Affairs, Airlines for America | Mitigation | The Final Section 61 Findings also must acknowledge that it is inappropriate to require the turnover of “all” GSE by any date certain, even if all of these predicates are met, without first evaluating and analyzing the cost-effectiveness of converting or replacing equipment before its useful life has been attained. | Working closely with airlines, fixed base operators, and others, Massport is committed to implementing its GSE electrification initiative in a cost-effective manner. In particular, the initiative is structured so existing equipment will only be replaced once replacement eGSE is commercially available. Generally, existing GSE will only be replaced with eGSE once it is at least eight years old. |
| 5-7 | Tim A. Pohle, Senior Managing Director, Environmental Affairs, Airlines for America | Mitigation | The Final Section 61 Findings must recognize that any reasonable policy regarding the replacement of GSE will include reasonable exceptions for low-use equipment. | Massport is committed to implementing its GSE electrification initiative, as outlined in the updated draft Section 61 findings and provided for in other commitments. |
| 5-8 | Tim A. Pohle, Senior Managing Director, Environmental Affairs, Airlines for America | Mitigation | With respect to “commercial availability,” the Final Section 61 Findings also must acknowledge that this can be a difficult concept to define with respect to GSE. As such, before establishing any policy specifying the scope and schedule for replacing GSE, “commercial availability” must be carefully defined. Such a definition must acknowledge that “commercial availability” necessarily requires that the equipment is available at a commercially reasonable price. In addition, the process and criteria must also be defined for determining whether (a) specific equipment is “commercially available,” (b) sufficient infrastructure is in place to support deployment of eGSE, (c) the eGSE in question can be practically operated at BOS and (d) conversion of GSE to eGSE is cost-effective. | Massport is committed to implementing its GSE electrification initiative, as outlined in the updated draft Section 61 findings and provided for in other commitments. Working closely with airlines, fixed base operators, and others, Massport is committed to implementing the GSE electrification initiative for commercially-available equipment in a cost-effective manner. |
| 5-9 | Tim A. Pohle, Senior Managing Director, Environmental Affairs, Airlines for America | Mitigation | We unequivocally oppose the assertion in the Draft Section 61 Findings that “Massport will ensure that at least 60 percent of commercial aircraft taxiing for re-positioning will be done by electric tugs by 2027.” First and foremost, as emphasized above, the FAA exercises exclusive and plenary authority to regulate the operation of aircraft and has promulgated regulations establishing that the pilot-in-command of an aircraft has direct responsibility for and final authority as to the operation of the aircraft. As such, there is no legal means available to either impose or enforce such a taxiing requirement. For this reason alone, it must be removed from the Final Section 61 Findings. | Massport acknowledges that the FAA regulates the operation of aircraft. Based on discussions with the airlines at Logan Airport, Massport believes that 60 percent of commercial aircraft taxiing for re-positioning can be done with electric tugs by 2027. Massport remains committed to implementing its GSE electrification initiative, as outlined in the updated draft Section 61 findings and provided for in other commitments. |

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Table 2-2 Responses to Public Comments on the DEIR/EA (Continued)

| Comment # | Author | Topic | Comment | Response |
|------------------|---|---------------------------------|--|---|
| 6-1 | Gail Miller, President, Airport Impact Relief, Incorporated (AIR, Inc.) | MEPA Process | AIR, Inc., the Boston region's longest serving community-based airport mitigation planning group opposes this project and requests that Secretary Theoharides require the Proponent to produce a Supplemental EIR which addresses the many serious flaws in the reporting and analysis within the present EIR. | Comment noted. Please note that the Secretary's Certificate, dated August 2, 2019, determined that the DEIR/EA "adequately and properly complies with MEPA and its implementing regulations." |
| 6-2 | Gail Miller, President, Airport Impact Relief, Incorporated (AIR, Inc.) | MEPA Process | [EOEA should require the proponent to:] Report on the Project as a component of recent, current and future projects and provide analysis and discussion of project and associated cumulative environmental impacts. | Massport provides annual updates on Logan Airport activity and annual impacts including near and long-term planning initiatives. The Logan Airport EDR and ESPR filings are specifically designed to provide the cumulative impact context of recent, current, and future projects. |
| 6-3 | Gail Miller, President, Airport Impact Relief, Incorporated (AIR, Inc.) | Alternatives Analysis | [EOEA should require the proponent to:] Develop a Third Alternative based on research and development of multiple additional Logan Express Routes, expanded and improved suburban parking facilities, improved BRT service at a variety of price points, and future MBTA connectivity and service Improvements. | The Proposed Project is just one component of Massport's ground access strategy. Massport has already begun expanding and incentivizing Logan Express service to double annual ridership from 2 million to 4 million (and in the process, eliminate 1.5 million vehicles from Airport roads, tunnels, and Route 1A). New customer benefits from this initiative include: 1) a new urban Logan Express service from North Station with free service from Logan Airport, 2) modeling a new suburban Logan Express service with parking for potential success, 3) online e-ticketing, 4) more parking at the Framingham and Braintree Logan Express locations, and 5) more frequent bus services from Framingham Logan Express. This initiative is expected to be implemented incrementally and be fully complete in spring 2024. Massport continues to support and expand HOV programs and partnerships with the MBTA and private transit carriers. This is demonstrated by Massport's commitment to pay for eight additional Silver Line buses (bringing the total to 16) to operate on the SL1 route by December 2024 (dependent on MBTA procurement). |
| 6-4 | Gail Miller, President, Airport Impact Relief, Incorporated (AIR, Inc.) | Environmental Impacts – General | [EOEA should require the proponent to:] Accurately report on the increases in impacts which the Project will cause within the Project MEPA EIR. | The DEIR/EA appropriately assesses the potential environmental impacts of the Proposed Project by using the best available data and applying industry standard methodologies. |
| 6-5 | Gail Miller, President, Airport Impact Relief, Incorporated (AIR, Inc.) | Environmental Impacts - General | [EOEA should require the proponent to:] Correct the flawed planning assumptions and provide thorough discussion and analysis of the Project in lieu of the 5% average annual passenger growth rate. | The growth rate incorporated into the analyses of the DEIR/EA was developed based on the best available data and modeling. It is consistent (i.e., within 10 percent) with the FAA's Fiscal Year 2018 Terminal Area Forecast. |
| 6-6 | Gail Miller, President, Airport Impact Relief, Incorporated (AIR, Inc.) | Air Quality | [EOEA should require the proponent to:] Undertake a collaborative Localized Air Quality Monitoring and Improvement Program, working in conjunction with AIR, Inc. and their partners to provide accurate and timely data on airport related emissions and deploy HEPA filtration systems within schools and homes in heavily impacted zones. | Comment noted. The Proposed Project is designed to reduce ground access trips, VMT, and associated vehicle emissions, and therefore constitutes mitigation of activities at Logan Airport. Massport continues its over 35-year program of reporting on annual airport activity, associated impacts, and mitigation programs. |
| 6-7 | Gail Miller, President, Airport Impact Relief, Incorporated (AIR, Inc.) | Ground Access | EOEA should require the Proponent to provide comprehensive analysis and discuss the relative costs of a variety of HOV promoting, traffic reducing initiatives to provide reviewers with a robust understanding of the expected cost / benefit of this \$304M investment in additional parking. | No single initiative will fully mitigate the Airport's impacts on regional VMT and their associated emissions. Accordingly, the Proposed Project is just one component of Massport's ground access strategy. In addition, Massport has opened the new Ride App drop-off/pick-up areas on the ground floor of the Central Garage complex and begun to increase HOV options through new and improved Logan Express bus service. Massport's investment in these other initiatives are expected to exceed \$120 million. Please see the 2017 ESPR (specifically Chapter 5, <i>Ground Access to and from Logan Airport</i>) for more information on Massport's ground access strategy at the Airport. |

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| Comment # | Author | Topic | Comment | Response |
|------------------|---|-----------------------|---|--|
| 6-8 | Gail Miller, President, Airport Impact Relief, Incorporated (AIR, Inc.) | Ground Access | Proper review of the Parking Project should consider an overview of Logan's location relative to Boston; the peak period morning commute; present and future local roadway and mass transit capacity, and; examination of mode choice behaviors highlighting opportunities. | <p>The DEIR/EA takes a regional approach to estimating the Proposed Project's overall savings in VMT. While regional VMT is reported on an annual and daily basis, the proportion of this occurring during peak commuter hours is commensurate with the amount of traffic traveling to the Airport during those same hours. The evaluation of traffic on-Airport considered peak hours for ground transportation at Terminal E and the Economy Garage. Peak travel patterns at the Economy Garage overlap somewhat with peak commuter hours unrelated to the Airport; however, at Terminal E, the peak travel patterns follow later in the evening given the flight times for international travel from the east coast.</p> <p>As demonstrated in Section 4.5.1.3 of the DEIR/EA, there is adequate capacity on the MBTA Blue Line to accommodate the estimated usage at Airport Station in 2030. Further, Massport continually evaluates and adapts the Silver Line bus service to ensure it meets Massport's customer service requirements, including the provision of adequate passenger capacity.</p> <p>Massport's ground access strategy will continue to be informed by a passenger ground access survey. In past years, Massport conducted this survey every three years. Moving forward, such studies will be conducted on an annual basis and the results published in the EDRs and ESPRs.</p> |
| 6-9 | Gail Miller, President, Airport Impact Relief, Incorporated (AIR, Inc.) | Alternatives Analysis | Congestion pricing, improvements in MBTA connectivity via the Red to Blue Connector, extension of the Blue Line to Lynn, expanded Ferry transportation service, and removal of curbside passenger access are all reasonable approaches to the stated goals of the Project: reducing drop-off/pick-up activity, and improving congestion, air quality, and passenger experience and minimizing environmental impacts. Yet the EIR fails to evaluate these alternatives, referencing only briefly a non-Project strategic plan referred to as the Ground Transportation Strategy. | <p>The MassDEP studies, published on Massport's website (http://www.massport.com/media/3370/final-massport-dep-report.pdf) on September 30, 2019, assess opportunities to effect HOV mode share increases at Logan Airport beyond the Proposed Project. These studies address HOV services, HOV pricing, and operational measures to reduce non-HOV drop-off/pick-up modes of transportation to/from the Airport. Section 1.8, <i>Ground Access and Trip Reduction Strategy Studies</i> of this FEIR/EA summarizes the development of the MassDEP studies and describes certain recommendations that Massport has begun to implement. Appendix D, <i>Executive Summary and Introduction to the MassDEP Studies</i> of this FEIR/EA provides the Executive Summary and Introduction of the overall report.</p> <p>Massport will continue to work with its partners, such as the MBTA, to support and expand HOV programs. This is demonstrated by Massport's commitment to pay for eight additional Silver Line buses (bringing the total to 16) to operate on the SL1 route by December 2024 (dependent on MBTA procurement).</p> |
| 6-10 | Gail Miller, President, Airport Impact Relief, Incorporated (AIR, Inc.) | Alternatives Analysis | A reasonable Project Alternative can be built around an analysis of the development of 5,000 - 10,000 additional suburban parking spaces, with multiple new Logan Express routes featuring aggressively subsidized fares and improved Bus Rapid Transit Service (BRT). | <p>Massport is already planning on expanding and incentivizing Logan Express service to double annual ridership from 2 million to 4 million (and in the process, eliminate 1.5 million vehicles from Airport roads, tunnels, and Route 1A). New customer benefits from this initiative include: 1) a new urban Logan Express service from North Station with free service from Logan Airport, 2) modeling a new suburban Logan Express service with parking for potential success, 3) online e-ticketing, 4) more parking at the Framingham and Braintree Logan Express locations, and 5) more frequent bus services from Framingham Logan Express. This initiative is expected to be implemented incrementally and be fully complete in spring 2024.</p> <p>Massport continues to support and expand HOV programs and partnerships with the MBTA and private transit carriers. This is demonstrated by Massport's commitment to pay for eight additional Silver Line buses (bringing the total to 16) to operate on the SL1 route by December 2024 (dependent on MBTA procurement).</p> |

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Table 2-2 Responses to Public Comments on the DEIR/EA (Continued)

| Comment # | Author | Topic | Comment | Response |
|------------------|---|---------------------------------|---|--|
| 6-11 | Gail Miller, President, Airport Impact Relief, Incorporated (AIR, Inc.) | Ground Access | While the Project EIR describes future savings in traffic and emissions impacts under hypothetical situations in which would-be parkers search for parking or opt for other pick-up and drop-off modes, its analysis fails to discuss the 25% increase in VMT, traffic congestion, and pollution impacts this 25% increase in on-airport parking will produce. | The reductions in regional VMT and associated air quality improvements presented in Chapter 4, <i>Assessment of Impacts/Environmental Consequences</i> of the DEIR/EA represent <u>net savings</u> comparing the No-Action Alternative and the Proposed Project. These findings account for the increase in passengers traveling to and parking at the Airport. Given the air passenger increase, the Proposed Project would allow for a shift in traffic from drop-off/pick-up to drive and park, which provides for the noted net reduction in VMT and associated emissions. Any increase in traffic related to an increase in air passengers is accounted for in the increase between existing conditions and the No-Action Alternative. |
| 6-12 | Gail Miller, President, Airport Impact Relief, Incorporated (AIR, Inc.) | Purpose and Need | The EIR statement that the Project will satisfy Parking demand until the 50M passenger level is reached within the 10 - 15-year horizon (2029 - 2034) is inaccurate. With 2018 passenger volume at 40.9 million and an average 5% annual passenger growth rate this milestone will be surpassed by 2022. | The 50 million air passenger forecast at Logan Airport is expected to occur within the 10- to 15-year planning horizon – not by 2022. For the impact analyses in the DEIR/EA, which assume 50 million air passengers, the full-build year is 2030 (i.e., five years after the Economy Garage expansion is anticipated to be operational). |
| 6-13 | Gail Miller, President, Airport Impact Relief, Incorporated (AIR, Inc.) | Ground Access | The stated expectation that the Project, in conjunction with Massport’s Ground Transportation Strategy could eliminate 3 million (3M) annual trips should also be carefully scrutinized. Current HOV mode share of 30.5 and a passenger growth rate of 5% adding 10M additional passengers by 2022, will deliver 4M new net trips per year, creating commensurate increases in traffic congestion, VMT, and emissions. | As a separate initiative from the Logan Airport Parking Project, Massport is centralizing Ride App drop-off/pick-up areas on the ground floor of the Central Garage complex and planning to increase HOV options through new and improved Logan Express bus service. Together, these initiatives are expected to eliminate 3 million vehicles annually from local and regional roadways. This estimate is based on planning-level mode share forecasting completed as part of the MassDEP studies. Please note that the 50 million air passenger forecast at Logan Airport that is presented in the 2017 ESPR is expected to occur within the 10- to 15-year planning horizon – not by 2022. For the purposes of the impact analyses in the DEIR/EA, which assume 50 million air passengers, the full-build year is 2030 (i.e., five years after the Economy Garage expansion is anticipated to be operational). |
| 6-14 | Gail Miller, President, Airport Impact Relief, Incorporated (AIR, Inc.) | Environmental Impacts - General | Unchecked Logan expansion has caused intense environmental and economic losses across the region with noise, airport traffic congestion, and emissions increasingly and unnecessarily threatening the habitability of the Boston region. Not only should EOEAs weigh these socialized costs carefully as part of MEPA review, but it should also hold the Proponent to a very high standard of proof in regard to the fundamental accuracy of their claims. | As described in the DEIR/EA, (see Chapter 4, <i>Assessment of Impacts/Environmental Consequences</i>), the Proposed Project would have beneficial impacts on traffic and air quality. By reducing the drop-off/pick-up mode share to and from the Airport, the Proposed Project would also reduce VMT and associated air emissions. Concerning potential noise impacts, the Economy Garage expansion would have added noise barrier benefits, in conjunction with the Terminal E Modernization Project, by enhancing screening of community and neighborhood recreation areas from aircraft ground noise in the North Apron Area. |
| 6-15 | Gail Miller, President, Airport Impact Relief, Incorporated (AIR, Inc.) | Air Quality | The EIR does not report on or analyze Project traffic congestion and emissions impacts on local environmental justice communities in the Harborview, and Eagle Hill neighborhoods downwind of the Project site. | As the Proposed Project is designed to reduce drop-off/pick-up activity, it is anticipated to reduce roadway congestion and improve regional air quality. Environmental justice communities proximate to the Airport (shown in Figure 3-13 of the DEIR/EA) would benefit from the estimated 10 percent reduction in regional VMT, 11 percent reduction in nitrogen oxides, and 12 percent reduction in volatile organic compounds. |
| 6-16 | Gail Miller, President, Airport Impact Relief, Incorporated (AIR, Inc.) | Purpose and Need | The recent 42% decline in annual over-capacity parking days reported in the EIR casts doubt on the benefit of investing of nearly half \$1 billion into additional on-airport parking. | The existing parking supply continues to fail to meet existing demand during significant peak parking events such as holiday weekends and school vacation weeks. As discussed in the DEIR/EA (see Section 1.3.1, <i>Growth in Parking Demand</i>), at 50 million air passengers, which is expected within the 10-15 planning horizon, parking demand at the Airport would require valet operations on more than 100 occurrences per year. If Massport did not implement the Proposed Project, the commercial parking supply at the Airport would become more inadequate during the peak periods, contributing to further increases in drop-off/pick-up mode share. This would have substantial (and avoidable) adverse environmental consequences, as it would cause increased roadway congestion and air emissions due to the higher VMT associated with the drop-off/pick-up mode share. Massport will reevaluate the need for the additional 3,000 parking spaces planned as part of the Economy Garage expansion prior to the start of its construction, anticipated in mid-2023. |

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Table 2-2 Responses to Public Comments on the DEIR/EA (Continued)

| Comment # | Author | Topic | Comment | Response |
|------------------|--|--------------|--|---|
| 7-1 | Staci Rubin, Senior Attorney, Conservation Law Foundation | MEPA Process | On the basis of Massport’s commitment to a series of emissions reduction and other measures to mitigate any adverse effects of the project, as set forth in an enforceable agreement with CLF (May 18, 2017) (hereinafter the Massport-CLF Agreement), CLF supports the project. | Comment noted. |
| 7-2 | Staci Rubin, Senior Attorney, Conservation Law Foundation | Mitigation | CLF encourages incorporation of the terms of the Massport-CLF Agreement explicitly or by reference in the DEIR and its Chapter 61 findings. | In its May 2017 agreement with CLF, Massport committed to including three initiatives in the Logan Airport Parking Project Section 61 Findings: (1) Electrification of Ground-Service Equipment; (2) Expanding Logan Express Service; and (3) Increasing Percentage of Zero Emission Taxi, Livery and TNC Vehicles. Those three initiatives are included in the updated draft Section 61 findings for the Proposed Project as “Additional Ground Access Improvement, Trip Reduction, and Emissions Reduction Initiatives.” Massport remains committed to implementing the other measures described in the Massport-CLF agreement, including those in the section titled “Ground Access Improvement/Trip Reduction.” The studies included in the “Parking Freeze Regulation Measures” portion of the Massport/CLF agreement were recently completed and are available on Massport’s website. Irrespective of whether these initiatives are included in the Massport-CLF Agreement, the Section 61 findings, or both, Massport is committed to implementing all initiatives, projects, and programs provided for in the updated draft Section 61 findings and the Massport-CLF Agreement. |
| 7-3 | Staci Rubin, Senior Attorney, Conservation Law Foundation | Mitigation | Consistent with the Massport-CLF Agreement, Massport sought to include many of these improvements, projects, measures, incentives, as well as studies and additional measures not recited here, in its Section 61 Findings as part of the MEPA process for the project. | Comment noted. |
| 7-4 | Staci Rubin, Senior Attorney, Conservation Law Foundation | Mitigation | CLF suggests that noise impacts to EJ populations be mitigated and that Massport work with residents and community organizations in East Boston, Chelsea, Revere, and Winthrop to determine appropriate mitigation. | As discussed in the DEIR/EA (see Section 4.5.5, <i>Noise and Noise-Compatible Land Use</i>), no significant noise impacts on proximate communities – whether they be environmental justice communities or otherwise – are anticipated from the implementation of the Proposed Project. The Economy Garage expansion would have added noise barrier benefits, in conjunction with the Terminal E Modernization Project, by enhancing screening of community and neighborhood recreation areas from aircraft ground noise in the North Apron Area. |
| 8-1 | John Vitagliano, Former Commissioner, Boston Transportation Department | MEPA Process | I write in full support of the Logan Airport Parking Project, Draft Environmental Impact Report/Environmental Assessment (EEA#15665). | Comment noted. |

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Beneficial Measures/Mitigation

3.1 Introduction

The Logan Airport Parking Project (the Proposed Project) is designed as an integral component of the Massachusetts Port Authority's (Massport's) ground access and emissions reduction strategies at Boston Logan International Airport (the Airport). Its primary purpose is to reduce the number of trips to/from the Airport and thus reduce associated air emissions. By constructing the Proposed Project in locations that are already fully developed and in-use for Airport parking, and reducing trips and emissions, the Proposed Project would not create any long-term adverse environmental impacts; only minor, temporary construction-period impacts are expected.

Implementation of the Proposed Project would allow Massport to avoid adverse environmental impacts that would occur if no action were taken. These avoidable impacts include higher regional vehicle miles traveled (VMT) and associated air emissions from a high drop-off/pick-up mode share resulting from an inadequate parking supply at Boston Logan International Airport (the Airport).

Like Massport's high-occupancy vehicle (HOV) promotion efforts, the Proposed Project serves segments of users that either do not have convenient access to the Massachusetts Bay Transportation Authority (MBTA) system or other HOV modes, or would not use such modes even if access were available. While Logan Airport's ground access modes are evolving, as evidenced by Ride Apps such as Uber and Lyft, increasing passenger levels continue to result in unmet and growing parking demand. In 2018, the Airport reached a new passenger record of 40.9 million annual air passengers, an upward trend that has continued through 2019.

This chapter provides updates to the environmental benefits of the Proposed Project, including the incorporation of sustainable and resilient features (such as select measures associated with the U.S. Green Building Council's [USGBC's] Parksmart rating system) and construction period mitigation. Consistent with the Secretary of the Executive Office of Energy and Environmental Affairs' August 2, 2019 Certificate on the Draft Environmental Impact Report/Environmental Assessment (DEIR/EA) and supplemental guidance provided by the Massachusetts Environmental Policy Act (MEPA) Office,¹ this chapter also provides the general implementation schedule and responsible parties for the identified beneficial measures and mitigation, and estimated program costs for the Proposed Project's major benefits (e.g., solar photovoltaic [PV] systems, light-emitting diode [LED] lighting, etc.). Per guidance provided by the MEPA Office, this chapter also includes costs

¹ Communication between Stewart Dalzell, Massport, and Paige Czepiga, MEPA on October 11, 2019.

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for Massport’s significant ongoing and planned HOV mode share commitments that are not directly associated with the Proposed Project.

Appendix C, *Updated Draft Section 61 Findings* confirms the beneficial measures and mitigation that Massport commits to incorporating into the Proposed Project, Massport’s commitment to provide a self-certification that greenhouse gas emissions reduction measures have been incorporated, and additional ground access improvement, trip reduction, and emissions reduction initiatives. Following approval of the Proposed Project, tracking of and reporting on the beneficial and mitigation measures, as applicable, will continue through Massport’s Logan Airport Environmental Data Report (EDR) and Environmental Status and Planning Report (ESPR) filings. Massport will address monitoring and reporting on its progress toward achieving its ground access strategy goals in future EDRs/ESPRs.

3.2 Summary of Beneficial Measures/Mitigation Commitments

As listed in the DEIR/EA, Massport anticipates the Proposed Project will result in the following benefits through its function, physical design, and location:

- Accommodating existing and anticipated air passenger demand for parking to reduce the environmentally undesirable drop-off/pick-up mode share and its associated VMT and on- and off-Airport air emissions;
- Selecting Project sites with significant community input that are in areas already used for parking (i.e., not introducing a new use), are on existing bus/shuttle routes, and are separated from nearby residential communities;
- Reusing existing developed areas (i.e., the Project sites avoid undeveloped, greenfield lands);
- Providing convenient passenger access between the new garage in front of Terminal E and the terminal buildings and to the pedestrian bridge that connects Terminal E to the Central Garage complex (which includes the West and Central Garages);
- Incorporating the following ground access features into the design of the new garage in front of Terminal E:
 - A secondary entrance for public parkers to reduce on-Airport recirculation and associated VMT
 - A vehicular bridge connected to the Central Garage complex to enable more efficient operational movements by Massport’s Ground Transportation Unit;
- Providing added aircraft ground noise barrier benefits to nearby residences and recreation areas, in conjunction with the Terminal E Modernization Project, through the expansion of the existing Economy Garage; and
- Relying on existing roadway infrastructure, bus routes, and signage for the Economy Garage expansion.

Massport has incorporated significant sustainability enhancements into the design of the Proposed Project, which would contribute towards Project certification under the USGBC’s Parksmart rating system. These enhancements, which would be implemented by Massport’s construction contractors at the time of construction, are listed below along with their estimated program costs.

- Reducing lighting power densities from a base of 0.19 watts per square foot to a maximum of 0.05 watts per square foot (**\$3,150,000**);

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- Incorporating a solar PV system at the new garage in front of Terminal E capable of offsetting 50 percent of the facility’s total energy consumption (i.e., electricity and natural gas), including all lighting and power required for its EV charging stations **(\$2,700,000)**;
- Installing 11 dual-port EV charging stations (22 ports) in the new garage in front of Terminal E^{2, 3} **(\$231,500)**; and
- Integrating vertical landscaping into the façade of the new garage in front of Terminal E **(\$2,400,000)**.

Table 3-1 provides a summary of the remaining beneficial measures incorporated into the Project’s design, along with the construction-period mitigation commitments that Massport pledges to implement. Measures denoted with an asterisk (*) would contribute towards Project certification under the USGBC’s Parksmart rating system. All measures listed in **Table 3-1** are included in the Project’s program budget. Massport and/or its construction contractors are responsible for implementation, which will occur either at the time of construction or initiated prior to the start of facility operations and through the operations and maintenance phase.

**Table 3-1 Summary of Logan Airport Parking Project Beneficial and Mitigation Measures
(included in overall program budget)**

| Sustainability and Resiliency | |
|--|--|
| <ul style="list-style-type: none"> ■ Installing occupancy sensors and photocells on all applicable interior and exterior lighting * ■ Installing programmable thermostats, where applicable (i.e., mechanical/electrical rooms) * ■ Conditioning electrical and telecommunications rooms with split system heat pumps capable of operating at or below temperature of 0°F * ■ Designing the parking decks to be open air, negating the need for ventilation systems * ■ Performing building commissioning in accordance with ASHRAE Guideline 0-2005 and ASHRAE Guideline 1.1-2007 * ■ Relocating the existing solar photovoltaic (PV) system at the Economy Garage to the top of the facility’s new highest level upon completion of Project construction (the installation of a newer, more efficient system will be evaluated for feasibility as that construction period gets closer) * ■ Designing and building the proposed garages to accommodate expanded solar in the future as it becomes more cost effective/feasible ■ Reserving parking spaces for alternative fuel vehicles (e.g., EVs) amounting to at least 1 percent of total spaces and assigning preferred parking spaces for other low-emitting and fuel-efficient vehicles amounting to at least another 1 percent of total spaces * ■ Designing and building the proposed garages to accommodate expanded EV charging infrastructure to accommodate 150 percent of demand * | <ul style="list-style-type: none"> ■ Encouraging parkers to pay their fees prior to returning to their vehicles via Massport’s pay-by-foot system, which uses automated kiosks to enable the efficient flow of vehicles exiting the garages and reduce vehicle idling and associated air emissions * ■ Providing tire inflation services for each garage to promote increased fuel efficiency and vehicle safety * ■ Providing drivers with important roadway and parking information through internal and external wayfinding systems to reduce on-Airport and in-garage circulation, as well as associated VMT and air emissions. Such systems will include: <ul style="list-style-type: none"> <input type="checkbox"/> Dynamic signage/messaging <input type="checkbox"/> A parking reservation system <input type="checkbox"/> Parking guidance via electronic space occupancy detection * ■ Planting water-conserving ground landscapes that apply the principles of xeriscaping (e.g., use of native plants) * ■ Specifying water efficient fixtures and faucets in a staff restroom at the new garage in front of Terminal E * ■ Applying durable design principles to extend the facilities’ lifespan and avoid greenhouse gas emissions caused by future large-scale construction and renovation activities * ■ Preparing/adhering to a preventative maintenance plan to extend facility lifespan and avoid greenhouse gas emissions caused by future large-scale construction and renovation activities * ■ Installing and applying only no- or low-volatile organic compound (VOC) coatings, paints, and sealants * ■ Installing halon-free fire suppression systems in each garage * |

* Contributes towards Project certification under the USGBC’s Parksmart rating system

2 The DEIR/EA suggested the Project would include 15 single-port charging stations. Massport now plans 11 double-port stations to accommodate 22 dedicated EV charging parking spaces. Massport will increase the number of EV charging stations as part of the new garage in front of Terminal E to accommodate 150 percent of demand, as necessary.

3 The DEIR/EA stated Massport would install five EV charging stations in the Economy Garage expansion; however, such installations (inclusive of two ports/spaces per station) plus additional infrastructure to accommodate future expansion will now be accelerated to take place in the existing Economy Garage. Massport will increase the number of EV charging stations as part of the Economy Garage expansion to accommodate 150 percent of demand, as necessary.

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**Table 3-1 Summary of Logan Airport Parking Project Beneficial and Mitigation Measures (Continued)
(included in overall program budget)**

| Sustainability and Resiliency (Continued) | |
|--|--|
| <ul style="list-style-type: none"> ■ Complying with Massport’s <i>Floodproofing Design Guide</i> and elevating critical equipment and systems above the designated design flood elevations ■ Ensuring redundant or back-up power sources to reduce disruption from extreme weather conditions that may cause power outage ■ Performing frequent sweeping (at least monthly) to reduce the need for constant pressure washing and associated water use ■ Implementing an active recycling program to reduce the amount of waste sent to regional landfills/incinerators and to reduce greenhouse gas emissions associated with material disposal | <ul style="list-style-type: none"> ■ Displaying educational materials to convey the facilities’ environmentally sustainable design and operations ■ Participating in a recognized sustainable purchasing buying program applicable to non-capital equipment/materials ■ Implementing environmentally safe cleaning supplies and providing necessary training to use, maintain, and dispose of these products |
| Construction Period Mitigation | |
| <ul style="list-style-type: none"> ■ Providing on-Airport storage areas for construction materials ■ Coordinating the arrival of large construction equipment among various on-Airport projects and limiting their arrival or removal during peak travel hours (both Airport and commuter peaks) ■ Developing specific truck routing and/or staging plans for implementation by the various contractors ■ Requiring construction managers to prepare: <ul style="list-style-type: none"> <input type="checkbox"/> Draft Soil Management Plan <input type="checkbox"/> Draft Stormwater Pollution Prevention Plan <input type="checkbox"/> Draft Management Plan for Dewatering, if needed <input type="checkbox"/> Draft Health and Safety Plan ■ Employing a Construction Waste Management Plan that requires at least 85 percent of materials to be recycled or reused ■ Controlling rodents through routine inspection, monitoring, and treatment ■ Prioritizing the use of construction equipment and materials that are repurposed, reused, or recycled (or contain recycled content), where feasible ■ Prioritizing construction equipment and materials that are sourced regionally (i.e., within 300 miles of the Project sites) to reduce greenhouse gas emissions associated with their transport ■ Using regional (i.e., within 75 miles) labor to the greatest extent practicable ■ Encouraging construction companies to provide off-Airport parking for their employees and to provide shuttle services from these locations (shuttles are required to use the Coughlin Bypass road to access the Airport) ■ Requiring all construction vehicle/equipment to follow anti-idling procedures and all construction managers to provide associated training ■ Requiring the use of low- or zero-emissions equipment, where practicable ■ Requiring the retrofitting of appropriate diesel construction equipment with diesel oxidation catalyst and/or particulate filters ■ Requiring contractors to use Ultra Low Sulfur Diesel Fuel (ULSD) ■ Maintaining low on-site vehicle speeds | <ul style="list-style-type: none"> ■ Deploying air quality and fugitive dust management best practices, such as reducing exposed erodible surface areas through appropriate materials and equipment staging, covering exposed surface areas with pavement or vegetation in an expeditious manner, and stabilizing soil with cover or periodic watering ■ Using and maintaining construction equipment appropriately to avoid unnecessary noise and applying noise-reduction measures to reduce noise from pile driving by at least 5 A-weighted decibels (dBA) below their unmitigated levels⁴ ■ Requiring trucks to access the Project sites by Route 1A, Interstate 90, Coughlin Bypass road, and the main Airport roadway only or other routes in compliance with transportation safety requirements ■ Prohibiting trucks from using local streets ■ Specifying truck routes in contractors’ construction specifications ■ Using concrete production and batching plants with access via Route 1A or Interstate 90 ■ Encouraging construction workers to use Massachusetts Bay Transportation Authority (MBTA) transit services, Logan Express, the water shuttle, and other high-occupancy modes of travel ■ Putting into place an Erosion and Sedimentation Control Program, in compliance with the Stormwater Pollution Prevention Plan, to protect water quality and to minimize construction phase impacts to Boston Harbor ■ Deploying spill prevention measures and sedimentation controls throughout the construction phases to prevent pollution from construction equipment and erosion ■ Using the following erosion and sedimentation controls throughout the construction phases: <ul style="list-style-type: none"> <input type="checkbox"/> Perimeter barriers such as straw wattles or compost-filled “silt sock” barriers will be placed around upland work areas to trap sediment transported by runoff before it reaches the drainage system or leaves the construction site <input type="checkbox"/> Existing catch basins within the work sites will be protected with barriers (where appropriate) or silt sacks <input type="checkbox"/> Open soil surfaces will be stabilized within 14 days after grading or construction activities have temporarily or permanently ceased |

⁴ Sound levels from activities associated with the construction of the Proposed Project would be voluntarily consistent with the City of Boston’s noise criteria; therefore, no construction noise mitigation is anticipated.

3.3 Detailed Beneficial Measures/Mitigation Commitments

The following sections are updated versions of Sections 5.2.1, *Project Planning and Design* through 5.4, *Other Ongoing Beneficial Measures* in the DEIR/EA.

3.3.1 Project Planning and Design

A primary purpose of the Project is to accommodate existing and anticipated air passenger demand for parking to reduce the environmentally undesirable drop-off/pick-up mode share. By reducing unnecessary trips generated by drop-offs and pick-ups, Massport would reduce VMT and associated on- and off-Airport air emissions. Furthermore, the Proposed Project would be sited entirely on-Airport in areas that were selected with significant input from the community, and are already developed and currently used for commercial parking. The Project sites are separated from nearby residential communities: the new garage in front of Terminal E is largely surrounded by other Airport facilities and structures, and the Economy Garage expansion by local roads, the MBTA Blue Line right-of-way, and Interstate 90/Route 1A. Both Project sites are served by existing Massport shuttle bus routes.

While the Project itself constitutes mitigation, Massport will also incorporate design features that specifically intend to improve operational efficiencies at the garages and enhance the passenger experience and further reduce impacts. The new garage in front of Terminal E will provide passengers with convenient access to the terminal buildings and to the pedestrian bridge that connects Terminal E to the Central Garage complex (which includes the West and Central Garages), and will include a secondary entrance for public parkers to reduce on-Airport recirculation. It will also include a vehicular bridge connected to the Central Garage complex to enable more efficient operational movements by Massport's Ground Transportation Unit (i.e., moving vehicles between the parking facilities in cases of overflow). The Economy Garage expansion will rely on existing roadway infrastructure, bus routes, and signage and have added noise barrier benefits, in conjunction with the Terminal E Modernization Project, thereby screening the community and neighborhood recreation areas from aircraft ground noise in the North Apron Area. Common to both facilities, Massport will develop internal and external wayfinding systems to include dynamic signage, a parking reservation system, and parking guidance via electronic space occupancy detection. Massport will also implement its pay-by-foot system to encourage parkers to pay their parking fees at automated kiosks prior to returning to their vehicles, thereby reducing queuing/idling and related emissions at the garage exits. These wayfinding and pay-by-foot systems would support a reduction in on-Airport and in-facility circling and idling, resulting in fewer VMT and associated air emissions.

3.3.2 Sustainability and Resiliency

Massport is committed to operating its facilities in an environmentally sound and responsible manner. Accordingly, the Proposed Project incorporates Massport-specified sustainability requirements and industry standards into all new development and redevelopment projects at the Airport such as Massport's *Sustainable Design Standards and Guidelines* and the building goals of the USGBC's Leadership in Energy and Environmental Design (LEED®) rating system. Massport will integrate USGBC's Parksmart framework into the planning, design, and operation of the proposed garages. Parksmart is an environmental and sustainability focused rating system specific to parking structure management, programming, design, and technology.

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The Proposed Project will be consistent with Massport’s overall sustainability program, which includes diverse sustainability initiatives ranging from facilities maintenance to innovative partnerships and public incentives. The sustainable features that Massport will incorporate into the design of the garages are listed below.

- Installing and applying only no- or low-volatile organic compound (VOC) coatings, paints, and sealants;
- Reducing lighting power densities for garage lighting from a base of 0.19 watts per square foot to a maximum of 0.05 watts per square foot;
- Installing occupancy sensors and photocells on all applicable interior and exterior lighting;
- Incorporating a solar PV system at the new garage in front of Terminal E capable of offsetting 50 percent of the facility’s total energy consumption (i.e., electricity and natural gas), including all lighting and power required for its EV charging stations;
- Relocating the existing solar PV system at the Economy Garage to the top of the facility’s new highest level upon completion of Project construction (the installation of a newer, more efficient system will be evaluated for feasibility as that construction period gets closer);
- Designing and building the proposed garages to accommodate expanded solar in the future as it becomes more cost effective/feasible;
- Performing building commissioning in accordance with ASHRAE Guideline 0-2005 and ASHRAE Guideline 1.1-2007, thereby allowing Massport to confirm that the Proposed Parking is meeting its sustainability goals;
- Installing EV charging stations and associated infrastructure to accommodate 150 percent of demand at the proposed garages all times, including 11 dual-port charging stations (22 ports/dedicated EV charging spaces) in the new garage in front of Terminal E and as many as necessary to meet the demand threshold as part of the Economy Garage expansion - to advance this latter effort, Massport will install five EV charging stations now in the existing Economy Garage rather than add them to the future expansion;⁵
- Reserving priority parking spaces for alternative fuel vehicles (e.g., electric vehicles) amounting to at least 1 percent of total spaces and assigning preferred parking spaces for other low-emitting and fuel-efficient vehicles amounting to at least another 1 percent of total spaces;
- Integrating vertical landscaping into the façade of the new garage in front of Terminal E;
- Planting water-conserving ground landscapes that apply the principles of xeriscaping (e.g., use of native plants);
- Evaluating the use of harvested stormwater for landscape irrigation.
- Performing frequent sweeping (at least monthly) to reduce the need for constant pressure washing and associated water use;
- Installing programmable thermostats, where applicable (e.g., mechanical rooms, water service rooms, and the restroom);
- Specifying water efficient fixtures and faucets in a staff restroom at the new garage in front of Terminal E;

⁵ The DEIR/EA stated Massport would install five EV charging stations in the Economy Garage expansion; however, such installations (inclusive of two ports/spaces per station) plus additional infrastructure to accommodate future expansion will occur in the existing Economy Garage.

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- Implementing an active recycling program to reduce the amount of waste sent to regional landfills/incinerators and to reduce greenhouse gas emissions associated with material disposal;
- Applying durable design principles (e.g., by minimizing steel corrosion by keeping steel away from the immediate concrete surface and selecting the appropriate concrete mix to reduce permeability, protect against chloride ion erosion, and reduce micro cracking) and conducting proactive maintenance to extend facility lifespan and avoid greenhouse gas emissions caused by future large-scale construction and renovation activities;
- Conditioning electrical and telecommunications rooms with split system heat pumps capable of operating at or below temperature of 0°F;
- Designing the parking decks to be open air, negating the need for ventilation systems;
- Providing tire inflation services for each garage to promote increased fuel efficiency and vehicle safety; and
- Installing a halon-free fire suppression system in each garage.

In 2013, Massport launched a comprehensive resiliency initiative to maximize business continuity under human and natural threats. Recent extreme storms, such as Winter Storm Nemo (2013), Hurricane Sandy (2012), and Tropical Storm Irene (2011) demonstrated the link between climate hazards and the resiliency of the built environment, including air and maritime transportation infrastructure. As part of its broader resiliency initiative, in 2014 Massport conducted a *Disaster and Infrastructure Resiliency Planning Study*⁶ focused on the risks associated with climate change, primarily coastal flooding from extreme storms and sea level rise. The *Disaster and Infrastructure Resiliency Planning Study* included climate hazard analyses, vulnerability assessments for critical infrastructure, and resiliency-oriented recommendations for capital improvements and programming. One of the high priority recommendations was for Massport to develop and adopt design guidelines for flood resiliency, including establishing design flood elevations for future flood scenarios possibly more stringent than required by current building codes. In April 2015, Massport published its updated *Floodproofing Design Guide*,⁷ which is based on the analysis and recommendations of the *Disaster and Infrastructure Resiliency Planning Study*.

Consistent with Massport's *Floodproofing Design Guide*, Massport will ensure that critical equipment and systems (e.g., electrical, mechanical, emergency, and fire) at the new garage in front of Terminal E and the Economy Garage expansion will be elevated above the designated design flood elevation for new facilities of 17.0 feet (North American Vertical Datum of 1988 [NAVD88]). Existing critical infrastructure at the Economy Garage may have to be raised above the design flood elevation for existing facilities, which is 13.7 feet (NAVD88). Redundant or back-up power sources will also be incorporated at both the new garage in front of Terminal E and the Economy Garage expansion to protect against extreme weather conditions that may cause power outage.

3.3.3 Construction Period Measures

As required by the Secretary's Certificate on the Project's Environmental Notification Form (ENF), the DEIR/EA identified construction period impacts (see Chapter 4, *Assessment of Impacts/Environmental Consequences*), as well as avoidance, minimization, and mitigation measures (see Chapter 5, *Beneficial Measures/Mitigation*). In accordance with FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for*

⁶ Massport. 2014. *Disaster and Infrastructure Resiliency Planning Study*.

⁷ Massport. 2015. *Floodproofing Design Guide*.

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Airport Actions and Order 1050.1F, *Environmental Impacts: Policies and Procedures*, Massport has analyzed potential construction-related impacts, including construction noise, dust, and noise from heavy equipment traffic, disposal of construction debris, and air and water pollution. Temporary, construction-related impacts occur on a short-term basis during the construction period based on construction methods, duration, materials, and equipment. Construction impacts alone are rarely significant pursuant to NEPA; however, Massport has identified best practices that will minimize the likelihood of negative impacts on the natural and built environment.

The Proposed Project would result in limited short-term impacts from added vehicle trips to and from the sites by construction equipment, fugitive dust, noise, negligible amounts of sediment added to the area's stormwater collection system, and demolition materials and other routine construction wastes in need of proper disposal. Temporary, short-term impacts from construction activities will be mitigated to the extent practicable. Appropriate construction mitigation measures will be incorporated into the contract documents and specifications governing the activities of contractors and subcontractors constructing elements of the Proposed Project. All construction activities will comply with FAA Advisory Circular 150/5370-10 (latest edition), *Standard Specifications for Construction of Airports*. These construction-period mitigation measures will be the responsibility of Massport. Specific mitigation measures will be developed during the final design.

3.3.3.1 Construction Period Management

It is expected that construction would take place primarily during the day shift, approximately 7:00 AM to 7:00 PM. The need for nighttime or weekend work would be further determined during construction phasing development.

Massport will require all contractors to comply with certain construction guidelines and best management practices that include:

- Storage areas for construction materials will be located on-Airport.
- A Draft Soil Management Plan will be developed based upon sub-surface investigations. The plan will outline standards and procedures for the identification and disposal of contaminated materials that may be encountered during construction. Soil tracking protocols will be detailed from the point of excavation to designated testing areas and to the ultimate disposal site.
- A Draft Stormwater Pollution Prevention Plan will be developed to keep the Airport's stormwater system free of sediment and contaminants during construction. The plan will be incorporated into construction plans, specifications, and contracts.
- A Draft Management Plan for Dewatering, if needed, will be developed to address the requirements for testing, handling, and treatment prior to discharge of contaminated groundwater from dewatering.
- A Draft Health and Safety Plan will be developed to provide the minimum health and safety specifications that contractors must meet during construction including requirements for environmental monitoring, personnel protective equipment, site control and security, and training.
- A Draft Construction Waste Management Plan will be developed for the collection, storage, and handling recyclables. This plan will require at least 85 percent of construction materials to be recycled or reused.

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- Rodent control inspection, monitoring, and treatment will be carried out before, during, and after the completion of all foundation and utility demolition and construction work.
- Construction equipment and materials that are repurposed, reused, or recycled (or contain recycled content) will be prioritized, where feasible, to reduce the Proposed Project's consumption of virgin natural resources.
- Construction equipment and materials that are sourced regionally (i.e., within 300 miles of the Project sites) will be prioritized, where feasible, to reduce greenhouse gas emissions associated with their transport.
- Regional labor (i.e., laborers within 75 miles) will be used to the greatest extent practicable.

In addition, Massport will employ on-site resident engineers and inspectors to monitor all construction activities related to the Project. This includes coordination with all relevant utility companies and agencies, including the FAA, Massachusetts Department of Environmental Protection (MassDEP), Massachusetts Water Resources Authority, City of Boston, and Boston Water and Sewer Commission, as appropriate. It also includes the preparation of detailed pre-construction plans for traffic maintenance, construction specifications for contractors, and coordinated scheduling of all construction activities.

3.3.3.2 Construction Period Surface Transportation Mitigation

Construction traffic mitigation will focus on two issues: 1) minimizing construction-related vehicles on local roads, and 2) ensuring that all Airport roadway operations are maintained at full capacity to minimize traffic congestion both on- and off-Airport. The specific measures to be taken are noted below:

- All trucks will access the sites by Route 1A, Interstate 90, and the main Airport roadway only or other routes in compliance with transportation safety requirements. Trucks will be prohibited from using local streets unless seeking construction-related access to or from local businesses.
- Truck routes will be specified in contractors' construction specifications.
- Concrete production and batching will occur in existing plants with access via Route 1A or Interstate 90. This would reduce on-Airport construction activities and consolidate truck trips to the greatest extent possible.
- Construction workers will be encouraged to use public transportation or via shuttle buses from off-Airport parking areas. Specific actions regarding construction worker access are noted below.
 - Massport will encourage construction workers to use MBTA transit services, Logan Express, the water shuttle, and other high-occupancy modes of travel.
 - Construction companies will be encouraged to provide off-Airport parking for their employees and to provide shuttle services from these locations. Massport will encourage contractors to locate off-Airport construction worker parking in areas adjacent to regional arterial roadways to help further minimize traffic on local streets. The employee shuttles are required to use the Coughlin Bypass road to access the Airport to keep them off neighborhood streets.

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3.3.3.3 Construction Period Air Quality Mitigation

Massport will require all contractors to comply with certain construction guidelines and best management practices that include:

- Construction vehicle/equipment anti-idling (along with the provision of associated training);
- Using low- or zero-emissions equipment, where practicable;
- Retrofitting appropriate diesel construction equipment with diesel oxidation catalysts and/or particulate filters;
- Reducing onsite vehicle speeds;
- Requiring contractors to use Ultra Low Sulfur Diesel Fuel (ULSD);
- Reducing exposed erodible surface areas through appropriate materials and equipment staging procedures;
- Covering exposed surface areas with pavement or vegetation in an expeditious manner;
- Stabilizing soil with cover or periodic watering;
- Using covered haul trucks during materials transportation;
- Suspending construction activities during high-wind conditions; and
- Ensuring contractor knowledge of appropriate equipment exhaust and fugitive dust controls.

3.3.3.4 Construction Period Noise Mitigation

Sound levels from construction activities would be consistent with the City of Boston’s noise criteria (even though Massport is not subject to these criteria); therefore, no additional construction noise mitigation is required. Construction equipment, however, will use noise-reduction measures such as:

- Noise control techniques will be used to reduce noise from pile driving at the new garage in front of Terminal E by at least 5 A-weighted decibels (dBA) below their unmitigated levels. These techniques include such measures as enclosing the point of impact for the pile driver; installing an impact cushion between the pile driver and the pile; or requiring the application of dampening (energy-absorbing) material to steel piles. No pile driving is anticipated for the Economy Garage expansion.
- Further noise control options will be evaluated during Project design to define their effectiveness and feasibility. Appropriate operational specifications and performance standards will be incorporated into the construction contract documents. In addition, community noise levels will be monitored during construction to verify compliance with contract specifications and applicable state and local noise regulations.

3.3.3.5 Construction Period Water Quality Mitigation

Soil disturbance from construction activities creates the potential for water quality impacts from stormwater runoff and erosion. The Proposed Project will be required to comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Construction Activities. The NPDES permit requires filing a Notice of Intent and preparing a Stormwater Pollution

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Prevention Plan. As part of the Stormwater Pollution Prevention Plan, an Erosion and Sedimentation Control Program will be put in place to minimize construction phase impacts to adjacent properties and the Boston Harbor. Further, Massport will comply with the provisions of the Massachusetts Contingency Plan.

The following spill prevention measures and sedimentation controls will be deployed throughout the construction phases to prevent pollution from construction equipment and erosion. These controls are provided as recommendations for the site contractor and do not constitute or replace the final Stormwater Pollution Prevention Plan that must be fully implemented by the contractor and owner in compliance with U.S. Environmental Protection Agency NPDES regulations and with Massport's contractor requirements.

- Perimeter barriers such as straw wattles or compost-filled "silt sock" barriers will be placed around upland work areas to trap sediment transported by runoff before it reaches the drainage system or leaves the construction site;
- Existing catch basins within the work sites will be protected with barriers (where appropriate) or silt sacks; and
- Open soil surfaces will be stabilized within 14 days after grading or construction activities have temporarily or permanently ceased.

3.3.4 Coordination with Other On-Airport Construction Activities

During the planning of the Proposed Project, it was noted that construction activities associated with the new garage in front of Terminal E would occur simultaneous with other on-Airport projects, including the Terminal E Modernization and Terminal C Canopy, Connector, and Roadways Projects. To address any unanticipated congestion associated with construction activities, Massport will implement several mitigation measures:

- Develop and facilitate traffic management strategies Airport-wide that are responsive to the aggregate of construction projects and their potential impacts.
- Manage traffic related to construction workers by encouraging them to utilize off-Airport parking locations and requiring contractors to shuttle employees to the job site.
- Coordinate the arrival of large construction equipment among projects and limit their arrival or removal during peak travel hours (both Airport and commuter peaks).
- Develop specific truck routing and/or project staging plans for implementation by the various contractors. It is anticipated that these plans may be developed with input from the contractors directly.

In keeping with Massport's long-standing policy that traffic operations along roadways be maintained to accommodate passenger levels, construction will be staged (and staging modified as necessary) to the maximum extent practicable to avoid disruption to the transportation system or impact to the surrounding environment.

3.4 MEPA Self-Certification

The Secretary’s Certificate on the Project’s DEIR required that the Final EIR (FEIR) include the following:

“To ensure that all greenhouse gas emissions reduction measures adopted by the Proponent in the Preferred Alternative are actually constructed or performed by the Proponent, I require Proponents to provide a self-certification to the MEPA Office indicating that all of the required mitigation measures, or their equivalent, have been completed. The commitment to provide this self-certification in the manner outlined above should be incorporated into the updated draft Section 61 Findings included in the FEIR.”

Massport will provide self-certification to the MEPA Office indicating that all required greenhouse gas mitigation measures, or their equivalents, have been completed. Documentation will be reported on and included in Massport’s EDR/ESPR filings.

3.5 Other Ongoing Beneficial Measures

The Logan Airport Parking Project is part of a comprehensive program strategy to reduce the effects associated with Airport activities. This strategy is described more fully in Massport’s EDR/ESPR filings. Key Airport-wide initiatives are summarized below.

3.5.1 Surface Transportation/HOV Enhancement Initiatives

The increase in parking supply at Logan Airport is one component of a multi-pronged comprehensive program undertaken by Massport to reduce the overall environmental impacts and emissions associated with travel to and from the Airport. Massport currently spends more than \$30 million annually on HOV operations – including Logan Express and the Silver Line.

Since 2002, Massport’s capital expenditures for HOV operations have exceeded \$160 million. Massport’s HOV commitments have included:

- Since 2005, purchasing eight Silver Line buses that access the Airport and funding their mid-life rebuilds or rebuilds in 2017 and 2018, respectively;
- Since 2012, providing free MBTA Silver Line bus trips from the Airport terminals;
- Operating four suburban Logan Express sites, as well as the Back Bay Pilot location, resulting in an increase of the total capacity of HOV/shared-ride mode service by 154 percent since 1989; and
- Acquiring Park-and-Fly lots in East Boston, as contemplated by the 1989 Amendment to the Logan Parking Freeze, permanently removing these spaces from East Boston and transferring them to the Airport.

Additional HOV commitments that Massport plans to implement in the next few years include:

- Increasing HOV mode share for Logan Airport, currently 30.5 percent, to 40 percent by 2027, with a portion of the 40 percent being achieved with the use of taxis and Ride App companies such as Uber and Lyft;
- Providing preferred taxi and Ride App line privileges to electric vehicles, subject to negotiations with the relevant companies;

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- Training ground transportation personnel to encourage passengers to share rides;
- Increasing Logan Express capacity, measured in available seats, by 10 percent; and
- Purchasing eight more (16 total) MBTA Silver Line buses (dependent on MBTA procurement).

Since filing the DEIR/EA with MEPA and the FAA, Massport completed and submitted to the Massachusetts Department of Environmental Protection (MassDEP) the “Logan Airport Parking Freeze Amendment Ground Access and Trip Reduction Strategy Studies.” These studies focused on:

- **Ways to improve HOV access to the Airport** - This study evaluated the costs, feasibility and effectiveness of potential measures to improve HOV access to Logan Airport. It considered, among other things, possible improvements to Logan Express bus service, additional Logan Express sites, and the benefit of improvements to the MBTA Silver Line bus service to the Airport.
- **Parking pricing strategies** - This study assessed the costs and pricing for different modes of transportation to and from the Airport to identify a pricing structure and evaluate allocation of revenues generated to promote HOV modes of transportation by air travelers and visitors at the Airport. This study included an evaluation of short- and long-term parking rates and their influence on different modes of ground access transportation to and from the Airport.
- **Strategies for reducing drop-off/pick-up modes** - This study evaluated the feasibility and effectiveness of potential operational measures to reduce the non-HOV drop-off/pick-up modes of transportation to Logan Airport, including an evaluation of emerging Ride App and other ride-hailing/ridesharing modes.

The studies identified specific measures, informed by the above studies, that Massport has already undertaken. These measures include:

- Relocating Back Bay Logan Express service to the MBTA’s Back Bay Station, eliminating the fare from the Airport to Back Bay, and reducing the fare from Back Bay to the Airport from \$7.50 to \$3.00;
- Increasing peak-hour frequency on the Logan Express Braintree service from 30 minutes to 20 minutes;
- Advancing a new urban Logan Express service at North Station with free service from the Airport;
- Offering priority access at the Airport Security Line to customers who take Back Bay Logan Express or any mode of water transportation to the Airport;
- Initiating studies of a new suburban Logan Express location with parking;
- Implementing a new Ride App drop-off fee of \$3.25 (in addition to the current \$3.25 pickup fee) and providing a discounted fee of \$1.50 for shared-ride (such as UberPool and Lyft Line) customers;
- Implemented parking pricing that discourages short-term parking that is associated with pick-up and drop-off uses;
- Piloted use of the South Boston Waterfront – Emergency Access Ramp, reducing travel time on the MBTA Silver Line (SL1) service to help encourage use; and
- Consolidating Ride App operations at dedicated areas on the ground floor of the Central Garage, making it easier for drivers to pick up arriving air passengers after dropping off departing air passengers without having to circulate around the Airport.

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Appendix D, Executive Summary and Introduction to the MassDEP Studies of this FEIR/EA contains the Executive Summary and Introduction to the “Logan Airport Parking Freeze Amendment Ground Access and Trip Reduction Strategy Studies.” The MassDEP Studies are available at:

<http://www.massport.com/massport/about-massport/project-environmental-filings/logan-airport/>.

3.5.2 Air Quality Improvement/Greenhouse Gas Reduction Initiatives

As part of implementing and advancing its ongoing air quality management strategy for Logan Airport, Massport has established a number of goals and objectives to address air emissions from Airport operations. These include:

- The Alternative Fuel Program, which is designed to replace Massport’s conventionally-fueled fleet with electric, alternatively fueled, or hybrid-powered vehicles, where feasible, to help reduce emissions associated with Logan Airport operations. Program highlights to-date include:
 - As of 2017, Massport operated approximately 100 vehicles that are either fueled by compressed natural gas (CNG), propane, or E85 flex fuel, or that have hybrid powertrains that use gasoline or diesel.
 - For almost two decades, Massport has operated one of the largest privately operated, publicly accessible, CNG stations in New England.
 - Massport installed EV charging stations and an E85 (first-generation biofuel) fuel dispensing tank at the on-Airport public gas station.
- Massport continues the “Clean-Air-Cab” incentive program for alternative fuel vehicles, which allows alternatively fueled or hybrid-powered taxis to go to the head of the taxi line to serve passengers.
- Since 2007, Massport has offered preferred parking for customers driving alternatively fueled or hybrid-powered vehicles.
- Massport has provided or will provide electric vehicle charging stations in the Taxi, Limousine, and Ride App lots.

Upcoming additional measures that are planned to be implemented in the next few years include:

- Expanding availability of electric vehicle charging stations to meet 150 percent of demand in all garages;
- Working with the airlines and other tenants at Logan Airport to convert ground service equipment (GSE) to electric power, where commercially available; and
- Working with the airlines so that 60 percent of aircraft being tugged for re-positioning purposes will use electric tugs.

4

Distribution

The Massachusetts Environmental Policy Act (MEPA) requires this Final Environmental Impact Report (FEIR) be circulated to each person or agency that commented on the Environmental Notification Form (ENF) and/or the Draft EIR (DEIR), to any State Agencies from which the Proponent will seek permits or approvals, and to any parties specified in section 11.16 of the MEPA regulations. Federal Aviation Administration (FAA) Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*¹ states that airport development will trigger public interest. Distributing this to the public is the best way to provide it with the information needed to formulate an opinion. The Massachusetts Port Authority (Massport) will distribute this combined FEIR/Environmental Assessment (EA) in accordance with Massachusetts regulation 301 CMR 11.16 (3) and FAA Order 5050.4B.

The following is a list of recipients of this FEIR/EA, which include representatives of governmental agencies, community groups, and local residents interested in activities at Logan Airport. The ‘N’ indicates that Massport sent a notice of availability and the ‘P’ indicates that Massport sent a printed copy. Recipients denoted with an asterisk (*) provided commenters on the DEIR/EA.

This FEIR/EA is available on Massport’s website (www.massport.com). Persons may request limited CD or printed copies from Stewart Dalzell, telephone (617) 568-3524, email: sdalzell@massport.com. Printed copies are available for review at the following public libraries.

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| P Boston Public Library Charlestown Branch | 179 Main Street Charlestown, MA 02129 | P Revere Public Library | 179 Beach Street Revere, MA 02151 |
| P Boston Public Library East Boston Branch | 365 Bremen Street East Boston, MA 02128 | P Winthrop Public Library | 2 Metcalf Square Winthrop, MA 02151 |

¹ Federal Aviation Administration. 2006. Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*.

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**LOGAN AIRPORT PARKING PROJECT –
FINAL ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL ASSESSMENT**

Boston Logan International Airport
East Boston, Massachusetts

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**LOGAN AIRPORT PARKING PROJECT –
FINAL ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL ASSESSMENT**
Boston Logan International Airport
East Boston, Massachusetts

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Appendix A

- Secretary’s Certificate and Public Comments on the DEIR/EA

**LOGAN AIRPORT PARKING PROJECT –
FINAL ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL ASSESSMENT**
Boston Logan International Airport
East Boston, Massachusetts

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August 2, 2019

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
 ON THE
 DRAFT ENVIRONMENTAL IMPACT REPORT

PROJECT NAME : Logan Airport Parking Project
 PROJECT MUNICIPALITY : Boston
 PROJECT WATERSHED : Boston Harbor
 EEA NUMBER : 15665
 PROJECT PROPONENT : Massachusetts Port Authority (Massport)
 DATE NOTICED IN MONITOR : June 10, 2019

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G.L. c. 30, ss. 61-621) and Section 11.08 of the MEPA Regulations (301 CMR 11.00), I have reviewed the Draft Environmental Impact Report (DEIR) and hereby determine that it **adequately and properly complies** with MEPA and its implementing regulations. The Massachusetts Port Authority (Massport) must prepare and submit for review a Final Environmental Impact Report (FEIR) in accordance with the Scope provided in this Certificate. The Scope is intended to ensure consistency with other planning documents and ongoing studies and is primarily limited to air quality, greenhouse gas emissions, construction period impacts, responses to comments, and revisions to mitigation measures and draft Section 61 Findings.

As described below, the amended Parking Freeze regulations require Massport to complete three studies to identify ways to further support alternative transit options to and from the Airport. The results of these studies will inform Massport's long-range planning efforts to reduce air passenger-related vehicle miles traveled (VMT) and associated air emissions which will extend the associated air quality benefits of this project. I encourage Massport to amend the 2017 Environmental Status and Planning Report (ESPR), submitted to the MEPA office for

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publication in the August 7, 2019 *Environmental Monitor*, to include the completed studies and a summary of their findings. It should also describe how the results have informed Massport's long-range efforts to address VMT and air quality impacts of different ground access modes to/from the Airport and identify recommendations or findings that Massport has already implemented. The completed studies and information identified above should also be provided in the FEIR to support review of these measures.

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Project Description

As described in the DEIR, the project includes the phased construction of 5,000 additional commercial parking spaces at the Logan International Airport (the "Airport"). The project will construct a structured parking garage with 2,000 parking spaces in the location of the existing Terminal E surface parking lot followed by the addition of 3,000 new spaces at the Economy Garage through expansion of the existing facility. The Terminal E Garage will open in 2022 and the Economy Garage expansion will open by the end of 2025. The parking spaces are intended to accommodate existing and anticipated air passenger demand for parking at the Airport. According to the DEIR, the project will reduce drop-off/pick-up activity at the Airport and will reduce regional air passenger-related vehicle miles traveled (VMT) and associated air emissions.

In addition to the overall air quality benefits, the DEIR indicated that Massport is implementing additional high occupancy vehicle (HOV) mode improvement measures in conjunction with this project. These include enhancing Logan Express bus service through expanded parking at existing locations and increased frequency of service and expanding the Logan Express service area to new suburban locations and urban/downtown areas based on the success of the Back Bay Logan Express pilot program. The DEIR also indicated that Massport has committed to purchase additional Silver Line buses to increase service capacity to the Airport. As described in the DEIR, Massport is also planning to centralize transportation network company (TNC) (e.g. Uber, Lyft, etc.) operations (i.e. drop-offs and pick-ups) on the ground floor of the Central Garage complex to reduce congestion outside the terminals. Massport is also evaluating mechanism to decrease the number of TNC drivers that leave the Airport without a passenger (i.e., deadhead trips).

Project Background and Context

The number of commercial and employee parking spaces allowed at Logan Airport is regulated by the Massachusetts Department of Environmental Protection (MassDEP) through the Massport/Logan Airport Parking Freeze (310 CMR 7.30), an element of the Massachusetts State Implementation Plan (SIP) under the federal Clean Air Act. As previously described in the Environmental Notification Form (ENF), peak day demand for on-Airport parking was increasing, resulting in daily demand frequently nearing the Logan Airport Parking Freeze cap. Massport worked with MassDEP on an amendment to the Parking Freeze. The ENF was filed concurrent with MassDEP's issuance of a draft regulation to amend the Parking Freeze to allow the creation of an additional 5,000 commercial parking spaces at the Airport. After the Certificate on the ENF was issued, MassDEP approved the requested parking increase and issued the amended regulation on June 30, 2017. The EPA issued a proposed rule approving the

revision of the SIP and incorporating the amended Parking Freeze on March 6, 2018, and the rule went into effect on April 5, 2018. The MassDEP regulations provide the larger framework of the Logan Airport Parking Freeze, while project-specific impacts and mitigation measures will be analyzed through the MEPA review process for the Logan Airport Parking Project.

The approved regulations increased the Logan Airport commercial parking freeze limit by 5,000 spaces (from 18,640 to 23,640 spaces) and increased the total cap to 26,088 commercial and employee parking spaces (comprised of 23,640 commercial spaces and 2,448 employee parking spaces). The regulations (310 CMR 7.30(8)) require that Massport complete the following studies, each within 24 months of June 30, 2017, to identify ways to further support alternative transit options to the airport:

1. A study to evaluate the costs, feasibility, and effectiveness of potential measures to improve HOV access to the Airport. The study should consider, among other things, possible improvements to Logan Express bus service and the benefits of adding Silver Line buses with service to the Airport.
2. A study of costs and pricing for different modes of transportation to and from the Airport to identify a pricing structure and the use of revenues so generated to promote the use of HOV modes of transportation by Airport air travelers and visitors. The study will include evaluation of short-term and long-term parking rates and their influence on different modes of Airport transportation.
3. A study of the feasibility and effectiveness of potential operational measures to reduce non-high occupancy vehicle pick-up/drop-off modes of transportation to Logan Airport, including an evaluation of emerging ride-sharing and transportation network company modes.

Supplemental information from Massport clarified that the three studies will be completed by September 30, 2019.

Logan Airport and Project Site

The Airport boundary encompasses approximately 2,400 acres in East Boston and Winthrop, including approximately 700 acres underwater in Boston Harbor. The airfield is comprised of six runways and approximately 15 miles of taxiway. Logan Airport has four passenger terminals, A, B, C, and E, each with its own ticketing, baggage claim, and ground transportation facilities. The Airport is surrounded on three sides by Boston Harbor and is accessible by two public transit lines and the roadway system. The preferred locations for the parking structures are the Economy Garage and the Terminal E surface parking lot. The Economy Garage is located in the northwest portion of the Airport campus at the intersection of Service Road and Prescott Street. It is comprised of two levels and provides over 2,700 spaces. The Economy Garage has an existing rooftop solar photovoltaic (PV) system on its top level which will be relocated or replaced on the top level of the garage following construction. The Terminal E surface parking lot is located within the Airport interior and adjacent to Terminal E.

The Airport is served by several Massachusetts Bay Transportation Authority (MBTA) public transit routes, including Blue and Silver Lines for the rapid transit system, commuter ferry

service, and local and express bus routes. Specifically, Massport provides free shuttle service between the Blue Line Airport Station and all Airport terminals and subsidizes the Silver Line Logan Airport Route (SL1) by providing free outbound Silver Line trips from the Airport on eight Silver Line buses purchased for this route by Massport. Massport also operates an extensive Logan Express Bus service, serving five locations. The airport is also served by other private express bus service and intercity bus service as part of the range of HOV modes available for ground access.

The Economy Garage and the Terminal E parking lot sites are both located within the coastal zone of Massachusetts. Both locations are comprised of previously disturbed impervious area. They are not located in Priority or Estimated Habitat as mapped by the Division of Fisheries and Wildlife's (DFW) Natural Heritage and Endangered Species Program (NHESP). The parking lot sites do not contain wetland resource areas regulated pursuant to the Wetland Protect Act and its implementing regulations (310 CMR 10.00).

Environmental Impacts and Mitigation

The project includes construction of 5,000 new commercial parking spaces at two locations. The project is located within previously altered impervious area and will not create new impervious area. According to the DEIR, the new spaces are intended to accommodate existing and anticipated air passenger demand for parking at the Airport while minimizing pick-up and drop-off activity and decreasing regional air passenger-related VMT and associated vehicle emissions. Specifically, the DEIR indicates that the project will reduce carbon dioxide (CO₂), volatile organic compounds (VOC), and oxides of nitrogen (NO_x) emissions by 10%, 11%, and 11% in 2022 when the first 2,000 parking spaces are constructed and 12%, 12% and 11% in 2030 when all 5,000 spaces are constructed (respectively) as compared to the future No-Build Alternative.

In addition to the overall project benefits and HOV related measures required as part of the Logan Parking Freeze, the DEIR indicated that Massport is undertaking additional HOV measures in conjunction with the construction of the proposed 5,000 parking spaces. These include: enhancing existing Logan Express scheduled bus service; expanding Logan Express scheduled bus service; exploring Logan Express scheduled bus service in the urban/downtown area; and investing in additional MBTA Silver Line buses. Massport will also centralize TNC operations to reduce on-Airport congestion and evaluate mechanisms to decrease TNC deadhead trips.

Jurisdiction and Permitting

The project is undergoing MEPA review and requires preparation of a mandatory EIR pursuant to 301 CMR 11.03(6)(a)(7) because it will be undertaken by a State Agency and will construct greater than 1,000 parking spaces in a single location. The project may require a modified Sewer Use Discharge Permit from the Massachusetts Water Resources Authority (MWRA).¹

¹ This potential Permit was not identified in the ENF.

The project may require a Sewer Permit Modification from the Boston Water and Sewer Commission (BWSC). The project may be subject to Massachusetts Office of Coastal Zone Management (CZM) federal consistency review. The project requires approval by the Federal Aviation Administration (FAA) for changes to the Airport Layout Plan and, therefore, requires an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA). The project also requires a National Pollutant Discharge Elimination System (NPDES) General Permit for Construction from the EPA.

Because the project will be undertaken by a State Agency, MEPA jurisdiction is broad in scope and extends to all aspects of the project that may cause Damage to the Environment, as defined in the MEPA regulations.

Review of the DEIR

Massport filed a joint DEIR/EA to satisfy the MEPA and NEPA review processes. This Certificate applies to the review of the project under MEPA only, and does not restrict the ability of the federal government to act on those aspects of the project subject to NEPA. The DEIR described the proposed project, identified existing conditions, described potential environmental impacts and mitigation measures, provided an expanded discussion of alternatives, and an executive summary of the project in English and in Spanish. The DEIR included an update on state, local, and federal permitting and provided a discussion of permitting requirements and the project's consistency with regulatory standards. At Massport's request, the project was subject to an extended 47-day comment period. Massport's consultant provided supplemental information identifying data and assumptions which have been updated since the ENF was submitted to facilitate MEPA review.² For purposes of clarity, references to the DEIR in this Certificate include this supplemental information unless otherwise referenced. Comments from state and regional agencies are generally supportive of the project and acknowledge the overall air quality benefits which will be provided by the project. Comments do not request additional analysis in the form of a Supplemental DEIR.

Though the Executive Office of Energy and Environmental Affairs' (EEA) *Environmental Justice (EJ) Policy* is not applicable to this project, Massport provided outreach consistent with the spirit and intent of the enhanced public participation provisions of the EJ Policy. Massport requested and was granted an extension of the comment period to provide additional time to review and comment on the DEIR. The DEIR included a Spanish language version of the Executive Summary and Spanish language translation was also provided at a Public Information Meeting held the evening of June 25, 2019 at the Logan Airport Rental Car Center. I encourage Massport to continue providing translated Executive Summaries with all future MEPA filings.

As described in the DEIR, the location and number of parking spaces has not changed since the ENF was filed. The DEIR included revised analyses (including updated estimates of projected reductions in VMT and air emissions) based on updated mode share data and passenger projections. The analysis in the DEIR was updated based on a future passenger forecast of 50 million air passengers (MAP) in 2030 (46.5 MAP in the ENF), with an increased HOV mode

² Emails sent from Stewart Dalzell (Massport) on 7/30/10 and 8/1/19 to Page Czepiga (MEPA Office).

share. The VMT analysis in the ENF assumed a 2.54 % annual passenger growth rate through 2030 while the analysis in the DEIR assumed a growth rate commensurate with the FAA's Fiscal Year (FY) 2018 Terminal Area Forecast (TAF); which represents a 3.1% passenger growth rate through 2030. The passenger mode share distribution in the DEIR assumed a 30.5% HOV mode share, consistent with the findings of the 2016 *Logan Airport Passenger Ground Access Survey* (27.8% in the ENF, based on 2013 survey data). The DEIR also assumes that Massport will continue to implement policies and programs to achieve a 40% HOV mode share goal by 2027 (37.5% in the ENF).

Alternatives Analysis

The location of the Preferred Alternative (Economy Garage, Terminal E surface lot) has not changed since the ENF was filed. The DEIR included an expanded alternatives analysis that evaluated various massing and circulation alternatives for the Terminal E garage. The massing alternatives included various combinations of four to seven levels on the garage's east and west sides. The circulation alternatives included two options to provide access/egress for public vehicles and limousines at the Terminal E garage. The DEIR did not evaluate massing or access alternatives for the Economy Garage. According to the DEIR, the massing and height of the Economy Garage was determined by FAA airspace height restrictions, structural considerations, and cost. The Preferred Alternative for the Terminal E garage includes a pedestrian bridge connection to the Central Garage with five parking levels on the west side and six parking levels on the east side of the pedestrian bridge. The garage will have two access points for public vehicles, a separate access point for limousines, and a vehicle bridge to the Central Garage complex. The vehicular bridge will be used by Massport to transfer vehicles under overflow conditions. The DEIR indicated that this direct connection will remove vehicles from on-Airport circulation, reduce on-Airport VMT, and provide air quality benefits. The Preferred Alternative for the Economy Garage will construct three additional parking levels on top of the existing structure and a six level addition on the facility's south side. The DEIR indicated that the project will provide an adequate number of parking spaces, reduce on-Airport VMT, provide operational efficiencies, is adjacent to compatible land uses and/or Airport terminals, and it will not require significant changes to existing roadway infrastructure. According to the DEIR, the project will provide sufficient parking to accommodate approximately 10 years of peak-day parking demand.

The DEIR included a brief evaluation of construction phasing and configurations. The Terminal E garage will be constructed first to achieve construction efficiencies with other construction projects at the Airport and to provide increased operational flexibility in managing the parking supply. Additionally, the parking supply in the Terminal E garage will compensate for the temporary loss of 1,000 revenue-generating parking spaces associated with centralizing TNC operations in the Central Garage complex.

Air Quality

As described in the DEIR, if the project was not constructed, the commercial parking supply would become more constrained and approximately 77% of "would-be parkers" would switch to drop-off/pick-up modes. The project is anticipated to shift mode share from drop-off/pick-up modes and result in reductions in regional off-Airport VMT and improvements to on-

Airport roadway conditions compared to the future No-Build scenario. The VMT analysis presented in the ENF assumed that all 5,000 spaces would be operational by 2022. The DEIR included a revised analysis that incorporated the construction phasing and evaluated an interim (2022; 2,000 spaces in Terminal E Garage operational) and full-build (2030; both garages operational with 5,000 spaces) scenario. As noted above, the air quality analysis was also revised since the ENF was submitted to reflect updated passenger forecasts, growth rates, and HOV mode share data. This decreased the projected VMT reduction and emissions reductions benefits compared to those presented in the ENF. The project will result in CO₂, VOC, and NO_x reductions of 10%, 11%, and 11% in 2022 and 12%, 12% and 11% in 2030 (respectively) compared to the future no-build scenario. According to the DEIR, the project will comply with the Clean Air Act General Conformity Rule, the SIP, and will not cause or contribute to a violation of the National Ambient Air Quality Standards (NAAQS) for these pollutants. The DEIR included the results of a microscale analysis that demonstrated the carbon monoxide (CO) concentrations will be below the NAAQS for both the 1-hour and the 8-hour concentrations.

The analysis is predicated on and Massport has committed to achieving a future HOV mode share goal of 40% by 2027. The DEIR identified the following commitments which Massport plans to implement to improve HOV mode share:

- Providing preferred taxi and TNC line privileges to electric vehicles (EV);
- Training ground transportation personnel to encourage passengers to share rides;
- Increasing Logan Express capacity, measured in available seats, by 10%;
- Purchasing eight more (16 total) MBTA Silver Line buses by 2024 (dependent upon MBTA procurement); and
- Conducting the studies required in the amended Parking Freeze regulations and sharing the findings with MassDEP.

I note monitoring and reporting on the progress towards achieving the goals and success of the mitigation program can be addressed in the Long-Term Parking Management Plan and future Environmental Status and Planning Reports (ESPRs) and Environmental Data Reports (EDRs) (EEA#3247/5146). The DEIR also identified measures Massport will implement to reduce air emissions from Airport operations, including: providing high-speed EV charging stations in taxi, limousine, and TNC lots; working with airlines/tenants to convert commercially available ground source equipment (GSE) to electric power; and working with airlines to increase the use of electric tugs to 60% of aircraft that need re-positioning. I refer Massport to comments from Airlines for America which identify concerns with incorporating measures to reduce emissions from GSE into the draft Section 61 Findings for this project. Comments from the Conservation Law Foundation (CLF) identify additional measures that Massport has agreed to implement to support HOV use and reduce air emissions, including free Blue Line service from the Airport Station for employees, implementation of variable-rate parking and Airport pass-through rate (if warranted based on study results), and incentivizing ride-sharing through reduced fees.

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The DEIR indicated that the MBTA Blue Line and Silver Line carry approximately 6% of passengers to/from the airport. This represents an increase of 1,900 total passengers per day in

2030. The DEIR included an analysis of the MBTA's Blue Line ability to accommodate the projected increase in passengers. The analysis assumed passenger loads grew by 1.5% per year to approximate future background growth. The analysis indicated that the Blue Line will have adequate capacity to accommodate the 135 additional weekday evening peak hour passengers boarding at the Airport Station in 2030. As the Silver Line buses are free from the Airport, boarding and alighting data is not collected. Based on this, the DEIR did not evaluate future passenger loads for the Silver Line. The DEIR indicated that Massport will continue to monitor the Logan Express and Massport operated shuttles and will expand the fleet as necessary to ensure they meet Massport customer service requirements. The DEIR indicated that the MBTA's Service Delivery Policy and Massport's policy to expand and improve the Silver Line, Logan Express, and Massport operated shuttles to meet customer service requirements will ensure that public transit services to/from the Airport will have sufficient capacity to accommodate future increases in demand.

Climate Change

Executive Order 569: Establishing an Integrated Climate Change Strategy for the Commonwealth (EO 569; the Order) was issued on September 16, 2016. EO 569 recognizes the serious threat presented by climate change and directs agencies within the administration to develop and implement an integrated strategy that leverages state resources to combat climate change and prepare for its impacts. The Order seeks to ensure that Massachusetts will meet GHG emissions reduction limits established under the Global Warming Solution Act of 2008 (GWSA) and will work to prepare state government and cities and towns for the impacts of climate change.

The GHG Policy and requirements to analyze the effects of climate change through EIR review is an important part of a statewide strategy. These analyses advance proponents' understanding of the projects contribution and vulnerability to climate change.

Greenhouse Gas Emissions

The project is subject to review under the May 5, 2010 MEPA Greenhouse Gas Emissions Policy and Protocol ("the Policy"). The DEIR indicated that the parking garages will be naturally ventilated and that conditioned space will be limited to mechanical/electrical rooms, elevator lobbies, and cashier booths. The DEIR included a GHG analysis that quantified the CO₂ emissions associated with the project's energy use (stationary sources), primarily associated with interior and exterior lighting. Mobile source GHG emissions were calculated in a similar method as the air quality analysis and were based on the anticipated reduction in VMT under future conditions. Massport has committed to the following measures to reduce GHG emissions:

- External wayfinding system to reduce on-Airport VMT, including dynamic informational signage and a reservation system for passengers to reserve and pre-pay for a parking space;
- Internal wayfinding system to reduce in-facility circulation including parking guidance via level occupancy detection;

- Preferred parking spaces for low-emitting and fuel-efficient vehicles amounting to at least 1% of total spaces;
- Reserved parking spaces for EV amounting to at least 1% of total spaces;
- Installation of EV charging stations to accommodate 150% of demand (including construction of 15 EV charging stations in the Terminal E Garage and 5 in the Economy Garage);
- Reduced lighting power densities (LPD) of 0.09 watts/sf (W/sf) inside the parking garages;
- Occupancy sensors and photocells on all interior and exterior lighting (respectively);
- Installation of a solar photovoltaic (PV) system on the Terminal E garage;
- Relocation or replacement of existing solar PV system at the Economy Garage to the top of the facility's new highest level;
- Building Commissioning; and
- Construction waste recycling.

The solar PV array on the Economy Garage will generate 77,800 kWh/year and result in a GHG reduction of 28 tons per year (tpy). The DEIR indicated Massport will evaluate replacing the existing array with a newer and more efficient solar PV system as project design progresses. The DEIR did not evaluate expanding the footprint of the solar PV canopy. The project will also install a 10,000 sf solar PV canopy on the east side of the Terminal E garage which will generate 250,000 kWh/year and result in a GHG reduction of 89 tpy. The DEIR did not provide documentation to support the proposed size of the solar PV canopies, explain why it is not proposed on the west side of the Terminal E garage or within an increased footprint on the Central Garage, nor identify other constraints to expanding the system size. I refer Massport to comments from the Department of Energy Resources (DOER) which indicates a larger solar PV system may be feasible. Additional analysis of solar PV is required in the FEIR.

The project's stationary source GHG emissions were estimated at 1,333 tpy in the Base Case. Through the adoption of energy efficient lighting, the Preferred Alternative will reduce stationary source GHG emissions by 382 tpy, for a total of 951 tpy, or a 28.6% decrease. This does not include the offsets associated with the facilities' solar PV systems, which are identified above. The project's mobile source emissions are summarized in the below table.

| Year | Condition | Regional VMT of "would be parkers" | CO₂ Emissions (tpy) |
|-------------|------------------------|---|---|
| 2017 | Existing | 327,280 | 153 |
| | No-Build | 13,584,217 | 5,079 |
| 2022 | Build/Proposed Project | 12,279,027 | 4,497 |
| | Difference | 1,305,190 (10%) | 582 (11%) |
| | No-Build | 52,130,253 | 15,126 |
| 2030 | Build/Proposed Project | 46,922,626 | 13,314 |
| | Difference | 5,207,627 (10%) | 1,812 (12%) |

The DEIR indicated the reduction in mobile source emissions is primarily attributed to the reduction in regional VMT as compared to the future No-Build Alternative. This will be achieved through shifting “would be parkers” from drop-off/pick-up modes to parking; reducing the number of trips associated with “would-be parkers” traveling to and from the Airport; reducing recirculation at the Terminal E curbsides and decreasing on-Airport VMT; and reducing on-Airport emissions related to improved curbside operations at Terminal E as air passengers shift from drop-off/pick-up modes to parking in the garages.

Adaptation and Resiliency

The DEIR included a review of the project’s design measures for increasing its resiliency to the effects of climate change. The project will incorporate redundant or back-up power sources to protect against extreme weather conditions that may cause power outages. It will also include drought tolerant landscaping along the façade of the Terminal E Garage to minimize the heat island effect and reduce irrigation needs. Stormwater runoff from the Terminal E garage will be collected and used to offset a portion of cooling tower water consumption at the Central Heating Plant. The DEIR briefly described the project’s consistency with Massport’s Disaster and Infrastructure Resiliency Planning Study and Floodproofing Design Guide. According to the DEIR, critical equipment and infrastructure will be elevated above future projected flood elevations.

Noise

The DEIR included a noise impact assessment to evaluate the potential changes in noise due to a taller Economy Garage. Aircraft ground operations noise was modeled at 11 locations near the Economy Garage both with and without the height increase. According to the DEIR, 8 locations (located north and northwest of the Economy Garage) will experience a decrease in ground noise due to the shielding from the expansion to the Economy Garage. The remaining 3 locations (located west of the Economy Garage) may experience noise increases ranging from 0.1 to 0.4 dB due to sound from aircraft ground operations reflecting off the taller portion of the Economy Garage. The DEIR indicated that the façade of the Economy Garage will consist of a combination of solid walls and open areas which will limit the potential for noise reflection.

Construction Period

Construction of the Terminal E garage will commence in spring 2020 and will be completed in 2022. The six levels on the east side of the pedestrian bridge will be constructed first, followed by the five parking levels on the west side of the bridge. Construction of the Economy Garage expansion will begin in 2023 and be completed by the end of 2025. Construction of the Economy Garage will start at the west end of the garage and proceed towards the east end. I refer Massport to comments from MAPC which recommend constructing the Economy Garage expansion only if/when warranted by demand.

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The DEIR described construction phasing and sequencing and provided additional information to identify construction period impacts and measures to control construction traffic, air quality, noise, and water impacts. The DEIR clarified that the Terminal E garage will be

constructed simultaneously with the Terminal E Modernization Project (EEA# 15434) and Terminal C Canopy, Connector, and Roadway Project. The DEIR described construction equipment requirements and identified anticipated construction period trips and truck routes. The DEIR identified measures to reduce construction period traffic impacts, including: developing specific truck routes, coordinating arrival of large equipment, requiring contractors to park off-site, and development of traffic management plans. Measures to reduce construction period air quality impacts include: limiting vehicle idling, using low- or zero-emissions equipment where practicable; retrofitting construction equipment, dust suppression, stabilizing exposed areas, and suspending construction during high-wind conditions. According to the DEIR, Massport will voluntarily comply with the City of Boston’s noise control regulations during construction. Portions of the project site are regulated pursuant to the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000). According to the DEIR, an Activity and Use Limitation (AUL) is located on the Economy Garage site and a Release Abatement Measure (RAM) Plan must be submitted with MassDEP prior to any subsurface work on this site.

SCOPE

General

The FEIR should follow Section 11.07 of the MEPA regulations for outline and content, as modified by this Scope. It should include a detailed description of the proposed project and identify, describe, and assess the environmental impacts of any changes in the project that have occurred since the filing of the DEIR. This should also identify any analysis that has been revised since the DEIR was filed based on updated data or projections. The DEIR should include updated site plans for existing and post-development conditions at a legible scale.

C-4
C-5
C-6

The FEIR should provide a brief description and analysis of applicable statutory and regulatory standards and requirements, and describe how the project will meet those standards. It should include a list of required State Permits, Financial Assistance, or other State approvals and provide an update on the status of each of these pending actions. The FEIR should confirm the need for a modified Sewer Use Discharge Permit from the MWRA and include updated mitigation measures and draft Section 61 Findings, as appropriate.

C-7
C-8
C-9
C-10

Project Description and Permitting

The FEIR should include site plans for existing and post-development conditions at a legible scale including the proposed garage structures and any curbside improvements and changes to the on-airport roadways. The project description should address access and revenue control systems; anticipated rate structures; and identify hybrid, alternative fuel, and EV parking locations. The 2017 ESPR was filed with the MEPA Office during review of the DEIR. The FEIR should confirm that the analyses presented in the DEIR used the most recent data, projections, and assumptions presented in the 2017 ESPR or should include revised analyses, as necessary.

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C-12
C-13

The amended Parking Freeze regulations require Massport to complete three studies to identify ways to further support alternative transit options to the Airport. The results of these studies can inform ways to further support alternative transit options to and from the Airport and extend the associated air quality benefits of the project. Massport anticipates completing the studies by September 30, 2019. As described above, the FEIR should include the completed studies and a summary of the findings. It should also describe how the results have informed Massport’s long-range efforts to address VMT and air quality impacts of different ground access modes to and from the Airport and identify measures that Massport has already implemented. The data and findings should be integrated into the FEIR and mitigation commitments should be updated, as appropriate.

C-14

C-15

Air Quality

The air quality analysis in the DEIR assumed that the policies and programs undertaken by Massport will achieve a 40% HOV mode share goal by 2027. The FEIR should describe how HOV mode share will be monitored to evaluate the effectiveness of the policies and programs in achieving this goal. The FEIR should demonstrate that the HOV programs/policies and any proposed HOV improvement measures will provide the capacity to meet demand associated with growth. Massport has made significant investments in programs to maintain and increase HOV modes and has been recognized as one of the top-ranking airports in terms of HOV/transit mode share. To support Massport’s investments and extend their benefits, the FEIR should include an evaluation of measures to support HOV use and extend the associated air quality benefits of the program and identify to what extent these measures will contribute towards attaining the future mode share goal. This evaluation can be supported by the findings of the three studies required by the amended Parking Freeze regulations.

C-16

C-17

C-18

Greenhouse Gas (GHG) Emissions

As recommended by DOER, the FEIR should analyze the feasibility and GHG mitigation benefits of expanding the proposed canopy solar PV arrays. The analysis should estimate the area available for solar canopies on each of the top parking levels, state the assumed panel efficiency, estimate the electrical output of the system, and identify associated GHG reductions. The analysis should be supported by conceptual plans that identify the “usable areas” for potential solar PV canopy systems and other appurtenances. The analysis should evaluate the east and west sides of the Terminal E Garage and the entire top level of the Economy Garage. The analysis should include a narrative and data (such as a solar reflection study/glare analysis) to support the Proponent’s adoption (or dismissal) of solar PV as a feasible measure to avoid, minimize or mitigate project-related GHG emissions and Damage to the Environment. As recommended by DOER, the project should be designed and built to accommodate solar in the future so as not to lose a significant rooftop asset in the event that issues effecting feasibility change.

C-19

C-20

The DEIR included a commitment to install EV charging stations to accommodate 150% of demand. The FEIR should clarify whether this commitment to meet 150% of demand extends to all on-Airport demand or is limited to the Terminal E Garage and Economy Garage. The FEIR should describe how demand for EV charging stations will be monitored and identify triggers for installation of additional EV stations. The FEIR should clarify whether the parking garages will be constructed as “EV-ready” with conduit to support future installation of EV charging station

C-21

C-22

C-23

or discuss how the construction and design of the garage could otherwise facilitate future expansion of EV charging stations if warranted by demand. This was requested in the Scope for the DEIR and was not provided. | C-23

The FEIR should identify the specific measures from the U.S. Green Building Council’s Parksmart program which will be incorporated into the structured parking facilities. | C-24

The FEIR should provide an updated emission table that compares base case GHG emissions with the Preferred Alternative showing the anticipated reduction in tpy and percentage by emissions source (stationary and mobile). | C-25

Construction Period Impacts

The FEIR should describe how construction will occur to avoid impacting the existing constrained parking supply. The FEIR should describe how it will comply with M.G.L. c. 21E during construction, including any applicable AULs. As recommended by EPA, the FEIR should confirm that Massport will require its construction contractors to use Ultra Low Sulfur Diesel fuel, and discuss the use of after-engine emissions controls, such as oxidation catalysts or diesel particulate filters. Off-road vehicles are required to use ultra-low sulfur diesel fuel (ULSD). | C-26
| C-27
| C-28

Mitigation and Draft Section 61 Findings

The FEIR should include a separate chapter summarizing proposed mitigation measures. This chapter should also include draft Section 61 Findings for each area of impact associated with Massport’s Preferred Alternative. It should include a draft Section 61 Finding for use by the MWRA in issuing the modified Sewer Use Discharge Permit (if required). The FEIR should contain clear commitments to implement these mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation (either funding design and construction or performing actual construction), and a schedule for implementation. To ensure that all GHG emissions reduction measures adopted by the Proponent in the Preferred Alternative are actually constructed or performed by the Proponent, I require Proponents to provide a self-certification to the MEPA Office indicating that all of the required mitigation measures, or their equivalent, have been completed. The commitment to provide this self-certification in the manner outlined above should be incorporated into the draft Section 61 Findings included in the DEIR. | C-29
| C-30
| C-31
| C-32
| C-33

Response to Comments

The FEIR should contain a copy of this Certificate and a copy of each comment letter received on the DEIR. In order to ensure that the issues raised by commenters are addressed, the FEIR should include direct responses to these comments to the extent that they are within MEPA jurisdiction. This directive is not intended, and shall not be construed, to enlarge the scope of the FEIR beyond what has been expressly identified in this Certificate. The response can refer to future EDRs and/or ESPRs to address issues that are not within the FEIR Scope. I recommend that Massport employ an indexed response to comments format, supplemented as appropriate with direct narrative response. | C-34
| C-35
| C-36
| C-37

Circulation

Massport should circulate the FEIR to those parties who commented on the ENF and/or the DEIR, to any State Agencies from which the Proponent will seek permits or approvals, and to any parties specified in section 11.16 of the MEPA regulations. Massport may circulate copies of the FEIR to commenters other than State Agencies in a digital format (e.g., CD-ROM, USB drive) or post to an online website. However, Massport should make available a reasonable number of hard copies to accommodate those without convenient access to a computer to be distributed upon request on a first come, first served basis. Massport should send a letter accompanying the digital copy or identifying the web address of the online version of the FEIR indicating that hard copies are available upon request, noting relevant comment deadlines, and appropriate addresses for submission of comments. The FEIR submitted to the MEPA office should include a digital copy of the complete document. A copy of the FEIR should be made available for review at the following Libraries: Boston Public Library – Main, Orient Heights, and East Boson Branches, Chelsea Public Library, Winthrop Public Library, and Revere Public Library.

C-38

C-39

C-40

C-41

C-42

August 2, 2019
Date

K. Theoharides
Kathleen A. Theoharides

Comments received:

- 06/26/2019 John Vitagliano
- 07/25/2019 Environmental Protection Agency (EPA) •
- 07/26/2019 Airlines for America
- 07/26/2019 Conservation Law Foundation (CLF) •
- 07/26/2019 Metropolitan Area Planning Council (MAPC) ••
- 08/01/2019 Massachusetts Department of Environmental Protection (MassDEP) •
- 08/02/2019 Department of Energy Resources (DOER) •
- 08/02/2019 Air Impact Relief, Inc. (AIR) •

KAT/PRC/prc



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912

OFFICE OF THE
REGIONAL ADMINISTRATOR

July 25, 2019

Richard P. Doucette
Environmental Protection Specialist
Federal Aviation Administration
1200 District Avenue
Burlington, MA 01803

RE: Draft Environmental Impact Report/Environmental Assessment for the Logan Airport Parking Project, Boston-Logan International Airport, East Boston, Massachusetts

Dear Mr. Doucette:

We are writing to comment on the May 2019 Draft Environmental Impact Report/Environmental Assessment (DEIR/EA) for the Logan Airport Parking Project at the Boston-Logan International Airport in East Boston, Massachusetts. We submit the following response to the EA in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act.

Background

Massport proposes to add 5,000 new parking spaces on the airport in accordance with the Logan Airport Parking Freeze. The proposed project will be implemented in two phases. As noted in the DEIR/EA, the Massachusetts Department of Environmental Protection (MassDEP) amended its Logan Airport Parking Freeze Regulation (310 CMR 7.30), and EPA Region 1 approved the amended 310 CMR 7.30 as a revision to the Massachusetts State Implementation Plan (SIP) in a final rule published in the Federal Register on March 6, 2018 (effective April 5, 2018; 83 FR 9438).

MassDEP hosted several stakeholder meetings prior to Massachusetts' adoption of the amended 310 CMR 7.30. EPA Region 1 participated in the stakeholder meetings and early review during the development of the air quality analysis, culminating with the SIP revision submitted by MassDEP. As part of the stakeholder review process, EPA Region 1 reviewed the emissions modeling and concurred that the air quality analysis was satisfactory. In addition, EPA Region 1 provided comments on draft and proposed versions of MassDEP's amended 310 CMR 7.30 regulation on March 16, 2017 and April 11, 2017, respectively. The air quality analysis in the Logan Airport DEIR/EA is consistent with that provided in the background document accompanying MassDEP's SIP revision request for the amended 310 CMR 7.30 (see www.regulations.gov, Docket ID # EPA-R01-OAR-2017-0590).

Internet Address (URL) • <http://www.epa.gov/region1>

Recycled/Recyclable • Printed with Vegetable Oil Based Inks on Recycled Paper (Minimum 30% Postconsumer)

General Conformity

As noted in Section 3.3.2.1 (Regulatory Context) of the DEIR/EA, general conformity provisions found at 40 CFR Part 93 apply to projects funded or approved by the FAA that would result in emissions originating in a nonattainment or maintenance area. Project components located within nonattainment or maintenance areas need to be evaluated for applicability to the Federal General Conformity regulations. Specifically, if the total of direct and indirect emissions of a criteria pollutant or precursor in a nonattainment or maintenance area caused by a Federal action would equal or exceed the applicability thresholds established in 40 CFR 92.153, the requirements of general conformity must be satisfied. EPA will review and comment on the conformity determination once it is made available by the FAA.

1-1

Reducing Air Pollution Emissions

Given the public health concerns from air emissions, EPA encourages Massport to commit to the use of newer vintage diesel engines where possible during all phases of project construction and operation. Alternatively, we encourage the project proponent to require diesel retrofits where practicable, require the use of cleaner fuels, and institute idle reduction measures to minimize emissions from diesel construction equipment. Retrofit technologies may include EPA verified emission control technologies and fuels and CARB-verified emission control technologies. A list of these diesel exhaust control technologies can be accessed at <https://www.epa.gov/verified-diesel-tech/manufacturer-contact-list-clean-diesel>. A list of approved idle reduction technologies can be found on EPA's SmartWay site here: <https://www.epa.gov/verified-diesel-tech/smartway-verified-list-idling-reduction-technologies-irts-trucks-and-school>. Additionally, operator training to reduce unnecessary idling of equipment to supplement the adoption of these technologies is encouraged.

1-2

1-3

The Northeast Diesel Collaborative has prepared model construction specifications to assist in developing contract specifications that would require construction equipment to be retrofitted with control devices and use clean fuels to reduce diesel emissions. The model construction specifications can be found on the Northeast Diesel Collaborative web site: <http://northeastdiesel.org/pdf/NEDC-Construction-Contract-Spec.pdf>.

We recommend that the project name specific exhaust emission mitigation measures and require a binding commitment from the applicant to implement these measures to help reduce and minimize the air quality impacts from construction of the proposed project.

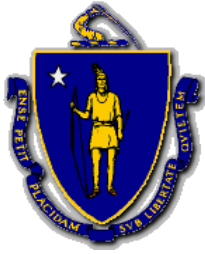
1-4

EPA looks forward to continued coordination with the FAA as appropriate as this project moves forward. Please contact me at (617) 918-1025 if you have any questions or require additional information.

Sincerely,



Timothy Timmermann
Director, Office of Environmental Review



COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF
ENERGY AND ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENERGY RESOURCES
100 CAMBRIDGE ST., SUITE 1020
BOSTON, MA 02114
Telephone: 617-626-7300
Facsimile: 617-727-0030

Charles D. Baker
Governor

Karyn E. Polito
Lt. Governor

Kathleen Theoharides
Secretary

Judith F. Judson
Commissioner

2 August 2019

Kathleen Theoharides, Secretary
Executive Office of Energy & Environmental Affairs
100 Cambridge Street
Boston, Massachusetts 02114
Attn: MEPA Unit

RE: Logan Airport Parking Garages, Boston, Massachusetts, EEA #15665

Cc: Maggie McCarey, Director of Energy Efficiency, Department of Energy Resources
Judith Judson, Commissioner, Department of Energy Resources

Dear Secretary Theoharides:

We've reviewed the Draft Environmental Impact Report (DEIR) for the above project. The proposed project consists of a new parking garage and parking garage expansion which together total about 1.6M sf in area. Conditioned space will be limited to lobby and kiosk spaces.

The project is proposing low lighting power density and about 250 kW of solar PV (total for both garages).

Our recommendations are as follows:

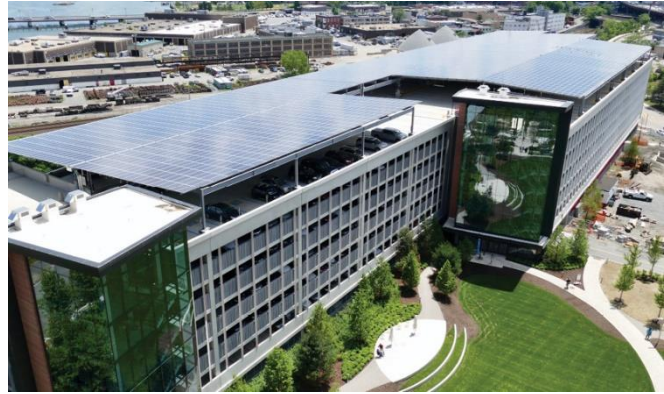
Rooftop Solar PV

The garages' large footprint and unobstructed exposure offers a significant potential opportunity for solar PV at a scale much larger than currently proposed. The currently planned 250-kW solar PV will occupy about 20,000-sf of area, representing about 5% of the total available area of garages' total footprint area.

Built-out to occupy 90% of the garages' total footprint area, the two parking garages could host more than 4.5MW of solar PV, generating more than 6,000 MWhrs/yr of electric power, offsetting more than 2,100 tons of emissions per year.

The Partners Health Care garage in Somerville, Massachusetts provides an example of maximizing solar PV in a parking garage setting. (Photo, right.)

We recommend that the proponent evaluate more PV, including systems up to 4.5MW (total, for the two structures). This evaluation should include a meeting with the appropriate utility to assess interconnection and evaluations of SMART and potential grants from Massachusetts' Lead by Example program.



*Solar PV on top of Partners Parking Garage
Somerville MA*

At a minimum, we recommend the project be designed and built to accommodate solar in the future so as not to lose a significant rooftop asset in the event that issues effecting feasibility today change.

Accordingly, at a minimum, we recommend that both garages be built to be solar-ready. The new Terminal E garage should be solar-ready to accommodate 1.5 MW of solar PV and the economy garage expansion should be solar ready to accommodate 3 MW of solar PV. "Accommodate" in this context means that, if built in the future, the garages would not require structural, geotechnical, or seismic retrofit based on current building Codes. Electric services and connection pathways should also be preplanned.

Space Heating and Cooling

We recommend that all space heating and any space cooling be done with cold-climate rated heat pumps and/or VRF. In the submission, reference is made to potential use of electric resistance heating, which is not recommended.

Sincerely,

Paul F. Ormond, P.E.
Energy Efficiency Engineer
Massachusetts Department of Energy Resources

2-1

2-2

2-3

2-4

From: Czepiga, Page (ENV)
To: [Dalzell, Stewart](#)
Subject: FW: MassDEP Comments - EEA# 15665: Logan Airport Parking
Date: Friday, August 2, 2019 10:59:38 AM

From: Weber, Sharon (DEP)
Sent: Thursday, August 01, 2019 10:14 AM
To: Czepiga, Page (EEA)
Cc: Kirby, Christine (DEP); Janak, Haidee (DEP)
Subject: EEA# 15665: Logan Airport Parking

Hi Page, MassDEP is not requesting further review of the project in a Supplemental Draft EIR. 310 CMR 7.30 was amended effective June 30, 2017. MassDEP expects to receive the three reports required by 310 CMR 7.30(8)(a)1. to 3. soon. Regards, Sharon

| 3-1

Sharon Weber
Deputy Director, Division of Air & Climate Programs
Massachusetts Department of Environmental Protection
One Winter Street
Boston, MA 02108
sharon.weber@mass.gov
617-556-1190 phone
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Visit our web site: mass.gov/dep



July 26, 2019

Kathleen Theoharides, Secretary
Executive Office of Energy & Environmental Affairs
Attention: MEPA Office – Page Czepiga, MEPA #15665
100 Cambridge Street, Suite 900
Boston, MA 02114

RE: Logan Airport Parking Project, DEIR, MEPA #15665

Dear Secretary Theoharides:

The Metropolitan Area Planning Council (MAPC) regularly reviews proposals deemed to have regional impacts. The Council reviews proposed projects for consistency with *MetroFuture*, the regional policy plan for the Boston metropolitan area, the Commonwealth’s Sustainable Development Principles, as well as impacts on the environment.

MAPC has a long-term interest in alleviating regional traffic and environmental impacts, consistent with the goals of *MetroFuture*. Furthermore, the Commonwealth encourages an increased role for bicycling, transit and walking to meet our transportation needs while reducing traffic congestion and vehicle emissions. Additionally, the Commonwealth has a statutory obligation to reduce greenhouse gas emissions (GHG) by 25% from 1990 levels by 2020 and by 80% from 1990 levels by 2050.

The Massachusetts Port Authority (Massport) has submitted a Draft Environmental Impact Report (DEIR)/Environmental Assessment (EA) for the Logan Airport Parking Project (the Project). This DEIR is combined with a Federal EA for review by the Federal Aviation Administration (FAA) under the National Environmental Policy Act (NEPA).

This Project addresses implementation of Massport’s plan to add 5,000 new on-Airport commercial parking spaces at Boston-Logan International Airport. Massport plans to construct the additional parking in two locations: approximately 2,000 spaces are proposed to be added in a new garage in front of Terminal E where there is an existing surface parking lot, and an additional 3,000 spaces are planned to be added to the existing Economy Garage.

Our comment letter focuses on two key matters: 1) Massport’s commitment to conduct three studies and 2) phasing of garage construction.

Commitment to Conduct Three Studies

As part of the amendment to the Parking Freeze, which was also echoed in the Secretary’s Certificate¹, one of Massport’s mitigation commitments to MassDEP was to complete three studies within 24 months of June 30, 2017.

These three studies will address the following:

1. *Ways to Improve High Occupancy Vehicle (HOV) Access to the Airport*

Evaluate the feasibility and effectiveness of potential measures to improve HOV access to Logan Airport. The study would consider, among other things, possible improvements to Logan Express bus service,

¹ ENF Certificate dated May 5, 2017.

additional Logan Express sites, and the benefit of improvements to the Silver Line service to Logan Airport.

2. Strategies for Reducing Drop-Off/Pick-Up Modes

Evaluate the feasibility and effectiveness of potential operational measures to reduce drop-off/pick-up modes of access to Logan Airport.

3. Parking Pricing Strategies

Assess parking pricing strategies and their effect on customer behavior and Vehicle Miles Traveled (VMT).

We are concerned to see that the DEIR/EA was filed with MEPA prior to the completion of these studies, which will provide useful information for evaluating the project and its mitigation. The availability of these studies will be critical to the Final Environmental Impact Report (FEIR) as they should be used to inform the mitigation measures for the project and identify ways to further support alternative transit options to and from the airport. These studies will also inform Massport’s long-range efforts to address VMT and air quality impacts of different ground access modes to and from Logan Airport.

4-1

It is important that all three studies be finalized and available prior to the issuance of the FEIR, and that the data and findings be integrated into the FEIR and particularly the mitigation commitments as appropriate. In order to minimize adverse impacts and to keep the Commonwealth on track in meeting its regulatory and statutory goals, MAPC respectfully requests that the Secretary incorporate this recommendation as part of the Certificate on the Draft EIR.

4-2

Phasing of Garage Construction

Massport proposes to first construct approximately 2,000 spaces in a new garage in front of Terminal E followed by approximately 3,000 spaces at the Economy Garage through an expansion of the existing facility. Construction of the garage in front of Terminal E is expected to begin in spring 2020 and be complete in 2022. Construction of the Economy Garage expansion is due to begin in 2023 and be complete by the end of 2025.

MAPC respectfully requests that Massport monitor the performance of the first facility after it is in operation, and use that information to reevaluate the timing, and to what extent, there is a need to construct the second phase of 3,000 additional parking spaces.

4-3

Plans for future adaptability of structured parking should be explored for potential productive reuse of the space, should parking demand decrease in the future due to changes in travel mode, Transportation Networking Companies (TNC), or other causes.

4-4

Transportation Network Company Trip Sharing

MAPC is pleased that Massport, as part of a parallel effort, is evaluating mechanisms to reduce TNC deadheading. With respect to TNC operations, shared-ride pick up trips will be incentivized with a discounted fee of \$1.50^{2,3}. Providing a reduced fee for shared pick up trips is a strong motivating factor to reduce trips and should be heavily promoted and marketed by Massport to passengers. Ride sharing is one of the most effective ways to reduce congestion, as there are fewer vehicles on the roadway network. Significant adoption of shared rides will be a contributing factor to Massport’s new ground transportation plan to help mitigate traffic congestion in and around Logan Airport as well as ensure the success of Massport’s expectation to reduce deadhead trips by as much as a third and the potential to eliminate more

² A non-shared pick-up fee will remain the same at \$3.25.

³ Effective October 1, 2019.

**Metropolitan Area Planning Council (MAPC) comments on
Logan Airport Parking Project, DEIR, MEPA # 15665**

4-5

than three million annual trips to and from Logan Airport. Advancing the efficient management of TNC trips, promoting TNCs to carry passengers both when entering and exiting Logan Airport, and increasing shared-trips may even reduce the need for additional onsite parking. That is why MAPC is requesting that the actual performance of the system be monitored after the first phase of parking expansion in 2021, to determine if the assumptions underlying the plan for a second phase continue to be valid.

Electrification Commitments

MAPC applauds Massport for addressing the following transportation electrification commitments and including them in the draft Section 61 Findings. These commitments will contribute to reductions in GHG emissions and help the state meet its goals:

- Reserve priority parking spaces for alternative fuel vehicles (e.g., electric vehicles) amounting to at least one percent of total spaces and assigning preferred parking spaces for other low-emitting and fuel-efficient vehicles amounting to at least another one percent of total spaces.
- Install electric vehicle charging stations to accommodate 150 percent of demand; 15 charging stations are currently planned for the new garage in front of Terminal E and five are planned for the Economy Garage expansion.
- Provide high-speed electric vehicle charging stations at all taxi, livery, and TNC pools at Logan Airport so that 150 percent of demand for charging stations is available at all pools at all times at no cost to the user.
- Provide taxi and TNC queue priority to electric vehicles (second only to vehicles with at least three passengers).

Thank you for the opportunity to comment.

Sincerely,



Martin Pillsbury
Environmental Planning Director

cc: Lisa Wieland, CEO
Martin Suuberg, Commissioner, MassDEP
David Mohler, MassDOT



Airlines for America®

We Connect the World

July 26, 2019

Submitted via: email to page.czepiga@state.ma.us

The Honorable Kathleen Theoharides
Secretary Executive Office of Energy and Environmental Affairs
Attn: MEPA Office Page Czepiga
100 Cambridge Street, Suite 900, Boston, Massachusetts 02114

Re: Airlines for America Comments on *Draft Environmental Impact Report / Environmental Assessment EEA# 15665 – Logan Airport Parking Project*

Dear Ms. Theoharides:

Airlines for America (“A4A”) appreciates this opportunity to comment on the *Draft Environmental Impact Report / Environmental Assessment EEA# 15665 – Logan Airport Parking Project* (“Draft EIR/EA”). A4A is the principal trade and service organization of the U.S. airline industry.¹

Together with our members we are pleased to support strongly the Logan Airport Parking Project (the “Project”), which will bring critically needed parking capacity to Boston Logan International Airport (“BOS”) while also providing important regional air quality benefits. This type of project aligns with the commercial aviation industry’s commitment to providing safe, reliable commercial air service that is a critical engine of strong, environmentally sustainable economic growth.

5-1

Our commitment to the environment has extended to working with various entities to establish well thought out, reasonable programs that achieve air emissions reductions from airport ground support equipment (“GSE”). Indeed, many of our carriers already have been working closely with Massport to convert GSE to alternatively-fueled, low-emission equipment where practicable and we look forward to working with Massport to develop an airport-wide program at BOS. We note, however, that because the Project itself provides air emissions benefits, it does not generate a need or requirement to mitigate air emissions. As such, it is very important that the Final EIR/EA explicitly states and clarifies that GSE-related programs to reduce emissions are not required to mitigate air emissions associated with the Project and/or to demonstrate conformity with the State Implementation Plan (“SIP”) pursuant to Section 176(c) of the Clean Air Act. In addition, as detailed below, we respectfully request that the *Draft Project § 61 Findings for the Parking Project at Boston-Logan International Airport* (as presented in Appendix C of the Draft EIR/EA), be amended to reflect that any GSE program will be voluntary and exclude any provision relating to commercial aircraft taxiing.

5-2

5-3

BACKGROUND

A4A’s members have a strong environmental record and demonstrated commitment to sustainable aviation growth. In fact, although the U.S. airlines contribute less than two percent to our nation’s greenhouse gas emissions (“GHG”) inventory, we take our role in controlling GHG emissions very seriously. Between 1978 and year-end 2018, the U.S. airlines improved their fuel efficiency by more than 130 percent, saving nearly 5 billion metric tons of carbon dioxide (“CO₂”), equivalent to taking 26 million

¹ A4A’s members are: Alaska Airlines, Inc., American Airlines, Inc., Atlas Air, Inc., Federal Express Corporation, Hawaiian Airlines, JetBlue Airways Corp., Southwest Airlines Co., United Airlines Holdings, Inc., and United Parcel Service Co. Air Canada, Inc. is an associate member.

cars off the road each of those years. And, they carried 42 percent more passengers and cargo in 2018 than they did in 2000, while emitting just 3 percent more CO₂.

At the same time, commercial aviation drives our national, state and local economies. At the national level, the commercial aviation industry drives more than \$1.5 trillion in economic activity and 10 million jobs. A very recent study from the Massachusetts Department of Transportation² concluded that in 2017 the State's public-use airports generated \$24.7 billion in economic output and supported over 199,000 jobs (\$7.2 billion in payroll). The critical role aviation has played in driving economic prosperity and growth in Massachusetts is evidenced by the fact that aviation's contribution to total output has increased 49 percent (nearly \$3 billion) since just 2013. BOS has contributed the vast majority of these benefits, accounting for over \$16.3 billion in economic output and employing 162,262 (\$5.97 billion payroll) in 2017.

The U.S. airlines have achieved this level of simultaneous economic and environmental performance through relentless pursuit and implementation of technology, operational, and infrastructure measures to minimize our environmental impact. And we are committed to accelerating the pace of progress. U.S. commercial airlines are active participants in a global aviation coalition that has committed to 1.5 percent annual average fuel efficiency improvements through 2020 and carbon neutral growth from 2020, subject to critical aviation infrastructure and technology advances achieved by government and industry, with an aspirational goal of a 50 percent reduction in CO₂ by 2050 relative to 2005 levels. Our primary focus is on getting further fuel efficiency and emissions savings through new aircraft technology, sustainable aviation fuels and air traffic management and other operational and infrastructure improvements.

With respect to GSE and the ability of carriers to replace or convert equipment, several points need to be emphasized. First, we strongly support the development of well thought out, reasonable GSE programs that achieve air emissions reductions. Indeed, our members have worked closely with Massport and other airports to replace and/or convert GSE to low-emission equipment where practicable. Some recent examples include:

- Last year, BOS and American Airlines worked together to create a \$2.5 million project to electrify GSE. The Federal Aviation Administration ("FAA") awarded BOS a \$1,880,335 grant which, together with the required local match of \$626,778, was used to fund installation of 50 electric chargers – these chargers are to be used to serve 99 units of electric GSE ("eGSE") that, in support of the grant, American Airlines committed to acquire at a cost of approximately \$3 million.³ Subsequently, the U.S. Environmental Protection Agency ("EPA") awarded Massport a DERA (Diesel Emissions Reduction Act) grant help fund the replacement of 15 diesel baggage tractors, 7 diesel belt loaders and 3 diesel push back tugs (for smaller regional jets), costing a total of \$1.2 million. The \$541,817 grant covered 45 percent of costs; the 55 percent of required matching funds (\$662,221) was provided by airlines.
- In fiscal year ("FY") 2013, BOS received a \$2,000,000 VALE grant to fund installation of eight electric-powered gates, which enabled use of gate-supplied pre-conditioned air (eliminating the need to operate diesel-powered air conditioning units) and gate-supplied power to aircraft (eliminating the need to operate diesel-powered ground power units ("GPUs")).
- Similarly, in 2018 JetBlue (which also has a major presence at BOS) partnered with the Port Authority of New York and New Jersey ("PANYNJ") to secure VALE funding to convert 116 baggage tugs and belt loaders from diesel- and gas-powered models to eGSE at John F. Kennedy International Airport ("JFK"). The lion's share of the required

² The MassDOT study is available here: <https://www.mass.gov/economic-impact-study>.

³ American committed to replacing 66 units by 2020 (34 diesel bag tractors, 9 diesel belt loaders, 8 gas bag tractors, 13 gas cargo tractors and 2 gas belt loaders), 18 gas bag tractors by 2021, and 15 diesel belt loaders by 2022. American also indicated it would replace 16 diesel push back tractors (for regional and single-aisle aircraft) by 2026, but the \$752,134 cost of the 16 chargers needed to serve these units was not covered by the VALE grant.

\$1,324,438 in local matching funds was provided by JetBlue in the form of an agreement to acquire the eGSE. The \$3,973,316 FAA grant to PANYNJ funded the installation of 38 charging stations (housing 120 chargers). In addition the New York Power Authority provided \$200,000 in technical and financial assistance to the PANYNJ.

Importantly, as the above examples illustrate, the success of these efforts depended on securing funds from the FAA's VALE Program,⁴ which requires that any emissions reductions be surplus to mandated reductions.⁵ Like VALE, emission reductions funded through DERA must be voluntary (i.e., may not be "used to fund emission reductions mandated under Federal, State or local law." 42 U.S.C. § 16132(d)(2)). In other words, the success of these efforts depended on the voluntary nature of the effort.

Second, GSE is critical to safe, reliable and efficient aircraft operations and any GSE program that has the effect of compromising the safety of aircraft operations or unduly constraining aircraft operations is preempted by Federal aviation laws.⁶ For example, aircraft deicing is essential to ensuring the safety of passengers and crew during aircraft operations in winter conditions – any mandate to electrify deicing trucks unless and until such trucks were available and able to deice aircraft in a manner conforming to FAA's rigid safety requirements and as efficiently as traditionally-fueled equipment would be preempted.⁷ Further, it is without question that the FAA exercises exclusive and plenary authority over the operation of aircraft and FAA regulations unequivocally provide that "[t]he pilot in command of an aircraft is directly responsible for, and is the final authority as to, the operation of that aircraft." 14 C.F.R. §91.3. Accordingly, the pilot in command exercises final authority as to how and under what circumstances the aircraft will be taxied, authority that cannot be usurped by State, local or other authorities.

Third, as a general matter it is important to understand that GSE is not a uniform, monolithic category of equipment – rather, GSE is comprised of roughly 23 separate categories of equipment ranging from baggage loaders and baggage tugs to large cargo loaders, aircraft tractors and GPUs. Equipment can vary significantly even within these categories. For example, the performance requirements of aircraft tractors designed for regional jets differ significantly from those designed for larger single-aisle aircraft and those differ significantly from tractors designed for still larger twin-aisle aircraft. Notably, electric alternatives do not exist for many aircraft tractors capable of towing larger twin-aisle aircraft. Similarly,

⁴ VALE grants are funded through the FAA's Airport Improvement Program ("AIP"), which in turn is funded predominately by taxes and fees imposed on air carriers and passengers, or through Passenger Facility Charges ("PFCs"), which are FAA-approved local taxes assessed by airport operators on airline passengers (airlines are required to collect PFCs and remit the proceeds to the taxing authority).

⁵ Emissions reductions are "surplus" if they are "not otherwise required by Federal, State or local regulations." See Guidance on Airport Emission Reduction Credits for Early Measures Through Voluntary Airport Low Emissions Programs (USEPA, September 2004) at 12.

⁶ The Federal Aviation Act establishes "a uniform and exclusive system of federal regulation" of aircraft operations to be administered by the FAA. *Burbank v. Lockheed Air Terminal, Inc.*, 411 U.S. 624, 639 (1973). See also *Abdullah v. American Airlines, Inc.*, 181 F.3d 363, 370 n.10 (3d Cir. 1999) (aviation regulation is an area where "[f]ederal control is intensive and exclusive") (quoting *Northwest Airlines, Inc. v. Minnesota*, 322 U.S. 292, 303 (1944)). Congress has affirmed repeatedly its intent that this system of federal regulation maintain the primacy of safety and accommodate, to the maximum extent possible, demand for air transportation. See e.g. 49 U.S.C. § 40101(a) ("[T]he Secretary of Transportation shall . . . (1) assign[] and maintain[] safety as the highest priority in air commerce.") Congress also has affirmed the need to meet environmental objectives consistent with maintaining safety and ability of the National Airspace System ("NAS") to accommodate the needs of the nation's economy and culture. See, § 47101(a) ("It is the policy of the United States . . . (6) that airport development projects under this subchapter provide for the protection and enhancement of national resources and the quality of the environment in the United States."). It is without question, however, that the FAA wields primary and exclusive jurisdiction over air safety and the operation of the NAS. See, 49 U.S.C. §40103(b): "The Administrator of the [FAA] shall develop plans and policy for the use of the navigable airspace and assign by regulation and order the use of the airspace necessary to ensure the safety of aircraft and the efficient use of airspace." This pervasive federal regulatory scheme extends to both aircraft in flight and aircraft-related operations on the ground. See, e.g., 49 U.S.C. § 40103(b)(2)(B)-(C); *Burbank-Glendale-Pasadena Airport Authority v. City of Los Angeles*, 979 F.2d 1338, 1341 (9th Cir. 1992) (Federal Aviation Act preempts any regulatory "interference" with the operations of aircraft on the ground); *City of Houston v. FAA*, 679 F.2d 1184, 1195 (5th Cir. 1982) (FAA has regulatory authority "not only [over] the corridors of air traffic, but the use of airports as well").

⁷ See also USEPA Final Rule, Effluent Limitations Guidelines and New Source Performance Standards for the Airport Deicing Category, 77 Fed. Reg. 29168 (May 16, 2012) at 29177 (USEPA declines to mandate use of specific technologies at space-constrained airports like BOS because it was "unable to develop regulatory requirements that would give airports the flexibility they need to avoid significant operational issues and delays"); at 29178-79 (technology mandates inappropriate where they may "lead to unacceptable safety concerns" and ". . . EPA agrees that delays must be a factor in considering today's possible requirements and recognizes that such delays fundamentally affect U.S and international business and recreational interests").

the performance requirements of cargo loaders designed for loading the lower deck of passenger and cargo aircraft differ significantly from the performance requirements of loaders designed to load the upper deck of large, cargo aircraft. Again, electric alternatives do not exist for this latter category.

A couple of important points flow from these observations. First, the already comparatively small market for GSE is comprised of many even smaller sub-categories of equipment that themselves are comprised of even smaller sub-categories. As a result, manufacturers have not invested heavily to develop GSE alternatives and have limited production runs. In fact, many GSE categories are not available “off-the-shelf”; rather, carriers must place special orders for equipment and wait significant periods for delivery. In other words, some types of GSE are not “commercially available” in alternatively-fueled models, including electric models. In addition, even where GSE can be purchased on the market, certain types often are not “commercially available” as that term is commonly understood (i.e., readily available “off-the-shelf”).

It also important to appreciate that, even if “commercially available” in alternatively-fueled models, including electric, this is not sufficient to establish that such GSE can be successfully deployed. For example, the infrastructure necessary to support such equipment must already be in place. With respect to eGSE, this means that off-airport utilities must be able to generate sufficient power to support such electrification and the required on-airport infrastructure (which typically is controlled by the airport) must be in place to support deployment of eGSE (e.g., sufficient on-airport substations, conduits and charging stations). Unless and until such infrastructure is put in place by those responsible for providing it, eGSE simply cannot be deployed. In this context, we reemphasize that aircraft cannot operate without GSE. In the event of power failures (resulting, e.g., from natural disasters such as Superstorm Sandy) aircraft operations would come to a halt unless there is sufficient, reliable back-up generation capacity and/or non-eGSE equipment is on hand to service aircraft. Airports and aircraft operations are critically important to facilitating emergency response in the wake of such disasters. It is thus critically important to consider the potential ramifications of relying exclusively on electricity to support aircraft operations and tailor eGSE policies accordingly.

Moreover, the configuration of the airport and nature of operations at the airport must be amenable to the operation of eGSE. For example, sufficient space must be available to install chargers and accommodate parking positions for eGSE while charging. In addition, even if eGSE is ostensibly available on the market, it must be capable of performing the required task at the airport in question. For example, if distances are too great or significant grades must be traversed, eGSE may not be capable of performing the tasks required of it. Such matters must be carefully considered and analyzed before reaching any conclusion regarding the feasibility of deploying eGSE by a certain date.

Finally, it is important to remember that GSE is highly specialized equipment and – especially for larger equipment categories like cargo loaders, aircraft tractors, GPUs and air starts – require very significant investment. In addition, the useful life of GSE is generally quite long and, for some types that are used relatively infrequently (such as air starts) is still longer. Significant expenditures for conversion of GSE before they have attained their useful life could impact the resources available to airlines to make positive investments in new aircraft and other advanced technology. Any turn-over requirement must carefully consider these factors by, for example, ensuring such requirements do not apply to newer units and providing low-use exemptions where conversion to eGSE is not cost-effective.

COMMENTS

With that background, we respectfully provide the following comments.

As an initial matter, as highlighted above, we note that the EIR/EA repeatedly emphasizes that the Project results in air emission benefits. This is true with respect to both emissions of criteria pollutants (relevant to local air quality) and greenhouse gases (“GHGs”) and, in both cases, the EIR/EA explicitly notes that this obviates the need for a “Build-with-Mitigation Scenario.”⁸ In addition, the EIR/EA concludes that

⁸ See EIR/EA, at 4-52 (concluding “[a]s the Build Condition is anticipated to reduce regional pollutant emissions, a Build-with-Mitigation scenario is not required by the SIP” and including Table 4-15, detailing reductions of Volatile Organic Compounds

increased emissions of criteria pollutants fall below *de minimis* thresholds for triggering a General Conformity determination pursuant to Section 176(c) of the Clean Air Act (i.e., an analysis demonstrating that the Project conforms to the SIP). Notably, the reductions in VOC and NOx resulting from the Project far exceed any peak-year emissions of these pollutants. Accordingly, we submit that the Final EIR/EA and *Final Section 61 Findings* must include language that explicitly clarifies that GSE-related programs to reduce emissions are not required to mitigate air emissions associated with the Project. We also are particularly concerned that as presently phrased, the *Section 61 Findings* could be deemed to create a local mandate to implement the eGSE program, thus disqualifying Massport and airlines from accessing funding sources such as VALE and DERA that – as illustrated above – have been critical to achieving early emissions reductions at BOS through electrification of GSE. Because the Draft EIR/EA itself establishes that there is no need to reduce GSE (or any) emissions to allow the Project to go forward and any mandate to reduce emissions from GSE would preclude both Massport and airlines from accessing significant sources of funding to accelerate the deployment of low-emission and/or eGSE, if the *Final Section 61 Findings* document addresses GSE, it should provide for the development of a voluntary GSE program.

5-4

In addition, while we appreciate the recognition that alternative GSE must be “commercially available” as a predicate to any requirement to convert or replace GSE, the *Final Section 61 Findings* must recognize that “commercial availability” alone is not sufficient to establish the viability of deploying eGSE. The *Final Section 61 Findings* must acknowledge that any mandate to deploy eGSE must also be predicated on findings that (a) sufficient infrastructure is in place to accommodate and support such equipment and (b) operation of eGSE is viable as a practical matter (i.e., that it is capable of performing the tasks of the equipment it will replace without compromising the safety and efficiency of aircraft operations). The *Final Section 61 Findings* also must acknowledge that it is inappropriate to require the turnover of “all” GSE by any date certain, even if all of these predicates are met, without first evaluating and analyzing the cost-effectiveness of converting or replacing equipment before its useful life has been attained. Moreover, the *Final Section 61 Findings* must recognize that any reasonable policy regarding the replacement of GSE will include reasonable exceptions for low-use equipment.

5-5

5-6

5-7

With respect to “commercial availability,” the *Final Section 61 Findings* also must acknowledge that this can be a difficult concept to define with respect to GSE. As such, before establishing any policy specifying the scope and schedule for replacing GSE, “commercial availability” must be carefully defined.⁹ Such a definition must acknowledge that “commercial availability” necessarily requires that the equipment is available at a commercially reasonable price. In addition, the process and criteria must also be defined for determining whether (a) specific equipment is “commercially available,” (b) sufficient infrastructure is in place to support deployment of eGSE, (c) the eGSE in question can be practically operated at BOS and (d) conversion of GSE to eGSE is cost-effective.¹⁰

5-8

In sum, such factors and considerations need to be carefully evaluated and taken into account whenever an airport is developing a program to achieve air emissions reductions from GSE. Here, where it is explicitly recognized that this Project generates air emission benefits and there is no legal or practical need to mitigate air emissions to enable the Project to go forward, it is arbitrary and capricious to include a mandatory eGSE program as part the *Section 61 Findings* supporting the Project.

(“VOCs”) and oxides of nitrogen (“NOx”); EIR/EA at 4-64 (concluding “[a]s the Build Condition is anticipated to reduce regional pollutant emissions, a Build-with-Mitigation scenario is not required under the *MEPA Greenhouse Gas Emissions Policy and Protocol*” and including Table 4-20 tabulating the reductions in CO2 generated by the Project).

⁹ We note that the Draft EIR/EA itself characterizes the GSE program in a way that apparently confuses the concept of commercial availability: “Massport is also working with the airlines and other tenants at Logan Airport to convert commercially available ground service equipment to electric power.” Draft EIR/EA at 3-32 and 5-13. We assume these statements are intended to read: “Massport is also working with the airlines and other tenants at Logan Airport to convert ~~commercially available~~ ground service equipment to electric power where commercially available.” The Final EIR/EA must also acknowledge “commercial availability” of eGSE alone is insufficient to establish the viability imposing an eGSE mandate as detailed elsewhere in these comments.

¹⁰ We note that, in this context, it is particularly important to consider these factors with specific reference to their potential impact on air cargo carriers. As reflected in the conclusions that this Project will generate air emission benefits because it will reduce vehicle miles traveled by “would-be-parkers” and “it reduces the number of vehicles traveling by drop-off/pick-up mode and associated regional VMT” (EIR/EA at 4-49), the Project will predominately facilitate activities of passengers. However, the proposed eGSE program will impose costs and burdens on both passenger and cargo carriers. It is incumbent upon Massport to consider carefully how such a program will impact air cargo carriers given that it does not appear the Project will benefit them directly.

Finally, we unequivocally oppose the assertion in the *Draft Section 61 Findings* that “Massport will ensure that at least 60 percent of commercial aircraft taxiing for re-positioning will be done by electric tugs by 2027.” First and foremost, as emphasized above, the FAA exercises exclusive and plenary authority to regulate the operation of aircraft and has promulgated regulations establishing that the pilot-in-command of an aircraft has direct responsibility for and final authority as to the operation of the aircraft. As such, there is no legal means available to either impose or enforce such a taxiing requirement. For this reason alone, it must be removed from the *Final Section 61 Findings*. In any event, “aircraft taxiing for re-positioning” is not a recognized concept and would need to be defined before any policy to regulate this activity was established (it appears the phrase refers to a subset of aircraft taxiing, but it is unclear which taxiing activities constitute “re-positioning” and which do not). In addition, the fleet operating at BOS could change by 2027 to include a significant number of large, twin-aisle aircraft: today such aircraft cannot be towed using eGSE and this may remain the case in 2027. So, even if legally viable (which it is not) this requirement would require further evaluation before being formally adopted in the *Final Section 61 Findings*.

A4A and its airline members are grateful for the opportunity to provide these comments. We will be very pleased to work with Massport to develop a well thought out, reasonable program that achieves air emissions reductions from GSE. In the meantime, we ask that the *Final EIR/EA* and *Final Section 61 Findings* reflect our comments and proposed changes.

Please do not hesitate to contact us should you have questions or wish to discuss our comments in greater detail.

Sincerely,



Tim A. Pohle
Senior Managing Director
Environmental Affairs
Airlines for America

Czepiga, Page (EEA)

From: Chris Marchi <cbmarchi@gmail.com>
Sent: Friday, August 02, 2019 11:22 AM
To: Czepiga, Page (EEA); Doucette, Richard P.
Cc: Gail Miller; Adrian C. Madaro (HOU); Joseph A. Boncore; Lydia Edwards
Subject: AIR, Inc. Comment RE EEA 15665
Attachments: AIR, Inc. Parking Project EEA 15665 Comment.pdf

Dear Ms. Czepiga and Mr. Doucette,
Please accept the attached letter of comment from AIR, Inc. regarding the Logan Airport Parking Project.

Due to summer schedules, our volunteer community-based group has been hard-pressed to produce our public comments on this important infrastructure project. Our hope is that Secretary Theoharides and her staff have not yet issued their decision RE certification and that our feedback will prove useful to her.

Please confirm receipt of this email and whether our comments can be accepted and reviewed.

Thank you.

Sincerely,

Chris Marchi, Vice President; AIR, Inc.
617-417-2093

July 26, 2019

VIA EMAIL (Page.Czepiga@state.ma.us; richard.doucette@faa.gov)

Secretary of Energy and Environmental Affairs
Executive Office of Energy and Environmental Affairs
Attn: MEPA Office
Page Czepiga, EEA No. 15665
100 Cambridge Street, Suite 900
Boston, MA 02114

Richard Doucette
Federal Aviation Administration
New England Region
1200 District Ave.
Burlington, MA 01803

Subject: Logan Airport Parking Project, Draft Environmental Impact Report

Dear Ms. Czepiga and Mr. Doucette:

Thank you for the opportunity to comment on the Logan Airport Parking Project EIR 15665. AIR, Inc., the Boston region's longest serving community-based airport mitigation planning group opposes this project and requests that Secretary Theoharides require the Proponent to produce a Supplemental EIR which addresses the many serious flaws in the reporting and analysis within the present EIR.

6-1

AIR, Inc. has consistently requested that EOEIA intervene in the procedural segmentation of airport projects. Deferral of MEPA review of Project related environmental impacts onto unrelated MEPA processes (such as ESPR 2017) obstructs the Public's Right to benefit from project review. Avoidance of adequate MEPA reporting also denies the Public, DEP, MassDOT, air travellers, and the airlines the opportunity to accurately assess the size, scale and nature of Boston's air travel related transportation challenges and to address them with effective planning.

The EIR proposes that a more efficient, larger airport will create less pollution than a *less* efficient, larger airport. The idea that the difference in additional negative impacts creates a benefit to environmental justice communities is ludicrous. Nowhere in the Logan Airport Parking Project EIR does the Proponent offer an option for the community *to be polluted less*; nor is the quantity of added pollution actually reported for the proposed Project at expected operational capacity. EOEIA should reject the Proponent's preposterous arguments that the addition of 25% more on-airport parking will reduce traffic and air pollution, save energy, and benefit children.

The EIR fails to explore plausible Project Alternatives, examining only a single Build Alternative based on hypothetical modeling and unrealistic and inaccurate data. Lacking in the

documentation and analysis are comprehensive discussion of reasonable alternatives through which the Proponent might better achieve its goals. Only net reduction of traffic and air pollution can be considered of benefit to children, Environmental Justice communities, the city of Boston and the Commonwealth. We can no longer afford the reckless and unmanaged expansion being ushered in by irresponsible planning at Massport.

EOEA should require the Proponent to:

- | | |
|---|-----|
| 1. <u>Report on the Project as a component of recent, current and future projects and provide analysis and discussion of project and associated cumulative environmental impacts.</u> | 6-2 |
| 2. <u>Develop a Third Alternative based on research and development of multiple additional Logan Express Routes, expanded and improved suburban parking facilities, improved BRT service at a variety of price points, and future MBTA connectivity and service improvements</u> | 6-3 |
| 3. <u>Accurately report on the increases in impacts which the Project will cause within the Project MEPA EIR</u> | 6-4 |
| 4. <u>Correct the flawed planning assumptions and provide thorough discussion and analysis of the Project in lieu of the 5% average annual passenger growth rate</u> | 6-5 |
| 5. <u>Undertake a collaborative Localized Air Quality Monitoring and Improvement Program, working in conjunction with AIR, Inc. and their partners to provide accurate and timely data on airport related emissions and deploy HEPA filtration systems within schools and homes in heavily impacted zones</u> | 6-6 |
| 6. <u>EOEA should require the Proponent to provide comprehensive analysis and discussion the relative costs of a variety of HOV promoting, traffic reducing initiatives to provide reviewers with a robust understanding of the expected cost / benefit of this \$304M investment in additional parking</u> | 6-7 |

Further information on AIR, Inc.'s comments can be found at the link below and attached below as Appendix A.

<https://drive.google.com/file/d/1gaspoEgDKSbTUnJnFqjmPiLKT2dSOtcz/view?usp=sharing>

Sincerely,



Gail Miller, President; Airport Impact Relief, Incorporated (AIR, Inc.)

APPENDIX A; AIR, Inc. Logan Parking Project EIR 15665 Comment

1. Only within the most narrowly constructed logic can a project which delivers a 25% increase in parking as part of a decade-long Mega-Expansion Project through which the Proponent has driven a 65% increase in passenger volume over the past decade, shielded from Public MEPA environmental review by a system of segmentation and regulatory complicity, can increases in traffic congestion and air pollution be considered to have environmental benefits for overburdened low income and minority populations.

| | Passengers | Change from previous year |
|------|------------|---------------------------|
| 2009 | 25,512,086 | ▼ 2.3% |
| 2010 | 27,428,962 | ▲ 7.5% |
| 2011 | 28,907,938 | ▲ 5.4% |
| 2012 | 29,325,617 | ▲ 1.4% |
| 2013 | 30,318,631 | ▲ 3.4% |
| 2014 | 31,634,445 | ▲ 4.7% |
| 2015 | 33,449,580 | ▲ 5.7% |
| 2016 | 36,288,042 | ▲ 8.5% |
| 2017 | 38,412,419 | ▲ 5.9% |
| 2018 | 40,941,925 | ▲ 6.6% |

Sub-projects under the un-reviewed Airport Mega-Expansion umbrella include:

- Logan Airport Parking Project
- Terminal C Canopy, Connector and Roadway Project
- Terminal B Optimization Project
- Terminal E Renovation and Enhancement Project
- Renovations and Improvements at Terminals B & C/E Project
- Terminal E Modernization Project, and
- Terminal E Renovations and Enhancement Project

By 2024, the sum of the recent, current, and upcoming projects will have doubled Logan passenger volumes which are fueled by the Proponent¹.

2. Proper review of the Parking Project should consider an overview of Logan’s location relative to Boston; the peak period morning commute; present and future local roadway and mass transit capacity, and; examination of mode choice behaviors highlighting opportunities. Congestion pricing, improvements in MBTA connectivity via the Red to Blue Connector, extension of the Blue Line to Lynn, expanded Ferry transportation service, and removal of curbside passenger access are all reasonable approaches to the stated goals of the Project: reducing drop-off/pick-up activity, and improving congestion, air quality, and passenger experience and minimizing environmental impacts. Yet the EIR fails to evaluate these alternatives, referencing only briefly a non-Project strategic plan referred to as the *Ground Transportation Strategy*.

6-8

6-9

A reasonable Project Alternative can be built around an analysis of the development of 5,000 - 10,000 additional suburban parking spaces, with multiple new Logan Express routes featuring aggressively subsidized fares and improved Bus Rapid Transit Service (BRT). Such a proposal would offer a true alternative to construction of additional

6-10

1

<https://www.bostonglobe.com/business/2018/08/06/massport-spends-million-lure-korean-air-logan-airport/js8KHT8ZGLsZrzZjPlhleP/story.html>

on-airport parking and would provide MEPA reviewers and the Public with clear advantages.

3. With the previous Parking Freeze limit at 20,188 commercial spaces, addition of 5,000 spaces represents a 25% increase. While the Project EIR describes future savings in traffic and emissions impacts under hypothetical situations in which would-be parkers search for parking or opt for other pick-up and dropoff modes, its analysis fails to discuss the 25% increase in VMT, traffic congestion, and pollution impacts this 25% increase in on-airport parking will produce.

6-11

The Secretary should not accept the Proponent's position that these impacts are separable from the Project and accumulate as a byproduct of unavoidable demand.

4. The EIR statement that the Project will satisfy Parking demand until the 50M passenger level is reached within the 10 - 15 year horizon (2029 - 2034) is inaccurate. With 2018 passenger volume at 40.9 million and an average 5% annual passenger growth rate this milestone will be surpassed by 2022. The stated expectation that the Project, in conjunction with Massport's Ground Transportation Strategy could eliminate 3 million (3M) annual trips should also be carefully scrutinized. Current HOV mode share of 30.5 and a passenger growth rate of 5% adding 10M additional passengers by 2022, will deliver 4M new net trips per year, creating commensurate increases in traffic congestion, VMT, and emissions.

6-12

6-13

Boston's population grows during weekdays from just under 700,000 residents, to 1.2 million. According to MAPC, *almost half* of these 500,000 weekday Boston-bound commuters drive passenger vehicles into the city². Over 100,000 commuters drive 25 miles or more per day (50 miles round trip)³ and 35,000 'super commuters' travel over 50 miles to the urban core each weekday. Of the remaining commuters, an average commute of 8 miles would add another 460,000,000 miles traveled to Boston's annual total VMT. A reasonable estimate of total annual VMT for Boston's weekday commuters alone would therefore be 2.7 billion VMT. Putting the claimed VMT savings of the Project into context, the project will offer a VMT savings of less than 5 100ths of a percent.

Embedded throughout the EIR is the assertion that the proposed new facilities will add efficiency resulting in public benefit. The accuracy of this Agency's claims and planning assumptions is a matter of great public concern. Unchecked Logan expansion has caused intense environmental and economic losses across the region with noise, airport

6-14

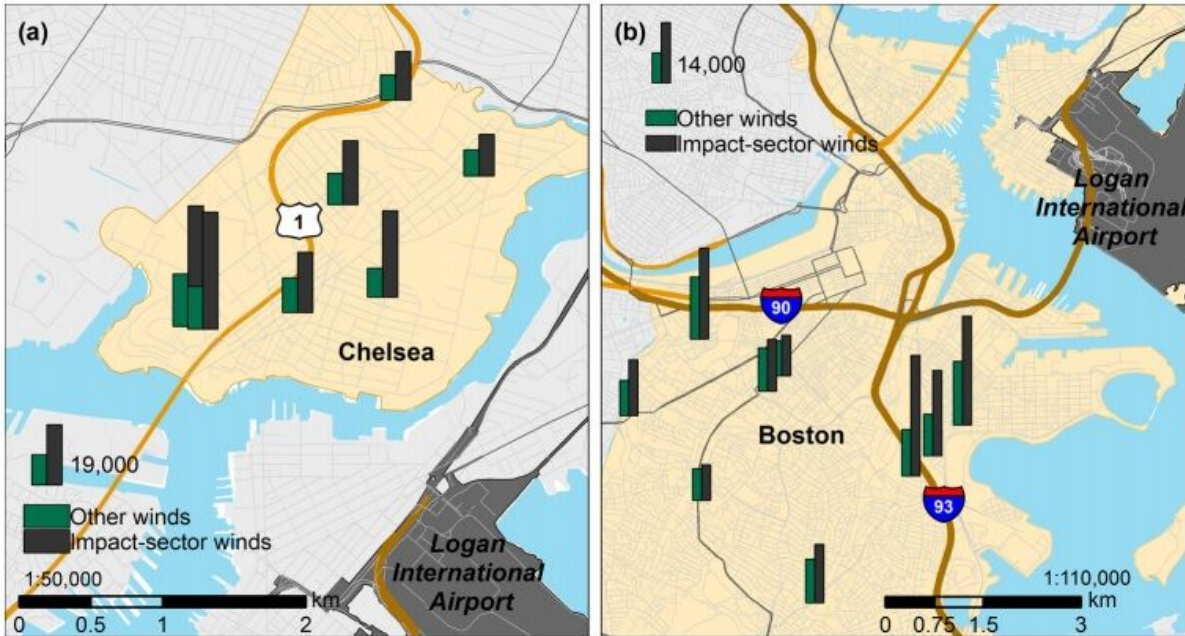
² <http://www.city-data.com/city/Boston-Massachusetts.html>

³

https://www.ctps.org/data/html/studies/other/Long-Distance_Commuting/Long-Distance_Commuting_in_the_Boston_Region.html

traffic congestion, and emissions increasingly and unnecessarily threatening the habitability of the Boston region. Not only should EOEa weigh these socialized costs carefully as part of MEPA review, but it should also hold the Proponent to a very high standard of proof in regard to the fundamental accuracy of their claims. That bigger and newer facilities offer efficiency benefits is not a given. As part of the Proponent's separated Mega-Expansion for instance, this agency has invested \$160M in new gates for a dying class of super-jumbo aircraft⁴ (via the Terminal E Enhancement and Improvement Project).

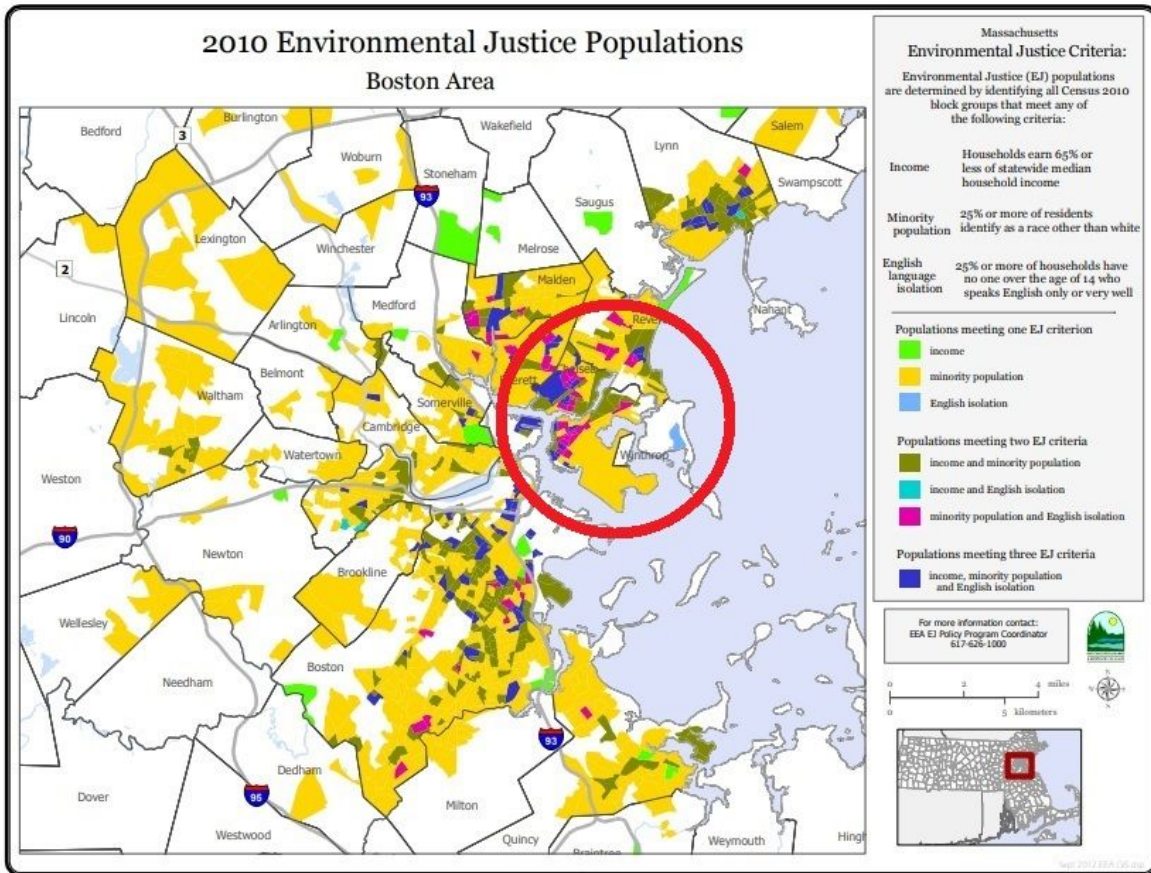
6-14



5. Tufts University research has proven the correlation between airport emissions, wind direction, and ultra-fine particulate pollution in both indoor and outdoor measurements in Chelsea homes a mile west. Use of air quality data from monitoring stations at Von Hillern Street in Dorchester, and Harrison Avenue in Roxbury sheds no light on the localized impacts of Project impacts. The EIR does not report on or analyze Project traffic congestion and emissions impacts on local environmental justice communities in the Harborview, and Eagle Hill neighborhoods downwind of the Project site.

6-15

⁴ <https://www.businessinsider.com/airbus-a380-jet-after-emirates-reduces-orders-2019-2>



6. A more granular air quality monitoring and reporting program is needed to allow the Public to assess and respond to Project impacts. AIR, Inc., Aerodyne Research, Inc., and Olin College of Engineering's [ARISense project](#) provides an example of such an innovative, affordable local air quality monitoring system which could inform improved health outcomes.

7. The recent 42% decline in annual over-capacity parking days reported in the EIR casts doubt on the benefit of investing of nearly half \$1 billion into additional on-airport parking. Such major investment would clearly create better regional VMT savings if targeted toward a comprehensive Third Alternative as provided above.

6-16



July 26, 2019

VIA EMAIL (Page.Czepiga@state.ma.us; richard.doucette@faa.gov)

Secretary of Energy and Environmental Affairs
Executive Office of Energy and Environmental Affairs
Attn: MEPA Office
Page Czepiga, EEA No. 15665
100 Cambridge Street, Suite 900
Boston, MA 02114

Richard Doucette
Federal Aviation Administration
New England Region
1200 District Ave.
Burlington, MA 01803

Subject: Logan Airport Parking Project, Draft Environmental Impact Report

Dear Ms. Page Czepiga and Mr. Richard Doucette:

On behalf of the Conservation Law Foundation (CLF), I write regarding the Massachusetts Port Authority’s (Massport) Draft Environmental Impact Report (DEIR)/Environmental Assessment (EA) on the Logan Airport Parking Project (the Proposed Project). On the basis of Massport’s commitment to a series of emissions reduction and other measures to mitigate any adverse effects of the project, as set forth in an enforceable agreement with CLF (May 18, 2017) (hereinafter the Massport-CLF Agreement), CLF supports the project.¹ CLF encourages incorporation of the terms of the Massport-CLF Agreement explicitly or by reference in the DEIR and its Chapter 61 findings.

7-1

7-2

Purpose of Massport-CLF Agreement

Massport and CLF share the goal of reducing the overall environmental, emissions, and traffic impacts of travel to and from Logan Airport and encouraging an increase in the number and percentage of airport passengers who get to and from the airport by high-occupancy

¹ Letter Agreement by and between the Massachusetts Port Authority and the Conservation Law Foundation on emissions reduction measures, (May 18, 2017) (attached).

vehicle (HOV) modes. To this end, Massport and CLF have signed an agreement advancing these mutual objectives. Pursuant to the Massport-CLF Agreement, the proposed increase in parking supply at Logan Airport would not occur in isolation, but rather as one component of a multi-pronged comprehensive program to reduce the overall environmental, emissions, and traffic impact of ground transportation and ground-service equipment at the airport. This program has the explicit goal of encouraging an increasing number of passengers to travel to and from the airport by an HOV mode, with a specific percentage increase required by a certain date, and to eliminate sources of both health-threatening soot and smog and greenhouse gases through increased electrification of airport transport and ground service. CLF supports this program.

Since 2002, Massport has invested more than \$160 million in HOV capital improvements. Massport currently spends at least \$33 million annually on HOV operations. These HOV investments have included the expansion of Logan Express sites (from two to six locations) and service, as well as financial support of Massachusetts Bay Transportation Authority (MBTA) Silver Line access to the airport, consisting of the purchase of eight buses for and free trips on the line from the airport terminals. Massport, as a result of the Massport-CLF Agreement, has now committed to build on these achievements and to implement substantial further capital and operational investments in HOV.

Specific Mitigation Measures and Targets included in Massport-CLF Agreement

As part of the Massport-CLF Agreement, Massport will increase the share of air passengers using HOV modes to access Logan Airport to at least a 35.5 percent mode share by December 31, 2022 (the current HOV mode share is less than 30.5 percent). Massport will further increase the HOV mode share to 40 percent no later than December 31, 2027. The HOV mode share may only include taxi, livery, and Transportation Network Company (TNC) trips that have an average of at least 2.0 passengers per vehicle per trip. Massport's recently approved changes to TNC access to Logan are consistent with these goals.

In addition, as part of the Massport-CLF Agreement, Massport has agreed to a series of specific improvements, projects, measures, incentives, and studies, as set forth in part below. Since the execution of the Massport-CLF Agreement, Massport and CLF have met regularly at the chief executive officer and staff to monitor and review timely compliance with Massport's obligations.

HOV Improvements:

Massport agreed to:

- Purchase and support the operation of 16 Silver Line buses, replacing eight buses and adding another eight.
- Offer the approximately 18,000 employees based at Logan Airport free Blue Line service from the MBTA Airport Station by January of 2019.

- Increase Logan Express capacity, measured in available seats, by 10 percent by the end of 2019.

Electrification Infrastructure:

Massport agreed to:

- Increase the availability of electric vehicle charging stations so that 150% of demand for such infrastructure is available at all parking facilities at all times. In other words, no more than 66.667% of electric vehicle charging stations are to be in use at any one time.
- Provide high-speed electric vehicle charging stations at all taxi, livery, and TNC pools at Logan Airport by July 2019, so that 150% of demand for such infrastructure is available at all pools at all times. This demand will be measured as no more than 66.667% of electric vehicle charging stations to be in use at any time. All such electric vehicle charging stations will be provided at no cost to the user.
- Replace all ground service equipment with zero-emission equipment, to the extent commercially available electric alternatives, are available by the end of 2027. By the beginning of construction of the parking garages at least 9% of the ground service equipment will be electric. By the completion of construction of the first parking garage at least 12% of the ground service equipment will be electric. And, by the time construction of the second parking structure is complete at least 24% of the ground service equipment will be electric.
- For those categories of equipment for which no electric or other zero-emission alternative is commercially available by the end of 2027, replace such equipment within two (2) years of it becoming commercially available, provided that the equipment to be replaced is at least eight years old.
- Implement procedures so that at least 60 percent of commercial aircraft taxiing for a re-positioning purpose be done by electric tugs by 2027.

HOV and Electrification Incentives:

Massport agreed to:

- Establish a ride-share trip fee on a per-trip rather than per-person basis starting no later than January 1, 2019.
- Train ground transportation personnel to encourage passengers to share rides no later than January 1, 2019.
- Provide taxi/TNC-queue priority to electric vehicles, second only to vehicles with at least three passengers starting in January of 2019.
- Implement variable-rate parking within one year of opening of the new structured parking, if Massport's study (see below) demonstrates a sufficient positive mode-shift impact.

Consistent with the Massport-CLF Agreement, Massport sought to include many of these improvements, projects, measures, incentives, as well as studies and additional measures not recited here, in its Section 61 Findings as part of the MEPA process for the project.

7-3

Mitigation benefits for passengers, surrounding communities, and the planet

While additional parking might appear customer-friendly to Logan travelers, the reality is that more parking yields more one- and two-passenger trips to the airport, increases congestion, reduces levels of service on already stressed tunnels, major arteries, and feeder roads, decreases customer confidence in timely arrival, and forces travelers to sacrifice more valuable time from work to avoid missed flights. This familiar pattern forces the somewhat counter-intuitive recognition that increased parking volume actually diminishes the travel experience for Logan passengers, rather than satisfying consumer needs. This same dynamic leads to significant impacts on the communities surrounding the airport, as more vehicle congestion compromises local air quality, local mobility, and the accessibility of small businesses to both customers and deliveries. The increased greenhouse gas emissions associated with such congestion are a further compelling concern and of great significance to the Commonwealth's goal to reduce greenhouse gas emissions from the transportation sector as part of the state's efforts to comply with the Global Warming Solutions Act. St. 2008, c. 298.

At the same time, an analysis by Massport indicates that the constrained parking supply could cause 75 percent of passengers who would otherwise choose to park at Logan to instead use a private pick up/drop off mode. Curbside pickup and drop off generally generates up to four trips as compared to two for parking, thereby increasing vehicle miles traveled (VMT), emissions, and traffic. As a result, it would be neither sufficient to increase the availability of parking at the airport alone, nor to limit it without additional efforts to incentivize the use of HOV modes by passengers and others commuting to and from the airport. Massport has recognized that parking expansion alone is not a sustainable solution for the long term. CLF supports Massport's proposal to reserve parking spaces for electric vehicles and zero-emission vehicles in the airport garages.² CLF notes that Massport has committed to regularly review the Logan Express service to enhance ridership by both air passengers and Airport employees, which we support.³ CLF also supports Massport's plan to increase Logan Express capacity by 10 percent.⁴ CLF is supportive of Massport's plan to harvest stormwater from the Terminal E garage to be reused in the Central Heating Plant and other reuse applications.⁵

Massport has acknowledged that Logan Airport is located near state-designated environmental justice (EJ) populations⁶ and that these communities would be impacted in the

² Massport DEIR at 4-61.

³ Massport DEIR at 1-3.

⁴ *Id.*

⁵ Massport DEIR at 4-62.

⁶ Massport DEIR at 3-53. *See* Massachusetts Environmental Justice Viewer, http://maps.massgis.state.ma.us/map_ol/ej.php.

short-term by construction noise.⁷ Massport explains that the construction noise will be below the City of Boston's noise limits and that the finished garage will have noise barrier benefits.⁸ CLF suggests that noise impacts to EJ populations be mitigated and that Massport work with residents and community organizations in East Boston, Chelsea, Revere, and Winthrop to determine appropriate mitigation.

7-4

The program agreed to between Massport and CLF will implement numerous initiatives to build on Massport's prior HOV efforts and make transit options more appealing to passengers and airport employees. Combined these efforts will substantially increase the HOV mode share of ground transportation at the airport, while also electrifying ground-service equipment of the airport and encouraging an increase in zero-emission vehicles traveling to and from the airport.

Conclusion

There is no doubt that Massport is facing a major challenge in managing ground transportation to the airport as passenger volumes increase. An increase in the parking cap by 5,000 spaces alone would only have provided Logan Airport relief for a short period, generating a litany of adverse impacts. Massport has now committed to implement smarter, more sustainable solutions to its ground-access challenges along with the increase in parking capacity. Considering this comprehensive approach, CLF supports the project, and encourages incorporation of all the terms of the Massport-CLF Agreement in the DEIR and Section 61 Findings.

CLF is happy to provide additional information and assistance as may be required. You may contact me with questions at SRubin@clf.org and 617-850-1781.

Sincerely,



Staci Rubin
Senior Attorney

⁷ Massport DEIR at 3-5.

⁸ Massport DEIR at 3-5, 4-5.

Attachment



Massachusetts Port Authority
One Harborside Drive, Suite 200S
East Boston, MA 02128-2909
Telephone (617) 568-5000
www.massport.com

May 18, 2017

Bradley M. Campbell, President
Conservation Law Foundation
62 Summer Street
Boston, MA 02110

Re: Letter Agreement by and between the Massachusetts Port Authority and the Conservation Law Foundation on Trip Reduction Strategy

Dear Bradley,

As you know, the Massachusetts Department of Environmental Protection (MassDEP) published a draft regulation, 310 CMR 7.30 ("Draft Regulation") to increase the Logan Airport Parking Freeze by 5,000 spaces on March 24, 2017, and held a public hearing on this regulatory amendment for April 25, 2017. To provide the public with maximum information on the parking projects for 5,000 spaces that underlie the Parking Freeze increase, Massport also filed an Environmental Notification Form (ENF) pursuant to the Massachusetts Environmental Policy Act (MEPA) to begin the MEPA process to allow for up to 5,000 additional parking spaces at Boston Logan International Airport (Logan Airport) on March 31, 2017.

The Massachusetts Port Authority (Massport) and the Conservation Law Foundation (CLF) have met a number of times over the past several months. In these productive meetings, CLF has urged Massport to commit to a number of transportation mitigation measures related to MassDEP's amendment of its Parking Freeze Regulation and Massport's proposed construction of an additional 5,000 parking spaces ("Parking Projects") at Logan Airport.

Massport and CLF agree that they share the goal of reducing the overall environmental and emissions impacts of travel to and from Logan Airport and encouraging an increase in the number of airport passengers who travel to and from the Airport by high occupancy vehicles (HOV). This letter sets forth the understandings and agreements reached between CLF and Massport regarding the Parking Projects resulting from these recent meetings.

I. Background

The proposed increase in parking supply at Logan Airport would not occur in isolation, but rather would be one component of a multi-pronged comprehensive program undertaken by Massport, to reduce the overall environmental and emissions impacts of travel to and from the Airport and encourage an increase in the number of Airport passengers who travel to and from the Airport by HOV.

Massport's Current HOV Commitments. Massport currently spends approximately \$33,000,000 annually on HOV operations. Since 2002, Massport's capital expenditures for HOV operations have exceeded \$160,000,000. Massport's HOV commitments include:

- prioritizing transit and HOV access to the Airport through the significant expansion of Logan Express sites and service and by its financial support of Silver Line access to Logan Airport;
- since 2005, the purchase of eight Silver Line buses that access the Airport;
- since 2012, financial support of Silver Line bus trips from the Airport terminals;
- the expansion of its original Logan Express sites from two to four locations, as well as the Back Bay Pilot location, resulting in an increase of the total capacity of HOV/shared-ride mode service by 154% since 1989; and
- as contemplated by the 1989 Amendment to the Logan Parking Freeze, Massport has also acquired Park-and-Fly lots in East Boston, permanently removing these spaces from East Boston and transferring them to the Airport.

II. Authority Commitments for Trip Reduction Strategy

As you are aware and as noted above, Massport has just begun the MEPA process for its proposed Parking Projects. Through that process, Massport will analyze the project-specific impacts of constructing additional parking spaces, and will propose a number of transportation-related measures that may improve Massport's and the Commonwealth's environmental performance (i.e., "mitigation measures"). As required by MEPA, Massport will ultimately issue Section 61 Findings that specify the means it will use to avoid damage to the environment, or, to the extent damage to the environment cannot be avoided, to minimize and mitigate damage to the environment to the maximum extent practicable. In our discussions, a number of potential mitigation measures have been considered. Massport appreciates CLF's recognition that its proposals may overlap with the MEPA process as the Parking Projects proceed. Based upon our discussions, in advance of that process, Massport has determined that it is able to agree with CLF in the following categories:

1. CLF initiatives that Massport is able to agree to implement or work toward implementing directly with CLF at this time;
2. Proposals that Massport is willing to commit to CLF will be a part of the MEPA Section 61 process; and
3. CLF proposals with respect to which Massport agrees to prepare data-driven scopes of work for the studies outlined in the MassDEP Draft Regulation, as appropriate, to focus on CLF specific proposals as described below.

1. Massport-CLF Initiatives

Massport and CLF hereby agree as follows:

A. Ground Access Improvement/Trip Reduction. Massport agrees to take the following measures:

- As noted above, since 2005 Massport has purchased and supported the operation of eight Silver Line buses for the portion of the Silver Line route that directly serves Logan Airport. As part of this Agreement, Massport commits to double this amount –

to purchase and support the operation of a total of 16 Silver Line buses, in accordance with parameters set forth in existing agreements, and in accordance with the MBTA's procurement schedule. If Massport and the MBTA do not have a signed agreement for new buses for the Silver Line by January 1, 2024, Massport will provide notice to CLF and offer substitute performance pursuant to Section IV.B.

- By January 2019, Massport further agrees to establish a program to offer the approximately 18,000 Logan Airport based employees effectively free (net of employer subsidies) Blue Line service from Airport Station, subject to the feasibility of implementing this program with the MBTA's forthcoming automated fare collection system. This initiative will primarily assist lower-wage employees in environmental justice communities.
- Massport agrees to implement variable-rate parking within one year of the opening of the new structured parking if the study described in Section II.3.A below demonstrates a positive impact.

B. HOV Goal. Massport agrees to the following:

- Massport will increase the share of air passengers using high occupancy vehicles (HOV) to access Logan Airport to at least 35.5 percent HOV mode share by December 31, 2022, and to further increase HOV mode share to 40 percent no later than December 31, 2027. If the goals set forth herein are not achieved by a deficit of more than 1% by the dates set forth herein, then Massport shall provide notice to CLF as set forth in Section IV.B. Consideration of substitute mitigation as set forth in such section shall include whether matters beyond the control of Massport (such as major change in transit or other HOV service provided by independent parties) impacted achievement of the goal.
- CLF agrees that Massport may reasonably include that portion of taxi, livery, and Transportation Network Company (TNC) trips for which it has a reasonable basis to conclude that the trips are properly credited as HOV trips. Such vehicles shall have on average no less than 2.0 passengers per vehicle.
- Massport further agrees to incentivize ride-sharing by establishing a ride-share trip fee on a per trip rather than per person basis starting no later than January 1, 2019. Massport also agrees that ground transportation personnel shall be trained to encourage passengers to share rides no later than January 1, 2019.

C. New Electric Vehicle (EV) Charging Stations. Massport currently has 26 EV charging stations in the Logan Airport parking garages. Massport commits to increasing the availability of EV charging stations so that 150% of demand for EV charging stations is available at all facilities at all times. This demand shall be measured as no more than 66.667% of EV charging stations to be in use at any time.

2. Anticipated MEPA Commitments

Massport will request that the MEPA Section 61 process will include the following initiatives, subject to the determination of the Executive Office of Energy and Environmental Affairs, in its Final Environmental Impact Report (FEIR) certificate. To the extent these initiatives are

substantially modified or omitted in the FEIR, CLF may elect to terminate this agreement in its entirety by written notice to Massport within thirty (30) days following publication of the FEIR.

A. Electrification of Ground-Service Equipment. Prior to commencement of construction of the first parking structure, Massport shall have in place an enforceable policy for the electrification of ground-service equipment. Pursuant to such policy, Massport shall complete a program for the replacement of all ground service equipment, where commercially available electric alternatives are available, no later than the end of 2027, with a limited deferral for equipment categories for which there are no commercially available electric alternatives. For those categories of equipment for which no electric or other zero emission alternative is commercially available by the end of 2027, such equipment will be replaced in those categories within two (2) years of such equipment becoming commercially available, provided that the equipment to be replaced is at least eight years old. In the alternative, Massport may develop a phased schedule in which certain categories are implemented earlier than 2027 and some categories are deployed later than 2027, so long as 2027 is the mean deployment date airport-wide.

Regardless, at least 9 percent of all ground service equipment for which commercially available electric alternatives are available shall be electric by the beginning of construction of the first parking structure, shall increase to 12 percent by the end of construction of the first parking structure, and shall increase to 24 percent by the end of construction of the second parking structure. Massport shall have in place procedures so that at least 60 percent of commercial aircraft taxiing for a re-positioning purpose will be done by electric tugs by 2027.

B. Expanding Logan Express (LEX) Service. With the understanding that HOV performance in transit and other modes is largely dependent upon factors outside of Massport's control, in striving to meet its HOV Goal, Massport agrees to increase its Logan Express capacity, measured in available seats, by 10 percent by the end of 2019.

C. Increase Percentage of Zero Emission Taxi, Livery and TNC Vehicles. Massport agrees to promote the use of electric vehicles among the combined fleet of taxi, livery, and TNC vehicles. Massport agrees to take the following measures:

- Starting in July of 2019, Massport will provide high-speed EV charging stations at all taxi, livery, and TNC pools at Logan Airport, so that 150% of demand for EV charging stations is available at all pools at all times. This demand shall be measured as no more than 66.667% of EV charging stations to be in use at any time.
- The EV charging stations will be provided at no cost to the user.
- Starting in January of 2019, Massport further agrees to provide taxi/TNC-queue priority to EVs, subject to negotiations with said companies, second only to vehicles with at least three passengers.

3. Parking Freeze Regulation Measures

Massport agrees to include as part of the studies referenced in the MassDEP Parking Freeze Regulation amendment the following:

A. Variable-Rate Parking. MassDEP's Draft Regulation calls for Massport to study short-term and long-term parking rates. Massport agrees to include in the study a scope of work that will consider variable pricing. The studies necessary to price and potentially implement this option shall be completed no later than at the time of the opening of any new structured parking.

B. Airport Pass-Through Rate. Massport agrees to include an airport pass-through rate as part of the study of costs and prices for different modes of transportation to and from Logan Airport as set forth in MassDEP's Draft Regulation. The studies necessary to price and potentially implement this option shall be completed no later than at the time of the opening of any new structured parking.

III. CLF Commitments

CLF hereby agrees as follows:

In consideration of Massport's commitments as set forth herein, CLF agrees not to file a lawsuit or otherwise challenge or oppose, and will favorably comment on the following:

1. the consideration and promulgation by MassDEP of the Logan Parking Freeze Amendment (310 CMR 7.30) and of Massport's role therein;
2. the review and approval of this regulatory change as an amendment to the SIP by the United States; Environmental Protection Agency, and of MassDEP's and Massport's roles therein; and
3. the Executive Office of Energy and Environmental Affairs' review and approval of the Logan Parking Projects through the MEPA process pursuant to MGL c. 30, Sections 61 through 62I, 301 CMR 11.00, and of MassDEP's and Massport's roles therein.

IV. Dispute Resolution and Enforceability

A. Massport and CLF agree that their respective obligations under this Agreement are binding and enforceable in the Courts of the Commonwealth.

B. The parties acknowledge that transportation behavior and environmental management is continually evolving. Massport and CLF agree that if: 1) Massport notifies CLF at least six (6) months prior to any milestone established herein that Massport is unlikely to reach the milestone, or, 2) if the parties agree that a substitute mitigation measure exists that has equal or greater effectiveness than a measure identified herein, Massport shall have the opportunity to offer substitute performance through alternative or substitute mitigation measures or other means. Massport shall provide CLF with adequate documentation to support its proposed substitute mitigation and CLF shall respond within 30 days of receiving the documentation, and it shall not unreasonably refuse to accept an adequately documented substitute mitigation within that time period.

V. Miscellaneous Provisions

A. This Agreement is subject to and subordinate to the provisions of federal law and to any agreement heretofore or hereafter made between Massport and the United States the execution of which is required to enable or permit the expenditure of federal grant funds for Airport improvement, maintenance or development. CLF shall consent to amendments and modifications of this Agreement if required by federal law or by such agreements with the United States, or if required as a condition of Massport's executing such Agreements with the United States in the future.

B. Unless otherwise specified herein, Massport shall not be expected to make any material investment in any measure set forth in Subsection I of Section II until commencement of construction of the Parking Projects. Massport shall have no obligation under this Agreement unless and until the Parking Freeze Regulation is approved.

C. Massport shall continue to report on its environmental data annually to MEPA, including the status of Section 61 Findings, through the EDR / ESPR process, which information shall also be provided to CLF. Massport will include in the annual EDR / ESPR submissions, reports on Massport's progress on the commitments set forth in this Agreement.

D. This Agreement shall remain in effect for ten (10) years after the completion of the Parking Projects at Logan Airport.

To acknowledge your agreement to the foregoing, please sign in the space provided below.


We look forward to continuing to work with you and your organization.

Sincerely,



Thomas P. Glynn
CEO and Executive Director
Massachusetts Port Authority

Agreed to by the Conservation Law Foundation



Bradley M. Campbell
President
Conservation Law Foundation

18 May 2017
Date

John Vitagliano
19 Seymour Street
Winthrop, MA 02152
Seagullconsult@msn.com

June 26, 2019

The Honorable Kathleen Theoharides
Secretary of Environmental affairs
Attn: MEPA Office
100 Cambridge Street, Suite 900
Boston, MA 02114

Richard Doucette
Federal Aviation Administration
New England Region
1200 District Avenue
Burlington, MA 01830

Subject: EEA#15665-Logan Airport Parking Project, Draft Environmental Impact Report/Environmental Assessment

Dear Secretary Theoharides and Mr. Doucette:

I write in full support of the Logan Airport Parking Project, Draft Environmental Impact Report/Environmental Assessment (EEA#15665). I am a lifelong resident of a Logan Airport neighboring community and as such regularly experience the effects of Logan Airport related ground traffic on local streets which have been intensifying recently due to several factors. Included are the increase in air travel at Logan, reflecting national and international aviation industry trends, and ground access facets such as the recent exponential growth in Transportation Network Companies (Uber and Lyft) whose inefficient operations directly impact local neighborhood and regional roadways including the recent significant increase in traffic congestion in the vicinity of the Sumner Tunnel entrance in East Boston which adversely impacts both community streets and Logan Airport ground access connectivity.

8-1

Similarly, the exit connections from the Callahan Tunnel in East Boston to the Logan Airport roadway system are progressively congested due to the same factors associated with the adjacent Sumner Tunnel congestion levels. The Callahan Tunnel exit congestion directly affects the ability of Logan Airport passengers to arrive at their airline terminals in a timely manner.

The Logan Airport Parking Project, by investing in 5,000 additional airport parking spaces, would provide a potential long term reduction of ten percent of regional and local community vehicle miles travelled (VMT) as compared to the No-Build Alternative by replacing a large proportion of existing 4 vehicles trips per passenger with 2 vehicle trips per passenger. This would reduce on-airport roadway congestion and off-airport airport access congestion which would mitigate the regional and community traffic congestion associated with the Sumner/Callahan Tunnels.

I commend the Logan Airport Parking Project because of its commitment to include substantial numbers of priority parking spaces for alternate fueled vehicles including electric and other low-emitting and fuel-efficient vehicles as well as electric vehicle charging stations.

I also support the parking project because of its inclusion of a significant amount of sustainable energy capacity to supply its energy requirements, in the form of retaining the existing solar photovoltaic system at the Economy Garage in its expanded configuration and also a new photovoltaic system in the new Terminal E garage.

Sincerely,

John Vitagliano

Former Commissioner
Boston Transportation Department

I

Appendix B

- Solar PV Analysis for the New Garage in Front of Terminal E

**LOGAN AIRPORT PARKING PROJECT –
FINAL ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL ASSESSMENT**
Boston Logan International Airport
East Boston, Massachusetts

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Appendix B – Solar PV Analysis for the New Garage in Front of Terminal E

1. Introduction

This appendix summarizes the Massachusetts Port Authority’s (Massport’s) assessment of solar photovoltaic (PV) options at the new garage in front of Terminal E for the Logan Airport Parking Project (the Proposed Project). The new garage in front of Terminal E is one component of the Proposed Project, which is fully described and evaluated in this Final Environmental Impact Report/Environmental Assessment (FEIR/EA) and the preceding Draft EIR/EA (DEIR/EA) prepared in accordance with the Massachusetts Environmental Policy Act (MEPA) and National Environmental Policy Act (NEPA).

As part of the DEIR/EA, which was noticed in the *Environmental Monitor* on June 10, 2019, Massport evaluated a system (hereafter referred to as the Base Option) capable of generating approximately 250,000 kilowatt-hours (kWh) of electricity per year (see Section 3.1, *Base Option* below). Massport has since evaluated and increased the capacity of the solar installation to a design capable of generating approximately 467,000 kWh per year (see Section 3.2, *Expanded Option*). Additionally, the proposed garage - as well as the proposed Economy Garage expansion (see Section 1.2, *Updated Project Description* in this FEIR/EA for a description of this component of the Proposed Project) - will be designed to allow for the future expansion of solar PV to the facilities’ maximum rooftop potential. Their designs will be based on current building codes; they will not require structural, geotechnical, or seismic retrofits at the time of a potential solar PV expansion. Further, appropriate electrical conduits will be installed to allow for the future expansion and integration to the voltage systems.

2. Analysis Inputs

To determine the feasibility of installing solar PV on the new garage in front of Terminal E, Massport conducted a sun exposure analysis, a glare analysis, as well as identified the usable roof areas of both the eastern and western sides of the proposed garage. The results of these assessments are discussed in the sub-sections below.

2.1. Sun Exposure Analysis

As part of the conceptual design phase of the new garage in front of Terminal E, Massport conducted a sun exposure simulation to assess the feasibility of installing solar PV on the roof of this facility. The analysis looked at both the summer and winter months to help identify the extent to which any existing or proposed structures (e.g., the Terminal E Modernization Project) would cause unwanted shadowing. **Figures B-1 through B-4** illustrate the outputs of this analysis, which identify both the eastern and western sides of the proposed garage as suitable locations for the installation of solar PV.

**LOGAN AIRPORT PARKING PROJECT –
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Boston Logan International Airport
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Figure B-1: East Garage Sun Exposure – Winter (8AM, 12PM, 4PM)



Figure B-2: East Garage Sun Exposure – Summer (8AM, 12PM, 4PM)

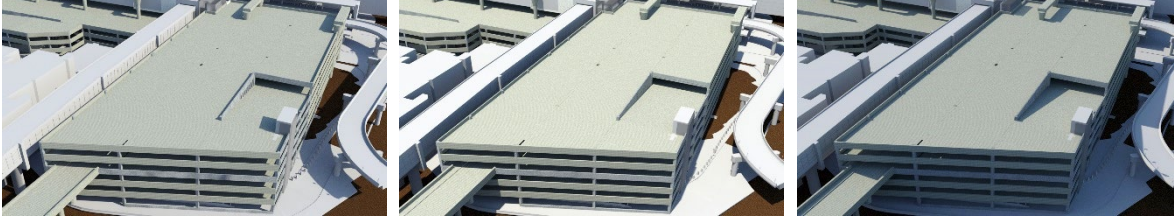
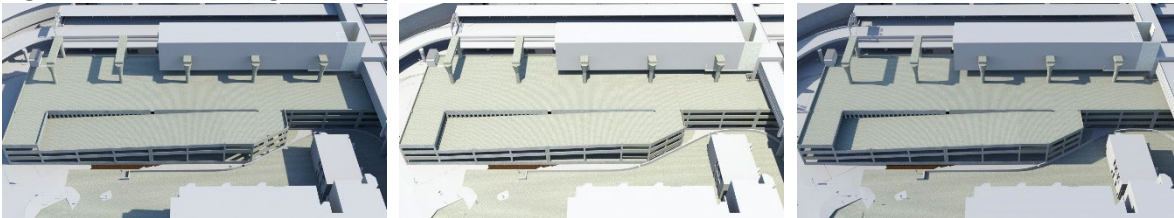


Figure B-3: West Garage Sun Exposure – Winter (8AM, 12PM, 4PM)



Figure B-4: West Garage Sun Exposure – Summer (8AM, 12PM, 4PM)



2.2. Glare Analysis

Massport additionally prepared a glare analysis to ensure compliance with Federal Aviation Administration (FAA) Interim Policy 78 FR 63276. The analysis utilized the Solar Glare Hazard Analysis Tool (SGHAT) with default glare analysis parameters and observer eye characteristics in accordance with Interim Policy 78 FR 63276 to demonstrate that a solar PV installation in front of Terminal E would meet the FAA’s criteria for solar energy systems on airport property. These criteria specifically include:

- No "yellow" glare (potential for after-image) for any flight path from threshold to 2 miles
- No glare of any kind for Air Traffic Control Tower(s) ("ATCT") at cab height

The results show no glare on the ATCT and either no glare or “green” glare (defined as a low potential for a temporary after-image) for aircraft on final descent to each of the Airport’s 12 runway ends.

**LOGAN AIRPORT PARKING PROJECT –
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Boston Logan International Airport
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2.3. Usable Areas

Based on the Proposed Project plans current at the time of the filing of this FEIR/EA, the usable areas (i.e., the physical availability of roof area) for potential solar PV canopy systems at the new garage in front of Terminal E amount to approximately 74 percent of total east side roof area and 62 percent of total west side roof area. These numbers reflect current design aspects that would prohibit the installation of the solar PV structures across the entire roof.

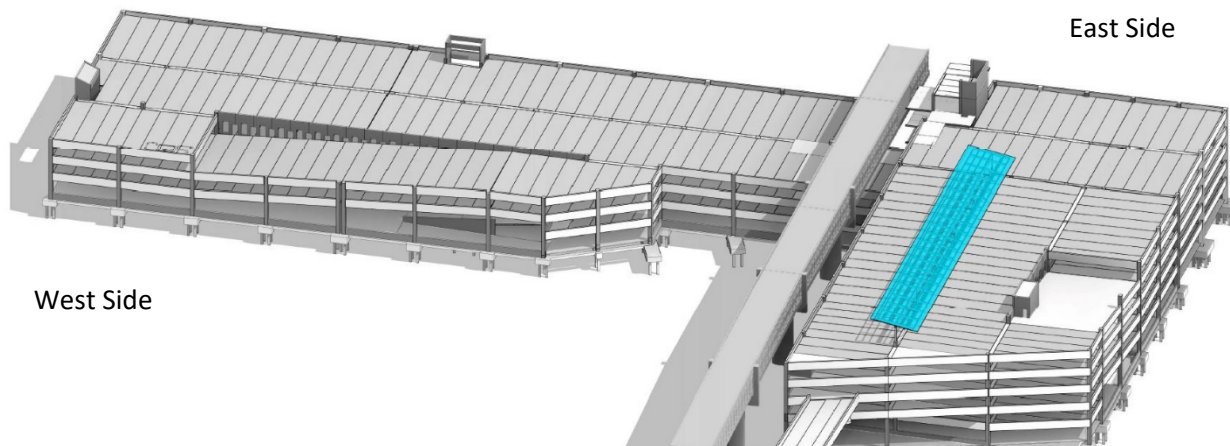
3. Solar PV Options Considered

In consideration of the above analyses, Massport evaluated two options for solar PV installations at the new garage in front of Terminal E. These options, which the following sub-sections detail, include a Base Option and an Expanded Option.

3.1. Base Option

As described in Section 4.5.3.2 and Section 4.5.4.2 of the DEIR/EA, Massport initially planned a minimum of 10,000 square feet of solar PV on the proposed garage’s eastern side (see **Figure B-5**). An installation of this size would produce approximately 250,000 kWh per year assuming a panel efficiency of 15 percent. Based on the facility’s updated energy model, this level of electricity generation would be enough to offset approximately 95 percent of electricity consumption associated with the garage’s interior lighting or about 27 percent of total facility electricity consumption.¹ Carbon dioxide (CO₂) emission offsets under the Base Option are estimated to be 89 tons per year (tpy).

Figure B-5: Solar PV - Base Option



Source: WSP

The cost of the Base Option is estimated to be \$1.5 million, including procurement and installation. This cost would be entirely accommodated by the Project’s overall capital budget of about \$120 million.

¹ The DEIR/EA reported that solar PV electricity offsets at the new garage in front of Terminal E were estimated at 60 percent of the garage’s interior lighting or about 15 percent of total facility consumption. Changes to these estimations reported in this FEIR/EA are primarily due to increased lighting efficiencies.

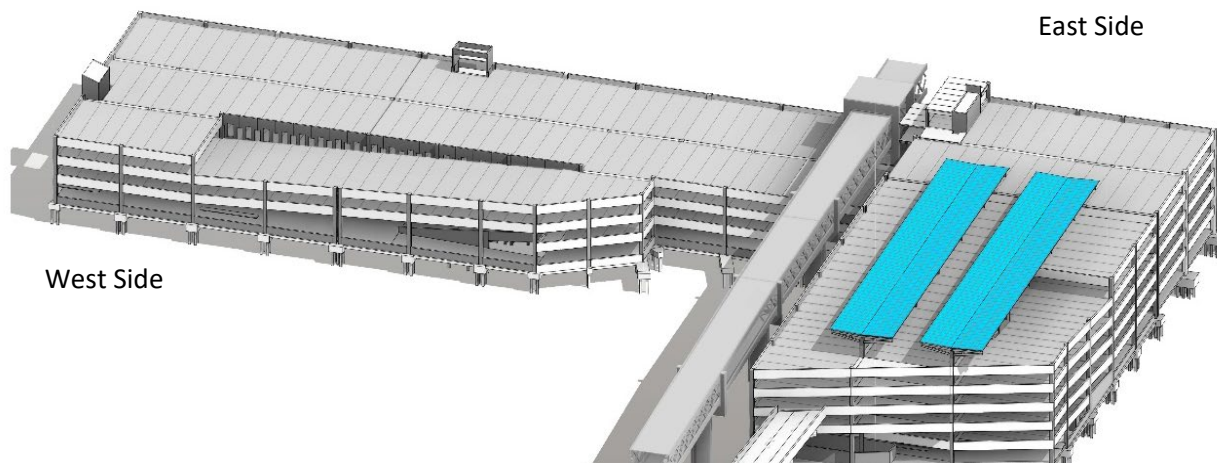
**LOGAN AIRPORT PARKING PROJECT –
FINAL ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL ASSESSMENT**

Boston Logan International Airport
East Boston, Massachusetts

3.2. Expanded Option

Based on comments the Secretary of the Executive Office of Energy and Environmental Affairs received on the DEIR/EA from the Massachusetts Department of Energy Resources (DOER), specifically with respect to maximizing solar PV for the Proposed Project, Massport identified an Expanded Option that doubled the solar PV installation area from 10,000 square feet to 20,000 square feet (see **Figure B-6**). This expanded installation would produce approximately 467,000 kWh per year assuming a panel efficiency of 15 percent. This would be enough to offset 50 percent of the proposed garage’s total energy (i.e., electricity and natural gas) consumption, including all lighting and power required for its electric vehicle charging stations. Associated CO₂ emission offsets are estimated to be 166 tpy, which is nearly twice as large as the estimated offsets of the Base Option.

Figure B-6: Solar PV - Expanded Option



WSP

Source:

The cost of the Expanded Option is estimated to be \$2.7 million, including procurement and installation. The majority of this cost will be accommodated by the Project’s overall capital budget. Massport is not eligible for grant funding under the Solar Massachusetts Renewable Target (SMART) program, as it is a licensed wholesale purchaser of power. Massport is in the process of exploring potential funding opportunities through the Massachusetts’ Leading by Example program. If such funding is not available, Massport will supplement the cost of the Expanded Option through other internal funding mechanisms.

Appendix C

- Updated Draft Section 61 Findings

**LOGAN AIRPORT PARKING PROJECT –
FINAL ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL ASSESSMENT**
Boston Logan International Airport
East Boston, Massachusetts

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DRAFT PROJECT § 61 FINDINGS FOR THE PARKING PROJECT AT BOSTON LOGAN INTERNATIONAL AIRPORT

PROPOSED RESOLUTION AND VOTE OF THE BOARD OF THE MASSACHUSETTS PORT AUTHORITY IN COMPLIANCE WITH M. G. L. c. 30, § 61

WHEREAS, over 90 percent of Boston Logan International Airport (Logan Airport or the Airport) travelers are origin and destination passengers and therefore use some form of local ground transportation to reach their final destinations; and

WHEREAS, passenger demand at Logan Airport has grown substantially over the past four decades, and particularly in the past three years, and current forecasts project that Logan Airport will serve 50 million air passengers annually within a 10- to 15-year planning horizon; and

WHEREAS, this growth of passenger demand at Logan Airport has occurred without any comparable increases in Airport parking; and

WHEREAS, the shortage of available parking spaces has the unintended effect of causing severe congestion on Airport roadways and negatively impacting air quality; and

WHEREAS, the number of commercial and employee parking spaces allowed at Logan Airport is regulated by the Massachusetts Department of Environmental Protection (MassDEP) through the Logan Airport Parking Freeze (Parking Freeze), which is an element of the Massachusetts State Implementation Plan (SIP) under the federal Clean Air Act; and

WHEREAS, the Parking Freeze was originally adopted in 1975 by the United States Environmental Protection Agency (EPA) under the federal Clean Air Act and was intended to reduce automobile emissions and enable Massachusetts to achieve compliance with the National Ambient Air Quality Standards (NAAQS) for carbon monoxide (CO) at localized sites and for ozone on a regional basis; and

WHEREAS, the Massachusetts Port Authority (Massport or the Authority) worked with MassDEP on an amendment to the Parking Freeze to increase the parking freeze limit by 5,000 spaces in parallel with the development of the Environmental Notification Form (ENF) for the Logan Airport Parking Project under the Massachusetts Environmental Policy Act (MEPA); and

WHEREAS, MassDEP approved the requested parking increase and issued the amended regulation on June 30, 2017; and

WHEREAS, the EPA approved the proposed rule to revise the SIP to incorporate the amended Logan Airport Parking Freeze on March 6, 2018, and the rule went into effect on April 5, 2018; and

WHEREAS, by adding a total of 5,000 new commercial parking spaces, in two phases, (approximately 2,000 spaces at a new garage in front of Terminal E and approximately 3,000 spaces at an expanded Economy Garage), implementation of the Project will better accommodate current and projected increased passenger demand that is expected to occur whether or not the Project is implemented; and

WHEREAS, implementation of the Project would cause a substantial decrease in vehicle miles traveled (VMT) and associated emissions by reducing congestion and drop-off/pick-up mode share, thereby providing a significant air quality benefit; and

WHEREAS, implementation of the Project would also improve passenger experience; and

WHEREAS, on March 31, 2017, Massport filed an ENF pursuant to MEPA, proposing the Logan Airport Parking Project, and on May 5, 2017, the Secretary of the Executive Office of Energy and Environmental Affairs (the Secretary) issued a Certificate and Scope for the Project and its environmental studies under MEPA; and

WHEREAS, on May 5, 2017, the Secretary issued a Certificate on the ENF stating that “The DEIR [Draft Environmental Impact Report] should include a separate chapter summarizing proposed mitigation measures. This chapter should also include draft Section 61 Findings for each area of impact associated with Massport’s Preferred Alternative. The DEIR should contain clear commitments to implement these mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation (either funding design and construction or performing actual construction), and a schedule for implementation. To ensure that all greenhouse gas emissions reduction measures adopted by the Proponent in the Preferred Alternative are actually constructed or performed by the Proponent, I require Proponents to provide a self-certification to the MEPA Office indicating that all of the required mitigation measures, or their equivalent, have been completed. The commitment to provide this self-certification in the manner outlined above should be incorporated into the draft Section 61 Findings included in the DEIR;” and

WHEREAS, on May 31, 2019, Massport filed a DEIR/Environmental Assessment for the Logan Airport Parking Project, and on August 2, 2019, the Secretary of the Executive Office of Energy and Environmental Affairs (the Secretary) issued a Certificate for the Project stating that the Final Environmental Impact Report (FEIR) should include a separate chapter summarizing proposed mitigation measures. This chapter should also include draft Section 61 Findings for each area of impact associated with Massport’s Preferred Alternative. The FEIR should contain clear commitments to implement these mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation (either funding design and construction or performing actual construction), and a schedule for implementation. To ensure that all greenhouse gas emissions reduction measures adopted by the Proponent in the Preferred Alternative are actually constructed or performed by the Proponent, the Proponent is required to provide a self-certification to the MEPA Office indicating that all of the required mitigation measures, or their equivalent, have been completed. The commitment to provide this self-

certification in the manner outlined above should be incorporated into the draft Section 61 Findings included in the FEIR.

NOW THEREFORE BE IT RESOLVED AND VOTED:

- A. The Authority hereby finds that: (a) the selection and implementation of the Project's Preferred Alternative and assessment of environmental impacts associated with the Project are properly and adequately described and evaluated in the EIR/EA; (b) the description of such environmental impacts set forth in said documents is adopted as a specific finding herein; and (c) by implementing the environmentally beneficial measures and mitigation measures set forth in the EIR/EA, as modified by and as authorized and directed by this resolution, all practicable means and measures will be taken to minimize damage to the environment. In making this finding, the Authority has considered reasonably foreseeable climate change impacts and effects, including greenhouse gas emissions and potential sea level rise.
- B. The Authority hereby further finds and determines that the improvements constituting the Preferred Alternative for the Project, as set forth in the EIR/EA, will enhance the operation of Logan Airport and better serve the traveling public.
- C. The Authority hereby makes the findings set forth below in accordance with M. G. L. c.30, § 61, and hereby authorizes and directs the CEO/Executive Director to implement the measures described herein.

1. Current and Future Parking Operations

Logan Airport's parking operations differ from other urban parking facilities in two important respects. First, due to the nature of air passenger travel, parking spaces at airports turn over (i.e., change vehicles) much less frequently. This requires more parking capacity than in an urban/workplace setting supporting the same number of vehicles. Second, in an urban core such as the City of Boston, daily/regular travel coupled with parking constraints encourage commuters to travel by high-occupancy vehicle (HOV) modes that are less environmentally harmful than other modes. Unlike urban commuters, however, air travelers do not travel to airports daily, so drop-off/pick-up modes and personal vehicle parking may be more practical options. When parking at Logan Airport is constrained, this can have the unintended adverse environmental consequence of encouraging drop-off/pick-up modes, which comparatively increases VMT and air emissions.

To address operational challenges and environmental conditions caused by the existing constrained parking supply at Logan Airport, Massport developed a Long-Term Parking Management Plan, which was first published in the *2012/2013 Logan Airport Environmental Data Report* (EDR). The Long-Term Parking Management Plan sets out a multi-element strategy for efficiently managing parking supply, pricing, and operations. Massport's goals are to maximize transit, shared-ride, and other HOV ground access, while both reducing parking demand and minimizing drop-off/pick-up activity.

2. Project Benefits

As demonstrated by its purpose, the implementation of the Project itself is an environmentally beneficial measure. As described below, the Project and its associated program elements will accommodate current and projected air passenger parking demand to reduce drop-off/pick-up activity, reduce VMT, improve regional air quality, and improve the passenger experience by adding 5,000 new commercial parking spaces (in accordance with the Parking Freeze) entirely within the Airport footprint. Approximately 2,000 spaces will be located in a new garage in front of Terminal E and approximately 3,000 spaces will be added to the existing Economy Garage through an expansion of the existing facility. With the exception of the temporary construction impacts described below, no significant adverse environmental impacts resulting from the implementation of the Project have been identified.

Table 1 summarizes the Project’s benefits and construction-period mitigation commitments, as applicable, and identifies associated responsibilities and costs, as available. The implementation schedule for construction period mitigation measures aligns with the implementation of the Project elements and their phases (see Section 4, *Timing and Responsibility for Implementation*). Non-construction mitigation measures will be implemented as part of the design or operation of the Project elements.

Table 1 Summary of Logan Airport Parking Project Beneficial and Mitigation Measures

| Beneficial/Mitigation Measure | Responsibility | Cost |
|---|----------------|---------------------------|
| Project Planning and Design | | |
| <ul style="list-style-type: none"> ■ Accommodating existing and anticipated air passenger demand for parking to reduce the environmentally undesirable drop-off/pick-up mode share and its associated vehicle miles traveled (VMT) and on- and off-Airport air emissions | Massport | Included in Program Costs |
| <ul style="list-style-type: none"> ■ Reusing existing developed areas (i.e., the Project sites avoid undeveloped, greenfield lands) | Massport | Included in Program Costs |
| <ul style="list-style-type: none"> ■ Selecting Project sites with community input that are in areas already used for parking (i.e., not introducing a new use), are on existing bus/shuttle routes, and are separated from nearby residential communities | Massport | Included in Program Costs |
| <ul style="list-style-type: none"> ■ Providing added noise barrier benefits to nearby residences and recreation areas, in conjunction with the Terminal E Modernization Project, through the expansion of the existing Economy Garage | Massport | Included in Program Costs |
| <ul style="list-style-type: none"> ■ Providing drivers with important roadway and parking information through internal and external wayfinding systems to reduce on-Airport and in-garage circulation, as well as associated VMT and air emissions. Such systems will include: <ul style="list-style-type: none"> □ Dynamic signage/messaging □ A parking reservation system □ Parking guidance via electronic space occupancy detection | Massport | Included in Program Costs |
| <ul style="list-style-type: none"> ■ Providing convenient passenger access between the new garage in front of Terminal E and the terminal buildings and to the pedestrian bridge that connects Terminal E to the Central Garage complex (which includes the West and Central Garages) | Massport | Included in Program Costs |

**Table 1 Summary of Logan Airport Parking Project Beneficial and Mitigation Measures
(Continued)**

| Beneficial/Mitigation Measure | Responsibility | Cost |
|---|---|---|
| Project Planning and Design (Continued) | | |
| <ul style="list-style-type: none"> ■ Incorporating the following ground access features into the design of the new garage in front of Terminal E: <ul style="list-style-type: none"> ❑ A secondary entrance for public parkers to reduce on-Airport recirculation and associated VMT ❑ A vehicular bridge connected to the Central Garage complex to enable more efficient operational movements by Massport’s Ground Transportation Unit | Massport | Included in Program Costs |
| <ul style="list-style-type: none"> ■ Relying on existing roadway infrastructure, bus routes, and signage for the Economy Garage expansion | Massport | Included in Program Costs |
| <ul style="list-style-type: none"> ■ Encouraging parkers to pay their fees prior to returning to their vehicles via Massport’s pay-by-foot system, which uses automated kiosks to enable the efficient flow of vehicles exiting the garages and reduce vehicle idling and associated air emissions | Massport | Included in Program Costs |
| Sustainability and Resiliency | | |
| <ul style="list-style-type: none"> ■ Incorporating measures from the U.S. Green Building Council’s (USGBC) Parksmart rating system into the Project’s technology, structural design, and operation | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| <ul style="list-style-type: none"> ■ Reducing lighting power densities from a base of 0.19 watts per square foot to a maximum of 0.05 watts per square foot | Massport/ Construction Contractor and Sub-contractors | \$3,150,000 - Included in Program Costs |
| <ul style="list-style-type: none"> ■ Installing occupancy sensors and photocells on all applicable interior and exterior lighting | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| <ul style="list-style-type: none"> ■ Installing programmable thermostats, where applicable (i.e., mechanical/electrical rooms) | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| <ul style="list-style-type: none"> ■ Conditioning electrical and telecommunications rooms with split system heat pumps capable of operating at or below temperature of 0°F | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| <ul style="list-style-type: none"> ■ Designing the parking decks to be open air, negating the need for ventilation systems | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| <ul style="list-style-type: none"> ■ Performing building commissioning in accordance with ASHRAE Guideline 0-2005 and ASHRAE Guideline 1.1-2007 | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| <ul style="list-style-type: none"> ■ Incorporating a solar photovoltaic (PV) system at the new garage in front of Terminal E capable of offsetting 50 percent of the facility’s total energy consumption, including all lighting and power required for its electric vehicle (EV) charging stations | Massport/ Construction Contractor and Sub-contractors | \$2,700,000 - Included in Program Costs |
| <ul style="list-style-type: none"> ■ Relocating the existing solar PV system at the Economy Garage to the top of the facility’s new highest level upon completion of Project construction (the installation of a newer, more efficient system will be evaluated for feasibility as that construction period gets closer) | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| <ul style="list-style-type: none"> ■ Designing and building the proposed garages to accommodate expanded solar in the future as it becomes more cost effective/feasible | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| <ul style="list-style-type: none"> ■ Reserving parking spaces for alternative fuel vehicles (e.g., EVs) amounting to at least 1 percent of total spaces and assigning preferred parking spaces for other low-emitting and fuel-efficient vehicles amounting to at least another 1 percent of total spaces | Massport | Included in Program Costs |

**Table 1 Summary of Logan Airport Parking Project Beneficial and Mitigation Measures
(Continued)**

| Beneficial/Mitigation Measure | Responsibility | Cost |
|--|---|---|
| Sustainability and Resiliency (Continued) | | |
| ■ Installing 11 EV charging stations (22 ports) in the new garage in front of Terminal E | Massport/ Construction Contractor and Sub-contractors | \$231,500 - Included in Program Costs |
| ■ Designing and building the proposed garages to accommodate expanded EV charging infrastructure to accommodate 150 percent of demand | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Providing tire inflation services for each garage to promote increased fuel efficiency and vehicle safety | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Integrating vertical landscaping into the façade of the new garage in front of Terminal E | Massport/ Construction Contractor and Sub-contractors | \$2,400,000 - Included in Program Costs |
| ■ Planting water-conserving ground landscapes that apply the principles of xeriscaping (e.g., use of native plants) | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Specifying water efficient fixtures and faucets in a staff restroom at the new garage in front of Terminal E | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Applying durable design principles to extend the facilities' lifespan and avoid greenhouse gas emissions caused by future large-scale construction and renovation activities | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Preparing/adhering to a preventative maintenance plan to extend facility lifespan and avoid greenhouse gas emissions caused by future large-scale construction and renovation activities | Massport | TBD |
| ■ Installing and applying only no- or low-volatile organic compound (VOC) coatings, paints, and sealants | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Installing halon-free fire suppression systems in each garage | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Complying with Massport's Floodproofing Design Guide and elevating critical equipment and systems above the designated design flood elevations | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Ensuring redundant or back-up power sources to reduce disruption from extreme weather conditions that may cause power outage | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Performing frequent sweeping (at least monthly) to reduce the need for constant pressure washing and associated water use | Massport | TBD |
| ■ Implementing an active recycling program to reduce the amount of waste sent to regional landfills/incinerators and to reduce greenhouse gas emissions associated with material disposal | Massport | TBD |
| ■ Displaying educational materials to convey the facilities' environmentally sustainable design and operations | Massport | TBD |
| ■ Participating in a recognized sustainable purchasing buying program applicable to non-capital equipment/materials | Massport | TBD |
| ■ Implementing environmentally safe cleaning supplies and providing necessary training to use, maintain, and dispose of these products | Massport | TBD |
| Construction Period Mitigation | | |
| ■ Providing on-Airport storage areas for construction materials | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |

**Table 1 Summary of Logan Airport Parking Project Beneficial and Mitigation Measures
(Continued)**

| Beneficial/Mitigation Measure | Responsibility | Cost |
|---|---|---------------------------|
| Construction Period Mitigation (Continued) | | |
| ■ Coordinating the arrival of large construction equipment among various on-Airport projects and limiting their arrival or removal during peak travel hours (both Airport and commuter peaks) | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Developing specific truck routing and/or staging plans for implementation by the various contractors | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Requiring construction managers to prepare: <ul style="list-style-type: none"> <input type="checkbox"/> Draft Soil Management Plan <input type="checkbox"/> Draft Stormwater Pollution Prevention Plan <input type="checkbox"/> Draft Management Plan for Dewatering, if needed <input type="checkbox"/> Draft Health and Safety Plan | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Employing a Construction Waste Management Plan that requires at least 85 percent of materials to be recycled or reused | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Controlling rodents through routine inspection, monitoring, and treatment | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Prioritizing the use of construction equipment and materials that are repurposed, reused, or recycled (or contain recycled content), where feasible | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Prioritizing construction equipment and materials that are sourced regionally (i.e., within 300 miles of the Project sites) to reduce greenhouse gas emissions associated with their transport | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Using regional (i.e., within 75 miles) labor to the greatest extent practicable | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Encouraging construction companies to provide off-Airport parking for their employees and to provide shuttle services from these locations (shuttles are required to use the Coughlin Bypass road to access the Airport) | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Requiring all construction vehicle/equipment to follow anti-idling procedures and all construction managers to provide associated training | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Requiring the use of low- or zero-emissions equipment, where practicable | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Requiring the retrofitting of appropriate diesel construction equipment with diesel oxidation catalyst and/or particulate filters | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Requiring contractors to use Ultra Low Sulfur Diesel Fuel (ULSD) | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Maintaining low on-site vehicle speeds | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Deploying air quality and fugitive dust management best practices, such as reducing exposed erodible surface areas through appropriate materials and equipment staging, covering exposed surface areas with pavement or vegetation in an expeditious manner, and stabilizing soil with cover or periodic watering | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |

**Table 1 Summary of Logan Airport Parking Project Beneficial and Mitigation Measures
(Continued)**

| Beneficial/Mitigation Measure | Responsibility | Cost |
|--|---|---------------------------|
| Construction Period Mitigation (Continued) | | |
| ■ Using and maintaining construction equipment appropriately to avoid unnecessary noise and applying noise-reduction measures to reduce noise from pile driving by at least 5 A-weighted decibels (dBA) below their unmitigated levels ¹ | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Requiring trucks to access the Project sites by Route 1A, Interstate 90, Coughlin Bypass road, and the main Airport roadway only or other routes in compliance with transportation safety requirements | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Prohibiting trucks from using local streets | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Specifying truck routes in contractors' construction specifications | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Using concrete production and batching plants with access via Route 1A or Interstate 90 | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Encouraging construction workers to use Massachusetts Bay Transportation Authority (MBTA) transit services, Logan Express, the water shuttle, and other high-occupancy modes of travel | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Putting into place an Erosion and Sedimentation Control Program, in compliance with the Stormwater Pollution Prevention Plan, to protect water quality and to minimize construction phase impacts to Boston Harbor | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Deploying spill prevention measures and sedimentation controls throughout the construction phases to prevent pollution from construction equipment and erosion | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| ■ Using the following erosion and sedimentation controls throughout the construction phases: <ul style="list-style-type: none"> ❑ Perimeter barriers such as straw wattles or compost-filled “silt sock” barriers will be placed around upland work areas to trap sediment transported by runoff before it reaches the drainage system or leaves the construction site ❑ Existing catch basins within the work sites will be protected with barriers (where appropriate) or silt sacks ❑ Open soil surfaces will be stabilized within 14 days after grading or construction activities have temporarily or permanently ceased | Massport/ Construction Contractor and Sub-contractors | Included in Program Costs |
| Ground Access Improvement, Trip Reduction, and Emissions Reduction | | |
| ■ Implement the following ground access improvement, trip reduction, and emission reduction initiatives: <ul style="list-style-type: none"> ❑ Advance the electrification of ground service equipment, pursuant to which all ground service equipment will be replaced no later than the end of 2027 (as available) ❑ Expand Logan Express capacity by 10 percent ❑ Increase the percentage of zero emission taxi, livery, and Ride App vehicles (i.e., those associated with companies such as Uber and Lyft) by providing: high-speed electric vehicle charging stations at all taxi, livery, and Ride App pools; and taxi and Ride App queue priority to electric vehicles (subject to negotiation with companies) | Massport | TBD |

Note:

1 Sound levels from activities associated with the construction of the Project would be voluntarily consistent with the City of Boston’s noise criteria; therefore, no construction noise mitigation is anticipated.

Project Planning and Sustainable Design

The Project is sited entirely on-Airport in areas that have been selected with significant community input and are already developed and currently used for commercial parking. The Project sites are separated from nearby residential communities: the new garage in front of Terminal E is largely surrounded by other Airport facilities and structures and the Economy Garage expansion by local roads, the Blue Line right-of-way, and Interstate 90/Route 1A. Both Project sites are served by existing Massport shuttle bus routes.

Massport will incorporate design features that specifically intend to improve operational efficiencies at the garages and enhance the passenger experience. The new garage in front of Terminal E will provide passengers with convenient access to the terminal buildings and to the pedestrian bridge that connects Terminal E to the Central Garage complex (which includes the West and Central Garages), and will include a secondary entrance for public parkers to reduce on-Airport recirculation. It will also include a vehicular bridge connected to the Central Garage complex to enable more efficient operational movements by Massport's Ground Transportation Unit (i.e., moving vehicles between the parking facilities in cases of overflow). The Economy Garage expansion will rely on existing roadway infrastructure, bus routes, and signage, and will have added noise barrier benefits, in conjunction with the Terminal E Modernization Project, screening the community and neighborhood recreation areas from aircraft ground noise in the North Apron Area. Common to both facilities, Massport will develop internal and external wayfinding systems to include dynamic signage, a parking reservation system, and parking guidance via electronic space occupancy detection. Massport will also implement its pay-by-foot system to encourage parkers to pay their parking fees at automated kiosks prior to returning to their vehicles, thereby reducing queuing/idling and related emissions at the garage exits. These wayfinding and pay-by-foot systems would support a reduction in on-Airport and in-facility circling and idling, resulting in fewer VMT and associated air emissions.

Massport is committed to operating its facilities in an environmentally sound and responsible manner. Accordingly, the Project incorporates Massport-specified sustainability requirements as well as industry standards into all new development and redevelopment projects at the Airport such as Massport's *Sustainable Design Standards and Guidelines* and the building goals of the U.S. Green Building Council's (USGBC's) Leadership in Energy and Environmental Design (LEED®) rating system. Massport will integrate USGBC's Parksmart framework into the planning, design, and operation of the proposed garages. Parksmart is an environmental and sustainability focused rating system specific to parking structure management, programming, design, and technology.

The Project will be consistent with Massport's overall sustainability program, which includes diverse sustainability initiatives ranging from facilities maintenance to innovative partnerships and public incentives. The sustainable features that Massport will incorporate into the design of the garages are listed below.

- Installing and applying only no- or low-volatile organic compound (VOC) coatings, paints, and sealants;

- Reducing lighting power densities for garage lighting from a base of 0.19 watts per square foot to a maximum of 0.05 watts per square foot;
- Installing occupancy sensors and photocells on all applicable interior and exterior lighting;
- Incorporating a solar PV system at the new garage in front of Terminal E capable of offsetting 50 percent of the facility's total energy consumption (i.e., electricity and natural gas), including all lighting and power required for its EV charging stations;
- Relocating the existing solar PV system at the Economy Garage to the top of the facility's new highest level upon completion of Project construction (the installation of a newer, more efficient system will be evaluated for feasibility as that construction period gets closer);
- Designing and building the proposed garages to accommodate expanded solar in the future as it becomes more cost effective/feasible;
- Performing building commissioning in accordance with ASHRAE Guideline 0-2005 and ASHRAE Guideline 1.1-2007, thereby allowing Massport to confirm that the Proposed Parking is meeting its sustainability goals;
- Reserving priority parking spaces for alternative fuel vehicles (e.g., electric vehicles) amounting to at least 1 percent of total spaces and assigning preferred parking spaces for other low-emitting and fuel-efficient vehicles amounting to at least another 1 percent of total spaces;
- Installing EV charging stations to accommodate 150 percent of demand, including 11 dual-port charging stations (22 ports/dedicated EV charging spaces) in the new garage in front of Terminal E and as many as necessary to meet the demand threshold as part of the Economy Garage expansion - to advance this latter effort, Massport will install five EV charging stations now in the existing Economy Garage rather than add them to the future expansion;
- Integrating vertical landscaping into the façade of the new garage in front of Terminal E;
- Planting water-conserving ground landscapes that apply the principles of xeriscaping (e.g., use of native plants);
- Performing frequent sweeping (at least monthly) to reduce the need for constant pressure washing and associated water use;
- Installing programmable thermostats, where applicable (e.g., mechanical rooms, water service rooms, and the restroom);

- Specifying water efficient fixtures and faucets in a staff restroom at the new garage in front of Terminal E;
- Implementing an active recycling program to reduce the amount of waste sent to regional landfills/incinerators and to reduce greenhouse gas emissions associated with material disposal;
- Applying durable design principles (e.g., by minimizing steel corrosion by keeping steel away from the immediate concrete surface and selecting the appropriate concrete mix to reduce permeability, protect against chloride ion erosion, and reduce micro cracking) and conducting proactive maintenance to extend facility lifespan and avoid greenhouse gas emissions caused by future large-scale construction and renovation activities;
- Conditioning electrical and telecommunications rooms with split system heat pumps capable of operating at or below temperature of 0°F;
- Designing the parking decks to be open air, negating the need for ventilation systems;
- Providing tire inflation services for each garage to promote increased fuel efficiency and vehicle safety; and
- Installing a halon-free fire suppression system in each garage.

Surface Transportation Benefits

The Project will make surface transportation operations more efficient at Logan Airport. Airport VMTs will be lowered due to reduced circulation and drop-off/pick-up mode activity. This will reduce congestion on Airport roadways and at curbsides.

The Project will enhance passenger experience by reducing the need to divert parkers to off-Airport satellite parking locations. Parking in satellite locations increases the time it takes for air passengers to drop off their cars and access the terminal area, and also increases on-Airport VMT. Providing sufficient parking will also reduce the need for Massport to valet overflow parking during peak parking periods.

Air Quality Benefits

The Project will provide regional air quality benefits by reducing Airport-related VMT by over 5 million miles or 10 percent. The addition of 5,000 new on-Airport commercial parking spaces is estimated to decrease drop-off/pick-up travel, reducing overall trips and associated VMT.

The Project is expected to provide the following benefits that would directly translate to reductions in emissions:

- Shifting “would-be parkers” from drop-off/pick-up modes to parking;
- Reducing the number of trips associated with “would-be parkers” traveling to and from the Airport;
- Reducing recirculation at the Terminal E curbsides resulting in decreases in on-Airport VMT; and
- Reducing on-Airport emissions related to improved curbside operations at Terminal E, as air passengers shift from drop-off/pick-up modes to parking in the garages.

With the Project, the annual emissions of the ozone pre-cursors nitrogen oxides (NO_x) and volatile organic compounds (VOCs) are expected to decrease by 11 percent and 12 percent, respectively, as compared to the No-Build Alternative. These benefits would be achieved in stages, correlating to the availability of additional parking. A portion of the emissions reduction would be realized when the new garage in front of Terminal E is operational in 2022. Additional reductions would be expected when the Economy Garage expansion is operational by the end of 2025, at which point all additional spaces will be built and the full reduction in regional VMT and emissions associated with the “would-be parkers” would occur.

The Project incorporates a number of strategies to reduce greenhouse gas emissions. Massport commits to self-certification of completion of such measures, or their equivalents, as set out in the Secretary’s Certificate.

Noise Benefits

The expansion of the Economy Garage is expected to have added noise barrier benefits, in conjunction with the Terminal E Modernization Project, enhancing screening of community and neighborhood recreation areas from aircraft ground noise in the North Apron Area.

3. Construction Period Management

It is expected that construction would take place primarily during the day shift, approximately 7:00 AM to 7:00 PM. The need for nighttime or weekend work would be further determined during construction phasing development. Massport will require all contractors to comply with certain construction guidelines and best management practices that include:

- Storage areas for construction materials will be located on-Airport.

- A Draft Soil Management Plan will be developed based upon sub-surface investigations. The plan will outline standards and procedures for the identification and disposal of contaminated materials that may be encountered during construction. Soil tracking protocols will be detailed from the point of excavation to designated testing areas and to the ultimate disposal site.
- A Draft Stormwater Pollution Prevention Plan will be developed to keep the Airport's stormwater system free of sediment and contaminants during construction. The plan will be incorporated into construction plans, specifications, and contracts.
- A Draft Management Plan for Dewatering, if needed, will be developed to address the requirements for testing, handling, and treatment prior to discharge of contaminated groundwater from dewatering.
- A Draft Health and Safety Plan will be developed to provide the minimum health and safety specifications that contractors must meet during construction including requirements for environmental monitoring, personnel protective equipment, site control and security, and training.
- A Draft Construction Waste Management Plan will be developed for the collection, storage, and handling recyclables. This plan will require at least 85 percent of construction materials to be recycled or reused.
- Rodent control inspection, monitoring, and treatment will be carried out before, during, and after the completion of all foundation and utility demolition and construction work.
- Construction equipment and materials that are repurposed, reused, or recycled (or contain recycled content) will be prioritized, where feasible, to reduce the Project's consumption of virgin natural resources.
- Construction equipment and materials that are sourced regionally (i.e., within 300 miles of the Project sites) will be prioritized, where feasible, to reduce greenhouse gas emissions associated with their transport.
- Regional labor (i.e., laborers within 75 miles) will be used to the greatest extent practicable.

As construction progresses, Massport will continue to provide the community with periodic updates on the Project through regularly scheduled community, neighborhood, and other civic meetings. Further, the status of the Project will be reported in upcoming EDRs and Environmental Status and Planning Reports. The community will be able to report any construction-related concerns in the interim through a construction hotline that Massport will establish and monitor. Concerns will be communicated to construction

contractors and subcontractors for resolution in a timely fashion, as appropriate. In cases of an emergency, callers to the hotline will be notified on how to reach key emergency personnel.

Mitigation measures in a number of categories where temporary construction impacts could occur are described below.

Construction Period Surface Transportation Mitigation

Construction traffic mitigation will focus on two issues: 1) minimizing construction-related vehicles on local roads, and 2) ensuring that all Airport roadway operations are maintained at full capacity to minimize traffic congestion both on- and off-Airport. The specific measures to be taken are noted below:

- All trucks will access the sites by Route 1A, Interstate 90, and the main Airport roadway only or other routes in compliance with transportation safety requirements. Trucks will be prohibited from using local streets unless seeking construction-related access to or from local businesses.
- Truck routes will be specified in contractors' construction specifications.
- Concrete production and batching will occur in existing plants with access via Route 1A or Interstate 90. This would reduce on-Airport construction activities and consolidate truck trips to the greatest extent possible.
- Construction workers will be encouraged to use public transportation or via shuttle buses from off-Airport parking areas. Specific actions regarding construction worker access are noted below.
 - Massport will encourage construction workers to use MBTA transit services, Logan Express, the water shuttle, and other high-occupancy modes of travel.
 - Construction companies will be encouraged to provide off-Airport parking for their employees and to provide shuttle services from these locations. Massport will encourage contractors to locate off-Airport construction worker parking in areas adjacent to regional arterial roadways to help further minimize traffic on local streets. The employee shuttles are required to use the Coughlin Bypass road to access the Airport to keep them off neighborhood streets.

Construction Period Air Quality Mitigation

Massport will require all contractors to comply with certain construction guidelines and best management practices that include:

- Construction vehicle/equipment anti-idling (along with the provision of associated training);
- Using low- or zero-emissions equipment, where practicable;
- Retrofitting appropriate diesel construction equipment with diesel oxidation catalysts and/or particulate filters;
- Reducing onsite vehicle speeds;
- Requiring contractors to use Ultra Low Sulfur Diesel Fuel (ULSD);
- Reducing exposed erodible surface areas through appropriate materials and equipment staging procedures;
- Covering exposed surface areas with pavement or vegetation in an expeditious manner;
- Stabilizing soil with cover or periodic watering;
- Using covered haul trucks during materials transportation;
- Suspending construction activities during high-wind conditions; and
- Ensuring contractor knowledge of appropriate equipment exhaust and fugitive dust controls.

Construction Period Noise Mitigation

Sound levels from construction activities would be consistent with the City of Boston's noise criteria (even though Massport is not subject to these criteria); therefore, no additional construction noise mitigation is required. Construction equipment, however, will use noise-reduction measures such as:

- Noise control techniques will be used to reduce noise from pile driving at the new garage in front of Terminal E by at least 5 A-weighted decibels (dBA) below their unmitigated levels. These techniques include such measures as enclosing the point of impact for the pile driver; installing an impact cushion between the pile driver and the pile; or requiring the application of dampening (energy-absorbing) material to steel piles. No pile driving is anticipated for the Economy Garage expansion.

- Further noise control options will be evaluated during Project design to define their effectiveness and feasibility. Appropriate operational specifications and performance standards will be incorporated into the construction contract documents. In addition, community noise levels will be monitored during construction to verify compliance with contract specifications and applicable state and local noise regulations.

Construction Period Water Quality Mitigation

Soil disturbance from construction activities creates the potential for water quality impacts from stormwater runoff and erosion. The Project will be required to comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Construction Activities. The NPDES permit requires filing a Notice of Intent and preparing a Stormwater Pollution Prevention Plan. As part of the Stormwater Pollution Prevention Plan, an Erosion and Sedimentation Control Program will be put in place to minimize construction phase impacts to adjacent properties and the Boston Harbor. Further, Massport will comply with the provisions of the Massachusetts Contingency Plan.

The following spill prevention measures and sedimentation controls will be deployed throughout the construction phases to prevent pollution from construction equipment and erosion. These controls are provided as recommendations for the site contractor and do not constitute or replace the final Stormwater Pollution Prevention Plan that must be fully implemented by the contractor and owner in compliance with U.S. Environmental Protection Agency NPDES regulations and with Massport's contractor requirements.

- Perimeter barriers such as straw wattles or compost-filled "silt sock" barriers will be placed around upland work areas to trap sediment transported by runoff before it reaches the drainage system or leaves the construction site;
- Existing catch basins within the work sites will be protected with barriers (where appropriate) or silt sacks; and
- Open soil surfaces will be stabilized within 14 days after grading or construction activities have temporarily or permanently ceased.

Coordination with Other On-Airport Construction Activities

During the planning of the Project, it was noted that construction activities associated with the new garage in front of Terminal E would occur simultaneously with other on-Airport projects, including the Terminal E Modernization and Terminal C Canopy, Connector, and Roadways Projects. To address any unanticipated congestion associated with construction activities, Massport will implement several mitigation measures:

- Develop and facilitate traffic management strategies Airport-wide that are responsive to the aggregate of construction projects and their potential impacts.
- Manage traffic related to construction workers by encouraging them to utilize off-Airport parking locations and requiring contractors to shuttle employees to the job site.
- Coordinate the arrival of large construction equipment among projects and limit their arrival or removal during peak travel hours (both Airport and commuter peaks).
- Develop specific truck routing and/or project staging plans for implementation by the various contractors. It is anticipated that these plans may be developed with input from the contractors directly.

In keeping with Massport's long-standing policy that traffic operations along roadways be maintained to accommodate passenger levels, construction will be staged (and staging modified as necessary) to the maximum extent practicable to avoid disruption to the transportation system or impact to the surrounding environment.

4. Timing and Responsibility for Implementation

All measures will be implemented according to each Project element's phased schedule. Massport anticipates first constructing the new garage in front of Terminal E, which would be located on existing short-term parking lots. Construction of this garage is expected to begin in Spring 2020 and be complete in 2022. Construction of the Economy Garage expansion is due to begin in 2023 and be complete by the end of 2025. Non-construction mitigation measures will be implemented as part of the design or operation of the Project elements. Responsibilities for implementation are identified in Table 1 above.

5. Additional Ground Access Improvement, Trip Reduction, and Emissions Reduction Initiatives

In addition to those measures discussed above, Massport will undertake and implement the below measures:

- Prior to commencement of construction of the Logan Airport Parking Project, Massport will advance the electrification of ground service equipment, pursuant to which all ground service equipment will be replaced no later than the end of 2027, where commercially available electric alternatives are available (with a limited deferral for categories of equipment where no commercially available electric alternatives are available). For categories of equipment for which no electric or other zero emission alternative is commercially available by the end of 2027, such equipment will be replaced in those categories within two years of such equipment becoming commercially available (provided the equipment being replaced is at least eight years old). Massport may, in the alternative, develop a phased schedule in

which certain categories are implemented earlier than 2027 and some are deployed later than 2027, so long as 2027 is the mean deployment date at Logan Airport.

Massport will achieve the following targets for electrification of ground service equipment: at least 9 percent by the beginning of Project construction; at least 12 percent by the end of construction of the first parking structure (new garage in front of Terminal E); and at least 24 percent by the end of construction of the second parking structure (Economy Garage expansion). Moreover, Massport will ensure that at least 60 percent of commercial aircraft taxiing for re-positioning will be done by electric tugs by 2027.

- Massport will increase its Logan Express capacity, measured in available seats, by 10 percent over the number of seats available in May 2017.
- Massport will implement several measures to promote the use of electric vehicles among the combined fleet of taxi, livery, and Ride App vehicles (i.e., those associated with companies such as Uber and Lyft):
 - Massport will provide high-speed electric vehicle charging stations at all taxi, livery, and Ride App pools at Logan Airport, so that 150 percent of demand for charging stations is available at all pools at all times at no cost to the user (this demand will be measured as no more than 66.667 percent of electric vehicle charging stations in use at any time).
 - Massport will provide taxi and Ride App queue priority to electric vehicles (second only to vehicles with at least three passengers), subject to negotiations with the relevant companies.

Appendix D

- Executive Summary and Introduction to the MassDEP Studies

**LOGAN AIRPORT PARKING PROJECT –
FINAL ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL ASSESSMENT**

Boston Logan International Airport
East Boston, Massachusetts

The Massachusetts Port Authority (Massport) published the *Logan Airport Parking Freeze Amendment Ground Access and Trip Reduction Strategy Studies* (MassDEP studies) on September 30, 2019.¹ These studies are described below, while their Executive Summary and Introduction are provided in the following appendix. The full report can be found on Massport’s website: <http://www.massport.com/media/3370/final-massport-dep-report.pdf>.

- **Study #1: Logan Airport Ground Access High-Occupancy Vehicle (HOV) Services.** A study of the costs, feasibility, and effectiveness of potential measures to improve HOV access to Boston Logan International Airport (Logan Airport or the Airport). This study considers, among other things, possible improvements to Logan Express bus service and the benefits of increasing Massachusetts Bay Transportation Authority Silver Line buses with service to the Airport.
- **Study #2: Logan Airport Ground Access HOV Pricing.** A study of the costs and pricing for different modes of transportation to and from the Airport to identify a pricing structure and evaluate allocation of revenues generated to promote HOV modes of transportation by air travelers and visitors at the Airport. This study includes an evaluation of short- and long-term parking rates and their influence on different modes of ground access transportation to and from the Airport.
- **Study #3: Logan Airport Ground Access and Reducing Non-HOV Operations.** A study of the feasibility and effectiveness of potential operational measures to reduce non-HOV drop-off/pickup modes of transportation to the Airport, including an evaluation of emerging Ride Apps such as Uber and Lyft and other ride-hailing/ridesharing modes.

¹ Recipients of the 2017 *ESPR*, filed with MEPA on July 30, 2019 and published in the Environmental Monitor on August 7, 2019 – EEA# 3247, were notified of the availability of the MassDEP studies at the time of their publishing. To allow the public adequate time to review these studies, the end date of the comment period for the 2017 *ESPR* was extended from October 11, 2019 to November 18, 2019, an additional 39 days.

Executive Summary

Project Background and Purpose

The following sections provide an overview of Boston Logan International Airport (hereafter the Airport or Logan Airport), a domestic and international airport located in East Boston and Winthrop, Massachusetts, and briefly describe the history of the Logan Airport Parking Freeze (Parking Freeze), including the 2017 Parking Freeze Amendment.

Overview of Logan Airport

The Massachusetts Port Authority (hereafter Massport or the Authority) owns and operates Logan Airport. It is New England's busiest airport, serving more than 40.9 million air passengers in 2018. Massport continuously strives to refine and improve its ground access plan and trip reduction strategy. Specifically, Massport's ground transportation strategy utilizes transit, being served by the Massachusetts Bay Transportation Authority's (MBTA's) Airport Station on the Blue Line. The Airport is well served by several ground access modes. In addition to public transit, modes serving the Airport include high-occupancy vehicle (HOV) modes like Massport's Logan Express network, which would be the seventh largest regional transit authority by ridership, free outbound MBTA Silver Line service, scheduled buses and vans, water transportation (ferry), courtesy shuttle buses, and charter buses. The Airport is also served by private automobiles, unscheduled private black car limousines and vans, taxis, rental cars, and ride apps. Massport owns and operates structured and surface commercial parking facilities at the Airport.

Massport prioritizes a reduction in private vehicles that access the Airport via environmentally undesirable drop-off/pickup modes. These trips generate up to four vehicle trips per passenger instead of just two vehicle trips for passengers who drive and park. Reducing vehicle miles traveled and their associated emissions requires utilizing the appropriate amount of available on-Airport parking.

2017 Parking Freeze Amendment and Studies

In 1975, the US Environmental Protection Agency (EPA), in cooperation with public agencies in Massachusetts, developed a transportation control plan for the

state, to be implemented under the federal Clean Air Act of 1963,¹ which included: 1) incentive programs to reduce single-passenger, commuter vehicle use; and 2) the Parking Freeze. These measures were intended to reduce automobile emissions and to enable Massachusetts to achieve compliance with the EPA's National Ambient Air Quality Standards (NAAQS) for carbon monoxide at localized sites and for ozone. EPA has designated all of Massachusetts as attainment/unclassifiable for the 2015 ozone NAAQS.

Logan Airport is the only airport in the nation subject to a parking freeze, which limits the number of commercial (i.e., for departing air passengers) and employee parking spaces available for use at the Airport. The Parking Freeze was substantially amended in June 2017 when the Massachusetts Department of Environmental Protection submitted amendments to the Parking Freeze as a formal revision to the Massachusetts State Implementation Plan. The revised Parking Freeze increases the total number of commercial spaces in the Parking Freeze area by 5,000 spaces to a total of 26,088 spaces (the 2017 Parking Freeze Amendment).

Consistent with prior amendments, the 2017 Parking Freeze Amendment specified that Massport was to conduct three ground access studies within the following 24 months to aid in the continual development of its Logan Airport Ground Access and Trip Reduction Strategy.

1. **Study #1: Logan Airport Ground Access HOV Services.** A study of the costs, feasibility, and effectiveness of potential measures to improve HOV access to the Airport. This study shall consider, among other things, possible improvements to Logan Express bus service and the benefits of increasing MBTA Silver Line buses with service to the Airport.
2. **Study #2: Logan Airport Ground Access HOV Pricing.** A study of the costs and pricing for different modes of transportation to and from the Airport to identify a pricing structure and evaluate allocation of revenues generated to promote HOV modes of transportation by air travelers and visitors at the Airport. This study shall include an evaluation of short- and long-term parking rates and their influence on different modes of ground access transportation to and from the Airport.

¹ 42 U.S.C. § 7401.

3. **Study #3: Logan Airport Ground Access and Reducing Non-HOV Operations.** A study of the feasibility and effectiveness of potential operational measures to reduce non-HOV drop-off/pickup modes of transportation to the Airport, including an evaluation of emerging ride app and other ride-hailing/ridesharing modes.

Summary of Methods and Approach

Massport developed a comprehensive framework to conduct the three ground access studies required as part of the 2017 Parking Freeze Amendment. The framework was developed using the following broad steps:

- Identify and develop potential policies that Massport could implement to address the HOV goals of the Logan Airport Parking Freeze Amendment Ground Access and Trip Reduction Strategy and its three studies.
- Review case studies and best practices to determine lessons learned for the Airport.
- Develop an analytical framework to evaluate each policy using a consistent set of metrics.
- Collect data and build tools to support the policy analysis.
- Summarize the results of the policy analysis within the analytical framework.

Policy Development

The study team worked closely with a diverse group of Massport staff to develop a set of policy variables that could influence traveler preferences for HOV ground access modes to the Airport. The study team identified a set of policy variables appropriate for each of the three ground access studies and analyzed combinations of relevant policy variables for each study.

Case Studies and Relevant Practices

The study team evaluated each policy variable in the context of relevant practices from other domestic and international airports. The case studies helped identify the policy variables that may have the greatest effect on HOV ridership based on successful implementation elsewhere.

Analytical Framework

The study team developed an analytical framework to evaluate the effects of each policy variable across several criteria, including the following:

- Ground access mode choice.
- Revenues and costs.
- Operations.
- Customer service.
- Air quality.
- Community and stakeholders.

Policy Tools

The study team reviewed existing data, conducted primary research, and developed tools to help Massport understand the effects of the policy scenarios on ground access mode choice and travel demand. The primary policy tool, the Mode Choice Model and Simulator (MCMS), used stated and revealed preference data,² derived from the fall 2018 Logan Air Passenger Ground Access Survey (hereafter the 2018 Passenger Survey), to build a mode choice model. The MCMS predicts the changes in share for each transportation mode that would occur with a given set of policy variables and simulates the likely changes in mode share.

While policy variables can be individually simulated using the MCMS, most variables change in combination with other variables. For example, to encourage more Logan Express ridership, a combination of policies like increasing Logan Express frequency, adding amenities, and adjusting pricing could be complementary. In short, many cases exist where a policy is not one change but a “package” of changes to obtain the desired policy outcome.

² Data detailing what people might do (hypothetical) and did do (observational), respectively.

Summary of Findings

This report describes policies and their effects, often by combining policy variables, to obtain optimal outcomes to enhance Massport's strategic goals. It describes the methods by which these combinations are derived to establish a framework for any future policy development and decisions by Massport on what ground access strategies to next implement.

The first policy development protocol tests each variable on its own to understand the sensitivities and effects each variable has on ground access mode choice. It then considers developing policy initiatives that are realistic and include logical variable combinations. Since Logan Airport already achieves one of the highest ground access HOV shares in the country, it becomes increasingly difficult to increase HOV share (law of diminishing returns). Thus, even policy variables with small effects, but that are relatively easy to implement (e.g., allowing a prioritized security line for those accessing the Airport via HOV modes), are worth considering.

The following report provides a detailed background and introduction to the Parking Freeze and includes the results of the Massachusetts Department of Environmental Protection-mandated studies (Study #1, Study #2, and Study #3). Each chapter details the actions taken and the results for each scenario. Each chapter can be read independently of the others, which results in some information being repeated across chapters; this is intentional.

Summary of Recent Implementation of the Logan Trip Reduction Strategy

This report describes the methods and approach employed by the study team to conduct each of the three studies. It also describes the data, tools, and analysis used for each study and the results and outcomes from each study. The studies' outcomes have already informed decision-making within Massport and have led to the development and recent implementation of the following ground access services and policies:

- **Additional Logan Express service**, which included relocating and revising Back Bay service to provide riders with priority access at the Airport³ security screening for Back Bay users (2019), increasing service frequency from Back Bay and Braintree (2019), planning for new service from North Station (to be implemented in 2020), and planning for a possible new Logan Express suburban site thereafter.
- **Revised ride app ground access policies and fees**, which included consolidating ride app operations at dedicated areas on the ground floor of the Central/West Garage, implementing a new Airport ride app drop-off fee of \$3.25 (in addition to the current \$3.25 pickup fee), and providing a discounted fee of \$1.50 for shared-ride (such as UberPool and Lyft Line) customers.

³ This service is free to passengers leaving Logan Airport and \$3 for those coming to Logan Airport. Prior to this policy change, the service was priced at \$7.50 each way, with a discounted \$5 fare for riders presenting a valid MBTA pass.

Introduction

This chapter provides an overview of the 2017 Parking Freeze Amendment, including the three required studies. It also includes a discussion of Massport’s ongoing trip reduction strategies and improvements to high-occupancy vehicle (HOV) access modes, several of which have already been fully implemented.

2017 Parking Freeze Amendment

Considerable study and analysis in recent years has shown growth in passenger volume. Coupled with the fixed supply of parking spaces, this growth is beginning to have counter effects by increasing the number of drop-off/pickup trips for air passengers accessing the Airport, which is the exact effect the original regulation was intended to offset. In effect, this doubles the number of trips—taking up to four trips to get to the Airport as opposed to two trips for parkers. If an air passenger is dropped off when departing on an air trip, and is picked up upon return, then that single air passenger generates a total of four ground access trips: two for the drop-off trip (one inbound to the Airport and one outbound) and two for the pickup trip (one inbound to the Airport and one outbound). The air passenger may be dropped off and picked up in a private vehicle, or may use taxi, ride apps, or black car limousine services. These access modes may not carry a passenger during all segments of travel to and from the Airport.

Despite the Massachusetts Port Authority’s (hereafter Massport or the Authority) industry-leading efforts to dampen ground access vehicle trips and vehicle miles traveled (VMT) through a capped parking supply and implementing the HOV/shared-ride mode initiatives, vehicle trips continue to increase with growth in air travel. As air passenger numbers are predicted to increase, the lack of available parking at the Airport has increased drop-off/pickup vehicle trips and, in turn, VMT and related air emissions.

As a result, in June 2016, Massport requested that Massachusetts Department of Environmental Protection (MassDEP) amend 310 CMR 7.30⁴ to increase the Parking Freeze limit by 5,000 spaces. The analysis by Massport indicated that, with increasing air passenger growth at the Airport, the current commercial parking cap has the unintended effect of negatively affecting air quality. The analysis also indicates that the constrained parking supply causes 75 percent of passengers who would otherwise choose to park at the Airport to instead use a

⁴ CMR refers to “Code of Massachusetts Regulations.”

drop-off/pickup mode.⁵ This increases Airport-related VMT and associated air emissions. The analysis showed that adding 5,000 commercial spaces to the Parking Freeze limit would result in a substantive decrease in Airport-related VMT and could provide a significant air quality benefit.

The growth in drop-off/pickup ground access vehicle travel has been augmented by the advent of ride apps and the rapid adoption of these ride-hailing services by consumers. Ride app ground access shares at the Airport have grown from 14 percent in 2016 to more than 29 percent in 2019, drawing share from all other ground access modes, including HOV/shared-ride services, driving and parking, traditional taxi services, private vehicle drop-off/pickup, and rental cars. Ride app ground access, in the absence of being able to rematch a passenger pickup directly after a passenger drop-off, also results in four trips compared to two.

Following an extensive stakeholder and public engagement process in response to Massport's 2016 request to consider an amendment to the Parking Freeze, MassDEP approved the requested parking increase of 5,000 commercial spaces and issued the amended regulation on June 30, 2017.⁶ On December 5, 2017, the EPA proposed a rule approving the revision of the State Implementation Plan incorporating the amended Parking Freeze.⁷ The EPA approved the proposed rule on March 6, 2018, and the rule went into effect on April 5, 2018.⁸ The new total Parking Freeze limit is 26,066 parking spaces, of which 23,640 are commercial spaces.⁹

⁵ Steer Davies Gleave, "2013 Logan International Airport Air Passenger Ground-Access Survey." Massport, May 2014, <https://www.massport.com/media/1553/2013-logan-air-passenger-ground-access-survey.pdf>. (accessed September 13, 2019).

⁶ Massachusetts Department of Environmental Protection, "Final 310 CMR 7.30 amendments," *Mass.gov*. June 30, 2017, <https://www.mass.gov/files/documents/2017/06/zi/lpf-freq.pdf>. (accessed September 13, 2019).

⁷ Air Plan Approval; Massachusetts; Logan Airport Parking Freeze, 82 Fed. Reg. 57415, 57418 (December 5, 2017) (revising 310 C.M.R. § 7.30 and 310 C.M.R. § 7.31).

⁸ Air Plan Approval; Massachusetts; Logan Airport Parking Freeze, 83 Fed. Reg. 9438, 9440 (March 6, 2018) (revising 310 C.M.R. § 7.30).

⁹ Massachusetts Department of Environmental Protection, "Background Document on Proposed Amendments to 310 CMR 7.30: Massport/Logan Airport Parking Freeze, Regulations.gov. March 24, 2017, <https://www.regulations.gov/document?D=EPA-R01-OAR-2017-0590-0004>. (accessed September 13, 2019).

2017 Parking Freeze Amendment Studies

The 2017 Parking Freeze Amendment required that Massport conduct three ground access studies within 24 months. These studies sought to identify programs and actions that could complement Massport's comprehensive ground access goals related to air quality, terminal curb operations, customer service, and fiscal responsibility. The three ground access studies, which comprise the Logan Airport Parking Freeze Amendment Ground Access and Trip Reduction Strategy project, include the following:

1. **Parking Freeze Amendment Study #1:** A study of the costs, feasibility, and effectiveness of potential measures to improve HOV access to the Airport. This study shall consider, among other things, possible improvements to Logan Express bus service and the benefits of increasing Massachusetts Bay Transportation Authority (MBTA) Silver Line buses with service to the Airport.
2. **Parking Freeze Amendment Study #2:** A study of the costs and pricing for different modes of transportation to and from the Airport to identify a pricing structure and evaluate allocation of revenues generated to promote HOV modes of transportation by air travelers and visitors at the Airport. This study shall include an evaluation of short- and long-term parking rates and their influence on different modes of ground access transportation to and from the Airport.
3. **Parking Freeze Amendment Study #3:** A study of the feasibility and effectiveness of potential operational measures to reduce non-HOV drop-off/pickup modes of transportation to the Airport, including an evaluation of emerging ride app and other ride-hailing/ridesharing modes.

The results of the above studies are the subject of this report and are documented in detail in the subsequent chapters. In addition to satisfying regulatory requirements, this analysis further supports Massport's continuous development and implementation of its trip reduction strategy.

Current Supporting Ground Access Initiatives

Massport's ongoing trip reduction strategies have been most recently supplemented by additional initiatives as described below.

Improvements to High-Occupancy Vehicle Access

Massport is undertaking several improvements to HOV access modes, several of which have already been fully implemented:

- Doubling the number of MBTA Silver Line vehicles purchased by Massport for the Silver Line service to the Airport, making it more convenient to use the transit line for Airport access. Massport has partnered with the MBTA to promote its Silver Line access to the Airport. Massport's financial support of the MBTA Silver Line has included Airport route subsidization (including paying for free boarding at the Airport), the prior purchase of eight MBTA Silver Line buses, and a commitment to purchase eight more MBTA Silver Line buses in the future.
- Continuing to provide free, clean-fuel shuttle bus service for passengers between the MBTA Blue Line Airport Station and all terminals.

Improvements to Logan Express

In an effort to double Logan Express to 4 million passengers annually, Massport is improving and expanding Logan Express options. Related measures include the following:

- Relocating Back Bay Logan Express service to the MBTA's Back Bay Station, eliminating the fare from the Airport to Back Bay, and reducing the fare from Back Bay to the Airport from \$7.50 to \$3.00. This effort was implemented in May 2019.
- Increasing the total number of Logan Express "seats" by 10 percent. This goal was accomplished in the summer of 2019.
- Reducing headways by 10 percent and adding amenities at existing Logan Express locations.
- Adding a new urban Logan Express service at North Station with free service from the Airport. Massport expects to start service in 2020.
- Increasing parking capacity at the Framingham and Braintree Logan Express locations by a combined total of 3,000 spaces.
- Identifying new suburban Logan Express locations with parking.
- Offering online e-ticketing for Logan Express passengers.

Improvements to Ride App Access and Pricing

As ground access mode shares for ride apps continue to increase, Massport has developed a plan to revise the operations and pricing for these modes. To date, this has entailed the following:

- Consolidating ride app operations at dedicated areas on the ground floor of the Central Garage to promote vehicle “rematch” of the driver making a drop-off and an arriving air passenger to reduce “deadheading.”
- Implementing a new drop-off fee of \$3.25 (in addition to the current \$3.25 pickup fee) and providing a discounted fee of \$1.50 to incentivize shared-ride (such as UberPool and Lyft Line) use by customers.

Parking Rates and Reservation System

Massport uses daily parking rates to incentivize travelers to use HOV/shared-ride modes to access the Airport.¹⁰ In 2019, the parking rates at the Central Garage complex and the Economy Garage were \$38/day and \$29/day, respectively. In addition, Massport has also eliminated the weekly parking discount previously available for Economy Garage parkers. Despite these rate increases, the Airport parking garages are often at or near capacity during the peak travel periods. Massport also plans to introduce a parking reservation system to allow air passengers to reserve and pay for parking spots in advance of their travel.

Roadway and Circulation Infrastructure

In addition to the above policy- and program-based initiatives, Massport has several capital projects underway to improve circulation and reduce congestion on terminal roadways, including the following three examples:

- **Terminal B to C Roadway Improvements.** This project will revamp the terminal area roadways to eliminate backups and allow passengers to move between the terminals more quickly. New construction will replace aging roadway infrastructure along both the Arrivals and Departures levels. This project will create more curb space at Terminal C and reduce on-Airport congestion by improving traffic flow and increasing traffic safety.

¹⁰ Despite daily parking rate increases, the Central Garage complex and Economy Garage are often at or near capacity during the peak travel periods.

- **Parking Garage Construction.** Following the 2017 Parking Freeze Amendment, Massport is advancing plans to construct 5,000 new commercial parking spaces in structured parking facilities at two on-Airport sites selected with community input. Approximately 2,000 spaces will be sited in a new garage on existing surface parking lots in front of Terminal E, and approximately 3,000 spaces are to be accommodated at the Economy Garage facility through an expansion of the existing garage. These additional parking spaces are currently under review by the Massachusetts Environmental Policy Act Office. The additional parking spaces are expected to reduce the number of passengers using drop-off/pickup ground access modes, thereby reducing Airport-related VMT and associated air emissions.
- **Feasibility Study for a Centralized Transportation Facility.** Massport is in the early stages of assessing the feasibility of building a centralized transportation facility. This project could assist in reducing on-Airport circulation traffic and congestion and could free up constrained curb space at the terminals.