



FEDERAL AVIATION ADMINISTRATION

EASTERN REGION  
AIRPORTS DIVISION

**Short Environmental  
Assessment Form  
for  
AIRPORT DEVELOPMENT  
PROJECTS**



Airport Name: Baltimore/Washington International Thurgood Marshall Airport Identifier: BWI

Proposed Project: Hotel Development at BWI Marshall Airport

This Environmental Assessment becomes a Federal document when evaluated, signed, and dated by the Responsible FAA official.

  
Responsible FAA Official

21 OCT 2013  
Date

*This form is to be used only for limited types of projects. It is strongly recommended that you contact your local Environmental Protection Specialist (EPS) before completing this form. See instructions page.*



**U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
FINDING OF NO SIGNIFICANT IMPACT**

Baltimore/Washington International Thurgood Marshall Airport  
Anne Arundel County, Maryland

Hotel Development Project

- 1. Introduction.** This document is a Finding of No Significant Impact (FONSI) on the environment as a result of the proposed hotel development project by the Maryland Aviation Administration (MAA), owner and operator of Baltimore/Washington International Thurgood Marshall Airport (BWI Marshall). The proposed hotel footprint is approximately 2.5 acres of the 11 acre hotel development project site evaluated.

Federal Aviation Administration (FAA) must comply with the National Environmental Policy Act of 1969 (NEPA) before being able to take the federal action of further processing of an application for Federal assistance in funding various airport development and for approval of the Airport Layout Plan (ALP) that depicts the proposed airport development projects. Approval of the ALP is authorized by the Airport and Airway Improvement Act of 1982, as amended (Public Laws 97-248 and 100-223). The issuing of this FONSI does not constitute a commitment by the FAA to provide federal financial assistance for these actions.

- 2. Project Purpose and Need.** The purpose and need of the proposed hotel development project is to achieve excellence in meeting the needs of BWI Marshall air passengers and other customers by providing accessible, high-quality lodging and conference space in a manner that maximizes revenue for the Airport. The proposed hotel development will also allow BWI Marshall to adequately accommodate the needs of travelers, customers, and regional corporate users, offering an array of aviation choices, products, and accommodations that are convenient and easily accessible.
- 3. Proposed Project.** The proposed hotel development project consists of constructing a 250-room six-story hotel on BWI Marshall Airport property directly adjacent to the existing hourly garage on the current site of the main terminal employee parking lot. The hotel footprint would include approximately 2.5 acres of the 11 acres available at this site. The proposed hotel is anticipated to include approximately 12,500 square feet of conference and banquet space, as well as food and beverage facilities. There are no roadway realignments anticipated for the proposed action.
- 4. Reasonable Alternatives Considered.** As described in Section 5 of the attached Environmental Assessment (EA), alternatives, to include the no action alternative, were evaluated for the proposed project.
- 5. Assessment.** The attached EA addresses the effect of the proposed project on the quality of the human and natural environment, and is made a part of this finding. The following impact analysis highlights the more thorough analysis presented in the EA prepared in July 2013.

**Air Quality.** The airport is located within the U.S. Environmental Protection Agency's (EPA) designated nonattainment area for the pollutants of ozone (O<sub>3</sub>) and particulate

matter equal to or less than 2.5 micrometers (fine particulates or PM<sub>2.5</sub>). Therefore, the EPA's General Conformity Rule applies and an air quality analysis must be prepared for the proposed hotel development project. The emission levels do not exceed any applicable de minimis threshold levels for the proposed project area. (EA-Attachment D,E)

**Coastal Resources.** The project area falls within the Maryland Coastal Zone Management area and therefore must comply with Federal and State Coastal Zone regulations. A Federal Consistency Certification was submitted as part of the draft EA. Maryland Department of the Environment concurred that the proposed action is consistent with the Maryland Coastal Zone Management Program. (EA-Attachment F)

**Hazardous Material.** In May of 2012, AECOM completed a literature and limited field investigation for the 2.5-acre land parcel located immediately north-west of the Hourly Parking Garage to evaluate the current environmental conditions of the property considered for the proposed hotel development. In January of 2013, AECOM performed a supplemental Phase II Environmental Assessment of the 4.5-acre parcel not included in the previous site investigation located immediately northwest of the initial investigation site, on the northern and eastern portions of the employee parking lot. In the 2.5-acre area evaluated for the Limited Phase II Environmental Assessment, there does not appear to be any significant impacts of concern within the first foot below grade at the proposed action alternative site in the areas investigated. In the 4.5-acre Supplemental Phase II Environmental Assessment conducted, various low-level concentrations of primarily petroleum related constituents were detected below regulatory standards in select soil boring locations across the study area. Additionally, based on the geophysical investigations, no remnant subsurface anomalies, USTs, etc. were identified in the areas surveyed. (EA-Attachment G)

**Induced Socioeconomic Impacts.** A *Hotel Market Analysis* was conducted in January of 2012 and the demand for on-Airport hotel rooms and services was evaluated. The study took into account the supply of rooms by direct competitors to estimate supportable guest rooms for a new airport hotel. The analysis determined supply and demand factors in the "very resilient lodging market" in the BWI Marshall Hotel Market Area, and projected the number of rooms that could be supported by the proposed hotel development. The proposed action would not cause any impacts to surrounding communities or shift any business or economic activity or population movement or shifts in a community. There is sufficient market demand to accommodate the proposed hotel at BWI Marshall. (EA-Attachment B)

**Social Impacts.** A 2013 *Traffic Study* assessed the potential traffic operational impacts associated with the hotel project which could result from (a) new trips associated with the hotel operation and (b) reallocation of existing employee parking trips resulting from modifications to the employee exit flow path to accommodate the implementation of the hotel. The Terminal area arrivals and departures level curbside roadways were not included in the study area because hotel-related traffic entering and exiting the study area would have direct access to the hotel site and would, therefore, not access the departures or arrivals level curbside roadways. The traffic analysis provides an assessment of existing (2012) traffic conditions and two future year conditions representing the first year of operation (assumed to be 2015) and opening-day plus five years (2020). Potential impacts were assessed by comparing the future No Action traffic condition to anticipated future Proposed Action traffic conditions for both 2015 and 2020. The only changes to traffic patterns that would result from the Proposed Action

would occur on Airport property. No neighborhoods or businesses would be impacted by changes to traffic patterns as a result of the Proposed Action. (EA-Attachment C)

- 6. **Public Participation.** The Draft EA was made available for public review from August 1, 2013 to September 3, 2013 (EA-Attachment F).
- 7. **Mitigation Measures.** The FAA requires that Maryland Aviation Administration implement the following conservation measures, if it decides to pursue the proposed project:
  - a. Develop and implement erosion and sediment control measures in accordance with the latest version of the Maryland Standards and Specifications for Erosion and Sediment Control Handbook and Maryland Stormwater Management Laws and Regulations.
  - b. Best management practices (BMPs) will be followed to avoid and minimize any potential impacts to the environment.
  - c. All required permits and approved plans for the proposed project must be obtained prior to construction.
  - d. Construction contract provisions must contain the provisions of FAA AC 150/5370-10E, *Standards for Specifying Construction of Airports* item P-156, temporary air, water pollution, soil erosion and siltation control and FAA AC 150/5320-5C, *Airport Drainage*.

8. **Finding of No Significant Impact**

I have carefully and thoroughly considered the facts contained in the attached EA. Based on that information I find that the proposed Federal action is consistent with existing national environmental policies and objectives as set forth in section 101(a) of the National Environmental Policy Act of 1969 (NEPA). I also find the proposed Federal Action, with the required mitigation referenced above will not significantly affect the quality of the human environment or otherwise include any condition requiring consultation pursuant to section 102 (2)(C) of NEPA. As a result, FAA will not prepare an EIS for this action.

**APPROVED:**

  
 \_\_\_\_\_  
 Terry J. Page, Manager  
 Washington Airports District Office

10/21/13  
 \_\_\_\_\_  
 Date

**DISAPPROVED:**

\_\_\_\_\_  
 Terry J. Page, Manager  
 Washington Airports District Office

\_\_\_\_\_  
 Date



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## APPLICABILITY

This Form can be used if the proposed project meets the following criteria:

- 1) It is not categorically excluded (see paragraphs 303 and 307-312 in FAA Order 1050.1E) or
- 2) It is normally categorically excluded but, in this instance, involves at least one extraordinary circumstance that may significantly impact the human environment (see paragraph 304 and the applicable section in Appendix of 1050.1E) or
- 3) The action is one that normally requires an EA at a minimum (see paragraph 506 in FAA Order 5050.4B) and
- 4) The proposed project must fall under one of the following categories of Federal Airports Program actions:
  - (a) Approval of a project on an Airport Layout Plan (ALP).
  - (b) Approval of federal funding for airport development.
  - (c) Requests for conveyance of government land.
  - (d) Approval of release of airport land.
  - (e) Approval of the use of Passenger Facility Charges (PFC).
  - (f) Approval of development or construction on a federally obligated airport.

**If you have questions as to whether the use of this form is appropriate for your project, contact your local EPS BEFORE using this form.**

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**Complete the following information:**

**Project Location**

Airport Name: Baltimore/Washington International Thurgood Marshall Airport      Identifier: BWI  
Airport Address: P.O. Box 8766  
City: BWI Airport                      County: Anne Arundel                      State: MD      Zip: 21240-0766

**Airport Sponsor Information**

Point of Contact: Robin M. Bowie, Manager, Division of Environmental Planning  
Address: P.O. Box 8766  
City: BWI Airport                      State: MD                      Zip: 21240  
Telephone: 410-859-7103                      Fax: 410-859-7082  
Email: [rbowie@bwiairport.com](mailto:rbowie@bwiairport.com)

**Evaluation Form Preparer Information**

Point of Contact: HNTB Corporation  
Address: 2900 S. Quincy Street, Suite 200  
City: Arlington                      State: VA                      Zip: 22206  
Telephone: 703-824-5100                      Fax: 703-671-6210  
Email: [cpinegar@hntb.com](mailto:cpinegar@hntb.com)

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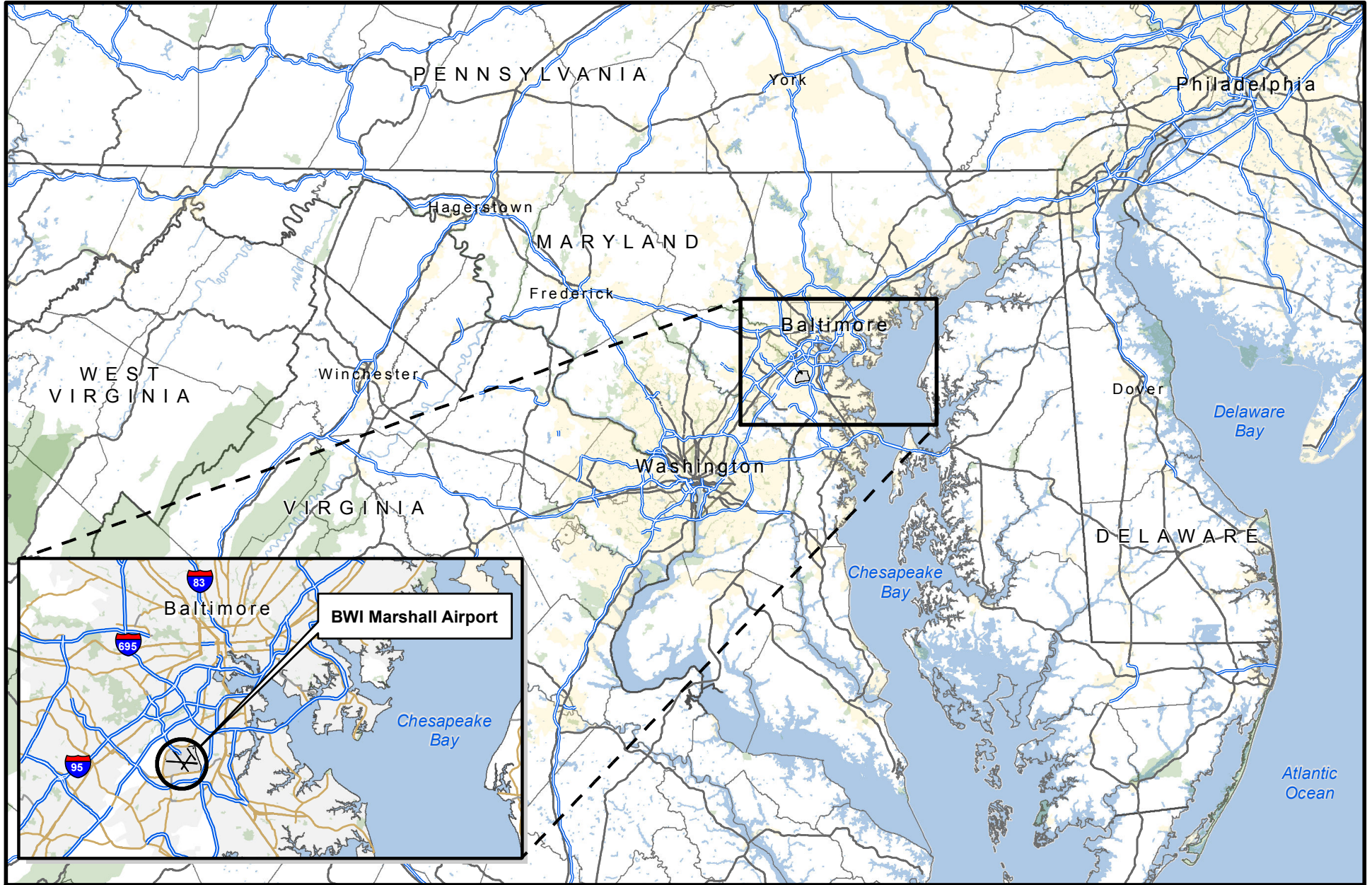
**1. Introduction/Background:**

The Maryland Aviation Administration (MAA) proposes to construct a hotel on airport property at Baltimore/Washington International Thurgood Marshall Airport (BWI Marshall or the Airport) to meet the needs of the traveling public. The MAA is preparing this Short Environmental Assessment (EA) Form to fulfill the legal requirements of the National Environmental Policy Act of 1969 (NEPA) and FAA Order 1050.1E for the proposed development. A general location map of BWI Marshall is provided on **Figure 1**.




BWI Marshall continues to experience growth in passenger activity. BWI Marshall passenger volumes are expected to grow from 22.6 million annual passengers to approximately 30 million by 2030. In addition to continued air passenger growth, the market for local office, research, and industrial/warehouse space has grown significantly, with a parallel increase in local employment and business activity. Since 2004, several hotel market studies, feasibility studies and site selection studies have been conducted for the MAA that identified and confirmed that there is a market and need for a first-class, full-service commercial hotel on Airport property that is convenient and accessible.

There are no hotels within a reasonable walking distance to the Airport’s Main Terminal Building. The lack of walkable, high-quality accommodations on Airport property translates to lost Airport revenue and reduces customer service and convenience for BWI Marshall travelers. Currently, there is a Four Points Sheraton hotel on Airport property, located just to the west of the Daily Garage. The hotel has 201 rooms and opened in 1966. It is the oldest Three-Star hotel in the market area. While it is in the Terminal core area, it is not within walking distance to the Airport

# BWI Marshall Hotel Environmental Assessment



## LEGEND

-  Interstate
-  Highway / Major Road
-  Park / Wilderness Area / Recreation Area

**Figure 1**  
**General Location Map**



0 33,000 66,000 132,000 Feet

Source: ESRI

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Terminal or any other airport facilities. Shuttle bus service is provided between the Four Points Sheraton and the Terminal.

In 2006, MAA conducted a *BWI Hotel Site Selection Study* to identify a preferred location for a proposed airport hotel. The study evaluated five alternative locations for a proposed hotel and identified a recommended site based on evaluation criteria. See **Attachment A, BWI Hotel Site Selection Study**.

A 2012 *Hotel Market Analysis* was conducted, confirming again that the hotel market can support a new Airport hotel in the near term. Based on research from this study, there is market support for a first-class, 250-room hotel identified to be developed within the BWI Marshall hotel market area with a target opening year of 2015. The 2012 market analysis compared two of the sites evaluated in the 2006 *BWI Hotel Site Selection Study*: (1) Airport Site (Proposed Action Alternative); and (2) Amtrak Station Area Site. The study found the Airport Site to be “excellent” for a hotel development and the Amtrak Station Area Site to be “below average” for the same use. The Airport Site is within the Terminal core area of BWI Marshall. See **Attachment B, Hotel Market Analysis**.

The proposed hotel development is shown on the Airport Layout Plan (ALP), August 2012, as a 2015 Improvement.

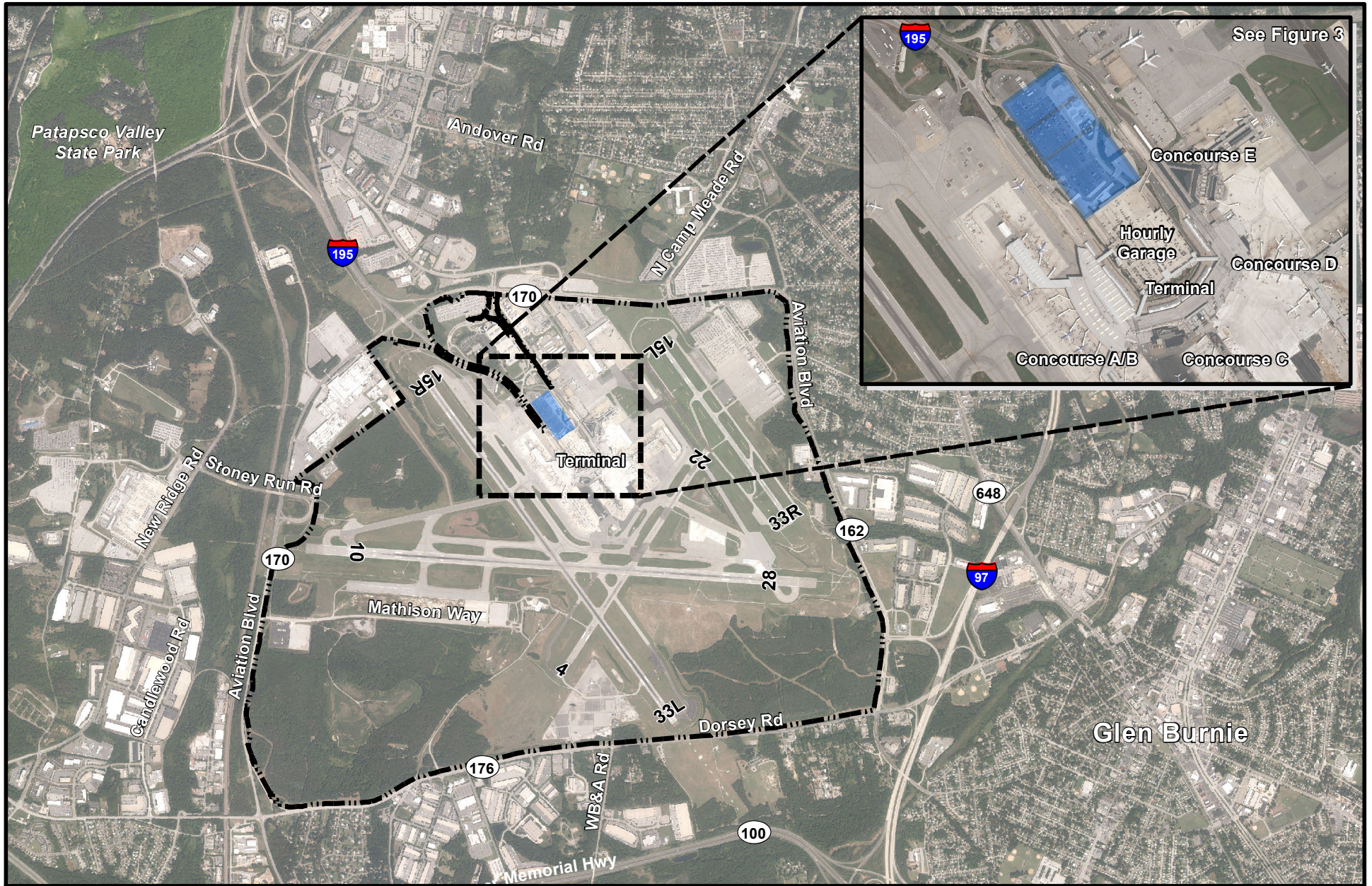
**2. Project Description** (List and clearly describe ALL components of project proposal including all connected actions). **Attach a map or drawing of the area with the location(s) of the proposed action(s) identified:**

**Figure 2** provides an overview of the proposed hotel (Proposed Action Alternative) site in relation to airport property and the surrounding area. The proposed development is located adjacent to the existing BWI Marshall Hourly Parking Garage on the existing site of the paved Main Terminal Employee Parking Lot in the Airport’s Terminal core area, as shown on **Figure 3**.

The total area of the site being considered for the proposed hotel development consists of 11 previously disturbed and paved acres of Airport property in the Terminal core area; however, the proposed hotel footprint is estimated to need only 2.5 acres of the available 11-acre paved site. MAA is considering and evaluating the entirety of the paved 11-acre site for purposes of this EA because the specific location of the hotel within the available paved area has not been determined. Ultimately the hotel footprint will only require 2.5 acres, however, because the exact location, layout and size of the hotel has not been decided (no developer has been chosen and therefore no detailed site plans are available to assess), the entire 11 acres is being evaluated, and is considered the LOD for purposes of this EA. However, all utility infrastructure and construction activities, including laydown areas will remain within the 11 acre-site analyzed within this EA.

The Proposed Action Alternative site is based on the screening and evaluation of the five alternative locations analyzed in in the *BWI Hotel Site Selection Study* (Discussed in *Section 5, Alternatives*). Based on conceptual design, the proposed Airport hotel is intended to be a “first-class” facility providing approximately 250 guest rooms, food and beverage facilities, and approximately 12,500 square feet of state-of-the-art conference and banquet facilities. The maximum building height would be 266 feet MSL due to line-of-sight considerations from the proposed Airport Traffic Control Tower.<sup>1</sup> A graphic rendering of a possible hotel design is illustrated on **Figure 4**.

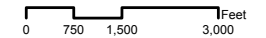
# BWI Marshall Hotel Environmental Assessment



**LEGEND**

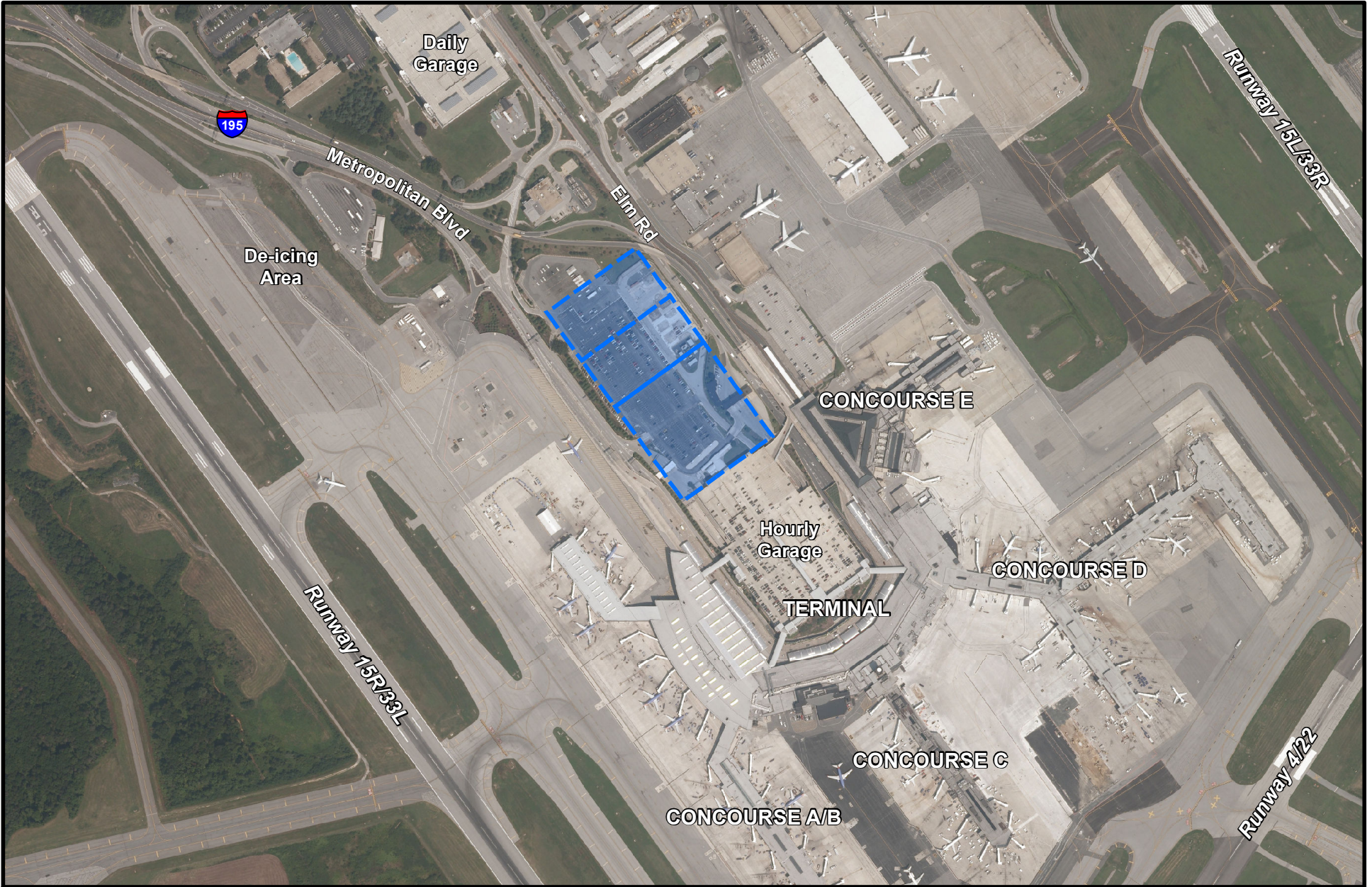
- Proposed Hotel Area
- Airport Property Boundary

**Figure 2**  
**Proposed Hotel Location and BWI Marshall Vicinity**




Source: BWI ALP (August 2012)

# BWI Marshall Hotel Environmental Assessment



## LEGEND

 Proposed Hotel Area

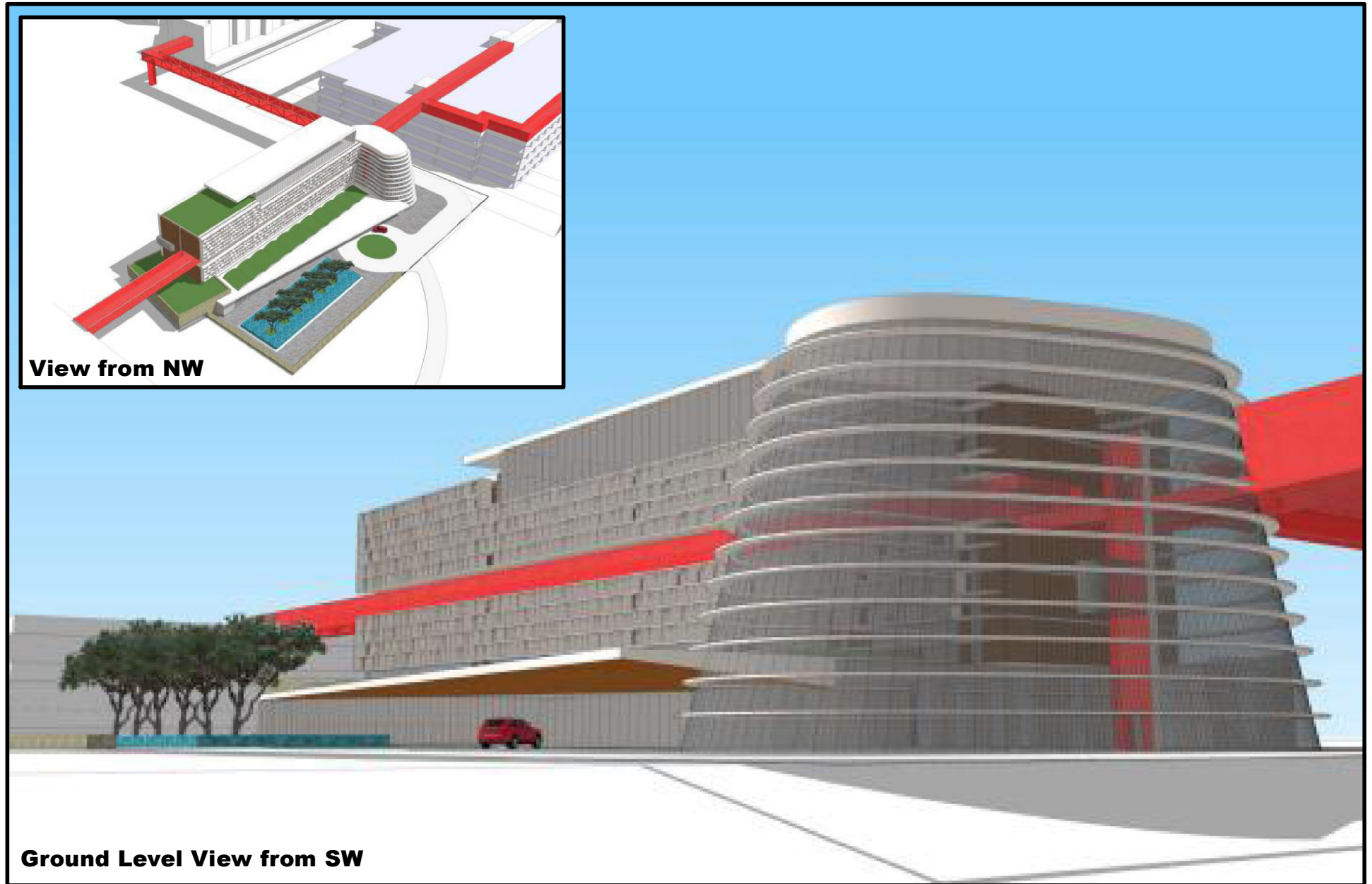
**Figure 3**  
**Proposed Hotel Location**



0 150 300 600 Feet

Source: BWI ALP (August 2012)

**BWI Marshall Hotel Environmental Assessment**



**Figure 4**  
**Graphic Rendering of Possible Hotel Development**

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The hotel development would displace some of the employee parking capacity on the existing surface lot (Main Terminal Employee Parking Lot). To address the effects of this displacement and to provide an assessment of the anticipated traffic operations along key existing roadways and intersections that would accommodate future hotel-related traffic, a traffic study was conducted in 2013 (See *Attachment C, Hotel Environmental Review: Traffic Study [Traffic Study]*). The proposed hotel site and potential changes to the employee parking lot and access to the hotel are depicted on **Figure 5**.

The hotel site would be easily accessible to airport passengers arriving on foot and to guests arriving by car. Surface parking and garage parking would flank the hotel on either side for vehicles, and the hotel would be within walking distance to airline passengers as it would be situated within a short distance from the Main Terminal Building.

### **3. Project Purpose and Need:**

#### **Purpose**

The purpose of the Proposed Action is to provide an accessible, high-quality hotel on BWI Marshall property in the Terminal core area within walking distance of the Main Terminal Building in a manner that maximizes revenue for the Airport.

#### **Need**

The proposed hotel is needed in order to generate revenue at BWI Marshall. MAA continues to seek additional revenue to support current and future operations and maintenance needs. There are no hotels within a reasonable walking distance to the Main Terminal Building. The lack of walkable, high-quality lodging and conference space accommodations on Airport property translates to missed revenue for the Airport and reduces customer service for BWI Marshall travelers.

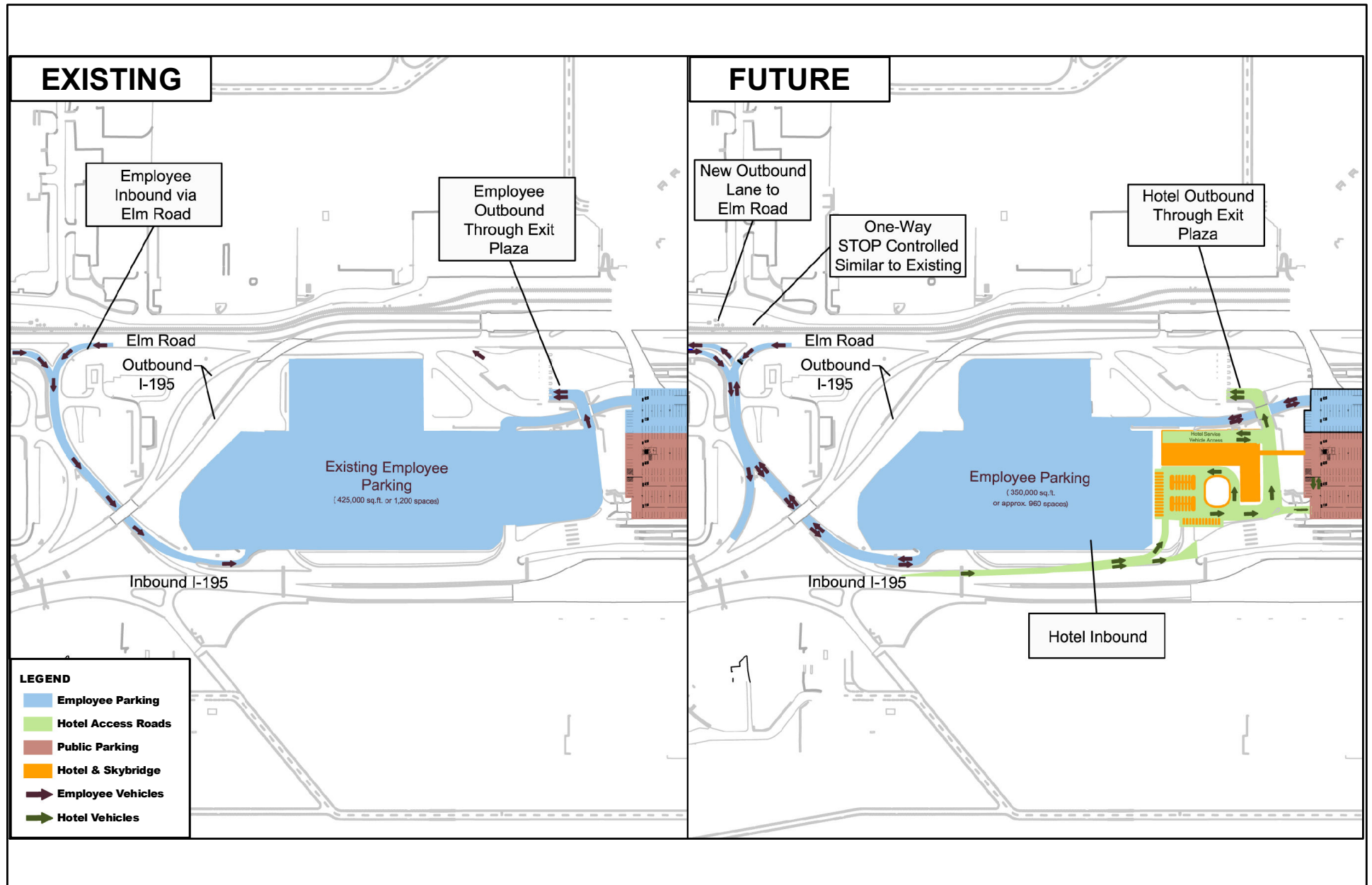
The current use of the site of the proposed hotel development is an employee parking lot that does not generate revenue; MAA has the opportunity to use this land to generate additional revenue in support of BWI Marshall. In addition, the 2013 *Traffic Study* concluded that the Hourly Parking Garage has adequate capacity to accommodate the displaced employee parking (and public parking) through the 2020 planning horizon, while also accounting for growth in demand for employee parking.<sup>2</sup>

A first-class, full-service hotel located within walking distance to the Main Terminal Building in the Terminal core area would play an important role in enhancing revenue generation to MAA.

### **4. Describe the affected environment (existing conditions) and land use in the vicinity of project:**

The Proposed Action Alternative site is located within the Terminal core area of BWI Marshall, in Anne Arundel County, Maryland. The Airport is bounded on the west, north, and east by Aviation Boulevard and on the south by Dorsey Road. Anne Arundel County describes land use on Airport property as Transportation/Utility, Retail, and Industrial. The proposed hotel development

# BWI Marshall Hotel Environmental Assessment



**Figure 5**  
**Existing Site Layout and Proposed Access Changes**



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(Proposed Action Alternative site) is coded as “Retail” land use on Airport property in the 2003 BWI/Linthicum Small Area Plan.

The proposed hotel development is on the current site of the Main Terminal Employee Parking Lot, a surface lot with approximately 1,200 parking spaces. Just south of the study area is the Hourly Parking Garage, a six-level facility, which is adjacent to the Main Terminal Building. All other sides of the proposed site (east, north, and west) are bordered by roadway. Beyond the roadways to the north of the proposed site are the Central Utility Plant (CUP), Daily Garage and the only existing hotel on airport property, the Four Points Sheraton, located approximately ¾-mile from the Main Terminal. To the west of the proposed hotel development site is the Concourse A apron area and to the east is the Concourse E apron and the north airfield cargo area.<sup>3</sup>

The Proposed Action is located completely within the landside area of the Airport and there are no sensitive populations within the project area. The nearest schools, daycare centers, or places of public assembly are located off of BWI Marshall property, approximately ¾- miles or more from the project area.

**5. Alternatives to the Project: Describe any other reasonable actions that may feasibly substitute for the proposed project, and include a description of the “No Action” alternative. If there are no feasible or reasonable alternatives to the proposed project, explain why (attach alternatives drawings as applicable):**

Proposed Action Alternative

The Proposed Action Alternative includes the construction of a 250-room, six-story hotel on BWI Marshall Airport property on the current site of the Main Terminal Employee Parking Lot. The hotel footprint would include approximately 2.5 acres of the 11 paved acres available at this site. The proposed hotel is anticipated to include approximately 12,500 square feet of conference and banquet space, as well as food and beverage facilities. No developer has been selected and therefore no detailed site plans are available at this time. The specific siting of the hotel within the 11 acres has not yet been determined; this EA will assist in the siting determination.

No new roadways are anticipated for the Proposed Action Alternative. The 2012 Traffic Study assumes that hotel patrons would enter the site from the I-195 inbound roadway and exit behind the Parking Administration Building into the main stream from the exit plaza. Hotel service vehicles and airport employees would likely enter and exit the site from Elm Road, where the intersection would be reconfigured to better accommodate the traffic movement that must be made from Elm Road into the hotel area. Entering and leaving the hotel site and the Hourly Parking Garage may change for hotel patrons and airport employees once the site layout is determined, however no new roadway is expected.

The Proposed Action Alternative site and a graphic rendering of a potential hotel design are depicted on Figures 3 and 4, respectively.

No Action Alternative

With the No Action Alternative, no hotel development would occur at the proposed site and the paved Main Terminal Employee Parking lot would remain as it is currently. The paved 11-acre

area would continue functioning as a parking lot for employees and would not generate additional revenue for the Airport. BWI Marshall travelers' convenience would not be improved by access to lodging and conference space within walking distance to the Main Terminal Building. The No Action Alternative does not meet the purpose and need described in Section 4.

Explanation

The alternatives for the project are limited to the Proposed Action and No Action alternatives as there are no unresolved conflicts concerning alternative uses of available resources. Several studies have been conducted for BWI Marshall in the past decade to determine the most appropriate site for the proposed airport hotel.

In 2006, a *BWI Hotel Site Selection Study* was completed to identify a preferred location for the proposed airport hotel. As illustrated on **Figure 6**, five (5) potential sites on MAA-owned land were considered and evaluated. A brief description of the sites considered is provided in **Table 1**.

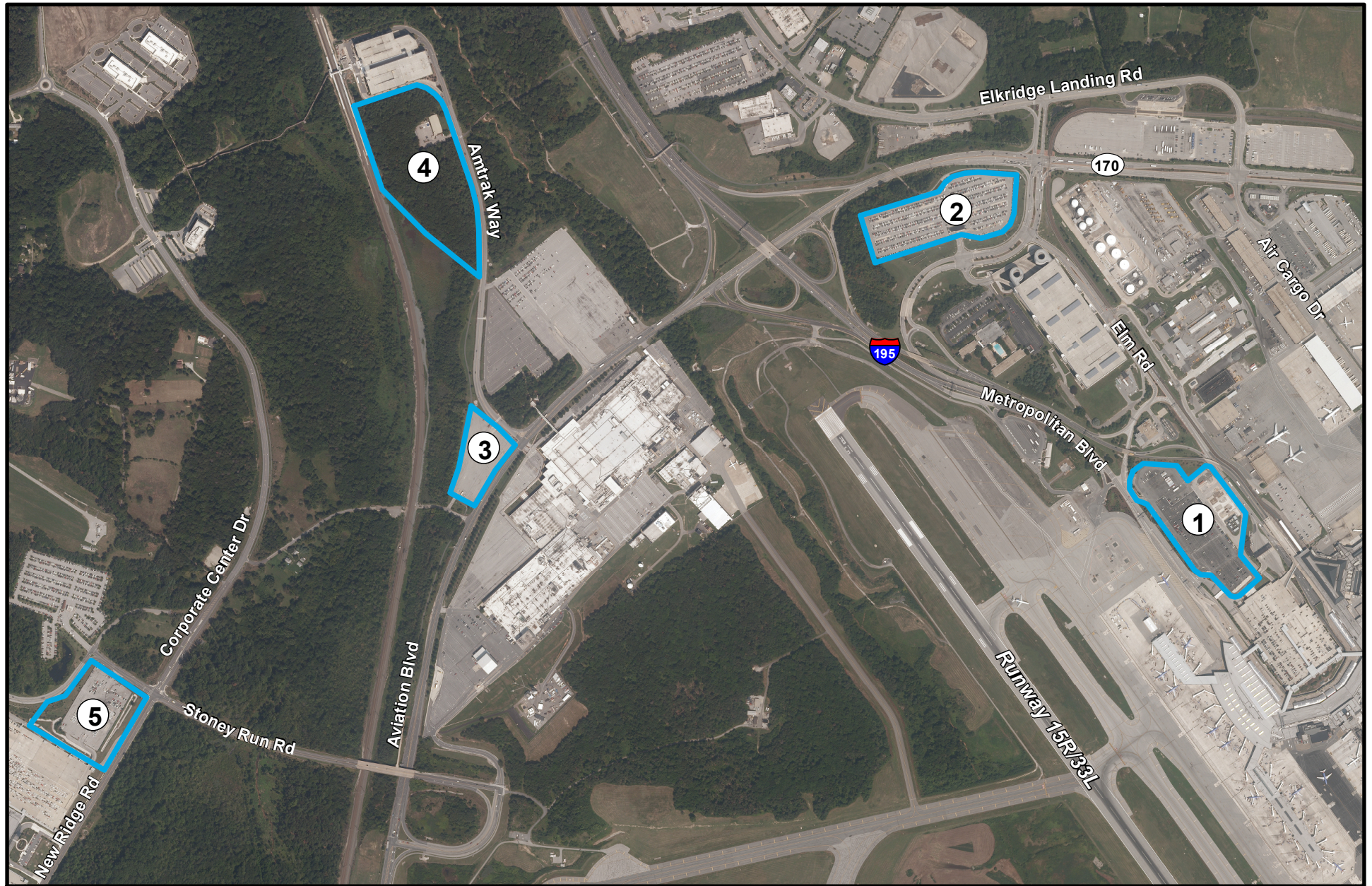
**Table 1**  
BWI Hotel Site Selection Study Locations Evaluated

Site	Location / Description
Site 1: Terminal Core Area	Located in BWI Marshall Terminal core area just north of the existing Hourly Parking Garage on land previously occupied by the rental car agencies. Size: approximately 11 acres.
Site 2: Express Service Parking (ESP) Lot Site	Located between the Daily Garage and Aviation Boulevard. Currently used for daily parking when demand warrants. Size: approximately 10 acres.
Site 3: Managers' Lot	Located on the northwest corner of the intersection of Aviation Boulevard and Amtrak Way. Currently used for overflow vehicular parking during peak travel periods. Size: approximately 4 acres.
Site 4: Amtrak Station Area Site	Located approximately two miles northwest of the Terminal. The site is bordered by Amtrak Way to the east and the Amtrak rail lines to the west. This site lies just outside of the Runway Protection Zone (RPZ) of Runway 15R. The Kauffman Building is located in the northern portion of this site. Size: approximately 14 acres.
Site 5: Consolidated Rental Car Facility Area	Located over two miles from the Terminal area. Two parcels initially considered; first parcel located west of New Ridge Road (approx. 8 acres), currently occupied by a rental car maintenance facility for one of the CRCF tenants. The second parcel is located across the road in a forested area bordered by Stoney Run Road to the north and New Ridge Road to the east.


Source: *BWI Hotel Site Selection Study*, 2006.

To determine the positives and negatives for each of the proposed sites, eight evaluation criteria were used as the basis for determining a recommended site for the proposed hotel: (1) Terminal Access, (2) Customer Service and Access to Amenities, (3) Location, Visibility, and Market Presence, (4) Development Potential, (5) Airport Development Impacts, (6) Capital Costs, (7) Environmental Resources, and (8) Physical Characteristics.

# BWI Marshall Hotel Environmental Assessment



## LEGEND

-  Alternatives Considered
- 1. Terminal Core Area
- 2. Express Service Parking (ESP) Lot Site
- 3. Manager's Lot
- 4. Amtrak Station Area Site
- 5. Consolidated Rental Car Facility Area

**Figure 6**  
**Alternatives Considered**



0 250 500 1,000 Feet

Source: BWI Hotel Site Selection Site Study, 2006

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Site 1: Terminal Core Area site was rated the “Best Site” for the development of a new hotel. The site rated “Good” (the best ranking available) in seven of the eight categories and scored the most points overall. The major advantages of this site over the others evaluated include its proximity to the Main Terminal Building and the minimal impact to the environment. Of notable contribution to the high score of this location are the site’s physical characteristics, development potential, compatibility with airport development, and location and visibility.<sup>4</sup> Site 1 is the basis for the location of the Proposed Action Alternative site for this EA.

Sites 2 and 3 both rated “Good” for development of a hotel. Site 2’s distance from the Main Terminal resulted in fair rankings in a few key areas, as well as its lack of multiple joint-use synergistic opportunities within the Main Terminal or other developments. Site 3’s size and shape made it challenging to meet the project development requirements and there were potential impacts to proposed future airport development. Access to the terminal, location and visibility and customer service and access to amenities also did not rate well. Site 4 rated “poor” due to its low ratings in physical characteristics, location and visibility, customer service and access to amenities, and capital costs. Additionally, this site has a significant historic/archaeological site identified within its boundary with a “preservation in place” recommendation. It was found that this location would be challenging and could be infeasible. Site 5 also rated “poor” for development of a new hotel. The most significant disadvantages to this site were the required relocation of one rental car agency’s maintenance facility and the costs of the relocation. Noise mitigation measures would also likely be needed at Site 5 prior to any hotel development.

In 2012, a *Hotel Market Analysis* again evaluated two of the potential hotel development sites: (1) at the airport adjacent to the hourly parking garage (Proposed Action Alternative Site/Airport Site); and (2) adjacent to the nearby Amtrak train station (Amtrak Station Area Site). The study also identified the number of guestrooms (and/or hotels) the market could support and made recommendations regarding the hotel’s design. The analysis concluded that the Proposed Action Alternative Site/Airport Site is considered excellent for the development of a hotel because it is located on a prime location at the Airport next to the terminals and has a superior location compared to the competitive supply. Additionally, it is easily accessible, has excellent visibility and is located on BWI Marshall property, the prime generator of lodging demand in the area. The analysis concluded that the Amtrak Station Area Site is below average for hotel development and is considered much less suitable; the site has a small footprint with fewer demand generators (commercial/retail uses), below average visibility, and is located adjacent to a busy train station.<sup>5</sup>

The aforementioned studies led to the conclusion that these alternative sites are not feasible or reasonable alternatives to the Proposed Action Alternative. Although the alternative locations considered throughout the screening process (and eliminated prior to this EA) would likely generate revenue, maximum revenue generation is dependent on a hotel development ranking well in the evaluation criteria considered, with location near the Main Terminal Building serving as a key component. The No Action Alternative and other action alternatives dismissed from further consideration do not meet the project purpose and need to maximize revenue for the Airport and serve BWI Marshall travelers by offering high-quality accommodations in the Terminal core area.

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**6. Environmental Consequences – Special Impact Categories (refer to the Instructions page and corresponding sections in Appendix A of 1050.1E and the Airports Desk Reference for more information and direction. The analysis under each section must comply with the requirements and significance thresholds as described in the Desk Reference).**

**(A) AIR QUALITY** (Please note this analysis must meet requirements for both NEPA review and Clean Air Act (CAA) requirements).

**Clean Air Act**

(a) Is the proposed project located in a nonattainment or maintenance area for the National Ambient Air Quality Standards (NAAQS) established under the Clean Air Act and does it result in direct emissions (including construction emissions)?(If **Yes**, go to (b), **No**, go to the NEPA section below.

Anne Arundel County in Maryland (including the area surrounding BWI Marshall) is presently designated by the United States Environmental Protection Agency (EPA) as nonattainment for the pollutants of ozone (O<sub>3</sub>) and particulate matter equal to or less than 2.5 micrometers (fine particulates or PM<sub>2.5</sub>). Therefore, the EPA’s General Conformity Rule applies to the Proposed Action and an air quality analysis must be prepared. Emissions of nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOC) – the two primary precursors to O<sub>3</sub> formation – as well as PM<sub>2.5</sub> are the focus of this air quality analysis. For this Proposed Action, the applicable *de minimis* thresholds are 100 tons per year of VOC, NO<sub>x</sub>, and PM<sub>2.5</sub>. For completeness, the emissions inventory also included carbon monoxide (CO), particulate matter equal to or less than 10 micrometers (coarse particulates or PM<sub>10</sub>), and sulfur dioxide (SO<sub>2</sub>).

(b) Is the proposed project an “exempted action,” under the General Conformity Rule or Presumed to Conform (See FRN, vol.72 no. 145, pg 41565)? (If **Yes**, cite exemption and go to NEPA section below; **No**, go to (c)).

No, the proposed project is not an “exempted action” under the General Conformity Rule.

(c) Would the proposed project result in a net total of direct and indirect emissions that exceed the threshold levels of the regulated air pollutants for which the project area is in non-attainment or maintenance? (Attach emissions inventory). (If **Yes**, consult with ADO).

A construction and operational emissions inventory were conducted. **Attachment D, Air Quality Technical Memorandum** contains the detailed assumptions and methodologies used for the emissions inventories. Emissions associated with construction activities are temporary (i.e., approximately 15 months) and variable depending on level of activity. Construction activities would include site preparation, grading, material handling, structure construction, and paving. These construction activities would require the use of heavy trucks, excavating and grading equipment, material loaders, cranes, dozers, and paving equipment. **Attachment E, Construction Schedule and Assumptions** provides a rough estimate of equipment usage and schedule during construction.

Construction emissions associated with the Proposed Action are presented and compared to applicable *de minimis* thresholds, where applicable, in **Table 2**. As shown, the maximum annual emissions are estimated to be 2.4 tons of CO, 1.8 tons of NO<sub>x</sub>, 2.0 tons of PM<sub>10</sub>, 0.3 ton of PM<sub>2.5</sub>,

less than 0.1 ton of SO<sub>2</sub>, and 0.1 ton of VOC. Importantly, the maximum annual emissions of VOC, NO<sub>x</sub>, and PM<sub>2.5</sub> do not exceed any applicable *de minimis* thresholds, and hence, construction emissions conform to the applicable State Implementation Plan (SIP) designed to attain the NAAQS.

**Table 2**  
Project-Related Construction Emissions Inventory

<b>Pollutant</b>	<b>2014</b>	<b>2015</b>	<b>Maximum</b>	<i>de minimis</i>	<b>Conforms ?</b>
Carbon Monoxide (CO)	2.35	0.41	2.35	-	Yes
Nitrogen Oxides (NO <sub>x</sub> )	1.76	0.34	1.76	100	Yes
Particulate Matter 10 micrometers (PM <sub>10</sub> )	1.99	0.49	1.99	-	Yes
Particulate Matter 2.5 micrometers (PM <sub>2.5</sub> )	0.29	0.07	0.29	100	Yes
Sulfur Dioxide (SO <sub>2</sub> )	<0.01	<0.01	<0.01	-	Yes
Volatile Organic Compounds (VOC)	0.14	0.19	0.19	100	Yes

Source: United States Environmental Protection Agency NONROAD2008a, 2009 and United States Environmental Protection Agency MOVES2010b, 2012.

The Proposed Action would generate 70 peak hour inbound trips and 60 peak hour outbound trips or 830 daily inbound trips and 820 daily outbound trips.<sup>6</sup> Operational emissions were based on a round trip distance of 20 miles. Operational emissions associated with the Proposed Action are presented and compared to applicable *de minimis* thresholds, where applicable, in **Table 3**. As shown, the maximum annual emissions are estimated to be 9.1 tons of CO, 2.5 tons of NO<sub>x</sub>, 0.3 ton of PM<sub>10</sub>, 0.1 ton of PM<sub>2.5</sub>, less than 0.1 ton of SO<sub>2</sub>, and 0.2 ton of VOC. Importantly, maximum annual emissions of VOC, NO<sub>x</sub>, and PM<sub>2.5</sub> do not exceed any applicable *de minimis* thresholds, and hence, operational emissions conform to the applicable SIP designed to attain the NAAQS.

**Table 3**  
Project-Related Operational Emissions Inventory

<b>Pollutant</b>	<b>2015</b>	<b>2020</b>	<i>de minimis</i>	<b>Conforms ?</b>
Carbon Monoxide (CO)	9.11	8.23	-	Yes
Nitrogen Oxides (NO <sub>x</sub> )	2.54	1.72	100	Yes
Particulate Matter 10 micrometers (PM <sub>10</sub> )	0.25	0.22	-	Yes
Particulate Matter 2.5 micrometers (PM <sub>2.5</sub> )	0.13	0.11	100	Yes
Sulfur Dioxide (SO <sub>2</sub> )	0.02	0.02	-	Yes
Volatile Organic Compounds (VOC)	0.20	0.16	100	Yes

Source: United States Environmental Protection Agency NONROAD2008a, 2009 and United States Environmental Protection Agency MOVES2010b, 2012.

**NEPA**

(a) Is the airport’s activity levels below the FAA thresholds for requiring a NAAQS analysis? (If **Yes**, document activity levels and go to Item 2, **No**, go to (b)).

Based on FAA guidance, even though airport activity levels exceed FAA thresholds, because the project’s direct emissions are below *de minimis* thresholds and there is no consequent increase in the volume of aircraft operations, a NAAQS assessment is not necessary.

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(b) Do pollutant concentrations exceed NAAQS thresholds? (Attach emissions inventory).

An intersection analysis was conducted to evaluate air quality impacts at intersections associated with the Proposed Action. *Attachment D* contains the detailed assumptions and methodologies used for the intersection air quality analysis.

The Proposed Action would generate 70 peak hour inbound trips and 60 peak hour outbound trips or 830 daily inbound trips and 820 daily outbound trips.<sup>7</sup> The EPA identifies CO, PM<sub>10</sub>, and PM<sub>2.5</sub> as the primary pollutants of concern when assessing potential air quality impacts from motor vehicle exhaust. Increased concentrations of CO, PM<sub>10</sub>, and PM<sub>2.5</sub> can be expected in places where large numbers of motor vehicles (especially diesel vehicles for PM<sub>10</sub> and PM<sub>2.5</sub>) are present including crowded intersections where traffic delays are common during peak (traffic) hour periods.

For CO, intersections that are at Level-of-Service (LOS) D, E, or F or that will deteriorate to LOS D, E, or F with the Proposed Action are to be evaluated. For PM<sub>10</sub> and PM<sub>2.5</sub>, intersections that are at LOS D, E, or F with a significant number of diesel vehicles or intersections that will deteriorate to LOS D, E, or F with a significant number of diesel vehicles with the Proposed Action are to be evaluated.

A hot-spot analysis is required only for locations which are nonattainment or maintenance for CO, PM<sub>10</sub>, and/or PM<sub>2.5</sub>. As previously stated, the area surrounding BWI Marshall is in attainment for CO and PM<sub>10</sub> and nonattainment for PM<sub>2.5</sub>. Secondly, a significant number of diesel vehicles would not be associated with the Proposed Action. Therefore, an intersection hot-spot analysis is not required for CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. Nevertheless, for informational purposes only, a CO intersection analysis was completed. For this analysis, future No Action and Proposed Action traffic volumes at three signalized intersections were evaluated, as listed within the following:

1. I-195/MD-170 Interchange (South Intersection)
2. I-195/MD-170 Interchange (North Intersection)
3. Aviation Blvd and Elm Road

**Table 4** presents the results of the intersection air quality analysis for CO. All results include background concentrations as well as the impacts of roadway traffic. All impacts are well below the NAAQS.

**Table 4**  
CO Intersection Hotspot Results (ppm)

Intersection	Averaging Period	NAAQS	2015 No Action	2015 Proposed Action	2020 No Action	2020 Proposed Action
1	1-hour	35 ppm	2.2	2.2	2.2	2.2
	8-hour	9 ppm	1.5	1.5	1.5	1.5
2	1-hour	35 ppm	2.3	2.2	2.1	2.1
	8-hour	9 ppm	1.6	1.5	1.4	1.4
3	1-hour	35 ppm	2.6	2.6	2.5	2.5
	8-hour	9 ppm	1.8	1.8	1.7	1.7

Source: KB Environmental Sciences, Inc., 2013.

Note: 1-hour and 8-hour results include 1.8 ppm and 1.2 ppm background concentrations, respectively; ppm = parts per million.

(c) Is an air quality analysis needed with regard to state indirect source review?

No. Indirect source review requirements are state specific, and Maryland is not one of the states that require such reviews.

**(B) BIOTIC RESOURCES**

Describe the potential of the proposed project to directly or indirectly impact plant communities and/or the displacement of wildlife. (This answer should also reference Section S, Water Quality, if jurisdictional water bodies are present).

No potential to directly or indirectly impact biotic resources; the site is paved with no substantial vegetation other than landscaping. Under current regulations (April 2013), coordination with Maryland Department of Natural Resources (MDNR) would be required to determine if documentation of existing forest and natural resource conditions (a Forest Stand Delineation [FSD]) and associated Forest Conservation Plan (FCP) or any updates to the Airport's existing plans would be needed. However, the need to conduct a FSD or a FCP under the Forest Conservation Act (FCA) would be eliminated under regulations that are expected by MDNR to become effective October 1, 2013. Coordination with MDNR typically occurs during the final design stage of the project so that MDNR has access to site plans and can evaluate the details of the project. The MAA will coordinate with MDNR regarding the new regulations and any requirements at that time.

**(C) COASTAL RESOURCES**

(a) Would the proposed project occur in a coastal zone, or affect the use of a coastal resource, as defined by your state's Coastal Zone Management Plan (CZMP)? Explain.

Yes, BWI Marshall is in Anne Arundel County, which is part of Maryland's Coastal Zone. As such, MAA is required to comply with the regulations set forth and administered by the Maryland Department of the Environment (MDE) and MDNR. However the proposed project would not affect the use of a coastal resource and would not impact wetlands, waterways or forest, as defined by the Maryland CZMP.



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(b) If **Yes**, is the project consistent with the State's CZMP? (If applicable, attach the sponsor's consistency certification and the state's concurrence of that certification).

Yes. In correspondence dated May 17, 2013 the Federal Consistency Coordinator (FCC) stated, "Regarding the State's Federal Consistency determination, pursuant to Section 307 of the Federal Coastal Zone Management Act of 1972, as amended (CZMA), the Maryland Department of the Environment has no specific comments at this time." Upon completion of the Draft EA, MAA received a consistency determination from the MDE FCC pursuant to Section 307 of the CZMA, dated September 6, 2013. See **Attachment F: Agency and Public Consultation** for correspondence with the FCC and documentation of the Federal Consistency determination.

(c) Is the location of the proposed project within the Coastal Barrier Resources System? (If **Yes**, and the project would receive federal funding, coordinate with the FWS and attach record of consultation).

No.

#### **(D) COMPATIBLE LAND USE**

(a) Would the proposed project result in other (besides noise) impacts that have land use ramifications, such as disruption of communities, relocation of residences or businesses, or impact natural resource areas? Explain.

No. The Proposed Action Alternative site is entirely within the Terminal core area of the Airport on an existing surface parking lot that is predominantly flat and paved. To the south of the site are the Hourly Parking Garage and the Main Terminal Building. Roadways directly border the site on the other three sides. All construction related to the proposed project would be on Airport property. The project would not disrupt communities or require relocation of residences or businesses, or impact any natural resource areas. Some of the employee parking capacity on the existing surface lot (Main Terminal Employee Parking Lot) would be displaced by the proposed improvements; however, the 2013 *Traffic Study* addressed the parking displacement and found that the demand for employee parking could be accommodated (and continue to grow) with the reduction of parking to accommodate the hotel and associated parking.

The project is consistent with the approved BWI Marshall ALP Update (August 2012).

(b) Would the proposed project be located near or create a wildlife hazard as defined in FAA Advisory Circular 150/5200-33, "Wildlife Hazards On and Near Airports"? Explain.

No. MAA has design standards for SWM and landscaping that do not allow construction of wildlife hazards on Airport property. All SWM facilities will be designed for consistency with Maryland standards for both water quality (COMAR 26.08.02) and stormwater management (COMAR 26.17.02). It is important to note that due to its location, the proposed hotel site is subject to wildlife hazard restrictions and the placement and type of stormwater management is restricted due to these wildlife hazard considerations. FAA Advisory Circular 150/5200-33, *Wildlife Hazard Attractants on or Near Airports*, warns against the creation of any open water within 10,000 feet of aircraft movement areas or within five miles of approach or departure surfaces. In addition, design standards require that Environmental Site Design (ESD) is used to the maximum extent

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practicable (MEP) for stormwater management and does not allow for open water facilities or landscaping that would serve as habitat or attract waterfowl or potentially hazardous wildlife on Airport property.

### **(E) CONSTRUCTION IMPACTS**

Would construction of the proposed project increase ambient noise levels due to equipment operation; degrade local air quality due to dust, equipment exhausts and burning debris; deteriorate water quality when erosion and pollutant runoff occur; and/or disrupt off-site and local traffic patterns? Explain.

Construction of the Proposed Action would result in temporary impacts to ambient noise levels, air quality, and potentially localized water quality when runoff occurs.

Noise impacts during construction are expected, but noise impacts are generally localized at the vicinity of the construction site. Construction equipment and vehicles will create localized increases in noise levels, but these temporary noise impacts will not disrupt normal airport operations. Grading and scraping operations are the noisiest activities, with equipment generating noise levels as high as 70 to 95 dBA within 50 feet of their operations. However, distance would rapidly attenuate noise levels so area residences would only experience a slight increase in ambient background conditions. Distance from the construction site must be considered when evaluating potential noise impacts to land uses adjacent to or nearby the construction areas. All proposed construction activities will take place inside the airport boundary. Overall, the construction phase of this project is expected to create minor and temporary impacts at the project site and in the surrounding area. These impacts will be short-term in nature, lasting for the duration of construction activities. Temporary contractor staging areas will be required throughout the construction process to store and assemble construction equipment and materials.

As shown in Section (A) Air Quality, the maximum annual construction emissions are estimated to be 2.4 tons of CO, 1.8 tons of NO<sub>x</sub>, 2.0 tons of PM<sub>10</sub>, 0.3 ton of PM<sub>2.5</sub>, less than 0.1 ton of SO<sub>2</sub>, and 0.1 ton of VOC. Importantly, the maximum annual emissions of VOC, NO<sub>x</sub>, and PM<sub>2.5</sub> do not exceed any applicable *de minimis* thresholds, and hence, construction emissions conform to the applicable SIP designed to attain the NAAQS.

Although construction emissions associated with the Proposed Action are considered to be *de minimis* under the General Conformity Rule and are temporary in duration (i.e., 15 months), these emissions can be further reduced by employing the following measures and by incorporating the provisions of FAA *Advisory Circular 150/5370 – 10E, Standards for Specifying Construction of Airports*:

- Reduction of exposed erodible surface area through appropriate materials and equipment staging procedures;
- Cover of exposed surface areas with pavement or vegetation in an expeditious manner;
- Reduction of equipment idling times;
- Ensure contractor knowledge of appropriate fugitive dust and equipment exhaust controls;
- Soil and stock-pile stabilization via cover or periodic watering;
- Use of low- or zero-emissions equipment;
- Use of covered haul trucks and conveyors during materials transportation;

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- Reduction of electrical generator usage, wherever possible; and
  - Suspension of construction activities during high-wind conditions.

Additionally, use of cutback asphalt would not be permitted during the months of June, July and August. Cutback asphalt is a combination of asphalt cement and petroleum solvent which contains VOC that evaporate into the atmosphere as the asphalt cures.

If uncontrolled, construction activities have the potential to cause erosion and sedimentation that can impact water quality. Short-term construction impacts would be minimized by strict adherence to erosion and sediment control procedures. An Erosion and Sediment Control Plan would be developed during the final design phase in accordance with MDE guidelines, and implemented to avoid and/or minimize erosion and sedimentation.

All impacts associated with construction of the Proposed Action would be temporary and below significance thresholds. Permit requirements will be adhered to and will minimize or mitigate any potential temporary impacts due to construction.

#### **(F) SECTION 4(f) RESOURCES**

Does the proposed project have an impact on any publicly owned land from a public park, recreation area, or wildlife or waterfowl refuge of national, state, or local significance, or an historic site of national, state, or local significance? (If **Yes**, contact FAA, contact appropriate agency and attach record of consultation).

No. The Proposed Action Alternative site is on BWI Marshall property and will not impact any Section 4(f) resources. MAA received concurrence from the MHT dated 4/11/13 confirming that there are no historic properties affected by the Proposed Action. See *Attachment F: Agency and Public Consultation*.

#### **(G) ENDANGERED AND THREATENED SPECIES**

(a) Would the proposed project impact any federally or state-listed or proposed, endangered, or threatened species (ESA) of flora and fauna, or impact critical habitat? (Attach record of consultation with federal and state agencies as appropriate).

No. Activities from the implementation of the Proposed Action would occur within the built-up Terminal core area of the Airport, which is well out of range of any threatened or endangered species. The Proposed Action would not have an impact on any known or suspected threatened or endangered species or critical habitat. The MDNR Wildlife and Heritage Service confirmed that there are no State or Federal records for rare, threatened or endangered species within the boundaries of the project site. Coordination with the MDNR is attached. See *Attachment F, Agency and Public Consultation*.

(b) Would the proposed project affect species protected under the Migratory Bird Act? (If **Yes**, contact FAA).

No.

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## **(H) ENERGY SUPPLIES, NATURAL RESOURCES AND SUSTAINABLE DESIGN**

What effect would the proposed project have on energy or other natural resource consumption?  
(Attach record of consultations with local public utilities or suppliers if appropriate)

The Proposed Action would require additional energy use to provide water, heating, air conditioning and electricity to the hotel; however, the anticipated increase in additional energy consumption required by the proposed hotel development would not amount to a significant percent of total airport energy use, and current energy supplies at the Airport could meet the additional demand.

The existing airport Central Utility Plant (CUP) was recently upgraded with more energy-efficient equipment, and another expansion of the CUP is proposed in anticipation of a potential vertical expansion of the terminal, which would require more energy use. The CUP expansion would increase the amount of energy supplied at the Airport and the ability to accommodate increases in energy consumption from stationary facilities. Although MAA currently has spare capacity within the electrical distribution system and CUP, the capacity is largely reserved for future MAA projects.<sup>8</sup> Therefore, the hotel developer will need to evaluate the available capacity and determine whether additional energy sources are needed and determine how to accommodate anticipated hotel energy usage. Additionally, a 6-inch gas line is available at the CUP; however the hotel developer will have to coordinate with BGE to determine if sufficient capacity exists to meet the Airport and hotel demand.<sup>9</sup>

The Proposed Action would not involve the use of any unusual or scarce materials and would not cause a demand for the use of any unusual natural resource or the use of any resource that is in short supply. There are no known deposits of valuable natural resources located on or in the vicinity of the Proposed Action Alternative site that would be affected by the Proposed Action.

### *Sustainable Design*

No formal site plans or building design have been developed for the proposed hotel site since a developer for the property has not yet been selected. Private development on State (Airport) property is not required to be designed and built to beyond-code green building rating systems, however, there are Federal and State incentives, such as tax credits, available to encourage sustainable development by private developers where there are no mandatory requirements in order to encourage higher levels of green building.

The U.S. Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) point system is divided into six categories including one that addresses sustainable sites. Some of the design opportunities to consider in this category include minimizing paving not necessary to meet code or functional requirements, minimizing the development footprint, removing existing pavement, and developing a comprehensive, site-specific stormwater management plan. The Proposed Action Alternative site is located on a previously disturbed and paved site, which is considered more likely to comply with LEED requirements than an undisturbed green site. In order for a LEED certification to be granted, a site has to have the ability to incorporate the concept of sustainable development as well as avoid impacts to the surrounding environment. According to preliminary analysis in the 2006 *BWI Hotel Site Selection Study*, a

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LEED certification rating of silver for the Proposed Action Alternative site would likely be obtainable.

In order to obtain LEED certification, sustainable technologies and methods must be utilized in the construction and design of the project. The proposed hotel will use sustainable techniques wherever feasible such as recycling and reuse of materials; access to affordable energy and local food production; use of sustainable source materials; and accessibility for elderly and physically challenged individuals. Building design will consider sustainable technologies such as ground-source heat pumps, energy efficient appliances, doors and windows, combined heating/cooling and power systems, and passive solar gain. Planting of trees and other vegetation proximate to the building (such as rain gardens and community vegetable gardens) will be considered to help reduce both “heat island effect” and help with onsite stormwater management. All of these sustainable techniques would promote opportunities for green jobs and training and improve the livability, environmental performance and economic vitality of the proposed hotel and BWI Marshall.

### **(I) ENVIRONMENTAL JUSTICE**

Would the proposed project have a disproportionate impact on minority and/or low-income communities? Consider human health, social, economic, and environmental issues in your evaluation. Explain.

No. The Council on Environmental Quality (CEQ), which has oversight of the Federal government’s compliance with Executive Order 12898 and NEPA, has determined that a minority population group exists if the affected area minority population exceeds 50 percent or the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate geographic analysis. The April 2012 Final EA for Proposed Airport Improvements at BWI Marshall considered the Census Block Groups in the Airport vicinity. In all of the Census Block Groups considered (see **Table 5**), the minority population percentage is substantially less than 50 percent and therefore the Block Groups do not qualify as minority population groups.

The poverty threshold for 2010, as established by the U.S. Census Bureau, was used to determine the low-income populations within the Airport vicinity. The average household size within the project area is 2.60 persons per household. The 2010 poverty threshold, for a three-person household, with one person under the age of 18, is \$17,590. For the purposes of analysis, the threshold amount was compared to the median household income of each Block Group in the Airport vicinity. According to the 2000 Census information, none of the Census Block Groups within the Airport vicinity are considered low-income (see Table 5).

The Proposed Action would occur on Airport property within the Terminal core area and would not impact the economic development or health and safety of the communities that exist in the vicinity of the Airport. No neighborhoods or populations would be impacted by the proposed hotel development and no disproportionately high and adverse impacts on minority and low-income populations with respect to human health and environment would occur.

**Table 5**  
Community Profile

Block Group	Total Population	Non-Minority Population	Median Household Income (\$)	Average Household Size	% Minority	% Low-Income
7507.00-1	913	683	58,958	2.56	25.2	3.5
7507.00-2	4	4	66,250	2.00	0	0
7508.01-5	95	83	51,364	2.63	12.6	11.7
7505.00-2	2,443	2,361	59,808	2.66	3.4	3.6
7505.00-3	178	175	40,729	2.78	1.7	0
7506.00-2	206	190	41,094	2.78	7.8	0
<b>Total</b>	<b>9,079</b>	<b>8,367</b>				

Source: U.S. Census, Bureau, 2000 (*Final EA for Proposed Airport Improvements at BWI Marshall*, April 2012).

**(J) FARMLANDS**

Does the project involve acquisition of farmland, or use of farmland, that would be converted to non-agricultural use and is protected by the Federal Farmland Protection Policy Act (FPPA)? (If **Yes**, attach record of coordination with the Natural Resources Conservation Service (NRCS), including form AD-1006.)

No.

**(K) FLOODPLAINS**

(a) Would the proposed project be located in, or would it encroach upon, any 100-year floodplains, as designated by the Federal Emergency Management Agency (FEMA)?

No.

(b) If Yes, attach the corresponding FEMA Flood Insurance Rate Map (FIRM) and describe the measures to be taken to comply with Executive Order 11988.

Not Applicable.

**(L) HAZARDOUS MATERIALS**

Would the proposed project involve the use of land that may contain hazardous materials or cause potential contamination from hazardous materials? (If **Yes**, attach record of consultation with appropriate agencies). Explain.

In May of 2012, AECOM completed a literature and limited field investigation for the 2.5-acre land parcel located immediately north-west of the Hourly Parking Garage to evaluate the current environmental conditions of the property considered for the proposed hotel development. In January of 2013, AECOM performed a supplemental Phase II Environmental Assessment of the 4.5-acre parcel not included in the previous site investigation located immediately northwest of the initial investigation site, on the northern and eastern portions of the employee parking lot. (**Attachment G: Limited Phase II Environmental Assessment: BWI Thurgood Marshall Future Hotel Site and**

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***Supplemental Phase II Environmental Assessment: BWI Thurgood Marshall Airport Future Hotel Site***). Figure 1 of the *Limited Phase II Environmental Assessment* report and Figure 1 of the *Supplemental Phase II Environmental Assessment* depict the sites investigated. The proposed hotel would likely be located on the 2.5-acre site evaluated initially. However, based on new airport planning information, MAA wanted to expand the initial assessment to encompass a larger potential footprint for hotel development.

*Limited Phase II Environmental Assessment of 2.5-Acre Site*

The May 2012 site assessment of 2.5 acres, determined that part of the subject property was historically used for fuel storage, gasoline retail operations and rental car facilities, which included automobile fueling and maintenance services. Historical maps of the property identify the presence of underground storage tanks (USTs), pump islands, a utility plant with oil fired boilers and fuel piping associated with the fuel storage and rental car servicing facilities that were located on the southeast and southwest corners of the current subject property.

*Soil Quality* - The study found that no concentrations of the common fuel constituents were detected above laboratory detection limits in any of the soil samples submitted. One of the subsurface soil samples (SB-14) submitted for analysis contained concentrations above laboratory detection limits for naphthalene, TPH-GRO and TPH-DRO; however, none of the concentrations detected in the subsurface samples exceed Maryland Department of Environment (MDE) Non-Residential Cleanup Standards. Analysis of the surface soil samples collected at the site revealed trace concentrations of TPH-DRO and naphthalene. The maximum concentration of naphthalene in surface soil samples was 0.13 mg/kg in sample SB-2 (0'-1"); and the maximum concentration of TPH-DRO was 110 mg/kg in sample SB-18 (0'-1"). Diesel range organics are composed of larger chains of hydrocarbons and their presence in the soil samples could also indicate the presence of jet fuel or fuel oil which are also composed of similar length (heavier) hydrocarbon chains. None of the concentrations detected exceed MDE Non-Residential Cleanup Standards.

*Groundwater* - Groundwater was not encountered during the investigation. Because a developer has not yet been selected, the placement of the hotel and associated hotel features has not been determined and the chosen construction methods are not known at the time of this EA. The type of development and method of construction will influence the potential to encounter groundwater. If groundwater is encountered by the developer/contractor before or during construction, the developer/contractor will obtain all necessary permits and coordinate with the appropriate agencies.

*Supplemental Phase II Environmental Assessment of 4.5-Acre Site*

Note that the 4.5-acre site evaluated for the Supplemental Phase II Environmental Assessment is part of the 11-acre parcel identified for hotel development. No developer has been selected for the proposed hotel development and therefore the placement of the hotel development within the 11 acres has not been determined. Although the entirety of the 11-acre site is being evaluated for the proposed hotel development, the 4.5-acre site described in this section is not the anticipated location for the proposed hotel building footprint. Furthermore, the findings of this EA will help to inform the developer of site conditions, once selected. Additionally, activities associated with hotel development, such as construction laydown areas may include this 4.5-acre area. If it is determined that any part of this 4.5-acre site is ideal for construction of the hotel itself, all necessary remediation will be identified and coordinated with the appropriate agencies.

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The 4.5-acre supplemental site assessment of the existing employee parking lot found that the site historically contained a number of fueling facilities. A former Chevron retail gasoline site was reported to have been located to the south of the current subject site and a former boiler facility building was located to the southeast of the site. A former “Quick Turn Around” (QTA) car rental area was located along the eastern portion of the current subject site. This area appears to have operated seven different bays facilitating different car rental company’s fleets. A geophysical study was conducted to check for the presence of USTs, vaults and associated piping in the QTA area, which was targeted as having the highest likelihood of these remnant subsurface structures. No subsurface anomalies that would be indicative of the presence of tanks or product piping within the scanned area were found. The Geophysical Report is included as an attachment to *Attachment G: Supplemental Phase II Environmental Assessment*.

*Soil Quality* – The study determined that no constituents analyzed for, including common fuel constituents, were detected above the MDE Non-Residential Clean-Up Standards in any of the soil samples submitted. Various constituents were detected at trace to low concentrations. Of the surface soil samples (0-1 foot) collected, concentrations of TPH-DRO were found in samples E-16 and E-17, however none of the concentrations detected exceed MDE Non-Residential Cleanup Standards. Of the subsurface soil samples submitted for analysis, various samples detected concentrations of TPH-GRO, TPH-DRO, Naphthalene, and total benzene, toluene, ethyl benzene, and xylene (BTEX), at levels below the MDE Non-Residential Cleanup Standards.

The detected soil impacts were primarily identified within the central to southern portions of the investigation area; but based on MDE standards, and planned land development, the material evaluated does not pose a significant risk. The levels detected suggest residual historical impacts from previous site use. Although the concentrations detected do not exceed a standard, the possibility exists of a source area in locations not evaluated (between boring locations), that may contain higher concentrations which do exceed a standard. Any future developer/contractor should be made aware of its presence and plan accordingly for proper soils management and site worker safety.

*Groundwater* – Five monitoring wells were sampled and analyzed on the 4.5-acre site. The groundwater analytical results for the wells sampled showed concentrations of at least one constituent that exceeded the MDE groundwater standard. The following constituents were detected in at least one well that exceeded a groundwater standard: TPH-DRO, TPH-GRO, benzene, MTBE, naphthalene, 1,2-dichloroethane, and 1,2-dibromoethane. Other constituents detected below a regulatory standard included: toluene, ethyl benzene, xylenes, trichloroethene, tert-butyl alcohol, cyclohexane, and chloroform. A summary of the results are provided in *Attachment G, Supplemental Phase II Environmental Assessment*. The TPH-DRO constituents detected suggest a widespread impacted groundwater area from historical site use. Monitoring well MW-EMP02 and MW-EMP04 contained the majority of other analytical detections and values exceeding MDE standards. These locations support the suspicion that a potential source area may exist on the southern portion of the subject site and/or the impacts detected are from historical residual site use.

### Conclusion

In the 2.5-acre area evaluated for the *Limited Phase II Environmental Assessment*, there does not appear to be any significant impacts of concern within the first foot below grade at the Proposed Action Alternative site in the areas investigated. Based on field observations and the analytical



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results of the subsurface investigation, petroleum hydrocarbon impacts appear localized to the 33 to 40-feet below ground surface (bgs) portion of soil boring SB-14 location and not widespread. Furthermore, SB-14 is the farthest outlying boring from the suspected potential source areas, with closer boring locations showing no evidence of petroleum impacts. Given that the concentrations detected in SB-14 do not exceed the MDE Non-Residential Clean-up Standards; and that future activities at the site are unlikely to include excavation or disturbance of soils at the impacted depths; no further actions are recommended at this time. If potential future development plans include excavations greater than 30 feet bgs, management of impacted soils may need to be further evaluated. Groundwater was not encountered during this investigation.

In the 4.5-acre *Supplemental Phase II Environmental Assessment* conducted, various low-level concentrations of primarily petroleum related constituents were detected below regulatory standards in select soil boring locations across the study area. Additionally, based on the geophysical investigations, no remnant subsurface anomalies, USTs, etc. were identified in the areas surveyed. The detected soil impacts were primarily identified within the central to southern portions of the investigation area; but based on MDE standards, and planned land development, the material evaluated does not pose a significant risk. Although the concentrations detected do not exceed a standard, the possibility exists of a source area in locations not evaluated (between boring locations), that may contain higher concentrations which do exceed a standard. Any future developer/contractor should be made aware of its presence and plan accordingly for proper soils management and site worker safety.

A prevalence of petroleum hydrocarbon constituents in groundwater was found across the 4.5-acre site, likely resultant from past land use. Based on groundwater depth, these findings should not impact construction activities.

During construction, if any hazardous materials are encountered, they will be disposed of in accordance with applicable laws and regulations. If potential future development plans include excavations greater than 30 feet bgs, management of impacted soils may need to be further evaluated. BWI Marshall has developed an *Airport Integrated Contingency Plan (ICP)* and *Spill Prevention, Control and Countermeasure (SPCC) Plan*. The ICP describes the actions that should be taken in the event of a release of hazardous materials or a spill that threatens to enter the stormwater management system. The ICP also includes emergency contacts and reporting procedures. This ICP, and other applicable documents such as tenant-specific plans, should be considered when preparing for hazardous or emergency situations. In addition, a separate SPCC plan has been developed for BWI Marshall, in accordance with regulatory requirements.<sup>10</sup>

#### **(M) HISTORIC, ARCHITECTURAL, ARCHEOLOGICAL OR CULTURAL PROPERTY**

(a) Describe any impact the proposed project might have on any properties in or eligible for inclusion in the National Register of Historic Places. (Include a record of your consultation and response with the State or Tribal Historic Preservation Officer (S/THPO)).

No impacts to historic, architectural, archeological, or cultural property. In 1996, MAA prepared a Historic Preservation Plan (HPP) with input and coordination from Maryland Historic Trust (MHT) that provided an overview of the history and prehistory of BWI Marshall, including an inventory of all recorded archeological and historical resources located on Airport property as well as a planning manual/action plan component. Part of the HPP planning manual/action plan details the

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coordination required for project review and development. Specifically, for projects that fall within areas designated in the HPP as previously evaluated/no additional study is required, MAA is able to move forward with the proposed project without any further coordination with MHT. The Proposed Action Alternative site is located in a “previously evaluated/no additional study required” area of the Airport. MAA received concurrence from the MHT dated 4/11/13 confirming that there are no historic properties affected by the Proposed Action. See *Attachment F, Agency and Public Consultation*.

(b) Describe any impacts to archeological resources as a result of the proposed project. (Include a record of consultation with persons or organizations with relevant expertise, including the S/THPO, if applicable).

No impacts. Refer to (M)(a) above.

### **(N) INDUCED SOCIOECONOMIC IMPACTS**

Would the proposed project cause induced, or secondary, socioeconomic impacts to surrounding communities, such as change business and economic activity in a community; impact public service demands; induce shifts in population movement and growth, etc.? Explain.

The Proposed Action would not cause any impacts to surrounding communities or shift any business or economic activity or population movement or shifts in a community. There is sufficient market demand to accommodate the proposed hotel at BWI Marshall. Currently, there is one other hotel on Airport property (Four Points Sheraton).

A *Hotel Market Analysis* was conducted in 2012 and the demand for on-Airport hotel rooms and services was evaluated. The study took into account the supply of rooms by direct competitors to estimate supportable guest rooms for a new airport hotel. The analysis determined supply and demand factors in the “very resilient lodging market” in the BWI Marshall Hotel Market Area, and projected the number of rooms that could be supported by the proposed hotel development. Primary competitive hotels (located in the Linthicum area) as well as a secondary competitive market (located in the Arundel Mills sub-market) were surveyed for occupancy and average daily room rate statistics for the last several years.<sup>11</sup> The research also considered hotels (room supply) entering the competitive market in 2013. Based on the research, and taking into account existing and projected origin/destination and enplaned passengers at the Airport, analysis showed that an on-Airport hotel can be supported in the 5 to 10 year timeframe while still maintaining an area-wide occupancy level of 75% to 80% or above. Specifically, considering all factors, the *Hotel Market Analysis* concluded that a 250-room hotel is market supportable by the year 2015.<sup>12</sup>

An estimate of approximately 50 square feet of meeting space per guest room was used in determining 12,500 gross square feet of recommended conference and banquet facilities at the proposed hotel. The ratio is comparable to its direct competitors, which have meeting space ratios ranging from 22 to 58 square feet of meeting space per guest room.<sup>13</sup> Given the location near the Airport, the BWI office market, and Baltimore, BWI Marshall Hotel Market Area hotels tend to serve business travelers, particularly those associated with companies adjacent to the Airport. The growing office market requires larger full-service hotels that offer conference and meeting space to meet their needs.<sup>14</sup> Since the proposed hotel is the only property in the competitive supply with direct connectivity to the Main Terminal, the hotel is likely to attract a particular market segment of

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meeting space customers with Airport- or aviation-related business. The unique location sets the proposed hotel apart from the competitive hotel supply and would attract a distinct market of meeting space customers. It is assumed that the addition of the proposed hotel to the market would not result in a significant loss of sales for existing hotels and conference/ banquet facilities.

Additionally, Anne Arundel County has a diverse economy and a strong market for hotels due to its location near corporate demand generators, government institutions, its growing office market and its proximity to Washington, DC, and the eastern seaboard. Airport enplanements, hotel tax data, taxable retail sales figures, and unemployment statistics all showed improvement in 2010. Given these statistics, the demand for hotels in the BWI Marshall Hotel Market Area, and the projected increase in passenger activity at BWI Marshall and the growing economy, there should be ample room in the hotel market for the proposed project without negatively impacting existing hotels in the area. It is anticipated that the Proposed Action would feature a variety of full-service food and beverage venues for travelers and visitors, which would support an increase in overall local economic activity.

### **(O) LIGHT EMISSIONS AND VISUAL EFFECTS**

Would the proposed project have the potential for airport-related lighting impacts on nearby residents? Explain.

No impacts to light emissions or visual impacts would result from implementing the Proposed Action. The area surrounding BWI Marshall is an urban landscape and there are no nearby residents that would be impacted by additional lighting from the proposed hotel. The Airport currently has light emissions from aircraft, ground operations, work area lighting and security lighting, and the surrounding highways and local roads are illuminated by street lights around the Airport property. Therefore, any additional light from the proposed hotel development would not significantly change the light emissions from the Airport. The Proposed Action would also not detract from the area's visual quality, and would be in keeping with the appearance of the modern international airport.

Lighting for the Proposed Action will be designed to comply with FAA and airport lighting standards in order to ensure there will be no negative impacts to runway operations or runway safety. The FAA promotes the following measures to mitigate any potential lighting impacts: shielding lighting fixtures with visors; angling fixtures toward the base of the mounting poles; directional lighting; or using minimal pole heights or reduced wattage bulbs.

### **(P) NOISE**

Will the project, when compared to the No Action alternative for the same timeframe, cause noise sensitive areas located at or above DNL 65 dB to experience a noise increase of at least DNL 1.5 dB? (Use AEM as a screening tool and INM as appropriate. See Airports Desk Reference, Chapter 17, for further guidance).

No. The Proposed Action does not induce aircraft activity nor change operational levels/fleet mix at BWI Marshall; therefore, there would be no difference between the No Action and Proposed Action noise exposure for aircraft activity. Any temporary noise during construction would be temporary,

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localized, and only incremental to the existing noise of aircraft and vehicle operations in the vicinity.

## **(Q) SOCIAL IMPACTS**

Would the proposed project cause an alteration in surface traffic patterns, or cause a noticeable increase in surface traffic congestion or decrease in Level of Service?

The only changes to traffic patterns that would result from the Proposed Action would occur on Airport property. No neighborhoods or businesses would be impacted by changes to traffic patterns as a result of the Proposed Action. The Proposed Action includes modifying the exit route from the employee parking facilities such that employees would exit the site via Elm Road, rather than through the existing parking exit plaza as currently provided. The 2013 *Traffic Study* assessed the potential traffic operational impacts associated with the hotel project which could result from (a) new trips associated with the hotel operation and (b) reallocation of existing employee parking trips resulting from modifications to the employee exit flow path to accommodate the implementation of the hotel. The Terminal area arrivals and departures level curbside roadways were not included in the study area because hotel-related traffic entering and exiting the study area would have direct access to the hotel site and would, therefore, not access the departures or arrivals level curbside roadways.

The traffic analysis provides an assessment of existing (2012) traffic conditions and two future year conditions representing the first year of operation (assumed to be 2015) and opening-day plus five years (2020). Potential impacts were assessed by comparing the future No Action traffic condition to anticipated future Proposed Action traffic conditions for both 2015 and 2020. A future project impact would be considered significant if the roadway segment or intersection operating under the future Proposed Action condition is (a) anticipated to operate at an unacceptable level of service (LOS E or F) AND (b) the project contribution to the roadway or intersection V/C ratio as measured by the difference in V/C between the Proposed Action and No Action alternatives is 5 percent or greater than the V/C ratio for the No Action Alternative.

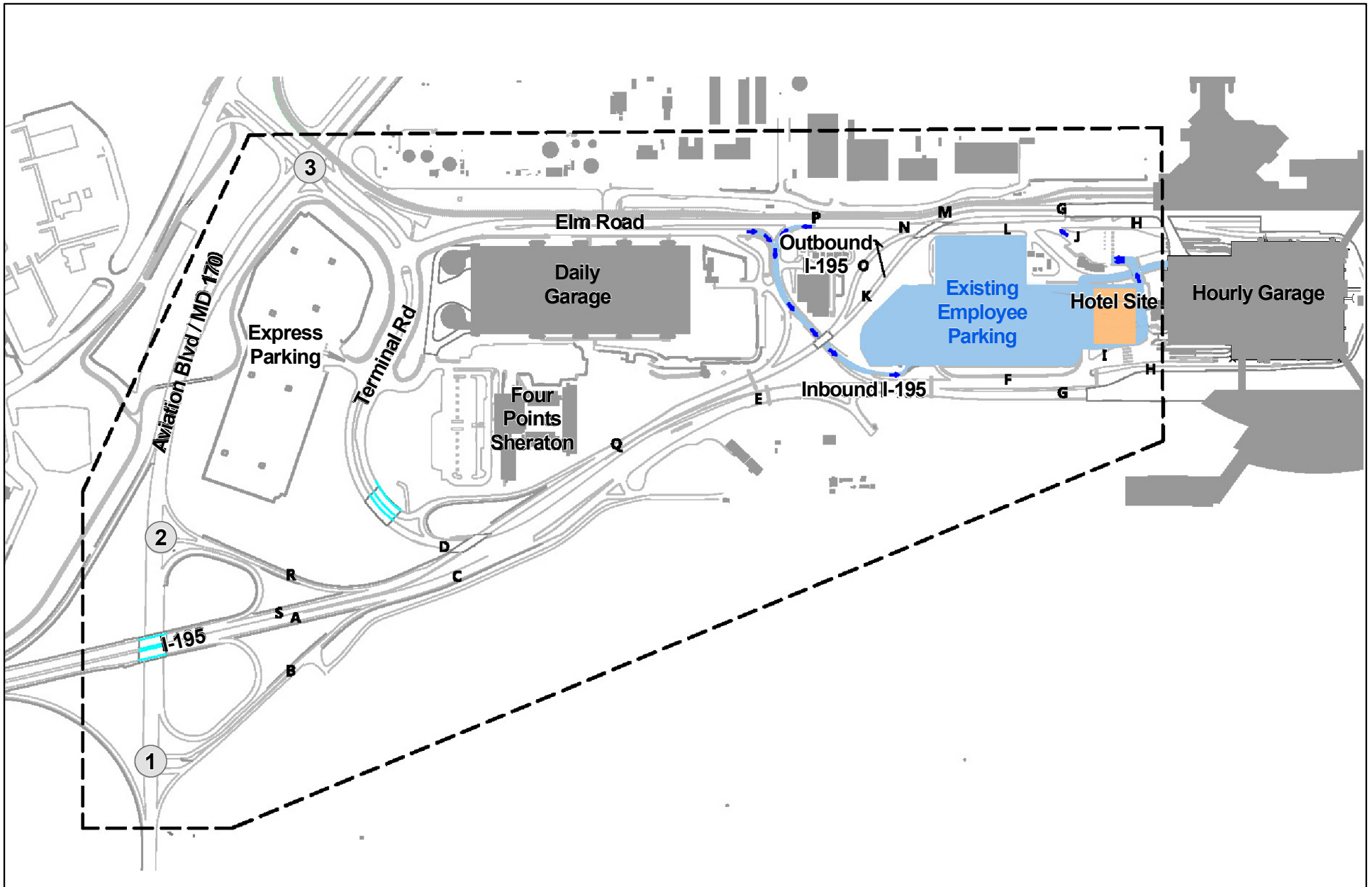
### Roadway Volumes and LOS:

In 2015, one of the roadways analyzed (Link B) resulted in a decrease in LOS (D to E) under the Proposed Action Alternative. In 2020, Link E resulted in a decrease in LOS when comparing the Proposed Action and No Action alternatives; however neither roadway in 2015 or 2020 had a 5 percent or greater change in the V/C condition and therefore the decrease is not considered significant. Link I resulted in a decrease from LOS A to LOS B in 2015 and 2020 when comparing the No Action and the Proposed Action alternatives, however, LOS B is considered acceptable. The links are illustrated on **Figure 7**.

### Intersection Volumes and LOS:

No intersections had a significant decrease in LOS, however, in 2015, the LOS at I-195/MD-170 Interchange (North intersection) decreased from B to C when comparing the No Action and Proposed Action alternatives. See *Attachment C, Traffic Study* for the detailed analysis and results.

# BWI Marshall Hotel Environmental Assessment



## LEGEND

- ##** Roadway Links
- Study Area Boundary
- 1** Study Area Intersection

**Figure 7**  
**Traffic Analysis Study Area and Link Diagram**



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The analysis determined that when comparing the No Action and Proposed Action alternatives, LOS for the study area roadway segments and intersections, there are no anticipated significant impacts to roadway or intersection operations resulting from the hotel project.

Parking Demand:

In addition, public and employee parking demand estimates were assessed to ensure that the Hourly Garage would provide adequate capacity through the 2020 planning horizon such that the employee parking currently provided in the Hourly Garage could remain in place. The analysis found that the demand for employee parking could continue to grow even with the reduction of parking capacity required to accommodate the hotel and associated parking. Specifically, the site would provide adequate parking capacity to accommodate the demand for employee parking through 2020 with an estimated surplus of 110 employee parking spaces in 2020.<sup>15</sup>

**(R) SOLID WASTE**

Would the operation and/or construction of the project generate significant amounts of solid waste? If **Yes**, are local disposal facilities capable of handling the additional volumes of waste resulting from the project? Explain.

The Airport currently produces and collects solid waste. The operation of the Proposed Action, once constructed, would not generate a significant amount of solid waste compared to solid waste already generated by airport operations. During construction, the developer/contractor will use disposal methods in accordance with state and local regulations. Any solid waste generated from the project will be properly disposed of at a permitted solid waste facility, or recycled, if possible. MAA will advise the selected developer/contractor to consider Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, during construction and implementation of the Proposed Action. The Order sets forth Federal energy requirements in several areas and states that Federal agencies should enhance efforts toward sustainable buildings and communities.

**(S) WATER QUALITY**

(a) Does the proposed project have the potential to impact water quality, including ground water, surface water bodies, and public water supply system or federal, state or tribal water quality standards? (If **Yes**, contact appropriate agency and include record of consultation).

No significant water quality impacts are anticipated as a result of the Proposed Action. Strategies for complying with water quality management requirements at the Proposed Action Alternative site were conceptually evaluated in a technical memorandum in December 2012. See **Attachment H, Technical Memorandum: Hotel Development Environmental Support - Stormwater Analysis (Stormwater Technical Memorandum)**. Analysis included the determination of anticipated stormwater management requirements, development of conceptual compliance alternatives, and development of conceptual cost estimates. The technical memorandum addresses the MDE stormwater management requirements for redevelopment activities, which considers only management of the water quality volume.

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The hotel site was analyzed in accordance with the *Stormwater Management Act of 2007*, the 2000 *Maryland Stormwater Design Manual* (2009 revisions), and the 2010 *Maryland Stormwater Management Guidelines for State & Federal Projects*. These guidelines require Environmental Site Design (ESD) practices to be implemented to the maximum extent practicable (MEP) to meet stormwater management requirements. Structural practices may be allowable if ESD practices are not practicable.

The Proposed Action Alternative site is currently an asphalt paved surface parking lot (approximately 100% impervious), and is therefore classified as “redevelopment.” For redevelopment sites, which are defined as any site being constructed on, altered or improved which has greater than 40 percent existing impervious cover, water quality treatment for the first one (1) inch of runoff is required for 50 percent of the existing impervious cover. For redevelopment sites with increases in impervious cover, additional impervious cover is treated as new development. For redevelopment sites with decreases in impervious cover, treatment requirements can be met through a combination of stormwater management practices and impervious removal.

To comply with MDE regulations, the proposed redevelopment project must address the water quality volume for 50% of the existing site impervious cover. It is estimated that 2.5 acres of existing impervious cover will be disturbed by the hotel development; therefore water quality treatment must be addressed for 1.25 acres of impervious cover. It is also expected that about 10 percent, or 0.25 acres, of the proposed site will be converted to pervious cover. Therefore, 1 inch of water quality treatment must be provided for 1.00 acre which translates to a total water quality treatment volume of 0.079 acre-feet. See *Attachment H, Stormwater Technical Memorandum* for calculations.

Four scenarios were developed as stormwater quality management solutions in the Stormwater Analysis conducted in December 2012 (*Attachment H*): (1) Micro-Bioretenion; (2) Pervious Pavement; (3) Subsurface Infiltration; and (4) Pavement Removal. Assuming there is sufficient space available in the site plan for above-ground practices, MDE is likely to prefer a solution similar to Scenario 1, 2 or 4 as environmental site design is required to the maximum extent practicable. The stormwater analysis may need to be updated once a more definitive site plan is developed.<sup>16</sup>

All SWM facilities will be designed for consistency with Maryland standards for both water quality (COMAR 26.08.02) and stormwater management (COMAR 26.17.02). It is important to note that due to its location, the proposed hotel site is subject to wildlife hazard restrictions and the placement and type of stormwater management is restricted due to these wildlife hazard considerations. FAA Advisory Circular 150/5200-33, *Wildlife Hazard Attractants on or Near Airports*, warns against the creation of any open water within 10,000 feet of aircraft movement areas or within five miles of approach or departure surfaces. In addition, design standards require that ESD is used to the MEP for stormwater management and does not allow for open water facilities or landscaping that would serve as habitat or attract waterfowl or potentially hazardous wildlife on Airport property.

Short-term construction impacts and long-term effects related to increased paved surfaces would be minimized by strict adherence to erosion and sediment control procedures. An Erosion and Sediment Control Plan would be developed during the final design phase in accordance with MDE guidelines, and implemented to avoid and/or minimize erosion and sedimentation. Appropriate

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drainage, infiltration, and sediment control measures would be planned and implemented to minimize disturbance to the area and reduce the risk of contamination to water resources.

Long-term impacts would be avoided and minimized through strict adherence to the *Stormwater Management Act of 2007*, the 2000 *Maryland Stormwater Design Manual* (2009 revisions), and the 2010 *Maryland Stormwater Management Guidelines for State & Federal Projects*. These guidelines require Environmental Site Design (ESD) practices to be implemented to the maximum extent practicable to meet stormwater management requirements. Structural practices may be allowable if ESD practices are not practicable.

(b) Is the project to be located over a designated Sole Source Aquifer? (If **Yes**, attach record of consultation with EPA).

No.

#### **(T) WETLANDS**

(a) Does the proposed project involve federal or state regulated or non-jurisdictional wetlands? (Contact USFWS or state agency if protected resources are affected) (Wetlands must be delineated using methods in the US Army Corps of Engineers 1987 Wetland Delineation Manual. Delineations must be performed by a person certified in wetlands delineation).

No. There are no federal or state regulated wetlands or non-jurisdictional wetlands in the area considered for the Proposed Action.

(b) If yes, does the project qualify for an Army Corps of Engineers General permit? (Document coordination with the Corps).

Not applicable.

#### **(U) WILD AND SCENIC RIVERS**

Would the proposed project affect a river segment that is listed in the Wild and Scenic River System or National Rivers Inventory? (If **Yes**, coordinate with the jurisdictional agency and attach record of consultation).

No.

#### **(V) CUMULATIVE IMPACTS**

Discuss impacts from past, present, and reasonably foreseeable future projects both on and off the airport. Would the proposed project produce a cumulative effect on any of the environmental impact categories above? Consider projects that are connected and may have common timing and/or location. For purposes of this Form, generally use 3 years for past projects and 5 years for future foreseeable projects.

A review of several information sources was conducted to determine past, present, and reasonably foreseeable development actions at BWI Marshall and the surrounding area. The April 2012 *Final EA for Proposed Airport Improvements at BWI Marshall* contains an analysis of cumulative



impacts that remains applicable to the proposed hotel development in this EA. The information sources used in the *Final EA* included the BWI Marshall Airport Master Plan (2010), BWI Marshall ALP, BWI Marshall 2011 Construction Update, and Maryland’s FY 2011-2016 Consolidated Transportation Program.

The analysis of cumulative impacts in this EA considers the potential impacts of the Proposed Action Alternative and other development actions, both on and off the airport, that are related in terms of time or proximity.

**On-Airport Projects:**

MAA is responsible for the planning, design and construction of various airport projects on BWI Marshall property intended to improve the functionality of the Airport as well as maintain its economic vitality. The BWI Marshall Airport Master Plan, which addresses the long-term facility needs of the airport through 2030 and beyond, is categorized by Airfield projects, Terminal projects, Support facilities and Private investments. **Table 6**, modified from the *Final EA for Proposed Airport Improvements at BWI Marshall*, contains a list of recently completed, current and future projects that occur between 2011 and 2020, in order to qualitatively assess potential cumulative impacts. The table was updated with more recent information available in the 2011 Master Plan Update and the August 2012 ALP Update.

**Table 6**  
BWI Marshall On-Airport Cumulative Projects

	<b>Project Name (Type of Project*)</b>	<b>Year</b>
Recently Completed	Runway 33L MALSR Installation	2009
	Reconstruct the C and D aprons (A)	2009 - 2011
	ASDE-X Installations	2010 - 2011
	Consolidated Rental Car Facility Improvements (S)	2010 - 2011
	Gate G Improvements (S)	2010 - 2011
	Ramp Paving Project (A)	2011
Current	Comprehensive Paving Improvements (A)	2011 - 2014
	Enclosures for US Airways and American Airlines (T)	2011
	Apron Reconstruction (A)	2011
	Comprehensive Interior/Exterior Modifications (T)	2011
Future	Noise Zone Land Acquisition Program (M)	2012 - 2013
	Homeowner Assistance Program (M)	2012 - 2016
	Runway 15L-33R FAA Standards Compliance (A)	2015**
	Expansion of CUP (S)	2015**
	On-Airport Roadway Improvements (S)	2015**
	Relocation of Electrical vault (S)	2016
	Development of a new Northrop Grumman Hangar (P)	2016
	Snow Removal Equipment Storage Facility (S)	2016
	Co-Generation Facility (S)	2016-2020**
	Connecting Terminal Taxiways and Apron Fill-in (A)	2017
	Construction of a second Fixed Based Operator (S)	2017
	ARFF Expansion (S)	2017
	Demolition of Commuter Concourse for “Remain Overnight” (RON) Aircraft Parking (A)	2018

**Table 6**  
**BWI Marshall On-Airport Cumulative Projects**

	<b>Project Name (Type of Project*)</b>	<b>Year</b>
	Construction of Concourse E RON Pad (A)	2019
	New Fire Training Facility (S)	2019
	Construction of GA facilities (NW quadrant) (S)	2020
	BWI Trail Relocation (M)	2020
	Runway 10-28 RPZ Land Acquisition (M)	2020
	Construct Airport Perimeter Road (NW quadrant) (S)	2020
	Relocation of Taxiway R (A)	2020
	Concourse A Extension (T)	2020

Source: *Final Environmental Assessment: Proposed Airport Improvements at BWI Marshall*, April 2012, Table 4.16-1. (MAA Capital Program FY 2011-2016; BWI Marshall ALP Narrative, 2010; BWI Marshall Construction Update, April 12, 2011)

Notes:

\*Type of Project: (A) – Airfield project; (T) – Terminal area project; (S) – Support facility project;

(P) – Private investment project; (M) – MAA project

\*\*Indicates Project Name and/or Year updated based on ALP Update (August 2012). Discussion is ongoing.

The Proposed Action is designated on the August 2012 update to the BWI Marshall ALP as a 2015 Improvement. As shown on **Figure 8**, the hotel would not interfere or preclude any identified ALP facilities or developments in the near term or ultimate future.

### **Off-Airport Projects:**

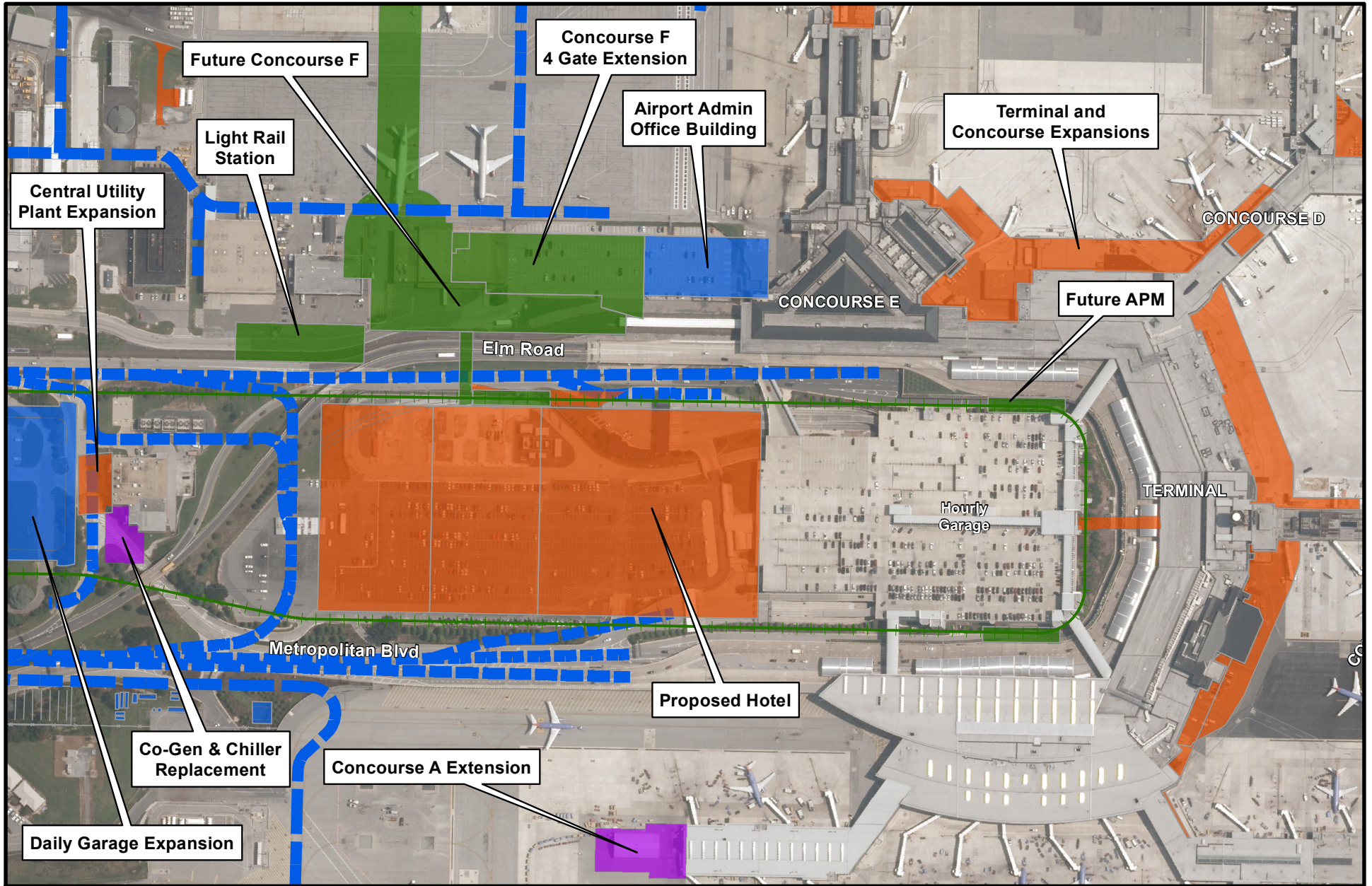
In considering cumulative impacts, off-airport projects that are planned for implementation in proximity to the BWI Marshall spatial boundary were also evaluated. The spatial boundary encompasses portions of Anne Arundel County, Hanover, Linthicum, and Ferndale. Projects discussed in this section are limited to those within the spatial boundary that are included within the approved local growth management plans for the BWI Marshall area. The projects listed are reasonably foreseeable based on state and local planning documentation.

The discussion is presented in terms of significant surface transportation improvements and proposed land development projects. To identify major transportation and development projects for the assessment of cumulative impacts, a variety of information sources were reviewed. The Anne Arundel County General Development Plan, BWI/Linthicum Small Area Plan, Baltimore Metropolitan Council Transportation Outlook, Maryland's FY 2011-2016 Consolidated Transportation Program and the Baltimore Region Transportation Improvement Program 2011-2014 were reviewed to identify projects that were included for capital improvement funding.

### **Surface Transportation**

- MD 295 (i.e., Baltimore Washington Parkway) -- currently being widened from four lanes to six lanes from I-195 northward to I-695.
- BWI Marshall Airport Rail Station – MTA has proposed station improvements and a Fourth Track Project. This includes construction of a new platform, improvements to the current station with possible multi-level transit oriented development, the addition of nine miles of fourth track along the Northeast Corridor Line and modifications to an interlocking just north of the West Baltimore MARC station. The general project area is defined as a 500-

# BWI Marshall Hotel Environmental Assessment



**LEGEND**

- 2015
- Phase 1
- Phase 2
- Phase 3
- APM
- Roadway Improvements

**Figure 8  
Cumulative Impacts**



0 80 160 320 Feet

Source: BWI ALP (August 2012)

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foot linear corridor centered on the existing rail line between the Odenton Station and Halethorpe Station, for a distance of approximately 10 miles. It is anticipated that all of the improvements would be made within the existing railroad and station rights-of-way.

### Land Development

- BWI/Linthicum Small Area Plan – Proposed land use changes and land development projects in various phases, including:
  - Airport Square Business Park in Linthicum is a business park along West Nursery Road that is planned for Employment Mixed land use to create more live/work opportunities along this employment corridor.
  - The Ridge Road Area of Hanover, located near the BWI Amtrak Station, is designated for Transit Mixed Use to allow office, retail, and high density residential uses near major employers around the airport and near AMTRAK and MARC transit/multi-modal opportunities.
- Anne Arundel County General Development Plan, 2009:
  - Developers have been interested in pursuing an “aerotropolis” concept that would incorporate airport- oriented uses, employment, hospitality, entertainment and residential uses in a transit-oriented development. The development would be planned within the area bordered by MD-295, Hanover Road, and Aviation Boulevard.

### **Potential Cumulative Impacts:**

The following is a qualitative assessment of impact categories in which the potential for cumulative impact associated with the projects described previously, when considered along with the Proposed Action.

### Air Quality

The total amounts of air emissions at BWI Marshall are expected to increase in the future, with or without the Proposed Action and other cumulative projects. This outcome is largely attributable to the forecasted increased aircraft operations at BWI Marshall over the same timeframe. Operational emissions associated with the Proposed Action do not exceed any applicable *de minimis* thresholds, and hence, operational emissions conform to the applicable SIP designed to attain the NAAQS.

The Proposed Action could result in fewer vehicle trips to and from other area hotels due to its on-Airport location and proximity (walking distance) to the Main Terminal Building, thereby slightly reducing air quality impacts. Other cumulative projects such as the MTA fourth track project could result in fewer vehicles on airport area roads or improved traffic flow in the vicinity of BWI Marshall thereby reducing air quality impacts. Overall, implementation of the Proposed Action and other cumulative projects is not anticipated to result in a significant cumulative impact to the environment surrounding BWI Marshall.

### Surface Transportation

Improvements to MD 295 and improvements to the BWI Marshall Airport Rail Station, along with other roadway projects associated with proposed airport improvements would result in changes to surface transportation and roadways; however, it is anticipated that all of the improvements would

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be made within the existing transportation rights-of-way and would be evaluated for any associated impacts.

The Proposed Action would require some changes to traffic patterns and/or access to the hotel and parking facilities in the immediate vicinity of the proposed hotel. The potential traffic operational impacts associated with the hotel project that could result from new trips associated with the hotel operation were analyzed and it was determined that a decrease in LOS would result at one of the roadways analyzed in each future year and at one intersection in 2015 when comparing the Proposed Action and No Action alternatives. However, the decreases in LOS are not considered significant because V/C ratio did not exceed the 5% threshold.<sup>17</sup> Additionally, analysis was completed to ensure that parking for employees would remain adequate using the Hourly Garage, given the proposed transition of the current employee surface parking lot into the proposed hotel. It was determined that the Hourly Garage would provide adequate parking capacity to accommodate the demand for employee parking through 2020 with an estimated surplus through 2020.<sup>18</sup>

The changes to surface transportation as a result of the Proposed Action would occur within Airport right-of-way, and are not anticipated to result in any impact to surface transportation when considered cumulatively with other projects due to the limited area of influence on Airport property, and the fact that there are no anticipated significant impacts to roadway, intersection, or parking operations resulting from the hotel project.

#### Water Quality

Implementation of the cumulative projects would result in localized, temporary impacts to water quality. These impacts would result from land clearing and temporary construction activities and primarily consist of potential increases in sediment runoff and transport, siltation, and changes in storage volumes, flow velocities and pollutant levels in receiving water bodies. All off-airport construction activities should adhere to the design standards and guidelines contained in state and local specifications. These standards would help minimize any cumulative water quality impacts.

According to the Anne Arundel County General Development Plan, there are potential infrastructure constraints as a result of the Ridge Road Area that need to be addressed. Water resource impacts of any cumulative project located in the Baltimore City Sewer Service Area is subject to an inter-jurisdictional agreement between the County and the City of Baltimore. This agreement allows the County a specified amount of treatment capacity at the Patapsco sewage treatment facility in Baltimore. The County will require that a concept plan be prepared with sufficient detail to allow adequate assessment of infrastructure impacts, including wastewater treatment, roads, and public safety services, prior to rezoning any properties within the area. Additionally, the County will require preservation of the Stoney Run and Piney Run tributaries, stream buffers, and any associated sensitive areas.

The potential for water supply and permanent water quality and ground water quality impacts varies by the individual project. Impacts could primarily result from the runoff of stormwater from newly constructed roadways and associated impervious surfaces. Commercial construction in the vicinity of BWI Marshall would be required to utilize onsite water retention and water quality control measures to prevent degradation of water quality in groundwater and receiving bodies.

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As described previously, implementation of the Proposed Action would require stormwater management; treatment requirements would be met through stormwater management practices and impervious removal. In order to comply with MDE regulations, four stormwater management scenarios were analyzed for this site as part of the *Stormwater Technical Memorandum (Attachment H)*. All stormwater management facilities will be designed for consistency with Maryland standards for both water quality (COMAR 26.08.02) and stormwater management (COMAR 26.17.02). Necessary stormwater discharge permits and construction permits will be obtained prior to project implementation. Along with BMPs, adherence to the Maryland Stormwater Management Guidelines for State and Federal Projects, and an NPDES permit, potential water resources impacts of the Proposed Action and cumulative projects would be minimized. Therefore, implementation of the Proposed Action and cumulative projects is not anticipated to result in a significant cumulative impact to the environment surrounding BWI Marshall.

### Construction

Overall, the construction phase of this project is expected to create minor and temporary impacts at the project site and in the surrounding area. These impacts will be short-term in nature, lasting for the duration of construction activities. Construction of the Proposed Action would result in temporary impacts to ambient noise levels, air quality, and potentially localized water quality when runoff occurs.

As shown in Section (A) Air Quality, the maximum annual construction emissions do not exceed any applicable *de minimis* thresholds, and hence, construction emissions conform to the applicable SIP designed to attain the NAAQS. These emissions can be further reduced by employing the BMPs and by incorporating the provisions of FAA *Advisory Circular 150/5370 – 10E, Standards for Specifying Construction of Airports*.

If uncontrolled, construction activities have the potential to cause erosion and sedimentation that can impact water quality. Short-term construction impacts would be minimized by strict adherence to erosion and sediment control procedures. It is expected that runoff from construction projects would be minimized by BMPs that would limit sediment transport.

All impacts associated with construction of the Proposed Action would be temporary and below significance thresholds. Permit requirements will be adhered to and will minimize or mitigate any potential temporary impacts due to construction. Temporary pollution controls employed by MAA would include limiting work activities to normal business hours; restricting open burning; wetting of active equipment work areas; covering of all trucks hauling loose materials; stabilizing materials, mulch, sandbags, slope drains, sediment checks, artificial covering, and berms. All applicable local, state, and Federal environmental construction controls should be incorporated into the specifications and construction plans necessary for the individual cumulative projects. These controls would help minimize temporary construction impacts, and implementation of the Proposed Action and cumulative projects is not anticipated to result in a significant cumulative impact to the environment surrounding BWI Marshall.

### Summary of Potential Cumulative Impacts

Through the use of BMPs and mitigation measures, the potential impacts of the Proposed Action would be in accordance with all Federal, state, and local laws and regulations and therefore not

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result in a significant impact. As described previously, the cumulative projects would result in environmental impacts. Resources affected by the cumulative projects, most of which are land development projects, are different than the resources affected by the Proposed Action. The government agency responsible for the development of each cumulative project will be responsible for obtaining all necessary approvals and permits to minimize impacts. Based on the types of cumulative projects planned for the area surrounding BWI Marshall, MAA has concluded that the implementation of the Proposed Action Alternative along with the cumulative projects would not result in a significant cumulative impact.

## **7. PERMITS**

List all required permits for the proposed project. Has coordination with the appropriate agency commenced and what is the expected time frame of receiving a permit?

At the time of this EA, a developer for the property has not been selected; therefore no formal site plans have been developed and the permits required for the development are not known. It is anticipated that permits will be needed for stormwater management, erosion and sediment control, forest conservation, construction and air quality (for operation of boilers, HVAC, etc.). Once a developer is selected and site planning and building design are underway, the MAA and the developer will work together to obtain all necessary permits and coordinate with the appropriate agencies.

## **8. MITIGATION**

Describe those mitigation measures to be taken to avoid creation of significant impacts to a particular resource as a result of the proposed project, and include a discussion of any impacts that cannot be mitigated.

No significant impacts are anticipated as a result of the Proposed Action Alternative. However, best management practices (BMPs) will be followed to avoid and minimize any potential impacts to the environment. Proposed measures to ensure minimal environmental impacts are included under the relevant impact category, if applicable.

## **9. PUBLIC INVOLVEMENT**

Describe the public review process and any comments received.

Scoping letters with information regarding the proposed hotel development were sent to relevant agencies by MAA on March 21, 2013. The scoping information provided a brief background of the project and project information, including the proposed location of the hotel development, as well as the impact categories expected to require some analysis and a preliminary schedule.

The following agencies received scoping information:

- Anne Arundel County Planning and Zoning, Transportation Planning
- Maryland Department of the Environment (MDE), Air Quality Planning Program
- Maryland Department of the Environment, Federal Consistency Coordinator
- Maryland Department of Natural Resources (MDNR), Wildlife and Heritage Division

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- Maryland Department of Transportation (MDOT), Office of Planning and Capital Programming
  - Maryland Historical Trust (MHT), Division of Historical and Cultural Programs

Four responses were received in response to the Scoping Letters. The Maryland Historical Trust (MHT) concurred that there are no historic properties affected by the Proposed Action. Anne Arundel County Office of Planning and Zoning requested that the EA address the demand for additional hotel rooms and conference/banquet facilities in the vicinity of BWI Marshall. MDNR determined that there are no State or Federal records for rare, threatened or endangered species within the boundaries of the project site as delineated and have no specific comments or requirements pertaining to protection measures at this time. The Federal Consistency Coordinator with the MDE responded that the agency had no comments at the time of scoping. MAA will request a Federal Consistency determination pursuant to Section 307 of the CZMA in advance of the Final EA. See *Attachment F, Agency and Public Consultation*, for copies of the scoping information.

The public and agencies were provided an opportunity to review and comment on the Draft Short EA Form during a 30-day review period from August 1 to September 3, 2013. A Notice of Availability (NOA) was published in *The Baltimore Sun* on August 1 and August 4, 2013. Notice of availability of the draft and links to the Draft EA document were also available on the MAA website. Hard copies of the document were made available to the public during the review period at FAA Washington Airports District Office, MAA offices and two public libraries in Anne Arundel County. The Draft EA was submitted to the Maryland Department of Planning State Clearinghouse for distribution to relevant agencies.

No comments were received from the public in response to the Draft EA. Seven agencies and agency departments submitted comments, recommendations and consistency determinations, which are included, along with copies of the NOA in *Attachment F: Agency and Public Consultation*.



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## 10. LIST OF ATTACHMENTS

- Attachment A: Parsons Brinckerhoff, *BWI Hotel Site Selection Study*, June 2006.
- Attachment B: Leigh-Fisher Management Consultants, *Hotel Market Analysis: Baltimore/Washington International Thurgood Marshall Airport*, January 17, 2012.
- Attachment C: Ricondo & Associates, Inc. with Landrum & Brown, Inc., *Hotel Environmental Review: Traffic Study*, January 2013 DRAFT.
- Attachment D: KB Environmental Sciences, Inc., Air Quality Technical Memorandum, April 2013.
- Attachment E: HNTB, Construction Schedule and Assumptions, March 5, 2013.
- Attachment F: Agency and Public Consultation
- Attachment G: AECOM, *Limited Phase II Environmental Assessment, BWI Thurgood Marshall Airport Future Hotel Site*, August 2012 and AECOM, *Supplemental Phase II Environmental Assessment*, February 2013.
- Attachment H: AECOM, *Technical Memorandum: Hotel Development Environmental Support – Stormwater Analysis*, December 2012.
- Attachment I: Maryland Environmental Assessment Form

## FIGURES

- Figure 1. General Location Map
- Figure 2. Proposed Hotel Location Map
- Figure 3. Proposed Hotel Location and BWI Marshall Vicinity
- Figure 4. Graphic Rendering of Possible Hotel Development
- Figure 5. Existing Site Layout and Proposed Access Changes
- Figure 6. Alternatives Considered
- Figure 7. Traffic Analysis Study Area and Link Diagram
- Figure 8. Cumulative Impacts

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## REFERENCES

AECOM, *Limited Phase II Environmental Assessment, BWI Thurgood Marshall Airport Future Hotel Site*, August 2012.

AECOM, *Technical Memorandum: Hotel Development Environmental Support – Stormwater Analysis*, December 2012.

HNTB, *Construction Schedule and Assumptions*, March 5, 2013.

KB Environmental Sciences, Inc., *Air Quality Technical Memorandum*, April 2013.

Leigh-Fisher Management Consultants, *Hotel Market Analysis: Baltimore/Washington International Thurgood Marshall Airport*, January 17, 2012.

Maryland Aviation Administration, *Airport Layout Plan Update*, August 2012.

Maryland Aviation Administration, *Baltimore/Washington International Thurgood Marshall Airport Master Plan*, 2011.

Maryland Aviation Administration, *Final EA for Proposed Airport Improvements at BWI Marshall*, April 2012.

Maryland Aviation Administration, *Stormwater Pollution Prevention Plan (SWPPP) Update 2011*, December 2011.

Maryland Aviation Administration, *Terminal Area Hotel Planning Considerations*, May 25, 2012.

Maryland Aviation Administration, *Terminal Area Hotel Planning Considerations*, February 27, 2013.

Parsons Brinckerhoff, *BWI Hotel Site Selection Study*, June 2006.

Partners for Economic Solutions, *BWI Rail Station Market Analysis*, Submitted to Maryland Department of Transportation Office of Real Estate, June 30, 2010.

Ricondo & Associates, Inc. with Landrum & Brown, Inc., *Hotel Environmental Review: Traffic Study*, January 2013 DRAFT.

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## ENDNOTES

- <sup>1</sup> Maryland Aviation Administration (MAA), *Terminal Area Hotel Planning Considerations*, February 27, 2013.
- <sup>2</sup> Ricondo & Associates, Inc. with Landrum & Brown, Inc., *Hotel Environmental Review: Traffic Study*, January 2013 DRAFT, p. 14.
- <sup>3</sup> Parsons Brinckerhoff, *BWI Hotel Site Selection Study*, June 2006, p. 20.
- <sup>4</sup> Parsons Brinckerhoff, *BWI Hotel Site Selection Study*, June 2006, p. 5.
- <sup>5</sup> Leigh-Fisher Management Consultants, *Hotel Market Analysis: Baltimore/Washington International Thurgood Marshall Airport*, January 17, 2012, p. 25.
- <sup>6</sup> Baltimore/Washington International Thurgood Marshall Airport, *Hotel Environmental Review: Traffic Study*, Ricondo and Associates, January 2013.
- <sup>7</sup> Baltimore/Washington International Thurgood Marshall Airport, *Hotel Environmental Review: Traffic Study*, Ricondo and Associates, January 2013.
- <sup>8</sup> MAA, *Final EA for Proposed Airport Improvements at BWI Marshall*, April 2012.
- <sup>9</sup> MAA, *Terminal Area Hotel Planning Considerations*, February 27, 2013.
- <sup>10</sup> MAA, *Stormwater Pollution Prevention Plan (SWPPP) Update 2011*, December 2011, p. 1-2.
- <sup>11</sup> Leigh-Fisher Management Consultants, *Hotel Market Analysis: Baltimore/Washington International Thurgood Marshall Airport*, January 17, 2012, p. 32.
- <sup>12</sup> Leigh-Fisher Management Consultants, *Hotel Market Analysis: Baltimore/Washington International Thurgood Marshall Airport*, January 17, 2012, p. 5.
- <sup>13</sup> Leigh-Fisher Management Consultants, *Hotel Market Analysis: Baltimore/Washington International Thurgood Marshall Airport*, January 17, 2012, p. 58.
- <sup>14</sup> Partners for Economic Solutions, *BWI Rail Station Market Analysis*, Submitted to Maryland Department of Transportation Office of Real Estate, June 30, 2010, p. 22.
- <sup>15</sup> Ricondo & Associates, Inc. with Landrum & Brown, Inc., *Hotel Environmental Review: Traffic Study*, January 2013 DRAFT.
- <sup>16</sup> AECOM, *Technical Memorandum: Hotel Development Environmental Support – Stormwater Analysis*, December 2012
- <sup>17</sup> Ricondo & Associates, Inc. with Landrum & Brown, Inc., *Hotel Environmental Review: Traffic Study*, January 2013 DRAFT.
- <sup>18</sup> Ricondo & Associates, Inc. with Landrum & Brown, Inc., *Hotel Environmental Review: Traffic Study*, January 2013 DRAFT.

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**Project Title:** Hotel Development at BWI Marshall Airport

**Identifier:** BWI

**11. PREPARER CERTIFICATION**

I certify that the information I have provided above is, to the best of my knowledge, correct.

Caroline E. Pinegar  
Signature

June 28, 2013  
Date

Caroline E. Pinegar, A.I.C.P.  
Name

Environmental Planner  
Title

MAA Consultant / HNTB Corporation  
Affiliation

703-824-5100  
Phone #

**12. AIRPORT SPONSOR CERTIFICATION**

I certify that the information I have provided above is, to the best of my knowledge, correct. I also recognize and agree that no construction activity, including but not limited to site preparation, demolition, or land disturbance, shall proceed for the above proposed project(s) until FAA issues a final environmental decision for the proposed project(s), and until compliance with all other applicable FAA approval actions (e.g., ALP approval, airspace approval, grant approval) has occurred.

Paul L. Shank  
Signature

July 16, 2013  
Date

Paul L. Shank, P.E., C.M.  
Name

Chief Engineer  
Title

Maryland Aviation Administration  
Affiliation

410-859-7061  
Phone #