Memphis International Airport

Westside Airport Improvements

Draft Environmental Assessment

akrf

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Draft Environmental Assessment

Submitted By: Memphis Shelby County Airport Authority

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November 2024

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

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Responsible FAA Official Date

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1 PURPOSE AND NEED

The Memphis-Shelby County Airport Authority (MSCAA) owns and operates Memphis International Airport (MEM, Airport) in Shelby County, Tennessee. Some of the Airport's existing landside facilities have reached their planned capacity and need modification/enhancement to accommodate the identified demand from current passenger levels. Specifically, passenger and employee parking capacities are less than what is necessary to satisfy current demand, and car rental services are at capacity and are expected to grow within the next few years, requiring a greater amount of space on-airport to provide those services. Other functions such as administration and a portion of the Checked Baggage Inspection System (CBIS) are also in need of additional space. The lack of capacity for parking and these other landside requirements will worsen passenger parking conditions and inhibit the Airport in satisfying the identified passenger demand for rental cars without some modification and reconfiguration of the landside space within the airport's footprint. The purpose of the project is to address the identified parking and facility needs of Memphis International Airport, specifically related to passenger and employee parking, car rental, and other selected landside services.

The MSCAA is preparing a focused Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) and Federal Aviation Administration (FAA) guidance to document the potential social, economic, and environmental consequences of the proposed project. This chapter describes the purpose and need for the project and the required approvals for its implementation.

1.1 Introduction

The MSCAA is an airport authority that owns and operates MEM and two general aviation airports in Tennessee, Charles W. Baker Airport in Millington and General DeWitt Spain Airport in Memphis. Memphis International Airport is in Memphis, east of downtown (**Figure 1, see Appendix A**). The MSCAA is a self-funded authority and does not receive local tax revenue.[1] MSCAA can, and does, apply for federal and state monies to assist in funding improvements to its three airports.

The current passenger and employee parking is located throughout the airport with several surface lots and garages, including a cell phone waiting lot. The car rental facilities are co-located with passenger parking in the Economy Garage, with the car rentals' Quick Turnaround Area (QTA) directly north of the garage (**Figure 2**).

1.2 Project Setting and Proposed Activities

The Airport includes garage and surface parking north of the terminals for passenger parking, with garages for short term, long-term, and economy parking. Additional economy surface lots for passenger parking are to the east and west of the garages, the East (Yellow) Lot and Blue Lot, respectively. The East Lot also includes some employee parking. One cell phone waiting lot is near the primary entrance of the airport,

[1] Memphis-Shelby County Airport Authority. https://flymemphis.com/leadership/. https://flymemphis.com/charleswbakerairport/. Accessed April 15, 2024.

north and adjacent to the Blue Lot. The public portions of the surface lots have shuttle service to the terminal, while the garages are walkable to the terminal building.

This project would construct several buildings and repurpose/modify garage and surface parking on Airport to provide more passenger parking spaces, additional employee parking, more capacity for car rental services, and a consolidated, efficient administration space. Aircraft operations and runway use would not change due to this project. The project does not result in additional operations, changes to flight patterns, or aircraft fleet mix. The project includes the following elements, which are depicted on **Figure 3**.

- **Demolition of Concourse A.** Passenger gates are no longer used in Concourse A and this concourse is closed. Concourse A is still connected by a hallway/corridor to Terminal A of the main terminal building; however, all passengers access their gates and flights via the main concourse (Concourse B). Proposed activities would require the demolition of Concourse A to accommodate the construction of the proposed Consolidated Rental Car Center (ConRAC) and Administration Building, allowing other areas of the Airport to be used to address the Airport's deficit of vehicle parking on-Airport.
- **Consolidated Rental Car Facility (ConRAC).** Currently, nine rental car companies provide service at the Airport, which are located on Levels 1 and 2 of the Economy Garage. Adjacent to the garage is space that serves as a QTA facility.[2] Ready/return vehicle areas, a vehicle storage area, and the customer service kiosks/stands for the rental car companies are within the Economy Garage.

  Proposed activities include the construction of a new ConRAC facility, housed in a multi-level garage west of the main terminal building, where the closed Concourse A is currently located. The ConRAC would provide space for all car rental services. Approximately 691,000 square feet (sq-ft) of existing ConRAC space in the Economy Garage would be converted to passenger parking, and the existing QTA area would be converted to employee parking. Entrance to the ConRAC for vehicles would be via Jim McGehee Parkway at the north side of the building. Vehicles leaving the ConRAC facility would travel and exit north of the Blue Lot and traverse the airport property east, to exit the airport via Jim McGehee Parkway, north of the Economy Garage, bypassing the terminal curbfronts and short-term garage entrances and exits. The proposed ConRAC will provide approximately 778,600 sq-ft for car rental services.[3] The space in the Economy Garage (Levels 1 and 2) would be reverted to passenger parking, providing an estimated 1,733 new spaces. The former QTA facility located just north of the economy garage would be converted into 434 employee parking spaces.

  Currently, some maintenance functions and temporary parking/storage of rental cars occur at a Consolidated Maintenance Site located west and outside of the Airport property on Airways Boulevard. The ConRAC would have more space to incorporate more vehicles and functions, reducing the need to drive vehicles between the two locations (the maintenance facility would remain off-site but would serve fewer functions). The future ConRAC would also have infrastructure for electric vehicle (EV) charging within the facility. The ConRAC would provide a pedestrian connection to Terminal A in a similar manner as the existing connector corridor between the terminal and Concourse A.

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[2] The Quick Turn Around (QTA) facility is where rental car companies prepare returned cars for future rentals, including fueling and cleaning services.

[3] Memphis Shelby County Airport Authority (MSCAA). Memphis International Airport Master Plan Update Technical Report. Prepared by Jacobsen Daniels. April 2024.

- **Administration Building.** MSCAA employees currently use four separate upper-level mezzanine spaces in the terminal as office facilities. These staff would be relocated out of the terminal to a new office building. This would be a new 100,000 sq-ft, three-level building, constructed south of the proposed ConRAC. Offices would be on the two upper levels, which would be connected to the terminal building (on the side of Terminal A) via a walkway/corridor and the lower level would be used for the CBIS. The walkway may be integrated with the ConRAC connector or interact with the terminal in the same manner as the existing connector to/from Concourse A.
- **Overflow Lot.** The Blue Lot is a passenger economy surface parking lot on the west side of the airport, northwest of the terminal building along Jim McGehee Parkway. This is a passenger lot with 947 spaces with shuttle service to the terminal. Vehicles enter the lot from Jim McGehee Parkway and exit through a connector road that travels between the Airport Tower building lot and Economy Parking Garage to the east side of the airport to exit the property. The Blue Lot would be supplemented by a new overflow lot (Overflow Lot). This lot would be developed north of Blue Lot and west of the existing Cell Phone Lot, to accommodate parking during peak demand days. The Overflow Lot would use the same entry/exit plazas as the Blue Lot. Combined, these lots would provide 1,440 parking spaces.
- **Cell Phone Lot.** The cell phone lot is a surface lot located just northeast of the Blue Lot along Jim McGehee Parkway. Vehicles enter and exit the cell phone lot through Jim McGehee Parkway. This lot currently provides 203 parking spaces for vehicles waiting to pick up passengers from the terminal. The future cell phone lot will remain in the same location with the same entrance and exits, but it will be reconfigured to accommodate approximately 270 parking spaces.

Table 1 shows the proposed employee and passenger parking. **Table 2** shows the proposed rental car parking. **Table 3** shows the proposed sizes of the structures, including the difference in square feet between the existing car rental operation and the facilities proposed in the ConRAC.

Table 1. Existing and Proposed Parking Spaces within the Project Area

Passenger Parking Areas	Existing Passenger Parking Spaces in Project Area	Proposed Passenger Parking Spaces in Project Area	Proposed Employee Parking Spaces in Project Area
	Total	Total	Total
Blue Lot	947	810	0
Overflow Lot	--	630	0
Cell Phone Lot	203	270	0
Existing Quick-Turn-Around (QTA) adjacent to Economy Parking	--		434
Economy Garage	4,542	6,275	0
Total	**5,692**	**7,985**	**434***

Source: Jacobsen Daniels, 2024.
* There are 250 employee parking spaces in the East Lot, which is outside of the project area.

Table 2. Existing and Proposed Rental Car Parking Spaces within the Project Area

Car Rental Facility (ConRAC)	Existing Rental Car Parking Spaces	Proposed Rental Car Parking Spaces
	Total	Total
Ready Spaces[1]	761	871
Return Spaces[2]	972	1,113
Total	**1,733**	**1,984**

Source: Jacobsen Daniels, 2024.

1. Ready space counts assume half of the total area is dedicated to ready functions and a metric of 345 sq-ft per space, inclusive of circulation.
2. Return space counts assume half of the total area is dedicated to return functions and a metric of 270 sq-ft per space, inclusive of pedestrian walking paths.

Table 3. Square Footage of Existing and Proposed Facilities for Rental Cars and Administration

	Existing Facilities	Proposed Facilities
	(Sq-ft)	(Sq-ft)
Car Rental Facility (ConRAC)		
Ready/Return & Vehicle Circulation	525,000	601,000
Quick-Turn-Around (QTA) Facility & On-Site Storage[1]	149,000	163,500
Customer Service Counters/Pedestrian Vertical Circulation	17,000	14,100
Total	**691,000**	**778,600**
Administration Building		
Administration Building[2]	35,000[3]	100,000
Total		**100,000**

Source: Jacobsen Daniels, 2024.

1. The former QTA located just north of the economy garage would be converted into employee parking.
2. The lower level of the Administration Building would be used for a Checked Baggage Inspection System (CBIS).
3. This is the collective space of four separate areas of the mezzanine level of the terminal building.

Proposed activities would provide MSCAA with an additional 2,293 passenger parking spaces, 434 additional employee parking spaces, and 87,600 additional square footage for its rental car services. The administration building would be new space developed to move the administrative Airport employees out of the terminal building as well for its lower level to house the CBIS.

The project area consists of paved landside and airside areas. During construction, staging would occur within the airport property and in the areas of proposed improvement (Concourse A, Blue Lot, Overflow Lot, and QTA facility). Equipment required for the construction of both the ConRAC and Administration Building would be typical for those types of facilities, which may include excavation equipment, hauling

trucks, boom lifts, forklifts, cranes, and power loaders. The only demolition would be the demolition of Concourse A.

1.3 Project Purpose and Need

The purpose of the project is to increase the capacity of selected landside facilities to accommodate the identified need for additional public parking, car rental, administration space, employee parking, and other landside space for selected services (including CBIS) at the Airport.

As part of the ongoing master planning process for MEM, MSCAA conducted an initial landside demand/capacity and facility requirements analysis. This was based on the growth of passenger volumes, as detailed in the Airport's approved forecast.[4] The analysis assumed consistent use of the parking facilities with unconstrained growth.

The analysis demonstrated that the airport's roadways as well as curbfronts had sufficient capacity to meet immediate and future demand levels. However, public parking, employee parking, and car rental services are either at capacity or will exceed capacity in the immediate future. Therefore, MSCAA began a planning process to evaluate how existing landside facilities can be modified to accommodate the identified demand. In addition, the MSCAA identified a need for additional space for employees and the CBIS system, so the construction of the administration building is proposed to house those needs.

1.3.1 Public and Employee Parking

The Airport has 7,254 existing parking spaces (including the East Lot, which is not included within the project area). These spaces are not adequate to meet today's demand,[5] and the Airport experiences 100 percent capacity of its passenger parking lots at peak demand times during the year, such as during holidays, school vacation breaks, and peak summer travel weeks/weekends.

The parking analysis included several assumptions regarding utilization and capacity, including particular capacity values based on utilization and milestones that would trigger the need for expanding capacity. For example, once utilization reaches 90 percent, a facility is generally considered "full." Because peak demand only occurs several times throughout the year, planners generally do not plan for the future peak demand using 100 percent utilization. Instead, parking capacity is generally based on a percentage less than 100 percent of anticipated demand.[6] At MEM, planners used the anticipated demand as 80 percent of the forecasted parking capacity need of the 15th busiest day,[7] which was based on the forecasted passenger volumes.

The master plan effort evaluated the demand over four Planning Activity Levels (PALs), with the baseline as 2024: PAL 1 (2026), PAL 2 (2032), PAL 3 (2036), PAL 4 (+2036). Over this planning horizon, the Airport will continue to experience increasing parking demand, based on the passenger volume forecast, and will

[4] Memphis Shelby County Airport Authority (MSCAA). Memphis International Airport Aviation Demand Forecast. Prepared by Jacobsen Daniels. June 2019. Approved by the Federal Aviation Administration (FAA) on July 2, 2019.

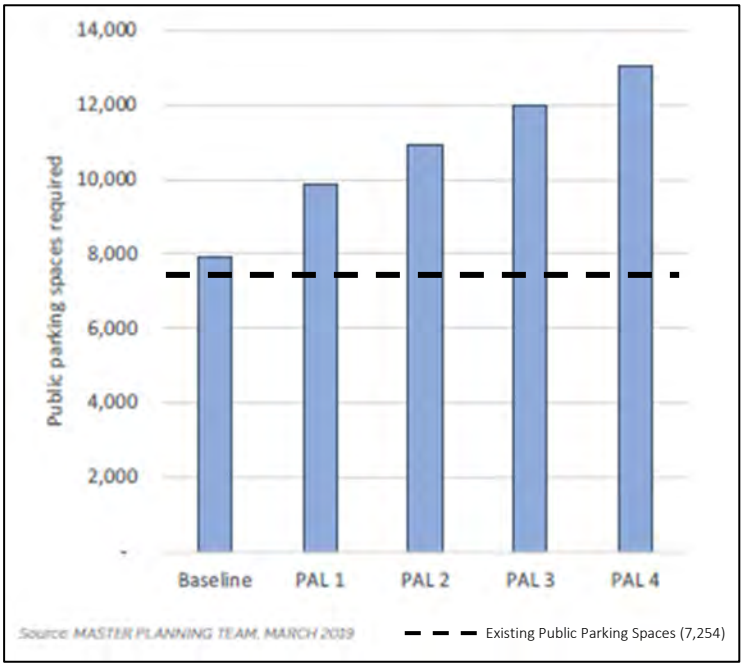
[5] Memphis Shelby County Airport Authority (MSCAA). Memphis International Airport Master Plan Update Technical Report. Prepared by Jacobsen Daniels. April 2024.

[6] Memphis Shelby County Airport Authority (MSCAA). Memphis International Airport Master Plan Update Technical Report. Prepared by Jacobsen Daniels. April 2024.

[7] Memphis Shelby County Airport Authority (MSCAA). Memphis International Airport Master Plan Update Technical Report. Appendix I. Prepared by Jacobsen Daniels. April 2024.

need to create new public parking for the identified demand (**Exhibit 1, Table 4**). Public parking utilization has already reached its capacity in 2024 (Baseline).

Exhibit 1. Public Parking Demand Over Time (Planning Activity Level (PAL))



Employee parking was also considered and determined to require additional, immediate capacity on-Airport, currently and increasing for each PAL (**Table 4**), with the demand for the baseline year (2024) greater than existing capacity.

Table 4. Public and Employee Parking Demand Over Time

	Existing Facility	Baseline (2024)	PAL 1 (2026)	PAL 2 (2032)	PAL 3 (2036)	PAL 4 (+ 2036)
Public Parking (including the East Lot, which is not proposed for modification)	7,254	7,932	9,833	10,923	11,979	13,207
Employee Parking	660	660	770	729	899	1,036
Source: Memphis International Airport, Landside Facilities. Master Plan Team, March 2019.						

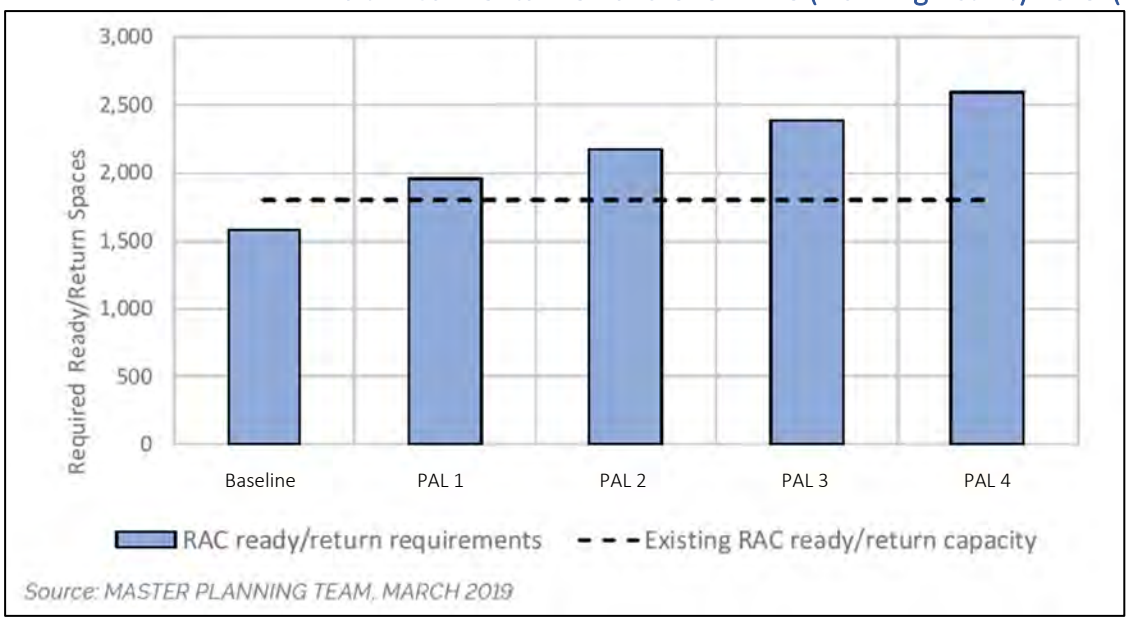
1.3.2 Car Rental Demand

Car rental demand will also continue to grow through the planning period, with demand exceeding the Airport's existing capacity by 2026 (PAL 1). Project planners, in consultation with existing car rental agencies at the Airport, determined the following regarding car rental demand:

- The existing Ready/Return capacity in the Economy Garage is near and/or at capacity.
- More QTA and in-close storage of ready/return vehicles is required to meet the identified demand.
- Walk-up counters and customer service space are no longer necessary, as these areas are used less due to technology and advanced check in/check out methods.

Based on this information, the current space allocated for car rentals is not sufficient to accommodate the identified demand without allocating additional space of the Economy Garage or other landside areas of the Airport (**Exhibit 2**).

Exhibit 2. Car Rental Demand Over Time (Planning Activity Level (PAL))



1.3.3 Administration Building

While not contemplated in the master plan's landside facilities analysis, the Airport determined there was a need for additional office/administrative space based on the inefficiencies of the existing administration spaces in the mezzanine of the terminal building.[8] Current office space is spread out among four separate spaces on the mezzanine level of the terminal. In addition, the current administrative space does not provide areas for the typical amenities of a modern office environment. Considering this, MSCAA proposes to construct a new building that would accommodate its anticipated staff growth over time, consolidate the Airport's administrative functions, "right size" the office space of the various technical and administrative departments, and add amenities such as training rooms, break/cafeteria facilities, collaboration spaces, and storage.

For the siting of this area, planners estimated the need for 70,000 sq-ft. In addition, planners realized that a newly constructed building could also accommodate the CBIS system, which requires space near baggage operations in the lower level of the terminal building. Therefore, planners determined the construction of additional space for these services was also necessary as part of landside improvements.

1.4 Required Approval

The FAA has determined that an EA be prepared to evaluate proposed activities. This EA was prepared in accordance with the NEPA; Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations (CFR) Parts 1500-1508, as revised in

[8] Memphis Shelby County Airport Authority (MSCAA). Terminal Modernization and Seismic Program (TMSP) preliminary design efforts. Prepared by Jacobsen Daniels. 2019.

July 2020); FAA, Order 1050.1F, *Environmental Impacts: Policies and Procedures* (FAA Order 1050.1F);[9] FAA Order 5050.4B, *NEPA Implementing Instructions for Airport Actions* (FAA Order 5050.4B);[10] and the associated FAA 1050.1F Desk Reference (FAA Order 1050.1F Desk Reference).[11]

[9] Federal Aviation Administration. Order 1050.1F, *Environmental Impacts: Policies and Procedures.* July 2015.

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

[11] Federal Aviation Administration. *1050.1F Desk Reference*. Version 2, February 2020.

2 PROJECT ALTERNATIVES

The Airport's identified needs are consistent but a subset of, and of a lesser extent, the long-term Airport needs detailed in the landside facility requirements analysis.[12] During the long-term planning process, MSCAA evaluated multiple alternatives that considered modifications to public parking, employee parking, car rental and QTA space, the cell phone lot, and the potential development of a commercial vehicle staging area, gas station, and hotel. The long-term needs have been identified through four planning activity levels (PAL 1-4), which occur between 2024 and 2036. Therefore, the alternatives evaluated in the master planning process contain more components and capacity enhancements for landside facilities than what is contemplated in this analysis, which is intended to meet the currently identified needs of the Airport.

This chapter describes the alternatives identified by MSCAA in the long-term master planning effort, which include variations that incorporate improvements to increase capacity in the areas of need identified in the Proposed Activities, Chapter 1, including public parking, employee parking, office space, and car rental services. These short-term improvements proposed as part of this analysis are consistent with the long-term evaluation process and screening of alternatives and therefore the long-term alternatives analysis also applies to these proposed actions, which will serve as an interim step in securing capacity in these areas of need.

2.1 Long-Term Planning Process

As the facility requirements analysis outlined the need for additional capacity for landside services, eight initial alternatives were developed based on the function goals and objectives set by MSCAA. These eight alternatives were refined to four alternatives and eventually one preferred concept, based on evaluation criteria that considered land use/siting, height constraints, and other characteristics identified by MSCAA. The range of alternatives strived to increase capacity of public parking (including the cell phone lot), rental car spaces, employee parking, as well as identify siting opportunities for new development, such as a commercial vehicle staging area, gas station, and hotel. While no specific goals or objectives were identified for the construction of an administrative building, adding airport administrative space was identified as a requirement associated with overall airport development. MSCAA goals for the long-term planning process included:

<u>Public Parking</u>

- Walkable to terminal building
- Provide for at least two different parking rate structures to allow for customer choice

[12] Memphis Shelby County Airport Authority (MSCAA). Memphis International Airport Master Plan Update Technical Report. Prepared by Jacobsen Daniels. April 2024.

- Consider combining public parking with other landside functions
- Flexible for incremental phasing

Employee Parking

- Separating those facilities from other functions
- Walkable to terminal building

Car Rental

- Site QTA adjacent to ready/return and customer service area
- Walkable to terminal building
- Facility should be north or west of terminal, not on east side, due to returning customer wayfinding

Initial alternatives considered included reconstructing the Short-Term and Long-Term Garages into new public parking structures as well as incorporating rental car service, reverting the Economy Garage's car rental space back to public parking, expanding the rental space in the Economy Garage, converting the existing QTA facility to employee parking, as well as building a new rental car facility.

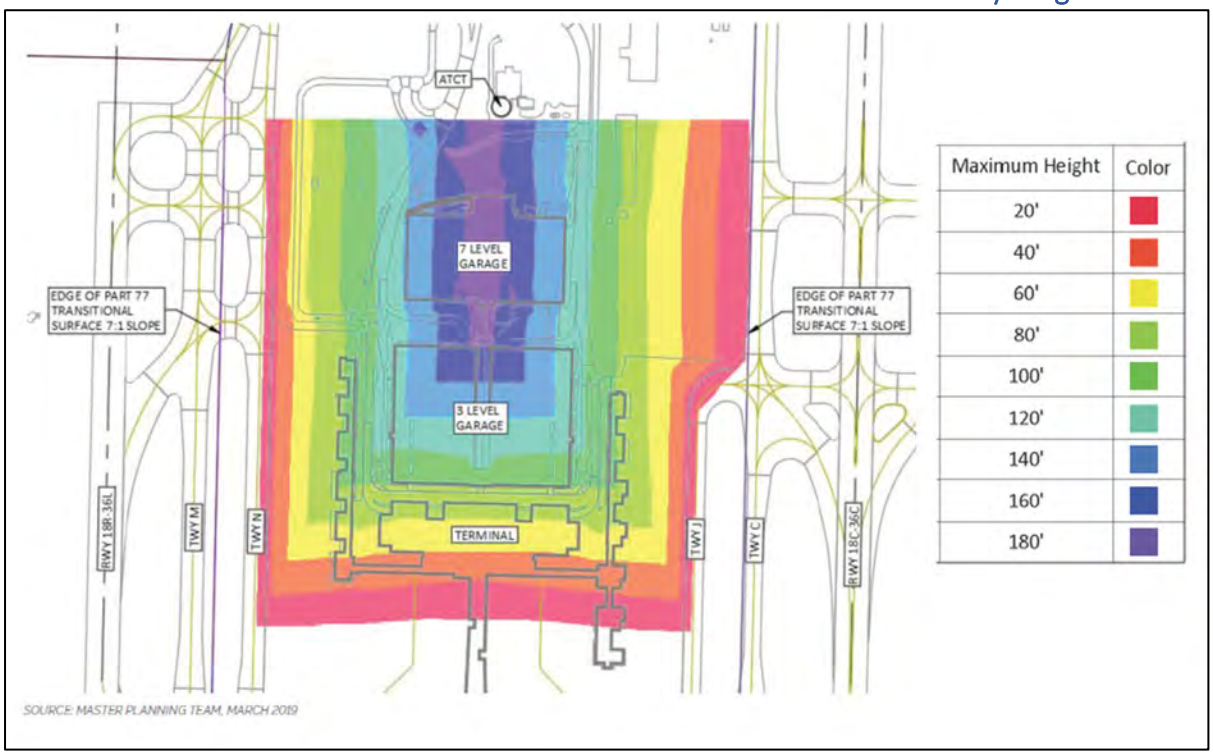
2.2 Long Term Planning Evaluation Criteria

An alternatives screening process was established to determine whether the initial alternatives would provide the long-term capacity needs of the Airport. Screening criteria for these long-term initial alternatives included site constraints on the landside portion of the Airport and consideration of the runways and the Air Traffic Control Tower (ATCT) location as to not restrict the tower's view of the airfield. Therefore, siting of new buildings, or increasing the heights of existing garages to add additional levels, relied on location as well as height restrictions for the line of sight between the ATCT and the airfield.

These constraints limited the areas of development/modification to the project area (**Figure 2**), except for the Economy Garage, its associated payment booths, and the Jim McGehee Parkway overpass, which were identified as constraints to new landside development.

Line of sight restrictions resulted in height restrictions to landside development, with the greatest height restrictions farther out from the center of the landside area, along the sides of the taxiways and airfield (the center of the landside area is where the Economy Garage is located). This limits the height of any buildings or garages and constrains where new buildings can be sited on-airport (**Exhibit 3**).

Exhibit 3. Landside Facility Height Constraints



Using the siting constraints, MSCAA developed eight initial alternatives and evaluated them based on the following characteristics.

- *Would the alternative preserve the view of Terminal?* The terminal building is historically important due to its visual characteristics. MSCAA determined that should be considered when planning surrounding structure heights and therefore, obstructing its view was considered unfavorable.
- *Would the alternative require demolition of the Short-Term and Long-Term Garage?* Re-purposing this garage to the extent possible was considered more favorable than the cost of its demolition and reconstruction.
- *To what extent would the alternative disrupt roadways during construction?* Disrupting airport roadways during construction and operating hours was considered unfavorable.
- *To what extent would the alternative accommodate rental car spacing demand?* An alternative that provided more rental car capacity was deemed more favorable.
- *To what extent would the alternative mix commercial vehicle operations with public vehicle roadways?* Separating commercial vehicle operations from public vehicle roadways was a priority when evaluating alternatives.

2.3 Long-Term Planning Alternatives

The eight alternatives initially considered included major reconfigurations of the landside facilities at the airport, including the demolition and construction of new garages and ConRAC spaces. These alternatives also contemplated the changes to roadways to enable full access to these new spaces. The following summarizes the eight initial alternatives considered.

Alternative A

- ConRAC located in Concourse A area and Long-Term Garage with new roadway for access
- QTA located directly adjacent to Ready/Return in Concourse A and Blue Lot area
- Demolition and modification of Short-Term and Long-Term Garages for ConRAC construction and public parking
- Car Rental from Economy Garage converted to public parking
- Existing QTA space converted to employee parking
- Blue Lot converted to gas station, cell phone lot, and commercial vehicle staging lot
- Overflow Lot in East Lot space (outside of project area)

Alternative B1

- ConRAC located in Long-Term Garage space (3 levels), combined with 2 levels of public parking
- Demolition and modification of Short-Term and Long-Term Garages for ConRAC construction and public parking
- QTA area remains in same location with new roadway connecting to ConRAC
- Car Rental from Economy Garage converted to public parking
- Employee parking located in Concourse Area and Blue Lot
- Gas station and cell phone lot in Blue Lot space
- Commercial Vehicle Staging Lot and Overflow Lot in East Lot space (outside of project area)

Alternative B2

- ConRAC located in Long-Term garage space (3 levels), combined with 3 levels of public parking
- Demolition and modification of Short-Term and Long-Term Garages for ConRAC construction and public parking
- QTA area remains in same location with new roadway connecting to ConRAC
- Car Rental from Economy Garage converted to public parking
- Employee parking located in Concourse Area and Blue Lot
- Gas station and cell phone lot in Blue Lot space
- Commercial Vehicle Staging Lot and Overflow Lot in East Lot space (outside of project area)

Alternative C

- ConRAC stays in Economy Garage, but expands to incorporate Level 3
- Demolition and modification of Short-Term and Long-Term Garages for public parking
- QTA area remains in same location with no new roadway
- Employee parking located in Concourse A area and Blue Lot
- Gas station and cell phone lot in Blue Lot space
- Commercial Vehicle Staging Lot and Overflow Lot in East Lot space (outside of project area)

Alternative D

- ConRAC stays in Economy Garage, but expands to south into area of Short-Term and Long-Term Garages
- Demolition and modification of Short-Term and Long-Term Garages to accommodate RAC Expansion and more public parking
- QTA area remains in same location with no new roadway
- Employee parking located in Concourse A area and Blue Lot
- Gas station and cell phone lot in Blue Lot space

- Commercial Vehicle Staging Lot in East Lot Space (outside of project area)

Alternative E
- ConRAC stays in Economy Garage, but expands to incorporate Level 3
- Demolition and modification of Short-Term and Long-Term Garages for public parking
- QTA area remains in same location with no new roadway
- Employee parking split between a portion of Blue Lot space and East Lot area (outside of project area)
- Public parking in Concourse A area
- Gas station and cell phone lot in Blue Lot space
- Commercial Vehicle Staging Lot in Blue Lot Space

Alternative F
- ConRAC stays in Economy Garage, but expands to incorporate Level 3
- Demolition and modification of Short-Term and Long-Term Garages for public parking
- QTA area remains in same location
- Employee parking split between a portion of Blue Lot space and East Lot area (outside of project area)
- Public parking in Concourse A area
- Gas station and cell phone lot in Blue Lot space
- Commercial Vehicle Staging Lot in Blue Lot space

Alternative G
- Demolition and modification of Short-Term and Long-Term Garages for public parking and ConRAC expansion
- QTA area remains in same location
- Employee parking split between a portion of Blue Lot space and East Lot area (outside of project area)
- Public parking in Concourse A area
- Gas station and cell phone lot in Blue Lot space
- Commercial Vehicle Staging Lot in Blue Lot space

The following table describes the results of the evaluation based on MSCAA's evaluation of the eight initial alternatives (**Table 5**).

Table 5. Initial Preliminary Landside Alternatives

Initial Alternatives	Evaluation of Alternatives				
	Would the alternative preserve the view of Terminal?	*Would the alternative require demolition of the Short-Term and Long-Term Garage?*	*To what extent would the alternative disrupt roadways during construction?*	*To what extent would the alternative accommodate rental car spacing demand?*	*To what extent would the alternative mix commercial vehicle operations with public vehicle roadways?*
Alternative A	Short-Term and Long-Term Garage modifications block view of terminal	Demolition required for ConRAC construction	Moderate Disruption	Rental car space sufficient in the mid-term (not long-term)	Commercial vehicle operations mixed with public roadways
Alternative B1	Short-Term and Long-Term Garage modifications block view of terminal	Demolition required for ConRAC construction	Significant Disruption	Rental car space sufficient in the mid-term (not long-term)	Commercial vehicle operations separate from public roadways
Alternative B2	Short-Term and Long-Term Garage modifications block view of terminal	Demolition required for ConRAC construction	Significant Disruption	Rental car space sufficient in the mid-term (not long-term)	Commercial vehicle operations separate from public roadways
Alternative C	Short-Term and Long-Term Garage modifications block view of terminal	Demolition required for more public parking	Minimal Disruption	Rental car space sufficient in the near-term (not long-term)	Commercial vehicle operations separate from public roadways
Alternative D	Short-Term and Long-Term Garage modifications block view of terminal	Demolition required for more public parking	Significant Disruption	Rental car space sufficient in the mid-term (not long-term)	Commercial vehicle operations separate from public roadways
Alternative E	Preserves restricted view of Terminal	Demolition required for more public parking	Moderate Disruption	Rental car space sufficient in the near-term (not long-term)	Commercial vehicle operations mixed with public roadways
Alternative F	Preserves restricted view of Terminal	Demolition required for more public parking	Moderate disruption to roadways during construction	Rental car space sufficient in the near-term (not long-term)	Commercial vehicle operations mixed with public roadways
Alternative G	Preserves view of Terminal	Demolition required for parking, roadway, and other construction	Significant disruption to roadways during construction	Rental car space sufficient in the mid-term (not long-term)	Commercial vehicle operations mixed with public roadways

Source: Memphis International Airport, Landside Facilities. Master Plan Team, March 2019.

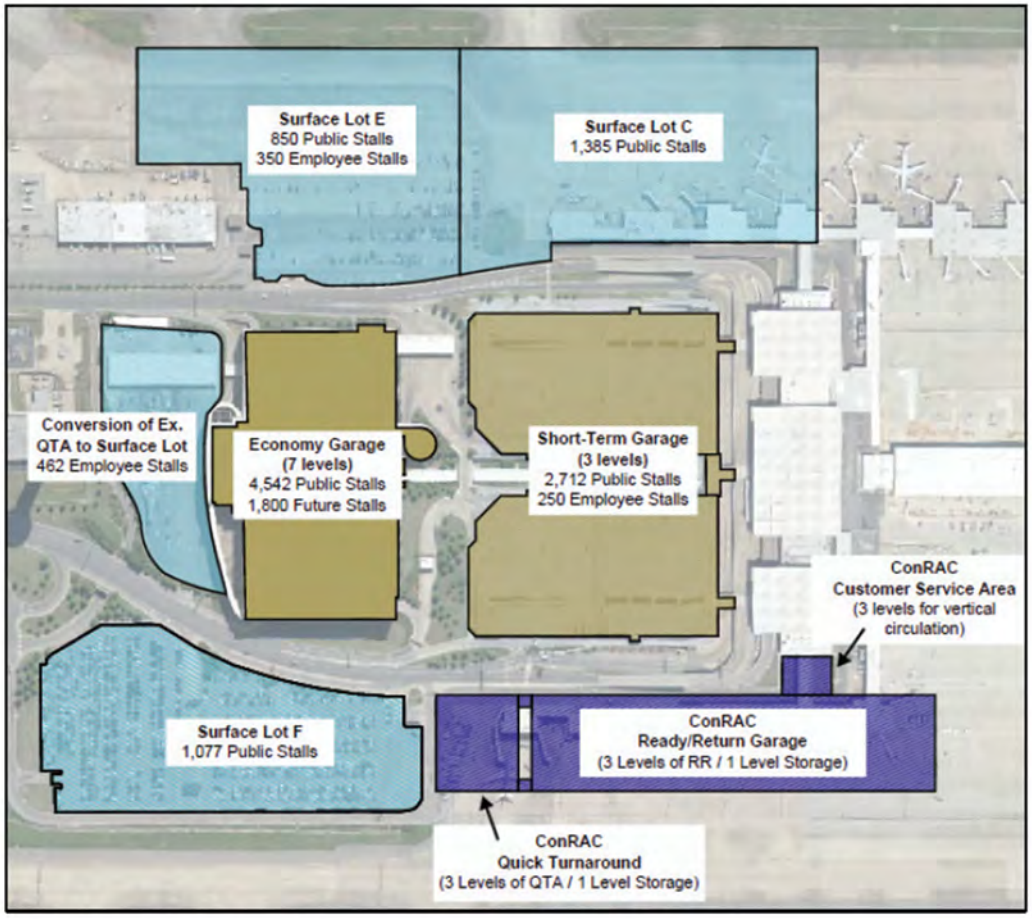
Using the results of the evaluation, MSCAA refined the initial alternatives, and four revised alternatives emerged from the initial eight considered. These alternatives varied by siting the ConRAC in the location of the demolished Concourse A, in the current Economy Garage, with expanded services, or in the Short-Term and Long-Term Garages location, as a reconstructed garage. Employee parking was separated from other parking in all four refined alternatives, and public parking was either in the Concourse A location or as part of the garages (either new or reconstructed in the same locations as the existing garages (**Exhibit 4**)).

Exhibit 4. Long-Term Planning Alternatives Refinement

SOURCE: MASTER PLANNING TEAM, MARCH 2019

These alternatives were further refined to one long-term preferred concept that could provide the immediate capacity needed for both rental car services and public parking operations as well as satisfy long-term goals. To do so, a new ConRAC facility would be built on the Concourse A site. To fulfill the public parking demand, surface lots would need to be expanded and the Economy Garage Levels 1 and 2 space currently used by car rental companies would be reverted to public parking (**Exhibit 5**). This alternative would not rebuild or alter the current height of the Short-Term and Long-Term Garages, and therefore not result in additional demolition or reconstruction cost as well as not block views of the terminal building. It would also require minimal roadway construction, primarily adding a connection from the ConRAC to Jim McGehee Parkway but would not disturb other airport roadways or access during construction.

Exhibit 5. Long-Term Preferred Planning Alternative, Phase 1



SOURCE: MASTER PLANNING TEAM, MARCH 2019

2.4 Applicability to Short-Term Goals and Project Needs

Proposed activities are consistent with Phase 1 of the preferred long-term alternative (**Exhibit 5**) selected during the master planning process. As shown in **Figure 3**, the ConRAC is sited in the location of the demolished Concourse A and the Economy Garage is converted back to public parking. The QTA facility would be converted to employee parking and QTA activities would be moved to the newly constructed ConRAC facility. In addition, the Blue Lot and Overflow lot are allocated for public parking.

The siting of the Administration Building used the same land use siting constraints as the other structures. It is lower in height than the proposed ConRAC structure and planners determined that siting the building south of the ConRAC would not remove any landside opportunities for additional parking while also not impede the Tower's view of the airfield.

Proposed activities would provide sufficient capacity to meet the identified need while not precluding planning for future growth.

2.5 Alternatives Considered in this EA

The land use constraints, line of sight restrictions of the Tower, as well as MSCAA's goals for minimizing impacts to the existing landside facilities were key criteria in the siting of facilities and repurposing of existing landside spaces. MSCAA planners were able to minimize construction impacts and roadway disturbances by utilizing its existing garages and surface lots with minor modifications to fulfill the immediate parking and car rental demands. Employees would be provided with a separate parking facility than passengers, and the Economy Garage will gain more passenger parking spaces with the relocation of car rental services, resulting in 1,733 more passenger spaces that are walkable to the terminal. Planners determined it would be least disruptive to construct a new facility for car rental and QTA and the new facility would be able to provide more capacity than retrofitting car rental space in either garage.

2.5.1 No Action Alternative

Under the No Action Alternative, improvements or modifications to landside facilities would not occur. The demolition of Concourse A would not occur. The Airport would continue to experience peak passenger volume days where public parking would not satisfy demand and there would not be an on-airport public parking option for all passengers. In addition, car rental services would be at capacity by the PAL 1 planning period (2026) and not all passengers that wanted to rent a car could do so during peak times. Administration space and employee parking spaces would also be at capacity in the near term and would not be able to accommodate the anticipated growth of employees parking and working at the airport.

2.5.2 Preferred Alternative

The Preferred Alternative would be the implementation of the proposed activities summarized in Chapter 1. The proposed activities would be implemented to increase the number of public and employee parking spaces as well as increase the amount of area for car rental services and administrative space. These activities would satisfy the identified demand for additional landside facilities.

The preferred alternative was derived from the long-term planning process of MSCAA's master planning effort and is consistent with the alternatives analysis performed. These activities would include the demolition of Concourse A, construction of a new ConRAC facility in its place that could house the QTA within the same structure, revert the car rental space in the Economy Garage back to public parking, add employee parking spaces in place of the existing QTA area, construct a surface lot for overflow, to provide more parking for those higher demand days, and construct a new administration building that could consolidate staff office space in one location as well as offer a lower level to house the CBIS system. These proposed activities would alleviate the burden of the existing demand for these services.

3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter identifies the built and natural environment within the proposed project's area of study (the "Affected Environment") as well as the anticipated environmental effects from the implementation of the evaluated Preferred Alternative ("Environmental Consequences"). FAA Order 1050.1F and its associated Desk Reference states the affected environment section of an EA should document existing environmental conditions of the proposed project's area of study (project area), which is the potentially affected geographic area(s) where proposed activities would occur. The environmental consequences analysis should include consideration of the direct and indirect effects of the build alternative(s) as well as the significance of these effects.

3.1 Project Area

The project area is paved landside and airside areas, consisting of existing surface parking and parking garages (Figure 2). While a portion of Jim McGehee Parkway falls in the study area, there are no proposed modifications to the roadway. The project area also includes a portion of airside space currently occupied by Concourse A, which is proposed for demolition.

3.2 Resource Categories Not Applicable

Due to the nature of proposed activities and the project area's location, several resource categories are not relevant and/or not present. There are no natural vegetated areas or waterbodies present within the project area and all proposed activities would occur on-Airport, not affecting private property or residential areas. Airport operations, such as the number of flights, flight patterns, or aircraft movements within the airfield, would not change because of these activities. In addition, there are no changes proposed to public roadways or access to and from the Airport.

3.2.1 Biological Resources

Proposed activities would take place within a previously disturbed (i.e., paved) area. Therefore, no ecological communities or trees are present, and none would be impacted by proposed activities.

The Federally listed northern long-eared bat (*Myotis septentrionalis*) (endangered), tricolored bat (*Perimyotis subflavus*) (proposed endangered), alligator snapping turtle (proposed threatened) (*Macrochelys temminckii*), and monarch butterfly (*Danaus Plexippus*) (candidate species) are listed as occurring in the project area; however, no federally listed critical habitats are present.[13] Furthermore, the project area is paved and no habitat for these species is present. There are 25 records of state-designated threatened, endangered, in need of management, rare, or special concern species (plants, fish, and wildlife)

[13] An Official Species list was generated on June 18, 2024 using the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) System.

by the Natural Heritage Program for Shelby County. However, there is no habitat for these state-listed species in the project area.[14]

Therefore, impacts to threatened, endangered, or state listed species would not occur, and the U.S. Fish and Wildlife Service made a "No Effect" determination for the northern long-eared bat.[15]

3.2.2 Farmlands

The entire airport property, including the project area, is classified as "urbanized area." These areas are largely developed with urban and suburban uses and therefore the Farmland Protection Policy Act (FPPA) does not apply.[16]

3.2.3 Hazardous Materials, Solid Waste, and Pollution Prevention

The project area consists of actively used spaces that are maintained for safe use by passengers and employees. The Airport has a solid waste management system where waste is collected from all areas and disposed of properly. The car rental and QTA facility may use car cleaning chemicals, but those products are commercially available and do not result in hazardous conditions for QTA employees or users. The Airport does not have any records of substantial spills or hazardous materials within the study area. Therefore, there are no known existing hazardous materials or hazardous waste sites that would be impacted by the proposed project or within the project area.

Most work would result in minor levels of solid waste. All wastes produced by the proposed project, including the demolition of Concourse A will be disposed of properly or recycled, if possible. Universal waste generated, such as lightbulbs, will be recycled offsite. If hazardous materials, asbestos containing materials, petroleum spills, or any soils excavated during demolition or construction that show evidence of hazardous material contamination are encountered at the site during construction, the appropriate governing agencies would be contacted for proper remediation. An asbestos survey of all materials included as part of the proposed project would be conducted prior to the bid process and noted on bid documents for a licensed contractor to abate prior to start of construction. If encountered, all abated asbestos-containing materials will be disposed of properly, in accordance with local, state, and federal regulations.

3.2.4 Land Use

The proposed project does not involve land acquisition or alteration of land use. Proposed activities are consistent with airport uses.

3.2.5 Visual and Light Emissions

Additional lighting would be necessary for the CONRAC and Overflow Lot. Modified lighting is also anticipated for the reconfigured cell phone lot. These modifications would result in a minor change in the illumination of the area and would not affect airfield movements or operations.

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[14] The Tennessee Natural Heritage Inventory Program was reviewed on June 6, 2024 for records of federally listed species in the vicinity of the project site.

[15] A USFWS IPaC Determination Key for northern long-eared bat, prepared on June 18, 2024, generated a "no effect" determination.

[16] U.S. Census Bureau, Department of Commerce - TIGER/Line Shapefile, 2017, 2010 nation, U.S., 2010 Census Urban Area National. https://catalog.data.gov/dataset/tiger-line-shapefile-2017-2010-nation-u-s-2010-census-urban-area-national. Accessed June 18, 2024.

3.2.6 Natural Resources and Energy Supply

Energy supply within the vicinity of the project area include suppliers of local public utilities such as power plants, water suppliers, sanitary and sewage disposal utilities, and natural gas and petroleum suppliers. Based on their size and functions, the proposed new buildings would not result in significant energy consumption associated with space heating and cooling and therefore, would not place any substantially new demand on local public utilities or the energy supply in the vicinity of the project area.

All proposed activities would be constructed on paved areas and no vegetation would be removed. Therefore, the proposed activities would not diminish the natural resources in the project area.

3.2.7 Noise and Compatible Land Use

The proposed activities would not contribute measurable noise during their operation. The temporary nature of construction noise associated with construction activities would be short-term and would occur in phases over approximately 2-3 years. Demolition of Concourse A and the development of shallow foundations for the new buildings may result in temporary noise impacts. This work would occur on-Airport and there are no noise-sensitive uses in the area where traffic patterns or levels may change. Anticipated equipment to conduct this work includes medium-sized excavators, mobile/crawler cranes, hauling trucks, boom lifts, forklifts, and power loaders. Significant excavation and foundation developed (more intensive construction activities) are not required as part of proposed activities. Therefore, construction of the proposed activities is not anticipated to result in long-term noise impacts.

Aircraft activity will not be altered because of the proposed activities and therefore an aircraft noise analysis is not required.

3.2.8 Socioeconomics, Environmental Justice, Children's Environmental Health and Safety Risks

There are no residential properties within the Airport or project area. Construction would occur within the project area, on airport property, and would not affect neighborhoods or communities. The proposed project would not directly or indirectly affect low-income or minority populations and would not change public, non-Airport roadways, or access to and from the Airport.

3.2.9 Water Resources

3.2.9.1 Coastal Resources

Coastal resources include coastal barriers and coastal zones. Coastal barriers and zones are not located within the project area and therefore would not be impacted by proposed activities.

3.2.9.2 Wetlands and Surface Waters

There are no wetlands present in the project area. According to the National Wetland Inventory (NWI) reviewed as part of this evaluation, NWI wetlands are located southeast of the project area, outside of the area of proposed activities (**Figure 4**). Airport staff visited the study area and confirmed there is no water or potential wetland resources present.

3.2.9.3 Floodplains

There are 100-year (1 percent chance of flooding) and 500-year (0.2 percent chance of flooding) (**Figure 5**) floodplains within the airport property. However, the project area does not occur in any floodplain zones. Furthermore, the proposed activities would take place indoors or in developed areas (i.e., paved) immediately around the existing terminal building. Therefore, floodplains would not be impacted.

3.2.9.4 Groundwater

The proposed project would occur within previously improved areas, and these types of resources are not present in this area. Therefore, groundwater would not be impacted and no further review of groundwater resources is required.

3.2.9.5 Wild and Scenic Rivers

Based on a review of the National Park Service, Nationwide Rivers Inventory, there are no wild or scenic rivers in the project area and, therefore, would not be impacted.

3.3 Resources Present

The following resources are present in the project area or could be affected by implementation of the Preferred Alternative. The analysis identifies the potential effects of the Preferred Alternative based on changes in the resource that would occur with implementation of the Proposed Project and would not occur with the No Action Alternative. Construction impacts are discussed within each resource category, as applicable. The primary statutes, regulations, executive orders, and other guidance related to the evaluation of the resources present in the project area for the project are detailed as part of FAA Order 1050.1F and its associated Desk Reference.

3.3.1 Air Quality

3.3.1.1 Affected Environment

Air quality is affected by air pollutants produced by both motor vehicles and stationary sources. Emissions from motor vehicles are referred to as mobile source emissions, while emissions from fixed facilities are referred to as stationary source emissions. Ambient concentrations of carbon monoxide (CO) are predominantly influenced by mobile source emissions. Particulate matter (PM), volatile organic compounds (VOCs), and nitrogen oxides (nitric oxide [NO] and nitrogen dioxide [NO2], collectively referred to as NOx) are emitted from both mobile and stationary sources. Fine PM is also formed when emissions of NOx, sulfur oxides (SOx), ammonia, organic compounds, and other gases react or condense in the atmosphere. Emissions of sulfur dioxide (SO2) are associated mainly with stationary sources, and some sources utilizing non-road diesel such as large international marine engines. On-road diesel vehicles currently contribute very little to SO2 emissions since the sulfur content of on-road diesel fuel, which is federally regulated, is extremely low. Ozone is formed in the atmosphere by complex photochemical processes that include NOx and VOCs. Ambient concentrations of CO, PM, NO_2, SO_2, ozone, and lead are regulated by the U.S. Environmental Protection Agency (EPA) under the Clean Air Act (CAA) and are referred to as “criteria pollutants.” Emissions of VOCs, NOx, and other precursors to criteria pollutants are also regulated by EPA.

As required by the CAA, primary and secondary NAAQS have been established for six major air pollutants: CO, NO_2, ozone, respirable PM (both $PM_{2.5}$ and PM_{10}), SO_2, and lead.

The project area is in a maintenance area for ozone and is in attainment for all other criteria pollutants. In February 2024, the United States Environmental Protection Agency (EPA) lowered the $PM_{2.5}$ annual average primary standard from 12 micrograms per cubic meter (µg/m3) to 9 µg/m3 when averaged over a three-year period (effective May 2024). Within two years of lowering the standard, EPA will complete its initial area designations to determine if areas are in attainment with the new standard." Until EPA makes final designations, the area remains in attainment for $PM_{2.5}$.

3.3.1.2 Environmental Consequences

No Action Alternative

The No Action Alternative would not result in any construction activities or change in existing airport operations. Under the No Action Alternative, the existing rental car services would continue to use Levels 1 and 2 of the Economy Garage and QTA with 1,733 ready/return spaces. As discussed in Section 1.3, Project Purpose and Need, parking and car rental demand would continue to grow. Therefore, under the No Action Alternative, existing public parking spots would be fully utilized, and rental car operations would continue to use the current space allocated at the airport in addition to the offsite storage facility to meet demand without increasing capacity, essentially "capping out" at their current service level. Therefore, air emissions are anticipated to be similar to existing emissions levels in the No Action Alternative and would not result in any related impacts to air quality.

Preferred Alternative

Proposed activities would include the construction of a new ConRAC Building, Administration Building, and parking facilities (including the expansion of selected surface lots). The new buildings would not result in significant energy consumption associated with space heating and cooling of these spaces. Therefore, the buildings are not anticipated to result in significant pollutant emissions in the Preferred Alternative.

The Preferred Alternative relocates rental car operations from the existing Economy Garage and QTA to the proposed ConRAC building and would provide increased spaces for storage, ready/return, and QTA. The 1,733 spaces in the existing Economy Garage and QTA would be repurposed for passenger parking use to meet anticipated future demand. Additionally, the project activities would include the development of 1,730 additional parking space across the proposed new Blue Lot, Cell Phone Lot, and Overflow Lot. As discussed in Section 1.3, Project Purpose and Need, passenger parking and car rental demand is anticipated to exceed existing capacity, but these proposed activities would not generate new, additional vehicle trips to/from the Airport.

Vehicle emissions are anticipated to be similar to or less than vehicle emissions under the No Action Alternative. The design of Airport traffic flows to and from the new facilities would continue to direct vehicles away from passenger drop off/pickup areas. Therefore, the Preferred Alternative would not result in a substantial increase in vehicle miles within the Airport and the increase of onsite rental car storage may result in reduced vehicle trips between the off-site rental car facilities and the Airport. Therefore, the Preferred Alternative would not result in notable changes in criterial pollutant levels in the study area. Additionally, the Preferred Alternative would not impact aircraft emissions and would not result in in any related impacts to air quality.

Construction of the Preferred Alternative would result in minimal construction activities over the duration of approximately 2 to 3 years and would include limited modification of existing parking facilities and the demolition of existing Concourse A that is no longer in use; shallow foundations for the ConRAC Building and Administration Building; surface paving for the proposed Blue Lot, Cell Phone Lot, and Overflow Lot; building superstructure; retrofit of the existing Economy Garage and QTA; and building interior/exterior fitting. To perform this work, typical construction equipment would be used and may include medium sized excavators, mobile/crawler cranes, hauling trucks, boom lifts, forklifts, and power loaders. Since construction would not include significant excavation and foundation activities (the most emission intensive periods of construction activities), the construction of the Preferred Alternative is not anticipated to result in significant pollutant emissions from construction equipment.

As customary with applicable Airport development projects, MSCAA would employ best management practices to minimize dust emissions from construction activities.

Overall, the Preferred Alternative's pollutant annual emission levels during operation and construction are anticipated to be below any of the federal *de minimis* levels for NO_x, VOC, $PM_{2.5}$, or SO_2. Potential emissions would be located greater than 3,000 feet from the nearest residential locations, which are east of the Airport. Therefore, the Preferred Alternative would not result in adverse air quality impacts.

3.3.2 Climate

3.3.2.1 Affected Environment

Because of the growing consensus that human activity resulting in greenhouse gas (GHG) emissions has the potential to profoundly impact the Earth's climate, countries around the world have undertaken efforts to reduce emissions by implementing both global and local measures addressing energy consumption and production, land use, and other sectors. Although the U.S. has not ratified the international agreements that set emissions targets for GHGs, in December 2015 the U.S. signed the international Paris Agreement[17] that pledged deep cuts in emissions, with a stated goal of reducing annual emissions to levels that would be between 26 and 28 percent lower than 2005 levels by 2025.[18] Regardless of the Paris Agreement, the EPA is required to regulate GHGs under the CAA and has begun to prepare and implement regulations to reduce GHG emissions in the United States.

Climate change is driven by the collective contributions of diverse individual sources of emissions to global atmospheric GHG concentrations. GHGs are those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wavelengths within the spectrum of infrared radiation emitted by the Earth's surface, the atmosphere, and clouds. The general warming of the Earth's atmosphere caused by this phenomenon is known as the "greenhouse effect." Water vapor, carbon dioxide (CO_2), nitrous oxide (N_2O), methane, and ozone are the primary GHGs in the Earth's atmosphere.

Identifying potential GHG emissions from a proposed action can help decision makers identify practicable opportunities to reduce GHG emissions and ensure consistency with policies aimed at reducing overall emissions. While the increments of criteria pollutants and toxic air emissions are assessed in the context of health-based standards and local impacts, there are no established thresholds for assessing the significance of a project's contribution to climate change. Therefore, all potential GHG emissions associated with a proposed project's activities, regardless of location, are considered when assessing the potential for climate change impacts.

3.3.2.2 Environmental Consequences

No Action Alternative

The No Action Alternative would not result in any construction activities or change in existing airport operations. Under the No Action Alternative, the existing rental car facilities would remain in Levels 1 and 2 of the existing Economy Garage. Offsite storage would continue to be used to accommodate rental car operations and capacity would not be added to the rental car or parking facilities. Therefore, GHG emissions are anticipated to remain at existing levels.

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[17] Conference of the Parties, 21st Session. *Adoption of The Paris Agreement, decision -/CP.21*. Paris, December 12, 2015.

[18] United States of America*. Intended Nationally Determined Contributions (INDCs)* as submitted. March 31, 2015.

Preferred Alternative

As discussed in Section 3.3.1, Air Quality, the Preferred Alternative would not result in significant pollutant emissions during construction or operation of the proposed ConRAC Building, Administration Building, Economy Garage, or surface parking lots. Similarly, the Preferred Alternative would result in similar levels of GHG emissions when compared to the No Action Alternative and minimal GHG emissions during construction. Therefore, the Preferred Alternative would not result in adverse climate change impacts.

3.3.3 Historic, Architectural, Archaeological, and Cultural Resources

3.3.3.1 Affected Environment

Regulatory Framework

This evaluation was prepared in accordance with the procedures of Section 106 of the National Historic Preservation Act of 1966 (NHPA), as implemented by federal regulations appearing in 36 CFR Part 800, in consultation with the Tennessee State Historic Preservation Office (SHPO) and other consulting parties.

Section 106 of NHPA mandates that federal agencies consider the effect of their actions on any properties listed on or determined eligible for listing on the National Register of Historic Places (National Register, NRHP) and afford the federal Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings. Section 101(d)(6)(B) of the NHPA requires the lead federal agency to consult with any Native Nation or Native Hawaiian organization that attaches religious and cultural significance to historic properties that may be affected by the undertaking. The lead federal agency shall ensure that consultation in the Section 106 process provides the Native Nation or Native Hawaiian organization a reasonable opportunity to identify its concerns about historic properties, advise on the identification and evaluation of properties, including those of traditional religious and cultural importance, articulate its views on the undertaking's effects on such properties, and participate in the resolution of adverse effects.

The lead federal agency, in consultation with the SHPO and appropriate consulting parties, must determine whether a proposed action (proposed activities) would have any adverse effects on the characteristics of a property that qualify it for the National Register. Section 106 requires consultation with consulting parties, which in addition to the SHPO and ACHP, include federally recognized Native Nations/Tribal Historic Preservation Officers (THPOs) or Native Hawaiian organizations, local governments, and other individuals and organizations with a demonstrated interest in proposed activities, whose participation is subject to approval by the responsible federal agency. The basic steps of the Section 106 process are as follows:

- All properties that may be affected by the proposed project and that are included in or eligible for the National Register must be identified by the lead federal agency, in consultation with SHPO and any appropriate Native Nations, Native Hawaiian organizations, or consulting parties. If properties are found that may be eligible for the NR or sites of religious or cultural significance to Native Nations, but for which no determination has yet been made, the agency consults with the SHPO and any participating Native Nations, Native Hawaiian organizations, or consulting parties to determine eligibility or ineligibility.
- If historic properties that may be affected are identified, the potential effect of the proposed activities on each property must be evaluated, in consultation with the SHPO and any participating Native Nations, Native Hawaiian organizations, or consulting parties, to determine if the proposed project would have adverse effects on them. To determine potential effects on the historic properties, the ACHP's Criteria of Adverse Effect (36 CFR § 800.5(a)(1)) must be applied, in consultation with the SHPO

and any appropriate Native Nations, Native Hawaiian organizations, or consulting parties, to determine whether adverse effects would occur. In general, a proposed action is deemed to have an adverse effect if it may cause a change in the quality of the property that qualifies it for inclusion in the NR. The ACHP, as well as the SHPO and any participating Native Nations, Native Hawaiian organizations, and consulting parties, is notified of any findings of adverse effects.

- If the analysis indicates that the proposed activities may have an adverse effect, SHPO and any consulting parties are consulted to seek agreement on ways to avoid, minimize, or mitigate adverse effects. This mitigation is typically implemented through a Memorandum of Agreement (MOA). The ACHP may choose to participate in the consultation when there are substantial impacts to historic properties, when a case presents important questions of policy or interpretation, when there is a potential for procedural problems, or when there are issues of concern to Native Nations or Native Hawaiian organizations. The ACHP must be invited to participate when the federal agency sponsoring the Proposed Project wants the Council's involvement and when proposed activities would have an adverse effect on a National Historic Landmark.
- Execution of the MOA and implementation of the terms therein satisfies the requirement of Section 106 that the ACHP be given a reasonable opportunity to comment on the undertaking and demonstrates that the federal agency has taken into account the effects of the action.

Review under Section 106 can be conducted in coordination with analyses conducted for the National Environmental Policy Act (NEPA). In addition, because the views of the public are essential to informed federal decision-making in the Section 106 process, the public should be informed about the proposed project and its effects on historic properties and given the opportunity to comment. This public comment element can be combined with the public participation component required by NEPA. The public participation efforts being conducted for the proposed project are described in Chapter 4, Public Involvement and Agency Coordination.

FAA, as the lead agency, initiated the Section 106 process with SHPO on June 20, 2024 (see **Appendix B** for correspondence). FAA determined that based on the nature of proposed activities, it was not necessary to consult with Native Nations as part of the Section 106 process for the undertaking. FAA invited the Memphis Area Association of Governments; the Memphis and Shelby County Historical Commission, Mr. James Rout; Memphis Heritage, Inc.; and the Memphis Landmarks Commission to serve as Section 106 consulting parties via telephone calls, as email and address information was not readily available. The Memphis and Shelby County Historical Commission, Mr. James Rout, accepted the invitation to be a Consulting Party, while the other organizations either declined to be a consulting party or did not respond to the invitation.

A meeting was held on September 13, 2024 to seek and consider views of the consulting parties regarding the project's effects on historic and cultural resources. The meeting was attended by FAA, MSCAA, SHPO, and the Memphis and Shelby County Historical Commission, represented by Mr. James Rout. The group discussed the historic properties within the Area of Potential Effect (APE) and the project's potential effects on these properties. This EA takes into consideration the views expressed by the SHPO and Mr. Rout at this meeting.

Methodology

A required step in the Section 106 process is determining the APE, which is defined as "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of

historic properties, if such properties exist" (36 CFR § 800.16[d]). The APE is influenced by the scale and nature of an undertaking (proposed activities). In general, potential adverse effects on architectural resources can include both direct physical effects—demolition, alteration, or damage from construction—and indirect effects, such as the introduction of visual, audible, or atmospheric elements that may alter the characteristics of the historic property that qualify it for inclusion in the National Register in a manner that would diminish the integrity of the property's significant historic features. Archaeological resources are potentially affected by direct impacts from construction activity resulting in disturbance to the ground surface (including submerged ground surfaces) such as excavation, grading, pile-driving, cutting and filling, dredging, and staging. The FAA defined the APE for proposed activities in consultation with SHPO. The Direct APE is defined as the area of potential ground disturbance that will be affected by the undertaking. Therefore, the sites of the proposed ConRAC facility and Administration Building, including the proposed connectors to Terminal A, are defined as the Direct APE. The Indirect APE where historic resources could experience visual or contextual effects from the proposed project is defined as the area within 200 feet of the sites of the proposed ConRAC facility and Administration Building (Figure 6). It is not expected that expanding/reconfiguring existing parking lots and converting parking spaces in the existing Economy Garage and QTA facility would have the potential to affect historic resources.

Once the APE was determined, a list of officially recognized architectural resources within the APE was compiled. In general, this includes National Historic Landmarks (NHL) and properties listed on the NR or determined eligible for such listing. A list of potential historic resources within the APE is also compiled based on surveys of the APE conducted by architectural historians who meet National Park Service Professional Qualification Standards for Architectural History, codified under 36 CFR Part 61. Potential historic resources comprise districts, sites, buildings, structures, and objects that may be eligible for listing on the National Register. Criteria for listing on the National Register are found in 36 CFR Part 60. Determinations of eligibility are made by the lead federal agency in consultation with SHPO and appropriate THPOs and consulting parties. As described in 36 CFR § 800.4(c)(2), "If the agency official determines any of the National Register criteria are met and the SHPO/THPO agrees, the property shall be considered eligible for the National Register for Section 106 purposes."

Existing Conditions

The APE contains no properties designated as NHLs and no properties listed on the National Register (Figure 6). Two properties, the MEM Terminal building, including the concourses, and Short-Term Garage, have been determined eligible for the National Register by SHPO, as described in greater detail below.

The entirety of the project area was subject to extensive ground disturbance as part of the construction of the terminal and other airport infrastructure. There are no tribal lands within the project area. In consultation with SHPO, FAA determined that the APE lacks archaeological sensitivity and no further archaeological studies are necessary.

NR-Eligible Memphis International Airport Terminal and Concourses

In 2019, SHPO determined that the MEM Terminal (Terminal) was eligible for the National Register under National Register Criterion C at the local level of significance as an example of new Formalist architecture in Memphis and under Criterion A in the area of Transportation for its association with popular commercial air travel opportunities in Memphis.

The original section of the Terminal (the central section now known as Terminal B) was completed in 1963 and designed by Tennessee-based architect Roy Harrover (1928-2016) (then part of the firm Mann & Harrover). The design of the Terminal received immediate recognition and was awarded a National Design

Award from Progressive Architecture magazine and the National Award of Merit from the American Institute of Architects in 1964. Harrover designed the Terminal to be expanded, which occurred in the early 1970s with the addition of east and west terminals (Terminals A and C) flanking the main Terminal. Harrover also designed these terminals in the same style. All three are considered contributing components of the NR-eligible historic property.

Character-defining features of the Terminal design include the pioneering use of tall, concrete columns supporting an overhanging hyperbolic paraboloid roof. Another important feature of the Terminal's architecture is the two-level nature of the design, allowing passengers to directly access the upper level, which connected with the airplanes, rather than needing to enter at ground level and carry their bags upstairs. An elevated access roadway was integrated into the design, running between the two outer sets of columns allowing passengers to disembark in a sheltered entry area. Harrover's design inspired subsequent architects to emulate this approach in other airports.

The terminal retains a high degree of historic integrity overall; however, incremental alterations to the building have been made since the early 1970s. The most notable of these alterations was the addition of an upper outer roadway that was constructed with the addition of a third level to the short-term parking garage in 1988.

In a letter dated June 28, 2024, SHPO confirmed that the three concourses (Concourses A, B, and C) are eligible features of the terminal. Concourse B, a Y-shaped building that extends south from the center of the terminal, was constructed in 1963 with the original terminal building. It has been substantially altered over time through the enlargement of its footprint, replacement of the concrete facades with large expanses of windows, and modernization of the interior layout and finishes. A fully renovated Concourse B opened in 2022, and it consolidated passenger gates with a significantly modernized interior.

Constructed in the early 1970s with Terminals A and C, Concourses A and C are long, linear buildings connected at right angles to the terminal by skybridges. They are clad in glazed brick with exposed concrete beams. The exteriors of Concourses A and C have been altered since their original construction through the infill of openings, creation of new openings, and change in size of openings. In addition, the southern end of Concourse A, including both original fabric and a 2001 addition, was demolished in 2014, and the southern end of Concourse C was demolished in 2023. Interior alterations have also been made to Concourses A and C, and both were permanently closed with the reduction in number and consolidation of passenger gates in the renovated Concourse B in 2022.

NR-Eligible Short-Term Parking Garage

On the north side of the airport loop road is a large rectangular-plan three-level parking garage that contains short-term parking facilities. It connects to the Terminal via skybridges to the upper outer roadway and crosswalks at ground level. In 2019, SHPO also determined the short-term parking garage to be NR-eligible along with the Terminal.

Harrover's 1970 architectural drawings for the expansion of the Terminal also included a three-level parking garage north of the Terminal and an elevated upper outer roadway adjacent and parallel to the upper interior roadway, but these structures were constructed after completion of Terminals A and C and Concourses A and C, with the third level of the parking garage and the upper outer roadway not completed until 1988. Like the lower floors of the Terminal, the short-term parking garage is clad in glazed brick with exposed concrete beams.

3.3.3.2 Environmental Consequences

No Action Alternative

The No Action Alternative would not result in any construction activities or change in existing airport operations. Under the No Action Alternative, the existing rental car facilities would remain in Levels 1 and 2 of the existing Economy Garage. Offsite storage would continue to be used to accommodate rental car operations and capacity would not be added to the rental car or parking facilities. Therefore, demolition of Concourse A would not occur and there would be no effects to architectural or archaeological resources.

Preferred Alternative

The Preferred Alternative would have no adverse effects on archaeological resources. The Preferred Alternative would result in an adverse effect on one historic architectural property: the NR-eligible Concourse A.

The proposed ConRAC facility would connect to the west façade of Terminal A with a corridor (**Figures 7-9**). As shown on **Figure 10**, the western portion of Terminal A consists of a low wing that extends beyond the glazed upper facade of the Terminal A arrival hall/ticketing area. Although it has not been fully designed, conceptual drawings anticipate that the ConRAC facility would be a cast-in-place concrete structure with a metal scrim façade similar to the façade of the existing Economy Garage.

In letters dated June 28, 2024 and July 31, 2024, SHPO commented that proposed activities would result in an adverse effect from demolition of Concourse A (**Appendix B**). Therefore, as noted above, a meeting was held on September 13, 2024 with the SHPO and the Memphis and Shelby County Historical Commission to seek and consider their views regarding the project's effects on historic and cultural resources as well as potential mitigation for the adverse effect. Additionally, in accordance with Section 106, the ACHP was notified of the Preferred Alternative's potential adverse effects on historic properties via an electronic submittal. The ACHP declined to participate in consultation on the project.

Measures to minimize and mitigate adverse effects to the historic property have been developed in consultation with SHPO and the Memphis and Shelby County Historical Commission, as documented in a Memorandum of Agreement (MOA) for the project (**Appendix C**). Measures included in the MOA to further minimize adverse effects on the historic property include a provision for SHPO to engage in design review of proposed project components during its development. The MOA also stipulates documenting the Terminal, including the three concourses, to SHPO Documentation Standards for Mitigation, Level II, including photography requirements prior to the commencement of the proposed project.

3.3.4 Surface Transportation

3.3.4.1 Affected Environment

The affected environment for the evaluation of surface transportation includes the landside space within the Airport's footprint that could potentially be impacted by proposed activities, particularly the ConRAC, Economy Garage, Overflow Lot, and Cell Phone Lot. Garage and surface parking facilities were evaluated to determine whether the proposed project would address the immediate and short-term demand for parking at the Airport. It does not result in additional operations, changes to flight patterns, or aircraft fleet mix, and would not induce additional on-airport traffic.

3.3.4.2 Environmental Consequences

No Action Alternative

The No Action Alternative would not address the immediate or near-term demand for passenger parking, employee parking, and rental car services at the Airport. Although access roadways will continue to

accommodate the growth in traffic accessing the Airport,[19] passenger parking and employee parking conditions will worsen, and rental car facilities will not be able to accommodate the anticipated growth in passenger traffic. Parking shortages would continue during peak periods, which would result in the MSCAA closing lots and garages when full. This may cause passengers to drive around the airport looking for parking, park illegally, or travel off-airport to look for parking.

Preferred Alternative

When compared to the No Action Alternative, the Preferred Alternative would not alter surface transportation patterns, with the exception of a new internal roadway from the ConRAC along the western border of the airport property. These vehicles would enter the facility from Jim McGehee Parkway prior to the reaching the terminal and exit similarly as those parking in the Blue Lot (**Figure 3**). Passengers and employees would utilize the same roadways to access landside parking and rental car service facilities and there would be no increase in traffic flows at the curbfronts as a result of proposed activities. The Preferred Alternative would improve the efficiency of the on-Airport roadway system and would accommodate the immediate demand for passenger parking, employee parking, and rental car services at the Airport.

3.4 Indirect and Cumulative Effects

Proposed activities are consistent with the master plan improvements prepared for the overall airport, which is ultimately planned to improve the efficiency and customer experience of the airport. Project activities are limited to airport property and address an existing and immediate need for public parking as well as short term needs for employee parking, administrative space, and rental car services. Any internal roadway changes do not create congestion conditions in or around the airport. The Project does not involve a change in aircraft operations, airport operations, or passenger or cargo volumes. Therefore, the project would not result in any indirect or induced development or effects.

There are no other landside development projects planned or underway at this time. The project activities are focused in an existing paved area with minimal disturbance to existing conditions. The project would not result in adverse environmental effects, other than the demolition of Concourse A and would not contribute to an adverse cumulative effect to other resources.

3.5 Irreversible and Irretrievable Commitment of Resources

The Preferred Alternative would not put undue stress on local utilities or Airport assets, or adversely alter the natural, visual, social, or economic conditions of the surrounding area. Therefore, there would be no irreversible or irretrievable commitment of resources associated with the implementation of the Preferred Alternative.

3.6 Conclusion

There are no permanent, significant, adverse impacts on resources as a result of the Preferred Alternative except for the determination that the demolition of Concourse A would be an adverse effect to the potentially-eligible resource. Mitigation activities are stipulated in the MOA (**Appendix C**).

While the Preferred Alternative would not result in significant adverse impacts to other resources, best management practices would also be observed during construction to avoid or dust emissions in the project area and its vicinity.

[19] Memphis International Airport, Landside Facilities. Master Plan Team, March 2019.

4 PUBLIC INVOLVEMENT AND AGENCY COORDINATION

4.1 Agency Coordination

Agency coordination occurred for those resources present and that may be affected by project activities as well as to confirm the absence of selected resources. Specifically, the Tennessee Historic Commission was contacted via written correspondence and participated in the evaluation of this project.

The following agency databases were reviewed to support the resource evaluation in the EA.

- The Tennessee Natural Heritage Inventory Program: reviewed for records of federally-listed species in the vicinity of the project area.
- U.S. Fish and Wildlife Service (USFWS) IPaC Determination Key: revised for northern long-eared bat.

4.2 Section 106 Consultation

Section 106 of the National Historic Preservation Act (36 CFR Part 800) requires Federal agencies to consider the effects of their undertakings on historic properties that are listed or meet the eligibility criteria for listing in the National Register of Historic Places. Section 106 includes a public participation component. The process includes providing Consulting Parties and the public with information about the project and its effects on historic properties and seeking public comment and input. This requirement is being satisfied in coordination with the public involvement requirements pursuant to NEPA.

FAA, as the lead agency, initiated the Section 106 process with SHPO on June 20, 2024. Two coordination letters were sent to the Tennessee Historic Commission outlining proposed activities and the rationale for a preliminary determination of effect (Appendix B). SHPO responded to both coordination letters and confirmed that the demolition of Concourse A would constitute an adverse effect. The FAA engaged potential consulting parties and held a meeting on September 13, 2024 to discuss the project and potential effects. The meeting also included discussion and agreement on potential strategies to mitigate the effect of the project, which is stipulated in the draft MOA (Appendix C).

4.3 Public Outreach

The MSCAA published a Notice of Availability of the EA providing the public an opportunity to review and comment on the project's environmental assessment. Notice was published in The Commercial Appeal, Tri-State, La-Prensa, and Daily News and on the Airport's website www.flymemphis.com.

The EA is available for public review from November 15, 2024 to December 16, 2024. Comments and/or questions should be submitted to MSCAA staff. Following the public comment period on the EA, FAA and MSCAA will consider public comments and provide responses to them as part of its statement of findings for the Project.

MSCAA will accept comments until the official comment period closes. Comments on this EA should be sent to:

Mr. James Hay, Director of Development
2491 Winchester Road, Suite 113
Memphis, TN 38116
Email: jhay@flymemphis.com

Any questions regarding this public notice can also be directed to Ms. Amy McCaffery at the address above or amccaffery@flymemphis.com.

5 DRAFT SECTION 4(f) EVALUATION

Section 4(f) of the U.S. Department of Transportation Act of 1966 (now 49 United States Code [USC] Section 303 and 23 USC Section 138; U.S. Department of Transportation [USDOT] Act) applies to the use of publicly or privately owned historic sites determined eligible for or listed on the National Register of Historic Places (NRHP); and publicly owned parks, recreation areas, and wildlife and waterfowl refuges (collectively, Section 4(f) properties). The requirements of Section 4(f) apply to FAA and other agencies of USDOT.

5.1 Regulatory Framework

Section 4(f) of the USDOT Act stipulates that FAA and other USDOT operating administrations may not approve the use of Section 4(f) properties unless they have determined that the following conditions apply:

- There is no feasible and prudent alternative that would avoid the use of the Section 4(f) property: and
- The Project includes all possible planning to minimize harm to that property resulting from such use (23 Code of Federal Regulations [CFR] Section 774.3(a)); or
- The use of the Section 4(f) property, including any measures(s) to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures) will have a de minimis impact, as defined in 23 CFR Section 774.17, on the property.

The regulations 23 CFR 774.17 set out factors to consider in determining whether an avoidance alternative is feasible and prudent:[20]

> (1) A feasible and prudent avoidance alternative avoids using Section 4(f) property and does not cause other severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) property. In assessing the importance of protecting the Section 4(f) property, it is appropriate to consider the relative value of the resource to the preservation purpose of the statute.
>
> (2) An alternative is not feasible if it cannot be built as a matter of sound engineering judgment.
>
> (3) An alternative is not prudent if:
>
> (i) It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;
>
> (ii) It results in unacceptable safety or operational problems;
>
> (iii) After reasonable mitigation, it still causes:
>
> (A) Severe social, economic, or environmental impacts;

[20] 23 CFR 774.17 "Feasible and prudent avoidance alternative."

(B) Severe disruption to established communities;

(C) Severe disproportionate impacts to minority or low-income populations; or

(D) Severe impacts to environmental resources protected under other Federal statutes;

(iv) It results in additional construction, maintenance, or operational costs of an extraordinary magnitude;

(v) It causes other unique problems or unusual factors; or

(vi) It involves multiple factors in paragraphs (3)(i) through (3)(v) of this definition, that while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude.

The Section 4(f) regulations define three types of "use" of Section 4(f) properties (23 CFR Part 774.17):

1. When land is permanently incorporated into a transportation facility. The permanent incorporation of land into a transportation facility occurs when land (either in whole or in part) from a Section 4(f) property is purchased outright for a transportation facility, or when a project acquires the property interest—either a full or partial acquisition—that allows permanent access onto a property such as a permanent easement for maintenance.

2. When there is a temporary occupancy of land that is adverse to the preservation purpose of Section 4(f) as determined by the criteria in 23 CFR 774.13(d). Temporary occupancy results when Section 4(f) property, in whole or in part, is required for project construction-related activities. The property is not permanently incorporated into a transportation facility, but the activity is considered to be adverse in terms of the preservation purpose of Section 4(f). Under the provisions of 23 CFR 774.13(d), a temporary occupancy does not constitute a Section 4(f) use if the following conditions are met:

   (1) the duration is less than the time needed for the project's construction and there is no change in ownership of land;

   (2) the scope of work is minor, in that both the nature and magnitude of changes to the 4(f) property are minimal;

   (3) no permanent, adverse physical impacts are anticipated, and there will be no temporary or permanent interference with the protected activities, features, or attributes of the property;

   (4) the land is fully restored, and returned to a condition at least as good as that which existed prior to the project; and

   (5) the agreement of the official(s) with jurisdiction over the Section 4(f) property regarding the above conditions is documented. If one or more of these conditions is not met, there is a use of the Section 4(f) property, even though the duration of construction related activities is temporary.

3. A constructive use of a Section 4(f) property occurs "when the transportation project does not incorporate land from a Section 4(f) resource, but the proximity impacts are so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired" (23 CFR Part 774.15(a)). A constructive use involves no physical use of the

Section 4(f) property via permanent incorporation of land or a temporary occupancy of land into a transportation facility.

The following sections identify the project's alternatives and their potential to use Section 4(f) properties in accordance with Section 4(f) regulations.

5.2 Description of the Project

The full description of the project (Preferred Alternative) is in **Chapter 1**. Two properties, the Memphis International Airport Terminal, including the concourses, and Short-Term Garage, have been determined eligible for the National Register by SHPO and, as such, considered Section 4(f) resources within the project area. Descriptions of the buildings are included in **Section 3.3.3**.

The following provides a list detailing the components of the Preferred Alternative proposed to accomplish the goals of the project. The project would construct several buildings and repurpose/modify garage and surface parking on Airport to provide more passenger parking spaces, additional employee parking, more capacity for car rental services, and a consolidated, efficient administration space.

- **Demolition of Concourse A.** Passenger gates are no longer used in Concourse A and this concourse is closed. Concourse A is still connected by a hallway/corridor to Terminal A of the main terminal building; however, all passengers access their gates and flights via the main concourse (Concourse B). Proposed activities would require the demolition of Concourse A to accommodate the construction of the proposed ConRAC and Administration Building, allowing other areas of the Airport to be used to address the Airport's deficit of vehicle parking on-Airport.
- **Consolidated Rental Car Facility (ConRAC).** Proposed activities include the construction of a new ConRAC facility, housed in a multi-level garage west of the main terminal building, where the closed Concourse A is currently located. The ConRAC would provide space for all car rental services. Approximately 691,000 sq-ft of existing ConRAC space in the Economy Garage would be converted to passenger parking, and the existing QTA area would be converted to employee parking. Entrance to the ConRAC for vehicles would be via Jim McGehee Parkway at the north side of the building. Vehicles leaving the ConRAC facility would travel and exit north of the Blue Lot and traverse the airport property east, to exit the airport via Jim McGehee Parkway, north of the Economy Garage, bypassing the terminal curbfronts and short-term garage entrances and exits. The proposed ConRAC will provide approximately 778,600 sq-ft for car rental services.[21] The space in the Economy Garage (Levels 1 and 2) would be reverted back to passenger parking, providing an estimated 1,733 new spaces. The former QTA facility located just north of the economy garage would be converted into 434 employee parking spaces.

  Currently, some maintenance functions and temporary parking/storage of rental cars occur at a Consolidated Maintenance Site located west and outside of the Airport property on Airways Boulevard. The ConRAC would have more space to incorporate more vehicles and functions, reducing the need to drive vehicles between the two locations (the maintenance facility would remain off-site but would serve fewer functions). The future ConRAC would also have infrastructure for EV charging within the facility and would provide a pedestrian connection to Terminal A in a similar manner as the existing connector corridor between the terminal and Concourse A.

[21] Memphis Shelby County Airport Authority (MSCAA). Memphis International Airport Master Plan Update Technical Report. Prepared by Jacobsen Daniels. April 2024.

- **Administration Building.** MSCAA employees currently use four separate upper-level mezzanine spaces in the terminal as office facilities. These staff would be relocated out of the terminal to a new office building. This would be a new 100,000 square foot, three-level building, constructed south of the proposed ConRAC. Offices would be on the two upper levels, which would be connected to the terminal building (on the side of Terminal A) via a walkway/corridor and the lower level would be used for the CBIS. The walkway may be integrated with the ConRAC connector or interact with the terminal in the same manner as the existing connector to/from Concourse A.
- **Overflow Lot.** The Blue Lot is a passenger economy surface parking lot on the west side of the airport, northwest of the terminal building along Jim McGehee Parkway. This is a passenger lot with 947 spaces with shuttle service to the terminal. Vehicles enter the lot from Jim McGehee Parkway and exit through a connector road that travels between the Airport Tower building lot and Economy Parking Garage to the east side of the airport to exit the property. The Blue Lot would be supplemented by a new overflow lot (Overflow Lot). This lot would be developed north of Blue Lot and west of the existing Cell Phone Lot, to accommodate parking during peak demand days. The Overflow Lot would use the same entry/exit plazas as the Blue Lot. Combined, these lots would provide 1,440 parking spaces.

Cell Phone Lot. The cell phone lot is a surface lot located just northeast of the Blue Lot along Jim McGehee Parkway. Vehicles enter and exit the cell phone lot through Jim McGehee Parkway. This lot currently provides 203 parking spaces for vehicles waiting to pick up passengers from the terminal. The future cell phone lot will remain in the same location with the same entrance and exits, but it will be reconfigured with approximately 270 parking spaces.

5.3 Project Purpose and Need

The purpose of the project is to increase the capacity of selected landside facilities to accommodate the identified need for additional public parking, car rental, administration space, employee parking, and other landside space for selected services (including CBIS) at the Airport.

As part of the ongoing master planning process for MEM, MSCAA conducted an initial landside demand/capacity and facility requirements analysis. This was based on the growth of passenger volumes, as detailed in the Airport's approved forecast.[22] The analysis assumed consistent use of the parking facilities with unconstrained growth. The analysis demonstrated that the airport's roadways as well as curbfronts had sufficient capacity to meet immediate and future demand levels. However, public parking, employee parking, and car rental services are either at capacity or will exceed capacity in the immediate future. Therefore, MSCAA has begun the planning process to evaluate how existing landside facilities can be modified to accommodate the identified demand. In addition, the MSCAA identified a need for additional space for employees and the CBIS system, so the construction of the administration building is proposed to house those needs.

5.4 Alternatives Considered Further in EA

The alternatives considered in the EA are short-term improvements consistent with the long-term master planning effort for the Airport, which include variations that incorporate improvements to increase capacity in the areas of need identified in the Proposed Activities, **Chapter 1**. These short-term improvements proposed are consistent with the long-term evaluation process and screening of alternatives. Therefore,

[22] Memphis Shelby County Airport Authority (MSCAA). Memphis International Airport Aviation Demand Forecast. Prepared by Jacobsen Daniels. June 2019. Approved by the Federal Aviation Administration (FAA) on July 2, 2019.

the long-term alternatives analysis of the master planning effort also applies to these proposed activities, which will serve as an interim step in securing capacity in these areas of need.

A range of concepts were considered for the project and represent variations on how an alternative could provide the adequate space, provide ease of access and enhance passenger compliance, comply with construction requirements and standards, as well as be affordable while preserving the character of the existing terminal's historic features. The land use site constraints, line of sight restrictions of the Tower, as well as MSCAA's goals for minimizing impacts to the existing landside facilities were key criteria in the siting of facilities and repurposing of existing spaces landside. MSCAA planners also considered the best and highest use for the on-airport space to reconfigure the facilities while minimizing construction impacts and roadway disturbances.

Using these constraints, MSCAA developed eight initial alternatives and subsequently refined them, ultimately resulting in one, preferred long-term solution. These initial alternatives varied by siting the ConRAC in various locations, including in the site of existing Concourse A, in the current Economy Garage, with expanded services, and in the Short-Term and Long-Term Garages location, as a reconstructed garage. Employee parking was separated from other parking, and public parking locations also varied by initial alternative. The ultimate long-term preferred alternative from the master planning process provided the immediate capacity needed for both rental car services and public parking operations. The full description of alternatives considered is included in Chapter 2. Based on the analysis in Chapter 2, the Preferred Alternative was determined as the only feasible alternative that would satisfy the project purpose and need.

5.4.1 No Action Alternative

Under the No Action Alternative, improvements or modifications to landside facilities would not occur. The demolition of Concourse A would not occur. The Airport would continue to experience peak passenger volume days where public parking would not satisfy demand and there would not be an on-airport public parking option for all passengers. In addition, car rental services would be at capacity by the PAL 1 planning period (2026) and not all passengers that wanted to rent a car could do so during peak times. Administration space and employee parking spaces would also reach capacity and MSCAA would not be able to accommodate the forecasted growth of employee parking needs.

5.4.2 Preferred Alternative

The Preferred Alternative would be the implementation of the proposed activities summarized in Chapter 1. The proposed activities would be implemented to increase the number of public and employee parking spaces as well as increase the amount of area for car rental services and administrative space. These activities would satisfy the identified demand for additional landside facilities.

The preferred alternative was derived from the long-term planning process of MSCAA's master planning effort and is consistent with the alternatives analysis performed. These activities would include the demolition of Concourse A, construction of a new ConRAC facility in its place that could house the QTA within the same structure, revert the car rental space in the Economy Garage back to public parking, add employee parking spaces in place of the existing QTA area, construct a surface lot for overflow, to provide more parking for those higher demand days, and construct a new administration building that could consolidate staff office space in one location as well as offer a lower level to house the CBIS system. These proposed activities would alleviate the burden of the existing demand for these services.

5.5 Section 4(f) Properties

5.5.1 Historic Sites

The requirements of Section 4(f) apply to historic sites listed or eligible for listing in the National Register of Historic Places (23 CFR 774.11(e)(1)). Section 4(f) historic sites were identified through the Section 106 process pursuant to 36 CFR Part 800, in consultation with the SHPO, the ACHP, and other Consulting Parties. The SHPO and ACHP are the officials with jurisdiction for the Section 4(f) historic sites.

There is only one potentially eligible historic resource located within the Areas of Potential Effects (APE) of the Project, which is the historical terminal building complex. Through various correspondence (Appendix B), the SHPO has determined that the concourses attached to the terminal building should also be considered eligible.

The MEM terminal complex is considered a historic resource. The passenger terminal is composed of three buildings, Terminals A, B, and C, two mezzanine structures between the terminals and one "Y" shaped concourse. Figure 3 depicts the terminal area. Terminal B is the original terminal structure, completed in 1963, and was designed by architect Roy Harrover (1928-2016) (then part of the firm Mann & Harrover). The terminal was expanded in 1972, adding Terminals A & C additions, which combined with Terminal B, are the entirety of the terminal. The original terminal building (Terminal B) was determined eligible for the NRHP by the SHPO in 2019.

The design of the terminal received immediate recognition and was awarded a National Design Award from Progressive Architecture magazine and the National Award of Merit from the American Institute of Architects in 1964. Harrover designed the Terminal to be expanded, which occurred in the early 1970s with the addition of east and west terminals (Terminals A and C) flanking the main Terminal. Harrover also designed these terminals in the same style. All three are considered contributing components of the NR-eligible historic property.

Character-defining features of the terminal design include the pioneering use of tall, concrete columns supporting an overhanging hyperbolic paraboloid roof. Another important feature of the Terminal's architecture is the two-level nature of the design, allowing passengers to directly access the upper level, which connected with the airplanes, rather than needing to enter at ground level and carry their bags upstairs. An elevated access roadway was integrated into the design, running between the two outer sets of columns allowing passengers to disembark in a sheltered entry area. Harrover's design inspired subsequent architects to emulate this approach in other airports. The terminal retains a high degree of historic integrity overall; however, incremental alterations to the building have been made since the early 1970s. The most notable of these alterations was the addition of an upper outer roadway that was constructed with the addition of a third level to the short-term parking garage in 1988.

In a letter dated June 28, 2024, SHPO confirmed that the three concourses (Concourses A, B, and C) are eligible features of the terminal. Concourse B, a Y-shaped building that extends south from the center of the terminal, was constructed in 1963 with the original terminal building. It has been substantially altered over time through the enlargement of its footprint, replacement of the concrete facades with large expanses of windows, and modernization of the interior layout and finishes. A fully renovated Concourse B opened in 2022, and it consolidated passenger gates with a significantly modernized interior.

Constructed in the early 1970s with Terminals A and C, Concourses A and C are long, linear buildings connected at right angles to the terminal by skybridges. They are clad in glazed brick with exposed concrete

beams. The exteriors of Concourses A and C have been altered since their original construction through the infill of openings, creation of new openings, and change in size of openings. In addition, the southern end of Concourse A, including both original fabric and a 2001 addition, was demolished in 2014, and the southern end of Concourse C was demolished in 2023. Interior alterations have also been made to Concourses A and C, and both were permanently closed with the reduction in number and consolidation of passenger gates in the renovated Concourse B in 2022.

5.5.2 Publicly Owned Parks, Recreation Areas, and Wildlife and Waterfowl Refuges

Section 4(f) applies to publicly owned parks, recreation areas, and wildlife and waterfowl refuges of national, state, or local significance. In addition, Section 4(f) applies to those portions of Federally designated Wild and Scenic Rivers that are publicly owned and function as, or are designated in a management plan as, a significant park, recreation area, or wildlife and waterfowl refuge (23 CFR § 774.11(g)). None of these resources are present within the project area.

5.6 Use of Section 4(f) Properties

The Preferred Alternative would result in a permanent use Concourse A, which was determined to be eligible for listing on the National Register of Historic Places. Under the Preferred Alternative, Concourse A would be demolished, and the space would be repurposed for landside facility improvements.

5.7 Avoidance Alternatives

The FAA may not approve the use of a Section 4(f) property if there is a "feasible and prudent" avoidance alternative. Therefore, if any feasible and prudent avoidance alternative exists, that alternative must be selected. As defined in the regulations (23 CFR § 774.17), an alternative that would not require the use of any Section 4(f) property is an avoidance alternative. Feasible and prudent avoidance alternatives are those that do not cause other severe problems that substantially outweigh the importance of protecting the Section 4(f) property.

The site where the existing Concourse A cannot be used to avoid the concourse building and still fulfill the need of the project to provide additional landside facilities. The existing Concourse A was originally designed as a passenger space. The master planning process demonstrated that the terminal facilities and gate capacity provided in Concourse B is sufficient for the existing and anticipated future demand, and there is no need to refurbish and reopen Concourses A or C for additional gate space. In addition, the master plan demonstrated that landside facilities are deficient and that the best use of on-airport space, including the site of Concourse A, is for use as public, employee, and rental car parking. While off-site facilities would be possible for these proposed activities, they are not desirable when considering the operational cost, lack of nearby available land, and the effects on customer experience. Parking and rental car facilities are most desirable close the terminal to enable convenient access for passengers. Appendix D summarizes these findings from the master planning process.

Another way to avoid the use and demolition of Concourse A would be to reuse the structure as part of the project. Four potential reuse options were identified for Concourse A (Appendix D). Reuse options included:

Option 1: Rehabilitate and Reuse for Passenger Operations. The master planning effort demonstrated there is not an additional need to reopen either Concourse A or C to accommodate passenger operations. Concourse B is the most efficient concourse location of the three concourses and has been recently upgraded to building code standards and seismic resiliency. It would not be prudent to open additional gates in Concourse A, as it would require a significant investment to upgrade the space to modern terminal

standards, increase the operational costs of MSCAA, airlines, and other tenants to operate in two concourses, and it would not utilize the investments already made to upgrade Concourse B.

Option 2: Rehabilitate and Reuse for Administration Building. The space of Concourse A (46,000 sq ft) on the gate level in addition to the 30,000 sq ft of the apron level is not of sufficient size to accommodate the 100,000 sq ft of space needed for administrative services. The configuration of Concourse A (long and narrow) is not conducive to the desired layout of administrative offices and the structure would have to be substantially altered (essentially reconstructed) to modify the configuration, as well as be updated for seismic resiliency, to accommodate administrative space. These modifications would not constitute a preservation of the facility.

Option 3: Rehabilitate and Reuse for the CBIS Facility as part of the Baggage Handling System. While the need for the CBIS facility near the terminal complex is important, the size and configuration of Concourse A (long and narrow) is not conducive to a CBIS facility. The structure would have to be substantially altered (essentially reconstructed) and updated for seismic resiliency on order to accommodate that function. These modifications would not constitute a preservation of the facility.

Option 4: Rehabilitate and Reuse for Other Airport Functions or Other Non-Terminal Related Uses. Other reuse functions were considered, such as Fixed Based Operations, airport maintenance, and other support functions. These activities are currently located elsewhere on-airport, and these existing facilities are of sufficient capacity. Therefore, the substantial cost to move these functions to a new location on airport, where proximity to the terminal is not important for these functions, would not be warranted.

None of the reuse options were found to be feasible and prudent. The analysis demonstrates that the existing Concourse A structure is either not adequately sized for the proposed reuse function, is not operationally viable because of its location or configuration, and/or is not appropriate for the function or proposed reuse without requiring substantial modifications to the original structure, which would include additional construction costs and operational inefficiencies. Therefore, none of the options for preservation or reuse of Concourse A would be considered prudent and feasible (**Appendix D**).

The only alternative that would meet purpose and need for the project would be the Preferred Alternative, which would require the use of Concourse A.

5.8 Measures to Minimize Harm

Measures to minimize and mitigate adverse effects to the historic property have been developed in consultation with SHPO and the Memphis and Shelby County Historical Commission in a MOA for the project. Measures in the MOA to minimize adverse effects on the historic property include a provision for SHPO to engage in design review of the demolition of Concourse A prior to implementation. The MOA also sets forth measures to conduct a recordation of the historic building through Level II SHPO documentation requirements prior to the commencement of the project.

5.9 Coordination

Coordination with Officials with Jurisdiction

As required by the Section 4(f) regulations (23 CFR § 774.5), the Draft Section 4(f) Evaluation for the project was provided for coordination and comment to the officials with jurisdiction over the Section 4(f) resources that would be used by the project. For historic sites, the officials with jurisdiction are SHPO and ACHP.

SHPO and FAA concurred on an adverse effect associated with the demolition of Concourse A, as shown through correspondence provided in **Appendix B**. The FAA has determined there is no prudent alternative

that avoids the use of the historic site. To minimize harm to the historic property, a MOA has been prepared to mitigate adverse effects on the historic property (Appendix C).

Public Involvement

The Draft Section 4(f) Evaluation is included and made available for public review and comment during the public review period as part of the EA. During the public comment period, the EA, with the Draft Section 4(f) Evaluation included, is available for review on the MSCAA website (www.flymemphis.com).

Consulting Parties

Members of the public with a demonstrated knowledge or relevant interest in the project (due to the nature of their legal or economic relation to the undertaking or affected properties, or their concern with the undertaking's effects on historic properties) may participate in the Section 106 process as Consulting Parties. Potential Consulting Parties for the project were identified in consultation with SHPO and FAA.

The Shelby County Historical Commission accepted the invitation to participate as a Consulting Party. A meeting was held on September 13, 2024 to review the proposed project activities and seek and consider views of the SHPO and the Consulting Party regarding the project's effects on historic and cultural resources. In addition, potential mitigation strategies were discussed, and the group agreed to incorporate several of them into the MOA for the project.

Conclusion

Only the Preferred Alternative would meet the siting constraints and meet the Project's purpose and need. All other alternatives were determined not prudent and feasible. The Preferred Alternative is the only prudent and feasible alternative.

FAA will consider any public comments on this EA and will make a Final Section 4(f) Determination after the public review period, in their statement of findings.

6 LIST OF PREPARERS

The consultants contracted to prepare this Environmental Assessment included the following:

AKRF, Inc.

Jennifer Hogan, CM (Project Manager)

Christopher Calvert, AICP (Technical Review)

Christopher Mojica, PE, PTOE, RSP1 (Transportation)

Nathan Riddle (Historic Resources)

Molly MacDonald, RPA (Historic Resources)

Aubrey McMahon (Natural Resources)

Kevin Edwards (Air Quality, Climate)

Jacobsen Daniels

Matt Johnson (Alternatives)

Rebecca Didio, CM (Alternatives)

7 REFERENCES

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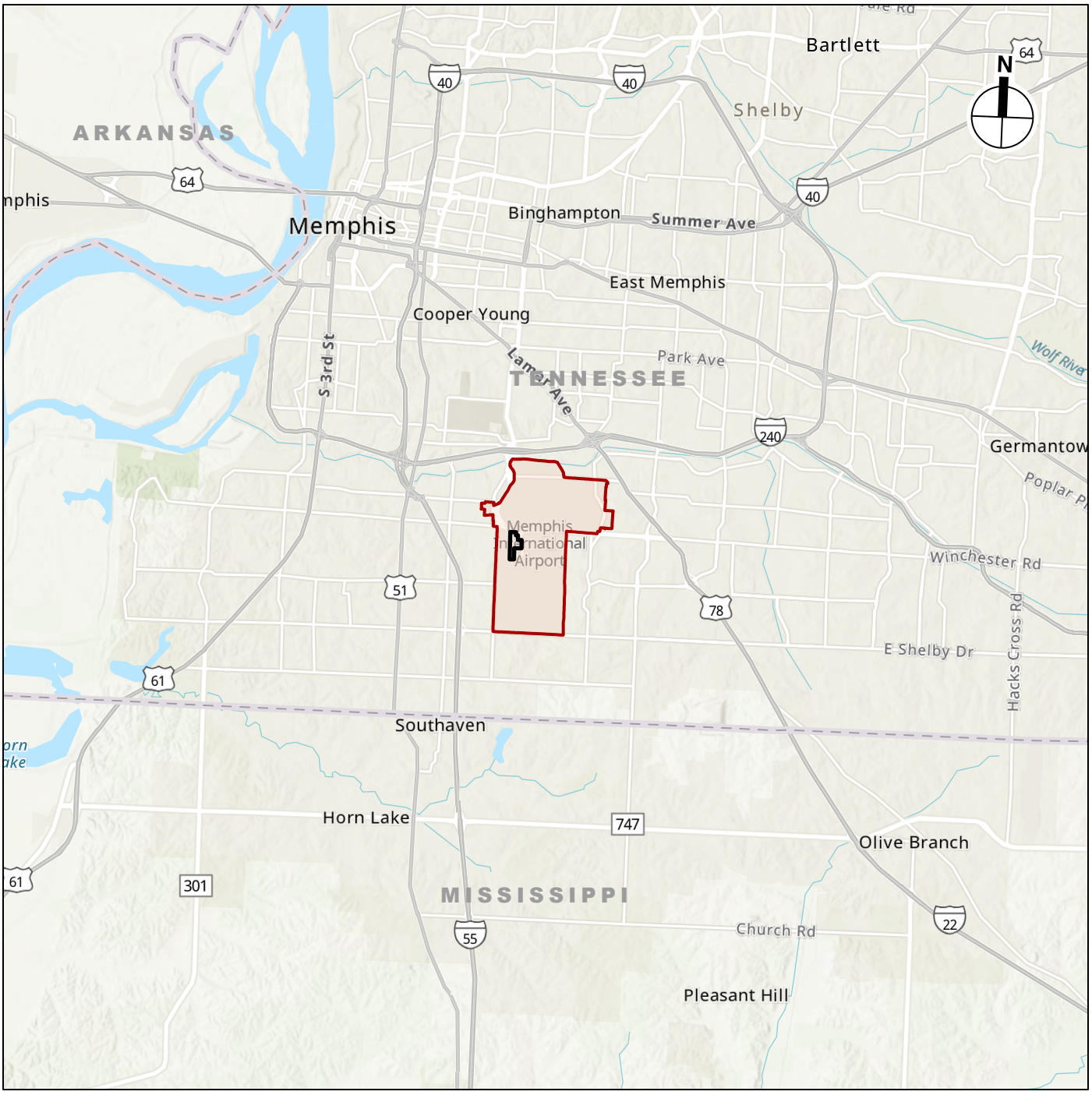
APPENDICES

APPENDIX A

FIGURES

6.4.24



Project Area

Memphis International Airport

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Project Vicinity Map

Figure 1

6.28.24

Project Area

0 500 FEET

MEMPHIS INTERNATIONAL AIRPORT
WESTSIDE IMPROVEMENTS

Project Area
Figure 2

6.28.24

NOT TO SCALE

Project Area
ConRAC
Blue Lot
Cell Phone Lot
Overflow Parking
Admin Building
Existing Facility
Traffic Flow for RAC
Traffic Flow for Cell Phone
Traffic Flow for Blue Lot

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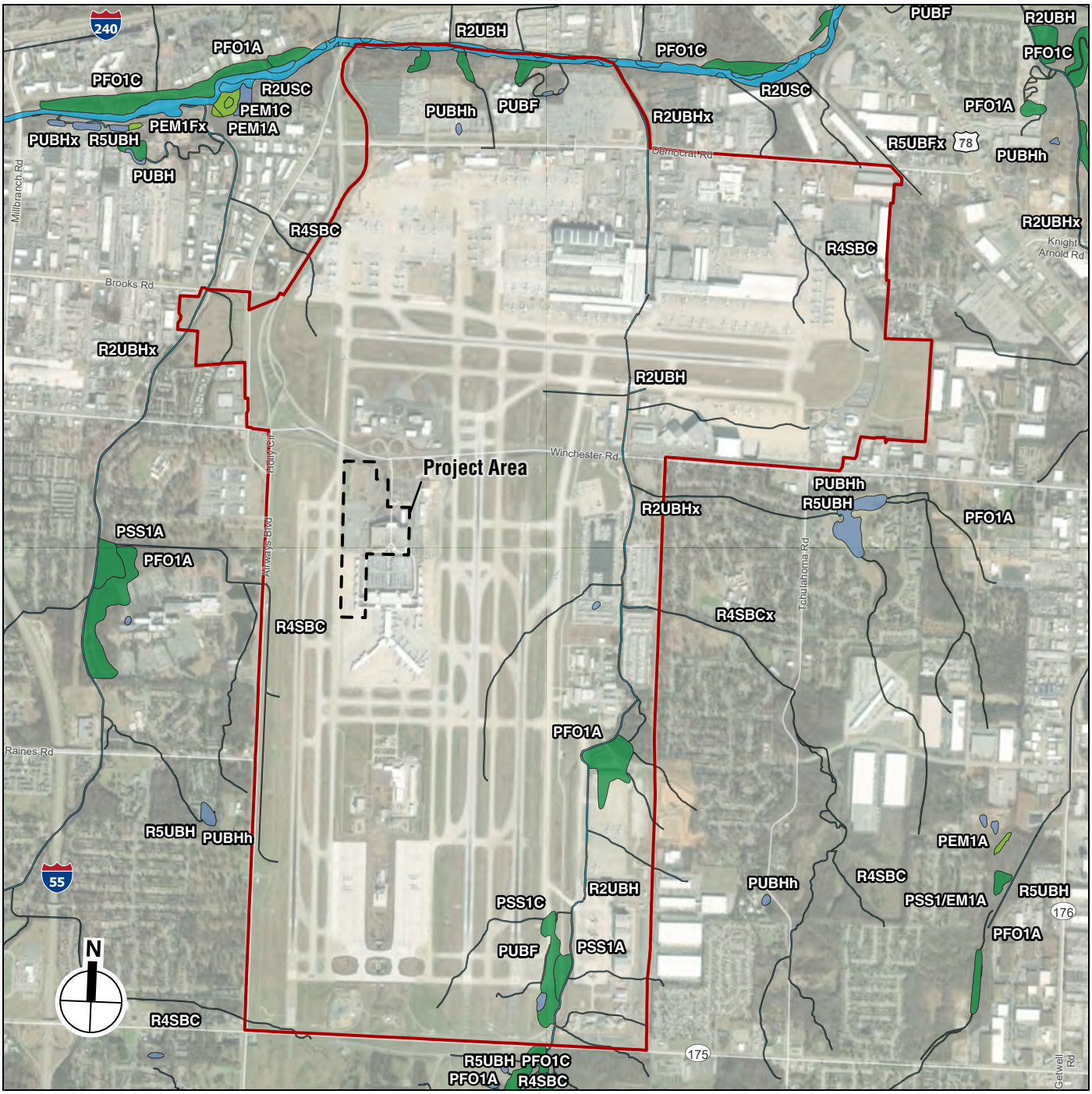
Proposed Activities of Westside Improvement Project

Figure 3

6.26.24



0 5,000 FEET

Project Area

Memphis International Airport

Freshwater Emergent Wetland (PEM)

Freshwater Forested/Shrub Wetland (PFO, PSS)

Freshwater Pond (PUB, PAB)

Riverine (R)

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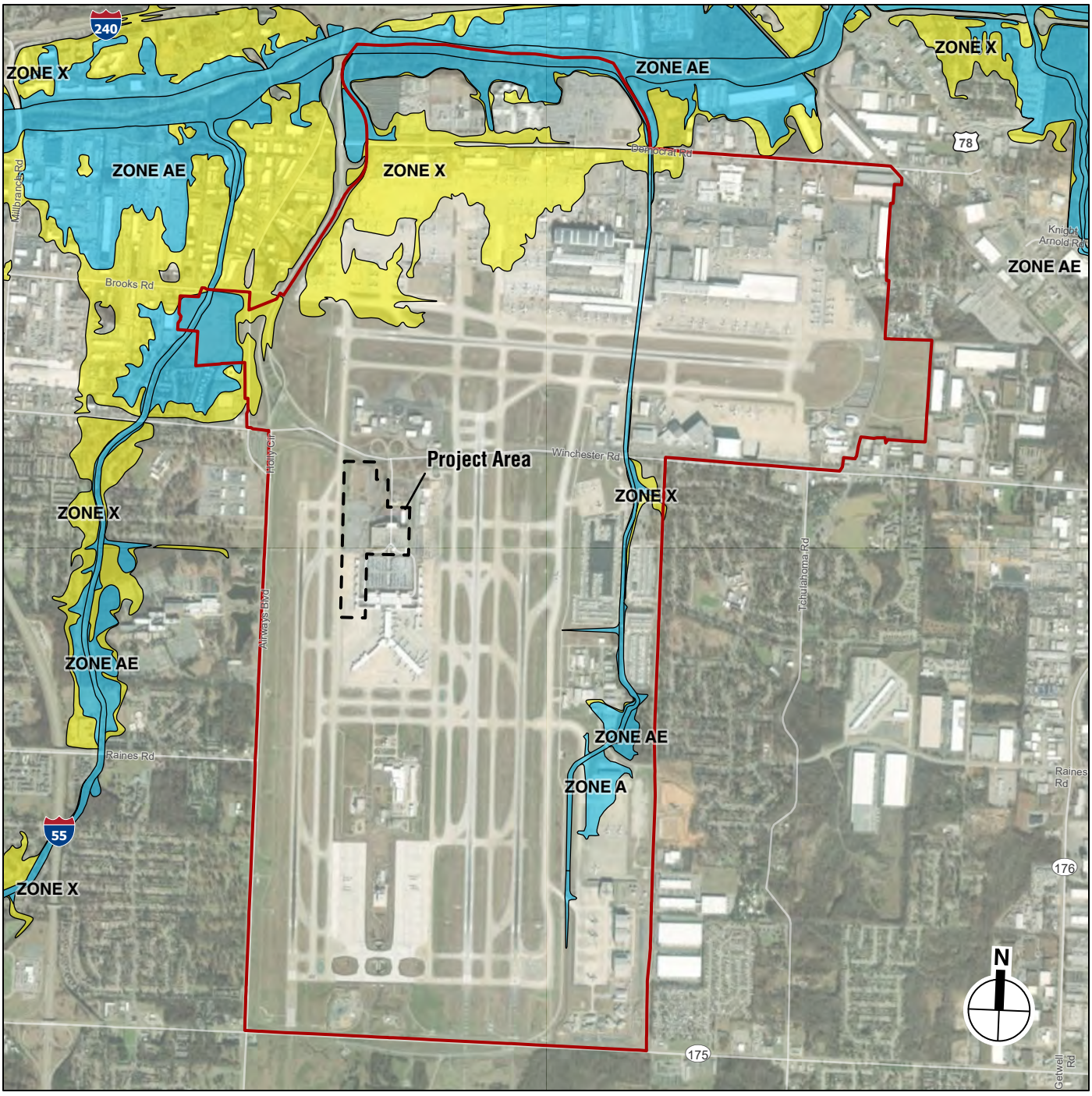
NWI Wetlands

Figure 4

6.26.24



Project Area

Memphis International Airport

1% Annual Chance of Flooding

0.2% Annual Chance of Flooding

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WESTSIDE IMPROVEMENTS

FEMA Floodplains

Figure 5

6.28.24

Project Area

Area of Potential Effect (200 - foot perimeter)

ConRAC

Blue Lot

Cell Phone Lot

Admin Building

Existing Facility

Overflow Parking

Traffic Flow for RAC

Traffic Flow for Cell Phone

Traffic Flow for Blue Lot

0 500 FEET

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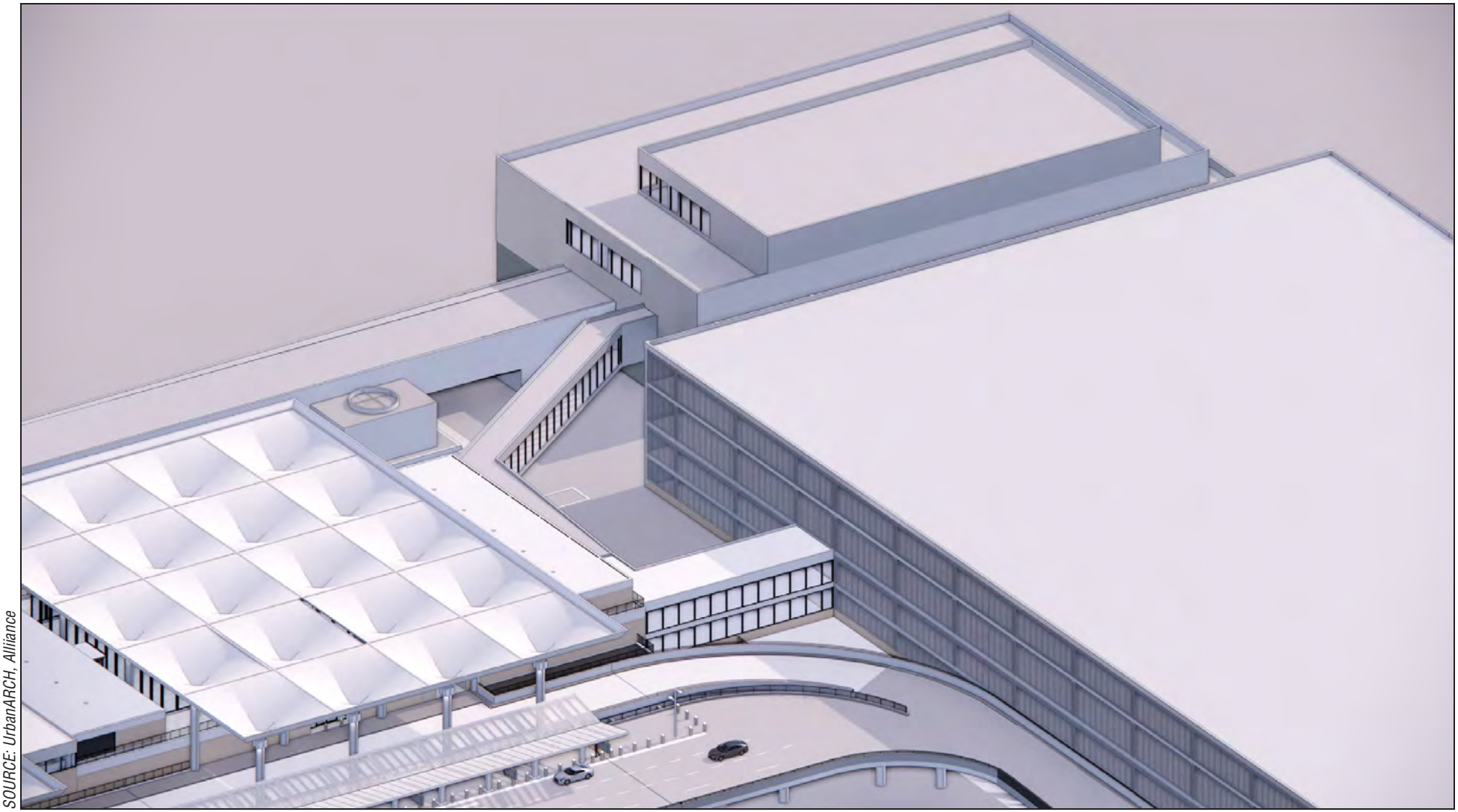
Area of Potential Effect for Westside Improvement Project

Figure 6

6.26.24



SOURCE: UrbanARCH, Alliance

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Proposed Administration Building, ConRAC, and
Connecting Corridors, Illustrative Rendering, Aerial View Southeast

Figure 7

6.26.24

SOURCE: UrbanARCH, Alliance

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Proposed ConRAC Connecting Corridor, Illustrative Rendering, Ground-Level View South

Figure 8

6.26.24

SOURCE: UrbanARCH, Alliance

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Proposed ConRAC Connecting Corridor, Illustrative Rendering,
View South From Elevated Roadway

Figure 9

6.21.24

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Terminal A, West Facade, Existing View
Southeast from Elevated Roadway

Figure 10

APPENDIX B

SECTION 106 COORDINATION CORRESPONDENCE

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June 18, 2024

Tennessee Historical Commission
State Historic Preservation Office
2941 Lebanon Pike
Nashville, TN 37243-0442

Office: (615) 532-1550
www.tnhistoricalcommission.org

Re: Section 106 Consultation for the Memphis International Airport Westside Airport Improvements Project

Dear Sir or Madam:

The Memphis and Shelby County Airport Authority (MSCAA) is proposing to construct several buildings and repurpose/modify surface parking at the Memphis International Airport (the Airport) to provide more passenger onsite parking (the Westside Airport improvements Project), based on the existing and anticipated future demand at the Airport. The Project Area is shown on Figure 1. The Memphis International Airport Terminal (inclusive of Terminals A, B, and C) and the Short-Term Garage were determined eligible for the National Register of Historic Places by the Tennessee State Historic Preservation Office (SHPO) in 2019. As you are aware, the Federal Aviation Administration (FAA) recently approved the Terminal Modernization Project that will modernize and expand the Terminal building.

This Westside Airport improvements Project has been determined an 'undertaking' subject to the National Historic Preservation Act (NHPA) and its implementing regulations under Section 106 36 CFR Part 800 (as amended). The proposed project and its associated activities are also subject to the National Environmental Policy Act (NEPA). The FAA has initiated preparation of an Environmental Assessment to meet its regulatory obligations. The agency intends to complete Section 106 in conjunction with the NEPA process.

The Airport includes garage and surface parking north of the Terminal, with two garages for short term and long-term economy parking. There are also surface lots to the east and west of the garages, the East Parking Lot and Blue Lot, respectively, with a mix of passenger and employee parking. One cell phone

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waiting lot is north and adjacent to the Blue Lot. The surface lots have shuttle service to the Terminal, while the garages are walkable to the Terminal. Aircraft operations and runway use would not change due to the proposed Westwide Airport Improvements Project, and the project would not result in additional operations, changes to flight patterns, or aircraft fleet mix. As shown on Figure 2, the project includes the following elements:

- **Demolition of Concourse A.** Passenger gates are no longer used in Concourse A and this concourse is closed. Concourse A is still connected by an elevated corridor to Terminal A; however, all passengers access their gates and flights via Concourse B. Proposed activities would require the demolition of Concourse A in order to accommodate the construction of a proposed ConRAC facility and therefore allow other areas of the Airport to be used to address the Airport's deficit of vehicle parking on-Airport. Concourse A is not a contributing feature of the National Register-eligible Terminal. Further, the southern end of Concourse A, including both original fabric and a 2001 addition, was demolished in 2014.

- **ConRAC.** Car rental services would be housed in a newly constructed, 1.5-million-square-foot multi-level garage west of Terminal, where the closed Concourse A is currently located. The ConRAC facility would replace the existing car rental services, which are currently located within and adjacent to the Economy Garage that currently has spaces for storage, ready/return, and the Quick-Turn-Around (QTA) facility. The QTA facility, where rental car companies fuel and clean returned cars, will also be relocated in the same garage as part of the ConRAC. The proposed ConRAC facility would accommodate approximately 3,700 storage spaces, 1,900 spaces for ready/return, and 150 spaces for QTA.

  Currently, some maintenance functions and temporary parking/storage of rental cars occur at a Consolidated Maintenance Site located west and outside of the Airport on Airways Boulevard. The proposed ConRAC facility would have space to incorporate more vehicles and functions, reducing the need to drive vehicles between the two locations. The proposed ConRAC facility would also have infrastructure for electric vehicle charging within the facility. The proposed ConRAC facility would connect with Terminal A in a similar manner as the existing elevated walkway to Concourse A, at both the Ticketing and Baggage Claim levels.

  The existing portions of the Economy Garage currently used for rental car space would be converted to passenger parking, and spaces in the existing QTA area would be converted to employee parking.

- **Administration Building.** MSCAA employees currently use the Mezzanine Level spaces in Terminal A, between Terminal A & B, between Terminal B & C and in Terminal C. They would be relocated out of these spaces to a new office building as part of the proposed project. The proposed Administration Building would be an approximately 100,000-square-foot, three-level building, constructed south of the proposed ConRAC facility. MSCAA Administration Offices would be on the second and third levels, and the ground level will be used for a Checked Baggage

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Inspection System (CBIS). The Administration Building will be connected to Terminal A via a walkway/corridor. The walkway may be integrated with the ConRAC connector or connect with Terminal A in the same manner as the existing Concourse A connector.

- **Overflow Lot.** The Blue Lot is a surface parking lot on the west side of the Airport, northwest of the Terminal along Jim McGehee Parkway. This is a passenger lot with shuttle service to the Terminal. Vehicles enter the lot from Jim McGehee Parkway and exit through a connector road that travels between the Airport Tower building lot and Economy Parking Garage to the east side of the Airport to exit the property. The Blue Lot would be connected to a new overflow lot. This lot would be developed north of and connect to the Blue Lot, west of the existing Cell Phone Lot, to accommodate peak demand days for passenger vehicle parking.

- Cell Phone Lot. The cell phone lot is a surface lot located just northeast of the Blue Lot along Jim McGehee Parkway. Vehicles enter and exit the cell phone lot through Jim McGehee Parkway. This lot provides parking spaces for vehicles waiting to pick up passengers from the Terminal. The proposed cell phone lot would be reconfigured with additional spaces in the same location.

The Section 106 Area of Potential Effect (APE) is the area in which the proposed project may cause alterations in the character or use of historic resources. The proposed Direct APE is defined as the area of potential ground disturbance that will be affected by the undertaking. Therefore, the sites of the proposed ConRAC facility and Administration Building, including the proposed connectors to Terminal A, are defined as the direct APE. The Indirect APE where historic resources could experience visual or contextual effects from the proposed project is defined as the area within 200 feet of the sites of the proposed ConRAC facility and Administration Building. It is not expected that expanding/reconfiguring existing parking lots and converting parking spaces in the existing Economy Garage and QTA facility would have the potential to affect historic resources.

The proposed ConRAC facility would replace Concourse A and a portion of the Blue Lot, and it would be located on the west side of the surface and elevated interior and outer roadways to the Terminal. The facility would be approximately 1.5 million square feet and 363 feet to the top of the roof (see Figure 4). Although it has not been fully designed, conceptual drawings anticipate that the ConRAC facility would be a cast-in-place concrete structure with a metal scrim façade similar to the façade of the existing Economy Garage. At approximately the same height as the 358-foot-tall Terminal and located west of the Terminal and Short-Term Garage across the surface and elevated roadways, the proposed ConRAC facility would not introduce visual, atmospheric, or audible elements that would diminish the integrity of the historic properties' significant historic features. Therefore, the proposed ConRAC facility would not be expected to result in an adverse effect to historic resources as it would not alter, directly or indirectly, any of the characteristics of the Terminal or Short-Term Garage that qualify them for listing on the National Register.

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The proposed ConRAC facility would connect to the west façade of Terminal A with a corridor (see Figures 4-6). As shown on Figure 3, the western portion of Terminal A consists of a low wing that extends beyond the glazed upper facade of the Terminal A arrival hall/ticketing area. The west wing of Terminal A is clad in glazed brick and concrete, and a balcony with aluminum railings runs on the roof of the second floor across the north façade of the wing and a portion of the west facade. The existing Concourse A connects to the west façade of Terminal A at the second floor with an elevated corridor. Additionally on the west façade of the Terminal wing, there are two metal-framed windows at the mezzanine and loading dock openings on the ground floor. Under the proposed project, the existing corridor between Terminal A and Concourse A would be removed, and the proposed ConRAC connector would be positioned north of the location of the existing corridor. The proposed connector would extend from ground-level to the second floor of the Terminal A wing, and it would remove a portion of the balcony and ground-floor entrances on the west façade of the Terminal. The proposed location of the connector would preserve land on the secure (southern) side of the Terminal; avoid placing the connection at the extreme southern end of the proposed ConRAC facility to lessen internal distances for users of the ConRAC facility; and to work with the existing internal circulation patterns in the Terminal and avoid conflicts with the ticketing counters. The west façade of the Terminal A wing in the location of the existing Concourse A connection would be restored. Although the proposed connector has not been fully designed, MSCAA will take every effort to design it so that it reads as a distinguishable, contemporary addition to the Terminal. As currently contemplated, the proposed ConRAC connector would be set back three to five feet from the north façade of the Terminal A wing, and it would be shorter than the wing, with its roof aligned with the second-floor balcony. The facades of the proposed connector are expected to be glass curtain walls with concrete bands that align with the concrete bands at the first and second floors of the Terminal A wing. As the proposed ConRAC connector would replace an existing corridor in a similar location and the lower height and setback position of the proposed connector would maintain the height and massing of the Terminal A wing, it would not introduce visual, atmospheric, or audible elements that would diminish the integrity of the Terminal's significant historic features, and it would not be expected to alter, directly or indirectly, any of the characteristics of the Terminal that qualifies it for listing on the National Register. Therefore, it is expected that the proposed ConRAC facility would not result in adverse effects to historic resources.

The proposed Administration Building would be located south of the proposed ConRAC facility, and it would have a rectangular footprint (see Figure 4). At 357-feet-tall, it would be the same height as the Terminal and six feet shorter than the proposed ConRAC facility. As noted above, the proposed building would connect to Terminal A with an elevated walkway. As currently contemplated, the walkway would tie into the ConRAC connector rather than Terminal A, although it could connect to the second floor of the Terminal. The proposed Administration Building would also connect to the existing non-historic corridor that was constructed in the 1990s to the south of the Terminal. From the approach roadways to

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the Terminal, it is not expected that the proposed Administration Building would be visible behind the proposed ConRAC facility and connector (see Figure 6), and there would be a limited visual relationship between the proposed Administration Building and the historic Terminal from locations accessible to the public. Therefore, the proposed Administration Building would not introduce visual, atmospheric, or audible elements that would diminish the integrity of the Terminal's significant historic features, and it would not be expected to result in an adverse effect to historic resources as it would not alter, directly or indirectly, any of the characteristics of the Terminal that qualifies it for listing on the National Register.

At this time, we are requesting pursuant to Section 106 an initial assessment from your office of the proposed Westside Airport Improvements Project and the preliminary assessment of the effects to historic resources described above. Thank you for your assistance with this matter, and we look forward to your comments and working with you on this project.

Sincerely,

James Hay
Senior Director, Terminal Modernization Planning & Development
2491 Winchester Road, Suite 113
Memphis, TN 38116-3856
P: 901-922-8224
M: 901-237-5837
F: 901-922-8211
flymemphis.com

cc: Peggy Kelley, FAA

6.19.24

Project Area

0 500 FEET

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Project Area
Figure 1

6.19.24

Project Area

Area of Potential Effect (200 - foot perimeter)

ConRAC

Blue Lot

Cell Phone Lot

Admin Building

Existing Facility

Overflow Parking

Traffic Flow for RAC

Traffic Flow for Cell Phone

Traffic Flow for Blue Lot

0 500 FEET

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Westside Development

Figure 2

6.6.24

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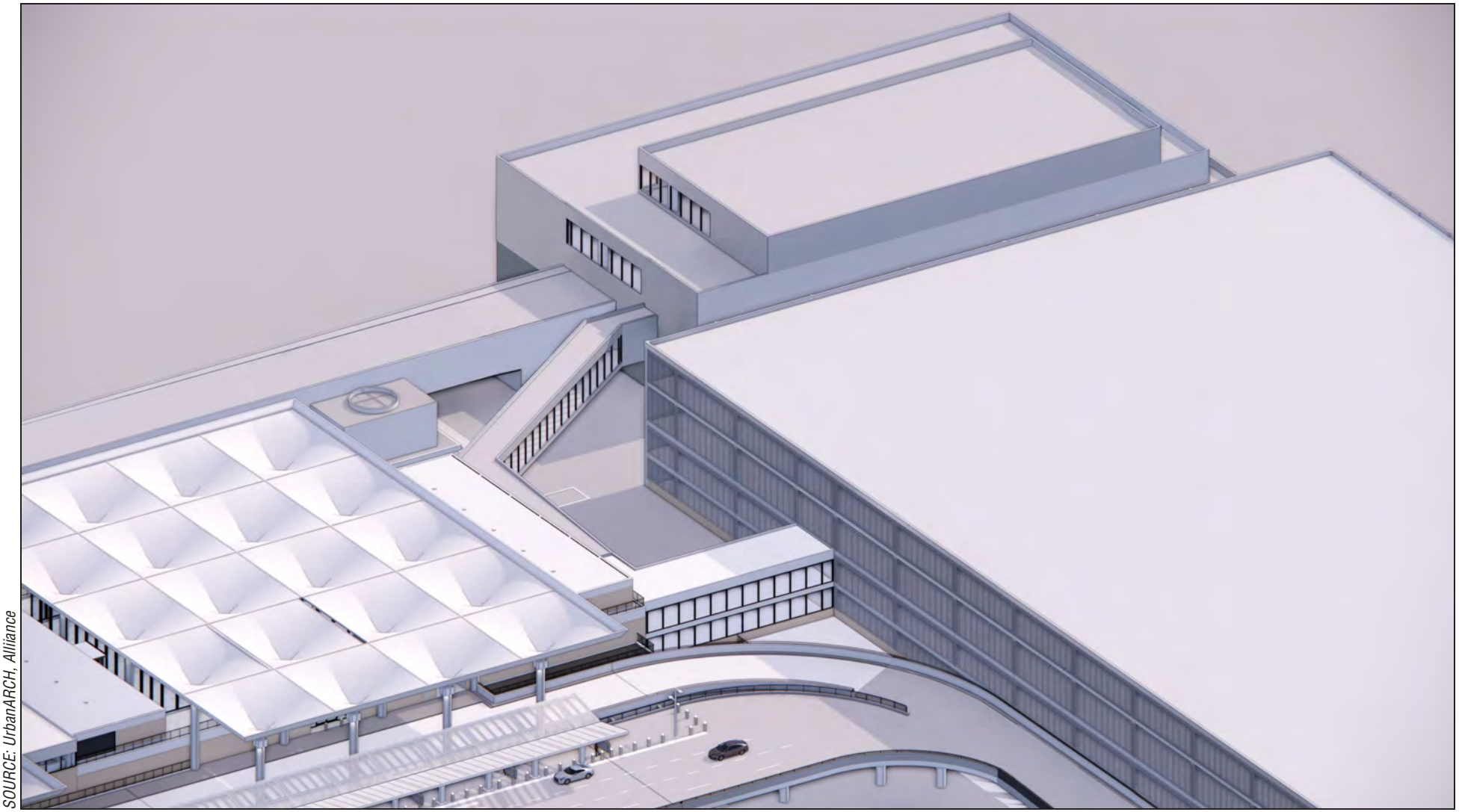
Terminal A, West Facade, Existing View
Southeast from Elevated Roadway

Figure 3

6.7.24



SOURCE: UrbanARCH, Alliance

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Proposed Project, Illustrative Rendering,
Aerial View Southeast

Figure 4

6.7.24

SOURCE: UrbanARCH, Alliance

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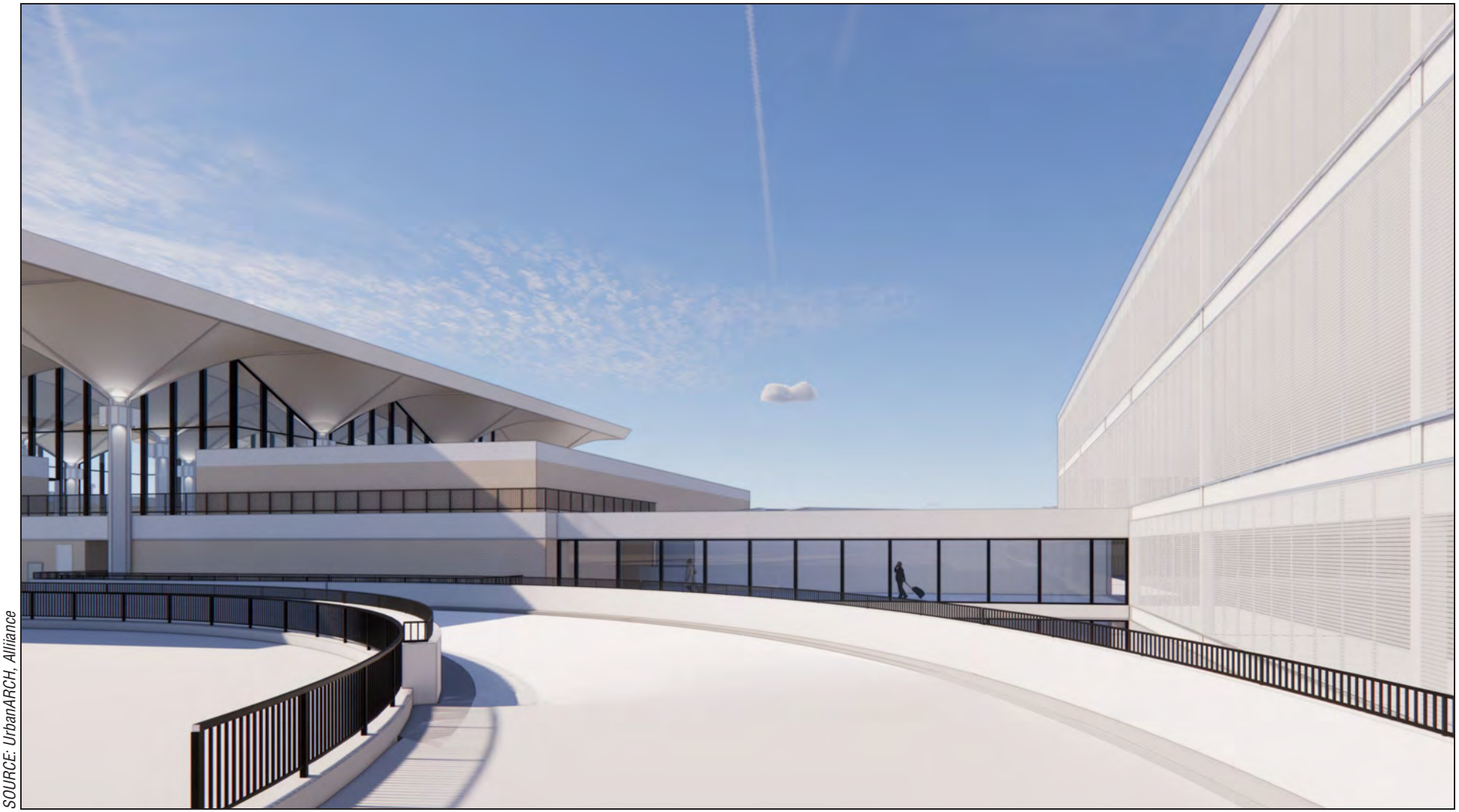
Proposed Project, Illustrative Rendering,
Ground-Level View South

Figure 5

6.7.24



SOURCE: UrbanARCH, Alliance

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Proposed Project, Illustrative Rendering,
View South from Elevated Roadway

Figure 6

Memphis International Westside Airport Improvements - Project # SHPO0005215

TN Help <tnhelp@service-now.com>

Fri 6/28/2024 3:51 PM

To:Nathan Riddle <nriddle@akrf.com>;JHay@flymemphis.com <JHay@flymemphis.com>
Cc:peggy.kelley@faa.gov <peggy.kelley@faa.gov>;Jennifer Hogan <jhogan@akrf.com>;BTenkhoff@flymemphis.com <BTenkhoff@flymemphis.com>; amccaffery@flymemphis.com <amccaffery@flymemphis.com>;JHay@flymemphis.com <JHay@flymemphis.com>

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2024-06-28 14:40:58 CDT

James Hay
Memphis and Shelby County Airport Authority
JHay@flymemphis.com

RE: Federal Aviation Administration (FAA), Memphis International Westside Airport Improvements, Project#: SHPO0005215, Memphis, Shelby County, TN

Dear James Hay:

In response to your request, we have reviewed the documents submitted regarding your proposed undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. This Act requires federal agencies or applicants for federal assistance to consult with the appropriate State Historic Preservation Office before they carry out their proposed undertakings. The Advisory Council on Historic Preservation has codified procedures for carrying out Section 106 review in 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739) .

The Memphis International Airport was previously determined eligible under Criterion C in recognition of it being considered one of Roy Harrover's best examples of New Formalism design. Harrover designed both the original terminal and the expansion, which includes both wings and the concourses. Because it was conceptualized and constructed as a unified design and extension of Harrover's masterpiece, the concourses would also be eligible since they are components of the larger eligible Harrover building. Therefore, the demolition of the concourse would result in an adverse effect.

Please visit our website for guidance on next steps after an adverse effect determination. You will need to continue to consult with our office to resolve the adverse effect. Questions can be sent to Casey Lee, Casey.Lee@tn.gov who drafted this response. We appreciate your cooperation.

Sincerely,

E. Patrick McIntyre, Jr.
Executive Director and
State Historic Preservation Officer

Ref:MSG14412286_ltwd5SJR7bZ582jMxPF

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July 22, 2024

Ms. Casey Lee
Tennessee Historical Commission
State Historic Preservation Office
2941 Lebanon Pike
Nashville, TN 37243-0442

Re: Federal Aviation Administration, Memphis International Westside Airport Improvements Project, Project#: SHPO0005215, Memphis Shelby County, Tennessee

Dear Ms. Lee:

Thank you for your office comment letter dated June 28, 2024 regarding the three concourses being eligible features of the Memphis International Airport Terminal. As you are aware, the airport's terminal building has previously been determined eligible for the National Register of Historic Places (National Register) under Criteria A and C. In this letter, we would like to provide more information about modifications to the three concourses since their original construction, which we believe have diminished the historic integrity of the concourses to the degree that they would not be considered eligible features of the complex.

Concourse B was constructed in 1963 with the original terminal building (Terminal B) and Concourses A and C were constructed with Terminals A and C as part of the expansion of the airport in the early 1970s. Roy P. Harrover and Associates designed both the original terminal and concourse and the expansion. As described below, substantial modifications to the footprints of the three concourses have been made since they were constructed. Figures 1 through 4 provide aerial photographs of the terminals and concourses in 1973, 1997, 2007, and 2021.

As constructed in 1963, Concourse B was a Y-shaped building that extended south from the center of the terminal. The connector trunk consisted of five two-level gate buildings with approximately rectangular or square footprints connected by a narrow concourse at the second level. The two branches of the Y were two-level rectangular structures connected to the southernmost gate building by narrow concourses. Concourse B was clad in brick with concrete bands, like the lower facades of the terminal. As part of the expansion of the terminal in the early 1970s, the two branches of the Y-shaped concourse were doubled in length. By 1997, the footprint of the southernmost gate building on the connector trunk had been enlarged with a triangular footprint, removing the original narrow concourses to the branches (see Figure 2). In addition, the southern halves of the branches were

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expanded in width (see Figure 2). The footprint of the connector trunk was enlarged again by 2007, and the trunk no longer consisted of the original individual gate buildings connected by a narrow concourse (see Figure 3). The footprint of the connector trunk was enlarged further by 2021, and the footprint of the east branch of the Y was also substantially enlarged (see Figure 4). As part of the 21st-century expansions of Concourse B, the brick and concrete facades were largely replaced with large expanses of windows, the interior layout was modernized, and interior finishes were changed. The renovated Concourse B opened in February 2022, and it consolidated passenger gates with a significantly modernized interior. Although Concourse B still has a Y-shaped footprint, it retains little of its original exterior and interior historic integrity of design and materials.

Concourses A and C were long, linear buildings connected at right angles to Terminals A and C by skybridges. They were clad in glazed brick with exposed concrete beams. Each concourse was designed with two-level squarish gate areas connected by a narrow, central concourse at the second level. As shown on Figure 1, Concourse A (the west concourse) originally had eight gate areas and Concourse C (the east concourse) had seven. In the late 1980s, a rear (south) addition was added to the second level of Terminal B, which included a security area, mechanical rooms and other back-of-house spaces, and a passenger lounge. In 1994, a connecting concourse was constructed at the south addition between Terminals A and B that connected to the east façade of the Concourse A gate area identified as "Area WF" on the original drawings (see Figure 2). A connecting concourse between Terminals C and B was constructed in 2000-2001 that connected to the west façade of the Concourse C gate area identified as "Area EF" on the original drawings and to the Terminal B south addition (see Figure 2). Unlike Concourses A and C, the façades of the connecting concourses were primarily glass. In 2001, the two southernmost Concourse A gate areas ("Area WD" and "Area WE" on the original drawings) were combined into a large structure with a rectangular footprint, a new Regional Jet Facility was added to the south end of Concourse A, a small addition was added to the north façade of the northernmost gate area ("Area WK" on the original drawings), and a small addition was added at the connection between the gate area identified as "Area WH" on the original drawings and the portion of the concourse identified as "Area WC5" (see Figure 3). In addition, the two southernmost Concourse C gate areas ("Area ED" and "Area EE" on the original drawings) were enlarged in 2001 (see Figure 3). In 2014, the southern end of Concourse A, including the Regional Jet Facility, was demolished, leaving six of the original eight gate areas (see Figure 4). The southern end of Concourse C was demolished in 2023, leaving five of the original seven gate areas. Concourses A and C both have reduced footprints, which has affected their historic integrity of design.

The exterior of the remaining portion of Concourse A has also been altered. The façades of the connector concourses at the second level are intact, but the pattern of openings on the six remaining gate areas has been altered through infill, creation of new openings, and the change in size of openings. Figures 5 through 17 compare current exterior photographs of Concourse A with corresponding elevations from the original drawings. Specific exterior alterations to the remaining six gate areas of Concourse A include:

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- **Area WK** (the northernmost gate area): four large ground-level openings were added to the east façade, which removed two doorways; a concrete extension was added to the north façade; a large ground-level opening on the north façade was infilled with brick; and a window on the second level of the north façade was reduced in size (see Figures 5 through 7);
- **Area WJ**: five ground-level openings were added to the ground level of the west facade, which was originally a brick wall (see Figure 9);
- **Area WI**: on the ground level of the east façade, a doorway was infilled with brick and a new opening was added; and on the west façade, two ground-level openings at the southern end were replaced with one opening in a different location and a window on the second level was reduced in size (see Figures 10 and 11);
- **Area WH**: on the east façade, two large ground-level openings at the south end were reconfigured into one smaller opening; on the north façade, an addition was constructed at the connection to the concourse; and on the west façade, one large window on the second level was reduced in size and one small window was infilled with brick (see Figures 12, 13, and 14);
- **Area WG**: on the west façade, two large openings on the ground level were infilled with brick that does not match the original brick, one large window on the second level was removed and three new windows of different sizes were added to that location, and a small window was infilled with brick (see Figure 16); and
- **Area WF**: on the west facade, a large opening at the ground level was partially infilled with brick, a new window was inserted into the concrete band at the parapet, and a large window on the second level was replaced with two smaller windows (see Figure 17).

In summary, the façades of the connector concourse at the second level are intact, but the exteriors of the remaining six gate areas have been altered, which has diminished their historic integrity of design and materials. The facades of Concourse C have similarly been altered.

The interiors of Concourses A and C have also been altered. Interior alterations made to Concourse A in the 21st century include: the installation of new jet bridges and reconfiguring of hold rooms and renumbering of gates; construction of multiple infill additions for concessions and renovation of existing concessions; renovations to restrooms and floor finishes; removal of the original tubular aluminum handrails that enclosed each gate hold room and separated them from the concourse; elevator building additions; and replacement of ceilings and can lighting. Multiple interior infill spaces for concessions have also been added to Concourse C. Further, Concourses A and C were permanently closed with the reduction in number and consolidation of passenger gates in the renovated Concourse B in 2022. There is no longer a continued functional use for Concourses A and C, although the land they occupy is important for future landside use in airport operations.

As described above, all three concourses have altered footprints, facades, and interiors, and these extensive alterations have diminished the integrity of the three concourses' historic features. Therefore, we believe that these concourses are no longer contributing features, and we request that the State Historic Preservation Office agree with our recommendation of no adverse effect associated

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with the Memphis International Westside Airport Improvements Project, which would demolish Concourse A and utilize that space to address the airport's need for additional landside facilities.

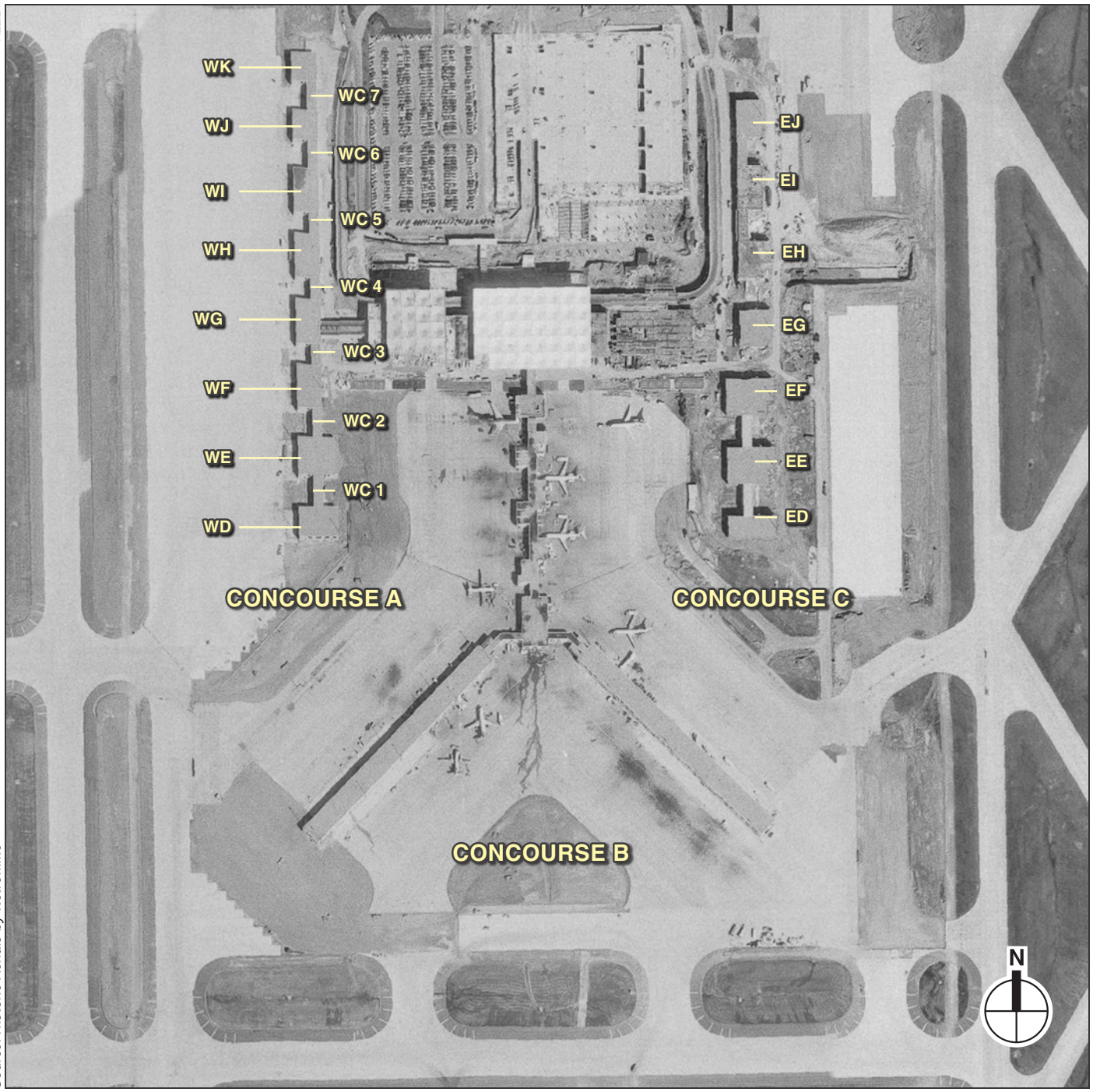
We look forward to continuing consultation with you on this important project, and we would like to schedule a call with you to discuss the additional information presented in this letter.

Sincerely,

James Hay
Senior Director, Terminal Modernization Planning & Development
2491 Winchester Road, Suite 113
Memphis, TN 38116-3856
P: 901-922-8224
M: 901-237-5837
F: 901-922-8211
flymemphis.com

cc: Peggy Kelley, FAA

7.22.24



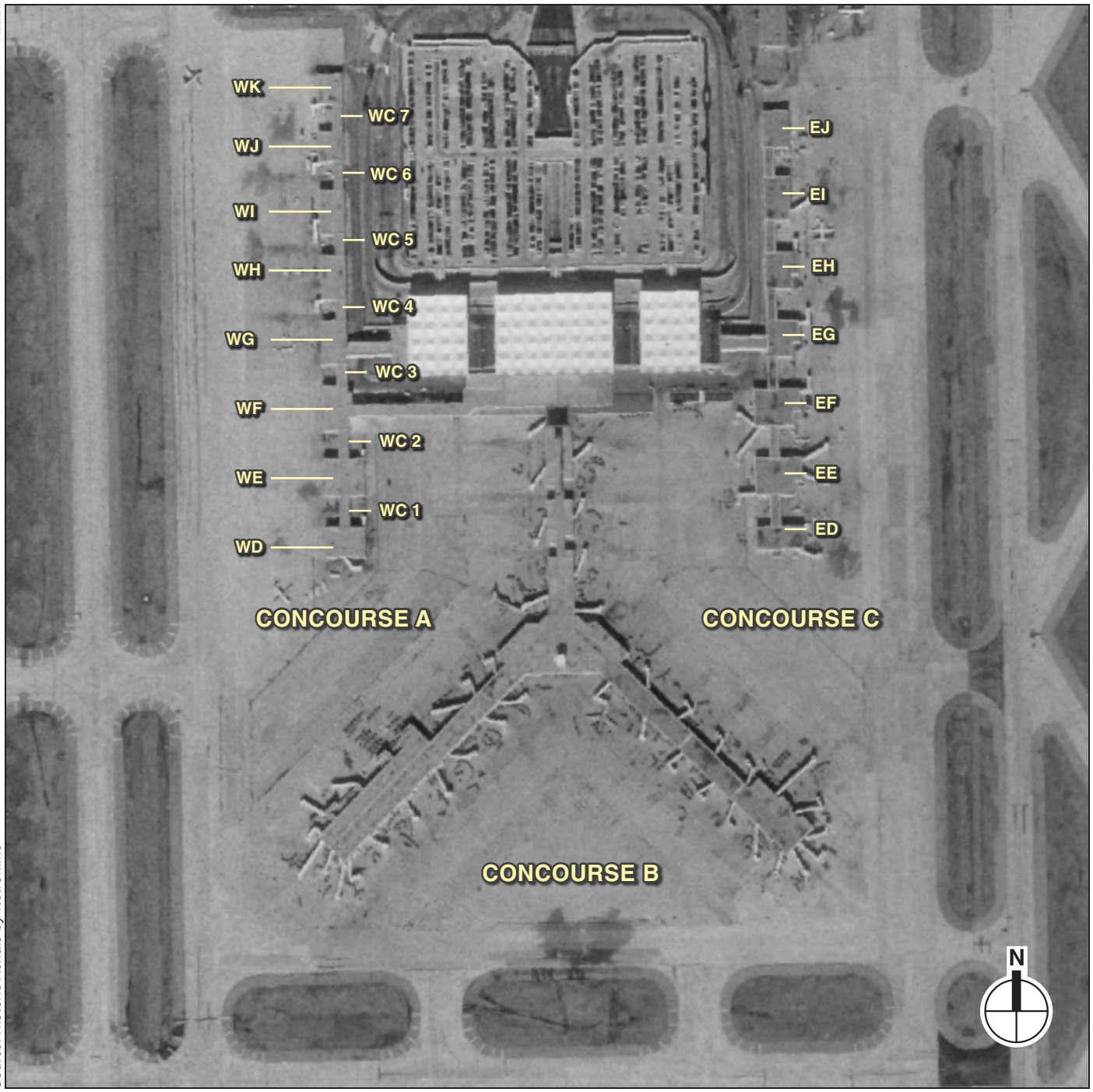
Source: Historic Aerials by Netronline

NOTE: Concourse gate labels refer to naming convention on original drawings as shown on the key plans on Figures 5 - 17.

1973 Aerial

Figure 1

7.22.24



Source: Historic Aerials by Netronline

NOTE: Concourse gate labels refer to naming convention on original drawings as shown on the key plans on Figures 5 - 17.

7.22.24

Source: Historic Aerials by Netronline

NOTE: Concourse gate labels refer to naming convention on original drawings as shown on the key plans on Figures 5 - 17.

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2007 Aerial

Figure 3

7.22.24

Source: Historic Aerials by Netronline

NOTE: Concourse gate labels refer to naming convention on original drawings as shown on the key plans on Figures 5 - 17.

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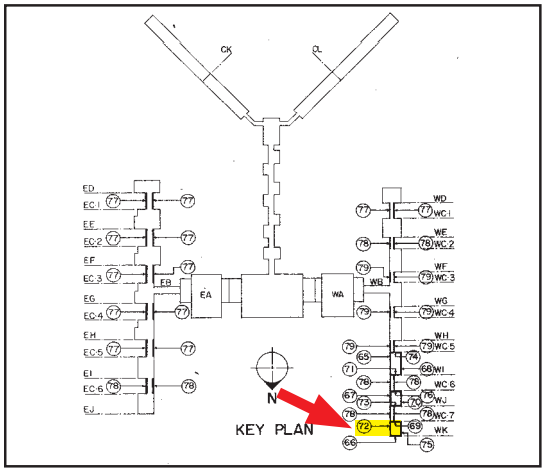
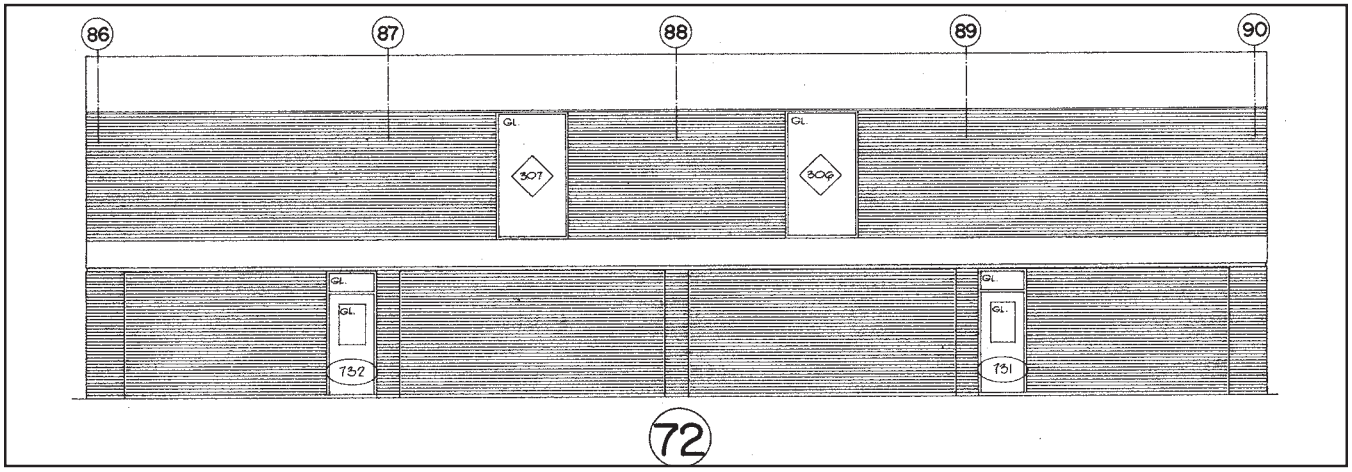
2021 Aerial

Figure 4

7.22.24

Existing Condition Photograph, East Façade





1970 Elevation #72

MEMPHIS
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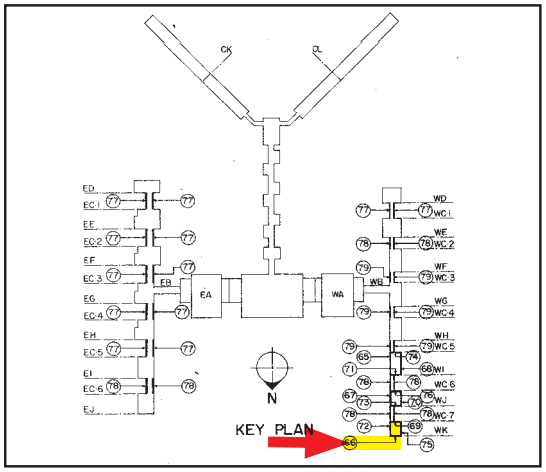
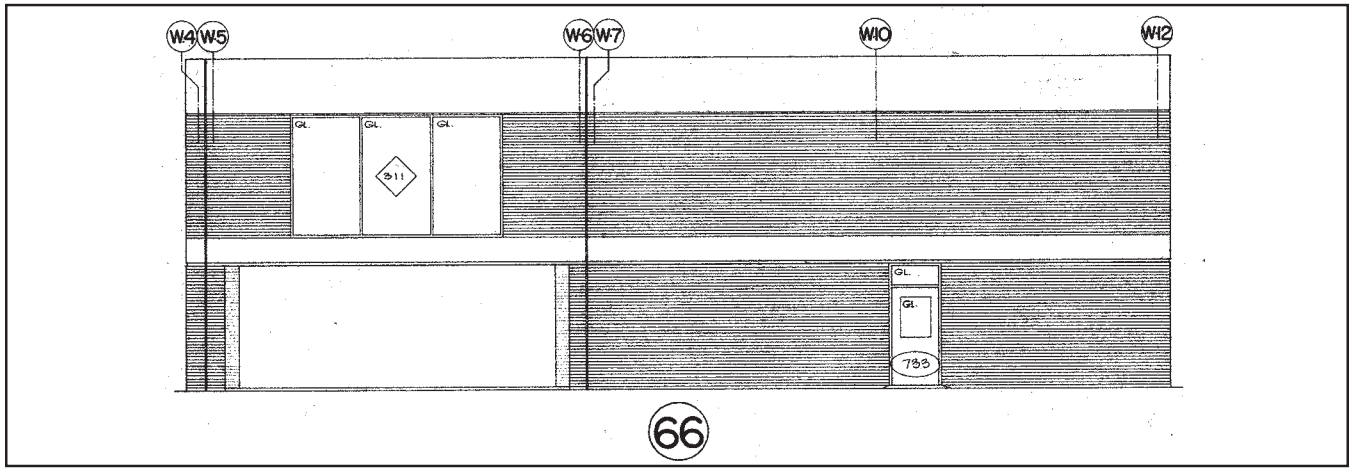
Concourse A, Area WK (Northernmost Gate)

Figure 5

7.22.24

Existing Condition Photograph, North Façade





1970 Elevation #66

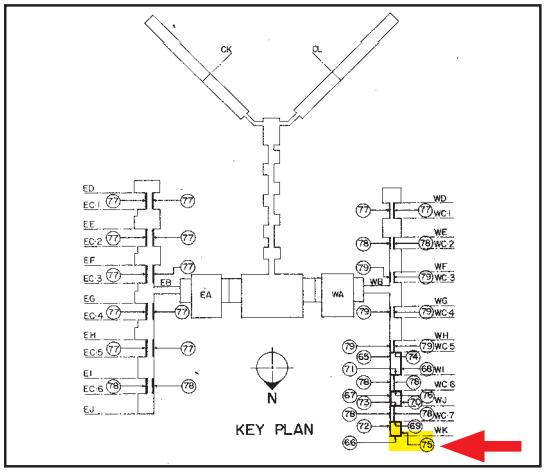
MEMPHIS
INTERNATIONAL AIRPORT
WESTSIDE IMPROVEMENTS

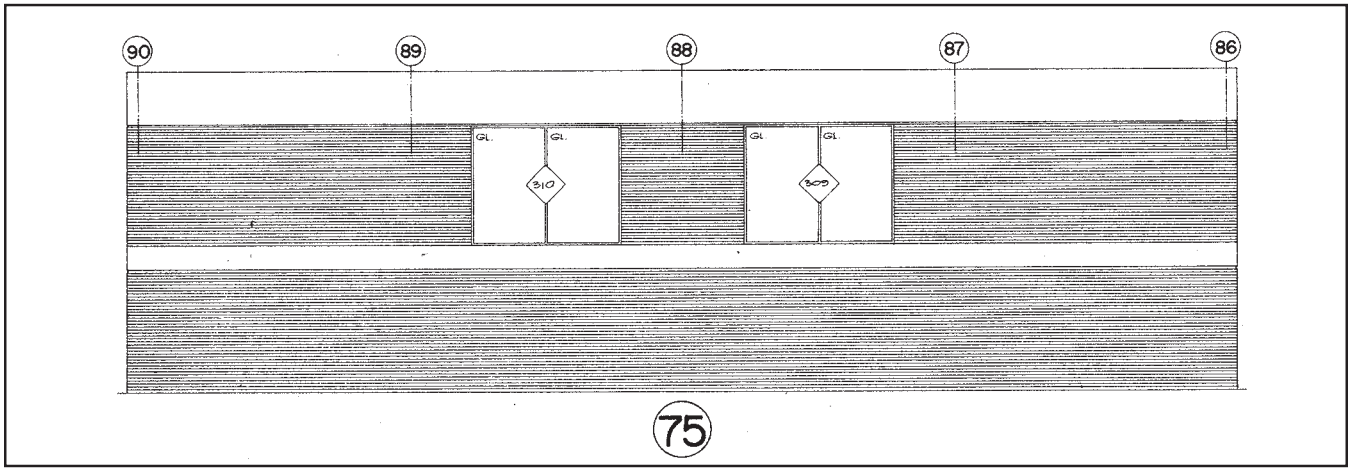
Concourse A, Area WK (Northernmost Gate)

Figure 6

7.22.24

Existing Condition Photograph, West Façade





1970 Elevation #75

MEMPHIS
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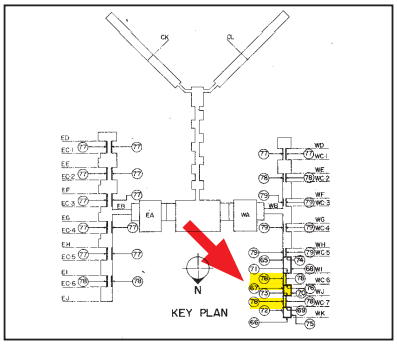
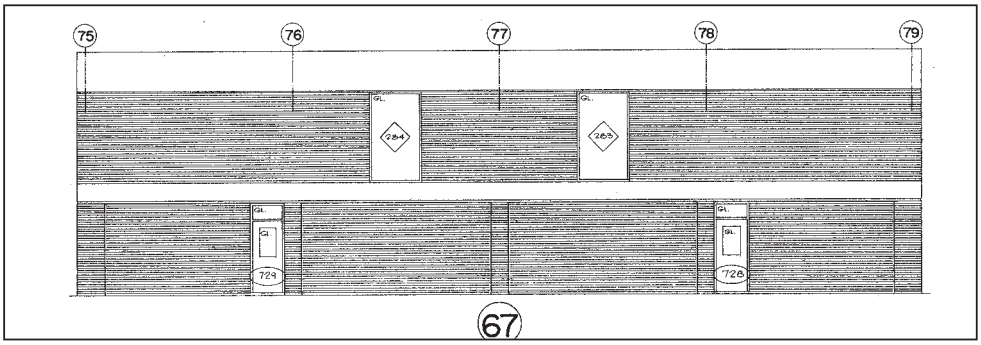
Concourse A, Area WK (Northernmost Gate)

Figure 7

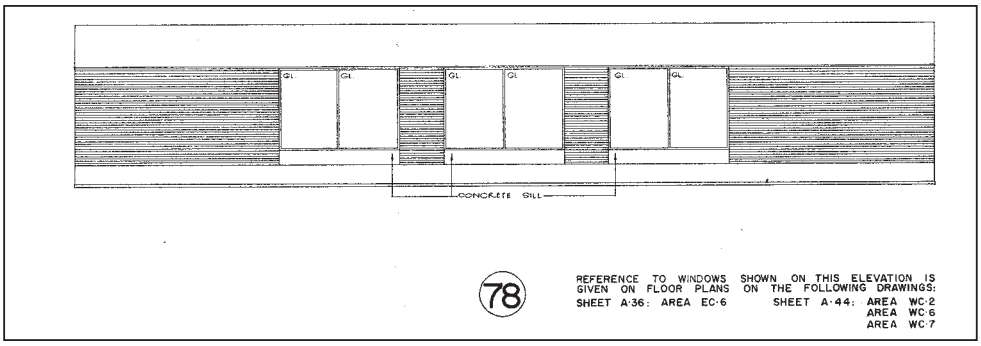
7.22.24

Existing Condition Photograph, East Façade





1970 Elevation #67



1970 Elevation #78

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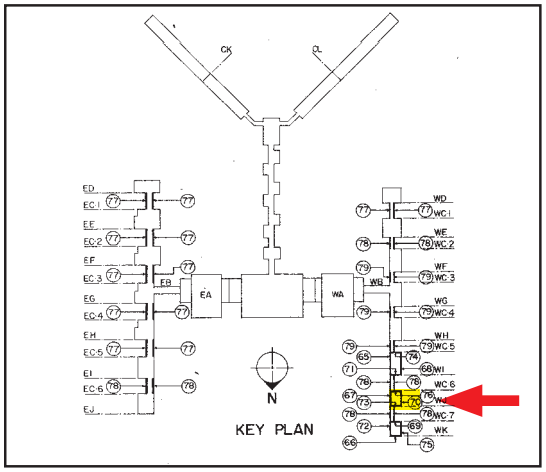
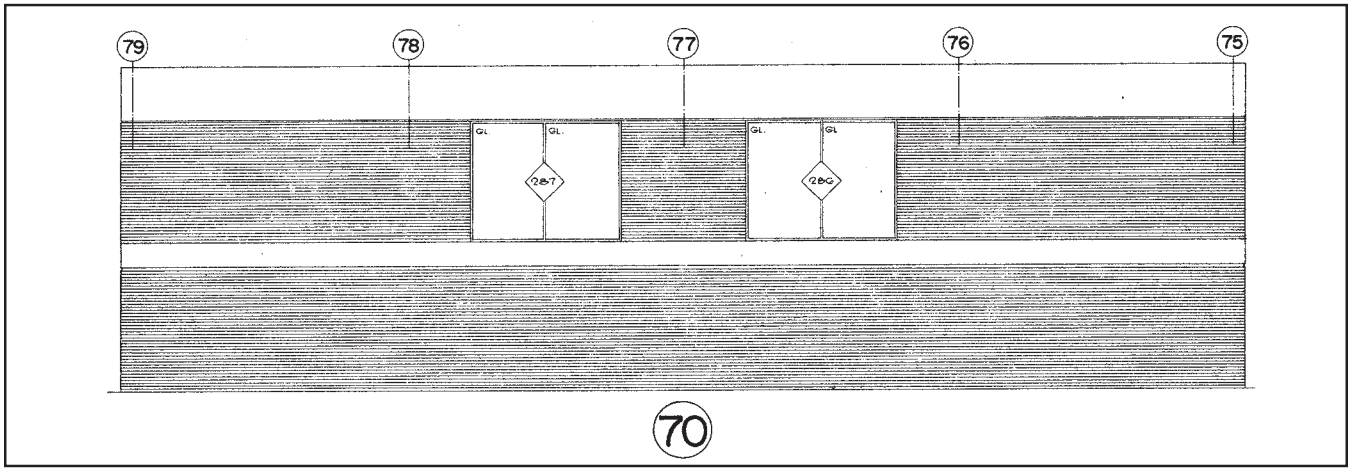
Concourse A, Areas WC6 and WJ

Figure 8

7.22.24

Existing Condition Photograph, West Façade





1970 Elevation #70

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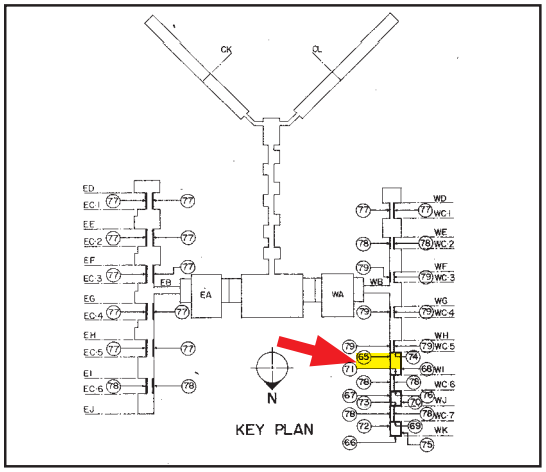
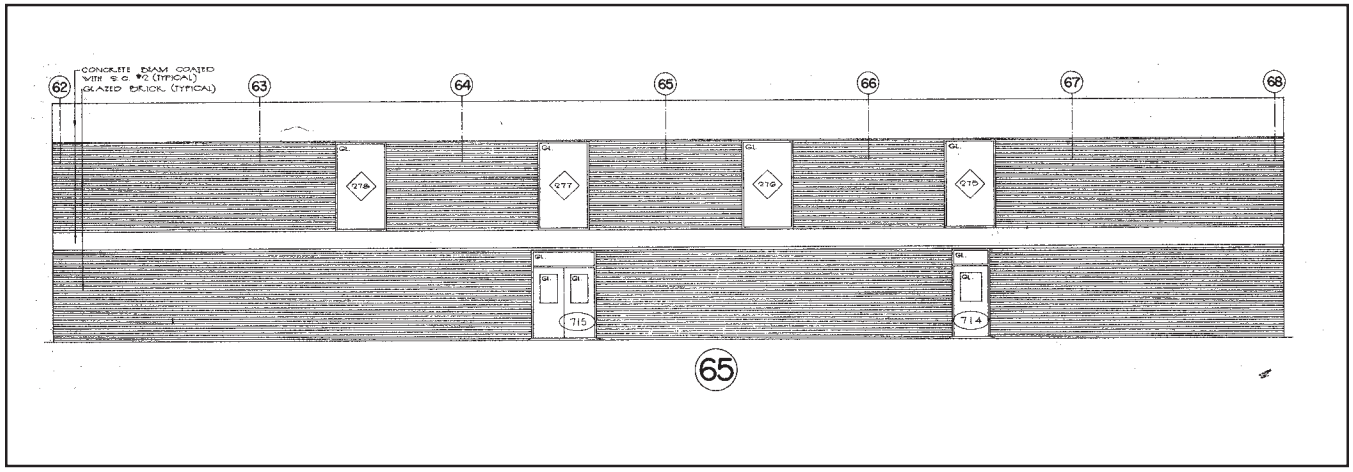
Concourse A, Area WJ
Figure 9

7.22.24

Existing Condition Photograph, East Façade





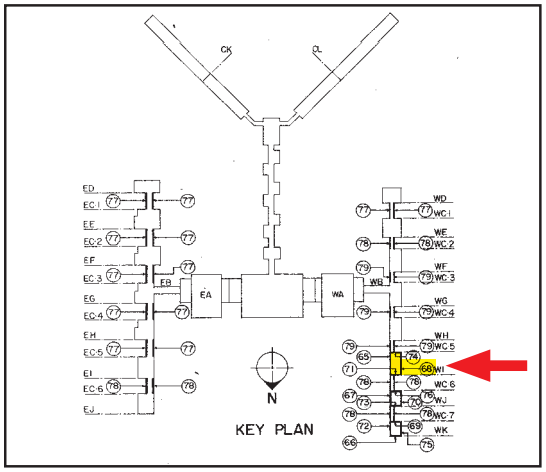
1970 Elevation #65

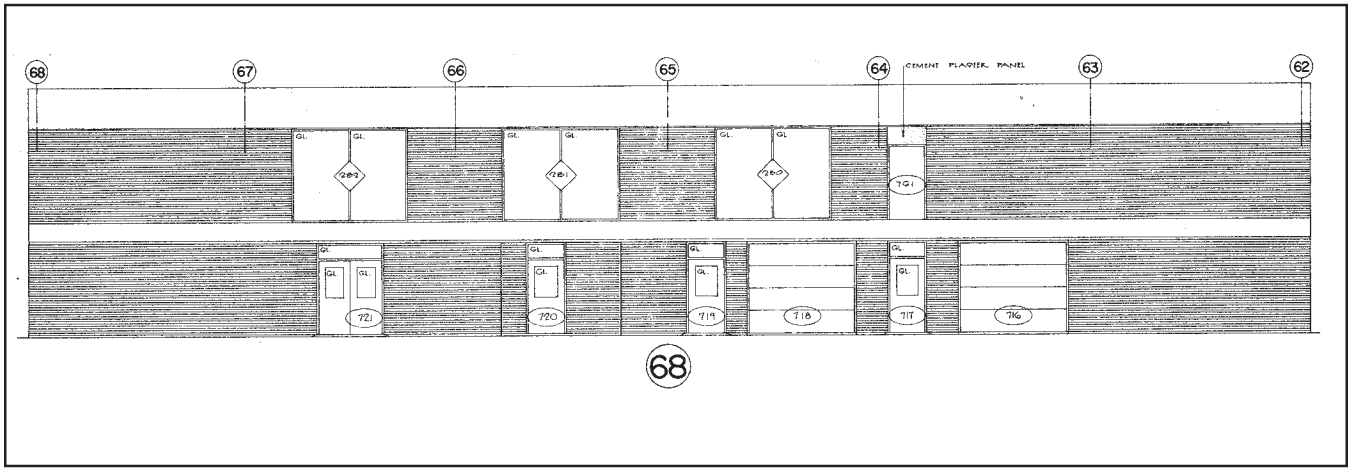
MEMPHIS INTERNATIONAL AIRPORT
WESTSIDE IMPROVEMENTS

Concourse A, Area WI
Figure 10

7.22.24

Existing Condition Photograph, West Façade





1970 Elevation #68

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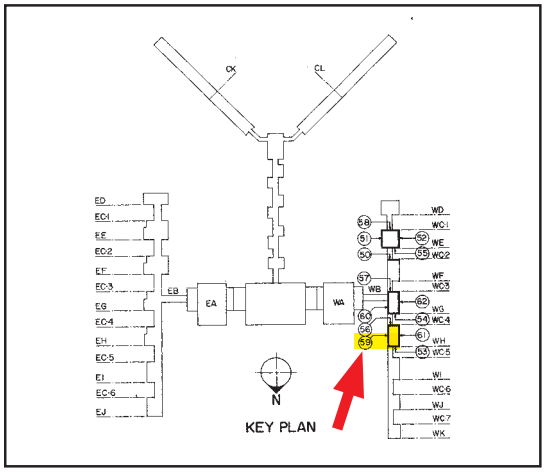
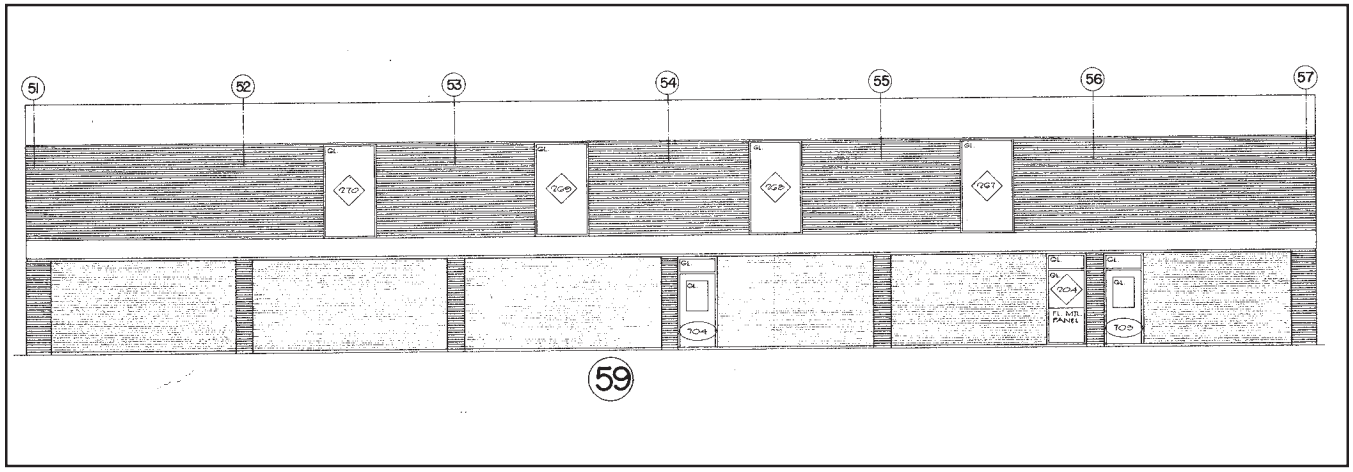
Concourse A, Area WI
Figure 11

7.22.24

Existing Condition Photograph, East Façade





1970 Elevation #59

MEMPHIS
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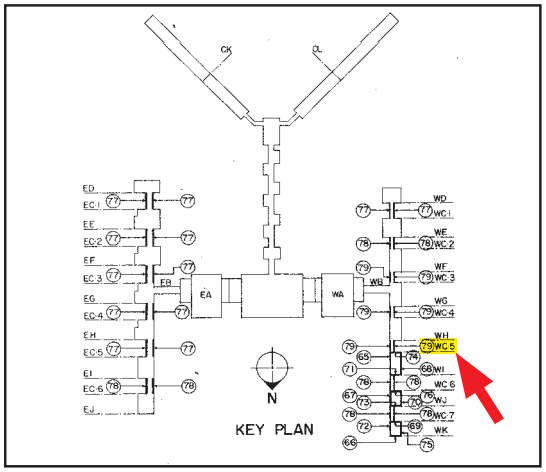
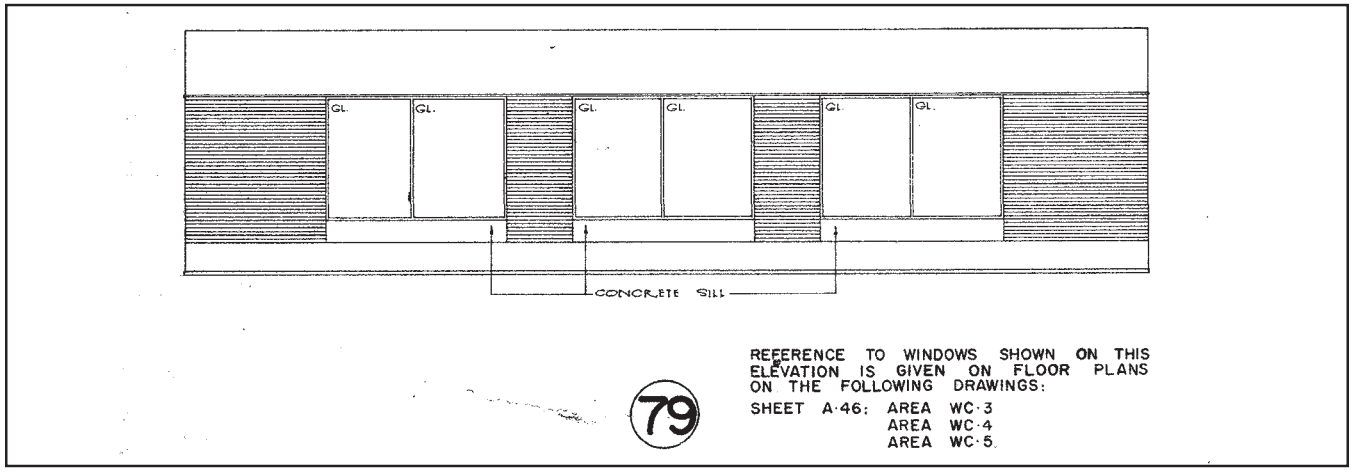
Concourse A, Area WH
Figure 12

7.22.24

Existing Condition Photograph, West Façade





1970 Elevation #79

MEMPHIS
INTERNATIONAL AIRPORT
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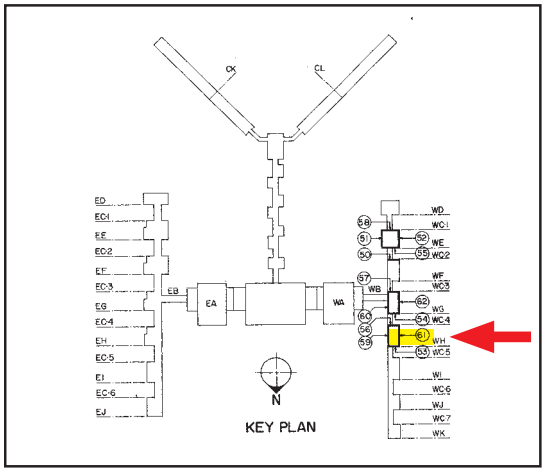
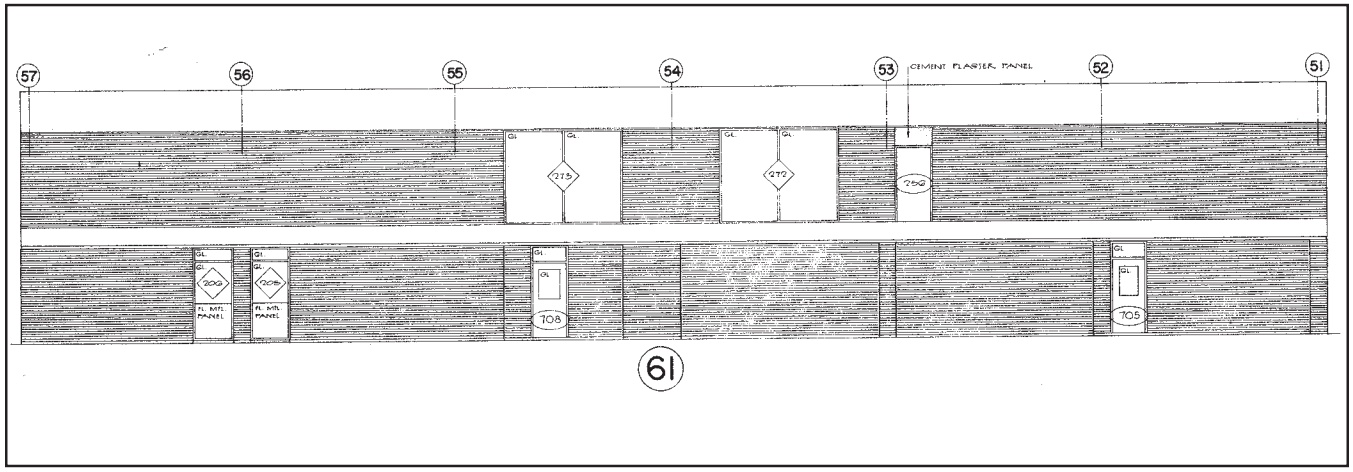
Concourse A, Area WC5 & WH

Figure 13

7.22.24

Existing Condition Photograph, West Façade





1970 Elevation #61

MEMPHIS
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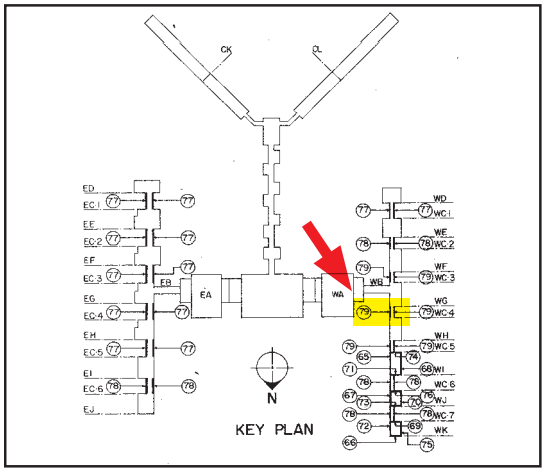
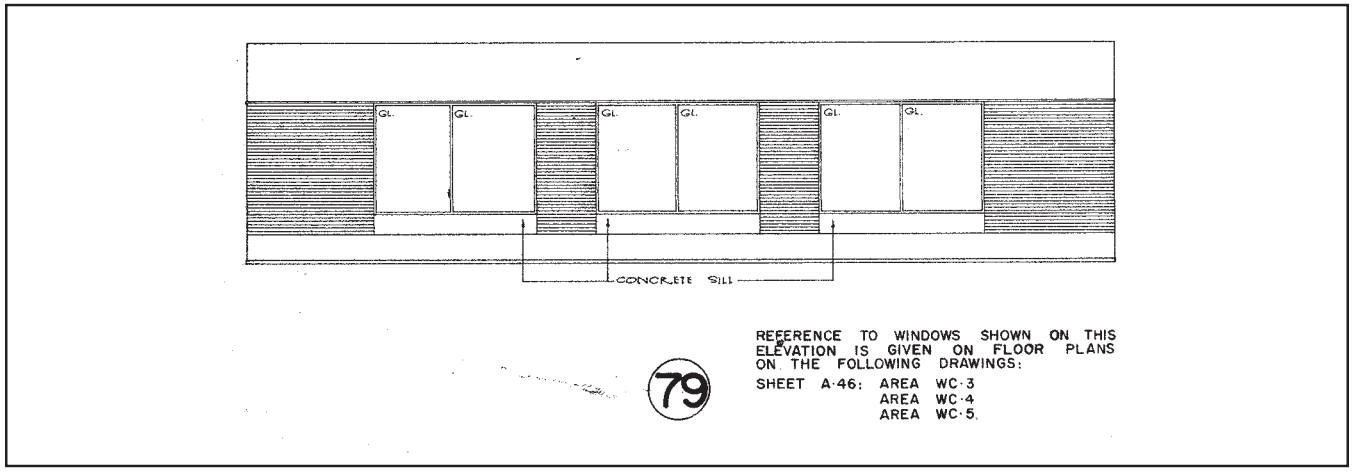
Concourse A, Area WH
Figure 14

7.22.24

Existing Condition Photograph, East Façade





1970 Elevation #79

MEMPHIS
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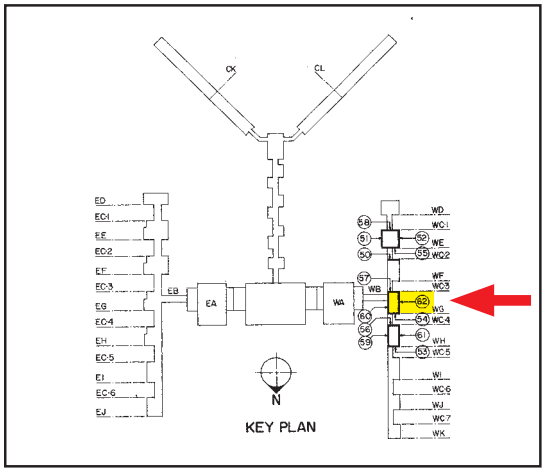
WESTSIDE IMPROVEMENTS

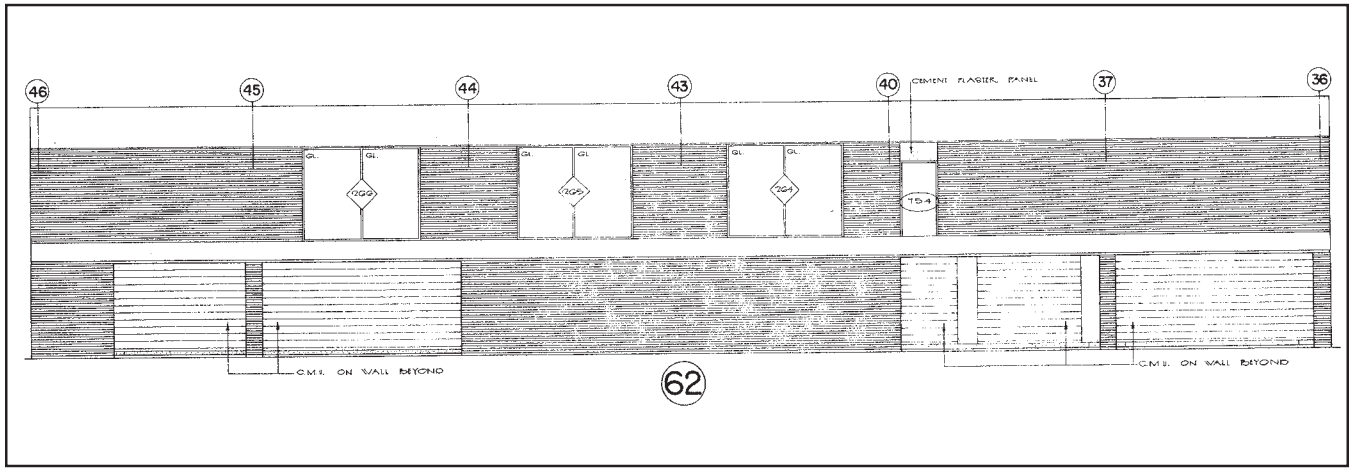
Concourse A, Area WC4

Figure 15

7.22.24

Existing Condition Photograph, West Façade





1970 Elevation #62

MEMPHIS
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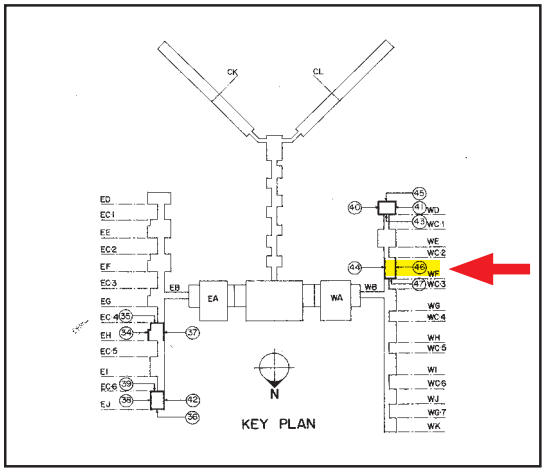
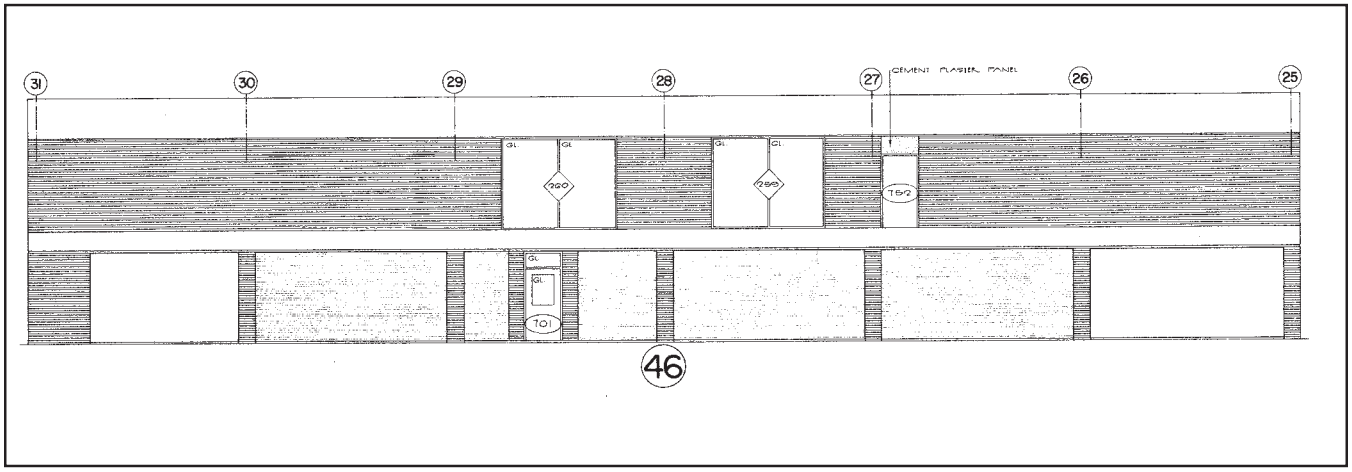
WESTSIDE IMPROVEMENTS

Concourse A, Area WG
Figure 16

7.22.24

Existing Condition Photograph, West Façade





1970 Elevation #46

MEMPHIS
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WESTSIDE IMPROVEMENTS

Concourse A, Area WF

Figure 17

Memphis International Westside Airport Improvements - Project # SHPO0005215

TN Help <tnhelp@service-now.com>

Wed 7/31/2024 10:49 AM

To:Nathan Riddle <nriddle@akrf.com>;JHay@flymemphis.com <JHay@flymemphis.com>
Cc:peggy.kelley@faa.gov <peggy.kelley@faa.gov>;Jennifer Hogan <jhogan@akrf.com>;JHay@flymemphis.com <JHay@flymemphis.com>;amccaffery@flymemphis.com <amccaffery@flymemphis.com>;btenkhoff@flymemphis.com <btenkhoff@flymemphis.com>

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STATE HISTORIC PRESERVATION OFFICE
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OFFICE: (615) 532-1550
www.tnhistoricalcommission.org

2024-07-31 09:44:36 CDT

James Hay
Memphis International Airport
JHay@flymemphis.com

RE: Federal Aviation Administration (FAA), Memphis International Westside Airport Improvements, Project#: SHPO0005215, Memphis, Shelby County, TN

Dear James Hay:

In response to your request, we have reviewed the documents submitted regarding your proposed undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. This Act requires federal agencies or applicants for federal assistance to consult with the appropriate State Historic Preservation Office before they carry out their proposed undertakings. The Advisory Council on Historic Preservation has codified procedures for carrying out Section 106 review in 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739) .

We appreciate both the thoroughness and organization of the additional materials submitted in this report. Having information on alterations to the concourses, as well as historic plans coupled with current photographs, made it easier to review the report and come to a conclusion.

Based on the provided information, we maintain that both concourses would be eligible for listing in the National Register as part of the larger eligible Roy Harrover building. As mentioned in our previous letter, the Memphis International Airport was determined eligible under Criterion C in recognition of it being one of Harrover's best examples of New Formalism design. Though the concourses came later, they were conceptualized, designed, and constructed as an extension of Hannover's masterpiece. Because they are part of this larger whole, they must be evaluated in the context of the entire building's integrity of design, materials, and workmanship.

The report identifies two large sections of the concourses that were demolished, thus negatively affecting the property's integrity. Comparisons between historic plans and current photographs also demonstrate varying changes in material, as evidenced by replacement windows and doors present in some areas, and overall fenestration, demonstrated in photographs showing altered historic openings. However, the overall character and design elements necessary to convey Harrover's overall design (zipper-like design of the concourses, overall scale and spacing in relationship to each other and the terminal, and materials like brick and concrete) remain. As such, the concourses are eligible for listing in the National Register as components of the larger eligible Harrover building.

Therefore, we still find that the demolition of the concourses will result in an adverse effect. You should continue to consult with our office to resolve the adverse effect. Please direct questions and comments to Casey Lee at Casey.Lee@tn.gov. We appreciate your cooperation.

Sincerely,

E. Patrick McIntyre, Jr.

E. Patrick McIntyre, Jr.

Executive Director and
State Historic Preservation Officer

Ref:MSG14817246_FAxSB7NUn6ZMnKWISx3

APPENDIX C

MEMORANDUM OF AGREEMENT (MOA)

MEMORANDUM OF AGREEMENT

AMONG THE
FEDERAL AVIATION ADMINISTRATION
TENNESSEE STATE HISTORIC PRESERVATION OFFICER
AND THE
MEMPHIS SHELBY COUNTY AIRPORT AUTHORITY

REGARDING THE
MEMPHIS INTERNATIONAL AIRPORT WESTSIDE AIRPORT
IMPROVEMENTS PROJECT
CITY OF MEMPHIS
SHELBY COUNTY, TENNESEE

WHEREAS, the Memphis Shelby County Airport Authority (MSCAA) has requested that the Federal Aviation Administration (FAA), as the lead federal agency, approve a proposed Westside Airports Improvements Project ("Proposed Project") at Memphis International Airport (MEM), pursuant to Section 106 of the National Historic Preservation Act of 1966 (54 U.S.C. § 306108), as amended and re-codified, (NHPA) and its implementing regulations at Title 36 Code of Federal Regulations (CFR) § 800, as amended (hereinafter collectively referred to as Section 106); and

WHEREAS, as the Proposed Project sponsor and operator of MEM, MSCAA, has requested the FAA to review and approve a change to the landside facilities (employee parking, car rental, and other selected landside services), as a change to the Airport Layout Plan (ALP) in support of the Proposed Project; and

WHEREAS, the Proposed Project includes constructing several buildings and repurposing/modifying garage and surface parking to provide more passenger parking spaces, additional employee parking, more capacity for car rental services, and a consolidated, efficient administration space at MEM in the City of Memphis, Shelby County, Tennessee. This project would address the identified parking and facility needs at MEM, specifically related to passenger and employee parking, car rental, and other selected landside services. The project scope includes the demolition of Concourse A, and development of a Consolidated Car Rental Facility (ConRAC), Administration Building, and Overflow Lot, as well as the reconfiguration of the Cell Phone Lot; and

WHEREAS, the FAA has determined that the Proposed Project constitutes an undertaking under Section 106; and

WHEREAS, the FAA, in consultation with the Tennessee State Historic Preservation Officer (SHPO), defined the undertaking's area of potential effects (APE) as the sites of the proposed ConRAC facility and Administration Building, including the proposed connectors to Terminal A, and including the area within 200 feet (see **Figure 1**); and

WHEREAS, SHPO has determined that Concourse A (as well as Concourse C, which would not be affected by the proposed undertaking) is eligible for listing on the National Register of Historic Places (NRHP) as part of the larger Terminal Building (MEM), which SHPO has determined to be NRHP-eligible under Criterion A and C in the areas of transportation and architecture at the local level; and

WHEREAS, the FAA determined that the undertaking will have an adverse effect on Concourse A in consultation with the SHPO pursuant to 36 CFR 800, the regulations implementing Section 106 of the National Historic Preservation Act; and;

WHEREAS, the FAA determined that it was not necessary to consult with Native Nations as part of the Section 106 process for the Proposed Project; and

WHEREAS, the FAA invited the following entities to serve as consulting parties to the Section 106 process: the Memphis Area Association of Governments; the Memphis and Shelby County Historical Commission, Mr. James Rout; Memphis Heritage, Inc.; and the Memphis Landmarks Commission; and

WHEREAS, the Memphis and Shelby County Historical Commission, Mr. James Rout, III, accepted the invitation to be a consulting party; and either a no response or a decline was received from the Memphis Area Association of Governments; Memphis Heritage, Inc.; and the Memphis Landmarks Commission;

WHEREAS, the FAA notified the Advisory Council on Historic Preservation (ACHP) of the adverse effect determination and invited the ACHP to participate in the consultation and to concur on this Memorandum Of Agreement (MOA), and the ACHP has chosen NOT to participate in the consultation pursuant to 36 CFR 800.6(a)(1)(iii); and

NOW, THEREFORE, the FAA, MSCAA, and the SHPO agree that the undertaking shall be implemented in accordance with the following stipulations to resolve the adverse effect of the Proposed Project on NRHP-eligible Concourse A of the Memphis International Airport.

STIPULATIONS

FAA, with the assistance of MSCAA, will ensure the following stipulations are implemented:

I. RECORDATION

Prior to construction or any alteration to the project site, which is anticipated to occur within one year of the FAA's approval of the project, MSCAA, using the services of Historian or Architectural Historian who meets the Secretary of the Interior's Professional Qualifications Standards (48 FR 44738-9) in the respective field, shall document the NRHP-eligible MEM Terminal and Concourses (A, B, C) to Tennessee State Historic Preservation (SHPO) Documentation Standards for Mitigation, Level II (assuming

"Measured Drawings" will not be requested), including photograph requirements;[1] SHPO will have 30 days for this review. SHPO review of recordation can run concurrently with other review timelines described herein. MSCAA shall work with the Historian/ Architectural Historian to review comments received. MSCAA will then ensure that all documentation is completed and accepted by the SHPO prior to any new construction related to the Proposed Project on the site. MSCAA shall provide one original digital copy of the recordation to the SHPO and one original digital copy to the Shelby County Historian. An additional digital copy shall be provided to another appropriate repository if identified in consultation with the SHPO. The recordation shall also be added to the MSCAA's website to facilitate public access to this information.

II. DESIGN REVIEW

MSCAA will submit a preliminary set of drawings and technical specifications of the proposed demolition of Concourse A to the FAA and SHPO for review. The SHPO shall respond within 15 calendar days unless additional time is requested in writing by SHPO to the FAA and granted by the FAA. MSCAA will take into consideration SHPO's comments as the design moves forward in order to try and minimize the adverse effect.

At least thirty (30) days prior to construction, MSCAA shall submit to the FAA and SHPO updated drawings and technical specifications. Significant changes to the preliminary drawings and technical specifications shall be highlighted and identified. In addition, MSCAA shall provide a summary document identifying comments made by the FAA and SHPO that were incorporated, and those considered but not incorporated.

III. DOCUMENT REVIEW, GENERAL STIPULATIONS

A. Unless otherwise stated elsewhere in this MOA, SHPO will provide comments on whichever documents they review to MSCAA (FAA would be copied on the submittal correspondence), as appropriate, and as set forth herein. For these reviews, the SHPO has up to thirty (30) calendar days from the date of receipt to review and provide written comments to MSCAA. FAA and/or the MSCAA will ensure any written comments received within the timeframe are considered, as appropriate, into the documentation.

B. If SHPO does not submit written comments to MSCAA within thirty (30) calendar days of receipt of any document, it is understood they have no comments on the submittal.

C. If SHPO objects to or recommends extensive revisions to these documents, which are stipulated in the MOA, FAA and/or the MSCAA will work expeditiously to respond to the recommendations and resolve disputes. If FAA and/or the MSCAA cannot resolve the

[1] Tennessee Historical Commission (State Historic Preservation Office). Mitigation Documentation Standards, Level II. Accessed September 18, 2024. thc_section-106_shpo-documentation-standards-for-mitigation.pdf (tn.gov)

disputes, and if after further consultation the dispute remains unresolved, the parties will adhere to the dispute resolution procedures detailed under Stipulation V.

D. The signatories acknowledge the timeframes set forth in this MOA will be the maximum allowed under normal circumstances. In exigent circumstances (e.g., concerns over construction suspensions or delays), all parties agree to expedite their respective document review within seven (7) calendar days.

E. Subject to compliance with all above stipulations, MEM shall not commence with any construction element (s) of the Proposed Project without prior consultation with the FAA and SHPO.

IV. DISPUTE RESOLUTION

In the event any signatory to this MOA objects in writing to any actions proposed in, or the manner in which the terms of this MOA are implemented, FAA will first consult with the other parties, as appropriate, within thirty (30) calendar days to resolve the objection. If FAA determines that such objection cannot be resolved, FAA will proceed as set forth herein.

A. FAA will forward all documentation relevant to the dispute, including FAA's proposed resolution, to the ACHP within fifteen (15) calendar days of the determination and request that the ACHP provide FAA with its advice on the resolution of the objection within thirty (30) calendar days of receiving the documentation. Concurrently, FAA will also provide the signatories with the same documentation for review and comment following the steps described in Stipulation IV. FAA will prepare a written response to the objection, which will constitute FAA's decision regarding the objection, that takes into account any timely advice or comments regarding the dispute from the ACHP and signatories and provide them with a copy of the written response. FAA will then proceed according to its decision regarding the objection. Should disputes arise under exigent circumstances (e.g., concerns over construction suspension or delays) all parties agree to expedite their dispute resolution obligations within seven (7) calendar days. The ACHP will still have thirty (30) calendar days to respond.

B. If the ACHP does not provide its advice regarding the dispute within the thirty (30) calendar daytime period, FAA may make its own decision regarding the dispute and proceed according to that decision. FAA will document this decision in a written response to the objection that takes into account any timely comments regarding the dispute from the signatories and provide the ACHP and signatories with a copy of such written response.

C. The signatories remain responsible for carrying out all other actions subject to the terms of this MOA that are not the subject of the dispute.

V. AMENDMENTS

Any signatory to this MOA may request that it be amended, whereupon that party will immediately consult with the other signatories within thirty (30) calendar days (or another time period agreed to by all signatories) to consider such an amendment. FAA will be responsible for developing the amendment and consulting with the signatories. The amendment will be effective on the date when all the signatories have signed it.

VI. TERMINATION

If any signatory to this MOA determines its terms will not or cannot be carried out, that party will immediately consult with the other signatories to attempt to accommodate the concern either through the Dispute Resolution or Amendment provisions per Stipulations V and VI. If within the respective timeframes defined in Stipulations V and VI (or another time period agreed to by all signatories) a resolution of the dispute or an amendment cannot be reached, any signatory may terminate the MOA upon written notification to the other signatories.

If the MOA is terminated, then, prior to work continuing on the Project, FAA must either, 1) execute a new agreement document (36 CFR § 800.6[c]) or 2) request, take into account, and respond to the comments of the ACHP under 36 CFR § 800.7. FAA will notify the signatories as to the course of action it will pursue.

VII. MONITORING AND REPORTING

MSCAA will provide, upon request from any signatory, a status update on the implementation of this MOA and will notify the signatories and Consulting Parties at the fulfillment of each mitigation measure under this MOA.

Each year following the execution of this MOA until it expires, is terminated, or until Project Completion (assuming all stipulations are met), MSCAA will provide all signatories to this MOA a summary report detailing work undertaken pursuant to its terms. Such report shall include any scheduling changes proposed, any problems encountered, and any disputes and objections received in the FAA's efforts to carry out the terms of this MOA.

VIII. DURATION

This MOA will expire when the MSCAA and SHPO certifies that all stipulations have been completed or in five (5) years from the effective date, whichever comes first, unless the signatories agree in writing to an extension using the amendment stipulation (Stipulation VI) herein.

IX. EXECUTION AND EFFECTIVE DATE

This MOA will go into effect on the date of the last signatory. Execution of this MOA by the signatories and implementation of its terms demonstrate that FAA has taken into account the effect of the Project on historic properties.

9.23.24

Project Area

Area of Potential Effect (200 - foot perimeter)

ConRAC

Blue Lot

Cell Phone Lot

Admin Building

Existing Facility

Overflow Parking

Traffic Flow for RAC

Traffic Flow for Cell Phone

Traffic Flow for Blue Lot

0 500 FEET

MEMPHIS INTERNATIONAL AIRPORT
WESTSIDE IMPROVEMENTS

Area of Potential Effect for Westside Improvement Project

Figure 1

MEMORANDUM OF AGREEMENT

AMONG THE
FEDERAL AVIATION ADMINISTRATION
TENNESSEE STATE HISTORIC PRESERVATION OFFICER
AND THE
MEMPHIS SHELBY COUNTY AIRPORT AUTHORITY

REGARDING THE
MEMPHIS INTERNATIONAL AIRPORT WESTSIDE AIRPORT
IMPROVEMENTS PROJECT
CITY OF MEMPHIS
SHELBY COUNTY, TENNESEE

SIGNATORY

FEDERAL AVIATION ADMINISTRATION

By: _____ Date: _____
Mr. Rans Black
Manager, Memphis Airport District Office

MEMORANDUM OF AGREEMENT

AMONG THE
FEDERAL AVIATION ADMINISTRATION
TENNESSEE STATE HISTORIC PRESERVATION OFFICER
AND THE
MEMPHIS SHELBY COUNTY AIRPORT AUTHORITY

REGARDING THE
MEMPHIS INTERNATIONAL AIRPORT WESTSIDE AIRPORT
IMPROVEMENTS PROJECT
CITY OF MEMPHIS
SHELBY COUNTY, TENNESEE

SIGNATORY

TENNESSEE STATE HISTORIC PRESERVATION OFFICER

By: _____ Date: _____
Mr. E. Patrick McIntyre, Jr.
Executive Director and State Historic Preservation Officer

MEMORANDUM OF AGREEMENT

AMONG THE
FEDERAL AVIATION ADMINISTRATION
TENNESSEE STATE HISTORIC PRESERVATION OFFICER
AND THE
MEMPHIS SHELBY COUNTY AIRPORT AUTHORITY

REGARDING THE
MEMPHIS INTERNATIONAL AIRPORT WESTSIDE AIRPORT
IMPROVEMENTS PROJECT
CITY OF MEMPHIS
SHELBY COUNTY, TENNESEE

SIGNATORY

MEMPHIS SHELBY COUNTY AIRPORT AUTHORITY

By: _____ Date: _____

Mr. Terry Blue
President and Chief Executive Officer

APPENDIX D

EVALUATION OF REUSE OPTIONS FOR CONCOURSE A

Memphis
INTERNATIONAL AIRPORT

MEMPHIS INTERNATIONAL AIRPORT

EVALUATION OF REUSE OF CONCOURSE A

PREPARED FOR: MEMPHIS-SHELBY COUNTY AIRPORT AUTHORITY

PRESENTED BY: JACOBSEN|DANIELS

Table of Contents

1 ANALYSIS OBJECTIVE & BACKGROUND CONTEXT

In support of the Westside Airport Improvements Project (Project), this analysis focuses on the potential uses for Concourse A at Memphis International Airport (MEM, Airport). Project planners evaluated the reuse potential of Concourse A to meet existing and future needs of the Project as well as overall improvements underway at MEM. Although originally considered and evaluated as part of a master plan process, this description of the evaluation of reuse alternatives has been prepared in support of the environmental review of a proposed project to demolish Concourse A to support the Memphis-Shelby County Airport Authority's (MSCAA) overall facility development needs.

1.1 Background

MEM's concourse/gate facilities were developed over time to accommodate the increasing hub activity associated with Northwest Airlines. During the late 1990s and early 2000s three concourses, A, B, and C, were in operation. One "Y" shaped concourse (Concourse B) centered on the main Terminal B and two wings (Concourses A and C) situated to the east and west adjacent to Terminals A and C, respectively. Figure 1 depicts the terminal area, including the concourses and terminals.

In 2007, the Airport experienced a significant decline in passenger carrier traffic as Delta (which merged with Northwest) began to dismantle its MEM connecting hub operation. Between 2007 and 2012, enplaned passenger traffic declined on average 9.8 percent annually. Traffic fell 31.5 percent in 2013, its largest year-over-year drop, as Delta finalized its move to downsize operations at MEM. Over this period, the role of the Airport has transitioned from a connecting hub airport to an Origination & Destination (O&D) airport. Consequently, many of its passenger facilities are no longer needed to accommodate air carrier activity.

In response to the reduced demand, as well as the need to upgrade aging facilities, MSCAA initiated a program to expand and modernize Concourse B. Concourse B is situated central to the terminal buildings, being the most efficient for airline, Transportation Security Administration (TSA), Federal Aviation Administration (FAA), and MSCAA operations compared to the other concourses. Its location is also the most advantageous for the traveling public's wayfinding, walking distance, and overall experience. This program improved passenger facilities, increased operational efficiency, and upgraded the roof, foundations, and structure in Concourse B to meet current building codes for high seismic areas. After completion in February 2022, Concourse B opened with 25 gates operational with opportunity to grow as demand dictates. As such, Concourses A and C were no longer needed for aircraft gates, were closed for operations, and MSCAA evaluated their footprints for other needs through a master planning process. If reused, the concourses would require significant improvements meet current building codes for high seismic areas.

1.2 Objective of this Analysis

This analysis describes the potential uses for the Concourse A structure as a functioning asset that supports the MSCAA's need to accommodate aviation demand. Reusing the concourse for aircraft gates, administration, and other terminal related functions are all considered and evaluated in the following

10.8.24

Source: Historic Aerials by Netronline

Terminals and Concourses at
Memphis International Airport

Figure 1

sections. The following sections also identify the needs of MEM's landside facilities (e.g., parking, rental car, etc.), which must be situated within convenient proximity to the terminal area.

1.3 MEM Master Plan

The MSCAA last updated the Memphis International Airport Master Plan in 2010. Since then, significant changes have occurred. The airport has transitioned to operating as an origin and destination (O&D) airport and has added new airlines to serve Memphis in the post-hub era. Opened in February 2022, the modernized concourse is the first step in providing Memphians a modern world class terminal and provides the airline partners, Federal Aviation Administration (FAA), Transportation Security Administration (TSA) and concessionaires a flexible and efficient facility out of which to operate.

In 2017, a Master Plan Update process was initiated to provide a comprehensive, organized, and phased approach that will continue to guide current and future development of airport facilities over a planning horizon of 20 years. The resulting plan was completed in 2023 and sets the foundation for development at the Airport.

The relevance of the MEM Master Plan to this analysis is one of land use and where functions essential to MEM's terminal core (areas adjacent to and surrounding the terminal itself) can be placed. The master plan process resulted in several key findings, including the following.

- Aircraft Gate Capacity – Approximately two-thirds of Concourse B was renovated and can accommodate 25 gates. The master plan estimated that an additional five gates would be required to meet the 20-year demand. The concourse can accommodate this growth through modernizing the remaining one-third, adding as many as twelve more gates, and thus, it can meet demand well into the future. Therefore, there is no need to refurbish and reopen Concourses A and C as additional gate space.
- Terminal Capacity – Terminals A, B and C provide ticketing, baggage, security and administrative support spaces. These terminals need renovation and reconfiguration, including modest expansion of circulation space, reconfiguring vertical circulation, expansion of security screening and significant seismic upgrades. With these improvements, the terminals are adequate to meet the future demand.
- MSCAA Administration – In order to reconfigure the spaces as described above, portions of the mezzanines where MSCAA has administrative space will be removed and relocated outside of, but adjacent to, the terminal.
- Checked Baggage Inspection System (CBIS) – MEM does not currently have a CBIS. Through the preliminary design prepared as part of the terminal modernization program, it was determined that the most efficient location for this essential facility is at the apron level adjacent to either Terminal A or C. The master plan calls for the Terminal C area to house a future Federal Inspection Service (FIS) facility, therefore the CBIS will occupy an area to the west of Terminal A.
- Landside Facilities - Public, employee, and rental car parking is deficient to meet current and projected demand. Substantial investment in parking garages and surface lots will be required to ensure these essential facilities can meet existing as well as future demand. Although off-site facilities (i.e., not in the terminal core) are possible, they are not desirable when considering the operational cost, lack of nearby available land, and the effects on the customer experience.

As part of the master plan process, a public awareness campaign was executed. This allowed the public to learn about and comment on the planning process, existing facilities, forecasts of future demand, facility needs, alternatives considered to accommodate the needs, and which alternatives will best meet the goals

and objectives of the MSCAA. The meetings were held town hall style. Attendees were able to review materials at their own pace with staff available to assist and answer questions. Two (2) offerings of the public informational meeting were held on October 25, 2022 and October 26, 2022. Attendees were invited to submit comments either at the event or afterwards through the MSCAA website. The public comments did not object to the recommendations of the master plan.

1.4 Project Purpose and Need

The purpose of the Westside Airport Improvements Project is to increase the capacity of selected landside facilities to accommodate the identified need for additional public parking, car rental, administration space, employee parking, and other landside space for selected services (including CBIS) at the Airport.

As part of the ongoing master planning process for MEM, MSCAA conducted an initial landside demand/capacity and facility requirements analysis. This was based on the growth of passenger volumes, as detailed in the Airport's approved forecast.[1] The analysis assumed consistent use of the parking facilities with unconstrained growth.

The analysis demonstrated that the airport's roadways as well as curbfronts had sufficient capacity to meet immediate and future demand levels. However, public parking, employee parking, and car rental services are either at capacity or will exceed capacity in the immediate future. Through the master plan process, MSCAA evaluated how existing landside facilities can be modified to accommodate the identified demand. In addition, the MSCAA identified a need for additional space for administration functions and the CBIS, both requiring a location adjacent to the terminal.

2 REUSE OPTIONS

2.1 Screening of Rehabilitation/Reuse Options

As described above, the master plan process identified a number of future needs related to MEM's terminals, concourses, administrative and landside facilities. During the master plan process, a series of alternative uses for Concourse A were considered.

This section of the report identifies potential options to reuse Concourse A, thereby avoiding the need to demolish it. Options evaluated to repurpose the concourse included:

2.1.1 Option 1: Rehabilitate and Reuse for Passenger Operations

This option would preserve the concourse for passenger operations. As stated above, MEM has more gates and concourse square footage than is needed to meet demand. This is a result of the airport being developed and expanded as a hub operation, and the subsequent elimination of that operation, resulting in a significant reduction of passenger air carrier activity. Concourse B is the most operational and efficient concourse location of the three and will accommodate demand well into the future.

For these reasons, it is not prudent to operate gates on Concourses A and B when Concourse B is the most efficient and logical. Operating two concourses would (1) increase operational costs for the MSCAA, airlines and other tenants, (2) diminish the passenger experience, (3) not utilize the investments already made into

[1] Memphis Shelby County Airport Authority (MSCAA). Memphis International Airport Aviation Demand Forecast. Prepared by Jacobsen Daniels. June 2019. Approved by the Federal Aviation Administration (FAA) on July 2, 2019.

Concourse B, and (4) result in the inability to accommodate other essential functions in space where Concourse A is located. Furthermore, it was determined that significant structurally/seismically improvements would be required to reopen the concourse for passenger operations. These improvements would substantially rebuild the concourse, altering its structure and characteristics. The magnitude of alterations required to make the space functional would not constitute preservation of the facility.

2.1.2 Option 2: Rehabilitate and Reuse for Administration Building

Preserving and modernizing Concourse A for use as a MSCAA administrative building was evaluated for its ability to meeting the programmatic needs for MSCAA office space and its functionality for such a purpose. From a programmatic perspective, administrative functions of the MSCAA are estimated to require 100,000 square feet (sq-ft) of space. Concourse A provides 46,000 sq-ft of space on the gate level with another 30,000+ sq-ft on the apron level, which does not accommodate the need. When considering functionality, modern administration facilities require an intentional layout that optimizes the needs of the airport and those non-airport visitors. Concourse A is not shaped and configured for this purpose as it was designed for aircraft gates, hold rooms, and concessions.

When considering Concourse A, a number of challenges became apparent that in aggregate demonstrate that reuse of the concourse as it is not a prudent option. First, it does not meet the stated project needs in terms of the capacity for administrative space. Furthermore, its layout and configuration results in unacceptable operational problems related to the functional needs of the administration space. It was determined that significant reconfiguration of the concourse, structurally/seismically improving it and altering it to fit the layout needs of an administration function would in essence require replacement or substantially rebuilding the structure that would alter its structure and characteristics. The magnitude of alterations required to make the space functional would not constitute preservation of the facility.

2.1.3 Option 3: Rehabilitate and Reuse for the Checked Baggage Inspection Service (CBIS) Facility as part of the Overall Baggage Handling System (BHS)

A Baggage Handling System (BHS) is designed to count bags, check weights of bags, balance loads, screen suitcases for security reasons, transport bags through an airport conveyor belt system and read bag information automatically. The CBIS component streamlines the checked baggage screening process and automates the movement of bags. This optimizes efficiency of TSA operations and reduces the number of physical injuries sustained by TSA staff since they do not have to lift or manually move heavy bags belonging to travelers. MEM does not have CBIS today, with bags being manually moved from the ticket counters to stand alone screening machines in the ticket lobby, then to conveyors connected to outbound bag make-up locations.

The reuse of Concourse A would provide the needed proximity for the CBIS to the adjacent to the terminals. However, its shape (long and narrow) and structural ability (e.g., lack of seismic resiliency) to accommodate such a facility results in its reuse not being prudent for both operational and safety reasons for a CBIS. Accommodating a CBIS would require the building to be significantly altered and essentially reconstructed to meet the needs of a CBIS, which would not constitute a preservation of the facility.

2.1.4 Option 4: Rehabilitate and Reuse for Other Airport Functions or Other Non-Terminal Related Uses

Other reuse options were considered including non-terminal related airport functions such as a Fixed Based Operations (FBO), airport maintenance, and other MSCAA support functions. All of these facilities are located elsewhere on MSCAA property and are adequate for future needs. The additional construction

costs and operational inefficiencies of moving these facilities to reuse the concourse are of a significant magnitude and not warranted.

Finally, uses not necessarily essential to the core function of the terminal area were considered. A museum or other public space and non-aviation developments were among the options discussed. A museum could easily be located off-site where access to the public is much easier, as access to Concourse A would require parking on-airport as well potential surface transportation modifications for non-passengers to access the site. In addition, a museum style space is already being contemplated within the terminal as part of the modernization efforts. The latter consideration, such as public space or non-aviation development, would likely be prohibited by FAA rules/policies and very difficult to achieve. In both cases locating those type of functions in the terminal core is not the highest and best land use for the area the concourse resides.

For these reasons, the four options considered for the reuse of Concourse A for airport functions and other uses not requiring to be within close proximity to the terminal were deemed not to be prudent alternatives.

3 CONCLUSIONS

Of all the options identified to reuse, and thus avoid the demolition of Concourse A, none were found to be a feasible and prudent avoidance alternative. In each case, the facility either was not sized adequately for the function, is not operationally viable due to its location or long narrow shape, is not structurally appropriate for the function and/or would require additional construction costs and operational inefficiencies of moving facilities that are of a significant magnitude. Therefore, the preservation of Concourse A is not considered a reasonable option for the Project.

Memphis-Shelby County Airport Authority
2491 Winchester Road
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akrf

NOVEMBER 2024