

Certification Manual




Original ACM: November 1, 2016

FAA Approved:

Federal Aviation Administration
Southern Region Airports Division

APPROVED
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Inspector


Scott Brockman, A.A.E.
President & CEO

REVISION LOG

| REVISION NUMBER | FAA SUBMITTAL DATE | FAA APPROVAL DATE | AMENDMENT/ PAGE # |
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| Original | November 1, 2016 | November 21, 2016 | New Manual |
| 1 | February 28, 2017 | March 16, 2017 | Revision Log, Appendix-1d, Appendix-4 pg. 4 |
| 2 | May 16, 2017 | May 26, 2017 | Revision Log, Sections 305, 319, 327, 331, 339, 343 |
| 3 | February 1, 2018 | March 12, 2018 | Cover Page, Revision Log, Section 335, All Appendices (Appendix 1-10) |
| 4 | July 10, 2018 | July 13, 2018 | Revision Log, Section 305, Appendix 4 (Pages 2, 5), Appendix 7 |
| 5 | April 1, 2019 | April 11, 2019 | Cover Page, Revision Log, Section 309, Appendix-1c |
| 6 | April 26, 2019 | May 14, 2019 | Cover Page, Revision Log, Distribution List |
| 7 | October 29, 2019 | December 18, 2019 | Cover Page, Revision Log, Section 313 |
| 8 | March 19, 2020 | March 20, 2020 | Cover Page, Revision Log, D-303-1, D-321-1, D-321-2, D-327-1, D-329-3, D-339-1, Appendix-9 |
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| 10 | September 15, 2020 | | Cover Page, Revision Log, Section 313 |
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Original Date: November 1, 2016

FAA Approval:

Revision Date: September 15, 2020Federal Aviation Administration
Southern Region Airports Division

APPROVED
Sep 24 2020
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TABLE OF CONTENTS

Page No.

Overview

| | |
|-------------------------|-----|
| Page Revision Log..... | i |
| Table of Contents..... | ii |
| List of Appendices..... | iii |
| Distribution List..... | iv |
| Foreword..... | v |

Subpart B – Certification

| | |
|--|---------|
| Section 139.101 – General Requirements..... | B-1 |
| Section 139.103 – Application for Certificate..... | B-1 |
| Section 139.105 – Inspection Authority..... | B-1 |
| Section 139.107 – Issuance of Certificate..... | B-1 |
| Section 139.109 – Duration of Certificate..... | B-1 |
| Section 139.111 – Exemptions..... | B-111-1 |
| Section 139.113 – Deviations..... | B-113-1 |
| Section 139.115 – Falsification, Reproduction or Alteration of Applications, Certificates, Reports, or Records..... | B-115-1 |

Subpart C – Airport Certification Manual

| | |
|---|-----|
| Section 139.201 – General Requirements..... | C-1 |
| Section 139.203 – Contents of Airport Certification Manual..... | C-2 |
| Section 139.205 – Amendments of Airport Certification Manual..... | C-3 |

Subpart D – Operations

| | |
|--|---------|
| Section 139.301 – Records..... | D-301-1 |
| Section 139.303 – Personnel..... | D-303-1 |
| Section 139.305 – Paved Areas..... | D-305-1 |
| Section 139.307 – Unpaved Areas..... | D-307-1 |
| Section 139.309 – Safety Areas..... | D-309-1 |
| Section 139.311 – Markings, Signs, and Lighting..... | D-311-1 |
| Section 139.313 – Snow and Ice Control..... | D-313-1 |
| Section 139.315 – ARFF Index Determination..... | D-315-1 |
| Section 139.317 – ARFF Equipment and Agents..... | D-317-1 |
| Section 139.319 – ARFF Operational Requirements..... | D-319-1 |
| Section 139.321 – Handling and Storing of Hazardous Substances and Materials..... | D-321-1 |

Original Date: November 1, 2016

FAA Approval:

Revision Date: July 10, 2018



Page No.**Subpart D – Operations (Continued)**

| | |
|--|---------|
| Section 139.323 – Traffic and Wind Directions Indicators | D-323-1 |
| Section 139.325 – Airport Emergency Plan | D-325-1 |
| Section 139.327 – Self Inspection Program | D-327-1 |
| Section 139.329 – Pedestrians and Ground Vehicles | D-329-1 |
| Section 139.331 – Obstructions..... | D-331-1 |
| Section 139.333 – Protection of NAVAIDS..... | D-333-1 |
| Section 139.335 – Public Protection..... | D-335-1 |
| Section 139.337 – Wildlife Hazard Management | D-337-1 |
| Section 139.339 – Airport Condition Reporting | D-339-1 |
| Section 139.341 – Identifying, Marking, and Lighting Construction and Other Unserviceable Areas | D-341-1 |
| Section 139.343 – Non-complying Conditions..... | D-343-1 |

LIST OF APPENDICES

Page No.**Section Appendices**

| | |
|-------------------------------------|-------------|
| Letters of Agreement | Appendix-1 |
| Runway Safety Area Diagram | Appendix-2 |
| Modification of Standards | Appendix-3 |
| Sign and Marking Plan | Appendix-4 |
| ARFF Equipment..... | Appendix-5 |
| Airport Emergency Grid Map..... | Appendix-6 |
| Fueling Inspection Checklists | Appendix-7 |
| Lighted Obstruction Map | Appendix-8 |
| Example Self-Inspection Form | Appendix-9 |
| Example NOTAM Form | Appendix-10 |

Original Date: November 1, 2016

FAA Approval:

Revision Date: July 10, 2018

DISTRIBUTION LIST

The official file copy of the Airport Certification Manual is maintained in the Director of Operations and Public Safety's office.

Copies or portions of the Airport Certification Manual, including all revisions and amendments are distributed to the following companies and agencies:

Organizations Receive Copies of the Sections Marked

| | ACM Main Body | Emergency Plan | Wildlife Plan | Snow Plan |
|--|---------------|----------------|---------------|-----------|
| President and CEO | ✓ | ✓ | ✓ | ✓ |
| Vice President of Operations | ✓ | ✓ | ✓ | ✓ |
| Vice President of Finance and Administration | ✓ | ✓ | ✓ | ✓ |
| Director of Operations and Public Safety | ✓ | ✓ | ✓ | ✓ |
| FAA Regional Office | ✓ | ✓ | ✓ | ✓ |
| Airport Operations | ✓ | ✓ | ✓ | ✓ |
| FAA Air Traffic Control Tower | ✓ | ✓ | ✓ | ✓ |
| Airport Maintenance | ✓ | ✓ | ✓ | ✓ |
| USDA Wildlife Biologists | | | ✓ | |
| Airport Security | ✓ | ✓ | | ✓ |
| Shelby County Emergency Management Coordinator | ✓ | ✓ | | ✓ |
| Memphis Fire Department (MFD) | ✓ | ✓ | | ✓ |
| Memphis Police Department (MFD) | | ✓ | | ✓ |
| Airport Communications | ✓ | ✓ | | ✓ |

Original Date: November 1, 2016

Revision Date: July 10, 2020

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Federal Aviation Administration
Southern Region Airports Division

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FOREWORD

The Airport Certification Manual (ACM) provides in print form the standard operating procedures and standards used to implement the requirements specified in FAR Part 139. It also provides a comprehensive description of facilities and equipment used to satisfy those requirements.

The purpose of this ACM is to provide a framework upon which the duties and responsibilities of the Memphis-Shelby County Airport Authority (MSCAA) are identified and organized, while providing answers to commonly asked questions. This manual will effectively outline the interactions necessary for the MSCAA and tenants to satisfy the FAR Part 139 requirements.

This manual supplements FAR Part 139. In the instance of a conflict of information between this manual and FAR Part 139, Part 139 takes precedence. Section numbering in this ACM refers to the associated sections of FAR Part 139.

This ACM will be kept current by the Manager of Operations or their designated representative.

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FEDERAL AVIATION ADMINISTRATION

JUL 13 2018

2018-07-13

SUBPART B - CERTIFICATION

PURPOSE

This manual provides direction and lines of responsibility in the day-to-day operation of the Memphis International Airport (herein referred to as "MEM" or "Airport"). It details operating procedures to be followed for both routine matters and unusual circumstances or emergencies that may arise. The content of this manual will comply with the Federal Aviation Administration rules and regulations Title 14 CFR Part 139, effective June 9, 2004.

AIRPORT INFORMATION

Under this regulation, Memphis International Airport operates as a Class I airport with scheduled air carrier service with over 30 passenger seats. Memphis International Airport is operated by the Memphis-Shelby County Airport Authority.

MAILING ADDRESS

Memphis-Shelby County Airport Authority
2491 Winchester Rd, Suite 113
Memphis, TN 38116-3856

LOCATION

Memphis International Airport (MEM) is located approximately 12 miles southeast of downtown Memphis in Shelby County, Tennessee.

COMPLIANCE

The Airport shall allow the Administrator to make any inspections including unannounced inspections, or tests to determine compliance with 14 CFR Part 139.

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Revision Date:

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SECTION 111 - EXEMPTIONS

EXEMPTIONS

The Memphis International Airport does not have any Exemptions approved by the Administrator.

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NOV 21 2016

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SECTION 113 - DEVIATIONS

DEVIATIONS

In an emergency condition requiring immediate action for the protection of life or property, Memphis International Airport may deviate from operational requirements of Title 14 CFR Part 139, Subpart D, or the Airport Certification Manual, to the extent required to meet that emergency.

In the event of a deviation Memphis International Airport shall, within 14 days after the emergency, notify the FAA Regional Airports Division Manager of the nature, extent, and duration of the deviation. The Airport shall provide this notification in writing.

Original Date: November 1, 2016

Revision Date:



SECTION 115 – FALSIFICATION, REPRODUCTIONS, OR ALTERATION OF APPLICATIONS, CERTIFICATES, REPORTS, OR RECORDS

FALSIFICATION, REPRODUCTION, OR ALTERATION OF APPLICATIONS, CERTIFICATES, REPORTS, OR RECORDS

The Memphis-Shelby County Airport Authority maintains that all records, reports, and other documentation provided to the FAA are correct and free of intentionally false or fraudulent statements.

Original Date: November 1, 2016

Revision Date:



SUBPART C – AIRPORT CERTIFICATION MANUAL

COMPLIANCE

Memphis International Airport will –

- (1) Keep the ACM current at all times. The Manager of Operations or their designated representative is responsible for maintaining the ACM.
- (2) Maintain at least one complete and current copy of the approved ACM on the Airport, which will be available for inspection by the FAA. This copy will be maintained in the office of the Director of Operations and Public Safety or their designated representative.
- (3) Furnish the applicable portions of the FAA approved ACM to airport personnel responsible for its implementation (see distribution list).
- (4) Ensure that the FAA Regional Airports Division is provided a complete copy of the most current ACM including any approved amendments.

The following procedure is in effect for revisions and amendments to the Airport Certification Manual:

- (1) At least two copies of the amendment, in color if applicable, will be submitted to:

Federal Aviation Administration
Southern Region, Airports Division
1701 Columbia Avenue
College Park, GA 30337-7214

- (2) Amendments to the ACM will be submitted at least 30 days prior to the proposed effective date. They will be submitted as needed to maintain currency;
- (3) The ACM Page Amendment Log will be completed and submitted with each amendment;
- (4) Each page of the amendment, including the Page Amendment Log, will have the date of the amendment and the original approval date of the ACM;
- (5) Upon FAA approval, copies of the approved amendment will be made and distributed to the holders of the Airport Certification Manual on the Distribution List.

Original Date: November 1, 2016

Revision Date:



SUBPART D – OPERATIONS

Section 301 – Records
Section 303 – Personnel
Section 305 – Paved Areas
Section 307 – Unpaved Areas
Section 309 – Safety Areas
Section 311 – Markings, Signs, and Lighting
Section 313 – Snow and Ice Control
Section 315 – Aircraft Rescue and Firefighting – Index Determination
Section 317 – Aircraft Rescue and Firefighting – Equipment and Agents
Section 319 – Aircraft Rescue and Firefighting – Operational Requirements
Section 321 – Handling and Storing of Hazardous Substances and Materials
Section 323 – Traffic and Wind Direction Indicators
Section 325 – Airport Emergency Plan
Section 327 – Self-Inspection Program
Section 329 – Pedestrians and Ground Vehicles
Section 331 – Obstructions
Section 333 – Protection of NAVAIDS
Section 335 – Public Protection
Section 337 – Wildlife Hazard Management
Section 339 – Airport Condition Reporting
Section 341 – Identifying, Marking, and Lighting Construction and Other Unserviceable Areas
Section 343 – Non-Complying Conditions

Original Date: November 1, 2016

Revision Date:



SECTION 301 – RECORDS

GENERAL

The Memphis-Shelby County Airport Authority maintains the specified records in accordance with the various sections listed below. Records are maintained in computer records, hard copies, or a combination of these. Details for each record will be found in the section requiring such record.

FURNISH RECORDS

Upon request of the Administrator, the Airport will furnish records listed under this section.

LIST OF REQUIRED RECORDS

The airport will maintain the following records:

- (1) Personnel Training – 24 consecutive calendar months for personnel training records under Section 303 – Personnel, and Section 327 – Self-Inspection Program.
- (2) Emergency Personnel Training – 24 consecutive calendar months for ARFF and emergency medical service personnel training records under Section 319 – ARFF: Operational Requirement.
- (3) Airport Fueling Agent inspection – 12 consecutive calendar months for records of inspection of airport fueling agents under Section 321 – Handling and Storing of Hazardous Substances and Materials.
- (4) Airport Fueling Agent supervisor and employee training – 12 consecutive calendar months for conformation of training of fueling personnel under Section 321 – Handling and Storing of Hazardous Substances and Materials.
- (5) Self-Inspection – 12 consecutive calendar months for self-inspection records under Section 327 – Self-Inspection Program.
- (6) Movement areas and safety area training – 24 consecutive calendar months, after termination of employee's access to movement and safety areas, for records of training given to pedestrians and ground vehicle operators under Section 329 – Pedestrians and Ground Vehicles.

Original Date: November 1, 2016

Revision Date:



- (7) [Accident and Incident](#) – 12 consecutive calendar months for each accident or incident in movement areas or safety areas involving air carrier aircraft and/or ground vehicles under Section 329 – Pedestrian and Ground Vehicles.
- (8) [Airport Condition](#) – 12 consecutive calendar months for records of airport condition information dissemination under Section 339 – Airport Condition Reporting.
- (9) [Wildlife Hazard Management](#) – 24 consecutive calendar months for training related to wildlife hazard management under Section 337 – Wildlife Hazard Management

[ADDITIONAL RECORDS](#)

The Airport will make and maintain any additional records required by the Administrator.

Original Date: November 1, 2016

Revision Date:



SECTION 303 – PERSONNEL

LINE OF SUCCESSION OF AIRPORT OPERATIONAL RESPONSIBILITY

The operational line of authority for the Memphis-Shelby County Airport Authority is:

- (1) President and CEO
- (2) Vice President of Operations
- (3) Vice President of Finance and Administration
- (4) Director of Operations and Public Safety
- (5) Manager of Operations
- (6) Operations Duty Managers

PERSONNEL REQUIREMENTS

The Airport will comply with the following personnel requirements:

- (1) Maintain sufficient qualified personnel to comply with the requirements of the ACM and the requirements of Title 14 CFR Part 139.
- (2) Equip personnel with sufficient resources needed to comply with the requirements of Title 14 CFR Part 139.
- (3) Train all personnel who access the movement areas and safety areas and perform duties in compliance with the requirements of the ACM and Part 139. This training shall be completed before initial performance of duties. Recurrent training shall be completed at least once every 12 consecutive calendar months thereafter. The curriculum for initial and recurrent training shall include at least the following areas:
 - (a) Airport familiarization, including airport marking, lighting and sign system.
 - (b) Procedures for access to, and operation in, movement areas and safety areas under Section 329 – Pedestrians and Ground Vehicles.
 - (c) Airport communications, including radio communication between the air traffic control tower and personnel, and procedures for reporting unsafe airport conditions.
 - (d) Duties required under the Airport Certification Manual and the requirements of Part 139
 - (e) Any additional subject areas required under Part 139 Sections 319, 321, 327, 329, 337, and 339, as appropriate.

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Revision Date: July 10, 2020

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Federal Aviation Administration
Southern Region Airports Division

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Jul 15 2020
NBL
Inspector

- (4) Make record of all training completed by each individual in compliance with this section including, at a minimum, a description and date of training received. Such records shall be maintained for 24 consecutive calendar months after completion of training.
- (5) As appropriate, comply with the following training requirements of Part 139:
 - (a) Section 319 – Aircraft Rescue and Firefighting: Operational Requirements
 - (b) Section 321 – Handling and Storage of Hazardous Substances and Materials
 - (c) Section 327 – Self-Inspection Program
 - (d) Section 329 – Pedestrian and Ground Vehicles
 - (e) Section 337 – Wildlife Hazard Management
 - (f) Section 339 – Airport Condition Reporting

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Revision Date:



SECTION 305 – PAVED AREAS

REQUIRED CONDITIONS OF PAVED AREAS

Airport pavement areas available to air carriers, including aprons available for air carrier operations, shall be promptly repaired and maintained as follows:

- (1) Pavement edges shall not exceed 3 inches difference in elevation between abutting pavement sections and between pavement and abutting areas.
- (2) Pavement shall have no holes exceeding 3 inches in depth, nor any hole the slope of which from any point in the hole to the nearest point at the lip of the hole is 45 degrees or greater, as measured from the pavement surface plane, unless, in either case, the entire area of the hole can be covered by a 5" diameter circle.
- (3) The pavement shall be free of cracks and surface variations that could impair directional control of an air carrier aircraft. Any pavement crack or surface deterioration that produces loose aggregate or other contaminants shall be promptly repaired.
- (4) Mud, dirt, sand, loose aggregate, debris, foreign objects, rubber deposits, and other contaminants shall be removed promptly and as completely as practicable, except the associated use of materials such as sand and deicing solutions for snow and ice control.
- (5) Any chemical solvent that is used to clean any pavement area shall be removed as soon as possible, consistent with the instructions of the manufacturer of the solvent, except for the associated use of deicing solutions for snow and ice control.
- (6) Pavement shall be sufficiently drained and free of depressions to prevent ponding that obscures markings or impairs safe aircraft operations.

MAINTENANCE OF PAVED AREAS

Corrective action shall be initiated by Operations personnel as soon as practical when any unsatisfactory conditions are found in the paved areas. Maintenance personnel are responsible for the correction of any unsatisfactory conditions on paved areas. If the Manager of Operations or their designated representative determines that an uncorrected condition in a paved area is unsafe for aircraft operations, that portion of the airport shall be closed to air carrier operations until the unsafe condition is corrected.

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A Letter of Agreement has been created between the Memphis-Shelby County Airport Authority and the Air Traffic Control Tower on closing portions of the movement areas for maintenance purposes. Specific procedures are outline in the LOA for the closing of movement areas and is included as Appendix-1a.

PAVED AREAS AVAILABLE TO AIR CARRIERS

Air carrier movement areas at Memphis International Airport include the following:

| RUNWAY | LENGTH | WIDTH | SURFACE TYPE |
|---------|-------------|----------|---------------------------------------|
| 18R/36L | 9,320 feet | 150 feet | Concrete, Grooved PCN – 82/R/C/W/T |
| 18C/36C | 11,120 feet | 150 feet | Concrete, Grooved PCN – 82/R/C/W/T |
| 18L/36R | 9,000 feet | 150 feet | Concrete, Grooved PCN – 82/R/C/W/T |
| 9/27 | 8,946 feet | 150 feet | Concrete, Grooved PCN – 92/R/B/W/T |

All taxiways are concrete and are rated as follows:

- (1) Taxiways 'C' north of 'C6'; 'V' west of 'S'; 'P' east of Runway 18L/36R; 'B' north of 'A'; 'Y' south of Runway 9/27; and 'V3' are all Group VI taxiways.
- (2) Taxiways 'C' between 'D' and 'C6'; 'N' between 'M' and 'M6'; 'V' east of 'B' are all Group IV taxiways.
- (3) Taxiway 'J' between 'C3' and 'K' is a Group III taxiway.
- (4) All other taxiways are Group V.

MOVEMENT AREAS

All taxiways are Movement Areas with the exceptions listed below. Each location was deemed to have sufficient ground traffic to warrant the exception to prevent overcrowding of the ground control frequencies during critical times or is operationally impractical to have 2-way communications or escort vehicles. A Letter of Agreement between Memphis-Shelby County Authority and Memphis Air Traffic Control Tower was established delineating the movement area from the non-movement area (See Appendix-1b).

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Federal Aviation Administration
Southern Region Airports Division

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Jul 15 2020
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- (1) Taxiway 'P1' at Taxiways 'P' and 'T'. Due to the physical layout of airport facilities, this area requires hundreds of crossings each day by vehicles servicing aircraft.
- (2) Taxiways 'N', 'C', and 'S' north of Taxiway 'V'. These areas are controlled by the FedEx Ramp Tower.
- (3) Taxiway 'P' east of Taxiway 'Y'. This area is the only access route to the East Cargo Ramp by vehicles.
- (4) During construction, other areas may be deemed non-movement areas to aid in vehicle flow as long as they meet the requirements of Section 329 – Pedestrian and Ground Vehicle, and Section 341 – Construction and Other Unserviceable Areas.

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SECTION 307 – UNPAVED AREAS

REQUIRED CONDITIONS OF UNPAVED AREAS

Memphis International Airport has no movement, loading, or parking areas which are unpaved for air carrier use.

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Revision Date:



SECTION 309 – SAFETY AREAS

RUNWAY SAFETY AREA DIMENSIONS

Runway safety area dimensions conform to FAA standards in the current version of AC 150/5300-13, *Airport Design*. A diagram of the runway safety areas is provided in Appendix-2. Runway safety area dimensions are as follows:

| RUNWAY | RUNWAY SAFETY AREA DIMENSIONS |
|---------|--|
| 18R/36L | 500 feet in width centered about the runway centerline and extending 1,000 feet beyond the north end of the runway threshold. The south end of the runway has an EMAS installed with the dimensions of 316 feet long by 178 feet wide reducing the safety area to 865 feet from the threshold of the runway to the back of the EMAS bed. |
| 18C/36C | 500 feet in width centered about the runway centerline and extending 1,000 feet at the Runway 18C departure end. The Runway 36C ILS Localizer has been surveyed and is 596 feet from the runway threshold, therefore declared distance is used on the north 405 feet of Runway 18C/36C to provide a 1,000 feet safety area at the north end of the runway. RWY 36C TORA – 11,120 feet; TODA – 11,120 feet; ASDA – 10,715 feet; LDA – 10,715 feet. |
| 18L/36R | 500 feet in width centered about the runway centerline and extending 1,000 feet beyond each end of the runway thresholds. |
| 9/27 | 500 feet in width centered about the runway centerline and extending 1,000 feet beyond each end of the runway thresholds. |

TAXIWAY SAFETY AREA DIMENSIONS

Taxiway safety area dimensions conform to FAA standards in AC 150/5300-13, *Airport Design*. Taxiway safety area dimensions are as follows:

- (1) Taxiways 'C' north of 'C6'; 'V' west of 'S'; 'P' east of Runway 18L/36R; 'B' north of 'A'; 'Y' south of Runway 9/27; and 'V3' have a safety area of 262 feet in width centered about the taxiway centerline which are Group VI.
- (2) Taxiways 'C' between 'D' and 'C6'; 'N' between 'M' and 'M6'; and 'V' east of 'B' have a safety area of 171 feet in width centered about the taxiway centerline which are Group IV.

Original Date: November 1, 2016

Revision Date: July 10, 2020

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Southern Region Airports Division

APPROVED
Jul 15 2020
NBL
Inspector

- (3) Taxiways 'J' between 'C3' and 'K' have a safety area of 118 feet in width centered about the taxiway centerline which are Group III.
- (4) All other taxiways have a safety area of 214 feet in width centered about the taxiway centerline which are Group V.

REQUIRED CONDITIONS OF SAFETY AREAS

Safety area conditions are maintained as follows:

- (1) Each safety area shall be cleared and graded, and shall be maintained free of potentially hazardous ruts, humps, depressions, or other surface variations.
- (2) Each safety area shall be drained by grading and storm sewers to prevent water accumulation.
- (3) Each safety area shall be capable under dry conditions of supporting snow removal equipment, aircraft rescue and firefighting equipment and the occasional passage of aircraft without causing major damage. Manhole or duct access covers are constructed of material of sufficient thickness and strength to support equipment and aircraft.
- (4) No object shall be located in any safety area, except for objects that need to be located in the safety area because of their function. These objects shall be constructed, to the extent practical, on frangible mounted structures of the lowest practical height and maintained so the frangible point is no higher than 3 inches above grade except for the Runway 18R/36L EMAS Bed. The FAA has approved a Modification of Standards for the Runway 18R/36L EMAS to allow the Memphis International Airport to raise the point of frangibility to be as low as practical above 3 inches on the EMAS Bed (See Appendix-3).
- (5) Safety areas shall conform to dimensions acceptable to the FAA if any runways or taxiways are constructed, reconstructed, or extended.

MAINTENANCE OF SAFETY AREAS

Safety areas are inspected each day with the Self-Inspection being conducted by the Manager of Operations or their designated representative. Special Inspections may be conducted at any time in order to re-open closed taxiways or runways, upon request by any authorized authority, or any other valid reason.

Original Date: November 1, 2016

Revision Date:



The EMAS on the approach end of Runway 36L will be inspected in accordance to the EMAS Inspection, Maintenance, and Repair Manual provided by the manufacturer and in accordance with Section 327 – Airport Self-Inspection Program.

Corrective action shall be initiated by Operations personnel as soon as practical when any unsatisfactory conditions are found in the safety areas. Airfield Maintenance personnel are responsible for the correction of any unsatisfactory conditions within the safety areas. The FAA System Service Center (SSC) is responsible for maintenance of FAA owned NAVAIDS at the airport. If any FAA owned NAVAIDS are damaged or have a frangible point higher than 3 inches above grade the FAA Service Sector Office will be notified by the Manager of Operations or their designated representative.

If corrective action must be deferred, a NOTAM will be issued (as appropriate) in accordance with Section 339 – Airport Condition Reporting. If the Manager of Operations or their designated representative determines that the uncorrected condition in the safety area does not meet the requirements of this section, that portion of the airport will be closed to air carrier operations until the requirements of this section are met.

A Letter of Agreement has been created to permit pedestrians inside the Runway Safety Area during Air Carrier Operations with notification of the Air Traffic Control Tower. Specific procedures for allowing vehicles and pedestrians inside the Safety Area is outlined in the LOA and is included as Appendix-1c.

Objects and equipment in the safety areas which are maintained by the FAA shall be the responsibility of the FAA.

Original Date: November 1, 2016

Revision Date:



SECTION 311 – MARKING, SIGNS, AND LIGHTING

MARKINGS

The airport will provide and maintain marking systems for air carrier operations in accordance with Part 139.311(a) and the most current version of AC 150/5340-1, *Standards for Airport Markings*.

- (1) Runway markings meet the specifications for takeoff and landing minimums for each runway. Markings include striping runway centerlines, chevrons marking thresholds, stripes marking touchdown zones, painted numerals designating runways, striping taxiway centerlines, and hold short lines. Runways are marked as follows:

| RUNWAY | RUNWAY MARKING |
|---------|-----------------------------|
| 18R/36L | Precision Instrument Runway |
| 18C/36C | Precision Instrument Runway |
| 18L/36R | Precision Instrument Runway |
| 9/27 | Precision Instrument Runway |

- (2) Taxiway markings include centerline and edge markings, holding position markings, ILS critical area markings, SMGCS markings, and intermediate holding position markings.
- (3) Holding position markings are located at distances farther from the runway than the designated safety area at each runway entry point except as noted below. Distances are as follows:

| RUNWAY | DISTANCE FROM RUNWAY CENTERLINE |
|---------|---------------------------------|
| 18R/36L | 283 feet |
| 18C/36C | 283 feet |
| 18L/36R | 283 feet |
| 9/27 | 283 feet |

- (4) Instrument Landing System (ILS) critical areas have been identified by markings where applicable on all taxiways effected.
- (5) Land and Hold Short Operations (LAHSO) holding position is identified with a holding position marking, a LAHSO lighting system, and holding position signs on both sides of Runway 9/27 for landing on Runway 27 and holding short of Taxiway 'N'. The airport has entered into a

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Revision Date:

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Letter of Agreement with Memphis ATCT to allow for Land and Hold Short Operations (See Appendix-1d).

The Airport has developed a Sign and Marking Plan in accordance with FAR Part 139 and the most current version of AC 150/5340-1, *Standards for Airport Markings* (See Appendix-4).

AIRFIELD SIGNS

The Airport will provide and maintain a sign system for air carrier operations in accordance with 14 CFR Part 139.311 (b). The Marking and Sign Plan is included in Appendix-4. The signs will meet standards in AC 150/5340-18, current edition, *Standards for Airport Sign Systems*, and sign specifications in AC 150/5345-44, current edition, *Specifications for Taxiway and Runway Signs*.

The Airport has developed a Sign and Marking Plan in accordance with FAR Part 139 and the most current version of AC 150/5340-18, *Standards for Airport Sign Systems* (See Appendix-4).

AIRFIELD LIGHTING

The Airport will provide and maintain lighting systems for air carrier operations in accordance with Part 139.311 (c) and the current version of AC 150/5340-30, *Design and Installation Details for Airport Visual Aids*, to meet the specifications for the lowest instrument approach minimums authorized for each runway.

- (1) Runways. Runway lighting at the airport is as follows:

| RUNWAY | LIGHTING SYSTEM |
|---------|--|
| 18R/36L | HIRL, CL, TDZ, PAPI (36L), MALS/RAIL (18R), ALSF-2 (36L) |
| 18C/36C | HIRL, CL, TDZ, MALS/RAIL (18C), ALSF-2 (36C) |
| 18L/36R | HIRL, CL, TDZ, PAPI, MALS/RAIL (18L), ALSF-2 (36R) |
| 9/27 | HIRL, CL, MALS/RAIL, PAPI (27), LAHSO (27) |

- (2) Taxiways. Taxiway lighting at the airport consists of taxiway edge lights and centerline lines with the exception of portions of Taxiways 'A', 'J', 'M', and 'N'. Taxiways 'J' and 'N' border the terminal ramp. Portions of Taxiways 'A', 'M', and 'N' use taxiway edge reflectors. All SMGCS routes on the movement area have centerline lighting as specified by the current version of AC 150/5340-30, *Design and Installation Details for Airport Visual Aids*.
- (3) Airport Beacon. The airport is equipped with a rotating beacon consisting of a green and white lens located east of the Fuel Farm.

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- (4) NAVAIDS and Visual Aids. Precision Approach Path Indicators (PAPI) and Approach Lighting Systems (ALS) are maintained by the FAA. If any FAA NAVAIDS are found to be inoperable, the inspector will contact the FAA Service Sector Office. All other NAVAIDS and Visual Aids are maintained by Airfield Maintenance.
- (5) Obstruction Lighting. Objects which are considered obstructions under Part 77 are identified and lighted as determined by the current version of AC 150/5345-43, Specification for Obstruction Lighting Equipment. Refer to ACM Section 331 – Obstructions, for more information.
- (6) Airfield Emergency Generators. To ensure constant source of power for airfield lighting, each electrical vault contains one (1) diesel generator (with the exception of Vault #3 which has two diesel generators) as a secondary power source to commercial power for all runways, taxiways, and NAVAIDs. An uninterruptible power source (UPS) is tied to all airfield lighting systems.

SURFACE MOVEMENT GUIDANCE CONTROL SYSTEM (SMGCS) PLAN

The Surface Movement Guidance Control System (SMGCS) Plan describes airport enhancements made to Memphis International Airport (MEM), and it contains procedures and actions applicable to Memphis-Shelby County Airport Authority (MSCAA), Memphis Air Traffic Control Tower (ATCT), air carriers and other tenants of the airport. These enhancements, procedures and actions are in accordance with the guidance in the Federal Aviation Administration (FAA) Advisory Circular 120-57. When visibility conditions are less than 1,800 feet RVR down to and including 1200 feet RVR, operations are conducted on a routine Category II basis. When visibility conditions are less than 1200 feet RVR down to and including 600 feet RVR, takeoff and landing operations are conducted on a Category III basis, including the use of ATC controlled stop bars. The Plan addresses takeoff and landing operations when the visibility is less than 1200 feet RVR down to and including 600 feet RVR; and RVR below 600 feet down to and including 300 feet RVR.

The procedures and actions contained in the SMGCS plan were developed by the SMGCS Working Group which consists of representatives of MSCAA, FAA-Air Traffic Control (ATC), FAA-Airports District Office, MEM (ADO), FAA-Airports Regional Office, Southern Region (ASO), FAA-Flight Standards, Air Transport Association (ATA), air carriers serving MEM and other interested parties. The document does not supersede established policies, procedures, rules or guidelines for airports, operators, or air traffic.

The SMGCS Plan was approved by the FAA on June 11, 2015; however, it is published under a separate cover for ease of reference and distribution.

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NOV-2 2016

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MAINTENANCE

Each marking, sign, and lighting system installed on the airport that is owned by the airport shall be properly maintained by cleaning, replacing, or repairing any faded, missing, or nonfunctional item. Each marking, sign, and lighting system will be maintained unobscured, clearly visible and shall provide an accurate reference to airport users.

Each lighting system will be maintained at least to the minimum operational criteria listed in Appendix 1, Table 7, of the current version of AC 150/5340-26, *Maintenance of Airport Visual Aid Facilities*.

In order to provide continuity of visual guidance, the allowable percentage of inoperable lights shall not be in such a way as to alter the basic pattern of the lighting system. In addition, an unserviceable light shall not be adjacent to another unserviceable light. Lights are considered adjacent if located either laterally or longitudinally in a lighting system.

If the above operating limits cannot be maintained, and airport management determines that the outage may not provide an accurate reference to airport users, information concerning the outage shall be disseminated locally. If an entire lighting system is inoperable or out of service, an airport condition report shall be issued in accordance with Section 339 – Airport Condition Reporting.

LIGHTING INTERFERENCE

All other lighting on the airport ramps, parking areas, roadways, fuel storage areas, and buildings are adjusted or shielded to prevent interference with air traffic control and aircraft operations.

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SECTION 313 – SNOW AND ICE CONTROL

SNOW AND ICE CONTROL PLAN

Snowfall at Memphis International Airport averages approximately 3 inches annually. With guidance from the current version of AC 150/5200-30, *Airport Winter Safety and Operations*, the airport's Snow and Ice Control Plan defines the procedures in use at the Memphis International Airport for the safe and prompt removal or control of snow and ice from runways, taxiways, ramps, roadways, and other areas that might be affected by measurable snow and ice accumulation.

The Snow and Ice Control Plan is published under a separate cover for ease of reference and distribution. Copies of the Snow and Ice Control Plan are distributed independently to all parties listed in the Distribution List.

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SECTION 315 – ARFF: INDEX DETERMINATION

INDEX DESIGNATION

The ARFF Index at Memphis International Airport is Index C based on more than five average daily departures of a Boeing MD-88. Index D level ARFF equipment is available upon request and a remark is published in the Airport Facility Directory (AFD) for prior arrangements. Aircraft rescue and firefighting equipment and personnel required for this index are provided 24 hours per day.

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SECTION 317 – ARFF: EQUIPMENT AND AGENTS

ARFF EQUIPMENT AND AGENTS

Appendix-5 of this manual is a worksheet which summarizes the available emergency vehicles, personnel, extinguishing agents, and radio equipment that are used for firefighting and rescue at Memphis International Airport.

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SECTION 319 – ARFF: OPERATIONAL REQUIREMENTS

ARFF OPERATIONS

Aircraft rescue and firefighting services are provided by the Memphis Fire Department under an agreement between the City of Memphis and the Memphis-Shelby County Airport Authority. The Memphis Fire Department operates Fire Station #9 on the airport proper with full firefighting services available. Back-up service is provided by adjacent Memphis Fire Department fire stations. All assigned emergency equipment and crews are housed in the fire station, a modern, covered masonry structure with direct access to both the Air Operations Area (AOA) and public areas. Fire Station #9 is manned and in service 24 hours a day, 7 days a week.

Additional ARFF resources may be available from the Tennessee Air National Guard (TNANG) and FedEx fire departments (See Appendix-5). These ARFF personnel are not maintained to FAR Part 139 standards and are not considered as ARFF resources for Index evaluation in accordance with § 139.317.

REDUCTION OF VEHICLE CAPABILITY

The Manager of Operations, or the Operations Duty Managers, are responsible for reducing the Airport Index when the following conditions exist:

- (1) During Alert IIIs whenever ARFF has extinguished its agent thereby necessitating a reduction in Airport Index.
- (2) When primary and backup equipment are down which are required to maintain Airport Index.
- (3) Anytime ARFF units are off airport property or when they are unable to meet the required response times to airport emergencies.

Whenever the ARFF Index is reduced a NOTAM will be issued in accordance to Section 339 – Airport Condition Reporting, to ensure the airlines have been notified. Whenever the condition requiring a reduction of ARFF Index has passed any NOTAMs pertaining to the reduction will be cancelled.

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VEHICLE COMMUNICATION

The ARFF vehicles are equipped with two-way voice radio communications equipment capable of communication with the Memphis Air Traffic Control Tower, Memphis Fire Department, and Airport Operations. A Discrete Emergency Frequency (DEF) has been established at the airport (See Appendix-1e)

VEHICLE MARKING & LIGHTING

The ARFF vehicles are painted red or lime-yellow with their radio call sign displayed in large contrasting letters on each side and are equipped with flashing red beacons or strobes to contrast with background and optimize nighttime visibility.

VEHICLE READINESS

- (1) ARFF vehicles are maintained so as to be operationally capable of performing their intended functions. Operational checks of the ARFF vehicles and their firefighting systems are conducted daily by the driver assigned to the apparatus. Scheduled service inspections and routine maintenance is performed by the City of Memphis Fire Department personnel or MSCAA Maintenance Mechanics.
- (2) ARFF vehicles are housed in heated bays at Fire Station #9.
- (3) Any required vehicle that becomes inoperative must be replaced with equipment with equal or greater capabilities. If replacement equipment is not available immediately, MSCAA will notify the FAA Regional Director and each air carrier serving the airport in accordance with Section 339 – Airport Condition Reporting. If the required Index level of capability is not restored within 48 hours, the Manager of Operations or their designated representative (unless authorized by the Administrator of the FAA) shall limit air carrier operations on the airport to those compatible with the Index corresponding to the remaining operative ARFF equipment.

RESPONSE REQUIREMENTS

When requested by the FAA to demonstrate compliance with § 139.319, at least one ARFF vehicle is capable of responding from its assigned post to the mid-point of the farthest air carrier runway or comparable distance and initiate discharge of extinguishing agent within three (3) minutes of the alarm. All other required ARFF vehicles are capable of responding to the same point from their assigned post and initiate discharge of extinguishing agents within four (4) minutes of the alarm. The Airport Emergency Grid Map is located in Appendix-6.

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PERSONNEL

- (1) All rescue and firefighting personnel are equipped with protective clothing and equipment needed to perform their duties.
- (2) ARFF personnel receive initial and recurrent training every 12 consecutive calendar months that comply with the current version of AC 150/5210-7, *Aircraft Rescue and Firefighting Communications*, and AC 150/5210-14, *Aircraft Rescue and Firefighting Equipment, Tools, and Clothing*, and in the following areas:
 - (a) Airport familiarization (to include airport signs, markings, and lighting)
 - (b) Aircraft familiarization
 - (c) Rescue and firefighting personnel safety
 - (d) Emergency communications systems on the airport including fire alarms
 - (e) Use of fire hoses, nozzles, turrets, and other appliances required
 - (f) Application of the types of extinguishing agents required for compliance with this part
 - (g) Emergency aircraft evacuation assistance
 - (h) Firefighting operations
 - (i) Adapting and using structural rescue and firefighting equipment for aircraft rescue and fire fighting
 - (j) Aircraft cargo hazards, including hazardous materials/dangerous goods incidents
 - (k) Familiarization with firefighters' duties under the Airport Emergency Plan

ARFF personnel are trained in the above subject areas following a site specific training curriculum. The ARFF Liaison Chief is responsible for maintaining the ARFF training curriculum and records of all training given to each individual.

- (3) All ARFF personnel participate in at least one live-burn drill prior to initial performance of ARFF duties and every 12 consecutive calendar months thereafter at an acceptable Regional ARFF Training Facility.
- (4) At least one individual, who has been trained and is current in basic emergency medical services, is available during air carrier operations. This individual is a member of the ARFF team and is on duty 24 hours a day. This individual has, prior to initial performance of emergency medical services, received a minimum of 40 hours of training in the following topics:
 - (a) Bleeding
 - (b) Cardiopulmonary resuscitation
 - (c) Shock
 - (d) Primary patient survey
 - (e) Injuries to the skull, spine, chest, and extremities

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FEDERAL AVIATION ADMINISTRATION

MAY 26 2017

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- (f) Internal injuries
 - (g) Moving patients
 - (h) Burns
 - (i) Triage
- (5) The ARFF Liaison Chief is responsible for maintaining records of all training given to each individual. ARFF training records will be maintained for 24 consecutive calendar months. Such records include a description and date of training received.
- (6) Sufficient rescue and firefighting personnel are available during all air carrier operations to operate the vehicles, meet response times, and meet the minimum agent discharge rates.
- (7) ARFF personnel are alerted to existing or impending aircraft emergencies by the following alerting system:

During emergencies, an alarm is sounded in Fire Station #9, Memphis Fire Department Central Alarm Room, Memphis-Shelby County Airport Authority Communications Office, and the FedEx and Tennessee Air National Guard Fire Departments by a direct line from Air Traffic Control Tower Cab personnel. They then relay the emergency information to the lead vehicle and subsequently to all vehicles responding. This system is tested each morning for operational capability. The Letter of Agreement between the Air Traffic Control Tower, Memphis-Shelby County Airport Authority, and the Memphis Fire Department is contained in Appendix-1e.

HAZARDOUS MATERIALS GUIDANCE

Each ARFF vehicle is equipped with the current edition of the "North American Emergency Response Guidebook" relating to hazardous materials/dangerous goods responses.

EMERGENCY ACCESS ROADS

All weather emergency access roads are maintained to support ARFF equipment and connect directly from Fire Station #9 to the movement-area. These roads are addressed in the Snow and Ice Control Plan as a priority in snow removal operations.

OFF AIRPORT OR OTHER EMERGENCY RESPONSE OF ARFF EQUIPMENT

In the event of an off-airport response or other type of emergency response where the three (3) minute ARFF response cannot be maintained during air carrier operations, the Manager of Operations or their designated representative shall immediately notify the airlines and issue a

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NOTAM stating that ARFF equipment is temporarily unavailable. During any off-airport or other emergency response, ARFF equipment shall return to service as soon as practical.

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SECTION 321 – HANDLING AND STORING OF HAZARDOUS SUBSTANCES AND MATERIALS

CARGO HANDLING AGENT

The airport does not act as a cargo handling agent. All tenants engaged in cargo handling shall establish and maintain procedures for the protection of person and property on the airport during the handling and storage of any material regulated by the Hazardous Materials Regulation (49 CFR Part 171, 35 seq.).

The Tennessee Air National Guard maintains procedures required by the Department of Defense in respect to ordinance and other potential hazardous materials.

AIRPORT FIRE SAFETY FUEL HANDLING STANDARDS

The Airport complies with the current version of NFPA-407, which is the local fire code.

FUELING AGENTS

The following fueling agents operate at the airport:

- (1) Signature Flight Support
- (2) Wilson Air Center
- (3) Swissport

All fueling agents are required by the Airport to comply with the current version of NFPA-407 and reasonable surveillance of all fueling activities on the airport is conducted by the Memphis Fire Department and Airport Operations personnel.

INSPECTIONS OF FUELING FACILITIES

ARFF and/or Airport Operations personnel conduct periodic inspections of fuel storage areas, mobile fuelers, fuel carts, and fuel cabinets for compliance with airport's fire safety standards at least once every three (3) consecutive calendar months. Follow up inspections will be conducted when unsatisfactory items are found. Checklists used by ARFF and/or Airport Operations when conducting the inspections and follow-up inspections are included in Appendix-7. Inspection records are maintained by the Manager of Operations or their designated representative, for at least twelve (12) consecutive calendar months.

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All fueling agents engaged in handling and dispensing aviation fuel are required to take immediate corrective action whenever notified of noncompliance with any of the current requirements of NFPA-407. If corrective action cannot be accomplished within a reasonable period of time, the Director of Operations and Public Safety or their designated representative will notify the airport's assigned Airport Certification Safety Inspector.

TRAINING STANDARDS

- (1) Each fueling agent will have a supervisor complete an aviation fuel-training course in fire safety that is acceptable to the FAA. The supervisor will receive recurrent training at least once every 24 consecutive calendar months. If a new supervisor is hired, he/she will successfully complete an authorized aviation fuel-training course within 90 days.
- (2) All other employees at each fueling agent who would fuel aircraft, accept fuel shipments, or handle fuel, shall receive at least initial on-the-job training in fire safety and recurrent training every 24 consecutive calendar months from the supervisor who has been trained in the fuel-training course in fire safety acceptable to the FAA.
- (3) All fueling agents engaged in handling and dispensing fuel at the airport, shall submit written certification to airport management once every 12 consecutive calendar months that the above training standards have been accomplished. Those records shall be maintained by the Manager of Operations, or their designated representative, for 12 consecutive calendar months.

EMERGENCY SITE FOR HAZARDOUS SUBSTANCES AND MATERIALS

The designated parking area for "Hot Cargo" at Memphis International Airport is on Taxiway 'Y' or the East Cargo Ramp. Any aircraft landing at the airport with a reported problem with hazardous materials, such as a leaking container, will park at one of the "Hot Cargo" spots until declared safe by the ARFF Chief. Explosive-laden aircraft are not permitted to land at the airport except when an in-flight emergency exists, or with prior permission from the Director of Operations and Public Safety or their designated representative.

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SECTION 323 – TRAFFIC AND WIND INDICATORS

WIND DIRECTION INDICATORS

The Primary Wind Cone is located at the Northeastern corner of Taxiway 'Y' and 'P' adjacent to ARFF Station #9 and Supplemental Lighted Wind Cones are located at the approach end of all runways. The airport's wind cones comply with the current version of AC 150/5345-27, *FAA Specification for Wind Cone Assemblies*.

SEGMENTED CIRCLE

The airport has an Air Traffic Control Tower that is operated 24 hours a day, therefore the airport has no segmented circle to indicate a traffic pattern.

INSPECTION AND MAINTENANCE

The wind direction indicators are inspected each day during the daytime and nighttime safety inspection as detailed in Section 327 – Airport Self-Inspection Program

Corrective action will be initiated by Operations personnel as soon as practical when any unsatisfactory conditions exist with the wind cones. Maintenance personnel are responsible for correction of any unsatisfactory conditions.

If corrective action must be deferred a NOTAM will be issued (as appropriate) in accordance with Section 339 – Airport Condition Reporting.

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SECTION 325 – AIRPORT EMERGENCY PLAN

AIRPORT EMERGENCY PLAN

The Airport Emergency Plan is published under a separate cover for ease of reference and distribution. Copies of the Airport Emergency Plan are distributed independently to all parties listed in the Distribution List.

The plan was developed and coordinated with law enforcement agencies, rescue and firefighting agencies, medical personnel and organizations, the principal tenants at the airport, and all other agencies/personnel who have responsibilities under this plan.

TRAINING OF AIRPORT PERSONNEL

All airport personnel that have duties and responsibilities under the AEP are properly trained and familiar with their assignments.

ANNUAL REVIEW OF THE AEP

A review of the AEP is conducted at least once every 12 consecutive calendar months to ensure the AEP is current and all parties with whom the plan is coordinated are familiar with their responsibilities. All of the agencies involved in the AEP shall participate in the annual review meeting.

TRIENNIAL FULL-SCALE EXERCISE OF THE AEP

A full-scale exercise of the AEP is conducted at least once every 36 consecutive calendar months. The full-scale exercise involves, to the extent practicable, all mutual aid participants and a reasonable amount of emergency equipment. The purpose of this exercise is to test the effectiveness of the AEP through a combined response of the airport and mutual aid agencies to an air carrier aircraft accident at the airport, and to familiarize emergency personnel with their responsibilities in the plan.

CONSISTENCY WITH SECURITY REGULATIONS

The AEP contains instructions for response to bomb incidents, including designation of parking areas for the aircraft involved; and sabotage, hijack incidents, and other unlawful interference with operations that are consistent with the approved airport security program.

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SECTION 327 – SELF-INSPECTION PROGRAM

FREQUENCY OF INSPECTION

Inspection of the airfield will be conducted by the Operations Department at least daily. The Manager of Operations or their designated representative is responsible for conducting the self-inspection. Additional self-inspections will be conducted wherever required under the following circumstances:

- (1) During and after construction activity
- (2) Rapidly changing meteorological conditions
- (3) Immediately after any incident or accident (inspection will concentrate on the area affected);
- (4) After any other unusual condition on the airport or upon request from any tenant, user, or other proper authority.

PERSONNEL AUTHORIZED TO CONDUCT SELF-INSPECTIONS

The following personnel have self-inspection duties under FAR Part 139:

- (1) Manager of Operations
- (2) Operations Duty Managers

REPORTING

Conditions not meeting the requirements of FAR Part 139 discovered during the self-inspection will be noted on the inspection form and reported to the Airfield Maintenance Department for prompt corrective action. Any potential hazardous discrepancy that cannot be immediately corrected will be NOTAMed in accordance with Section 339 – Airport Condition Reporting and the current version of AC 150/5200-28, *Notices to Airmen (NOTAMs) for Airport Operators*.

TRAINING

The Manager of Operations is responsible for ensuring that personnel authorized to perform self-inspections are trained and qualified to perform the inspections. In addition to on-the-job training, a training program has been established and includes initial and recurrent training every 12 consecutive calendar months in the following subject areas:

- (1) Airport familiarization, including airport signs, marking, and lighting;
- (2) Airport Emergency Plan;
- (3) Notice to Airmen (NOTAM) notification procedures;

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- (2) Airport Emergency Plan;
- (3) Notice to Airmen (NOTAM) notification procedures;
- (4) Procedures for pedestrian and ground vehicles in movement areas and safety areas;
- (5) Discrepancy reporting procedures;
- (6) Any other training deemed necessary by the Administrator.

RECORDS

A copy of the Airport Self-Inspection Checklist used is included as Appendix-9. Inspection records will show the conditions found and all corrective action taken. Inspection records are kept on file by the Manager of Operations or their designated representative for at least 12 consecutive calendar months.

Training records for each individual include a description and date of training received. Training records are kept on file by the Manager of Operations or their designated representative for at least 24 consecutive calendar months.

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SECTION 329 – PEDESTRIANS AND GROUND VEHICLES

LIMITING ACCESS / PERSONNEL AND EQUIPMENT

Pedestrians and ground vehicles authorized by the President and CEO of the Airport or their designated representative, to operate on movement areas and safety areas at the airport are limited to those pedestrians and vehicles necessary for airport operations and include the following type of vehicles:

- (1) Airport owned vehicles equipped with a two-way radio for communications with the Air Traffic Control Tower and rotating beacon or flashing strobes.
- (2) FAA Service Sector Vehicles equipped with a two-way radio for communications with the Air Traffic Control Tower and rotating beacon or flashing strobes.
- (3) Airline and tenant vehicles providing aircraft servicing and other required functions equipped with a two-way radio for communications with the Air Traffic Control Tower and rotating beacon or flashing strobes.
- (4) Authorized construction vehicles operating under airport procedures equipped with a two-way radio for communications with the Air Traffic Control Tower and rotating beacon or flashing strobes.

Other individuals who need access to the movement areas or safety areas are escorted by qualified persons or are required to complete the airport's ground vehicle training program prior to operating a vehicle on the movement areas or safety areas. Rules and regulations pertaining to the operation of vehicles on the airport are contained in the AOA Driver's License Study Guide and distributed to all employees authorized to operate a vehicle on movement areas and safety areas.

CONTROLS

The training given to individuals authorized to drive in the movement areas and safety areas specifically emphasizes the markings and signs that designate the movement area boundaries.

Airfield access is controlled by perimeter fencing and computer access controlled badges for gates on roads and for doors from buildings that lead onto the Air Operations Area (AOA). Violators will be escorted out of the AOA and the incident will be documented.

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PROCEDURES FOR GROUND VEHICLE OPERATIONS

All vehicles operating on movement areas and safety areas are required to be equipped with a two-way radio allowing communications with ATCT on local ground control frequencies or other frequencies as assigned, or be under the direct escort of a vehicle that is equipped accordingly.

Ground vehicles at the airport are required to operate under the Rules and Regulations established by the Memphis-Shelby County Airport Authority which comply with the current version AC 150/5210-20, Ground Vehicle Operations on Airports. Airport employees who have a need to operate vehicles in movement areas and safety areas are given training in ground vehicle procedures and radio procedures prior to being authorized to have access to movement areas and safety areas.

Procedures for operating in movement areas and safety areas are as follows:

- (1) Operators of any radio-equipped vehicles on movement areas must be trained and familiar with airport radio procedures prior to operating on movement areas and safety areas.
- (2) All vehicles must establish radio contact with ATCT and receive authorization prior to operating on movement areas.
- (3) Vehicle operators are not to cross hold lines or enter an active runway or taxiway until authorized by ATCT.
- (4) Aircraft have right-of-way on movement areas and aprons. Vehicles are required to yield to all moving aircraft.
- (5) Access onto an active runway without ATCT authorization will be investigated by the FAA as a possible violation to FAR Part 139. Any vehicle operator involved in a runway incursion will be required to submit a written report to the Director of Operations and Public Safety and may have their airfield driving privileges immediately suspended pending the outcome of an investigation and/or completion of remedial airfield driver's training.

Tugs, catering trucks, mobile fuelers, and other vehicles engaged in aircraft servicing will, at all times, yield to the right-of-way to aircraft. These vehicles are not required to be radio equipped or under escort while on the non-movement area.

A Letter of Agreement between Memphis-Shelby County Authority, Memphis Air Traffic Control Tower, and Memphis FAA Technical Operations was established outlining activities permitted in Safety Areas during Air Carrier Operations. The LOA emphasizes that vehicles avoid ILS and Localizer Arrays during periods of low visibility (See Appendix-1c).

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TRAINING OF EMPLOYEES AUTHORIZED TO OPERATE IN MOVEMENT AREAS AND SAFETY AREAS

Training for operating a vehicle in the movement areas and safety areas is administered exclusively by MSCAA. Initial training and examinations include a computer-based interactive test or direct instruction covering representative driving details. Computer based training or direct instruction is re-administered at least once every 12 consecutive calendar months to ensure retention of operating rules.

The employee's department head is responsible for ensuring all employees requiring driver's licenses attend MSCAA training prior to the operation of a vehicle in the movement areas and safety areas.

FedEx employees requiring movement area access will be required to obtain a Class III (movement areas and safety areas) driver's license from MSCAA.

CONSEQUENCES OF NONCOMPLIANCE

Enforcement of the pedestrian and ground vehicle procedures applicable to airport employees, tenants, and contractors shall be handled by the Director of Operations and Public Safety or their designated representative. Penalties for violation of any airport rule or regulation at the airport, including the AOA, as specified in the Rules and Regulations, include retraining, fines, suspensions, and revocations.

RECORDS

The Airport maintains a description and date of training completed by each individual operating in the movement areas or safety areas. Records are maintained for 24 consecutive calendar months after the termination of an individual's access to movement areas or safety areas.

The Airport maintains records of accidents or incidents in the movement areas and safety areas, involving air carrier aircraft and/or ground vehicles. Records of each accident or incident are maintained for 12 consecutive calendar months from the date of accident or incident.

All records pertaining to pedestrian and ground vehicle operations in movement areas and safety areas are maintained by the Manager of Operations or their designated representative.

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SECTION 331 – OBSTRUCTIONS

GENERAL

The Airport shall ensure that each object within the authority of the Airport that has been determined by the FAA to be an obstruction is removed, marked, or lighted unless determined to be unnecessary by an FAA aeronautical study.

OBSTRUCTIONS

Obstruction lights located on FAA NAVAID equipment are the responsibility of the FAA maintenance team. Obstruction lights and markings located on airport-owned equipment are maintained by the Airport. The lights and markings of obstructions will be inspected by Airport Operations for proper condition, visibility, and currency as part of the regular self-inspection in accordance to Section 327 – Airport Self-Inspection. A Lighted Obstruction Map has been provided to identify the location of each obstruction that will be inspected, and is included as Appendix-8.

Use regulations and height restrictions that are applicable to property within designated airport turning and approach zones are included in the City of Memphis Code of Ordinances. A survey will be conducted annually to check for any new obstructions.

In the event that an object is discovered, which exceeds any of the heights or imaginary surfaces in FAR Part 77, the Manager of Operations or their designated representative will take steps necessary for the object removal, marking, or lighting as appropriate.

Any obstruction not in compliance with FAR Part 77 will be NOTAMed in accordance to Section 339 – Airport Condition Reporting and the current version of AC 150/5200-28, *Notices to Airmen (NOTAMs) for Airport Operators*.

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SECTION 333 – PROTECTION OF NAVAIDS

CONSTRUCTION

To prevent the construction of facilities on the on the airport that would derogate the operations of a NAVAID, MSCAA holds pre-construction conferences with representatives of the contractor companies, the FAA, and tenant airlines. Construction programs are then reviewed to ensure they do not interfere with the operations of NAVAIDS. During the pre-construction conference, the locations of all pertinent airport NAVAIDS are reviewed with the contractor. Additionally, all construction plans must adhere to building restriction lines and conform to the approved airport layout master plan.

PROTECTION AGAINST VANDALISM

All NAVAID areas and FAA facilities are restricted areas which are enclosed by chain-link security fencing. The airport's remote transmitter and remote receiver sites are fenced and the gates are locked. Additionally, direct surveillance from the FAA Air Traffic Control Tower (ATCT) and periodic checks from Airport Police and security patrols help protect against vandalism.

INTERRUPTION OF VISUAL AND ELECTRONIC SIGNALS OF NAVAIDS

In addition to the pre-construction conference detailed above, the applicable architect or consulting engineer will provide onsite inspectors during construction activity so as to prevent utility cable to NAVAIDS being inadvertently damaged. Also, signs have been placed to identify the areas in close proximity to the glide slope antenna to help protect against inadvertent traversing of this area which could cause false emissions of the failure of the NAVAID.

In the event of NAVAID signal interruption as a result of construction or maintenance, MSCAA will notify the ATCT and FAA Service Sector Office.

Original Date: November 1, 2016

Revision Date:



SECTION 335 – PUBLIC PROTECTION

ACCESS CONTROL

Access onto apron areas is limited to persons who have an operational need. Access to the Air Operations Area (AOA) is controlled by fencing which meets TSR Part 1542 requirements to prevent inadvertent access to the movement areas. Access gates into the area, monitored by a TSA approved access control system; ensures positive identification of persons/vehicles entering. Access gates under control of tenants are required to be controlled when not under direct supervision.

The fence line and blast fences are inspected daily by qualified personnel to ensure they meet the requirements of this section. Gates shall be closed and locked if found open and recorded on the inspection form. The Airport Security Coordinator or their designated representative will follow up with the tenant with control responsibility.

Corrective action will be initiated by Operations as soon as practical when any unsatisfactory conditions exist with the fence line or blast fences. The Airfield Maintenance Department is responsible for correction of any unsatisfactory conditions.

AIRCRAFT BLAST PROTECTION

Aircraft at the terminal at the following gates are required to be pushed back by tugs and towed to a power-up point before taxiing under power:

Concourse B: B-1, B-2, B-3, B-4, B-5, B-6, B-7, B-8, B-9, B-10, B-11, B-12, B-14, B-27, B-28, B-29, B-30, B-31, B-33, B-35, and B-37.

In the ramp area where commuter operations require apron level boarding, passenger lanes are marked on the pavement and designed in such a way as to prevent, to the extent practical, any direct jet blast. In addition, airline personnel are required to escort all passengers to their respective aircraft.

The following areas have jet blast fences to protect the personnel and property from jet blast:

- (1) West side of taxiway 'C' at taxiway 'C7' and 'C8' protecting Signature Flight Support FBO Ramp.
- (2) East end of taxiway 'A' at the entrance into FedEx Winchester Ramp protecting the service road.

Original Date: November 1, 2016

Revision Date: July 10, 2020

FAA Approval:

Federal Aviation Administration
Southern Region Airports Division

APPROVED
Jul 15 2020
NBL
Inspector

SECTION 337 – WILDLIFE HAZARD MANAGEMENT

GENERAL

The Airport shall take immediate measures to alleviate wildlife hazards whenever they are detected or reported. Airport Operations personnel shall:

- (1) Watch for and report any unusual concentration of wildlife or birds that may be a hazard to aircraft operations, especially when low-flying or in the vicinity of runways, their respective safety areas and immediate approach areas.
- (2) In circumstances when such concentrations of wildlife or birds are observed, take appropriate measures to disperse the wildlife or birds or otherwise attempt to alleviate the risk of strikes by aircraft. Dispersal activities will take into consideration the traffic flow and coordinate with ATCT to avoid dispersing wildlife into the path of aircraft.

EVENTS TRIGGERING A WILDLIFE HAZARD ASSESSMENT

The Memphis International Airport is a 3,900 acre facility located in the southwest corner of Tennessee, in the southern part of Shelby County within the city limits of Memphis, TN. The airport sits within the Mississippi Flyway which serves as a migratory route for birds during spring and fall months. Birds from this flyway often use the airport locale for convenient feeding and loafing areas.

The United States Department of Agriculture completed a Wildlife Hazard Assessment conducted between August 2011 to June 2012 covering items listed in § 139.337(b). This study has been reviewed by the Administrator.

A Wildlife Hazard Management Plan has been prepared in accordance with § 139.337(d), using the Wildlife Hazard Assessment as a basis and has been approved by the Administrator. The Wildlife Hazard Management Plan is published under a separate cover for ease of reference and distribution. Copies of the Wildlife Hazard Management Plan are distributed independently to all parties listed in the Distribution List.

Review of the Wildlife Hazard Management Plan will be reviewed at least once every 12 consecutive calendar months or when any of the following events occurs on or near the airport:

- (1) An air carrier aircraft experiences multiple wildlife strikes
- (2) An air carrier aircraft experiences substantial damage from striking wildlife
- (3) An air carrier aircraft experiences an engine ingestion of wildlife

Original Date: November 1, 2016

Revision Date:

FAA Approval

NOV 21 2016

TNC
INSPECTOR

SECTION 339 – AIRPORT CONDITION REPORTING

REPORTING AIRPORT CONDITIONS

A copy of the Airport Condition Report form is included in Appendix-10. Additionally, the Airport and the ATCT have entered into a Letter of Agreement outlining the responsibilities and procedures for coordination and the reporting of runway surface conditions (See Appendix-1f).

Airport personnel in the following positions are authorized to issue Airport Condition Reports to the Flight Service Station, or disseminate airport conditions locally to the ATCT and air carriers.

- (1) Manager of Operations
- (2) Operations Duty Managers

AIRPORT CONDITION REPORTING SYSTEM

The procedures for issuing Airport Conditions Reports are as follows:

- (1) NOTAMs will be issued utilizing the Direct Digital NOTAM System (DDN). As a backup to the DDN System, those authorized to issue NOTAMs can contact Lockheed Flight Martin Flight Services at (877) 487-6867. NOTAMs are issued in accordance to the current version of AC 150/5200-28, *Notices to Airmen (NOTAMS) for Airport Operators*.

CONDITIONS REQUIRING A SURFACE CONDITION REPORT

The following airport conditions that may affect the safe operation of air carriers shall be disseminated to the Flight Service Station, or disseminated locally to the ATCT and air carriers if FSS does not accept the condition for NOTAM distribution:

- (1) Construction or maintenance activity on movement areas, safety areas, or loading ramps, and parking areas.
- (2) Surface irregularities on movement areas, safety areas, or loading ramps, and parking areas.
- (3) Snow, ice, slush, or water on movement areas or loading ramps and parking areas.
- (4) Snow piled or drifted on or near movement areas in such a height that all air carrier aircraft propellers, engine pods, rotors, and wingtips may not clear the snowdrift or snowbanks as the aircraft's landing gear traverses any full strength portion of the movement area.

Original Date: November 1, 2016

Revision Date: March 19, 2020

FAA Approval:

Federal Aviation Administration
Southern Region Airports Division

APPROVED
Mar 20 2020

NBL
Inspector

- (5) Objects on the movement area or safety areas contrary to Section 309 – Safety Areas.
- (6) Malfunction of any required lighting system, holding position signs, or ILS critical area signs.
- (7) Unresolved wildlife hazards in accords with Section 337 – Wildlife Hazard Management
- (8) Non-availability of any required rescue and firefighting capability required in Section 317 – ARFF: Equipment and Agents; and Section 319 – ARFF: Operational Requirements.
- (9) Any other condition that may otherwise adversely affect the safe operations of air carriers.

DISTRIBUTION

Airport condition reports (NOTAMs) will be distributed via the NOTAM system in accordance with the most current FAA Advisory Circular 150/5200-28, Notices to Airman (NOTAMS) for Airport Operators. Additionally ATC will be notified via recorded telephone, radio, or fax any time a NOTAM is initiated by Operations.

RECORDS

A record of each dissemination of airport conditions (NOTAMs) will be maintained for at least 12 consecutive calendar months to air carriers.

Original Date: November 1, 2016

FAA Approval:

Revision Date: May 16, 2017

FEDERAL AVIATION ADMINISTRATION

MAY 16 2017

TNC
INSPECTOR

SECTION 341 – IDENTIFYING, MARKING AND REPORTING CONSTRUCTION AND OTHER UNSERVICABLE AREAS

CONSTRUCTION SAFETY

Safety plans and construction marking and lighting will be accomplished in accordance with the current version of AC 150/5370-2, *Operational Safety on Airports During Construction*. During the pre-construction process, the Manager of Operations or their designated representative will review marking and lighting requirements of construction areas. All construction areas are required to be clearly delineated and lighted where appropriate. One or more of the following methods of marking and/or lighting construction areas may be required.

- (1) Construction of temporary barriers
- (2) Use of barricades with alternating white and orange markings
- (3) Orange flags
- (4) Steady and/or flashing red lights
- (5) Reflective cones
- (6) Any other method deemed appropriate which is both clearly and generally recognizable as indicating a hazard exists.

Additionally, construction specifications shall include a provision requiring contractors to have a person on call 24 hours per day for emergency maintenance of airport hazard lighting and barricades.

MARKING AND LIGHTING OF CONSTRUCTION EQUIPMENT

Construction equipment shall be marked and, if appropriate, lighted in a manner acceptable to the Administrator. Plans and specifications involving marking and lighting of construction equipment shall be submitted to the FAA for approval on AIP funded projects.

PROCEDURES FOR AVOIDING DAMAGE TO UTILITIES

Utility plans for airport utilities are on file in the Airport Development and Airfield Electricians offices. The location of any airport utility lines in the areas of construction shall be marked by Airport Development Surveyors or Airfield Electricians prior to the start of construction. Airport Development and Airport Operations are responsible for monitoring construction activities on the airport to prevent the interruption of utilities.

Original Date: November 1, 2016

Revision Date:



SECTION 343 – NONCOMPLYING CONDITIONS

NONCOMPLYING CONDITIONS

When otherwise authorized by the Administrator of the FAA, whenever requirements of FAR Part 139 cannot be met to the extent that uncorrected unsafe conditions exist on the airport, the Manager of Operations or their designated representative shall limit air carrier operations to those portions of the airport not rendered unsafe by those conditions.

Original Date: November 1, 2016

Revision Date: May 16, 2017

FAA Approval:

FEDERAL AVIATION ADMINISTRATION

MAY 24 2017

TNC
INSPECTOR

**LETTER OF AGREEMENT (LOA)
BETWEEN
MEMPHIS-SHELBY COUNTY AIRPORT AUTHORITY (MSCAA)
AND
FEDERAL AVIATION ADMINISTRATION (FAA)
MEMPHIS AIR TRAFFIC CONTROL TOWER (MEM-ATCT)**

EFFECTIVE November 25, 2017

SUBJECT: Procedures for Opening and Closing Movement Areas

1) PURPOSE. This Letter of Agreement (LOA) defines the authority, responsibilities, and procedures for opening and closing movement areas at Memphis International Airport (KMEM or Airport). In addition to normal runway/taxiway closure procedures followed herein, specific procedures for emergency or other unplanned runway closures are contained in this document.

2) SCOPE. The procedures contained herein are for use between Memphis Airport Traffic Control Tower (MEM-ATCT) and the Memphis-Shelby County Airport Authority (MSCAA) when opening and closing runways/taxiways. These procedures are divided into planned, unplanned, and emergency runway/taxiway closures. While typical advance coordination for a planned runway/taxiway closure might include steps such as the issuance of a Notice to Airmen (NOTAM) and the distribution of airfield closure maps, unplanned and emergency runway/taxiway closures occur when unforeseen conditions or circumstances prompt a need for quicker response. These conditions may include, but are not limited to:

- a) Debris present on the runway/taxiway surface.
- b) Wildlife present on the runway/taxiway or creating a significant risk imminent to aircraft operations.
- c) Pavement holes or cracks that require immediate repair.
- d) Malfunctions of required lighting.
- e) Visibility conditions below the minimums required by the Surface Movement Guidance and Control System (SMGCS) Plan.
- f) A report of "nil" braking action.
- g) Response of emergency equipment to an aircraft accident.

3) DEFINITIONS. The movement area at Memphis International Airport (KMEM) is defined as runways and taxiways on the airport which are utilized for taxiing, take-off, and landing of aircraft, exclusive of loading aprons and parking areas.

4) BACKGROUND: The Memphis-Shelby County Airport Authority (MSCAA) President has delegated the authority and responsibility for the opening and closing of movement areas at KMEM to MSCAA Airport Operations. Memphis Tower (MEM-ATCT) and Airport Operations personnel must use the following procedures when opening and closing movement areas:

All Notices to Airmen (NOTAMs) become active/in effect at the time the NOTAM states, unless otherwise coordinated via a recorded telephone line or on the appropriate VHF frequency.

NOTAMs remain in effect until the expiration time of the NOTAM, or until they have been cancelled. Movement Area surfaces may be released back to MEM-ATCT for operational use prior to the NOTAM expiration time or cancellation, so long as such is communicated on the appropriate VHF frequency.

MEM-ATCT and MSCAA Letter of Agreement dated April 21, 2016 is cancelled.

- 5) **LOCATION.** This LOA encompasses all runway and taxiway surfaces here at KMEM.
- 6) **RESPONSIBILITIES OF MSCAA.** Only MSCAA – Airport Operations (Vehicle Call Signs: ‘Ops [#1 through #3]’) is responsible for assessing runway/taxiway conditions against regulatory requirements and coordinating runway/taxiway closures to make the necessary repairs or take actions required to return the runway/taxiway to a safe operation. No other vehicle call sign, (i.e., Mike Forty-Two, Maintenance ‘#’, etc.) has the authority to close or open any airfield surface.

a) The following procedures are required for “Planned” or “Unplanned” Runway and Taxiway Closures. Airport Operations will:

1. Provide a daily airfield closure sheet or fax a runway closure request directly to the Tower Cab no later than 30 minutes prior to the runway closures. The fax shall include the runway requested, available crossing taxiways on a closed runway, UTC date, estimated start and stop times, Airport Operations point of contact and phone number. Airport Operations will verify the receipt of the fax with MEM-ATCT before the runway is released.
2. Contact the MEM-ATCT on Ground Control or Local Control frequency when the closure is requested only when vehicles are staged in the vicinity of the runway and positioned for the closure. Airport Operations will state their position on the airport to ensure positive identification of their location by MEM-ATCT personnel and will only use single direction runway designations consistent with the direction of the KMEM operational flow. (For example, when in a North Operation and Runway 18L/36R is the runway desired, Airport Operations will request to close Runway 36R).
3. Advise the MEM-ATCT if the lighted “X” will be placed on the runway. Airport Operations will designate crossing points and ensure that all vehicles operating on the runway will yield to any MEM-ATCT traffic crossing the closed runway.
4. Issue a Notice to Airmen (NOTAM) describing the runway closure.



7) **RESPONSIBILITIES OF THE MEM-ATCT.** MEM-ATCT is responsible for the internal coordination required to effect a runway or taxiway closure.

a) The following procedures will be used for “Planned” or “Unplanned” runway/taxiway closures. MEM-ATCT will:

1. Advise Memphis TRACON (M03) of any movement area closures that will affect their operation.
2. Ensure the ATIS and IDS reflect the correct runway/taxiway status.
3. Ensure the light system serving the runway to be closed/opened is off/on, as appropriate.
4. Ensure the approach lights, if applicable, to the runway to be closed/opened are off/on, as appropriate.
5. Advise Airport Operations representative on the recorded telephone line (901-842-8458), or on the appropriate frequency, when the runway/taxiway is released for closing.

8) **PROCEDURES USED FOR “EMERGENCY” RUNWAY CLOSURES.**

a) The following procedures will be used for “Emergency” runway closures:

1. If a condition is observed by MEM-ATCT or relayed to the MEM-ATCT by a pilot, the MEM-ATCT will:

- i. Alert Airport Operations via phone call or over the VHF radio of the condition observed or reported, including the location.
- ii. Provide Airport Operations with an opportunity, if necessary, to enter the runway, assess or correct the condition and return the runway to a safe operation.
- iii. Confirm closure of the runway if Airport Operations determines that a runway closure is the only means remaining to correct the condition.
- iv. Upon receiving notification from the MEM-ATCT, Airport Operations will:

A) Assess the condition, and if access to the runway is necessary, notify the MEM-ATCT via the recorded telephone line (901-842-8458) stating the reason for the closure and the estimated duration of the closure.



- B) Confirm the closure on the MEM-ATCT Local Control frequency.
 - C) Provide periodic updates to the MEM-ATCT on the status of the runway.
 - D) Inspect, open, and return the runway to service.
2. If the condition is initially observed by Airport Operations, Airport Operations will:
- i. Advise the MEM-ATCT on the Local Control frequency of the runway condition.
 - ii. If an immediate closure is required, notify the MEM-ATCT via the recorded telephone line (901-842-8458) providing:
 - A) The reason for the closure
 - B) The expected duration of the closure
 - iii. Confirm the closure with the MEM-ATCT on the Local Control frequency.
 - iv. Provide periodic updates to the MEM-ATCT on the status of the runway.
 - v. Inspect, open, and return the runway to service.
 - vi. The MEM-ATCT will:



- A) Provide an opportunity, if necessary, for Airport Operations to enter the runway, assess/correct the condition, and return the runway to a safe operation.
- B) Confirm the closure of the runway if Airport Operations determines that a runway closure is the only means remaining to correct the condition.
- C) Utilize the runway closure procedures in 7.a.

9) **DEVIATIONS.** Deviations from procedures identified herein shall be approved only after coordination and agreement between MEM-ATCT and MSCAA.

10) **TERMINATION.** This agreement may be terminated by either party upon giving thirty (30) days advance written notice to the other party.

11) EXECUTION OF AGREEMENT. The parties hereby agree and express their intent to execute this agreement electronically if MSCAA has a designated information processing system. The parties also hereby agree that this agreement may be executed in counterparts, each of which shall be deemed to be an original, but all of which, taken together, shall constitute one and the same agreement.

12) ENTIRE AGREEMENT. This agreement constitutes the complete agreement of the parties with respect to the subject matter hereof and supersedes all prior negotiations, stipulations, representations, or agreements, whether written or oral. Except as otherwise specifically provided herein, no amendment, modification or alteration of the provisions of this agreement shall be binding unless the same be in writing and duly executed by the parties.

*The remainder of this page intentionally left blank.
[Signature page to follow.]*



IN WITNESS WHEREOF, The parties hereto have executed this Letter of Agreement as of the dates written below.

**MEMPHIS-SHELBY COUNTY
AIRPORT AUTHORITY**

By: Scott A Brockman
Scott A Brockman (Oct 26, 2017)

Title: President and CEO

**MEMPHIS AIRPORT TRAFFIC
CONTROL TOWER**

By: Christopher J. Byrd
Christopher J. Byrd (Oct 26, 2017)

Printed Name: Christopher J. Byrd

Title: Air Traffic Manager

Approved as to Content:

By: Terry Blue
Terry Blue (Oct 26, 2017)

Title: Vice President of Operations

Approved as to Form and Legality:

By: Janet Shipman
Janet Shipman (Oct 26, 2017)

Title: Associate Airport Counsel



**LETTER OF AGREEMENT (LOA)
BETWEEN
MEMPHIS-SHELBY COUNTY AIRPORT AUTHORITY (MSCAA)
AND
FEDERAL AVIATION ADMINISTRATION (FAA)
MEMPHIS AIR TRAFFIC CONTROL TOWER (MEM-ATCT)**

EFFECTIVE November 25, 2017

SUBJECT: Areas of Jurisdictional Responsibility – Memphis International Airport (KMEM)

- 1) **PURPOSE.** This agreement defines jurisdictional responsibilities between MEM-Air Traffic Control Tower and Memphis-Shelby County Airport Authority and delineates the taxiways under the jurisdiction of MEM-ATCT in areas where the taxiways and loading apron/parking areas are contiguous.
- 2) **SCOPE.** The jurisdiction and delineations in this agreement cover all movement areas. The following delineations are made for purposes of MEM-ATCT jurisdictional responsibility:
 - a) Taxiway “J” is 75 feet in width in its entirety.
 - b) Taxiway “N” is 75 feet in width along the west edge of the Terminal apron, between Taxiways “T” and “M7”.
 - c) Taxiway “V” is 75 feet in width along the south edge of the FedEx Express apron, between Taxiways “S” and “V2”.
- 3) **DEFINITIONS.** The movement area at Memphis International Airport (KMEM or Airport) is defined as runways and taxiways on the Airport which are utilized for taxiing, take-off, and landing of aircraft, exclusive of loading aprons and parking areas as depicted in **Attachment 1**. Specific approval for entry into the movement area must be obtained from MEM-ATCT.
- 4) **BACKGROUND.** MEM-ATCT and MSCAA Letter of Agreement dated July 1, 2013 is cancelled.
- 5) **LOCATION.** The locations covered under this LOA include all aircraft movement areas at KMEM.
- 6) **RESPONSIBILITIES OF MSCAA.**
 - a) The MSCAA shall require, by user agreement or regulation, that all aircraft/vehicle operators, including those conducting push-back operations, contact MEM-ATCT Ground Control for clearance prior to penetrating a movement area.
 - b) All air carrier personnel must coordinate with MSCAA personnel such as Airport Operations, Police, or Airport Maintenance prior to entering the movement area to inspect or retrieve an aircraft.
 - c) **Air Carrier Notification.** If an aircraft requires assistance on the movement area, the on-duty Airport Operations representative ensures the air carrier involved is notified. If



warranted, an air carrier tug and/or personnel may be requested to standby for an escort to assist with the removal/inspection of their aircraft.

7) **RESPONSIBILITIES OF THE MEM ATCT.**

- a) Information transmitted by MEM-ATCT to aircraft/vehicles operating on the loading apron and parking areas is advisory in nature, and does not imply control responsibility.
- b) Those areas delineated in Attachment 1, where authorized vehicles are permitted to enter Taxiways "P1" and "P2", and cross Taxiways "T" and "P" without approval from MEM-ATCT, are excluded from the movement area. MEM-ATCT's responsibility for control of traffic shall cease at those points where uncontrolled vehicles are permitted to enter or cross taxiways.
- c) Taxiway "V" east of Taxiway "S" is released from MEM-ATCT to the FedEx ramp tower during specific times. This release is covered under a separate LOA between the parties, entitled, *FedEx Express Ramp/Taxi Procedures* and currently in effect. Also, if the airport enters into Surface Movement Guidance Control System (SMGCS) or Aircraft Deicing Operations, then the procedures in the MSCAA SMGCS Plan or the MSCAA Winter Operations Plan prevail.
- d) **Airport Operations Notification.** If an aircraft requires assistance on the movement area, MEM-ATCT shall notify Airport Operations via phone call or on the appropriate VHF frequency.

8) **DEVIATIONS.** Deviations from procedures identified herein shall be approved only after coordination and agreement between MEM-ATCT and MSCAA.

9) **TERMINATION.** This agreement may be terminated by either party upon giving thirty (30) days advance written notice to the other party.

10) **EXECUTION OF AGREEMENT.** The parties hereby agree and express their intent to execute this agreement electronically if MSCAA has a designated information processing system. The parties also hereby agree that this agreement may be executed in counterparts, each of which shall be deemed to be an original, but all of which, taken together, shall constitute one and the same agreement.

11) **ENTIRE AGREEMENT.** This agreement constitutes the complete agreement of the parties with respect to the subject matter hereof and supersedes all prior negotiations, stipulations, representations, or agreements, whether written or oral. Except as otherwise specifically provided herein, no amendment, modification or alteration of the provisions of this agreement shall be binding unless the same be in writing and duly executed by the parties.

*The remainder of this page intentionally left blank.
[Signature page to follow.]*



IN WITNESS WHEREOF, The parties hereto have executed this Letter of Agreement as of the dates written below.

**MEMPHIS-SHELBY COUNTY
AIRPORT AUTHORITY**

By: Scott A Brockman
Scott A Brockman (Oct 27, 2017)

Title: President and CEO

**MEMPHIS AIRPORT TRAFFIC
CONTROL TOWER**

By: Christopher J. Byrd
Christopher J. Byrd (Oct 27, 2017)

Printed Name: Christopher J. Byrd

Title: Air Traffic Manager

Approved as to Content:

By: Terry Blue
Terry Blue (Oct 27, 2017)

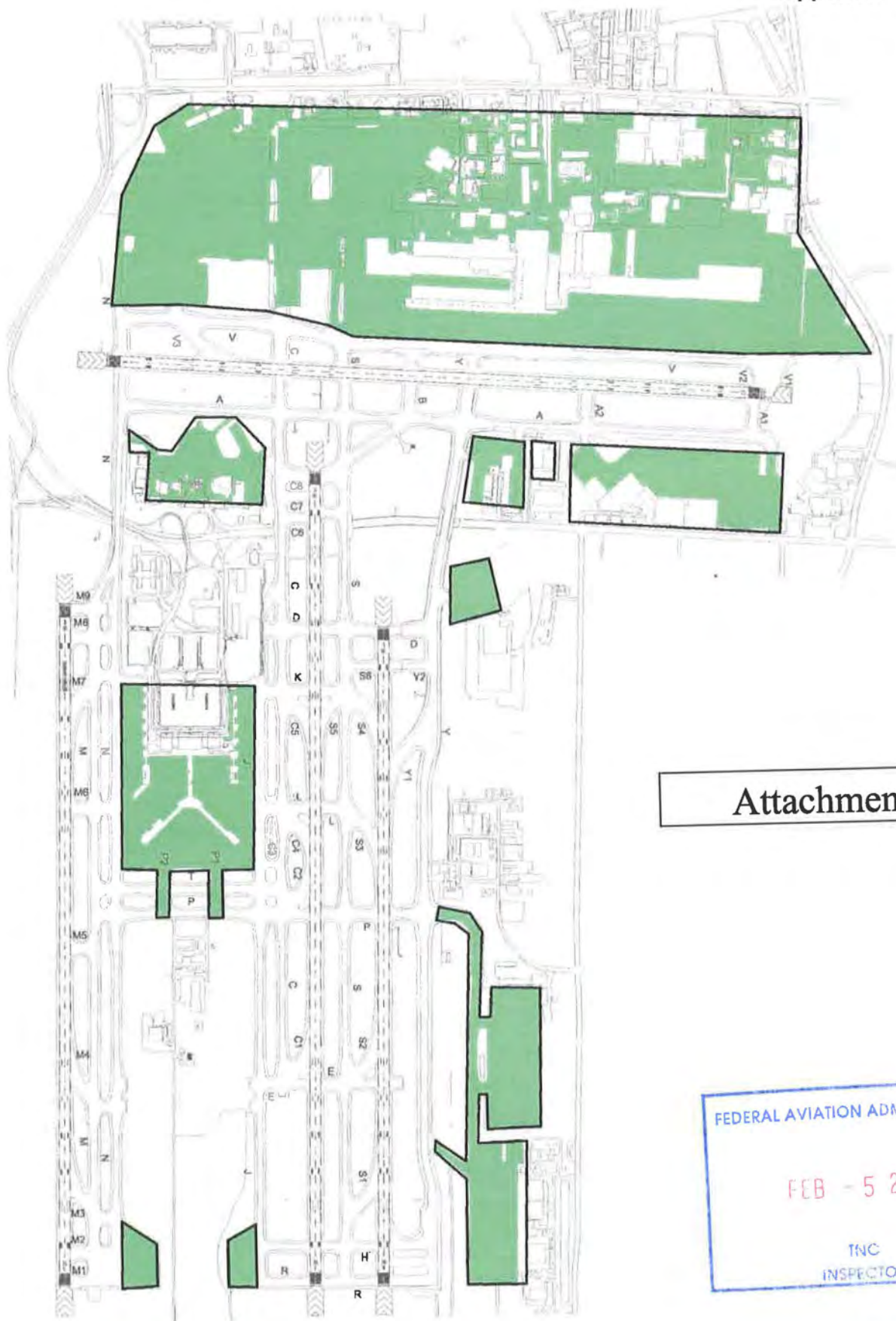
Title: Vice President of Operations

Approved as to Form and Legality:

By: Janet Shipman
Janet Shipman (Oct 27, 2017)

Title: Associate Airport Counsel





Attachment 1



**LETTER OF AGREEMENT
BETWEEN
MEMPHIS-SHELBY COUNTY AIRPORT AUTHORITY (MSCAA)
AND
FEDERAL AVIATION ADMINISTRATION (FAA)
MEMPHIS AIR TRAFFIC CONTROL TOWER (MEM-ATCT)
AND
MEMPHIS TECHNICAL OPERATIONS MAINTENANCE (MEM-TECH OPS)**

EFFECTIVE April 1, 2019

SUBJECT: Requirements for Operating in the Runway Safety Areas (RSAs)

- 1) **PURPOSE.** This Letter of Agreement (LOA) defines the responsibilities and procedures of MSCAA, ATCT, and Tech Ops for accessing, operating, and exiting the runway safety areas at the Memphis International Airport ("MEM") during aircraft operations. This LOA is intended to bridge the gap in existing procedures for each party.
- 2) **SCOPE.** The procedures contained herein are for use by operational personnel at MEM-ATCT, MEM-Tech Ops, MSCAA-Operations and each entity's respective internal lines of business / contractors.
- 3) **DEFINITIONS.**
 - a. **Movement Area:** The runways, taxiways, and other areas at MEM that aircraft use for taxiing, takeoff, and landing, exclusive of loading aprons and aircraft parking areas as depicted in **Attachment 1**.
 - b. **Runway Safety Areas (RSAs):** A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to aircraft in the event of an under-shoot, overshoot, or excursion from the runway. For all runways, the RSAs are 500 feet wide, centered on the runway. The RSA extends 1,000 feet beyond each runway threshold, except for the departure end of Runway 18R, which is 865 feet beyond the runway threshold and includes and EMAS structure; and the departure end of Runway 36C, which is 596 feet beyond the runway threshold. Depictions of the RSAs are in **Attachment 2**.
- 4) **PROCEDURES.** Each entity listed above has some responsibility for ensuring the RSA is protected during aircraft operations. Specific responsibilities are listed below:
 - a. **General**
 1. RSAs must normally be clear of personnel, vehicles and equipment during aircraft operations. Most activities that need to take place in the RSA should occur when the runway is closed. However, there are some situations and/or circumstances where personnel, vehicles and equipment require access to the RSA during aircraft

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operations. Examples include maintenance/repair of navigational aids, FOD removal, and other airport safety-related circumstances.

2. During aircraft operations, only authorized personnel (pedestrians) may operate in the RSAs to perform essential duties. If needed to drop off light or small equipment, a vehicle may be brought into the area **between** aircraft operations, provided the vehicle is then removed from the RSA immediately.
3. Approval to enter an RSA is **not** clearance onto a runway. Vehicles, pedestrians, and equipment shall remain off the runway surface unless additional clearance onto the runway is requested and granted by ATCT.

b. MSCAA Responsibilities

1. Develop and conduct training, required and recurrent, for operational personnel that access airport movement areas and operate in RSAs.
2. Approve/deny Tech Ops personnel request to access RSAs based on location, safety and weather conditions.
3. Monitor positive control and communication procedures as able for compliance with RSA entry/exit procedures.
4. Maintain and monitor a database of employees that have access privileges to RSAs to gauge compliance with RSA procedures.
5. Maintain code of enforcement policies for those who violate RSA procedures.

c. ATCT Responsibilities

1. Perform operational personnel training on airport movement area access procedures as contained in this LOA.
2. Upon request to enter or exit the RSAs, ATCT may state "proceed as requested".
3. Vehicle operators or maintenance personnel with equipment (in direct communications with the ATCT), may be authorized to operate up to the edge of the active runway surface when necessary, per FAAO 7110.65, para. 3-1-5.

d. Tech Ops Responsibilities

1. Ensure operational personnel that will access RSAs have a valid MSCAA Security Identification Display Area (SIDA) badge and Class III movement area driving privileges.



2. Ensure operational personnel that will access RSAs are properly trained and adhere to RSA entry/exit procedures.
 3. To the extent possible, schedule maintenance activities within the RSA during planned and coordinated runway closures.
 4. Request MSCAA approval for access into the movement area and/or the RSA. Advise of the location, scope of work, amount of personnel, type of access required (i.e. on foot, equipment, vehicles) and operating time frame at the time of request. Upon approval from MSCAA-Operations, Tech Ops or MSCAA-Operations will notify the ATCT supervisor via landline providing the same information.
 5. Request ATCT clearance onto the airport movement area and into and out of RSAs before proceeding, defining specific routes of travel.
 6. Maintain positive radio communication with ATCT while operating in the RSAs.
 7. Accept responsibility and enforcement actions that MSCAA levies for procedural violations.
- e. **Closed Runway:** Any person entering the RSA of a closed runway must meet the requirements established herein for entering the RSA of an active/open runway, with the exception that communication with ATCT is not necessary if accessing directly from a non-movement area.
- f. **Construction Projects:** Notwithstanding the foregoing requirements, authorized personnel may utilize other methods to control personnel and vehicles entering and exiting the RSA for the sole purpose of performing duties associated with a construction project. Such methods shall be conducted in accordance with all procedures and guidelines established and approved by MSCAA.
- 5) **DEVIATIONS.** Deviations from procedures identified herein must be approved in writing only after coordination between the MSCAA, ATCT, and Tech Ops.
- 6) **TERMINATION.** This agreement may be terminated by any of the parties upon giving thirty (30) days advance written notice to the other parties.
- 7) **EXECUTION OF AGREEMENT.** The parties hereby agree and express their intent to execute this agreement electronically if MSCAA has a designated information processing system. The parties also hereby agree that this agreement may be executed in counterparts, each of which shall be deemed to be an original, but all of which, taken together, shall constitute one and the same agreement.
- 8) **ENTIRE AGREEMENT.** This agreement constitutes the complete agreement of the parties with respect to the subject matter hereof and supersedes all prior negotiations, stipulations,



Appendix-1 c

representations, or agreements, whether written or oral, including any prior letters of agreement establishing requirements for operating in the runway safety areas at MEM. Except as otherwise specifically provided herein, no amendment, modification or alteration of the provisions of this agreement shall be binding unless the same be in writing and duly executed by the parties.

The remainder of this page intentionally left blank.

[Signature page to follow.]



IN WITNESS WHEREOF, The parties hereto have executed this Letter of Agreement as of the dates written below.

**MEMPHIS-SHELBY COUNTY
AIRPORT AUTHORITY**

By: Scott A Brockman
Scott A Brockman (Apr 1, 2019)

Title: President and CEO

Approved as to Content:

By: Terry Blue
Terry Blue (Apr 1, 2019)

Title: Vice President of Operations

Approved as to Form and Legality:

By: Janet Shipman
Janet Shipman (Mar 29, 2019)

Title: Associate Airport Counsel

**MEMPHIS AIR TRAFFIC
CONTROL TOWER**

By: Chris Byrd
Chris Byrd (Mar 28, 2019)

Printed Name: Christopher J. Byrd

Title: Air Traffic Manager

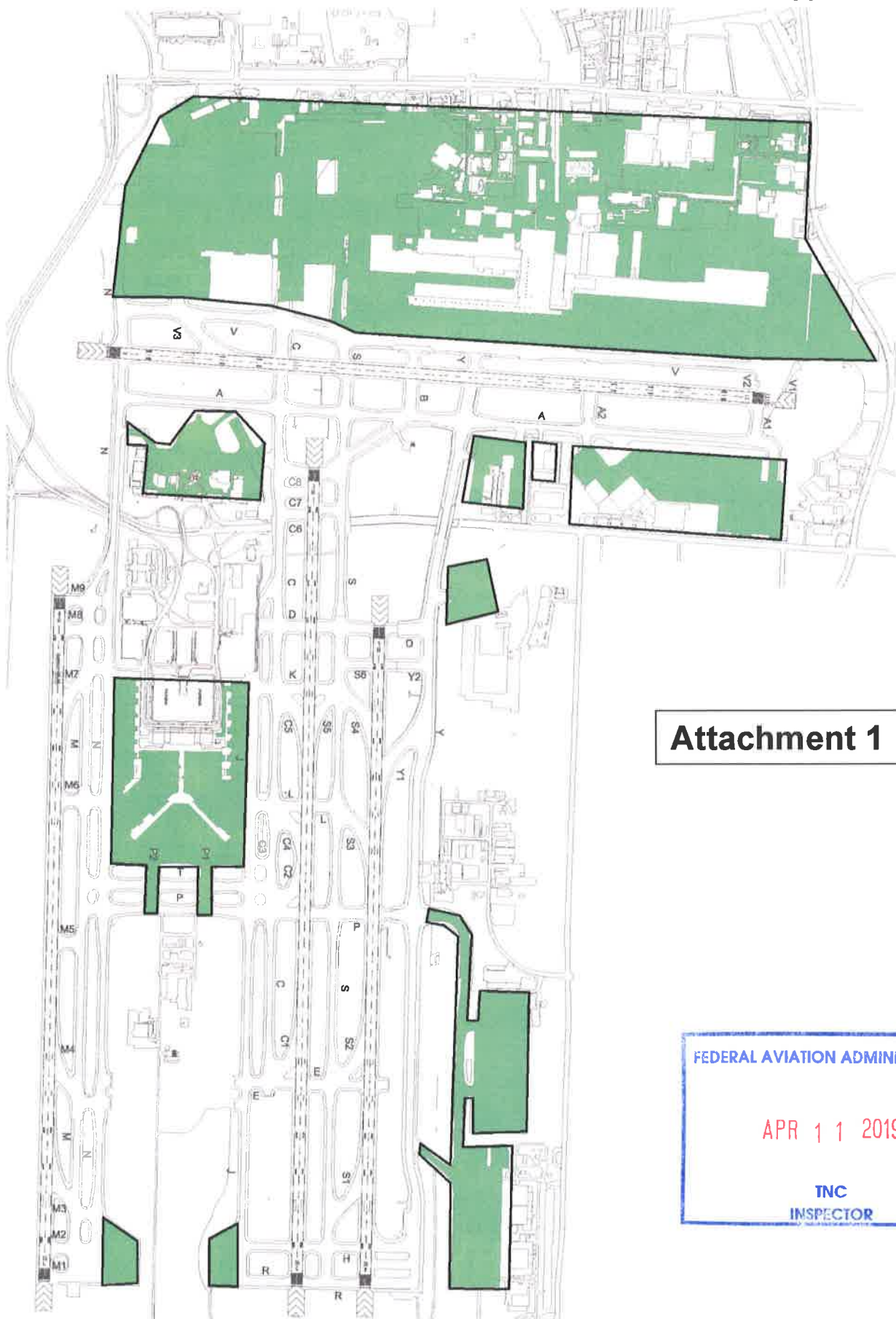
**MEMPHIS TECHNICAL
OPERATIONS MAINTENANCE**

By: Eric Alexander
Eric Alexander (Mar 27, 2019)

Printed Name: Eric Alexander

Title: Memphis NAV/COM SSC Manager



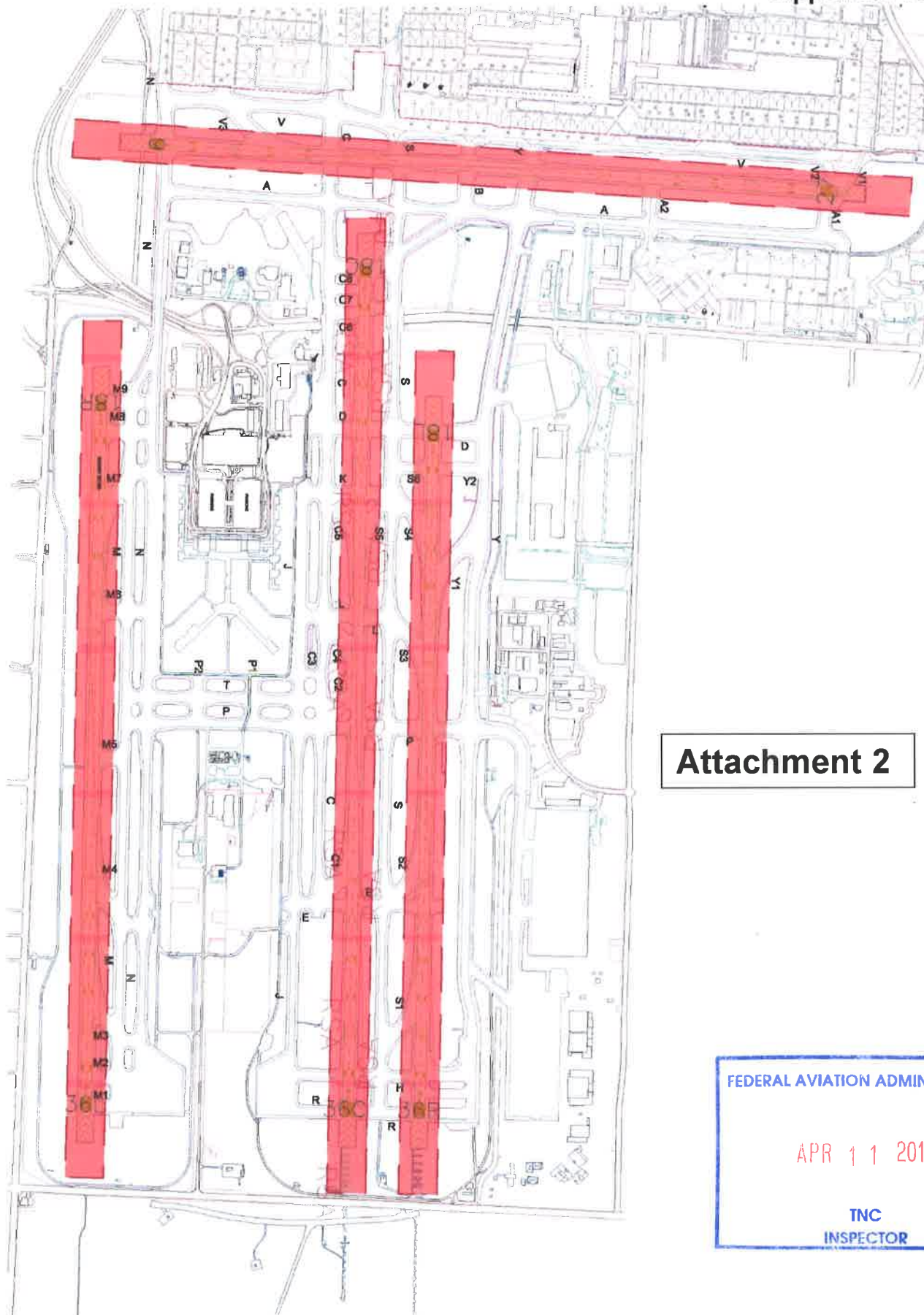


Attachment 1

FEDERAL AVIATION ADMINISTRATION

APR 11 2019

TNC
INSPECTOR



Attachment 2

FEDERAL AVIATION ADMINISTRATION

APR 11 2019

TNC
INSPECTOR

**MEMPHIS AIR TRAFFIC CONTROL TOWER (MEM ATCT) and
MEMPHIS SHELBY COUNTY AIRPORT AUTHORITY (MSCAA)
LETTER OF AGREEMENT**

EFFECTIVE: April 29, 2016

SUBJECT: Land and Hold Short Operations (LAHSO) Procedures

1. **PURPOSE.** This agreement delineates the responsibilities of MEM ATCT and MSCAA that are necessary for initiating and carrying out Land and Hold Short Operations (LAHSO) on Runway 27 at Memphis International Airport.
2. **CANCELLATION.** The Memphis Airport Traffic Control Tower, Memphis-Shelby County Airport Authority Letter of Agreement dated February 1, 2010 is cancelled.
2. **SCOPE.** This Letter of Agreement covers LAHSO operations for Memphis International Airport and is supplemental to the requirements set forth in FAA Order 7110.118.
3. **BACKGROUND.** LAHSO is an air traffic control procedure that allows the issuance of landing clearances to aircraft to land and hold short of an intersecting runway, taxiway or other designated point on the runway. It is a procedure designed to more efficiently move aircraft within the terminal airspace and on the airport surface.
4. **APPROVED LAHSO RUNWAY/LOCATION.** The following runway hold short location is approved for conducting LAHSO at MEM:

| | | |
|--------|---------------------------------|-------------|
| Runway | Location | Designation |
| 27 | Prior to Taxiway N intersection | Day, Night |

5. RESPONSIBILITIES OF MSCAA.

- a. Install and maintain LAHSO runway markings and signs at all of the above specified locations in accordance with FAA Advisory Circular (AC) 150/5430-1, Standards for Airport Markings, and AC 150/5340-18 Standards for Airport Sign Systems.
- b. Provide FAA with distance measurements from the landing threshold to the LAHSO runway position marking at the specified LAHSO location.
- c. Install and maintain a LAHSO in pavement lighting system at the LAHSO location. The lighting system must be designed and installed in accordance with AC 150/5430-29, Installation Details for Land and Hold Short Lighting Systems.
- d. Notify MEM ATCT at (901) 842-8458 whenever runway marking, signs, and/or lighting systems are known to be inoperative.
- e. Issue appropriate Notices to Airman (NOTAM) relating to LAHSO.



6. RESPONSIBILITIES OF MEM ATCT.

- a. Publish a list containing the runway at MEM that is approved for LAHSO, together with the available landing distance for the hold short location.
- b. Terminate LAHSO whenever MSCAA reports that signs and markings are not installed, or conditions are not in accordance with FAA Order 7110.118, Land and Hold Short Operations.
- c. Terminate LAHSO when in the judgment of the air traffic manager, conditions preclude the use of LAHSO.
- d. Meet annually with MSCAA and the LAHSO Development Team, or as necessary, to review LAHSO related events or issues.


7. DEVIATIONS. Deviations from procedures identified herein must be approved only after coordination and agreement between Memphis Airport Traffic Control Tower and the Memphis Shelby County Airport Authority.

8. TERMINATION: This Agreement must be in effect until suspended or terminated by either party upon written notice.

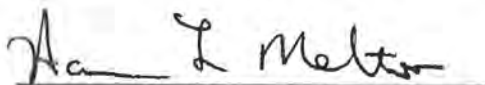
Memphis-Shelby County Airport Authority


President and Chief Executive Officer

Approved as to Form and Legality


General Counsel

Memphis-Shelby County Airport Authority


Haven L. Melton
Air Traffic Manager, MEM

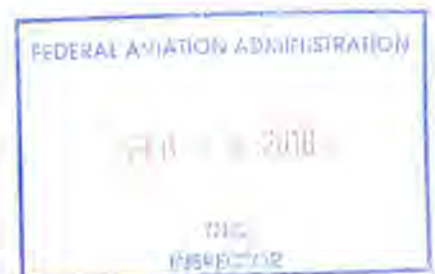


FEDERAL AVIATION ADMINISTRATION
MEMPHIS AIR TRAFFIC CONTROL TOWER
MEMPHIS-SHELBY COUNTY AIRPORT AUTHORITY
AND
MEMPHIS FIRE DEPARTMENT
LETTER OF AGREEMENT

Effective: February 26, 2016

SUBJECT: MEMPHIS INTERNATIONAL AIRPORT EMERGENCY PROCEDURES

1. **PURPOSE.** The purpose of this document is to prescribe procedures to be utilized to the fullest extent practicable in the event of an accident, emergency, or potential emergency on or in the vicinity of the airport.
2. **CANCELLATION.** The Memphis Airport Traffic Control Tower, Memphis-Shelby County Airport Authority and Memphis Fire Department Letter of Agreement dated June 1, 2013 is cancelled.
3. **SCOPE.** In the event of an accident, emergency, or potential emergency on or in the vicinity of the Memphis International Airport (KMEM), Memphis Air Traffic Control Tower (ATCT) must alert the Memphis Fire Department (MFD) Aircraft Rescue and Fire Fighting (ARFF) when any of the following personnel request such action:
 - a. ATCT Cab supervisor/controller-in-charge (SC/CIC)
 - b. The pilot of the aircraft concerned
 - c. The operator of the aircraft or their representative
 - d. A representative of airport management
4. **RESPONSIBILITIES.** Each party to this agreement is responsible for training and compliance by personnel under their authority with the provisions contained herein.
5. **ALERTING PROCEDURES.** It is the responsibility of the tower SC/CIC to alert the primary ARFF Station #9 located at KMEM, taxiway 'Y' and 'P'. The alert must consist of the alert category, aircraft callsign, type aircraft involved, nature of the emergency, anticipated runway for landing or exact location of the emergency on the airfield, estimated time of arrival, souls on board, fuel remaining (in pounds), and hazardous material onboard.
 - a. The alert notification must be transmitted on the direct line **RED** telephone located in the ATCT. The following format must be used when transmitting an ALERT.
 - "ALERT (I/II or III) standby for Roll Call":
 - Aircraft callsign
 - Aircraft Type
 - Nature of the emergency
 - Anticipated runway or location of the emergency on the airfield



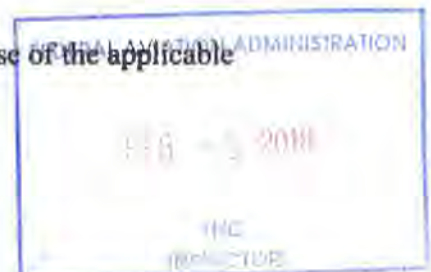
- Estimated time of arrival
- Souls on board
- Fuel remaining (in pounds)
- Hazardous material onboard
- "Station 9" (acknowledge)
- "Station 33" (acknowledge)
- "Airport Communications" (acknowledge)

In the event the **RED** telephone is inoperative, ARFF Station #9 may be alerted by Air Rescue Chief's Cell (901-553-0559), Office phone (901-922-2266), MFD Watch Commander (901-636-5310), or by dialing 911 and asking for the Memphis Fire Department ARFF.

- b. Operational procedures for the direct line **RED** telephone are as follows:
1. Pick up the handset and initiate alert. The phone automatically rings to Fire Station #9 and #33, and Airport Communications. The caller will confirm with ARFF Station #9 that the information has been received. FedEx Fire Services, and Tennessee Air National Guard (TNANG) will receive the alert via speakers, but will not be in communication with ATCT via the **RED** telephone regarding alert confirmation.
 2. The **RED** telephone must be tested daily at 0700 local or as soon as possible thereafter. Daily test must be accomplished using following:
 - "Daily crash phone test, standby for Roll Call";
 - "Station 9" (acknowledge),
 - "Station 33" (acknowledge),
 - "Airport Communications" (acknowledge),
 - "This concludes the daily crash phone test"
 3. The **RED** telephone must not be used to report fires/emergencies not in the immediate vicinity of the airport (ex: downtown). MFD may be contacted at 911.
- c. Communications with ARFF Station #9 vehicles, after they have been alerted, will be on ground frequency 121.9, 121.65, or 121.0 as appropriate. After ARFF vehicles are staged at the appropriate taxiway location for the runway of intended landing, ARFF vehicles will switch to the appropriate frequency for that runway unless instructed otherwise.

119.7 18L/36R and 18C/36C
128.42 18R/36L
118.3 9/27

In the event of radio failure, communication will be established by use of the applicable light gun signals or the Chiefs' cell phone.



- d. The amount of equipment to respond to an alert will be determined by the ARFF based on the alert category assigned and information available. The Airport maintains mutual aid agreements with FedEx Express Fire Services and the Tennessee Air National Guard (TNANG). These agencies may respond to assist ARFF if requested by MFD.

6. ALERT CATEGORIES.

- a. **Alert I (Local Standby Alert):** An aircraft that is known or suspected to have an operational defect that should not normally cause serious difficulty in achieving a safe landing. This is notification only. No response is required. All units involved will be manned and will standby in quarters.
- b. **Alert II (Full Emergency Alert):** An aircraft that is known or is suspected to have an operational defect that affects normal flight operations to the extent that there is danger of an accident. All units respond to pre-designated positions.
- c. **Alert III (Aircraft Accident Alert):** An aircraft incident/accident has occurred on or in the vicinity of the airport. All designated emergency response units proceed to the scene in accordance with established plans and procedures.

Note: "Alerts" will only be issued for AIRCRAFT emergencies. Structural fires or other emergencies must be reported to Station #9 or #33 without being classified as an alert.

7. DISCRETE EMERGENCY FREQUENCY (DEF) 121.0 PROCEDURES:

- a. Memphis-Shelby County Airport Authority (MSCAA) Memphis Fire Department (MFD) procedures:
 - 1. Recognizing the Memphis-Shelby County Airport Authority's overall responsibility and control of the airport, it has the need to monitor the DEF in use during an emergency for awareness of the situation and for planning purposes. If an aircraft emergency is in progress, the DEF is available for communications between the Emergency Responders, flight crew, and the ATCT.
 - 2. The ARFF Incident Commander (IC), call sign "Memphis Command," must initially utilize ground control frequency 121.9 or other appropriate ground frequency for emergency response, switch to runway frequency upon reaching setup and maintain contact with Memphis ATC until directed to switch to the DEF.
 - 3. The ARFF IC may request permission from the ATCT to establish direct communications on the DEF with the flight crew of the aircraft involved in the emergency. The ARFF IC must receive direct authorization from the ATCT and be assigned to the DEF prior to transmitting on it.
 - 4. When directed to switch to the DEF, the ARFF IC will utilize that frequency for emergency communications with the flight crew.



5. Terminology on the DEF must be in accordance with the most current Advisory Circular 150/5210-7, Aircraft Rescue & Fire Fighting Communications.
 6. The ARFF IC must notify the ATCT when the emergency is secured, allowing release of the DEF. The ATCT will then direct the emergency aircraft and all responding vehicles to return to the normal ground control frequency or as otherwise directed.
 7. Memphis Command will monitor all radios during an emergency. All vehicles will maintain radio silence unless called. The ARFF radios will be checked with the ATCT each morning to ensure proper operations.
 8. No equipment responding to an alert will proceed on or cross any runway/taxiway without permission from the ATCT, either by radio or light gun signals, unless routes have been specified on initial contact.
 9. The ARFF IC, in conjunction with the flight crew and Airport Operations, will terminate the alert and advise the ATCT when an alert is terminated.
- b. Memphis ATCT Procedures:
1. Once an emergency response has been initiated, the ATCT supervisor may elect to have a separate controller coordinate the emergency on the DEF.
 2. The controller assigned to coordinate the emergency must coordinate (with all appropriate operating positions) for the arrival of the aircraft and the intent/request of responding vehicles to proceed toward the site before issuing clearance for such. Clearance for emergency vehicles must be given as expeditiously as possible.
 3. When aircraft/vehicles are already assigned to the DEF due to frequency outages, the ATCT must use 121.5 for an alternate DEF.
 4. The controller assigned to coordinate the emergency must approve the ARFF IC to communicate directly with the flight crew of the emergency aircraft as appropriate.
 5. The ATCT must issue instructions for the Emergency Responders and aircraft to switch to the DEF.
 6. When the DEF is in use, the ATCT will issue control instructions and information to the flight crew and Emergency Responders on the DEF.
 7. When notified by the ARFF IC that the status of the emergency allows the release of the DEF, the ATCT will direct the emergency aircraft and all responding vehicles to return to the normal ground control frequency or as otherwise appropriate.
 8. The command vehicle must monitor all radios during the emergency. All other vehicles must maintain radio silence unless called.



9. The following light gun signals must be used for the control of emergency equipment in the event of radio failure:

- (a) Steady Green - Cleared onto a runway/taxiway and/or cleared to cross a runway/taxiway
- (b) Steady Red - Stop, hold position
- (c) Flashing Red - Clear runway/taxiway
- (d) Flashing White - Return to starting point on airport
- (e) Alternating Red/Green - Use extreme caution.

c. Air Carrier Medical Emergency Parking Procedures:

1. Gate B-43 or another identified alternate can be designated by MSCAA as the primary location for the parking of non-tenant air carrier emergency aircraft with medical emergencies. All other air carrier aircraft can park at gates operated by their respective companies. MSCAA must be notified ASAP of unscheduled or diverted aircraft.
2. If deemed necessary, the ATCT may request an emergency aircraft to park on a taxiway or runway. If a suitable location cannot be found, the ATCT must contact MSCAA for further assistance.

d. ARFF equipment staging locations:

1. 18L/36R A1 = TWY 'Y' & 'P'
 A2 = TWY 'Y' & 'H'
 A3 = TWY 'Y' & 'Y2'
2. 18C/36C A1 = TWY 'S' & 'P'
 A2 = TWY 'S' & 'E'
 A3 = TWY 'S' & 'K'
3. 18R/36L A1 = TWY 'M' & 'M5'
 A2 = TWY 'M' & 'M4'
 A3 = TWY 'M' & 'M7'
4. 9/27 A1 = TWY 'A' & 'Y'
 A2 = TWY 'A' & 'C'
 A3 = TWY 'A' & 'A2'

5. Unit #19 will standby unless needed.

6. The ATCT may issue alternate standby locations in the event ground traffic conflicts with Emergency Responses (ex. Taxiway 'C' may be used as an alternate to 'S' for Runway 18C/36C.)



8. **NOTIFICATION OF AGENCIES OR PERSONNEL.** After ARFF Station #9 has been alerted, MSCAA is responsible for notifying other agencies or personnel.
9. **TERMINATION.** This Agreement shall be in effect until suspended or terminated by either party upon written notice.

10. **MISCELLANEOUS.**

- a. Each entity will be solely responsible for the acts of their respective personnel pursuant to the applicable entity's Tort Claims Act.
- b. In order to facilitate concise communications on the airfield with ATCT, personnel should refer to the newer station as "Fire Station #9" and the older facility as "Fire Station #33". Fire Station #9 is the primary ARFF Station, but both stations will continue to be staffed and operate on the airfield.
- c. Equipment/personnel used for aircraft emergencies and accidents must be identified as follows:

| | | |
|----|-----------------------------------|-----|
| 1. | Quick Response Vehicles (Command) | A1 |
| 2. | Major Aircraft Vehicle | A2 |
| 3. | Major Aircraft Vehicle | A3 |
| 4. | Quick Response Vehicle (Backup) | A4 |
| 5. | Major Aircraft Vehicle (Backup) | A5 |
| 6. | Quick Response Vehicle (Backup) | A6 |
| 7. | ARFF Liaison Chief | A10 |

Mutual aid equipment responding to aircraft emergencies will include, but not be limited to, the following:

| | | |
|----|--|-------------|
| 1. | Engine Company | E-33 |
| 2. | Truck Company | T-16 |
| 3. | Ambulance | Unit 19 |
| 4. | FedEx/Rural Metro (Quick Response Vehicle) | A-30 |
| 5. | FedEx/Rural Metro (Major Crash Vehicle) | A-36 |
| 6. | FedEx/Rural Metro (Backup) | A-35 |
| 7. | Tennessee Air National Guard (TNANG) | A-24 |
| 8. | Tennessee Air National Guard (TNANG) | A-25 |
| 9. | Air Stairs | Air Stair 1 |



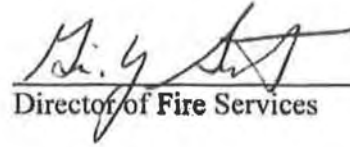
- d. Surface Movement Guidance Control System (SMGCS)
 1. When informed by the ATCT that SMGCS is in effect with conditions <1200 feet RVR, ARFF will assume an Alert I in station and stand by position.
 2. When informed by the ATCT that SMGCS is in effect with conditions <600 feet RVR, ARFF will relocate and stage at Fire Station #33 until lifted.

Memphis Air Traffic Control Tower



Manager

City of Memphis



Director of Fire Services

Memphis-Shelby County Airport Authority



President and Chief Executive Officer

Approved as to Form and Legality

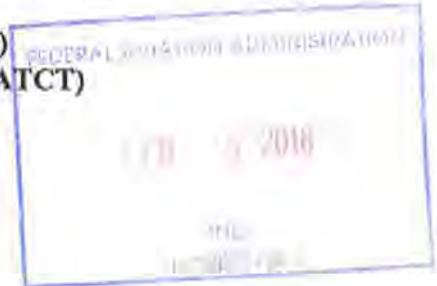


General Counsel



**LETTER OF AGREEMENT
BETWEEN
MEMPHIS-SHELBY COUNTY AIRPORT AUTHORITY (MSCAA)
AND
FEDERAL AVIATION ADMINISTRATION (FAA)
MEMPHIS AIR TRAFFIC CONTROL TOWER (MEM ATCT)**

EFFECTIVE October 1, 2016



SUBJECT: Runway Surface Condition Reporting

- 1) **PURPOSE.** This agreement between Memphis ATCT and Memphis-Shelby County Airport Authority defines the procedures and responsibilities for coordination and the reporting of runway surface conditions.
- 2) **CANCELLATION.** Runway Friction Reporting Letter of Agreement, dated Oct. 24, 2013
- 3) **RESPONSIBILITY.** All parties shall be responsible for those actions and procedures assigned to them in this Letter of Agreement.
- 4) **DEFINITIONS.**
 - a. *FICON (Field Condition) report* - a Notice to Airmen (NOTAM) generated to reflect pavement surface conditions on runways, taxiways, and aprons and Runway Condition Codes (RwyCCs) if greater than 25 percent of the overall runway length and width coverage or cleared width of the runway is contaminated.
 - b. *Runway Condition Code (RwyCC)* - describes runway conditions based on defined contaminants for each runway third, in accordance with the Runway Condition Assessment Matrix (RCAM) established in FAA AC 150/5200-30D, Table 5-2. RwyCCs are used by pilots to conduct takeoff and landing performance assessments.
 - c. *Good, Good to Medium, Medium, Medium to Poor, Poor, NIL* - refer to Pilot Report (PIREP) pavement braking condition reports provided by pilots using a specific runway or other movement area pavement. Conditions are self-explanatory, with NIL indicating no braking action exists on the reported pavement.
- 5) **PROCEDURES.**

Memphis ATCT shall:

- a. Furnish Runway Braking Action Reports of "Medium", "Medium to Poor" "Poor" or "Nil" to Airport Operations as soon as received from aircrews to include the type of aircraft making the report.
- b. Solicit PIREPS of runway braking action per current FAA directives.
- c. Immediately notify Airport Operations when two consecutive "poor" PIREPs are reported on a runway that had previous PIREPs of "good" or "medium" braking action. Aircraft operations will cease on that runway until a pavement assessment can be conducted, unless Airport Operations is already conducting continuous monitoring.

- d. Cease aircraft operations on a runway when a PIREP "Nil" braking action report is received by the tower from an aircraft. Operations for that runway must be ceased prior to the next flight operation.
- e. Resume flight operations on the affected runway only after Airport Operations has returned the runway to service.
- f. Advise Airport Operations when Braking Action Reports have improved to "Good." To include the type of aircraft making the report.

MSCAA shall:

- a. Perform runway friction surveys and condition assessments as necessary.
 - b. Use observed runway conditions and other applicable criteria to generate a RwyCC for each operational runway, as appropriate.
 - c. Report RwyCCs and other pertinent surface condition information via NOTAM. This information will also be provided to ATCT via radio or telephone prior to returning any runway to service that has been chemically treated or broomed/plowed.
- 6) **DEVIATIONS.** Deviations from procedures identified herein shall be approved only after coordination and agreement between ATCT and MSCAA.
- 7) **TERMINATION.** This agreement may be terminated by either party upon giving thirty (30) days advance written notice to the other party.
- 8) **EXECUTION OF AGREEMENT.** The parties hereby agree and express their intent to execute this agreement electronically if MSCAA has a designated information processing system. The parties also hereby agree that this agreement may be executed in counterparts, each of which shall be deemed to be an original, but all of which, taken together, shall constitute one and the same agreement.
- 9) **ENTIRE AGREEMENT.** This agreement constitutes the complete agreement of the parties with respect to the subject matter hereof and supersedes all prior negotiations, stipulations, representations, or agreements, whether written or oral. Except as otherwise specifically provided herein, no amendment, modification or alteration of the provisions of this agreement shall be binding unless the same be in writing and duly executed by the parties.

The remainder of this page intentionally left blank.

[Signature page to follow.]



IN WITNESS WHEREOF, The parties hereto have executed this Letter of Agreement as of the dates written below.

**MEMPHIS-SHELBY COUNTY
AIRPORT AUTHORITY**

By: Scott A Brockman
Scott A Brockman (Sep 22, 2016)

Printed Name: Scott A. Brockman

Title: President and CEO

Date: _____

**MEMPHIS AIRPORT TRAFFIC
CONTROL TOWER**

By: Haven Melton

Printed Name: Haven Melton

Title: Facility Manager – MEM Tower

Date: 9/26/2016

Approved as to Content:

By: Terry Blue
Terry Blue (Sep 22, 2016)

Terry Blue
Vice President of Operations

Date: _____

Approved as to Form and Legality:

By: Brian Kuhn
Brian Kuhn (Sep 22, 2016)

Brian Kuhn
General Counsel

Date: _____



**LETTER OF AGREEMENT (LOA)
BETWEEN
MEMPHIS-SHELBY COUNTY AIRPORT AUTHORITY (MSCAA)
AND
FEDERAL AVIATION ADMINISTRATION (FAA)
MEMPHIS AIR TRAFFIC CONTROL TOWER (MEM-ATCT)
AND
FEDEX EXPRESS CORPORATION (FDX)
EFFECTIVE November 25, 2017**



SUBJECT: FedEx Express Ramp/Taxi Procedures

- 1) **PURPOSE.** The purpose of this LOA is to proscribe responsibilities and procedures for the movement of FDX aircraft into and out of the FDX ramp and authority over certain movement areas, as defined.
- 2) **SCOPE.** The jurisdiction and delineations in this agreement cover a portion of Taxiway Victor adjacent to the FedEx ramp during specific time periods.
- 3) **DEFINITIONS.** The movement area at Memphis International Airport (KMEM or Airport) is defined as runways and taxiways on the Airport which are utilized for taxiing, take-off, and landing of aircraft, exclusive of loading aprons and parking areas. Specific approval for entry into the movement area must be obtained from the control tower in control of the area.
- 4) **BACKGROUND.** MEM-ATCT and FDX Letter of Agreement, dated December 01, 2009 is cancelled.
- 5) **LOCATION.** During the hours of 0200-0500L, Tuesday-Saturday, and 1400-1700L, Tuesday-Sunday, control of Taxiway "V" east of Taxiway "S" will be released to the FDX Ramp Tower (RTO). The transition of control occurs automatically, or, in the rare instances of need, as coordinated. The status of Taxiway "V" full length will remain movement area as defined above. Additionally, if SMGCS or De-ice operations are enacted, applicable LOAs will dictate use and designation (e.g., non-movement with appropriate NOTAMs). RTO will be responsible for resolving all conflicts on the ramp prior to releasing aircraft to MEM-ATCT at designated spots.
- 6) **RESPONSIBILITIES OF THE MEM-ATCT.** MEM-ATCT will provide an orderly flow of traffic to/from the ramp entry/exit spots and ensure:
 - a) Potential traffic conflicts between inbound and outbound aircraft on the movement area are resolved prior to the aircraft reaching the entry spot.
 - b) Aircraft are taxied to the spot designated by the pilot.
 - c) Aircraft outbound at spots on Taxiway "V", east of Taxiway "S", during periods of RTO control, enter the movement area nearest the spot from which they called.

- 7) **RESPONSIBILITIES OF FEDEX EXPRESS RAMP TOWER (RTO).** RTO will provide an orderly flow of outbound traffic to MEM-ATCT and ensure:
- a) All aircraft are routed to spots designated in attachment (1).
 - b) Aircraft exiting the ramp between the hours of 0200-0500L, Tuesday-Saturday, at spots 4E, 4W, 7E, 7W, 8E, and 8W will be instructed to contact GC on frequency 121.9. Aircraft at Spots 5E, 5W and 6E, if programmed to depart Runway 27, will be instructed to contact GC on frequency 121.9; otherwise contact "Memphis Tower" on frequency 118.3 for assignment of a parallel runway. Remaining spots will contact GC on 121.65.
 - c) Aircraft exiting the ramp between the hours of 1400-1700L, at all spots, will be instructed to contact GC on 121.9.
 - d) Between the hours of 2300-0200L all outbound or repositioning aircraft requesting to use the movement area will have the requests coordinated with MEM-ATCT, prior to blocking access to the ramp.
 - e) Coordinate with MEM-ATCT any time there are additional circumstances that would prevent access to the ramp, as soon as possible.
- 8) **DEVIATIONS.** Deviations from procedures identified herein shall be approved only after coordination and agreement between MEM-ATCT, FEDEX EXPRESS, and MSCAA.
- 9) **TERMINATION.** This agreement may be terminated by either party upon giving thirty (30) days advance written notice to the other party.
- 10) **EXECUTION OF AGREEMENT.** The parties hereby agree and express their intent to execute this agreement electronically if MSCAA has a designated information processing system. The parties also hereby agree that this agreement may be executed in counterparts, each of which shall be deemed to be an original, but all of which, taken together, shall constitute one and the same agreement.
- 11) **ENTIRE AGREEMENT.** This agreement constitutes the complete agreement of the parties with respect to the subject matter hereof and supersedes all prior negotiations, stipulations, representations, or agreements, whether written or oral. Except as otherwise specifically provided herein, no amendment, modification or alteration of the provisions of this agreement shall be binding unless the same be in writing and duly executed by the parties.



*The remainder of this page intentionally left blank.
[Signature page to follow.]*

IN WITNESS WHEREOF, The parties hereto have executed this Letter of Agreement as of the dates written below.

**MEMPHIS-SHELBY COUNTY
AIRPORT AUTHORITY**

By: [Signature]

Title: President and CEO

**MEMPHIS AIR TRAFFIC
CONTROL TOWER**

By: [Signature]

Printed Name: Christopher J. Byrd

Title: Air Traffic Manager

Date: 11/14/17

Approved as to Content:

By: [Signature]

Title: Vice President of Operations

FEDEX EXPRESS CORPORATION

By: [Signature]

Printed Name: Tim Leonard

Title: Vice President of Operations

Date: 16-NOV-17

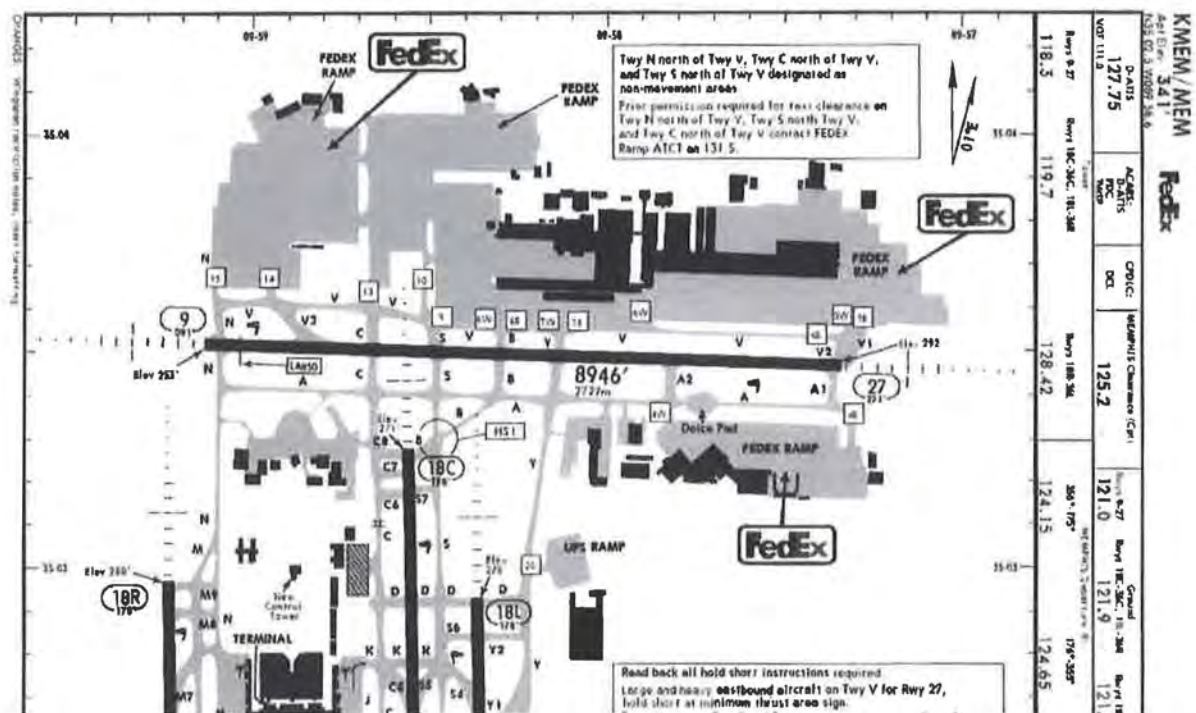
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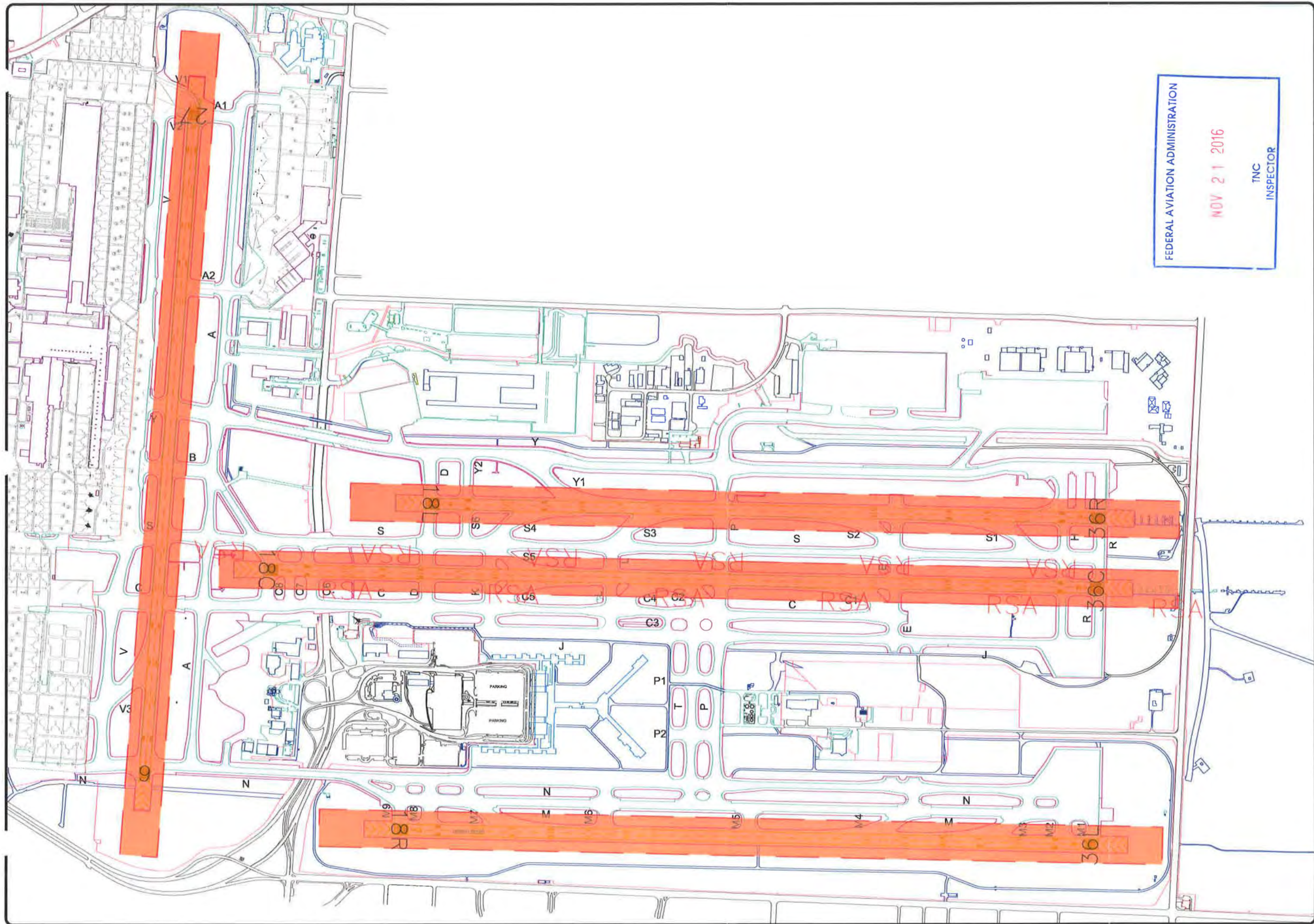
By: [Signature]

Title: Associate Airport Counsel



ATTACHMENT 1 – FAA ATCT Spots





FEDERAL AVIATION ADMINISTRATION
NOV 21 2016
TNC
INSPECTOR

| REVISIONS | | |
|-----------|------|-------------|
| MARK | DATE | DESCRIPTION |
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MSAA PROJ. NO.
NOT ASSIGNED

PROJECT:
MEMPHIS
INTERNATIONAL
AIRPORT

SHEET TITLE:
RUNWAY
SAFETY AREA
DIAGRAM

APPENDIX-2

| | |
|---|--------------------|
| DWG. FILE NAME: appendix 2 - runway safety area diagram2 | |
| REQUESTED BY: OPS/WMH | DRAWN BY: CS |
| DATE: 10-14-2016 | SHEET NO. APP-2 |
| SCALE: NO SCALE | |

**FAA SOUTHERN REGION
MODIFICATION OF AIRPORT DESIGN STANDARDS**

| BACKGROUND | | |
|---|--|---|
| 1 AIRPORT Memphis International | 2 LOCATION (CITY/STATE) Memphis, TN | 3 LOC ID MEM |
| 4 EFFECTED RUNWAY/TAXIWAY RW 18R-36L | 5 APPROACH (EACH RUNWAY) <input checked="" type="checkbox"/> PIR <input type="checkbox"/> NPI <input type="checkbox"/> VISUAL | 6 AIRPORT REF CODE (ARC) D-V (B-747) |
| 7 DESIGN AIRCRAFT (EACH RUNWAY/TAXIWAY) B777 | | |
| MODIFICATION OF STANDARDS | | |
| 8 TITLE OF STANDARD BEING MODIFIED (CITE REFERENCE DOCUMENT) FAA Advisory Circular 150/5220-22A, Section 8, Paragraph k. | | |
| 9 STANDARD REQUIREMENT The Advisory Circular states that "The first point of frangibility must be three inches or less above the top of the EMAS Bed." | | |
| 10 PROPOSED MSCAA proposes to exceed the three inch frangibility limit. | | |
| 11 EXPLAIN WHY STANDARD CANNOT BE MET (FAA ORDER 5300.1F) The recommended three inch frangibility limit is not conducive to constructing a waterproof system. ESCO, the EMAS supplier, and AC 150/5220-22A both state that the EMAS bed must be kept watertight. ALSF-2 LIR masts require penetrations through the EMAS bed which must be appropriately sealed. The seal is proposed to be located between the upper and lower plates of each approach light bar riser. This will require the installation of a waterproofing boot around the body of the riser to prevent infiltration under the EMAS bed. In order to meet the drainage requirements of the EMAS bed, the EMAS must transversely sloped away from the extended runway centerline. In order to install the waterproofing boot and maintain adequate drainage around the approach light bar riser, the installation of the boot at the closest practical point to the EMAS surface will require that the frangibility point be located above the upper plate of the light bar riser. (Please see the attached EMAS Approach Light Riser Detail.) | | |
| 12. DISCUSS VIABLE ALTERNATIVES (FAA ORDER 5300.1E) The following alternatives were considered: 1. Install the upper plate at the top of the EMAS. This alternative will not allow enough space to install the waterproofing boot below the upper plate and provide adequate drainage around the approach light riser. 2. Install the waterproofing boot above the upper plate. This alternative will result in 4 penetrations of the waterproofing surface as opposed to one at the body of the riser, thereby allowing more opportunities for water infiltration. (Please see the attached EMAS Approach Light Riser Detail - Alternatives 1 and 2.) | | |
| 13. STATE WHY MODIFICATION WOULD PROVIDE ACCEPTABLE LEVEL OF SAFETY (FAA ORDER 5300.1E) Product Standards Acceptability: Installing the waterproofing boot around the light bar riser provides the optimum waterproofing condition to meet the requirements of the Advisory Circular, thereby maximizing the lifespan of the system. Level of Safety Acceptability: Raising the upper frangible fuse bolts above the 3" maximum limit will not impair the level of safety. The upper frangible fuse bolts will protect a lighter aircraft that may not crush the EMAS bed. If a heavier aircraft traverses the EMAS bed, it is anticipated that the lower frangible fuse bolts will work in conjunction with the upper frangible fuse bolts thus enhancing the effect of the proposed modification with two points of frangibility. Local Laws & Regulations Acceptability: There are no governing local laws and regulations. | | |
| ATTACH ADDITIONAL SHEETS AS NECESSARY - INCLUDE SKETCH/PLAN | | |

FEDERAL AVIATION ADMINISTRATION

NOV 21 2016

TNC
INSPECTOR

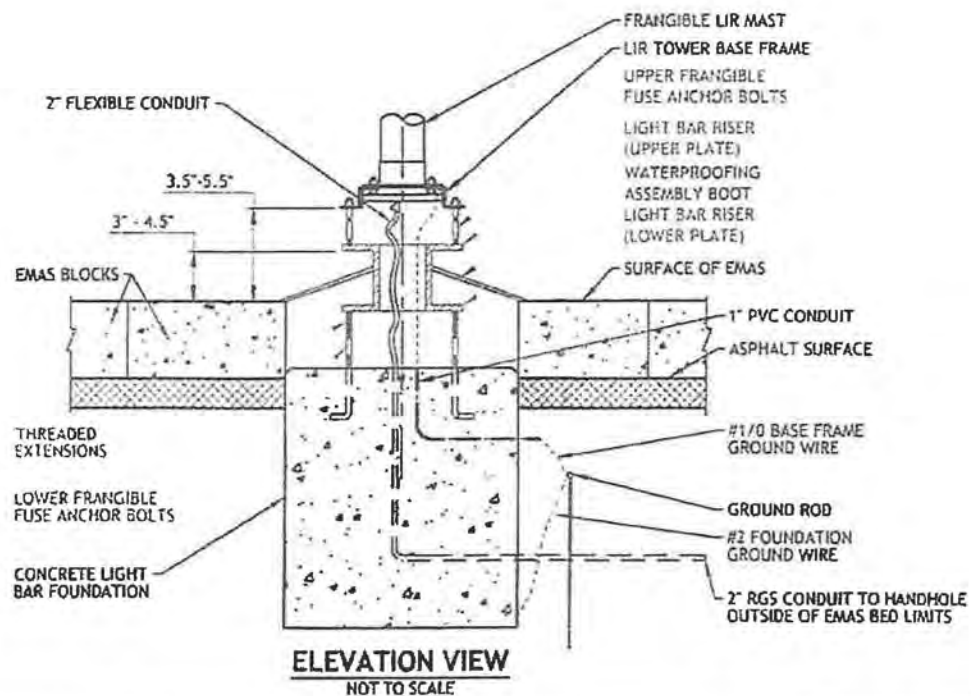
**FAA SOUTHERN REGION
MODIFICATION OF AIRPORT DESIGN STANDARDS**

| | | | | | |
|--|----------------------------------|---|--------|--------------------------------------|--|
| MODIFICATION: EMAS/NAVAID First Point of Frangibility | | LOCATION: Memphis International Airport | | PAGE 2 OF 2 | |
| 14. SIGNATURE OF ORIGINATOR: <i>James A. Hay</i> James A. Hay, Director of Development | | 15. ORIGINATOR'S ORGANIZATION: Memphis/Shelby County Airport Authority | | 16. TELEPHONE: 901-922-8033 | |
| 17. DATE OF LATEST FAA SIGNED ALP: 08/23/2010 | | | | | |
| 18. ADO RECOMMENDATION: <i>Approve</i> | | 19. SIGNATURE: <i>Cynthia Wills</i> | | 20. DATE: <i>8-27-12</i> | |
| 21. FAA DIVISIONAL REVIEW (AT, AF, FS): | | | | | |
| ROUTING SYMBOL | SIGNATURE | DATE | CONCUR | NON-CONCUR | |
| ASD-620H | <i>Raymond</i> | 8/27/12 | ✓ | | |
| | | | | | |
| | | | | | |
| COMMENTS: | | | | | |
| 22. AIRPORTS' DIVISION FINAL ACTION: | | | | | |
| <i>Recommend HQ approval.</i> | | | | | |
| <input type="checkbox"/> UNCONDITIONAL APPROVAL | | <input checked="" type="checkbox"/> CONDITIONAL APPROVAL | | <input type="checkbox"/> DISAPPROVAL | |
| DATE: <i>9/5/2012</i> | SIGNATURE: <i>[Signature]</i> | TITLE: RSA Program Manager | | | |
| CONDITIONS OF APPROVAL: <i>THE POINT OF FRANGIBILITY ABOVE THE BED. SHOULD BE AS LOW AS PRACTICABLE, PREFERABLY 3.5", IF 3" CANNOT BE ACHIEVED.</i> | | | | | |

FEDERAL AVIATION ADMINISTRATION

NOV 21 2012

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Memphis Shelby County Airport Authority,
Memphis International Airport

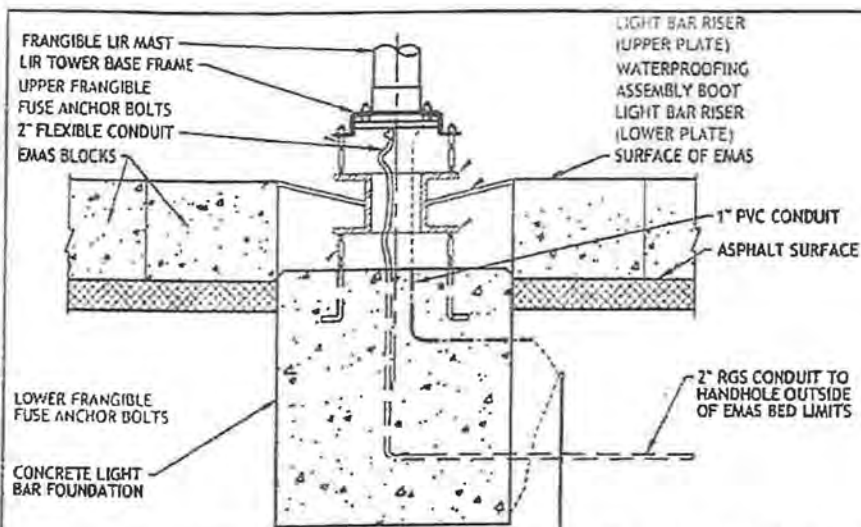
FAA Modification to Standards
EMAS Approach Light Riser Detail

FEDERAL AVIATION ADMINISTRATION

ARMSTRONG.

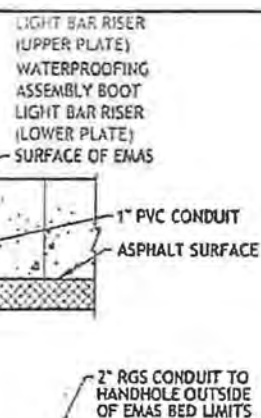
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ALTERNATIVE 1 - ELEVATION VIEW
NOT TO SCALE

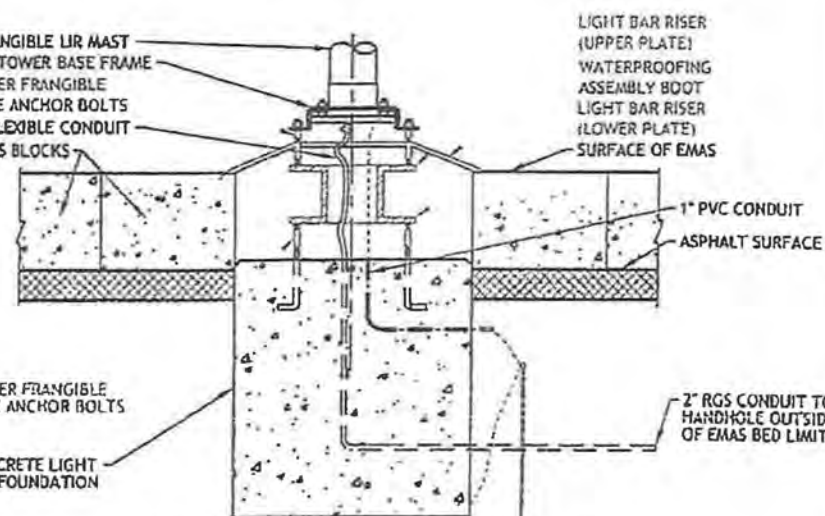
ALTERNATIVE 1 - NOTE:
NEGATIVE SLOPE OF WATERPROOFING ASSEMBLY BOOT WILL NOT PROVIDE ADEQUATE DRAINAGE AROUND LIGHT BAR.



2\" RGS CONDUIT TO HANDHOLE OUTSIDE OF EMAS BED LIMITS

FRANGIBLE LIR MAST
LIR TOWER BASE FRAME
UPPER FRANGIBLE FUSE ANCHOR BOLTS
2\" FLEXIBLE CONDUIT
EMAS BLOCKS

LOWER FRANGIBLE FUSE ANCHOR BOLTS
CONCRETE LIGHT BAR FOUNDATION



ALTERNATIVE 2 - ELEVATION VIEW
NOT TO SCALE

ALTERNATIVE 2 - NOTE:
PLACING WATERPROOFING ASSEMBLY BOOT ABOVE UPPER PLATE WILL CREATE MORE OPPORTUNITIES FOR WATER INFILTRATION.

LIGHT BAR RISER (UPPER PLATE)
WATERPROOFING ASSEMBLY BOOT
LIGHT BAR RISER (LOWER PLATE)
SURFACE OF EMAS

2\" RGS CONDUIT TO HANDHOLE OUTSIDE OF EMAS BED LIMITS

1\" PVC CONDUIT
ASPHALT SURFACE

Memphis Shelby County Airport Authority,
Memphis International Airport

FAA Modification to Standards
EMAS Approach Light Riser Detail
Alternatives 1 and 2

Table 34

AIRCRAFT FLEET MIX FORECAST
Master Plan Update
Memphis International Airport

The forecasts presented in this table were prepared using the information and assumptions described in the accompanying text. Inevitably, some of the assumptions used to develop the forecasts will not be realized and unanticipated events and circumstances may occur. Therefore, there are likely to be differences between the forecast and actual results, and those differences may be material.

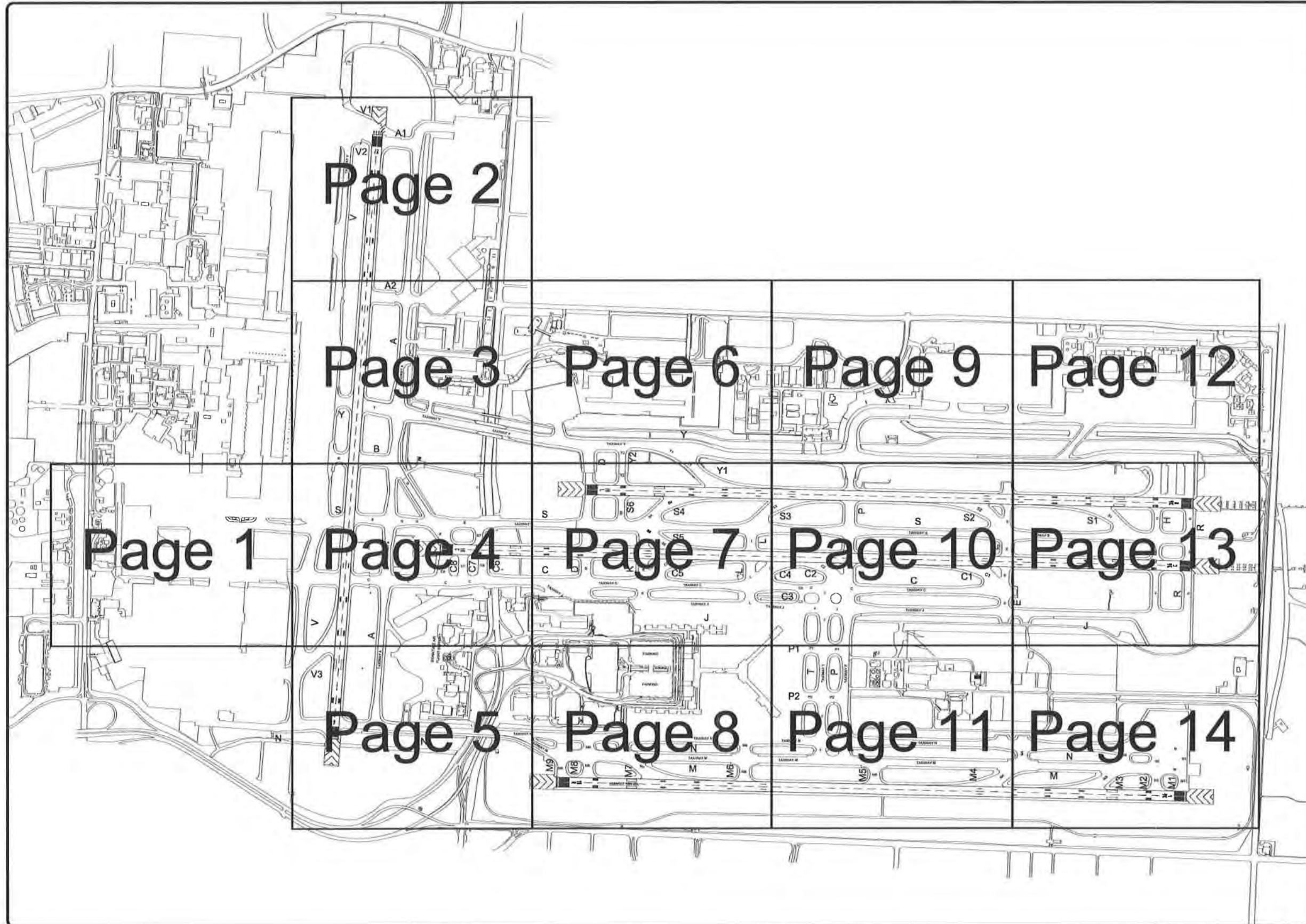
| | 2007 | 2012 | 2017 | 2027 |
|----------------------------------|---------------|---------------|---------------|---------------|
| Passenger aircraft | | | | |
| Mainline aircraft | | | | |
| Widebody | | | | |
| A332 | 0.4% | 0.7% | 0.7% | 0.3% |
| B747 | 0.0% | 0.3% | 0.3% | 0.9% |
| Subtotal | 0.4% | 1.0% | 1.0% | 1.2% |
| Narrowbody | | | | |
| A319 | 5.3% | 5.1% | 5.0% | 4.4% |
| A320 | 8.5% | 7.8% | 8.0% | 7.1% |
| B717 | 2.5% | 2.7% | 2.3% | 1.5% |
| B737 | 0.0% | 0.0% | 7.0% | 13.1% |
| B757 | 1.8% | 1.7% | 2.0% | 0.0% |
| DC-9 | 15.9% | 10.6% | 0.0% | 0.0% |
| MD-80 | 2.9% | 2.2% | 2.2% | 0.0% |
| Subtotal | 36.7% | 30.7% | 26.9% | 26.1% |
| Regional aircraft | | | | |
| CRJ-200 | 40.2% | 36.8% | 31.2% | 30.9% |
| CRJ-700 | 2.8% | 3.7% | 7.0% | 8.0% |
| CRJ-900 | 2.6% | 8.3% | 15.9% | 18.4% |
| E70 | 0.4% | 0.3% | 0.7% | 0.9% |
| E75 | 0.0% | 3.4% | 2.8% | 11.0% |
| ERJ | 0.4% | 0.3% | 0.0% | 0.0% |
| ERJ | 6.4% | 6.1% | 6.0% | 3.6% |
| SF3 | 10.2% | 9.2% | 3.6% | 0.0% |
| Subtotal | 63.0% | 68.3% | 72.1% | 72.8% |
| Total passenger aircraft | 103.0% | 100.0% | 100.0% | 100.0% |
| Air cargo aircraft | | | | |
| Widebody | | | | |
| A300 | 20.4% | 18.8% | 19.0% | 17.0% |
| A310 | 15.8% | 14.5% | 13.9% | 13.1% |
| B747 | 0.4% | 0.7% | 1.4% | 1.6% |
| B767 | 0.0% | 0.7% | 1.4% | 2.2% |
| B777 | 0.0% | 3.9% | 5.4% | 6.7% |
| DC10 | 8.1% | 6.2% | 5.8% | 0.0% |
| MD10 | 16.9% | 16.3% | 15.6% | 20.2% |
| MD11 | 8.3% | 10.8% | 11.4% | 10.7% |
| Subtotal | 69.8% | 72.0% | 72.8% | 71.5% |
| Narrowbody | | | | |
| B727 | 25.8% | 12.6% | 0.0% | 0.0% |
| B757 | 0.4% | 11.5% | 23.1% | 24.3% |
| DC8 | 0.4% | 0.0% | 0.0% | 0.0% |
| DC9 | 0.4% | 0.0% | 0.0% | 0.0% |
| Subtotal | 27.0% | 24.1% | 23.1% | 24.3% |
| Turboprops/prop | 3.2% | 3.9% | 4.1% | 4.2% |
| Total air cargo aircraft | 100.0% | 100.0% | 100.0% | 100.0% |
| General aviation aircraft | | | | |
| Piston | 25% | 25% | 20% | 15% |
| Turboprop | 20% | 15% | 10% | 10% |
| Corporate jet - heavy | 5% | 7% | 10% | 12% |
| Corporate jet - light | 50% | 53% | 60% | 63% |
| Total | 100% | 100% | 100% | 100% |
| Military aircraft | | | | |
| CSA/C-17 | 100% | 100% | 100% | 100% |

Note: Totals may not add due to rounding.

Sources: Historical - Memphis Shelby County Airport Authority records and Official Airline Guides, Inc. online database.
 Forecast - Jacobs Consultancy, July 2008.

NOV 21 2015

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**Memphis**
INTERNATIONAL AIRPORT

FEDERAL AVIATION ADMINISTRATION

NOV 21 2016

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SHEET TITLE:
**Appendix 4
Signage Plan
Key**

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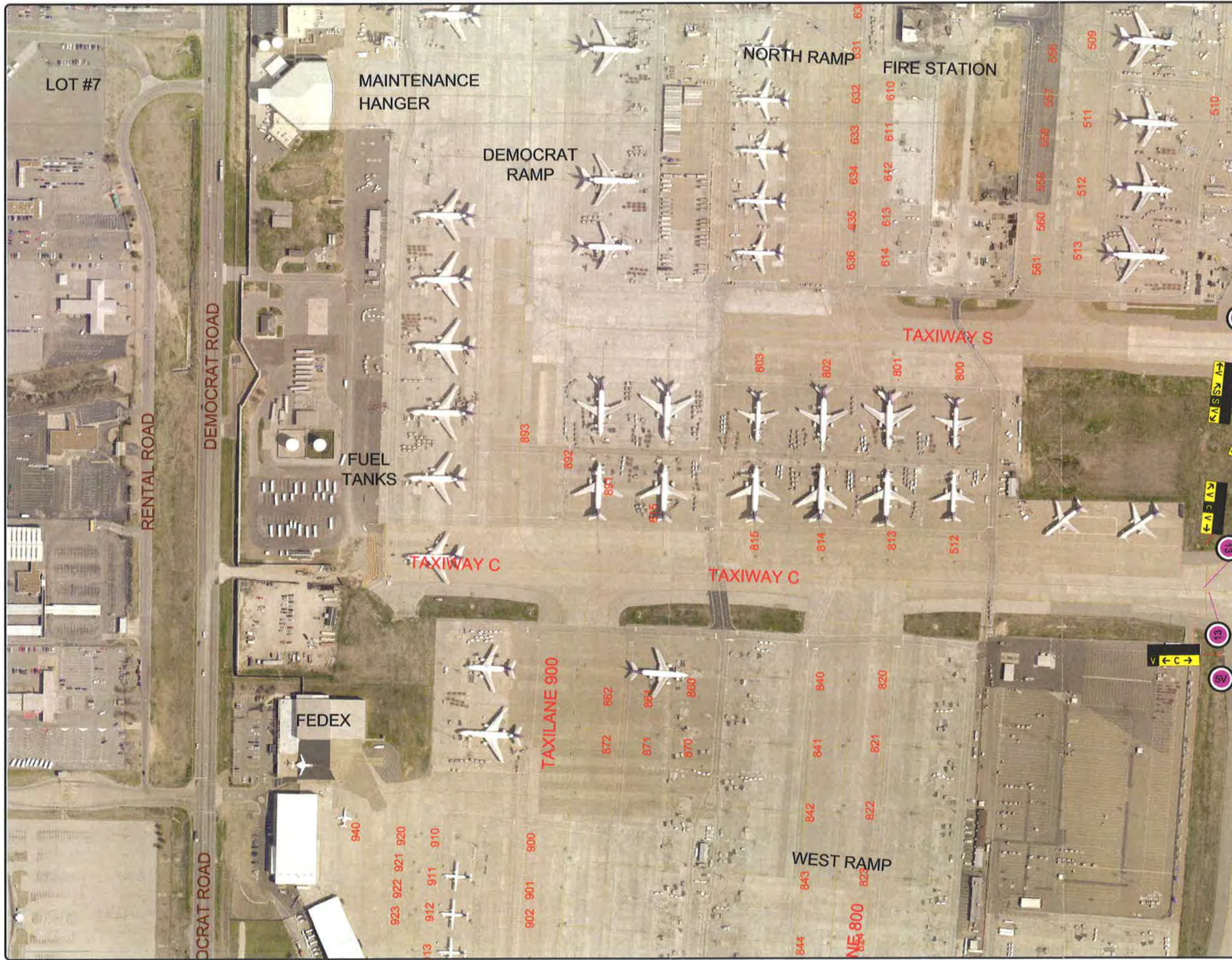
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VEHICULAR TRAFFIC
SIGNAGE LEGEND

INDICATES A STOP SIGN WITH
AN ACCOMPANYING
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AS EITHER ONE OF THE
FOLLOWING SIGNS

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FOR CLARITY, THE
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| SCALE | SCALE | | |
| 1" = 100' | 1" = 100' | | |



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VEHICULAR TRAFFIC SIGNAGE LEGEND

INDICATES A STOP SIGN WITH AN ACCOMPANYING INSTRUCTION SIGN DEPICTED AS EITHER ONE OF THE FOLLOWING SIGNS.

DO NOT PROCEED

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FEDERAL AVIATION ADMINISTRATION

NOV 21 2016

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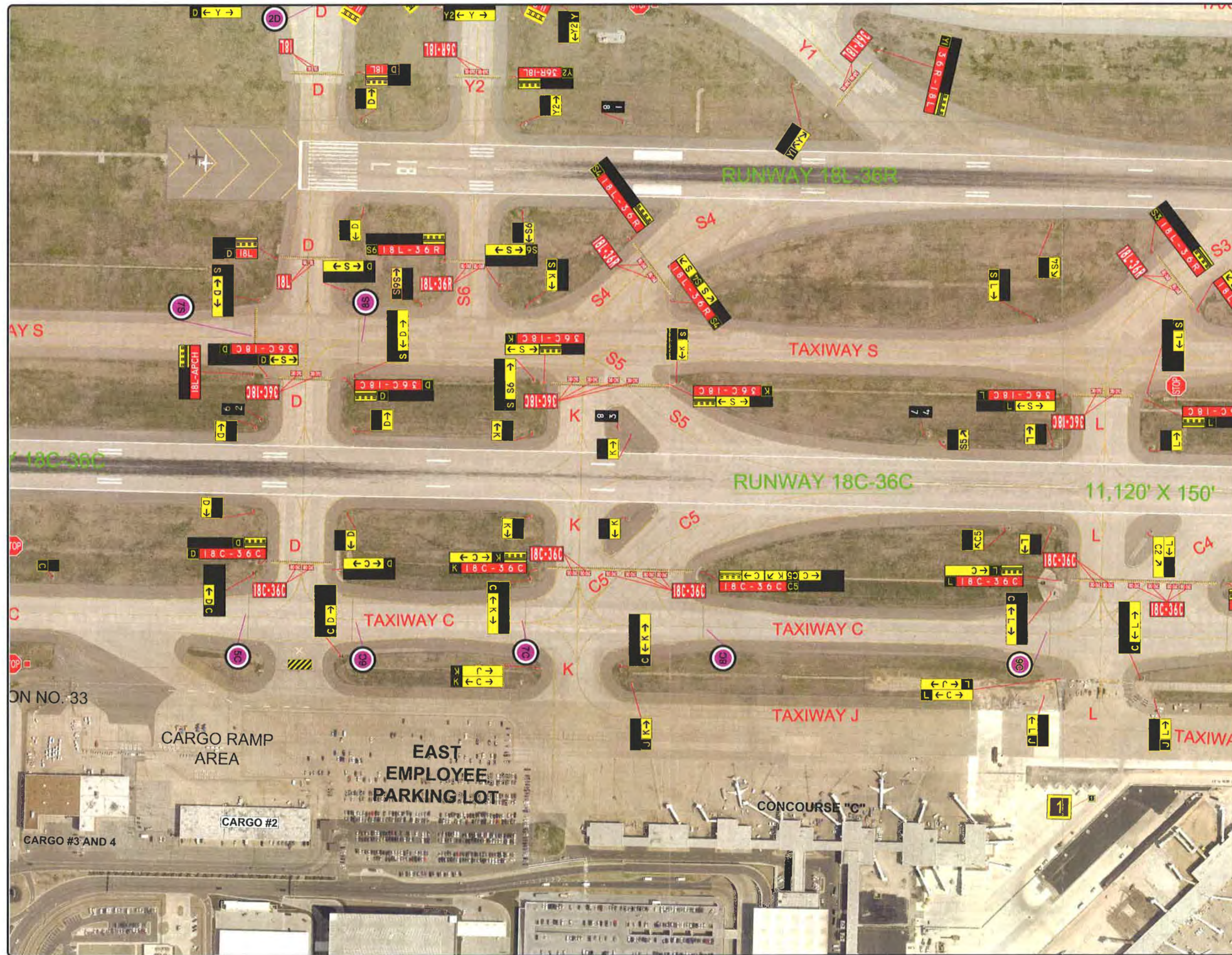
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Appendix 4
Signage and
Marking Plan

Page 6

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VEHICULAR TRAFFIC SIGNAGE LEGEND

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VEHICULAR TRAFFIC SIGNAGE LEGEND

INDICATES A STOP SIGN WITH AN ACCOMPANYING INSTRUCTION SIGN DEPICTED AT EITHER ONE OF THE FOLLOWING SIZES:

18" X 24" (MIN)

30" X 48" (MAX)

FOR CLARITY, THE YIELD TO AIRCRAFT SIGNS DEPICTED WITHOUT TEXT

DO NOT REPRODUCE CONTACTS

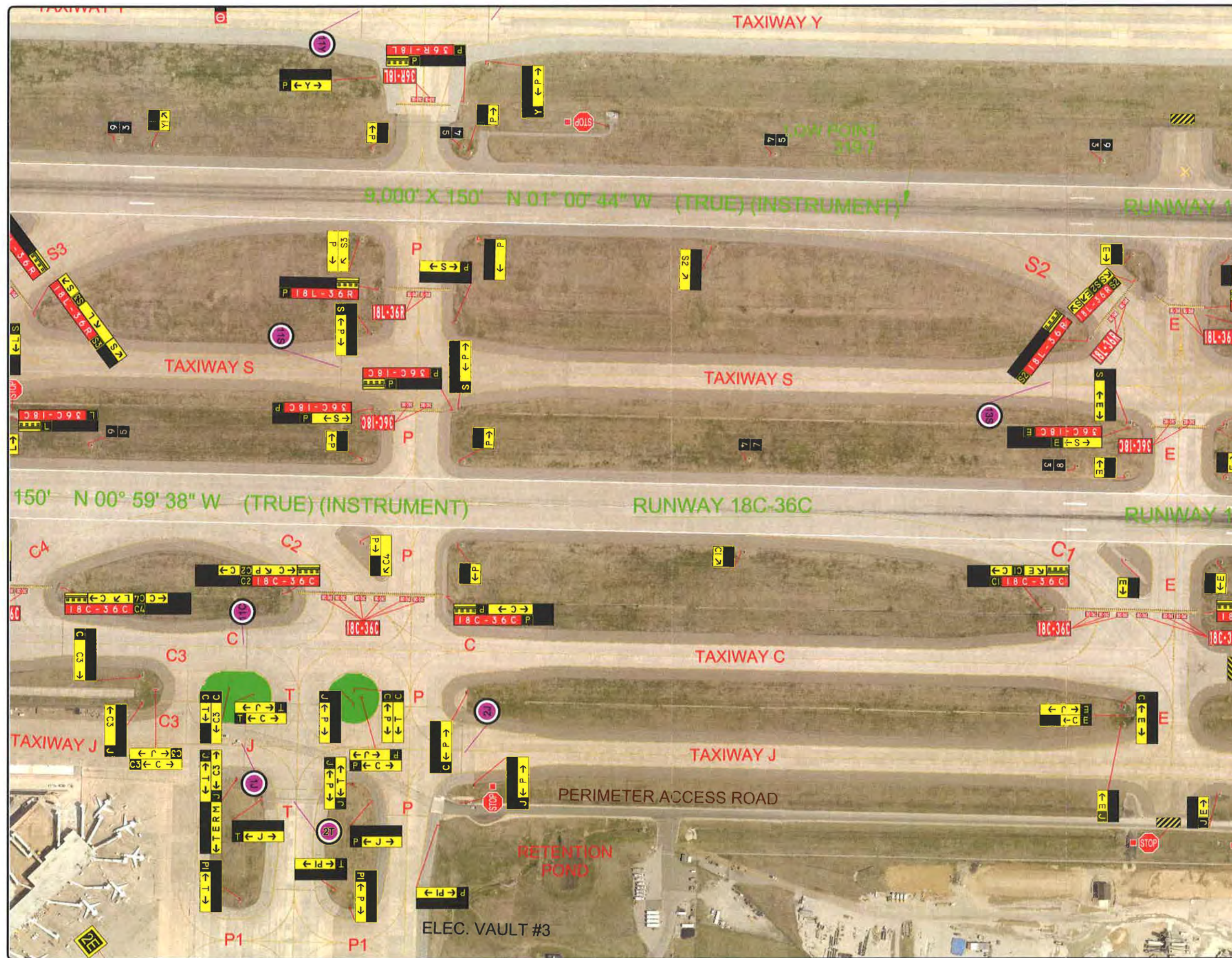
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| Appendix 4 Signage and Marking Plan | | | |
| Page 8 | | | |
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VEHICULAR TRAFFIC SIGNAGE LEGEND

INDICATES A STOP SIGN WITH AN ACCOMPANYING INSTRUCTION SIGN DEPICTED AS EITHER ONE OF THE FOLLOWING SIGNS:

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| | 06128 (PCY) 20 |
| | 06129 (PCY) 20 |

FOR CLARITY, THE YIELD TO AIRCRAFT SIGN IS DEPICTED WITHOUT TEXT

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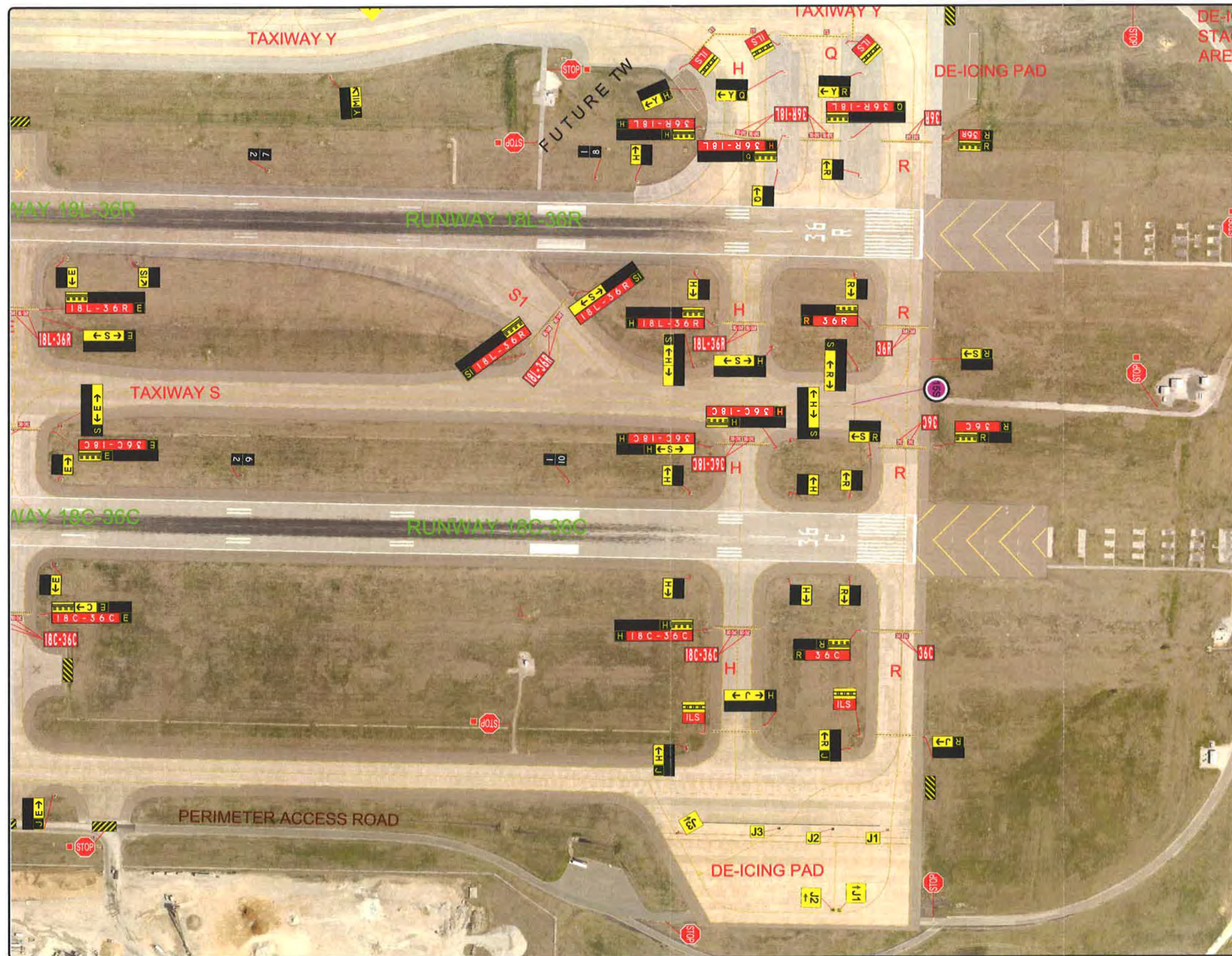
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Appendix 4
Signage and
Marking Plan

Page 10

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VEHICULAR TRAFFIC SIGNAGE LEGEND

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Appendix 4
Signage and
Marking Plan

Page 13

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13



VEHICULAR TRAFFIC
SIGNAGE LEGEND

INDICATE A STOP SIGN WITH
AN ACCOMPANYING
INSTRUCTION SIGN DEPICTED
AS EITHER ONE OF THE
FOLLOWING SIGNS:



FOR CLARITY, THE
YIELD TO AIRCRAFT
SIGN IS DEPICTED
WITHOUT TEXT

DO NOT PROCEED
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FEDERAL AVIATION ADMINISTRATION

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Appendix 4
Signage and
Marking Plan

Page 14

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AIRCRAFT RESCUE AND FIREFIGHTING EQUIPMENT

| Vehicle # | Type Vehicle | Year/Make | Condition of vehicle | Personnel per shift (min/aux) | Agent | Water (Gal) | Foam (Gal) | AFFF (Gal) | Dry Chemical (pounds) | Halon/ Halotron | Remarks | Radio Equipment |
|---------------|--|---------------------------------|----------------------|-------------------------------|-------|-------------|------------|------------|-----------------------|---------------------|----------------------|---------------------------|
| A-1* | Chief's vehicle Rapid response | 2005 Danko Ford F-550 | Good | 2 / 0 | A | | | 300 | 480 | 17 lb Halon | | Tower MFD Net |
| A-2* | Foam pumper With Rhino | 2001 Oshkosh T-1 3000 | Good | 3 / 0 | A | 3000 | | 420 | 480 | | 480 lbs PKP | Tower MFD Net |
| | | | | | B | 1200 gpm | | | | | | |
| A-3* | Foam pumper with Snozzle | 2012 Oshkosh Striker Snozzle | Excellent | 3 / 0 | A | 3000 | | 420 | | 480 lb Halotron | | Tower MFD Net |
| | | | | | B | 1200 gpm | | | | | | |
| A-4 | Rapid Response (Reserve) | 1997 Ford F-350 | Good | 2 / 0 | A | | | | 350 | 500 lbs Halon | | Tower MFD Net |
| | | | | | B | | | | | | | |
| A-5 | Foam pumper with Snozzle (Reserve) | 2000 Oshkosh T-1 3000 | Good | 3 / 0 | A | 3000 | | 420 | | 500 lbs Halon | | Tower MFD Net |
| | | | | | B | 1200 gpm | | | | | | |
| FedEx A-30 | Rapid Intervention (Mutual Aid) | 2005 Ford F-550 | Good | 2 / 0 | A | | | 150 | 500 | | 500 lbs PKP | Tower FedEx MFD Net |
| | | | | | B | | | | | | | |
| FedEx A-35 | Foam pumper (Mutual Aid) (Reserve) | 1999 Oshkosh T-1500 | Good | 2 / 0 | A | 1500 | | 210 | | 500 lbs Halotron | | Tower FedEx MFD Net |
| | | | | | B | 1500 gpm | | | | | | |
| FedEx A-36 | Foam pumper (Mutual Aid) | 2012 Oshkosh Striker 3000 | Excellent | 3 / 0 | A | 3000 | | 420 | | 500 lbs Halotron | | Tower FedEx MFD Net |
| | | | | | B | 2000 gpm | | | | | | |
| TNANG A-24 | Foam pumper (Mutual Aid) | 2006 Oshkosh P-19 Striker | Good | 2 / 0 | A | 1500 | 180 | | | | | Tower TNANG MFD Net |
| | | | | | B | 1200 gpm | | | | | | |
| TNANG A-25 | Foam Pumper (Mutual Aid) | 1995 Teledyne P-23 | Good | 2 / 0 | A | 3300 | | 500 | 500 | | 500 lbs PKP | Tower TNANG MFD Net |
| | | | | | B | 1500 gpm | | | | | | |
| TNANG A-26 | Foam Pumper (Mutual Aid) | 1994 Teledyne P-23 | Good | 2 / 0 | A | 3300 | | 500 | 500 | | 500 lbs PKP | Tower TNANG MFD Net |
| | | | | | B | 1500 gpm | | | | | | |
| TNANG A-28 | Water Tanker (Mutual Aid) | 2012 MKE | Excellent | 2 / 0 | A | 4000 | | | | | Water Tanker Only | No Radios |
| TNANG A-31 | Rapid Response | 2012 MKE | Excellent | 2 / 0 | A | 500 | | 55 | | | | Tower TNANG MFD Net |
| | | | | | B | 75 gpm | | | | | | |

FD: Memphis Fire Department

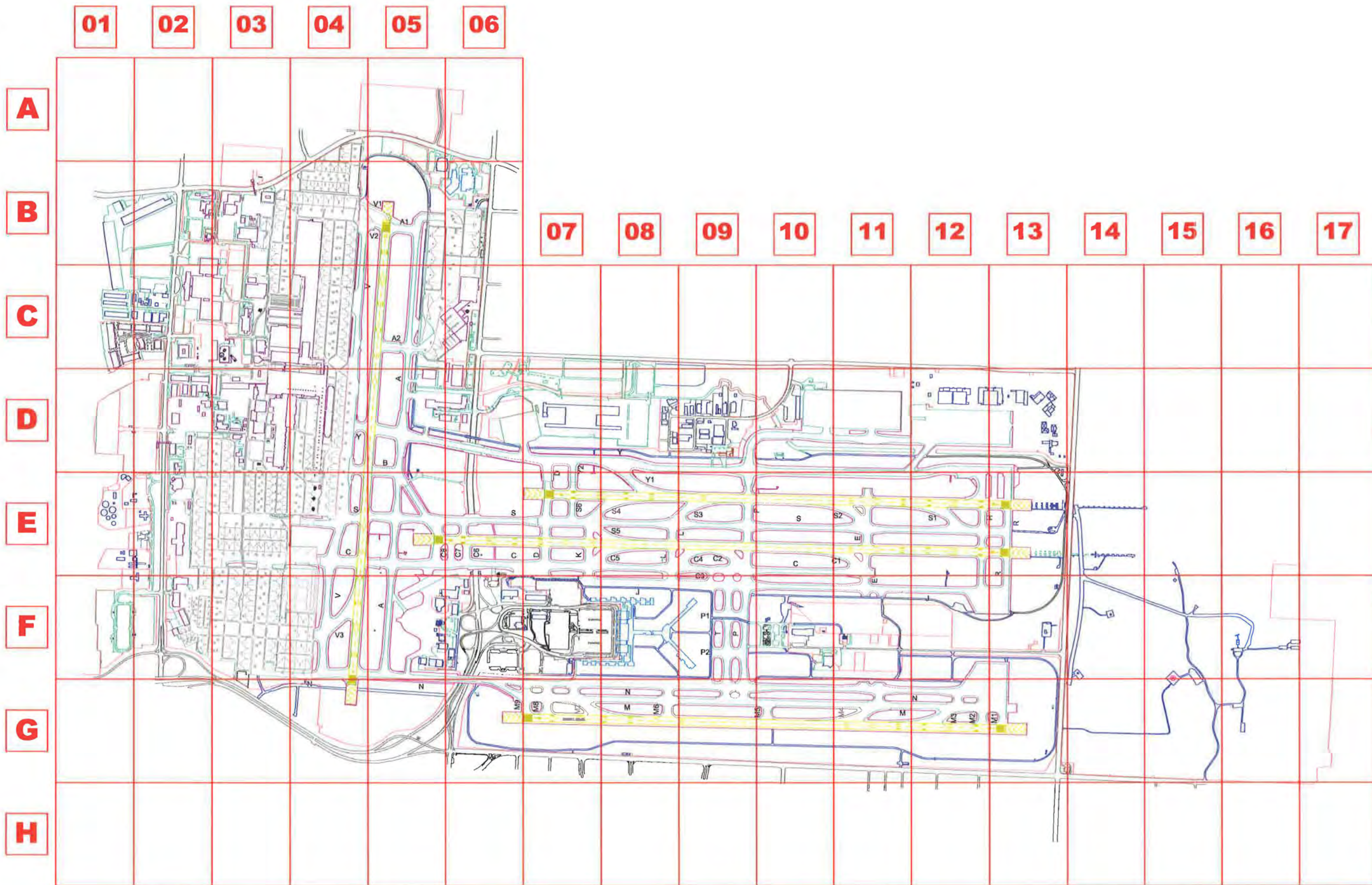
A = Quantities (water in gallons; dry chemical in pounds; pre-mix in gallons)

TNANG: Tennessee Air National Guard

B = Pump rates for water

* Denotes Primary Equipment. All other equipment is backup.

FedEx and TNANG ARFF Equipment is listed only as Mutual Aid.



FEDERAL AVIATION ADMINISTRATION

NOV 21 2016

TNC
INSPECTOR

| REVISIONS | | |
|-----------|------|-------------|
| MARK | DATE | DESCRIPTION |
| | | |
| | | |
| | | |
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| | | |
| | | |

MSAA PROJ. NO.
NOT ASSIGNED

PROJECT:
**MEMPHIS
INTERNATIONAL AIRPORT**

SHEET TITLE:
**AIRPORT
EMERGENCY
GRID MAP**

APPENDIX-6

UWG, FILE NAME:
appendix 6 - airport emergency grid map
REQUESTED BY: OPS/WMH
DATE: 10-14-2016
SCALE: NO SCALE
DRAWN BY: CS
SHEET NO.
APP-6



Memphis International Airport
Fuel Safety Program
Fixed Facility Inspection Form



Inspection Type (circle): **Quarterly** **Follow-Up** **Special**

Date: _____ **Fueling Agency:** _____ **Representative:** _____

Asset #: _____ **Product:** _____ **Location:** _____

Applicable requirements are referenced from NFPA 407, 10, 30, and 704

| | | NFPA | S | U | N/A | R |
|--|--|-------------------------|---|---|-----|---|
| 1. Security Fence | Complete, protected, good condition, SECURE | 407- 5.2.1 | | | | |
| 2. "NO SMOKING" Label | (3) inch letters, located at entrances, tanks | 407-4.2.12.2.1 | | | | |
| 3. "FLAMMABLE" Label | (3) inch letters, located on tanks & throughout facility | 704-4.3 | | | | |
| 4. Placards or 704 Label | Product # or 704 located on each tank | 704- 4.3/30-21.7.2.1 | | | | |
| 5. Product Type Label | (3) inch letters, ID on pumps, tanks, piping | 407- 2.3.7 | | | | |
| 6. "EMERGENCY FUEL SHUTOFF" Sign | (2) inch letters, sign bottom 7 ft. above grade ea. LOC | 407-5.1.11.1/4.1.11.1 | | | | |
| 7. EFSO Directional Sign | (2) inch letters, action or arrow, near operation | 407-6.1.11.4.2 | | | | |
| 8. Fire Extinguisher Sign/Labeled | (2) inch lettering, required on compartment only | 407 - 4.2.7.3 | | | | |
| 9. Fire Extinguishers (portables) | Located 30 ft. (40B minimum) ABC prohibited, | 10-6.3/5.2.2/5.4.1.3/ | | | | |
| 10. Fire Extinguishers (load station) | 1 per station or rack (40-B:C, 20lb dry chem.) NO ABC | 407 - 5.1.10 | | | | |
| 11. Wheeled Extinguisher | Located 50 ft. (80B minimum) | 410- 10.2.11 | | | | |
| 12. Fire Extinguisher Labels/Serviced | Instruction, maintenance, UL labels present and visible | 10-6.1.3.9/7.3.4.1 | | | | |
| 13. Cleanliness/FOD/Obstructions | NO LOOSE OBJECTS, | 30-6.9.4/6.9.5 | | | | |
| 14. Bonding Cables | Clean, unpainted, No worn, damaged cables or clamp | 407-4.1.5/4.2.5 | | | | |
| 15. Deadman Control Operations | Not worn, damaged rope, not bypassed or nozzle latch | 407-4.2.6/5.1.7.1 | | | | |
| 16. Fuel Leaks | No leaks from tank, hoses, piping or connections | 30-6.9.2 | | | | |
| 17. Hose Conditions (loading stations) | Not blistered, separated, damaged, kinked or leaking | 407-4.2.9/4.2.9.7 | | | | |
| 18. Nozzles | Not dragged/Properly stowed | 407- 4.2.3.3 | | | | |
| 19. All piping protected | Strong, secured and protected, supported | 407-5.1.3 | | | | |
| 20. Confined Spaces | Properly labeled and secured | 350- 4.4/4.5 | | | | |
| 21. Emergency Fuel Shutoff | Accessible, labeled at each fuel position, Mode of operation displayed, records of system device testing | 407-4.1.11/4.2.4/ 5.1.9 | | | | |
| 22. Dry Break Couplers/Adapters | Self-closing dry break, bottom load valve security | 407-5.1.7.3 | | | | |
| 23. Ignition Sources | Enclosed/sealed wires and boxes | 30-7.3.1 | | | | |
| 24. Vehicle Regeneration Area | 100 ft. away, markings, signs, debris | 407 - 6.2.10.4 | | | | |
| 25. Other | Any other conditions considered a safety concern | 407/30/10/30A/AHJ | | | | |

Remarks:

This facility was inspected by _____ of the Memphis Fire Department, ARFF Division.

Print Here

(Passed) _____ 1st Quarter _____ 2nd Quarter _____ 3rd Quarter _____ 4th Quarter

(FAILED) _____ Unit Removed from Service (Record details in remarks)

Fuel Agency Representative, I _____ confirm the inspection was completed.

Sign Here

Original Date: November 1, 2016

FAA Approval:

Revision Date: July 10, 2018

FEDERAL AVIATION ADMINISTRATION

111-13 2018

TWC
INSPECTOR



**Memphis International Airport
Aviation Fuel Safety Program
Vehicle/Cart Inspection Form**



Inspection Type (circle): **Quarterly** **Follow-Up** **Special**

Date: _____ **Fueling Agency:** _____ **Representative:** _____

Asset #: _____ **Product:** _____ **Location:** _____

For a Fueling Cart Numbers 1 through 23 ONLY

| | | NFPA 407 | S | U | N/A | R |
|--|---|---|----------|----------|------------|----------|
| 1. "NO SMOKING" | (3) inch letters, located each side, rear | 6.1.11.3/6.1.11.3.1-3 | | | | |
| 2. "FLAMMABLE" | (3) inch letters, located each side and rear | 6.1.11.3/6.1.11.3.1-3 | | | | |
| 3. Placards | *Tankers* only, Product number, Located (4) sides | 6.1.11.6 | | | | |
| 4. Product Type | (3) inch letters, located on all sides | 6.1.11.3/6.1.11.3.1-3 | | | | |
| 5. "EMERGENCY FUEL SHUTOFF" | (2) inch letters, located near operation | 6.1.11.4.1 | | | | |
| 6. EFSO Directional Sign | (2) inch letters, action or arrow, near operation | 6.1.11.4.2 | | | | |
| 7. Fire Extinguisher Sign | (2) inch lettering, required on compartment only | 6.1.10/6.1.10.7 | | | | |
| 8. Proper Parking | (50') from building, (10') from equipment/vehicles | 6.2.1.1 (1-4) | | | | |
| 9. Tires/Wheel Chocks | Tread condition/No belts or separation, chocks avail. | 6.2.8.1/6.2.11.9 | | | | |
| 10. Bonding Cables | Clean, unpainted, No worn, damaged cables or clamp | 6.1.5.4/4.2.5 | | | | |
| 11. Deadman Control Operations | Not worn, damaged rope, not bypassed, no nozzle latch | 6.1.7.1, .3/6.2.11.2-3 | | | | |
| 12. Fuel Leaks | No leaks from tank, hoses, or connections | 6.2.8.2 | | | | |
| 13. Aircraft Fuel Hose | Not blistered, separated, damaged, kinked or leaking | 4.2.9/4.2.9.7 | | | | |
| 14. Interlock-override/Parking Brake | Brake/chocks in place, integral system prevent moving | 6.2.12.4/6.1.12.6 | | | | |
| 15. All piping protected | Strong, secured and protected, supported | 6.1.3 | | | | |
| 16. Dome Tank Lid/Gasket | Forward hinged, not worn damaged or missing | 6.1.2.9.1-.2 | | | | |
| 17. All Batteries | Separate engine/fuel/drains, sealed & vented | 6.1.6.1 | | | | |
| 18. EFSO both sides and platform if applicable | Accessible, Operational, Mode of operation displayed | 6.1.9.1/6.1.9.4 | | | | |
| 19. Fire Extinguishers – Tankers (2) Hydrant Carts (1) (40B:C/20lb dry) | Accessible, Charged, Sealed, ABC Prohibited Labels (NFPA 10), instruction, maintenance, UL visible | 6.1.10.1/6.1.10.2 10-6.1.3.9/7.3.4.1 | | | | |
| 20. Vehicle Maintenance | Proper repair, no excess grease, oil, or combustibles | 6.2.8/6.2.8.1-.4 | | | | |
| 21. Dry Break Couplers/Adapters | Self-closing dry break, bottom load valve security | 5.1.7.3/6.1.3.12.2.1 | | | | |
| 22. Nozzles | Properly Stowed/Not dragged | 4.2.3.3/6.1.12.6 | | | | |
| 23. Other | Any other condition considered a safety concern | AHJ/NFPA | | | | |
| 24. Cab/Evidence of Smoking | No matches, lighter, cigarettes, no ashtray//label in cab | 6.1.10.8/6.1.11.5 | | | | |
| 25. Exhaust/Spark Arrester | Securely fastened, shielding, turbo no arrester, | 6.1.13 | | | | |
| 26. Vehicle fuel tank | Made of metal, supported | 6.1.2.10 | | | | |
| 27. Lighting | Enclosed/sealed wires, weatherproof, operational lamp | 6.16.2.1/6.1.6.6 | | | | |
| 28. Engine Compartment | OEM intake, insulated spark plugs, | 6.1.6.3/6.1.2.2 | | | | |
| 29. DPF Regeneration Vehicle | Regen requirements | 6.1.13.3.1 | | | | |

Remarks:

This equipment was inspected by _____ of the Memphis Fire Department, ARFF Division.

Print Here

(Passed) ____ 1st Quarter/Blue ____ 2nd Quarter/Orange ____ 3rd Quarter/Green ____ 4th Quarter/Yellow

(FAILED) ____ Red Tag Applied and Unit Removed from Service **(Record details in remarks)**

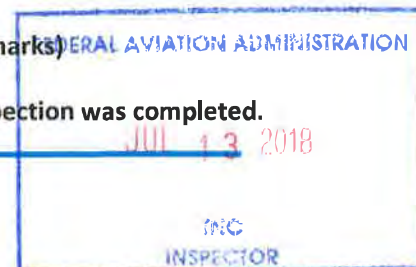
Fuel Agency Representative, I _____ **confirm the inspection was completed.**

Sign Here

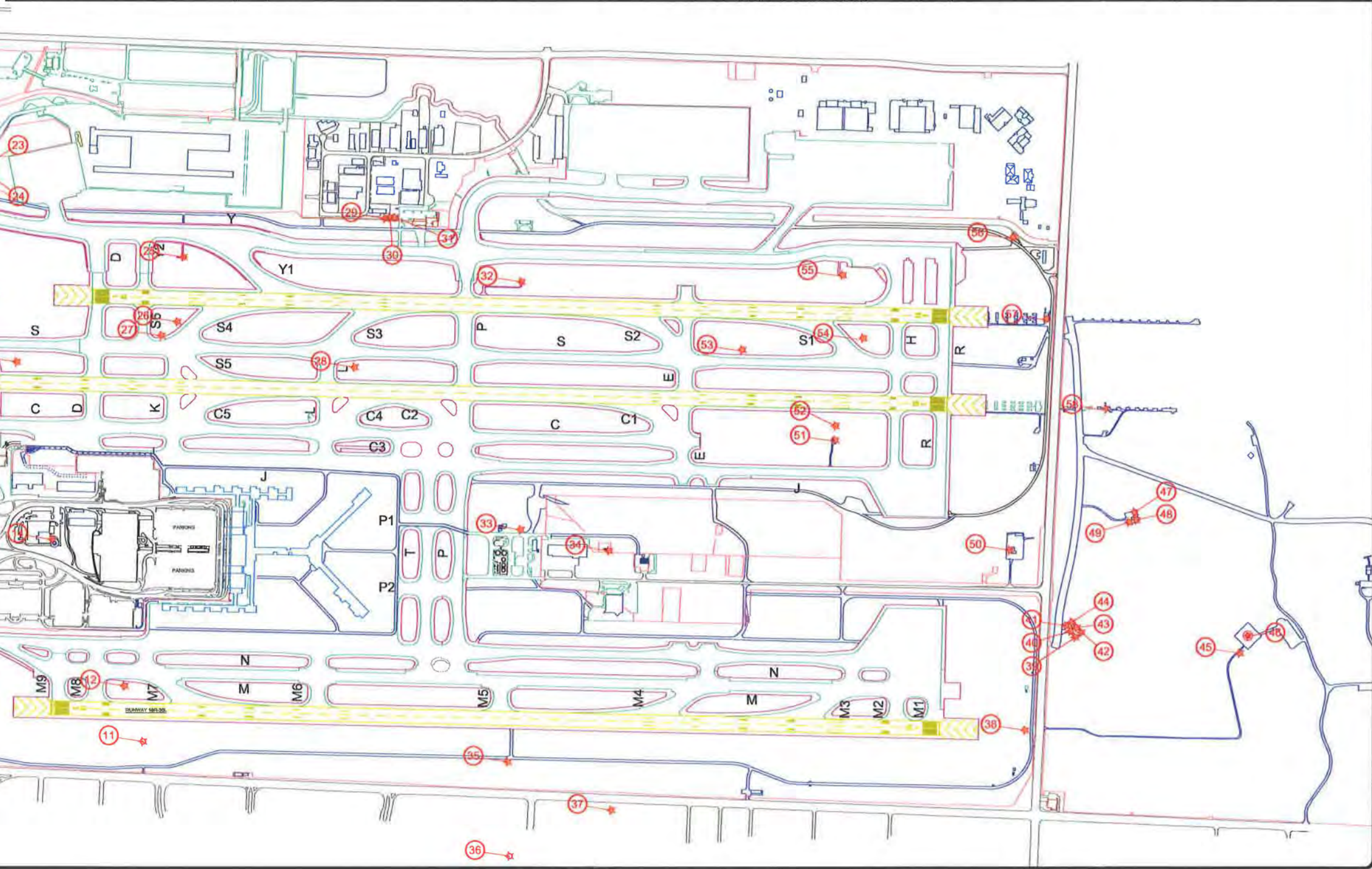
Original Date: November 1, 2016

FAA Approval:

Revision Date: July 10, 2018



| LIGHTED OBSTRUCTION LEGEND | | | | | | | | | |
|----------------------------|-----------------------|-----|---|-----|------------------------------|-----|------------------------------|-----|------------------------------|
| NO. | DESCRIPTION | NO. | DESCRIPTION | NO. | DESCRIPTION | NO. | DESCRIPTION | NO. | DESCRIPTION |
| 1 | 9 LOCALIZER | 11 | 18R GLIDESLOPE ANTENNA | 21 | FAA REMOTE TRANSMITTER RADIO | 31 | CELL TOWER | 41 | FAA REMOTE TRANSMITTER RADIO |
| 2 | 27 GLIDESLOPE ANTENNA | 12 | 18R WINDSOCK | 22 | FAA REMOTE TRANSMITTER RADIO | 32 | 18L/36R MDPT RVR | 42 | FAA REMOTE TRANSMITTER RADIO |
| 3 | 27 WINDSOCK | 13 | UNKNOWN ANTENNA | 23 | FAA REMOTE TRANSMITTER RADIO | 33 | AIRPORT BEACON | 43 | FAA REMOTE TRANSMITTER RADIO |
| 4 | 9/27 MDPT RVR | 14 | AIR TRAFFIC CONTROL TOWER | 24 | FAA REMOTE TRANSMITTER RADIO | 34 | ASDE REMOTE ANTENNA | 44 | FAA REMOTE TRANSMITTER RADIO |
| 5 | 36C LOCALIZER | 15 | SIGNATURE BLAST FENCE OBSTRUCTION LIGHT | 25 | 18L GLIDESLOPE ANTENNA | 35 | 18R/36L MDPT RVR | 45 | UNKNOWN ANTENNA |
| 6 | 9 WINDSOCK | 16 | SIGNATURE BLAST FENCE OBSTRUCTION LIGHT | 26 | 18L WINDSOCK | 36 | CELL TOWER | 46 | VOR OBSTRUCTION LIGHT |
| 7 | 9 GLIDESLOPE ANTENNA | 17 | SIGNATURE BLAST FENCE OBSTRUCTION LIGHT | 27 | 18L ASOS | 37 | ASDE REMOTE ANTENNA | 47 | FAA REMOTE TRANSMITTER RADIO |
| 8 | 27 LOCALIZER | 18 | 18C GLIDESLOPE ANTENNA | 28 | 18C/36C MDPT RVR | 38 | 18R LOCALIZER | 48 | FAA REMOTE TRANSMITTER RADIO |
| 9 | ASOS | 19 | 18C WINDSOCK | 29 | ASDE REMOTE ANTENNA | 39 | FAA REMOTE TRANSMITTER RADIO | 49 | FAA REMOTE TRANSMITTER RADIO |
| 10 | 36L LOCALIZER | 20 | 36R LOCALIZER | 30 | CELL TOWER | 40 | FAA REMOTE TRANSMITTER RADIO | 50 | ASR-9 |
| | | | | | | | | 51 | 36C GLIDESLOPE |
| | | | | | | | | 52 | 36C WINDSOCK |
| | | | | | | | | 53 | 36R ASOS |
| | | | | | | | | 54 | 36R WINDSOCK |
| | | | | | | | | 55 | 36R GLIDESLOPE ANTENNA |
| | | | | | | | | 56 | ASDE REMOTE ANTENNA |
| | | | | | | | | 57 | 18L LOCALIZER |
| | | | | | | | | 58 | 18C LOCALIZER |
| | | | | | | | | 59 | DESCRIPTION |
| | | | | | | | | 60 | DESCRIPTION |



FEDERAL AVIATION ADMINISTRATION

NOV 21 2016

TNC INSPECTOR

| REVISIONS | | |
|-----------|------|-------------|
| MARK | DATE | DESCRIPTION |
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MSCAA PROJ. NO.
NOT ASSIGNED

PROJECT:
MEMPHIS INTERNATIONAL AIRPORT

SHEET TITLE:
LIGHTED OBSTRUCTION MAP
APPENDIX-8

| | |
|----------------------------|---------------------------|
| DWG. FILE NAME drawing2 | |
| REQUESTED BY: OPS/WMH | DRAWN BY: CS |
| DATE 10-14-2016 | SHEET NO. APP-8 |
| SCALE NO SCALE | |



139 Self-Inspection Report

Inspection Report ID:

Inspection Date:

Midnight Shift

North Inspector:

Start Time:

End Time:

West Inspector:

Start Time:

End Time:

East Inspector:

Start Time:

End Time:

Day Shift

North Inspector:

Start Time:

End Time:

West Inspector:

Start Time:

End Time:

East Inspector:

Start Time:

End Time:

Evening Shift

North Inspector:

Start Time:

End Time:

West Inspector:

Start Time:

End Time:

East Inspector:

Start Time:

End Time:

Pavement

Sat Unsat

| | | |
|------------------------|--------------------------|--------------------------|
| Pavement Lips >3" | <input type="checkbox"/> | <input type="checkbox"/> |
| Hole > 5"diam. 3"Deep | <input type="checkbox"/> | <input type="checkbox"/> |
| Cracks/Spalling/Heaves | <input type="checkbox"/> | <input type="checkbox"/> |
| FOD:Gravel/Debris/Sand | <input type="checkbox"/> | <input type="checkbox"/> |
| Rubber Deposits | <input type="checkbox"/> | <input type="checkbox"/> |
| Ponding/Edge Dams | <input type="checkbox"/> | <input type="checkbox"/> |

Safety Areas/OFAs

Sat Unsat

| | | |
|----------------------------|--------------------------|--------------------------|
| Ruts/Humps/Erosion | <input type="checkbox"/> | <input type="checkbox"/> |
| Drainage/Construction | <input type="checkbox"/> | <input type="checkbox"/> |
| Support Equipment/Aircraft | <input type="checkbox"/> | <input type="checkbox"/> |
| Frangible Bases | <input type="checkbox"/> | <input type="checkbox"/> |
| Unauthorized Objects | <input type="checkbox"/> | <input type="checkbox"/> |
| Objects/Vegetation | <input type="checkbox"/> | <input type="checkbox"/> |

Markings

Sat Unsat

| | | |
|---------------------------|--------------------------|--------------------------|
| Clearly Visible/Standard | <input type="checkbox"/> | <input type="checkbox"/> |
| Runway Markings | <input type="checkbox"/> | <input type="checkbox"/> |
| Taxiway Marking | <input type="checkbox"/> | <input type="checkbox"/> |
| Holding Position Markings | <input type="checkbox"/> | <input type="checkbox"/> |
| Glass Beads | <input type="checkbox"/> | <input type="checkbox"/> |

Signs

Sat Unsat

| | | |
|-------------------------|--------------------------|--------------------------|
| Standard/Meet Sign Plan | <input type="checkbox"/> | <input type="checkbox"/> |
| Obscured/Operable | <input type="checkbox"/> | <input type="checkbox"/> |
| Damaged/Retroreflective | <input type="checkbox"/> | <input type="checkbox"/> |

Lighting

Sat Unsat

| | | |
|-------------------------|--------------------------|--------------------------|
| Obscured/Dirty/Operable | <input type="checkbox"/> | <input type="checkbox"/> |
| Damaged/Missing | <input type="checkbox"/> | <input type="checkbox"/> |
| Faulty Aim/Adjustment | <input type="checkbox"/> | <input type="checkbox"/> |
| Runway Lighting | <input type="checkbox"/> | <input type="checkbox"/> |
| Taxiway Lighting | <input type="checkbox"/> | <input type="checkbox"/> |
| Pilot Control Lighting | ATC 24/7 | |

Navigational Aids

Sat Unsat

| | | |
|--------------------------|--------------------------|--------------------------|
| Rotating Beacon Operable | <input type="checkbox"/> | <input type="checkbox"/> |
| Wind Indicators | <input type="checkbox"/> | <input type="checkbox"/> |
| VGSI Systems/PAPIs | <input type="checkbox"/> | <input type="checkbox"/> |

Obstructions

Sat Unsat

| | | |
|-----------------------------|--------------------------|--------------------------|
| Obstruction Lights Operable | <input type="checkbox"/> | <input type="checkbox"/> |
| Cranes/Trees | <input type="checkbox"/> | <input type="checkbox"/> |

Fueling Operations

Sat Unsat

| | | |
|-----------------------|--------------------------|--------------------------|
| Fencing/Gates/Signs | <input type="checkbox"/> | <input type="checkbox"/> |
| Fuel Marking/Labeling | <input type="checkbox"/> | <input type="checkbox"/> |
| Fire Extinguishers | <input type="checkbox"/> | <input type="checkbox"/> |
| Wires/Bonding Clips | <input type="checkbox"/> | <input type="checkbox"/> |
| Fuel Leaks/Vegetation | <input type="checkbox"/> | <input type="checkbox"/> |

ARFF

Sat Unsat

| | | |
|-----------------------------|--------------------------|--------------------------|
| Equipment/Crew Availability | <input type="checkbox"/> | <input type="checkbox"/> |
| Communication/Alarms | <input type="checkbox"/> | <input type="checkbox"/> |
| Response Routes Affected | <input type="checkbox"/> | <input type="checkbox"/> |

Snow and Ice

Sat Unsat

| | | |
|---------------------------|--------------------------|--------------------------|
| Surface Conditions | <input type="checkbox"/> | <input type="checkbox"/> |
| Snowbank Clearances | <input type="checkbox"/> | <input type="checkbox"/> |
| Lights and Signs Obscured | <input type="checkbox"/> | <input type="checkbox"/> |
| Snow Affected NAVAids | <input type="checkbox"/> | <input type="checkbox"/> |
| Fire Access/Mutual Aid | <input type="checkbox"/> | <input type="checkbox"/> |

Construction

Sat Unsat

| | | |
|--------------------------|--------------------------|--------------------------|
| Barricades/Lights | <input type="checkbox"/> | <input type="checkbox"/> |
| Equipment Parking | <input type="checkbox"/> | <input type="checkbox"/> |
| Material Stockpiles | <input type="checkbox"/> | <input type="checkbox"/> |
| Confusing Signs/Markings | <input type="checkbox"/> | <input type="checkbox"/> |

Public Protection

Sat Unsat

| | | |
|--------------------|--------------------------|--------------------------|
| Fencing/Gates | <input type="checkbox"/> | <input type="checkbox"/> |
| Signs | <input type="checkbox"/> | <input type="checkbox"/> |
| Jet Blast Problems | <input type="checkbox"/> | <input type="checkbox"/> |

Wildlife

Sat Unsat

| | | |
|----------------------------|--------------------------|--------------------------|
| Wildlife Present/Location | <input type="checkbox"/> | <input type="checkbox"/> |
| Complying with WHMP | <input type="checkbox"/> | <input type="checkbox"/> |
| Dead Birds/Flocks of Birds | <input type="checkbox"/> | <input type="checkbox"/> |
| Coyotes/Canines | <input type="checkbox"/> | <input type="checkbox"/> |



139 Self-Inspection Report

Inspection Date:

Inspection Report ID:

Regularly Scheduled Inspections (Daily) and Continuous Surveillance:

| |
|--|
| |
|--|

Periodic Inspections:

| |
|--|
| |
|--|

Special Inspections:

| |
|--|
| |
|--|

Comments:

| |
|--|
| |
|--|

FOD/Wildlife Inspections/ARFF Daily Report

| | |
|---------------------|--|
| Wildlife Incidents: | |
| FOD Incidents: | |
| ARFF: | |

Work Orders:

| | | | | |
|--------------------|----------|-----------------|-------|------------------|
| Ops Work#: | Ops Mgr: | Mtn Work Order: | Date: | |
| Ops Discrepancy: | | | | |
| Corrective Action: | | | | Priority: |
| Comment: | | | | Type: |
| Resolved By: | | Date Resolved: | | |
| <hr/> | | | | |
| Ops Work#: | Ops Mgr: | Mtn Work Order: | Date: | |
| Ops Discrepancy: | | | | |
| Corrective Action: | | | | Priority: |
| Comment: | | | | Type: |
| Resolved By: | | Date Resolved: | | |

EXAMPLE NOTAM FORM

IMEM 04/146 MEM RWY 18L/36R CLSD WEF 1304251300-1304251930

Created by: Cedric Simon

Phone:9019228117

Fax:

Comments: ATCT-JA

Please note: This e-mail was sent from the FNS system that cannot accept incoming e-mail. Please do not reply to this message.

