

**CONSTRUCTION SAFETY AND PHASING PLAN  
NARRATIVE REPORT**  
FOR THE  
**FBO TERMINAL BUILDING CONSTRUCTION**  
AT THE  
**MIDDLE GEORGIA REGIONAL AIRPORT  
(MCN)**



Prepared For:

MACON-BIBB COUNTY CONSOLIDATED GOVERNMENT  
700 POPLAR STREET  
MACON, GA  
31201

Prepared By:

PASSERO ASSOCIATES, LLC  
4730 CASA COLA WAY, SUITE 200  
ST. AUGUSTINE, FL  
32095



THIS PAGE IS INTENTIONALLY LEFT BLANK

# Construction Safety and Phasing Plan Narrative Report

## FBO TERMINAL CONSTRUCTION MIDDLE GEORGIA REGIONAL AIRPORT (MCN)

### TABLE OF CONTENTS

PREFACE .....	1
1. COORDINATION .....	2
2. PHASING .....	2
3. AREAS AND OPERATIONS AFFECTED BY CONSTRUCTION ACTIVITY .....	2
4. NAVIGATION AID (NAVAID) PROTECTION .....	3
5. CONTRACTOR ACCESS.....	3
6. WILDLIFE MANAGEMENT.....	4
7. FOREIGN OBJECT DEBRIS (FOD) MANAGEMENT .....	4
8. HAZARDOUS MATERIALS (HAZMAT) MANAGEMENT .....	4
9. NOTIFICATION OF CONSTRUCTION ACTIVITIES.....	4
10. INSPECTION REQUIREMENTS.....	5
11. UNDERGROUND UTILITIES .....	5
12. PENALTIES.....	5
13. SPECIAL CONDITIONS .....	5
14. RUNWAY AND TAXIWAY VISUAL AIDS.....	5
15. MARKING AND SIGNS FOR ACCESS ROUTES.....	6
16. HAZARD MARKING, LIGHTING AND SIGNING .....	6
17. PROTECTION OF RUNWAY AND TAXIWAY SAFETY AREAS.....	6
18. OTHER LIMITATIONS ON CONSTRUCTION.....	8

**FBO TERMINAL CONSTRUCTION  
MIDDLE GEORGIA REGIONAL AIRPORT (MCN)**

**PREFACE**

**Airport Operator/Owner:** **Macon-Bibb County Consolidated Government**

**Engineer:** **Passero Associates, LLC**

**Contractor:** **Not Yet Awarded**

**Aviation Safety Requirements During Construction**

All construction activities shall be in accordance with AC 150/5370-2G, Operational Safety on Airports During Construction.

All construction personnel should be trained in operational safety during construction, including limits of their authorized work area, drivers should receive airport drivers training as appropriate, and have limited access.

No work to be conducted in any active RSA or TSA. Barricades should not be placed inside an active RSA or TSA.

The Plan here within provides airport operators, contractors, and consultants with a safety plan for the General Aviation Site Improvements construction project. This Plan relates to unique airport site conditions associated with the proposed project. Consideration is given to progressing work in a timely fashion without undue risk to the users or workers. This document should be readily available to personnel engaged in the work including Airport Operations Staff.

**Definitions**

**MOVEMENT vs NON-MOVEMENT AREAS.** Movement areas are defined as runways, taxiways and other areas of an airport used for taxiing, air taxiing, takeoff, and landing aircraft, exclusive of loading aprons and aircraft parking areas. Non-movement areas are inside the airport security fence where aircraft and ground vehicles are not controlled by airport operations. It is important to note that the non-movement area includes pavement traversed by aircraft. Runways or taxiways temporarily closed to aircraft become non-movement areas throughout the closure duration.

**RUNWAY AND TAXIWAY SAFETY AREAS.** Safety areas are a defined surface surrounding the runway or taxiway environment prepared or suitable for reducing the risk of damage to airplanes in the event of an aircraft unintentionally exiting the runway or taxiway pavement. Safety areas must be kept clear of any objects except objects on frangible couplings whose location is fixed by function. Occupancy of a safety area by construction activity requires closure of that runway or taxiway until the safety area can be cleared.

## 1. COORDINATION

Construction activities shall be coordinated with the airport operator on at least a weekly basis. The Engineer shall be notified of any change in construction phasing and will update the airport operator. All coordination will be at the airport operator's directive. Only the airport operator can open or close runways or taxiways.

Operational safety will be a consistent agenda item during Contractor progress meetings throughout the construction project. Operational safety includes:

- Safety of aircraft maneuvering in and around the work area such that no foreign matter is ingested by engines or launched by jet blast or prop wash.
- Cutting of tires.
- Transgression into the work area.
- Movement conflict with vehicles accessing the work area.
- Protecting airport workers servicing aircraft and their equipment from construction activities.

Changes in the project scope or duration may necessitate revisions to the Construction Safety and Phasing Plan and subsequent review and approval by the airport operator and the FAA.

## 2. PHASING OF CONSTRUCTION

The construction phasing of this project as shown on the plans will have no impact on the closure of any runways or taxiways. All construction work and equipment shall always remain outside of the object free areas of both Runway 5/23 and Runway 14/32.

## 3. AREAS AND OPERATIONS AFFECTED BY CONSTRUCTION ACTIVITY

Runways and taxiways should remain in use by aircraft to the maximum extent possible without compromising safety. During the proposed construction, the following safety guidelines shall be adhered to:

- Runway 5/23 and Runway 14/32 shall remain active for the entire duration of construction.

Runway	Aircraft Approach Category* A, B, C, or D	Airplane Design Group* I, II, III, or IV	RSA width from runway centerline*
5/23	D	III	250 Feet
14/32	B	II	75 Feet

\*See AC 150/5300-13B, *Airport Design*, to complete the chart for a specific runway.

#### 4. NAVIGATION AID (NAVAID) PROTECTION

Navigational Aids shall be protected by the contractor for the entire duration of construction.

#### 5. CONTRACTOR ACCESS

- a. Anyone requesting access through the construction gate should be screened for authorized entrance.
- b. **Location of Stockpiled Construction Material.** Stockpiled materials and equipment storage are not permitted within the Runway Safety Area (RSA), Obstacle Free Zone (OFZ), and Object Free Area (OFA) of an operational runway. Stockpiled materials and equipment adjacent to these areas shall be prominently marked and lighted during hours of restricted visibility or darkness. Height of any stockpile or equipment will be reviewed by the Engineer for airspace clearance requirements.
- c. **Construction Site Parking.** Employee parking shall be in the staging area, as shown on the attached drawing.
- d. **Construction Equipment Parking.** Contractor employees must park and service all construction vehicles in an area designated by the airport operator outside the OFZ and never in the safety area of an active runway or taxiway. Unless a complex setup procedure makes movement of specialized equipment infeasible, inactive equipment must not be parked on a closed taxiway or runway. If it is necessary to leave specialized equipment on a closed taxiway or runway at night, the equipment must be properly lighted. Employees shall also park construction vehicles outside the OFA when not in use by construction personnel.
- e. **Access and Haul Roads.** Job site access shall be along the route shown on the attached Construction Safety Phasing Plan. No deviations or excursions from the designated route are allowed without permission and approved escort by Airport Operations. Material deliveries shall be along the same route. The Contractor will maintain gate security and provide escort for material and equipment access as indicated on the drawings.
- f. **Marking and Lighting of Vehicles.** Marking and lighting of vehicles will comply with AC 150/5210-5D, Painting, Marking and Lighting of Vehicles Used on an Airport.
- g. **Proper Vehicle Operations.** No vehicle should travel over any portion of an aircraft movement area for this project. No escorts are required to access the project site along the construction access road.
- h. **Situational Awareness.** Vehicle drivers shall confirm by personal observation that no aircraft is approaching their position (either in the air or on the ground) when given clearance to cross a runway, taxiway, or any other area open to airport operations.
- i. **Radio Communications.** Construction personnel will be required to have a two-way radio for communication with the tower to operate in the movement area. The construction area shall be properly identified to prevent incursions.
- j. **Maintenance of the Secured Area of the Airport.** Airport operators and contractors shall maintain security during construction when access points are created in the security fencing

to permit temporary passage of construction vehicles or personnel. Procedures are required to be in place to ensure only authorized persons and vehicles have access to the airport operations area (AOA) and to prohibit ‘piggybacking’ behind another person or vehicle.

## **6. WILDLIFE MANAGEMENT**

The Contractor shall carefully control and continuously remove waste or loose materials that might attract wildlife. Contractor personnel shall be aware of and avoid construction activities that can create wildlife hazards on airports.

## **7. FOREIGN OBJECT DEBRIS (FOD) MANAGEMENT**

Waste and loose materials can cause damage to aircraft landing gears, propellers, and jet engines. The Contractor shall not leave or place FOD on or near active aircraft movement areas. Materials capable of creating FOD will be removed during the construction project. Fencing (other than security fencing) may be necessary to contain construction materials that can be carried by wind into areas where aircraft operate. Any loose debris from the work shall be picked up immediately by the Contractor, both inside and outside the work area.

## **8. HAZARDOUS MATERIALS (HAZMAT) MANAGEMENT**

Contractors operating construction vehicles and equipment on the airport must be prepared to expeditiously contain and clean-up spills resulting from fuel or hydraulic fluid leaks.

## **9. NOTIFICATION OF CONSTRUCTION ACTIVITIES**

A list of responsible representatives/points of contact for all involved parties, and procedures for contacting each of them, including after hours, will be distributed prior to construction. The Contractor shall designate key personnel who can be contacted 24 hours a day in the event of an emergency. These people shall be authorized to make decisions on the company’s behalf and must physically respond to the airport within two hours.

Before beginning any construction activity, the Airport Operator will give notice [using the Notice to Airmen (NOTAM) System] of proposed location, time, and date of commencement of construction. Upon completion of work and return of all such areas to standard conditions the Airport Operator will verify the cancellation of all notices issued via the NOTAM System.

Coordination with ARFF personnel and other emergency services is required for this project. No water lines or fire hydrants will be deactivated, and no emergency access route will be blocked. ARFF Access and access roads must be maintained, any closure will require prior approval from an ARFF representative.

Any person proposing construction or alteration of objects that affect navigable airspace, as defined in 14 CFR Part 77, shall notify the FAA. This includes construction equipment and

associated parking areas on airports. The Engineer will submit FAA Form 7460-1 to the appropriate FAA Airports Regional or District Office on behalf of the Contractor.

## **10. INSPECTION REQUIREMENTS**

Inspections shall be conducted at least daily (more frequently if deemed necessary by the airport operator) to ensure conformance with the Construction Safety and Phasing Plan. At completion of work in any construction phase, and fifteen minutes prior to the scheduled opening of the designated airfield facilities, an inspection to determine whether the respective airport facilities are in appropriate condition to be opened for aircraft use will be performed. Any deficiencies, whether caused by negligence, oversight, or project scope change, shall be remedied immediately.

## **11. UNDERGROUND UTILITIES**

Known existing underground utilities are shown on the contract drawings. The Contractor shall coordinate with the airport operator to ensure all existing utilities are known in the excavation area. The Contractor shall use care when excavating and protect existing utilities to remain. Should an existing utility be damaged or disrupted, the airport operator shall be notified immediately.

## **12. PENALTIES**

Contractor shall pay a fine up to \$10,000.00 for each incident as recorded by the tower.

## **13. SPECIAL CONDITIONS**

Should an aircraft inadvertently enter the work area, the Contractor will suspend work until the aircraft has safely been removed from the area. Safety measures currently in place will be re-evaluated.

## **14. RUNWAY AND TAXIWAY VISUAL AIDS**

Airport markings, lighting, signs, and visual NAVAIDS shall be clearly visible to pilots, not misleading, confusing, or deceptive. All shall be secured in place to prevent movement by prop wash, jet blast, wing vortices, or other wind currents and constructed of durable materials to minimize damage to an aircraft in event of inadvertent contact.

Markings shall comply with AC 150/5340-1M, Standards for Airport Markings. Temporary markings may be added at any time by directive of airport operations personnel.

Lighting shall comply with AC 150/5340-30J, Design and Installation Details for Airport Visual Aids, and AC 150/5345-50, Specification for Portable Runway and Taxiway Lights.



Signs shall conform to AC 150/5345-44K, Specification for Runway and Taxiway Signs, and AC 150/5340-18G, Standard for Airport Sign Systems. Any time a sign does not serve its normal function it shall be covered or removed to prevent misdirecting pilots. Note that information signs identifying a crossing taxiway continue to perform their normal function even if the crossing taxiway is closed.

## **15. MARKING AND SIGNS FOR ACCESS ROUTES**

Construction pavement markings and signs shall conform to AC 150/5340-18G, applicable Federal Highway Administration Manual on Uniform Traffic Control Devices (MUTCD), and State highway specifications. Signs adjacent to areas used by aircraft must comply with the frangibility requirements of AC 150/5220-23A, Frangible Connections, which may require modification to size and height guidance in the MUTCD. No markings shall be placed without the Airport Operators written approval.

## **16. HAZARD MARKING, LIGHTING AND SIGNING**

Hazard marking and lighting prevents pilots from entering areas closed to aircraft and prevents construction personnel from entering areas open to aircraft.

Low profile barricades, including traffic cones, (weighted or sturdily attached to the surface) are acceptable methods used to identify and define the limits of construction and hazardous areas on airports. Careful consideration shall be given to selecting equipment that minimizes danger to aircraft but sturdy enough to remain in place when subjected to typical winds, prop wash, and jet blast. The spacing of barricades shall be such that a breach is physically prevented barring a deliberate act.

Lights must be either steady burning or flashing red and must meet the luminance requirements of the State Highway Department. Lights shall be mounted on barricades and spaced at no more than 10 feet. The lights shall be operated between sunset and sunrise and during periods of low visibility whenever the airport is open for operations.

Barricades are not permitted in an active safety area. Within a runway or taxiway object free area, and on aprons, use orange traffic cones, flashing or steady burning red lights as noted above, collapsible barricades marked with diagonal, alternating orange and white stripes, and/or signs to separate all construction/maintenance areas from the movement area. All barricades adjacent to any open runway or taxiway/taxilane safety area or apron shall not exceed 18 inches high, exclusive of supplementary lights and flags.

The Contractor shall have a person on call 24 hours a day for emergency maintenance of airport hazard lighting and barricades. The Contractor shall file the person's information with the airport operator. Lighting shall be checked for proper operation at least once per day, preferable at dusk.

## **17. PROTECTION OF RUNWAY AND TAXIWAY SAFETY AREAS**

- a. **Runway Safety Area (RSA).** A runway safety area is the defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway.

No construction may occur within the existing RSA while the runway is open for aircraft operations. The RSA dimensions may be temporarily adjusted if the runway is restricted to aircraft operations requiring an RSA that is equal to the RSA width and length beyond the runway ends available during construction. The airport operator must coordinate the adjustment of RSA dimensions with the appropriate FAA Airports Regional or District Office and issue a NOTAM.

Open trenches or excavations are not permitted within the RSA while the runway is open. If possible, backfill trenches before the runway is opened. If the runway must be opened before excavations are backfilled, cover the excavations appropriately. Covering for open trenches must be designed to allow the safe operation of the heaviest aircraft operating on the runway across the trench without damage to the aircraft. The Contractor must prominently mark open trenches and excavations at the construction site with red or orange flags, as approved by the airport operator, and light them with red lights during hours of restricted visibility or darkness.

Soil erosion must be controlled to maintain RSA standards. The RSA must be cleared and graded and have no potentially hazardous ruts, humps, depressions, or other surface variations, and capable, under dry conditions, or supporting snow removal equipment, aircraft rescue and firefighting equipment, and the occasional passage of aircraft without causing structural damage to the aircraft.

- b. **Runway Object Free Area (ROFA).** Equipment must be removed from the ROFA when not in use, and material should not be stockpiled in the ROFA. Construction vehicles crossing the ROFA will need to coordinate with the airport operator.
- c. **Taxiway Safety Area (TSA).** No construction may occur within the TSA while the taxiway is open for aircraft operations. The TSA dimensions may be temporarily adjusted if the taxiway is restricted to aircraft operations requiring a TSA that is equal to the TSA width available during construction. The airport operator must coordinate the adjustment of the TSA dimensions with the appropriate FAA Airports Regional or District Office and issue a NOTAM.

Open trenches or excavations are not permitted within the TSA while the taxiway is open. If possible, backfill trenches before the taxiway is opened. If the taxiway must be opened before excavations are backfilled, cover the excavations appropriately. Covering for open trenches must be designed to allow the safe operation of the heaviest aircraft operating on the taxiway across the trench without damage to the aircraft. The Contractor must prominently mark open trenches and excavations at the construction site with red or orange flags, as approved by the airport operator, and light them with red lights during hours of restricted visibility or darkness.

Soil erosion must be controlled to maintain TSA standards, that is, the TSA must be cleared and graded and have no potentially hazardous ruts, humps, depressions, or other surface variations, and capable, under dry conditions, of supporting snow removal equipment, aircraft rescue and firefighting equipment, and the occasional passage of aircraft without causing structural damage to the aircraft.

- d. **Taxiway Object Free Area (TOFA).** No construction may occur within the taxiway object free area while the taxiway is open for aircraft operations. The TOFA may be

temporarily adjusted if the taxiway is restricted to aircraft operations requiring a TOFA that is equal to the TOFA width available. Construction activity may be accomplished without adjusting the width of the TOFA subject to the following restrictions:

- Appropriate NOTAMS are issued.
  - Marking and lighting meeting the provisions of paragraphs 14 and 16 above are implemented.
  - Five-foot clearance is maintained between equipment and materials and any part of an aircraft (includes wingtip overhang). In these situations, flaggers must be used to direct construction equipment, and wing walkers will be necessary to guide aircraft. Wing walkers should be airline/aviation personnel rather than construction workers. If such clearance can only be maintained if an aircraft does not have full use of the entire taxiway width, then it will be necessary to move personnel and equipment for the passage of that aircraft.
- e. **Obstacle Free Zone (OFZ).** In general, personnel, material, and/or equipment may not penetrate the OFZ while the runway is open for aircraft operations. If a penetration to the OFZ is necessary, it may be possible to continue aircraft operations through operational restrictions.
- f. **Runway Approach/Departure Areas and Clearways.** No runway thresholds will be permanently relocated during this project.

#### **18. OTHER LIMITATIONS ON CONSTRUCTION**

- Flagmen should have specific training to prevent incidents with vehicle crossings.
- The airport should conduct frequent inspection of the construction areas and entry points and include documentation of the inspection on the daily inspection sheets.
- There will be no use of open flame welding or torches unless fire safety precautions are provided, and the airport operator has approved their use.
- No use of electrical blasting caps on or within 1,000 feet of airport property will be allowed.
- The use of flare pots within the air operations area is prohibited.