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TECHNICAL SPECIFICATIONS

FOR

RUNWAY 8-26 PAVEMENT REHABILITATION

AT

FULTON COUNTY EXECUTIVE AIRPORT
BROWN FIELD
ATLANTA, GEORGIA

FULTON COUNTY

MARCH 2025

Michael Baker International, Inc.

Michael Baker
INTERNATIONAL

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FULTON COUNTY EXECUTIVE AIRPORT

RUNWAY 8-26 PAVEMENT REHABILATATION

PI#: T008996 FULTON

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SECTION 4

SCOPE OF WORK AND TECHNICAL SPECIFICATIONS

ENGINEER OF RECORD
SEALS PAGE

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SECTION 4

PART 1

SCOPE OF WORK

This project consists of the construction phase for the Runway 8-26 Pavement Rehabilitation - The project scope will include variable pavement milling, sealing existing cracks, asphalt inlay, pavement marking and pavement grooving. Bituminous pavement milling will need to be performed so that appropriate tie-in's to surrounding pavements can be accomplished.

The limits of work will extend along entire length of RW 8/26 and connecting pavement areas.

PERMITS: (Required)

The selected Bidder will be required to obtain any permits needed to perform the work described in these contract documents.

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DIVISION 1
GENERAL REQUIREMENTS

All materials used shall be in accordance with FAA and Georgia Department of Transportation, State of Georgia, Standard Specifications Construction of Transportation Systems, Current Editions unless modified by Special Provision.

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SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.01 RELATED DOCUMENTS:

A. Drawings and general requirements of Contract, including General Provisions and Supplementary Conditions and other Division 1 Specification sections, apply to work of this section.

1.02 PROJECT IDENTIFICATION:

A. The Project name is: **Runway 8/26 Pavement Rehabilitation** at **Fulton County Airport**, as shown on the Contract Documents prepared by Michael Baker International, Inc. Drawings and Specifications are dated: **March 2025**.

1.03 WORK COVERED BY CONTRACT DOCUMENTS:

A. Indicate the work of the Contract and related requirements and conditions that have an impact on the project. Related requirements and conditions that are indicated on the Contract Documents include, but are not necessarily limited to the following:

1. Existing site conditions and restrictions on use of the site.
2. Mandatory staging/sequencing.
3. Requirements for partial utilization of various elements prior to substantial completion of the Work.

B. Division 1 - General Requirements of the contract specifications is an integral part of the Contract Documents for each of the Contracts.

1.04 SUMMARY BY REFERENCES:

A. Work of the Contract can be summarized by references to the Contract, General Provisions, Supplementary Conditions, Specification Sections, Drawings, addenda and modifications to the contract documents issued subsequent to the initial printing of this project manual and including but not necessarily limited to printed material referenced by any of these. It is recognized that work of the Contract is also unavoidably affected or influenced by governing regulations, natural phenomenon including weather conditions and other forces outside the contract documents.

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B. Federal Aviation Advisory Circulars. Where work or other requirements are specified by reference to Federal Aviation Advisory Circulars the reference shall be considered to mean the latest change effective on the date bids are received.

1.05 CONSTRUCTION TIME:

A. Time Schedule: The work as described by the contract specifications and as shown on the plans shall be completed and ready for use by the Owner within the awarded number of consecutive calendar days after the date of Notice-to-Proceed. The time schedule for completion of this project is critical due to the impact to aircraft operations. Liquidated damages as prescribed in the Contract will be enforced.

B. Upon approval of the bid and securing the necessary funding by Owner and GDOT, the Owner will issue a Notice-of-Award.

1.06 COORDINATION:

A. General: Each Contractor is responsible for coordination of his work, including preparation of general coordination drawings, diagrams and schedules, and control of site utilization, from beginning of construction activity through project close-out and warranty periods.

END OF SECTION 01010

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SECTION 01030

AIRPORT PROJECT PROCEDURES

(Construction Safety Plan)

PART 1: GENERAL

1.01 INTRODUCTION: This project will involve Contractor operations within active Air Operations Areas (AOA). The Airport will conduct normal aircraft operations during the course of this project, subject to certain restrictions called out in this section or elsewhere in the specifications. Therefore, to provide for the security and safety of Airport users and the Contractor's forces, as well as to minimize interruptions to aircraft operations, the Contractor shall limit his work within the areas designated and conduct his operations as specified.

1.02 UNAUTHORIZED CROSSING OF ACTIVE AIRFIELD OPERATIONS AREAS (AOA): Any fines or assessments levied against the Sponsor as a result of intrusions in the AOA or other violations by the Contractor's personnel or those of his subcontractors and material suppliers will be passed on to the Contractor. In addition, the Contractor will be subject to a fine of $1,000.00 per incident, assessed by the Sponsor.

1.03 AIR OPERATION AREA (AOA) SAFETY REQUIREMENTS:

A. Barricades: Existing aprons, taxiways and runways outside the limits of construction shall be separated from construction areas with barricades as shown on the plans and described in Section 01530.

B. Radio Communication: The Contractor shall maintain radio communication with Air Traffic Control (ATC) at all times during construction and shall immediately obey all instructions to vacate areas when directed. Contractor shall have a sufficient number of working radios on site at all times during construction and shall assign responsible personnel to continuously monitor the radio(s).

C. Runway and Taxiway Closures: Closures of runways and taxiways will be made only by the Owner. The Owner shall contact the appropriate FAA Flight Service Station prior to issuing the Notice-to-Proceed so that a Notice-to-Airmen (NOTAM) for runway or taxiway closure can be issued in accordance with established criteria. Construction operations within the runway or taxiway safety zone as defined in paragraph 1.03-B (1) of this section shall not begin until the Contractor receives clearance from the Owner and Engineer assuring that the adjoining runway or taxiway has been closed or that adequate barricades and marking have been provided.

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1.04 CONSTRUCTION SAFETY REQUIREMENTS:

A. General:

1. Safety Officer: The Contractor is required to employ a Safety Officer who will be the liaison between the Contractor, the Engineer and the Owner in all safety related matters for the duration of the project. The Safety Officer shall be on call 24 hours per day for emergency maintenance of airport hazard lighting, barricades, and other safety features.

2. Protection of Utilities: The Contractor shall be responsible for field marking and protecting all utilities within the construction limits.

3. Storage of Equipment, Vehicles, and Materials: All equipment, vehicles, and materials must be stored in the designated storage or staging area or in areas acceptable to the Engineer.

4. Vehicular Markings: Contractor vehicles and equipment shall be marked with checkered flags and lighted with flashing beacons to comply with requirements of FAA AC 150/5210-5D.

5. Construction Methods Limitation:

   a. **No open flames or burning will be allowed on Airport property.**

   b. Stockpiled material shall be constrained in a manner to prevent displacement by jet blast, prop blast, or wind and shall be kept to a height so as to not penetrate FAR Part 77 imaginary air space.

6. Safety and Accident Protection:

   a. The Contractor shall comply with all applicable federal, state, and local laws, ordinances, and regulations governing safety, health, and sanitation; shall provide barricades; and shall take any other needed actions, on his own responsibility, that are reasonably necessary to protect the life and health of employees on the job, the safety of airport users, and the safety of moving and parked aircraft, and other property during the performance of the work.

   b. The Safety Officer's duties shall include accident prevention.

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7. Navigational Aids: Airport navigational aid critical areas are shown on the drawings. The Contractor shall not enter these areas without the Engineer's approval.

8. FAA Advisory Circular: Except as otherwise specified, FAA AC 150/5370-2G and all its references shall be used in maintaining airport operational safety during construction.

B. Runway and Taxiway Safety Zones:

1. Limitations: When necessary to accomplish construction in areas adjacent to runways and taxiways, the construction equipment, vehicles, and men are authorized to operate without interruption within the project limits, except within the following areas and as specified otherwise:

Distance from Runway centerline or end
- within 250 feet.

Distance from active Taxiway centerline
- within 90 feet.

Runway End approach areas
- within 34:1 slope approach surface as shown on drawings, unless noted otherwise.

2. Request for Facility Closures: Construction activities on runways or taxiways or within the above restricted areas shall only be performed at times when the runway or taxiways are closed to aircraft. Closure of a runway or taxiway or any portion thereof must be requested in writing by the Contractor through the Engineer. This request must indicate the areas needed and a schedule of operations and time(s) required for operations within the area. The Owner reserves the right, however, to shift any approved closure periods to alleviate aircraft congestion or when inclement weather conditions dictate.

3. Equipment Operation Restrictions: Contractor may be permitted to operate trenching machines and other equipment in the runway and taxiway safety zones provided all of the following conditions are satisfied:

a. The equipment operator and/or crew foreman monitors the ATC ground frequency continuously, using a two-way radio transceiver.

b. All equipment shall be cleared from the Runway or Taxiway Safety Zones during aircraft operations (landings, take-offs, and taxiing).

c. All equipment within the Runway and Taxiway Safety Zones is manned and being used. No unnecessary or parked equipment will be allowed within the Runway and Taxiway Safety Zones.

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d. All excavated trenches and holes shall be backfilled, tamped and leveled to match existing grades before workmen leave the site at the end of each workday.

4. Stockpiles: Stockpiled materials shall not be permitted within the runway or taxiway safety zones.

5. Grading Requirements: All construction within a restricted area shall be performed in such a manner that, at the end of the closure period, it will leave the safety area with no abrupt grade changes or grades in excess of 5 percent and with no trenches with depth or width greater than 3 inches, unless in the case of taxiway safety areas, the safety area has been marked and barricaded in accordance with FAA AC 150/5370-2G and as approved by the Engineer.

C. Obstructions to Navigation:

1. Violation of Safety Zone Surfaces: Penetration of equipment, vehicles, materials, or men into the safety zones and approach surfaces requires the preparation and distribution of Notices of Airmen (NOTAM) in advance to the actual penetration.

2. Scheduling: When part of the work in this project is in violation of FAR Part 77, the clearance distance requirements from runway and taxiway edges shall be incorporated into the construction sequence schedule. At no time shall the construction limits of the area under construction violate the safety zones without prior notification to and approval by the Engineer.

3. Coordination and Communication: Work within and adjacent to active AOAs shall be coordinated with the Engineer prior to commencement of the activity. Work crews in these areas shall be accompanied by the construction superintendent and the resident inspector, both of which shall be in constant radio contact with ATC.

D. **Additional safety requirements are set forth in FAA A/C 150/5370-2G, "Operational Safety on Airports During Construction," included in this Project Manual.**

1.05 SAFETY PLANNING: The Contractor shall integrate and maintain requirements of airport operational safety into each of his planning and work schedules. The Contractor's Safety Officer shall continuously monitor all planning schedules and work underway for compliance

to AC 150/5370-2G; he shall maintain vigilance to detect areas needing attention due to oversight or altered construction activities. Airport operational safety during construction will be on the agenda at the preconstruction conference and each coordination and progress meeting.

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1.06 **SECURITY REQUIREMENTS:** The Contractor has the responsibility for maintaining control of the access gates or any other entrance to the AOA. The Contractor may utilize a gate guard or install an automatic operated gate controller with limited access with numeric keypad. The Contractor's method of maintaining security shall be set forth in his Security Plan. **The Contractor must familiarize himself with and adhere to all Fulton County Airport Security requirements.**

1.07 **BARRICADES:** Contractor shall provide barricades along the active runway and taxiway pavement areas and elsewhere as shown on the plans or as directed by the Engineer while work is proceeding in the taxiway, apron and runway areas. Barricades shall be placed and relocated as necessary during the course of the work to clearly identify areas closed to aircraft operations.

1.08 **TAXIWAY CLOSURES:** Taxiway / Taxilane closures shall be scheduled in advance. Contractor shall identify taxiway closures with approved barricades and by covering taxiway lights within closure limits. Remove barricades and covers when no longer needed or as directed by the Engineer.

1.09 **CONTRACTOR USE OF PREMISES:**

A. Use of the Site: Confine operations at the site to the areas designated on the Drawings. Portions of the site beyond areas on which work is indicated are not to be disturbed. Conform to site rules and regulations affecting the work as stated on this Safety Plan while engaged in project construction.

B. Keep existing drives, entrances and air operations areas designated to remain open, clear and available to the Owner, his employees and the public at all times. Do not use these areas for parking or storage of materials.

C. Do not unreasonably encumber the site with materials or equipment. Confine stockpiling of materials and location of storage sheds to the areas indicated. If additional storage is necessary, obtain Engineer’s approval.

D. Lock automotive type vehicles, such as passenger cars and trucks, and other mechanized or motorized construction equipment, when parked and unattended, so as to prevent unauthorized use. Do not leave such vehicles or equipment unattended with the motor running or the ignition key in place.

PART 2: PRODUCTS

2.01 **BARRICADES:** Barricades shall be of material and construction as specified in Section 01530.

PART 3: EXECUTION

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3.01 LIMITATION OF CLOSURES:

A. Airfield pavement closures will be made only by the OWNER through the Engineer. The Contractor shall request the closure through the OWNER, to issue the order to close an active airfield pavement.

3.02 BARRICADE INSTALLATION:

A. Install barricades at location shown on the drawings and where directed by Engineer. Anchor all barricades by sandbags. Maintain barricades and markings until removal is directed by Engineer.

B. Barricade batteries shall be checked and maintained on a weekly basis to insure the adequate operation of the flashers during the night. Replace batteries as required. Upon removal of barricades, repair any damage to pavement or surrounding area caused by markers or barricades.

3.03 PAYMENT: Except as otherwise specified in Item 01530, no measurement or payment shall be made for this item of work, and it will be considered as an incidental cost to Mobilization.

END OF SECTION 01030

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SECTION 01040

PROJECT COORDINATION

PART 1: GENERAL

1.01 RELATED DOCUMENTS: All contract documents and drawings apply to work of this section.

1.02 DESCRIPTION OF WORK: Minimum administrative and supervisory requirements necessary for coordination of work on the project include but are not necessarily limited to the following:

1. Coordination and meetings.
2. Surveys and records or reports.
3. Limitations on use of site.
4. Cleaning and protection.
5. Conservation and salvage.

PART 2: PRODUCTS (Not applicable.)

PART 3: EXECUTION

3.01 COORDINATION AND MEETINGS:

A. General: The Contractor shall prepare a written memorandum on required coordination activities and include such items as required notices, reports and attendance at meetings. Distribute this memorandum to each entity performing work at the Project site. Prepare similar memorandum for separate Contractors where interfacing of their work is required.

B. Preconstruction Conference: A Preconstruction Conference will be scheduled after award of Contract and prior to issuance of a Notice to Proceed. Key Project personnel representing the Prime Contractor and all major Subcontractors will be required to attend this Conference. All other parties involved with this Project, such as the Owner, Engineer, and GDOT, will also be represented. The entire Construction Schedule will be reviewed carefully by all affected parties at the Preconstruction Conference.

The Contractor(s) shall prepare a detailed Construction Schedule for review prior to and at the Preconstruction Conference.

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C. Coordination Meetings: The Contractor shall hold General Project Coordination Meetings at regularly scheduled times convenient for all parties involved. These meetings may be as often as weekly if required. These meetings are in addition to specified meetings held for other purposes, such as regular Project meetings and special Pre-installation Meetings. Request representation at each meeting by every party currently involved in coordination or planning for the work of the entire Project. Conduct meetings in a manner which will resolve coordination problems. Record results of the meeting and distribute copies to everyone in attendance and to others affected by decision or actions resulting from each meeting.

1. The Contractor shall conduct daily coordination meetings with the Engineer's representative, FAA and designated Owner's representative to coordinate construction and airport operations.

D. Progress Meetings: Conduct progress meetings by teleconference weekly and at the project site monthly. Notify the Owner and Engineer of scheduled meeting dates. Coordinate dates of meetings with preparation of the payment request.

E. Attendees: In addition to representatives of the Owner and Engineer, each subcontractor, supplier or other entity concerned with current progress or involved in planning, coordination or performance of future activities shall be represented at these meetings by persons familiar with the project and authorized to conclude matters relating to progress.

F. Agenda: Review and correct or approve minutes of the previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to the current status of the project, and to airport operational safety during construction.

1. Contractor's Construction Schedule: Review progress since the last meeting. Determine where each activity is in relation to the Contractor's Construction Schedule, whether on time or ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

2. Other: Review the present and future needs of each entity present, including such items as:

Interface requirements.
Time.
Sequences.

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Deliveries.
Off-site fabrication problems.
Access.
Site utilization.
Temporary facilities and services.
Hours of work.
Hazards and risks.
Housekeeping.
Quality and work standards.
Change orders.
Documentation of information for payment requests.

G. Reporting: No later than 3 days after each progress meeting date, distribute copies of minutes of the meeting to each party present and to other parties who should have been present. Include a brief summary, in narrative form, of progress since the previous meeting and report.

H. Schedule Updating: Revise the construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule concurrently with the report of each meeting.

3.02 SURVEYS AND RECORDS/REPORTS:

A. Construction Staking: The Engineer has established survey base lines for the Contractor. The Contractor shall take all necessary precautions to prevent the loss or damage of primary control points. **The Contractor will be responsible for staking required for construction.** Working from lines and levels established by the design survey, establish and maintain benchmarks and other dependable markers required for construction. Establish benchmarks and markers to set lines and levels for work at each stage of construction and elsewhere as needed to properly locate each element of the project. Calculate and measure required dimensions as shown within recognized tolerances. Drawings shall not be scaled to determine dimensions. Advise entities performing work of marked lines and levels provided for their use.

B. Survey Procedures: Before proceeding with the layout of actual work, the Contractor shall verify the layout information shown on the drawings, in relation to the property survey and existing benchmarks. As work proceeds, check every major element for line, level and plumb. Maintain a surveyor's log or record book of such checks; make this log or record book available for the Engineer's reference. Record deviations from required lines and levels, and advise the Engineer promptly upon detection of deviations that exceed indicated or recognized tolerances. Record deviations which are accepted, and not corrected, on record drawings. Survey work shall be performed by and under supervision of a professional (registered) land surveyor in the State of Georgia.

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C. Quality of Work: The elevations of permanent and temporary benchmarks shall be determined and recorded to the nearest 0.01 foot. Differential leveling and transit traverses shall be of such precision that the error of vertical closure in feet shall not exceed plus or minus 0.1 foot in 5000 feet. The angular error of closure for transit traverses shall not exceed 1.0-minute times the square root of the number of angles turned.

Slope stakes shall be placed, as a minimum, at 100-foot stations, breaks in the original ground surface, and at any other intermediate stations necessary to insure accurate location for construction layout and measurement. Slope stakes and cross sections shall be perpendicular to the centerline. Significant breaks in grade shall be determined for cross sections. Distances shall be measured horizontally and recorded to the nearest 0.1 foot. Side shots for interim construction stakes may be taken with a hand level.

D. Records: All survey data shall be recorded in fully identified, standard hard-bound engineering survey field notebooks with consecutively numbered pages. All field notes and printed data shall include the purpose or description of the work, the date the work was performed, weather data, sketches and the personnel who performed and checked the work. Electronically generated survey data and computations shall be bound, page numbered and cross referenced in a bound field notebook containing the index for all survey data and shall be signed and sealed by a registered Land Surveyor in the **State of Georgia**.

The construction survey records shall be available at all times during the progress of the work for examination and use by the Engineer and copies shall be made available to the Engineer upon request. The original field notebooks and other records shall be turned over to and become the property of the Owner prior to final acceptance of the work.

3.04 MEASUREMENT AND PAYMENT: No measurement or payment will be made for work in this item; it will be considered as incidental cost to Mobilization and other items of work.

END OF SECTION 01040

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SECTION 01060

CONTROL OF EROSION, SILTATION AND POLLUTION

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS:

The Contractor shall take whatever measures are necessary to minimize soil erosion and siltation, water pollution and air pollution caused by his operations. The Contractor shall also comply with the applicable regulations of all legally constituted authorities relating to pollution prevention and control. The Contractor shall keep himself fully informed of all such regulations which in any way affect the conduct of the work and shall at all times observe and comply with all such regulations. In the event of conflict between such regulations and the requirements of the specifications, the more restrictive requirements shall apply.

The Engineer will limit the area over which clearing and grubbing, excavation, borrow, and embankment operations are performed whenever the Contractor's operations do not make effective use of construction practices and temporary measures which will minimize erosion, or whenever effective erosion control features are not being completed as soon as permitted by construction operations.

PART 2 PRODUCTS (Not used)

PART 3 EXECUTION

3.01 EROSION AND SILTATION CONTROL:

The Contractor shall exercise every reasonable precaution throughout the life of the project to prevent the eroding of soil and silting of rivers, streams, lakes, reservoirs, other impoundments, ground surfaces, or other property.

Prior to suspension of operations on the project or any portion thereof, the Contractor shall take all necessary measures to protect the construction area from erosion during the period of suspension.

3.02 COORDINATION OF EROSION CONTROL OPERATIONS:

Temporary and permanent erosion control measures shall be provided as shown on the plans or as directed by the Engineer. All permanent erosion control work shall be incorporated into the project at the earliest practicable time. Temporary erosion control measures shall be coordinated with permanent erosion control measures and all other work on the project to assure economical, effective, and continuous erosion control throughout the construction and post construction period and to minimize siltation of rivers, streams, lakes, reservoirs, other

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water impoundments, ground surfaces, or other property.

Temporary erosion control measures shall include but not be limited to the use of temporary berms, dikes, dams, silt fences, drainage ditches, silt basins, diversion ditches, slope drains, structures, vegetation, mulches, mats, netting, gravel, rip rap, or any other methods or devices that are necessary. Temporary erosion control measures may include work outside the construction limits where such work is necessary as a result of construction such as borrow pit operations, haul roads, plant sites, equipment storage sites, and disposal of waste or debris. The Contractor shall be liable for all damages to public or private property caused by silting or slides originating in waste areas furnished by the Contractor.

Materials for temporary erosion control measures shall have been approved by the Engineer before being used or shall be as directed by the Engineer.

Erosion control measures installed by the Contractor shall be acceptably maintained by the Contractor.

3.03 WATER AND AIR POLLUTION:

The Contractor shall exercise every reasonable precaution throughout the life of the project to prevent pollution of rivers, streams, and water impoundments. Pollutants such as chemicals, fuels, lubricants, bitumens, raw sewage, and other harmful waste shall not be discharged into or alongside of rivers, streams, or impoundments, or into natural or manmade channels leading thereto.

The Contractor shall comply with all Federal, State or local air pollution regulations throughout the life of the project.

3.04 DUST CONTROL:

The Contractor shall control dust throughout the life of the project within the project area and at all other areas affected by the construction of the project, including, but not specifically limited to unpaved roads, haul roads, access roads, disposal sites, borrow and material pits, and production sites. Dust control shall not be considered effective where the amount of dust creates a potential or actual unsafe condition, public nuisance, or condition endangering the value, utility, or appearance of any property.

The Contractor will not be directly compensated for any dust control measures necessary, as this work will be considered incidental to the work covered by the various contract times.

3.05 APPLICATION OF SPECIFICATIONS:

The provisions of this section shall apply to all construction operations. Further references and detailed requirements concerning erosion, siltation, and pollution prevention and control, may be given in other sections of the specifications and on the drawings.

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3.06 CONTRACTOR'S INSPECTION AND REPORT:

The Contractor shall make an inspection of the construction site on a weekly basis and after each potentially damaging rainfall. All possible petroleum leaks and construction exists must be inspected daily. Note shall be taken of any damage to existing erosion control features and of siltation problems encountered during the inspection. In a report to the Engineer, the Contractor shall outline his corrective measures to be undertaken and the date of implementation.

3.07 TEMPORARY SUSPENSION OF WORK:

Failure of the Contractor to fulfill any of the requirements of this section may result in the Engineer ordering the stopping of construction operations in accordance with the following:

A. The Engineer shall have the authority to suspend the work wholly or in part by written order, for such periods as he may deem necessary due to conditions considered unfavorable for the suitable prosecution of the work, or to failure on the part of the Contractor to correct conditions unsafe for workmen or the general public or to carry out orders given or to perform any provisions of the contract. Such suspension of operations will not justify an extension of contract time.

B. Failure on the part of the Contractor to perform the necessary measures to control erosion, siltation, and pollution will result in the Engineer notifying the Contractor to take such measures. Any fine, penalty or other cost assessed by State, local or other governmental agencies for non-performance of erosion, siltation or pollution controls against the Owner shall become the responsibility of the Contractor; such assessments, if not paid by the Contractor, shall be deducted from monies due the Contractor at the completion of the job. In the event that the Contractor fails to perform such measures within 24 hours after receipt of such notice, the Engineer may suspend the work as provided above, or may proceed to have such measures performed by others. The cost of such work performed by others will be deducted from monies due the Contractor on his contract.

3.08 PAYMENT:

Except where specified otherwise elsewhere in the specifications, there will be no direct payment for any work in connection with the requirements of this section; this work shall be considered incidental to the work.

END OF SECTION 01060

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SECTION 01070

ABBREVIATIONS AND SYMBOLS

PART 1 GENERAL

1.01 DESCRIPTION:

A. Abbreviations that may be used in the Contract Documents including the drawings are listed in this section and have the identifications and meanings shown herein except where otherwise indicated.

B. Symbols are identified on the drawings.

C. Related requirements in other parts of the Contract Documents.

1. Drawing symbols: Contract drawings
2. Drawing abbreviations: Contract drawings.

1.02 ABBREVIATIONS:

A. Agencies, Codes, Standards, etc.:

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AF	Air Force
AGC	Associated General Contractors of America
AI	Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ANG	Air National Guard
ANSI	American National Standard Institute
API	American Petroleum Institute
AREA	American Railway Engineering Association
ASTM	American Society for Testing and Materials
AWPA	American Wood Preservers Association
AWG	American Wire Gage
AWS	American Welding Society
AWWA	American Water Works Association
COE	Corps of Engineers
CRSI	Concrete Reinforcing Steel Institute
FAA	Federal Aviation Administration

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FHWA	Federal Highway Administration
FS	Federal Specifications
GDOT	Georgia Department of Transportation
MUTCD	Manual on Uniform Traffic Control Devices for Streets and Highways
NEMA	National Electrical Manufacturers Association
NEC	National Electrical Code
NWS	National Weather Service
OSHA	Occupational Safety and Health Act
PCA	Portland Cement Association
UL	Underwriter's Laboratories, Inc.

B. Drawing Abbreviations:

1. The following list is not necessarily all inclusive; additional abbreviations may be used and defined on the drawings.
2. Some abbreviations used on the drawings may not have the same meaning as that identified in the following list; the non-conforming meanings are identified on the drawings when not self-evident.
3. Some variation in use of periods and capitalization may be found on the drawings.

Abbreviations	Meaning	Abbreviations	Meaning
A			
AB	Anchor Bolt	ABT	About
ABV	Above	AC	Advisory Circular (FAA)
AC	Alternating Current	AC	Asphaltic concrete
ACFT	Aircraft	ADDN.	Addition
AF	Air Force	AGG.	Aggregate
AIP	Airport Improvement Program	ALIGN	Alignment
ALP	Airport Layout Plan	ALS	Approach lighting system
ALT	Alternate	ANT.	Antenna
AOA	Air operational area	AP	Airport
APPROX.	Approximate	ARCH.	Architecture
ARP	Airport reference point	ASPH	Asphalt
ATC	Air traffic control	ATCT	Air traffic control tower
AVE	Avenue	AVG	Average
AWG	American wire gage	AWOS	Automatic weather observing systems
B			
B TO B	Back to back	BCN	Beacon
BDY	Boundary	BET.	Between
BF	Both faces	BIT. or BITUM	Bituminous
BLDG	Building	BL	Base line
BM	Bench mark	BOT	Bottom
BRL	Building restriction line	BRK	Brick
BS	Both sides	BTW	Between
BW	Both ways		

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C			
C	Centigrade	C TO C	Center to center
CA	Cable	CB	Catch basin
CBM	Construction bench mark	CD	Check dam
CEM	Cement	CFM	Cubic feet per minute
CFS	Cubic feet per second	CHAM	Chamfer
CHG	Change	CHK	Check
CI	Cast iron	CIP	Cast iron pipe
CJ	Construction joint	CL	Clear
C/L	Center line	CLR	Clearance
CMP	Corrugated metal pipe	CO	Cleanout
CONC	Concrete	CONST	Construction
CONT	Continue	CORR	Corrugate
CPP	Corrugated Polyethylene	CPS	Cycles per second
CTB	Cement Treated Base Course	CULV	Culvert
CY. or CU.YD.	Cubic yard		
D			
D	Depth	DAT	Datum
DBL	Double	DBST	Double bituminous surface treatment
DC	Direct current	DEF. ANG.	Deflection angle
DEG	Degree	DEMO.	Demolish
DI	Drop inlet	DIA	Diameter
DIP	Ductile iron pipe	DIM.	Dimension
DIR	Direction	DIST	Distant
DIV	Division	DO	Ditto
DSGN	Design	DTD	Dated
DWG	Drawing		
E			
EA	Each	EF	Each face
EG	For example	EJ or EXP JT	Expansion joint
EL or ELEV	Elevation	ENGR	Engineer
EOP	Edge of pavement	EQ	Equal
EQUIP	Equipment	EQUIV	Equivalent
EST	Estimate	EW	Each way
EXC	Excavate	EXIST	Existing
EXT	Exterior		
F			
F	Fahrenheit	F TO F	Face to face
FAB	Fabricate	FAR	Federal Aviation Regulation
FBO	Fixed base operator	FDN	Foundation
FF	Finish floor	FG	Finish grade
FH	Fire hydrant	FIG	Figure
FIN	Finish	FLD	Field
FOD	Foreign object damage	FPM	Feet per minute
FPS	Feet per second	FS	Federal Specification
FT	Foot or feet	FTG	Footing
FW	Fresh water	FWD	Forward
G			
GA	Gage or Gauge	GAL	Gallon

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GALV	Galvanize	GEN	General
GFE	Government-furnished equipment	GOVT	Government
GPM	Gallons per minute	GPS	Gallons per second
GRD	Ground or grade	GV	Gate valve
GVGI	Generic visual	GVGI	Glideslope indicator
H			
HP	High point	HGT	Height
HGR	Hangar	HH	Handhole
HIRL	High intensity lighting system	HMAC	Hot mix asphaltic concrete
HOR or HORIZ	Horizontal	HWY	Highway
I			
ID	Inside diameter	IDENT	Identification
IFR	Instrument flight rule	ILS	Instrument landing system
IN	Inch	INCL	Include
INT	Intersect	INV	Invert
IP	Inlet protection	IP	Iron pipe
J			
JB	Junction Box	JFR	Jet fuel resistant
JMF	Job mix formula	JT	Joint
K			
K	Kip (1,000 lb)	KWY	Keyway
L			
L	Left	LAT	Latitude
LB	Pound	LC	Length of curve
LF	Linear feet	LG	Length or long
LIN	Linear	LITL	Low intensity taxiway lights
LOA	Length over-all	LOC	Localizer
LONG	Longitudinal	LP	Low point
LS	Lump sum	LT	Light
LVC	Length of vertical curve		
M			
MAINT	Maintenance	MALS	Maximum Runway lights Intensity approach
MATL	Material	MAX	Maximum
MH	Handhole	MHW	Mean high water
MIN	Minimum	MIRL	Medium intensity runway lights
MITL	Medium intensity	MISC	Miscellaneous
MLS	Microwave landing system	MLW	Mean low water
MON	Monument	MSL	Mean sea level
MTL	Metal		
N			
NATL	National	NAVAID	Navigational aid
NIC	Not in contract	NO	Number
NOM	Nominal	NOTAM	Notice to airmen
NTS	Not to scale		
O			
OA	Over-all	OC	On center
OD	Outside diameter	OFZ	Obstacle free zone
OPS	Operations	ORIG	Original

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P			
PAPI	Precision approach path	PAR	Precision approach radar
PAV'T	Pavement	PC	Point of curve
PCC	Portland cement concrete	PFC	Porous friction course
PI	Point of intersection	PIV	Post indicator valve
PJF	Premolded joint filler	POL	Petroleum fuel, oil, and/or lubricants
PL	Plate	PREP	Prepare
PROJ	Project	PROP	Proposed
PSI	Pounds per square inch	PT	Point
PT	Point of tangency	PVC	Polyvinyl chloride
PVC	Point of vertical curve	PVI	Point of vertical intersection
PVT	Point of taxiway lights vertical tangency	PVMT	Pavement
Q			
QA	Quality assurance	QC	Quality control
R			
R	Right	R or RAD	Radius
RAIL	Runway alignment indicator lights	R/W or RW	Runway
RC	Reinforced concrete	RCP	Reinforced concrete pipe
RD	Road	REF	Reference
REIL	Runway end identifier	REIN	Reinforce
RELOC	Relocated	REP	Repair
REQD	Required	RET	Return
REV	Revise	ROC	Run of crusher
ROW	Right of way	RPM	Revolutions per minute
RPZ	Runway protection zone	RR	Railroad
S			
S	Slope	SABC	Stabilized aggregate base course
SALV	Salvage	SAN	Sanitary
SB	Straw bale	SBST	Single bituminous surface treatment
SCHED	Schedule	SEC	Second slope indicator
SEC Cor	Section corner	SECT	Section
SEP	Separate	SF	Silt fence
SF or SQ. FT.	Square feet	SHT	Sheet
SHLD	Shoulder rules	SIM	Similar
SK	Sketch	SP	Space(s)
SPEC	Specification	SQ	Square
SS	Stainless steel	STA	Station
STD	Standard	STL	Steel
STR	Structural fabric	SUPP	Supplement
SWG	Swing	SYM	Symbol
SYM	Symmetrical	SY or SQ.YD.	Square yards between
SYS	System		
T			
T	Thick	T	Ton
T&B	Top and bottom	TBM	Temporary benchmark
TECH	Technical	TEL	Telephone
TEMP	Temperature	THK	Thick
THRU	Through	T/L or TL	Taxilane
TOC	Top of curb	TOG	Top of grate

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TOL	Tolerance	TOP	Top of pavement
TRANS	Transformer	TSD	Temporary slope drain
T/W or TW	Taxiway	TYP	Typical
U			
UD	Underdrain	UG	Underground
UGT	Underground telephone line	USGS	United States Geodetic Survey
V			
VASI	Visual approach	VB	Valve box
VC	Vertical curve	VCP	Vitrified clay
VERT	Vertical	VFR	Visual flight
VS	Versus		
W			
W	Water	W/	With
WGT	Weight	W/O	Without
WL	Water line	WWF	Welded wire
WP	Working point		
X			
X	By (used dimensions)	XSECT	Cross section
Y			
YD	Yard		

1.03 SYMBOLS:

A. As outlined on drawings.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION 01070

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SECTION 01090

REGULATIONS AND DEFINITIONS

PART 1 GENERAL

1.01 RELATED DOCUMENTS:

Drawings, General Provisions, Supplementary Conditions, Specifications, and other contract documents apply to work of this section.

1.02 DESCRIPTION OF REQUIREMENTS:

A. General: This section specifies procedural and administrative requirements for compliance with governing regulations, codes and standards imposed upon the work. These requirements include obtaining permits, licenses, inspections, releases and similar documentation, as well as payments, statements and similar requirements associated with regulations, codes and standards.

The term "Regulations" is defined to include laws, statutes, ordinances and lawful orders issued by governing authorities, as well as those rules, conventions and agreements within the construction industry which effectively control the performance of the work regardless of whether they are lawfully imposed by governing authority or not.

B. Governing Regulations: Refer to General Provisions, Supplementary Conditions, the General Requirements for requirements related to compliance with governing regulations.

1.03 DEFINITIONS:

A. General Explanation: Certain terms used in contract documents are defined in this article. Definitions and explanations contained in this section are not necessarily complete but are general for the work to the extent that they are not stated more explicitly in another element of the contract documents.

B. General Requirements: Provisions and requirements of Division 1 sections apply to the entire work of the contract and, where so indicated, to other elements which are included in the project.

C. Indicated: The term "indicated" is a cross-reference to graphic representations, notes or schedules on the drawings, to other paragraphs or schedules in the specifications, and to similar means of recording

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requirements in contract documents. Where terms such as "shown", "noted", "scheduled", and "specified" are in lieu of "indicated", it is for the purpose of helping the reader locate the cross-reference, and no limitation of locations is intended except as specifically noted.

D. Directed, Requested, etc.: Terms such as "directed", "requested", "authorized", "selected", "approved", "required", "accepted", and "permitted" mean "directed by the Engineer", "requested by the Engineer", and similar phrases. However, no such implied meaning will be interpreted to extend the Engineer's responsibility into the Contractor's area of construction supervision.

E. Approved: Where used in conjunction with the Engineer's response to submittals, requests, applications, inquiries, reports and claims by the Contractor, the term "approved" will be held to limitations of the Engineer's responsibilities and duties as specified in General Provisions and Supplementary Conditions. In no case will the Engineer's approval be interpreted as a release of the Contractor from responsibilities to fulfill requirements of contract documents or acceptance of the work, unless otherwise provided by requirements of the contract documents.

F. Project Site: The term "project site" means the space available to the Contractor for performance of the work, either exclusively or in conjunction with others performing other construction as part of the project. The extent of the project site is shown on the drawings.

G. Furnish: The term "furnish" is used to mean "supply and deliver to the project site, ready for unloading, unpacking, assembly, installation, and similar operations."

H. Install: The term "install" is used to describe operations at project site including the actual "unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations."

I. Provide: The term "provide" means "to furnish and install, complete and ready for the intended use."

J. Installer: The "installer" is the "the entity" (person or firm) engaged by the Contractor, its subcontractor or sub-subcontractor for performance of a particular element of construction at the project site, including installation, erection, application and similar required operations. It is a requirement that installers are experienced in the operations they are engaged to perform.

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1.04 SUBMITTALS:

Permits, Licenses, and Certificates: For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence and records established in conjunction with compliance with standards and regulations bearing upon performance of the work.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION 01090

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SECTION 01150
MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.01 DESCRIPTION:

A. Method of Measurement and Payment: This section supplements Section 90 of the General Provisions and establishes the method of measurement and payment for work performed under this contract.

B. Unit Price: Except where lump sum is indicated, payment for work performed shall be made on a unit price basis in accordance with the accepted bid and the method of payment provided in the General Provisions.

C. Related Requirements in Other Parts of the Specifications:

1. Bid (Proposal).
2. Agreement.
3. Conditions of the Contract.

D. Related Requirements Specified in Other Sections:

1. Summary of Work - Section 01010.
2. Submittals - Section 01300.
3. Contract Closeout - Section 01700.

E. Work With No Identified Payment Items: No additional payment will be made for items of work for which a separate payment item is not specified or contained in the Bid Schedule; such work shall be deemed incidental to the project and payment for said work shall be considered as included in the various unit bid prices.

1.02 APPLICATIONS FOR PAYMENT:

A. Submittal Schedule: Submit Applications for Payment to the Engineer in accordance with the schedule established by Conditions of the Contract and Agreement between Owner and Contractor.

B. Format and Data Required:

1. Submit Applications for Partial Payment on the form required by Owner with itemized data typed on 8 1/2 x 11-inch white paper continuation sheets.

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2. Provide itemized data on continuation sheet: Format, schedules, line items and values: Those of the Schedule of Values accepted by the Engineer.

C. Preparation of Application for Each Progress Payment:

1. Application Form:

a. Fill in required information, including that for Change Orders executed prior to the date of submittal of application.

b. Fill in summary of dollar values to agree with the respective totals indicated on the continuation sheets.

c. Execute certification with the signature of a responsible officer of the contract firm.

2. Continuation Sheets:

a. Fill in total list of all scheduled component items of work, with item number and the scheduled dollar value for each item.

b. Fill in the dollar value in each column for each scheduled line item when work has been performed or products stored. Round off values to the nearest dollar, or as provided in the bid.

3. List each Change Order executed prior to the date of submission, at the end of the continuation sheets.

a. List by Change Order and description, as for an original component item of work.

4. Submit Applications for Payment to Owner at the times stipulated in the Agreement.

a. Number: Four copies of each Application.

D. Substantiating Data:

1. When the Owner or Engineer require substantiating data, Contractor shall submit suitable information with cover letter identifying:

a. Project.

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b. Application number and date.
c. Detailed list of enclosures.
d. For stored products: Item number and identification as shown on application.
e. Description of specific material.

2. Submit one copy of data and cover letter for each copy of application.

E. Preparation of Application for Final Payment:

1. Fill in application form as specified for progress payments.

2. Use continuation sheet for presenting the final statement of accounting as specified in Section 01700 - Contract Closeout.

1.03 CHANGE ORDER PROCEDURES:

A. Format and Data Required:

1. Change Orders shall be prepared and submitted and will be processed in accordance with requirements of General Provisions and Funding Agency Requirements.

2. Engineer will transmit Certificate for Change to Owner and Agency for approval.

3. When Owner and Agency approval is received, Change Order will be included under next partial Application for Payment.

1.04 MEASURES AND WEIGHTS:

A. Contractor Assistance: To aid the Owner in determining all quantities, the Contractor shall, whenever so requested, provide scales, equipment and assistance for weighing or for measuring any of the materials at no cost to the Owner.

B. Weights and Measures: Quantities for payment will be the actual weight or actual measure, and no special or trade or so-termed customary allowances will be made, nor will any material which is lost or misplaced be included for payment.

C. Use of Planimeter: For estimating quantities in which computation of areas by geometric methods would be comparatively laborious, it is agreed that the

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planimeter shall be considered an instrument of precision to the measurement of such areas.

D. Precedence of Dimensions: Figured dimensions on drawings shall take precedence over measurement by scale, and detailed working drawings are to take precedence over general drawings and shall be considered as explanatory of them and not as indicating extra work.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION 01150

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SECTION 01300

SUBMITTALS

PART 1 GENERAL

1.01 SUBMITTALS BY CONTRACTOR:

A. Construction Progress Schedule.

B. Certifications as specified in the various sections.

C. Shop Drawings and Project Data as specified in the various sections.

D. Miscellaneous:

1. Equipment Manuals.
2. Weekly Payroll.
3. EEO Reports.
4. DBE Expenditure Report.
5. Safety Plan.
6. Security Plan.
7. Warranties and Bonds.
8. QC Plan.
9. Other(s) as required.

1.02 PROGRESS SCHEDULE:

A. Bar-Chart Schedule: Submit a CPM type bar-chart schedule 7 calendar days prior to the preconstruction conference date established for the work. On the schedule, indicate a time bar for each major category or unit of work to be performed at the site, properly sequenced and coordinated with other elements of work. Show completion of the work sufficiently in advance of the date established for substantial completion of work. **Progress Payments may be held if the Contractor fails to provide original and/or updated project schedules for review and approval by the Engineer.**

B. Phasing: Arrange schedule with notations to show how sequence of work is affected by requirements for phased completion, limitations of continued utilization, non-interruptible services, use prior to substantial completion, site restrictions, apron and taxiway closures, provisions for future work, seasonal

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variations, environmental control, and similar provisions of total project. Phase I schedule is required at the preconstruction meeting. Each subsequent phasing schedule is required at least two weeks before the phase is to begin. Refer to other sections of Division 1 and other contract documents for requirements.

C. Distribution: Following the initial submittal to and response by the Engineer, print and distribute progress schedules to the Engineer (3 copies), Owner, separate contractors, principal subcontractors and suppliers or fabricators, and others with a need-to-know schedule-compliance requirement. Post copies in the project meeting room and temporary field office. When revisions are made, distribute updated issues to the same entities and post updated issues in the same locations. Delete entities from distribution when they have completed their assigned work and are no longer involved in the performance of scheduled work.

D. Update: Contractor shall update the schedule monthly for duration of construction.

1.03 SHOP DRAWINGS AND PRODUCT DATA:

A. Scope: Submit certifications and product data for all products to be incorporated in the work.

B. Shop Drawings Will:

1. Be original drawings, prepared by the Contractor, subcontractor, supplier, or distributor, which illustrate some portion of the work; showing fabrication, layout, setting or erection details.

2. Be prepared by a qualified detailer.

3. Identify details by reference to sheet and detail numbers shown on Contract Drawings.

4. Be sheet size 22 in. X 34 in.

C. Product Data Will:

1. Include manufacturer's standard schematic drawings. The Contractor will:

a. Modify drawings to delete information which is not applicable to project.

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b. Supplement standard information to provide additional information applicable to project.

2. Include manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations and other standard descriptive data. The Contractor will:

a. Clearly mark each copy to identify pertinent materials or products.

b. Show dimensions and clearances required.

c. Show performance characteristics and capacities.

D. The Contractor Will:

1. Be responsible for all submittals.

2. Review shop drawings and product data prior to submission.

3. Verify:

a. Field measurements.

b. Field construction criteria.

4. Coordinate each submittal with the requirements of the work and of the Contract Documents.

5. Notify the Engineer, in writing at time of submission, of deviations in submittals from requirements of the Contract Documents.

6. Begin no work which requires submittals until the return of submittals with the Engineer's stamp and initials or signature indicating review.

7. After the Engineer's review, distribute copies.

E. Contractor's Responsibilities:

1. Contractor's responsibility for errors and omissions in submittals is not relieved by the Engineer's review of submittals.

2. Contractor's responsibility for deviations in submittals from requirements of the Contract Documents is not relieved by the Engineer's review of submittal, unless the Engineer gives written acceptance of specific deviations.

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F. Submission Requirements Include:

1. The product data and shop drawings shall be submitted in sufficient time to allow discussion and correction prior to beginning the work. Work shall not be performed, nor materials ordered prior to the review of the drawings except at the Contractor's risk.

2. Submit **5** copies of all product data and shop drawings after which one copy will be returned for correction or marked reviewed as noted. Any drawings returned for correction must be resubmitted with same number of copies as required above.

3. All submittals must be accompanied by a transmittal letter, in duplicate, containing:

   a. Date.

   b. Project title and number.

   c. Contractor's name and address.

   d. The number of each shop drawing and product data submitted.

   e. Notification of deviations from Contract Documents.

   f. Other pertinent data.

4. Submittals shall include the following, as applicable:

   a. Date and revision dates.

   b. Project title and number.

   c. The names of:

      (1) Engineer.

      (2) Contractor.

      (3) Subcontractor.

      (4) Supplier.

      (5) Manufacturer.

      (6) Separate detailer when pertinent.

   d. Identification of product or material.

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e. Relation to adjacent structure or materials.

f. Field dimensions clearly identified as such.

g. Specification item or section number.

h. Applicable standards, such as ASTM number or Federal Specification.

i. A blank space, 5 in. x 5 in., for the Engineer's stamp.

j. Identification of deviations from the Contract Documents.

k. Contractor's stamp, initialed or signed, certifying Contractor's review of submittal, verification of field measurements, and compliance with Contract Documents.

G. Resubmission Requirements Include:

1. Revision of initial drawings as required and resubmittal as specified for initial submittal.

2. An indication on the drawings of any changes which have been made, other than those requested by the Engineer.

3. On product data resubmittals, include new data as required for initial submittal.

H. Distribution to Others:

After review and approval, the Contractor will distribute copies of shop drawings and product data which carry the Engineer's stamp to others as may be required.

I. Shop Drawings and Product Data:

1. Submit notarized certifications cosigned by manufacturer/supplier and Contractor for:

a. Pavement sub-base, base, surfacing and related materials.

b. Grass seed.

c. Pavement marking paint.

c. All other products as required by the drawings, specifications, and Engineer.

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2. Submit product data for:

   a. Concrete and asphalt mix designs.

   b. All other products as required by the drawings, specifications, and Engineer.

1.04 MISCELLANEOUS:

A. Weekly Payrolls:

1. Submit certified weekly payrolls for prime contractor and all subcontractors working at project site.

2. Submit payrolls no later than 7 calendar days after pay period. Payrolls will be considered current if received within 10 calendar days after last workday of payroll work week. A work week is the seven-day period between midnight Sunday and midnight the following Sunday.

3. The Contractor is responsible for submission of payrolls by his subcontractors.

4. Submit a typed summary sheet with each payroll submission listing by week when contractor and each subcontractor worked at site.

5. A payroll submission is only required for weeks when Contractor or subcontractor is actually working at the site.

C. EEO Reports:

1. Contractor shall submit Monthly Employment Utilization Report and Annual EEO-1 Report to the appropriate Federal Labor Area Office in accordance with Section 100 of the General Provisions. Submit copy of submittal to Owner for his records.

2. Prime Contractor shall insure that all his first-tier subcontractors submit these reports and shall submit a sworn statement to Owner monthly certifying that all subcontractor reports have been submitted as required.

D. DBE Expenditure Reports:

With each application for payment, the Contractor shall submit his DBE expenditure report indicating the name, date and amount disbursed to his

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DBE subcontractors for the period as well as for the project to date expenditure.

E. Security Plan:

At preconstruction conference submit for approval, proposed security plan describing specifically how security will be maintained at each access point and work area by Contractor's forces.

F. Warranties and Bonds:

Submit as specified in Section 01740.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION 01300

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SECTION 01400

QUALITY CONTROL SERVICES

PART 1 GENERAL

1.01 RELATED DOCUMENTS: Drawings, General Provisions, Supplementary Conditions, Specifications, and other Contract Documents apply to work of this section.

1.02 DESCRIPTION OF REQUIREMENTS:

A. General: Required inspection and testing services are intended to assist in the determination of probable compliance of the work with requirements specified or indicated. These required services do not relieve the Contractor of responsibility for compliance with these requirements or for compliance with requirements of the Contract Documents.

B. Specified Inspection and Tests: Inspection, tests and related actions specified in this section and elsewhere in the Contract Documents are not intended to limit the Contractor's own quality control procedures which facilitate overall compliance with requirements of the Contract Documents.

C. Contractor Quality Control: Requirements for the Contractor to provide quality control services as required by the Engineer, the Owner, governing authorities or other authorized entities are not limited by the provisions of this section.

1.03 RESPONSIBILITIES:

A. Contractor Responsibilities: Contractor is responsible for his own quality control testing and inspection to ensure the quality of his means and methods of construction will produce the specified quality of work, and for any tests and inspections required by regulatory agencies. Costs for these services shall be included in the contract sum. The Contractor may employ and pay an independent agency, testing laboratory or other qualified firm to perform quality control services specified, or these services may be performed by qualified contractor personnel.

1. The Contractor shall submit for Engineer's approval a Quality Control (QC) Plan delineating his methods for each item requiring inspections, tests, and similar services.

B. Quality Assurance: The Owner will engage and pay for the services of an independent agency to perform inspections and tests of materials for Quality Assurance.

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C. Retest Responsibility: Where results of required inspections, tests, or similar services prove unsatisfactory and do not indicate compliance with the requirements of the Contract Documents, then retests are the responsibility of the Contractor, and shall be deducted from monies due the Contractor on his monthly pay request, regardless of whether the original test was the Contractor's responsibility. Retesting of work revised or replaced by the Contractor is the Contractor's responsibility, where required tests were performed on original work.

D. Responsibility for Associated Services: The Contractor is required to cooperate with the independent agencies performing required inspections, tests, and similar services. Provide such auxiliary services as are reasonably requested. Notify the testing agency sufficiently in advance of operations to permit assignment of personnel. These auxiliary services include but are not necessarily limited to the following:

1. Providing access to the work.
2. Taking samples or providing assistance with taking samples.
3. Delivery of samples to test laboratories.
4. Security and protection of samples and test equipment at the project site.
5. Surveying services required to establish horizontal and vertical location of tests by Engineer's quality assurance testing laboratory.

1.04 SCHEDULE OF SERVICES:

Schedule of Inspections and Tests: Each specification section identifies principal inspections, tests and similar services required by the Contractor Documents.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.01 REPAIR AND PROTECTION:

General: Upon completion of inspection, testing, sample-taking, and similar services performed on the work, repair damaged work and test sites to eliminate deficiencies. Protect work exposed by or for quality control service activities and protect repaired work. Repair and protection are the Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing or similar services.

END OF SECTION 01400

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SECTION 01510

TEMPORARY FACILITIES

PART 1 GENERAL

1.01 DESCRIPTION:

A. Contractor shall furnish, install and maintain temporary utilities required for construction and other temporary facilities as indicated; remove on completion of work.

B. Related requirements are specified in other sections of the specifications.

C. **An Engineers Field Office will NOT be required for this project.**

1.02 REQUIREMENTS OF REGULATORY AGENCIES:

A. Comply with National Electric Code.

B. Comply with Federal, State, and Local codes and regulations and with utility company requirements.

PART 2 PRODUCTS

2.01 MATERIALS, GENERAL:

Materials, furniture, and equipment may be new or used, but must be adequate in capacity for the required usage, must not create unsafe conditions, and must not violate requirements of applicable codes and standards. Acceptability of all items will be determined by the Engineer.

PART 3 EXECUTION

3.01 TEMPORARY ELECTRICITY AND LIGHTING:

Provide temporary electrical service required for power and lighting and pay all costs for service and for power used.

3.02 TEMPORARY WATER:

A. Provide water for construction purposes; pay all costs for installation, maintenance and removal, and service charges for water used.

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B. The site is served by a municipal water system. The Contractor shall make arrangements for securing and providing necessary water as required for the performance of work.

3.03 TEMPORARY SANITARY FACILITIES:

A. Provide sanitary facilities in compliance with laws and regulations.

B. Service, clean and maintain facilities and enclosures.

3.04 TEMPORARY SUPPORT FACILITIES:

A. General: Provide reasonably neat and uniform in appearance temporary support facilities acceptable to the Engineer and the Owner.

B. Siting: Locate storage and fabrication sheds and other support facilities for easy access to the work.

C. Maintenance: Maintain storage and fabrication sheds, temporary sanitary facilities, waste collection and disposal systems, and project identification and temporary signs until project completion.

D. Airfield Communications:

1. Contractor shall furnish his construction personnel with sufficient truck and hand-held radios to allow all construction locations to be in radio contact with the Unicom Frequency. The Contractor shall furnish one (1) hand-held radio for use by the Engineer. All radios shall be capable of two-way communications and shall be iCOM IC-A6 VHF Air Band Transceivers or approved equal. When working within active runway or taxiway safety areas, project superintendents shall be in constant radio contact and shall be responsible for controlling the movement of project equipment, vehicles and personnel.

   Provide the following accessories: 114 VAC wall charger, plug-in earphone, car cigarette lighter DC charger, one spare battery, case with belt loop, antenna, and operating manual. Radio shall cover Aviation NAV band 108-118 mH, and COM band 118-136 mH.

2. The radios will remain the property of the Owner at the conclusion of the project.

3. The Contractor will not be directly compensated for providing two-way radios as this work is considered incidental to the work covered by the various contract items.

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E. Staging Area: Contractor shall prepare his staging area and access road by grading, drainage, and placing a four (4) inch thick stone base of coarse aggregate (i.e. commonly used road stone) over the entire staging area and access road(s). The Contractor shall apply a periodic top dressing to the stone base in order to minimize any fugitive dust or mud during the construction period. Upon completion of the project, the stone base shall be completely removed, the site graded to drain, and then topsoiled, seeded and mulched in accordance with project specifications.

The Contractor may, at his option, erect fencing around the staging area. Any such fencing shall be removed at the end of the project.

F. Access and Haul Roads:

1. Locations of access and haul roads will be approved by the Engineer and are shown on the drawings. These roads will be located to minimize conflict with Airport operations and shall be maintained, well defined, and confined to the minimum area required. Damaged roads shall be promptly repaired by the Contractor to the satisfaction of the Engineer at no cost to the Owner.

2. The Contractor shall utilize existing access and haul roads and shall maintain the roads as required to create no dust. All project traffic must be routed through these areas. The Contractor shall provide all markings required to clearly define the access and haul roads.

3. The Contractor will be responsible for obtaining any necessary driveway permit(s) from local or state agencies for access and haul roads.

4. If access or haul roads cross a utility, the Contractor shall protect the utility as directed by the Owner of the utility.

5. There shall be no direct payment for the construction, maintenance, and removal of access and haul roads.

3.05 EXECUTION, GENERAL:

Maintain and operate systems to assure continuous service.

3.06 REMOVAL:

A. Completely remove temporary materials and equipment when their use is no longer required.

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B. Clean and repair damage caused by temporary installations or use of temporary facilities. Restore grassed and paved areas to their pre-construction condition.

3.07 MEASUREMENT AND PAYMENT:

There shall be no separate measurement and payment for Temporary Facilities. All provision and maintenance costs shall be included in the various items of associated work.

END OF SECTION 01510

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SECTION 01530

AIRFIELD BARRICADES

PART 1 GENERAL

1.01 DESCRIPTION:

A. Provide temporary barricades and runway closure markers as required for safety of aircraft and contractor's work forces, and to maintain use of the various portions of the air operations area during construction.

B. Comply with the referenced FAA Advisory Circulars and the safety and staging plan.

C. Related work specified elsewhere:

1. Construction safety: General Provisions and General Requirements.

2. Staging and safety plan: Contract Drawings and General Requirements.

PART 2 PRODUCTS

2.01 BARRICADES:

A. "Low Profile" Barricades: 6" Non-Perforated white PVC pipe split in half with 4" wide reflective orange stripes at 12" O.C., two 20"x20" orange/white checkered flags, and two battery powered flashing red lights."

B. An alternate barricade detail has been made available for this project. See project drawings for additional detail.

2.02 LIGHTED "X" UNITS:

Lighted "X" Units for this project shall be provided by the Contractor (total of 2), for the Contractor's use throughout the duration of the project. All costs associated with maintenance, fueling the Lighted "X"s, and any repair shall be the responsibility of the Contractor and shall be included in the Cost of Mobilization.

2.03 FABRIC "X" UNITS:

Fabric "X" Units for this project shall be provided by the Contractor for the Contractor's use throughout the duration of the project. All costs associated with the Fabric "X"s shall be the responsibility of the Contractor and shall be included in the Cost of Mobilization. At the end of the project, the two fabric runway closure

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markers will be turned over to the airport for their permanent possession and use.

PART 3 EXECUTION

3.01 GENERAL:

A. Install barricades at locations shown on the drawings and where directed by Engineer. Generally, place barricades a maximum of 10 feet apart. The barricades shall be placed in a continuous line on the apron taxilane and taxiway as shown on the phasing plan drawing and as directed by the Engineer. Anchor barricades with sandbags or other methods approved by Engineer.

B. Install Lighted "X"s at runway numerals at each end of the runway prior to the start of operations which require closures. Lighted "X"s will be removed or relocated by the Contractor to the Contractor's staging and storage area, to the Owner's storage facility, or as directed by the Engineer prior to opening the runway.

C. Maintain barricades until removal is directed by Engineer. The barricade flasher batteries shall be checked daily to ensure that flashers are operational. **Contractor shall replace barricade batteries, replace light fixtures, replace 20" x 20" orange flags, and replace orange and white reflective bands as required by the Engineer and the Owner.**

D. Remove barricades and Lighted "X"s as directed by Engineer. Repair any damage to pavement or surrounding area caused by barricades and Fabric or Lighted "X"s.

3.02 MEASUREMENT AND PAYMENT:

Barricades and Lighted "X"s shall not be measured for payment. The cost associated with these items shall be included in the cost of Mobilization and shall include all labor, materials, maintenance, batteries, and fuel for Lighted "X"s; and removal, installing, hauling, and storing as many times as needed, barricades and Lighted "X"s required for the Contractor's Approved Phasing Plan.

END OF SECTION 01530

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SECTION 01600

MATERIAL AND EQUIPMENT

PART 1 GENERAL

1.01 GENERAL:

A. Material and Equipment (Products) Incorporated into the Work:

1. Shall conform to applicable specifications and standards.

2. Shall comply with size, make, type and quality specified, or as specifically approved in writing by the Engineer.

3. Shall not be used for any purpose other than that for which it is designed or is specified.

B. Related Requirements in Other Parts of the Project Manual:

1. Conditions of the Contract.

1.02 PRODUCTS SUBSTITUTIONS AND OPTIONS:

A. Products List:

1. Contractor shall submit a complete list of products to be incorporated into the work (with the name of the installing contractor) at the Preconstruction Conference required by these specifications.

B. Contractor's Options:

1. For products specified only by reference standard, select any product meeting that standard.

2. For products specified by naming several products or manufacturers, select any one of the products or manufacturers named, which complies with the specifications.

C. Product Substitutions:

1. Contractor shall submit, at the Preconstruction Conference, all requests for product substitutions. No requests for substitutions will be accepted from manufacturers or suppliers.

2. Submit a separate written request for each product, supported with

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complete data, with drawings and samples as appropriate, including:

a. Comparison of the qualities of the proposed substitution with that specified.

b. Changes required in other elements of the work because of the substitution.

c. Effect on the construction schedule.

d. Cost data comparing the proposed substitution with the product specified.

e. Any required license fees or royalties.

f. Availability of maintenance service and source of replacement materials.

3. Engineer shall be the judge of the equality and acceptability of the proposed substitution.

4. If Engineer determines the proposed substitute product is not "equal" to the specified product, the Contractor must provide the specified product, subject to Engineer's shop drawing review and approval.

5. No further requests for substitutions will be considered after Preconstruction Conference.

D. Contractor's Representation: A request for a substitution constitutes a representation that Contractor:

1. Has investigated the proposed product and determined that it is equal to or superior in all respects to that specified.

2. Will provide the same warranties or bonds for the substitution as for the product specified.

3. Will coordinate the installation of an accepted substitution into the work, and make such other changes as may be required to make the work complete in all respects.

4. Waives all claims for additional costs, under his responsibility, which may subsequently become apparent.

E. Engineer's Review: Engineer will review requests for substitutions with reasonable promptness and notify Contractor, in writing, of the decision to

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accept or reject the requested substitution.

1.03 MANUFACTURER'S INSTRUCTIONS:

A. Printed Instructions: When Contract Documents require that installation of work shall comply with manufacturer's printed instructions, Contractor shall obtain and distribute copies of such instructions to parties involved in the installation, including copies to Engineer.

1. Maintain one set of complete instructions at the job site during installation and until completion.

B. Strict Compliance: Handle, install, connect, clean, condition, and adjust products in strict accord with such instructions and in conformity with specified requirements.

1. Should job conditions or specified requirements conflict with manufacturer's instruction, consult with Engineer for further instructions.

2. Do not proceed with work without clear instructions.

C. Complete Compliance: Perform work in accord with manufacturer's instructions. Do no omit any preparatory step or installation procedure unless specifically modified or exempted by Contract Documents.

1.04 TRANSPORTATION AND HANDLING:

A. Deliveries: Contractor shall arrange deliveries of products in accord with construction schedules; coordinate to avoid conflict with work and conditions at the site.

1. Deliver products in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible.

2. Immediately on delivery, inspect shipments to assure compliance with requirements of contract documents and approved submittals, and that products are properly protected and undamaged.

B. Handling: Provide equipment and personnel to handle products by methods to prevent soiling or damage of products or packaging.

1.05 STORAGE AND PROTECTION:

A. Storage: Store products in accord with manufacturer's instructions, with

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seals and labels intact and legible.

1. Store products subject to damage by the elements in weather tight enclosures.

2. Maintain temperature and humidity within the ranges required by manufacturer's instructions.

B. Exterior Storage:

1. Cover products which are subject to deterioration with impervious sheet coverings; provide adequate ventilation to avoid condensation.

2. Store loose granular materials in a well-drained area on solid surfaces to prevent mixing with foreign matter.

C. Storage Inspection: Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored products to assure that products are maintained under specified conditions, and free from damage or deterioration.

D. Protection After Installations: Provide substantial coverings as necessary to protect installed products from damage from traffic and subsequent construction operations. Remove when no longer needed.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION 01600

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SECTION 01700

CONTRACT CLOSEOUT

1.01 GENERAL:

A. Comply with requirements stated in conditions of the contract and in specifications for administrative procedures in closing out the work.

B. Related requirements in other parts of the Project Manual:
   1. Fiscal provisions, legal submittals and additional administrative requirements: Conditions of the contract.

C. Related Requirements Specified in Other Sections.
   1. Closeout submittals required of trades: The respective sections of specifications.

1.02 SUBSTANTIAL COMPLETION:

A. The conditions and procedures for inspection; and Contractor's and Owner's responsibilities pertaining to Substantial Completion are as specified in the Contract.

1.03 FINAL INSPECTION:

A. Shall be in accordance with conditions and procedures outlined in the General Provisions.

B. When Owner finds that the work is acceptable under the Contract Documents, he will request required Contractor's Closeout Submittals.

1.04 CONTRACTOR'S CLOSEOUT SUBMITTALS TO OWNER:

A. Evidence of payment and release of liens: To Owner requirements.

B. Certificates of Insurance for products and completed operations.

C. Warranties and Bonds: To requirements of Section 01740.

D. Evidence of compliance with requirements of governing authorities:
   1. Certificates of Inspection.

E. Project Record Documents: to requirements of Section 01720.

F. DBE Accomplishment Report.

END OF SECTION 01700

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SECTION 01710

CLEANING AND DISPOSAL

PART 1 GENERAL

1.01 DESCRIPTION:

Contractor shall execute cleaning during progress of the work and at completion of the work, as required by the General Requirements and other specification documents.

1.02 DISPOSAL REQUIREMENTS:

A. Conduct cleaning and disposal operations to comply with all local, state and federal codes, ordinances, regulations, and anti-pollution laws; and with airport and construction safety requirements.

B. All disposal of waste materials shall be off airport property at locations approved by the Engineer.

C. Contractor shall be responsible for arranging for and obtaining off-site disposal areas, including payment for all costs associated with such disposal.

1.03 SUBMITTALS:

A. Prior to beginning work, submit a Disposal Plan for the satisfactory disposal of all waste materials and debris.

B. Submit two (2) copies of the disposal site owner's written permission for such disposal with Disposal Plan.

PART 2 PRODUCTS

2.01 MATERIALS:

A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.

B. Use only those cleaning materials and methods recommended by manufacturer of the surface material to be cleaned.

C. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

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PART 3 EXECUTION

3.01 CLEANING:

A. Execute periodic cleaning to keep the work, site and adjacent properties free from accumulations of waste materials, rubbish, windblown debris, and dust resulting from construction operations.

B. Provide on-site containers for the collection of waste materials, debris and rubbish.

C. Remove waste materials, debris and rubbish from the site periodically and dispose of at approved locations.

3.02 BARRIERS AND PROTECTION:

Protect existing structures and vegetation from cleaning and disposal operations as required.

3.03 DUST CONTROL:

A. Schedule cleaning and other operations so that dust and other contaminants resulting therefrom will not fall on wet or newly coated surfaces, will not damage or contaminate aircraft, and will not unduly affect the work of other airport tenants.

3.04 DISPOSAL OF DEBRIS AND WASTE MATERIALS:

A. All waste materials shall be removed from site and disposed of in accordance with the Disposal Plan. **No on-site burning will be permitted.**

3.05 PAYMENT:

No separate payment will be made under this section for work described or specified herein.

END OF SECTION 01710

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SECTION 01720

PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS:

A. Contractor shall maintain at the site as specified herein for the Owner one (1) record copy of:

1. Drawings.
2. Specifications.
3. Addenda.
4. Change orders and other modifications.
5. Engineer field orders or written instructions.
6. Approved shop drawings, product data and samples.
7. Field test records.
8. Laboratory test records.

B. Related requirements in other parts of the Project Manual:

1. Conditions of the Contract.

PART 2 PRODUCTS (Not Used.)

PART 3 EXECUTION

3.01 MAINTENANCE OF DOCUMENTS AND SAMPLES:

A. Store record documents and samples in Contractor's field office apart from documents used for construction.

B. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.

C. Make documents and samples available at all times for inspection by Engineer.

3.02 RECORDING:

A. Stamp or label each document "PROJECT RECORDS" in 3/4-inch letters.

B. During daily progress of the work, the job superintendent for the Contractor

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shall record information concurrently with construction progress.

1. Do not conceal any work until required information is recorded.

C. Drawings: Legibly mark to record actual construction in color codes designated by the Engineer.

D. Record Information includes but is not limited to the following:

1. Horizontal and vertical locations of pavements and underground utilities and appurtenances referenced to permanent surface improvements or finish reference datum.
2. Field changes of dimension and detail.
3. Changes made by field order or by change order.
4. Details not on original contract drawings.
5. Extent and dimensions of pavement removal.
6. Any other changes in the plans.

E. Set one (1) Concrete Benchmark and document location and elevation data.

F. Specifications and addenda: Legibly mark each section to record:

1. Manufacturer, trade name, catalog number, and supplier of each product actually installed.
2. Changes made by field order or by change order.

G. All horizontal control dimensions shall be to the nearest tenth of a foot. Elevations shall be to the nearest one-hundredth of a foot.

3.03 SUBMITTAL:

A. **At the close of the job and prior to receipt of final payment, the Contractor shall deliver to the Engineer for the Owner one (1) complete set of Record Documents.**

B. Accompany submittal with transmittal letter containing:

1. Date.
2. Project title and number.
3. Contractor's name and address
4. Title and number of each record document.
5. Signature of Contractor or his authorized representative.

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3.04 PAYMENT:

No separate payment will be made under this section for work described or specified herein.

END OF SECTION 01720

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SECTION 01740

WARRANTIES AND BONDS

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS:

A. Contractor shall:
   1. Compile specified warranties and bonds.
   2. Compile specified service and maintenance contracts.
   3. Co-execute submittals to verify compliance with Contract Documents.
   4. Review submittals to verify compliance with Contract Documents.
   5. Submit to Engineer for review and transmittal to Owner.

B. Related requirements in other parts of the Project Manual:
   1. Bid Bonds: Instructions to bidders.
   2. Performance Bond and Payment Bond: Conditions of the contract.
   3. General warranty of construction: Conditions of the contract.

C. Related requirements specified in other sections:
   1. Contract closeout: Section 01700
   2. Equipment Manuals: Section 01300
   3. Warranties and Bonds required for specific products: Each respective section of specifications.
   4. Provisions of Warranties and Bonds, duration: The respective section of specifications which specifies the product.

PART 2 PRODUCTS (Not Used.)

PART 3 EXECUTION

3.01 SUBMITTAL REQUIREMENTS:

A. Assemble warranties, bonds and service and maintenance contracts, executed by each of the respective manufacturers, suppliers, and subcontractors.

B. Number of original signed copies required: Two (2) each.

C. Table of Contents: Neatly typed, in orderly sequence. Provide complete information for each item.

   1. Product or work item.
   2. Firm, with name of principal, address and telephone number.
   3. Scope.
   4. Date of beginning of warranty, bond or service and maintenance

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contract.

5. Duration of warranty, bond or service and maintenance contract.
6. Provide information for Owner's personnel:
   a. Proper procedure in case of failure.
   b. Instances which might affect the validity of warranty or bond.
7. Contractor, name of responsible principal, address and telephone number.

3.02 FORM OF SUBMITTALS:

A. Prepare in duplicate packets.

B. Format:
   1. Size 8 1/2 inches x 11 inches, punch sheets for 3-ring binder.
      a. Fold larger sheets to fit into binders.
   2. Cover: Identify each packet with typed or printed title "WARRANTIES AND BONDS". List:
      a. Project title and number
      b. Owner's name.
      c. Contractor's name and address.

C. Binders: Commercial quality, 3-ring, with durable and cleanable plastic covers.

3.03 TIME OF SUBMITTALS:

A. Submit within ten (10) days after date of substantial completion, and prior to final request for payment.

B. For items of work where acceptance is delayed materially beyond the date of substantial completion, provide updated submittal within ten (10) days after acceptance, listing the date of acceptance as the start of the warranty period.

3.04 SUBMITTALS REQUIRED:

Submit warranties, bonds, and service and maintenance contracts as specified in the respective sections of specifications.

3.05 PAYMENT:

No separate payment will be made under this section for work described or specified herein.

END OF SECTION 01740

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Division 2
Technical Specifications

All materials used shall be in accordance with Georgia Department of Transportation, State of Georgia, Standard Specifications Construction of Transportation Systems, Current Editions unless modified by Special Provision, except for electrical items of work which shall be in accordance with applicable FAA Specifications.

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ITEM C-105

MOBILIZATION

DESCRIPTION

105-1 **DESCRIPTION.** This item of work shall consist of, but is not limited to, work and operations necessary for the movement of personnel, equipment, material and supplies to and from the project site for work on the project except as provided in the contract as separate pay items.

105-2 **MOBILIZATION LIMIT.** Mobilization shall be limited to 10 percent of the total project cost.

105-3 **POSTED NOTICES.** Prior to commencement of construction activities, the Contractor must post the following documents in a prominent and accessible place where they may be easily viewed by all employees of the prime Contractor and by all employees of subcontractors engaged by the prime Contractor: Equal Employment Opportunity (EEO) Poster "Equal Employment Opportunity is the Law" in accordance with the Office of Federal Contract Compliance Programs Executive Order 11246, as amended; Davis Bacon Wage Poster (WH 1321) - DOL "Notice to All Employees" Poster; and Applicable Davis-Bacon Wage Rate Determination. These notices must remain posted until final acceptance of the work by the Owner.

105-4 **ENGINEER/RPR FIELD OFFICE.** An Engineer/RPR field office is not required.

METHOD OF MEASUREMENT

105-5 **BASIS OF MEASUREMENT AND PAYMENT.** Based upon the contract lump sum price for "Mobilization" partial payments will be allowed as follows:

a. With first pay request, 35%.

b. When 30% or more of the original contract is earned, an additional 35%.

c. When 60% or more of the original contract is earned, an additional 20%.

d. After final inspection, staging area clean-up and delivery of all project closeout materials as required by Section 90, paragraph 90-11, Contractor Final Project Documentation, the final 10%.

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BASIS OF PAYMENT

105-6 PAYMENT WILL BE MADE UNDER:

Item C-105 Mobilization

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Office of Federal Contract Compliance Programs (OFCCP)

Executive Order 11246, as amended

EEOC-P/E-1 – Equal Employment Opportunity is the Law Poster

United States Department of Labor, Wage and Hour Division (WHD)

WH 1321 – Employee Rights under the Davis-Bacon Act Poster

END OF ITEM C-105

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ITEM C-100

CONTRACTOR QUALITY CONTROL PROGRAM (CQCP)

100-01 **GENERAL.** Quality is more than test results. Quality is the combination of proper materials, testing, workmanship, equipment, inspection, and documentation of the project. Establishing and maintaining a culture of quality is key to achieving a quality project. The Contractor shall establish, provide, and maintain an effective Contractor Quality Control Program (CQCP) that details the methods and procedures that will be taken to assure that all materials and completed construction required by this contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors. Although guidelines are established, and certain minimum requirements are specified here and elsewhere in the contract technical specifications, the Contractor shall assume full responsibility for accomplishing the stated purpose.

The Contractor shall establish a CQCP that will:

a. Provide qualified personnel to develop and implement the CQCP.

b. Provide for the production of acceptable quality materials.

c. Provide sufficient information to assure that the specification requirements can be met.

d. Document the CQCP process.

The Contractor shall not begin any construction or production of materials to be incorporated into the completed work until the CQCP has been reviewed and approved by the Resident Project Representative (RPR). No partial payment will be made for materials subject to specific quality control (QC) requirements until the CQCP has been reviewed and approved.

The QC requirements contained in this section and elsewhere in the contract technical specifications are in addition to and separate from the quality assurance (QA) testing requirements. QA testing requirements are the responsibility of the RPR or Contractor as specified in the specifications.

A Quality Control (QC)/Quality Assurance (QA) workshop with the Engineer, Resident Project Representative (RPR), Contractor, subcontractors, testing laboratories, and Owner's representative must be held prior to start of construction. The QC/QA workshop will be facilitated by the Contractor. The Contractor shall

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coordinate with the Airport and the RPR on time and location of the QC/QA workshop. Items to be addressed, at a minimum, will include:

a. Review of the CQCP including submittals, QC Testing, Action & Suspension Limits for Production, Corrective Action Plans, Distribution of QC reports, and Control Charts.

b. Discussion of the QA program.

c. Discussion of the QC and QA Organization and authority including coordination and information exchange between QC and QA.

d. Establish regular meetings to discuss control of materials, methods and testing.

e. Establishment of the overall QC culture.

100-02 DESCRIPTION OF PROGRAM.

a. General description. The Contractor shall establish a CQCP to perform QC inspection and testing of all items of work required by the technical specifications, including those performed by subcontractors. The CQCP shall ensure conformance to applicable specifications and plans with respect to materials, off-site fabrication, workmanship, construction, finish, and functional performance. The CQCP shall be effective for control of all construction work performed under this Contract and shall specifically include surveillance and tests required by the technical specifications, in addition to other requirements of this section and any other activities deemed necessary by the Contractor to establish an effective level of QC.

b. Quality Control Program. The Contractor shall describe the CQCP in a written document that shall be reviewed and approved by the RPR prior to the start of any production, construction, or off-site fabrication. The written CQCP shall be submitted to the RPR for review and approval at least 21 workdays before the CQCP Workshop. The Contractor's CQCP and QC testing laboratory must be approved in writing by the RPR prior to the Notice to Proceed (NTP).

The CQCP shall be organized to address, as a minimum, the following:

1. QC organization and resumes of key staff

2. Project progress schedule

3. Submittals schedule

4. Inspection requirements

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5. QC testing plan

6. Documentation of QC activities and distribution of QC reports

7. Requirements for corrective action when QC and/or QA acceptance criteria are not met.

8. Material quality and construction means and methods. Address all elements applicable to the project that affect the quality of the pavement structure including subgrade, subbase, base, and surface course. Some elements that must be addressed include, but is not limited to mix design, aggregate grading, stockpile management, mixing and transporting, placing and finishing, quality control testing and inspection, smoothness, laydown plan, equipment, and temperature management plan.

The Contractor must add any additional elements to the CQCP that is necessary to adequately control all production and/or construction processes required by this contract.

100-03 **CQCP ORGANIZATION.** The CQCP shall be implemented by the establishment of a QC organization. An organizational chart shall be developed to show all QC personnel, their authority, and how these personnel integrate with other management/production and construction functions and personnel.

The organizational chart shall identify all QC staff by name and function and shall indicate the total staff required to implement all elements of the CQCP, including inspection and testing for each item of work. If necessary, different technicians can be used for specific inspection and testing functions for different items of work. If an outside organization or independent testing laboratory is used for implementation of all or part of the CQCP, the personnel assigned shall be subject to the qualification requirements of paragraphs 100-03a and 100-03b. The organizational chart shall indicate which personnel are Contractor employees and which are provided by an outside organization.

The QC organization shall, as a minimum, consist of the following personnel:

a. Program Administrator. The Contractor Quality Control Program Administrator (CQCPA) must be a full-time, on-site employee of the Contractor, or a consultant engaged by the Contractor. The CQCPA must have a minimum of five (5) years of experience in QC pavement construction with prior QC experience on a project of comparable size and scope as the contract.

Included in the five (5) years of paving/QC experience, the CQCPA must meet at least one of the following requirements:

(1) Professional Engineer with one (1) year of airport paving experience.

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(2) Engineer-in-training with two (2) years of airport paving experience.

(3) National Institute for Certification in Engineering Technologies (NICET) Civil Engineering Technology Level IV with three (3) years of airport paving experience.

(4) An individual with four (4) years of airport paving experience, with a Bachelor of Science Degree in Civil Engineering, Civil Engineering Technology or Construction.

The CQCPA must have full authority to institute any and all actions necessary for the successful implementation of the CQCP to ensure compliance with the contract plans and technical specifications. The CQCPA authority must include the ability to immediately stop production until materials and/or processes are in compliance with contract specifications. The CQCPA must report directly to a principal officer of the construction firm. The CQCPA may supervise the Quality Control Program on more than one project provided that person can be at the job site within two (2) hours after being notified of a problem.

b. QC technicians. A sufficient number of QC technicians necessary to adequately implement the CQCP must be provided. These personnel must be either Engineers, engineering technicians, or experienced craftsman with qualifications in the appropriate field equivalent to NICET Level II in Civil Engineering Technology or higher and shall have a minimum of two (2) years of experience in their area of expertise.

The QC technicians must report directly to the CQCPA and shall perform the following functions:

(1) Inspection of all materials, construction, plant, and equipment for conformance to the technical specifications, and as required by paragraph 100-6.

(2) Performance of all QC tests as required by the technical specifications and paragraph100-8.

(3) Performance of tests for the RPR when required by the technical specifications.

Certification at an equivalent level of qualification and experience by a state or nationally recognized organization will be acceptable in lieu of NICET certification.

c. Staffing levels. The Contractor shall provide sufficient qualified QC personnel to monitor each work activity at all times. Where material is being produced in a plant for incorporation into the work, separate plant and field technicians shall be provided at each plant and field placement location. The scheduling and coordinating of all inspection and testing must match the type and pace of work

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activity. The CQCP shall state where different technicians will be required for different work elements.

100-04 PROJECT PROGRESS SCHEDULE. Critical QC activities must be shown on the project schedule as required by Section 80, paragraph *80-03, Execution and Progress*.

100-05 SUBMITTALS SCHEDULE. The Contractor shall submit a detailed listing of all submittals (for example, mix designs, material certifications) and shop drawings required by the technical specifications. The listing can be developed in a spreadsheet format and shall include as a minimum:

a. Specification item number

b. Item description

c. Description of submittal

d. Specification paragraph requiring submittal

e. Scheduled date of submittal

100-06 INSPECTION REQUIREMENTS. QC inspection functions shall be organized to provide inspections for all definable features of work, as detailed below. All inspections shall be documented by the Contractor as specified by paragraph 100-9.

Inspections shall be performed as needed to ensure continuing compliance with contract requirements until completion of the particular feature of work. Inspections shall include the following minimum requirements:

a. During plant operation for material production, QC test results and periodic inspections shall be used to ensure the quality of aggregates and other mix components, and to adjust and control mix proportioning to meet the approved mix design and other requirements of the technical specifications. All equipment used in proportioning and mixing shall be inspected to ensure its proper operating condition. The CQCP shall detail how these and other QC functions will be accomplished and used.

b. During field operations, QC test results and periodic inspections shall be used to ensure the quality of all materials and workmanship. All equipment used in placing, finishing, and compacting shall be inspected to ensure its proper operating condition and to ensure that all such operations are in conformance to the technical specifications and are within the plan dimensions, lines, grades, and tolerances specified. The CQCP shall document how these and other QC functions will be accomplished and used.

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100-7 CONTRACTOR QC TESTING FACILITY.

a. For projects that include Item P-401, Item P-403, and Item P-404, the Contractor shall ensure facilities, including all necessary equipment, materials, and current reference standards, are provided that meet requirements in the following paragraphs of ASTM D3666, *Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials*:

- Equipment Calibration and Checks;
- 8.1.9 Equipment Calibration, Standardization, and Check Records;
- 8.1.12 Test Methods and Procedures

b. For projects that include P-501, the Contractor shall ensure facilities, including all necessary equipment, materials, and current reference standards, are provided that meet requirements in the following paragraphs of ASTM C1077, Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation:

- 7 Test Methods and Procedures
- 8 Facilities, Equipment, and Supplemental Procedures

100-8 QC TESTING PLAN. As a part of the overall CQCP, the Contractor shall implement a QC testing plan, as required by the technical specifications. The testing plan shall include the minimum tests and test frequencies required by each technical specification Item, as well as any additional QC tests that the Contractor deems necessary to adequately control production and/or construction processes.

The QC testing plan can be developed in a spreadsheet fashion and shall, as a minimum, include the following:

a. Specification item number (e.g., P-401)

b. Item description (e.g., Hot Mix Asphalt Pavements)

c. Test type (e.g., gradation, grade, asphalt content)

d. Test standard (e.g., ASTM or American Association of State Highway and Transportation Officials (AASHTO) test number, as applicable)

e. Test frequency (e.g., as required by technical specifications or minimum frequency when requirements are not stated)

f. Responsibility (e.g., plant technician)

g. Control requirements (e.g., target, permissible deviations)

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The QC testing plan shall contain a statistically-based procedure of random sampling for acquiring test samples in accordance with ASTM D3665. The RPR shall be provided the opportunity to witness QC sampling and testing.
All QC test results shall be documented by the Contractor as required by paragraph 100-9.

100-9 **DOCUMENTATION.** The Contractor shall maintain current QC records of all inspections and tests performed. These records shall include factual evidence that the required QC inspections or tests have been performed, including type and number of inspections or tests involved; results of inspections or tests; nature of defects, deviations, causes for rejection, etc.; proposed remedial action; and corrective actions taken.

These records must cover both conforming and defective or deficient features and must include a statement that all supplies and materials incorporated in the work are in full compliance with the terms of the contract. Legible copies of these records shall be furnished to the RPR daily. The records shall cover all work placed subsequent to the previously furnished records and shall be verified and signed by the CQCPA.

Contractor QC records required for the contract shall include, but are not necessarily limited to, the following records:

a. Daily inspection reports. Each Contractor QC technician shall maintain a daily log of all inspections performed for both Contractor and subcontractor operations. These technician's daily reports shall provide factual evidence that continuous QC inspections have been performed and shall, as a minimum, include the following:

(1) Technical specification item number and description
(2) Compliance with approved submittals
(3) Proper storage of materials and equipment
(4) Proper operation of all equipment
(5) Adherence to plans and technical specifications
(6) Summary of any necessary corrective actions
(7) Safety inspection.
(8) Photographs and/or video

The daily inspection reports shall identify all QC inspections and QC tests conducted, results of inspections, location and nature of defects found, causes for rejection, and remedial or corrective actions taken or proposed.

The daily inspection reports shall be signed by the responsible QC technician and the CQCPA. The RPR shall be provided at least one copy of each daily inspection report on the work day following the day of record. When QC inspection and test results are recorded and transmitted electronically, the results must be archived.

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b. Daily test reports. The Contractor shall be responsible for establishing a system that will record all QC test results. Daily test reports shall document the following information:

(1) Technical specification item number and description
(2) Test designation
(3) Location
(4) Date of test
(5) Control requirements
(6) Test results
(7) Causes for rejection
(8) Recommended remedial actions
(9) Retests

Test results from each day's work period shall be submitted to the RPR prior to the start of the next day's work period. When required by the technical specifications, the Contractor shall maintain statistical QC charts. When QC daily test results are recorded and transmitted electronically, the results must be archived.

100-10 CORRECTIVE ACTION REQUIREMENTS. The CQCP shall indicate the appropriate action to be taken when a process is deemed, or believed, to be out of control (out of tolerance) and detail what action will be taken to bring the process into control. The requirements for corrective action shall include both general requirements for operation of the CQCP as a whole, and for individual items of work contained in the technical specifications.

The CQCP shall detail how the results of QC inspections and tests will be used for determining the need for corrective action and shall contain clear rules to gauge when a process is out of control and the type of correction to be taken to regain process control.

When applicable or required by the technical specifications, the Contractor shall establish and use statistical QC charts for individual QC tests. The requirements for corrective action shall be linked to the control charts.

100-11 INSPECTION AND/OR OBSERVATIONS BY THE RPR. All items of material and equipment are subject to inspection and/or observation by the RPR at the point of production, manufacture or shipment to determine if the Contractor, producer, manufacturer or shipper maintains an adequate QC system in conformance with the requirements detailed here and the applicable technical specifications and plans. In addition, all items of materials, equipment and work in place shall be subject to inspection and/or observation by the RPR at the site for the same purpose.

Inspection and/or observations by the RPR does not relieve the Contractor of performing QC inspections of either on-site or off-site Contractor's or subcontractor's work.

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100-12 NONCOMPLIANCE.

a. The Resident Project Representative (RPR) will provide written notice to the Contractor of any noncompliance with their CQCP. After receipt of such notice, the Contractor must take corrective action.

b. When QC activities do not comply with either the CQCP or the contract provisions or when the Contractor fails to properly operate and maintain an effective CQCP, and no effective corrective actions have been taken after notification of non-compliance, the RPR will recommend the Owner take the following actions:

(1) Order the Contractor to replace ineffective or unqualified QC personnel or subcontractors and/or
(2) Order the Contractor to stop operations until appropriate corrective actions are taken.

METHOD OF MEASUREMENT

100-13 Basis of measurement and payment. Contractor Quality Control Program (CQCP) is for the personnel, tests, facilities and documentation required to implement the CQCP. The CQCP will be paid as a lump sum with the following schedule of partial payments:

a. With first pay request, 25% with approval of CQCP and completion of the Quality Control (QC)/Quality Assurance (QA) workshop.
b. When 25% or more of the original contract is earned, an additional 25%.
c. When 50% or more of the original contract is earned, an additional 20%.
d. When 75% or more of the original contract is earned, an additional 20%
e. After final inspection and acceptance of project, the final 10%.

BASIS OF PAYMENT

100-14 PAYMENT WILL BE MADE UNDER:

Item C-100 Contractor Quality Control Program (CQCP) – per Lump Sum

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

National Institute for Certification in Engineering Technologies (NICET)

ASTM International (ASTM)

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ASTM C1077	Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation
ASTM D3665	Standard Practice for Random Sampling of Construction Materials
ASTM D3666	Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials.

END OF ITEM C-100

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ITEM C-110

METHOD OF ESTIMATING PERCENTAGE OF MATERIAL WITHIN SPECIFICATION LIMITS (PWL)

110-1 GENERAL. When the specifications provide for acceptance of material based on the method of estimating percentage of material within specification limits (PWL), the PWL will be determined in accordance with this section. All test results for a lot will be analyzed statistically to determine the total estimated percent of the lot that is within specification limits. The PWL is computed using the sample average (X) and sample standard deviation (S_n) of the specified number (n) of sublots for the lot and the specification tolerance limits, L for lower and U for upper, for the particular acceptance parameter. From these values, the respective Quality index, Q_L for Lower Quality Index and/or Q_U for Upper Quality Index, is computed and the PWL for the lot for the specified n is determined from Table 1. All specification limits specified in the technical sections shall be absolute values. Test results used in the calculations shall be to the significant figure given in the test procedure.

There is some degree of uncertainty (risk) in the measurement for acceptance because only a small fraction of production material (the population) is sampled and tested. This uncertainty exists because all portions of the production material have the same probability to be randomly sampled. The Contractor's risk is the probability that material produced at the acceptable quality level is rejected or subjected to a pay adjustment. The Owner's risk is the probability that material produced at the rejectable quality level is accepted.

It is the intent of this section to inform the Contractor that, in order to consistently offset the Contractor's risk for material evaluated, production quality (using population average and population standard deviation) must be maintained at the acceptable quality specified or higher. In all cases, it is the responsibility of the Contractor to produce at quality levels that will meet the specified acceptance criteria when sampled and tested at the frequencies specified.

110-2 METHOD FOR COMPUTING PWL. The computational sequence for computing PWL is as follows:

a. Divide the lot into n sublots in accordance with the acceptance requirements of the specification.

b. Locate the random sampling position within the sublot in accordance with the requirements of the specification.

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c. Make a measurement at each location, or take a test portion and make the measurement on the test portion in accordance with the testing requirements of the specification.

d. Find the sample average (X) for all sublot test values within the lot by using the following formula:

$$\mathbf{X = (x_1 + x_2 + x_3 + \ldots x_n) / n}$$

Where: X = Sample average of all sublot test values within a lot
$x_1, x_2, \ldots x_n$ = Individual sublot test values
n = Number of sublot test values

e. Find the sample standard deviation (S_n) by use of the following formula:

$$\mathbf{S_n = [(d_1^2 + d_2^2 + d_3^2 + \ldots d_n^2)/(n-1)]^{1/2}}$$

Where: S_n = Sample standard deviation of the number of sublot test values in the set
$d_1, d_2, \ldots d_n$ = Deviations of the individual sublot test values $x_1, x_2, \ldots$ from the average value X
that is: $d_1 = (x_1 - X)$, $d_2 = (x_2 - X) \ldots d_n = (x_n - X)$
n = Number of sublot test values

f. For single sided specification limits (i.e., L only), compute the Lower Quality Index Q_L by use of the following formula:

$$\mathbf{Q_L = (X - L) / S_n}$$

Where: L = specification lower tolerance limit

Estimate the percentage of material within limits (PWL) by entering Table 1 with Q_L, using the column appropriate to the total number (n) of measurements. If the value of Q_L falls between values shown on the table, use the next higher value of PWL.

g. For double-sided specification limits (i.e., L and U), compute the Quality Indexes Q_L and Q_U by use of the following formulas:

$$\mathbf{Q_L = (X - L) / S_n}$$

and

$$\mathbf{Q_U = (U - X) / S_n}$$

Where: L and U = specification lower and upper tolerance limits

Estimate the percentage of material between the lower (L) and upper (U) tolerance limits (PWL) by entering Table 1 separately with Q_L and Q_U, using the column appropriate to the total number (n) of measurements, and determining the percent of material above P_L and percent of material below P_U for each tolerance limit. If the values of Q_L fall between values shown on the table, use the next higher value of P_L or P_U. Determine the PWL by use of the following formula:

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$PWL = (P_U + P_L) - 100$

Where: P_L = percent within lower specification limit

P_U = percent within upper specification limit

EXAMPLE OF PWL CALCULATION

Project: Example Project

Test Item: Item P-401, Lot A.

A. PWL Determination for Mat Density.

1. Density of four random cores taken from Lot A.

A-1 = 96.60
A-2 = 97.55
A-3 = 99.30
A-4 = 98.35
n = 4

2. Calculate average density for the lot.

$X = (x_1 + x_2 + x_3 + . . . x_n) / n$
$X = (96.60 + 97.55 + 99.30 + 98.35) / 4$
X = 97.95% density

3. Calculate the standard deviation for the lot.

$S_n = \mathbf{[}((96.60 - 97.95)^2 + (97.55 - 97.95)^2 + (99.30 - 97.95)^2 + (98.35 - 97.95)^2)) / (4 - 1)\mathbf{]}^{1/2}$
$S_n = \mathbf{[}(1.82 + 0.16 + 1.82 + 0.16) / 3\mathbf{]}^{1/2}$
$S_n = 1.15$

4. Calculate the Lower Quality Index Q_L for the lot. (L=96.3)

$Q_L = (X - L) / S_n$
$Q_L = (97.95 - 96.30) / 1.15$
$Q_L = 1.4348$

5. Determine PWL by entering Table 1 with $Q_L = 1.44$ and n= 4.

PWL = 98

B. PWL Determination for Air Voids.

1. Air Voids of four random samples taken from Lot A.

A-1 = 5.00
A-2 = 3.74
A-3 = 2.30
A-4 = 3.25

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2. Calculate the average air voids for the lot.

$X = (x_1 + x_2 + x_3 \ldots n) / n$

$X = (5.00 + 3.74 + 2.30 + 3.25) / 4$

$X = 3.57\%$

3. Calculate the standard deviation S_n for the lot.

$S_n = \mathbf{[}((3.57 - 5.00)^2 + (3.57 - 3.74)^2 + (3.57 - 2.30)^2 + (3.57 - 3.25)^2) / (4 - 1)\mathbf{]}^{1/2}$

$S_n = \mathbf{[}(2.04 + 0.03 + 1.62 + 0.10) / 3\mathbf{]}^{1/2}$

$S_n = 1.12$

4. Calculate the Lower Quality Index Q_L for the lot. (L= 2.0)

$Q_L = (X - L) / S_n$

$Q_L = (3.57 - 2.00) / 1.12$

$Q_L = 1.3992$

5. Determine P_L by entering Table 1 with $Q_L = 1.41$ and n = 4.

$P_L = 97$

6. Calculate the Upper Quality Index Q_U for the lot. (U= 5.0)

$Q_U = (U - X) / S_n$

$Q_U = (5.00 - 3.57) / 1.12$

$Q_U = 1.2702$

7. Determine P_U by entering Table 1 with $Q_U = 1.29$ and n = 4.

$P_U = 93$

8. Calculate Air Voids PWL

$PWL = (P_L + P_U) - 100$

$PWL = (97 + 93) - 100 = 90$

EXAMPLE OF OUTLIER CALCULATION (REFERENCE ASTM E178)

Project: Example Project

Test Item: Item P-401, Lot A.

A. Outlier Determination for Mat Density.

1. Density of four random cores taken from Lot A arranged in descending order.

A-3 = 99.30

A-4 = 98.35

A-2 = 97.55

A-1 = 96.60

2. From ASTM E178, Table 1, for n=4 an upper 5% significance level, the critical value for test criterion = 1.463.

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3. Use average density, standard deviation, and test criterion value to evaluate density measurements.

a. For measurements greater than the average:

If (measurement - average)/(standard deviation) is less than test criterion, then the measurement is not considered an outlier.

For A-3, check if (99.30 - 97.95) / 1.15 is greater than 1.463.

Since 1.174 is less than 1.463, the value is not an outlier.

b. For measurements less than the average:

If (average - measurement)/(standard deviation) is less than test criterion, then the measurement is not considered an outlier.

For A-1, check if (97.95 - 96.60) / 1.15 is greater than 1.463.

Since 1.435 is less than 1.463, the value is not an outlier.

Note: In this example, a measurement would be considered an outlier if the density were:

Greater than (97.95 + 1.463 × 1.15) = 99.63%

OR

less than (97.95 - 1.463 × 1.15) = 96.27%.

Table 1. Table for Estimating Percent of Lot Within Limits (PWL)

Percent Within Limits (P_L and P_U)	Positive Values of Q (Q_L and Q_U)							
	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10
99	1.1541	1.4700	1.6714	1.8008	1.8888	1.9520	1.9994	2.0362
98	1.1524	1.4400	1.6016	1.6982	1.7612	1.8053	1.8379	1.8630
97	1.1496	1.4100	1.5427	1.6181	1.6661	1.6993	1.7235	1.7420
96	1.1456	1.3800	1.4897	1.5497	1.5871	1.6127	1.6313	1.6454
95	1.1405	1.3500	1.4407	1.4887	1.5181	1.5381	1.5525	1.5635
94	1.1342	1.3200	1.3946	1.4329	1.4561	1.4717	1.4829	1.4914
93	1.1269	1.2900	1.3508	1.3810	1.3991	1.4112	1.4199	1.4265
92	1.1184	1.2600	1.3088	1.3323	1.3461	1.3554	1.3620	1.3670
91	1.1089	1.2300	1.2683	1.2860	1.2964	1.3032	1.3081	1.3118
90	1.0982	1.2000	1.2290	1.2419	1.2492	1.2541	1.2576	1.2602
89	1.0864	1.1700	1.1909	1.1995	1.2043	1.2075	1.2098	1.2115
88	1.0736	1.1400	1.1537	1.1587	1.1613	1.1630	1.1643	1.1653
87	1.0597	1.1100	1.1173	1.1192	1.1199	1.1204	1.1208	1.1212
86	1.0448	1.0800	1.0817	1.0808	1.0800	1.0794	1.0791	1.0789
85	1.0288	1.0500	1.0467	1.0435	1.0413	1.0399	1.0389	1.0382
84	1.0119	1.0200	1.0124	1.0071	1.0037	1.0015	1.0000	0.9990
83	0.9939	0.9900	0.9785	0.9715	0.9671	0.9643	0.9624	0.9610
82	0.9749	0.9600	0.9452	0.9367	0.9315	0.9281	0.9258	0.9241
81	0.9550	0.9300	0.9123	0.9025	0.8966	0.8928	0.8901	0.8882
80	0.9342	0.9000	0.8799	0.8690	0.8625	0.8583	0.8554	0.8533
79	0.9124	0.8700	0.8478	0.8360	0.8291	0.8245	0.8214	0.8192
78	0.8897	0.8400	0.8160	0.8036	0.7962	0.7915	0.7882	0.7858
77	0.8662	0.8100	0.7846	0.7716	0.7640	0.7590	0.7556	0.7531
76	0.8417	0.7800	0.7535	0.7401	0.7322	0.7271	0.7236	0.7211
75	0.8165	0.7500	0.7226	0.7089	0.7009	0.6958	0.6922	0.6896
74	0.7904	0.7200	0.6921	0.6781	0.6701	0.6649	0.6613	0.6587
73	0.7636	0.6900	0.6617	0.6477	0.6396	0.6344	0.6308	0.6282
72	0.7360	0.6600	0.6316	0.6176	0.6095	0.6044	0.6008	0.5982
71	0.7077	0.6300	0.6016	0.5878	0.5798	0.5747	0.5712	0.5686
70	0.6787	0.6000	0.5719	0.5582	0.5504	0.5454	0.5419	0.5394
69	0.6490	0.5700	0.5423	0.5290	0.5213	0.5164	0.5130	0.5105

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Percent Within Limits (P_L and P_U)	Positive Values of Q (Q_L and Q_U)							
	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10
68	0.6187	0.5400	0.5129	0.4999	0.4924	0.4877	0.4844	0.4820
67	0.5878	0.5100	0.4836	0.4710	0.4638	0.4592	0.4560	0.4537
66	0.5563	0.4800	0.4545	0.4424	0.4355	0.4310	0.4280	0.4257
65	0.5242	0.4500	0.4255	0.4139	0.4073	0.4030	0.4001	0.3980
64	0.4916	0.4200	0.3967	0.3856	0.3793	0.3753	0.3725	0.3705
63	0.4586	0.3900	0.3679	0.3575	0.3515	0.3477	0.3451	0.3432
62	0.4251	0.3600	0.3392	0.3295	0.3239	0.3203	0.3179	0.3161
61	0.3911	0.3300	0.3107	0.3016	0.2964	0.2931	0.2908	0.2892
60	0.3568	0.3000	0.2822	0.2738	0.2691	0.2660	0.2639	0.2624
59	0.3222	0.2700	0.2537	0.2461	0.2418	0.2391	0.2372	0.2358
58	0.2872	0.2400	0.2254	0.2186	0.2147	0.2122	0.2105	0.2093
57	0.2519	0.2100	0.1971	0.1911	0.1877	0.1855	0.1840	0.1829
56	0.2164	0.1800	0.1688	0.1636	0.1607	0.1588	0.1575	0.1566
55	0.1806	0.1500	0.1406	0.1363	0.1338	0.1322	0.1312	0.1304
54	0.1447	0.1200	0.1125	0.1090	0.1070	0.1057	0.1049	0.1042
53	0.1087	0.0900	0.0843	0.0817	0.0802	0.0793	0.0786	0.0781
52	0.0725	0.0600	0.0562	0.0544	0.0534	0.0528	0.0524	0.0521
51	0.0363	0.0300	0.0281	0.0272	0.0267	0.0264	0.0262	0.0260
50	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Percent Within Limits (P_L and P_U)	Negative Values of Q (Q_L and Q_U)							
	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10
49	-0.0363	-0.0300	-0.0281	-0.0272	-0.0267	-0.0264	-0.0262	-0.0260
48	-0.0725	-0.0600	-0.0562	-0.0544	-0.0534	-0.0528	-0.0524	-0.0521
47	-0.1087	-0.0900	-0.0843	-0.0817	-0.0802	-0.0793	-0.0786	-0.0781
46	-0.1447	-0.1200	-0.1125	-0.1090	-0.1070	-0.1057	-0.1049	-0.1042
45	-0.1806	-0.1500	-0.1406	-0.1363	-0.1338	-0.1322	-0.1312	-0.1304
44	-0.2164	-0.1800	-0.1688	-0.1636	-0.1607	-0.1588	-0.1575	-0.1566
43	-0.2519	-0.2100	-0.1971	-0.1911	-0.1877	-0.1855	-0.1840	-0.1829
42	-0.2872	-0.2400	-0.2254	-0.2186	-0.2147	-0.2122	-0.2105	-0.2093
41	-0.3222	-0.2700	-0.2537	-0.2461	-0.2418	-0.2391	-0.2372	-0.2358
40	-0.3568	-0.3000	-0.2822	-0.2738	-0.2691	-0.2660	-0.2639	-0.2624
39	-0.3911	-0.3300	-0.3107	-0.3016	-0.2964	-0.2931	-0.2908	-0.2892
38	-0.4251	-0.3600	-0.3392	-0.3295	-0.3239	-0.3203	-0.3179	-0.3161
37	-0.4586	-0.3900	-0.3679	-0.3575	-0.3515	-0.3477	-0.3451	-0.3432
36	-0.4916	-0.4200	-0.3967	-0.3856	-0.3793	-0.3753	-0.3725	-0.3705
35	-0.5242	-0.4500	-0.4255	-0.4139	-0.4073	-0.4030	-0.4001	-0.3980
34	-0.5563	-0.4800	-0.4545	-0.4424	-0.4355	-0.4310	-0.4280	-0.4257
33	-0.5878	-0.5100	-0.4836	-0.4710	-0.4638	-0.4592	-0.4560	-0.4537
32	-0.6187	-0.5400	-0.5129	-0.4999	-0.4924	-0.4877	-0.4844	-0.4820
31	-0.6490	-0.5700	-0.5423	-0.5290	-0.5213	-0.5164	-0.5130	-0.5105
30	-0.6787	-0.6000	-0.5719	-0.5582	-0.5504	-0.5454	-0.5419	-0.5394
29	-0.7077	-0.6300	-0.6016	-0.5878	-0.5798	-0.5747	-0.5712	-0.5686
28	-0.7360	-0.6600	-0.6316	-0.6176	-0.6095	-0.6044	-0.6008	-0.5982
27	-0.7636	-0.6900	-0.6617	-0.6477	-0.6396	-0.6344	-0.6308	-0.6282
26	-0.7904	-0.7200	-0.6921	-0.6781	-0.6701	-0.6649	-0.6613	-0.6587
25	-0.8165	-0.7500	-0.7226	-0.7089	-0.7009	-0.6958	-0.6922	-0.6896
24	-0.8417	-0.7800	-0.7535	-0.7401	-0.7322	-0.7271	-0.7236	-0.7211
23	-0.8662	-0.8100	-0.7846	-0.7716	-0.7640	-0.7590	-0.7556	-0.7531
22	-0.8897	-0.8400	-0.8160	-0.8036	-0.7962	-0.7915	-0.7882	-0.7858
21	-0.9124	-0.8700	-0.8478	-0.8360	-0.8291	-0.8245	-0.8214	-0.8192
20	-0.9342	-0.9000	-0.8799	-0.8690	-0.8625	-0.8583	-0.8554	-0.8533
19	-0.9550	-0.9300	-0.9123	-0.9025	-0.8966	-0.8928	-0.8901	-0.8882
18	-0.9749	-0.9600	-0.9452	-0.9367	-0.9315	-0.9281	-0.9258	-0.9241
17	-0.9939	-0.9900	-0.9785	-0.9715	-0.9671	-0.9643	-0.9624	-0.9610

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Percent Within Limits (P_L and P_U)	Negative Values of Q (Q_L and Q_U)							
	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10
16	-1.0119	-1.0200	-1.0124	-1.0071	-1.0037	-1.0015	-1.0000	-0.9990
15	-1.0288	-1.0500	-1.0467	-1.0435	-1.0413	-1.0399	-1.0389	-1.0382
14	-1.0448	-1.0800	-1.0817	-1.0808	-1.0800	-1.0794	-1.0791	-1.0789
13	-1.0597	-1.1100	-1.1173	-1.1192	-1.1199	-1.1204	-1.1208	-1.1212
12	-1.0736	-1.1400	-1.1537	-1.1587	-1.1613	-1.1630	-1.1643	-1.1653
11	-1.0864	-1.1700	-1.1909	-1.1995	-1.2043	-1.2075	-1.2098	-1.2115
10	-1.0982	-1.2000	-1.2290	-1.2419	-1.2492	-1.2541	-1.2576	-1.2602
9	-1.1089	-1.2300	-1.2683	-1.2860	-1.2964	-1.3032	-1.3081	-1.3118
8	-1.1184	-1.2600	-1.3088	-1.3323	-1.3461	-1.3554	-1.3620	-1.3670
7	-1.1269	-1.2900	-1.3508	-1.3810	-1.3991	-1.4112	-1.4199	-1.4265
6	-1.1342	-1.3200	-1.3946	-1.4329	-1.4561	-1.4717	-1.4829	-1.4914
5	-1.1405	-1.3500	-1.4407	-1.4887	-1.5181	-1.5381	-1.5525	-1.5635
4	-1.1456	-1.3800	-1.4897	-1.5497	-1.5871	-1.6127	-1.6313	-1.6454
3	-1.1496	-1.4100	-1.5427	-1.6181	-1.6661	-1.6993	-1.7235	-1.7420
2	-1.1524	-1.4400	-1.6016	-1.6982	-1.7612	-1.8053	-1.8379	-1.8630
1	-1.1541	-1.4700	-1.6714	-1.8008	-1.8888	-1.9520	-1.9994	-2.0362

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM E178 Standard Practice for Dealing with Outlying Observations

END OF ITEM C-110

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ITEM P-101

PREPARATION / REMOVAL OF EXISTING PAVEMENTS

DESCRIPTION

101-1 This item shall consist of preparation of existing pavement surfaces for overlay, surface treatments, removal of existing pavement, and other miscellaneous items. The work shall be accomplished in accordance with these specifications and the applicable plans.

EQUIPMENT AND MATERIALS

101-2 All equipment and materials shall be specified here and in the following paragraphs or approved by the Resident Project Representative (RPR). The equipment shall not cause damage to the pavement to remain in place.

CONSTRUCTION

101-3.1 REMOVAL OF EXISTING PAVEMENT.

The Contractor's removal operation shall be controlled to not damage adjacent pavement structure, and base material, cables, utility ducts, pipelines, or drainage structures which are to remain under the pavement.

a. Concrete pavement removal. Full depth saw cuts shall be made perpendicular to the slab surface. The Contractor shall saw through the full depth of the slab including any dowels at the joint, removing the pavement and installing new dowels as shown on the plans and per the specifications. Where the perimeter of the removal limits is not located on the joint and there are no dowels present, the perimeter shall be saw cut the full depth of the pavement. The pavement inside the saw cut shall be removed by methods which will not cause distress in the pavement which is to remain in place. If the material is to be wasted on the airport site, it shall be reduced to a maximum size of 1 inch. Concrete slabs that are damaged by under breaking shall be repaired or removed and replaced as directed by the RPR.

The edge of existing concrete pavement against which new pavement abuts shall be protected from damage at all times. Spall and underbreak repair shall be in accordance with the plans. Any underlaying material that is to remain in place, shall be recompacted and/or replaced as shown on the plans. Adjacent areas damaged during repair shall be repaired or replaced at the Contractor's expense.

b. Asphalt pavement removal. Asphalt pavement to be removed shall be cut to the full depth of the asphalt pavement around the perimeter of the area to be removed. The pavement shall be removed so the joint for each layer of pavement replacement is offset 1 foot (30 cm) from the joint in the preceding layer. This does not apply if the removed pavement is to be replaced with concrete or soil. If the material is to be wasted on the airport site, it shall be ground and graded to AASHTO M-145-91,

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Group A-1 Classification. Asphalt material will be inspected and approved by Engineer or Owner's representative. If material is not accepted for use on access roads or fill material contractor shall, at his/her own expense, remove all material and legally dispose of material off-site.

c. Repair or removal of Base, Subbase, and/or Subgrade. All failed material including surface, base course, subbase course, and subgrade shall be removed and repaired as shown on the plans or as directed by the RPR. Materials and methods of construction shall comply with the applicable sections of these specifications. Any damage caused by Contractor's removal process shall be repaired at the Contractor's expense.

101-3.2 PREPARATION OF JOINTS AND CRACKS PRIOR TO OVERLAY/ SURFACE TREATMENT.

Remove all vegetation and debris from cracks to a minimum depth of 1 inch (25 mm). If extensive vegetation exists, treat the specific area with a concentrated solution of a water-based herbicide approved by the RPR. Fill all cracks greater than 1/4 inch (6 mm) wide) with a crack sealant per ASTM D6690. The crack sealant, preparation, and application shall be compatible with the surface treatment/overlay to be used. To minimize contamination of the asphalt with the crack sealant, underfill the crack sealant a minimum of 1/8 inch (3 mm), not to exceed ¼ inch (6 mm). Any excess joint or crack sealer shall be removed from the pavement surface.

Wider cracks (over 1-1/2 inch wide (38 mm)), along with soft or sunken spots, indicate that the pavement or the pavement base should be repaired or replaced as stated below.

Cracks and joints may be filled with a mixture of emulsified asphalt and aggregate. The aggregate shall consist of limestone, volcanic ash, sand, or other material that will cure to form a hard substance. The combined gradation shall be as shown in the following table.

Gradation

Sieve Size	Percent Passing
No. 4 (4.75 mm)	100
No. 8 (2.36 mm)	90-100
No. 16 (1.18 mm)	65-90
No. 30 (600 µm)	40-60
No. 50 (300 µm)	25-42
No. 100 (150 µm)	15-30
No. 200 (75 µm)	10-20

Up to 3% cement can be added to accelerate the set time. The mixture shall not contain more than 20% natural sand without approval in writing from the RPR.

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The proportions of asphalt emulsion and aggregate shall be determined in the field and may be varied to facilitate construction requirements. Normally, these proportions will be approximately one part asphalt emulsion to five parts aggregate by volume. The material shall be poured or placed into the joints or cracks and compacted to form a voidless mass. The joint or crack shall be filled to within +0 to -1/8 inches (+0 to -3 mm) of the surface. Any material spilled outside the width of the joint shall be removed from the pavement surface prior to constructing the overlay. Where concrete overlays are to be constructed, only the excess joint material on the pavement surface and vegetation in the joints need to be removed.

101-3.3 REMOVAL OF FOREIGN SUBSTANCES/CONTAMINATES PRIOR TO OVERLAY.

Removal of foreign substances/contaminates from existing pavement that will affect the bond of the new treatment shall consist of removal of rubber, fuel spills, oil, crack sealer, at least 90% of paint, and other foreign substances from the surface of the pavement. Areas that require removal are designated on the plans and as directed by the RPR in the field during construction.

Chemicals, high-pressure water, heater scarifier (asphaltic concrete only), cold milling, rotary grinding, or sandblasting may be used. If chemicals are used, they shall comply with the state's environmental protection regulations. Removal methods used shall not cause major damage to the pavement, or to any structure or utility within or adjacent to the work area. Major damage is defined as changing the properties of the pavement, removal of asphalt causing the aggregate to ravel, or removing pavement over 1/8 inch (3 mm) deep. If it is deemed by the RPR that damage to the existing pavement is caused by operational error, such as permitting the application method to dwell in one location for too long, the Contractor shall repair the damaged area without compensation and as directed by the RPR.

Removal of foreign substances shall not proceed until approved by the RPR. Water used for high-pressure water equipment shall be provided by the Contractor at the Contractor's expense. No material shall be deposited on the pavement shoulders. All wastes shall be disposed of in areas indicated in this specification or shown on the plans.

101-3.4 CONCRETE SPALL OR FAILED ASPHALTIC CONCRETE PAVEMENT REPAIR.

a. **Repair of concrete spalls in areas to be overlaid with asphalt.** The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The perimeter of the repair shall be saw cut a minimum of 2 inches (50 mm) outside the affected area and 2 inches (50 mm) deep. The deteriorated material shall be removed to a depth where the existing material is firm or cannot be easily removed with a geologist pick. The removed area shall be filled with asphalt mixture with aggregate sized appropriately for the depth of the patch. The material shall be compacted with equipment approved by the RPR until the material is dense and no

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movement or marks are visible. The material shall not be placed in lifts over 4 inches (100 mm) in depth. This method of repair applies only to pavement to be overlaid.

b. Asphalt pavement repair. The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The failed areas shall be removed as specified in paragraph 101-3.1b. All failed material including surface, base course, subbase course, and subgrade shall be removed. Materials and methods of construction shall comply with the applicable sections of these specifications.

101-3.5 COLD MILLING. Milling shall be performed with a power-operated milling machine or grinder, capable of producing a uniform finished surface. The milling machine or grinder shall operate without tearing or gouging the underlaying surface. The milling machine or grinder shall be equipped with grade and slope controls, and a positive means of dust control. All millings shall be removed and disposed off Airport property, unless otherwise specified. If the Contractor mills or grinds deeper or wider than the plans specify, the Contractor shall replace the material removed with new material at the Contractor's Expense.

a. Patching. The milling machine shall be capable of cutting a vertical edge without chipping or spalling the edges of the remaining pavement and it shall have a positive method of controlling the depth of cut. The RPR shall layout the area to be milled with a straightedge in increments of 1-foot (30 cm) widths. The area to be milled shall cover only the failed area. Any excessive area that is milled because the Contractor doesn't have the appropriate milling machine, or areas that are damaged because of his negligence, shall be repaired by the Contractor at the Contractor's Expense.

b. Profiling, grade correction, or surface correction. The milling machine shall have a minimum width of 7 feet (2 m) and it shall be equipped with electronic grade control devices that will cut the surface to the grade specified. The tolerances shall be maintained within +0 inch and -1/4 inch (+0 mm and -6mm) of the specified grade. The machine must cut vertical edges and have a positive method of dust control. The machine must have the ability to remove the millings or cuttings from the pavement and load them into a truck. All millings shall be removed and disposed of off the airport.

c. Clean-up. The Contractor shall sweep the milled surface daily and immediately after the milling until all residual materials are removed from the pavement surface. Prior to paving, the Contractor shall wet down the milled pavement and thoroughly sweep and/or blow the surface to remove loose residual material. Waste materials shall be collected and removed from the pavement surface and adjacent areas by sweeping or vacuuming. Waste materials shall be removed and disposed off Airport property.

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101-3.6 **PREPARATION OF ASPHALT PAVEMENT SURFACES PRIOR TO SURFACE TREATMENT.** Existing asphalt pavements to be treated with a surface treatment shall be prepared as follows:

a. Patch asphalt pavement surfaces that have been softened by petroleum derivatives or have failed due to any other cause. Remove damaged pavement to the full depth of the damage and replace with new asphalt pavement similar to that of the existing pavement in accordance with paragraph 101-3.4b.

b. Repair joints and cracks in accordance with paragraph 101-3.2.

c. Remove oil or grease that has not penetrated the asphalt pavement by scrubbing with a detergent and washing thoroughly with clean water. After cleaning, treat these areas with an oil spot primer.

d. Clean pavement surface immediately prior to placing the surface treatment so that it is free of dust, dirt, grease, vegetation, oil or any type of objectionable surface film.

101-3.7 **MAINTENANCE**. The Contractor shall perform all maintenance work necessary to keep the pavement in a satisfactory condition until the full section is complete and accepted by the RPR. The surface shall be kept clean and free from foreign material. The pavement shall be properly drained at all times. If cleaning is necessary or if the pavement becomes disturbed, any work repairs necessary shall be performed at the Contractor's expense.

101-3.8 **PREPARATION OF JOINTS IN RIGID PAVEMENT PRIOR TO RESEALING.** Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the joint and does not damage the joint.

101-3.8.1 **REMOVAL OF EXISTING JOINT SEALANT**. All existing joint sealants will be removed by plowing or use of hand tools. Any remaining sealant and or debris will be removed by use of wire brushes or other tools as necessary. Resaw joints removing no more than 1/16 inch (2 mm) from each joint face. Immediately after sawing, flush out joint with water and other tools as necessary to completely remove the slurry.

101-3.8.2 **CLEANING PRIOR TO SEALING**. Immediately before sealing, joints shall be cleaned by removing any remaining laitance and other foreign material. Allow sufficient time to dry out joints prior to sealing. Joint surfaces will be surface-dry prior to installation of sealant.

101-3.8.3 **JOINT SEALANT.** Joint material and installation will be in accordance with Item P-605.

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101-3.9 PREPARATION OF CRACKS IN FLEXIBLE PAVEMENT PRIOR TO SEALING. Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the cracks and does not damage the pavement.

101-3.9.1 PREPARATION OF CRACK. Widen crack with a router by removing a minimum of 1/16 inch (2 mm) from each side of crack. Immediately before sealing, cracks will be blown out with a hot air lance combined with oil and water-free compressed air.

101-3.9.2 REMOVAL OF EXISTING CRACK SEALANT. Existing sealants will be removed by routing. Following routing any remaining debris will be removed by use of a hot lance combined with oil and water-free compressed air.

101-3.9.3 CRACK SEALANT. Crack sealant material and installation will be in accordance with Item P-605.

METHOD OF MEASUREMENT

101-4.1 COLD MILLING. The unit of measure for cold milling shall be 2 inches of milling per square yard (square meter). The location and average depth of the cold milling shall be as shown on the plans. If the initial cut does not correct the condition, the Contractor shall re-mill the area and will be paid for the total depth of milling.

101-4.2 JOINT AND CRACK REPAIR. The unit of measurement for joint and crack repair shall be the linear foot of joint.

BASIS OF PAYMENT

101-5.1 PAYMENT. Payment shall be made at contract unit price for the unit of measurement as specified above. This price shall be full compensation for furnishing all materials and for all preparation, hauling, and placing of the material and for all labor, equipment, tools, and incidentals necessary to complete this item.

Item P-101-A Cold Milling (1/2 - 2 inches) – per square yard

Item P-101-B Joint and Crack Repair, Small (⅛" to 1" Width) – per linear foot

Item P-101-C Joint and Crack Repair, Large (> 1" Width) – per linear foot

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REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5380-6	Guidelines and Procedures for Maintenance of Airport Pavements.
ASTM	International (ASTM)
ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements

END OF ITEM P-101

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ITEM P-401

ASPHALT MIX PAVEMENT

DESCRIPTION

401-1.1 This item shall consist of pavement courses composed of mineral aggregate and asphalt binder mixed in a central mixing plant and placed on a prepared base or stabilized course in accordance with these specifications and shall conform to the lines, grades, thicknesses, and typical cross-sections shown on the plans. Each course shall be constructed to the depth, typical section, and elevation required by the plans and shall be rolled, finished, and approved before the placement of the next course.

MATERIALS

401-2.1 **AGGREGATE.** Aggregates shall consist of crushed stone, crushed gravel, crushed slag, screenings, natural sand, and mineral filler, as required. The aggregates should have no known history of detrimental pavement staining due to ferrous sulfides, such as pyrite. Coarse aggregate is the material retained on the No. 4 (4.75 mm) sieve. Fine aggregate is the material passing the No. 4 (4.75 mm) sieve.

a. Coarse aggregate. Coarse aggregate shall consist of sound, tough, durable particles, free from films of matter that would prevent thorough coating and bonding with the asphalt material and free from organic matter and other deleterious substances. Coarse aggregate material requirements are given in the table below.

Coarse Aggregate Material Requirements

Material Test	Requirement	Standard
Resistance to Degradation	Loss: 40% maximum	ASTM C131
Soundness of Aggregates by Use of Sodium Sulfate **or** Magnesium Sulfate	Loss after 5 cycles: 12% maximum using Sodium sulfate - or - 18% maximum using magnesium sulfate	ASTM C88
Clay lumps and friable particles	0.3% maximum	ASTM C142
Percentage of Fractured Particles	For pavements designed for aircraft gross weights of 60,000 pounds (27200 kg) or more: Minimum 75% by weight of particles with at least two fractured faces and 85% with at least one fractured face[1]	ASTM D5821
	For pavements designed for aircraft gross weights less than 60,000 pounds (27200 kg): Minimum 50% by weight of particles with at least	

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Material Test	Requirement	Standard
	two fractured faces and 65% with at least one fractured face[1]	
Flat, Elongated, or Flat and Elongated Particles	8% maximum, by weight, of flat, elongated, or flat and elongated particles at 5:1 [2]	ASTM D4791
Bulk density of slag [3]	Weigh not less than 70 pounds per cubic foot (1.12 Mg/cubic meter)	ASTM C29.

[1] The area of each face shall be equal to at least 75% of the smallest mid-sectional area of the piece. When two fractured faces are contiguous, the angle between the planes of fractures shall be at least 30 degrees to count as two fractured faces.

[2] A flat particle is one having a ratio of width to thickness greater than five (5); an elongated particle is one having a ratio of length to width greater than five (5).

[3] Only required if slag is specified.

b. Fine aggregate. Fine aggregate shall consist of clean, sound, tough, durable, angular shaped particles produced by crushing stone, slag, or gravel and shall be free from coatings of clay, silt, or other objectionable matter. Natural (non-manufactured) sand may be used to obtain the gradation of the fine aggregate blend or to improve the workability of the mix. Fine aggregate material requirements are listed in the table below.

Fine Aggregate Material Requirements

Material Test	Requirement	Standard
Liquid limit	25 maximum	ASTM D4318
Plasticity Index	4 maximum	ASTM D4318
Soundness of Aggregates by Use of Sodium Sulfate **or** Magnesium Sulfate	Loss after 5 cycles: 10% maximum using Sodium sulfate - or - 15% maximum using magnesium sulfate	ASTM C88
Clay lumps and friable particles	0.3% maximum	ASTM C142
Sand equivalent	45 minimum	ASTM D2419
Natural Sand	5% maximum by weight of total aggregate	ASTM D1073

c. Sampling. ASTM D75 shall be used in sampling coarse and fine aggregate.

401-2.2 **MINERAL FILLER.** Mineral filler (baghouse fines) may be added in addition to material naturally present in the aggregate. Mineral filler shall meet the requirements of ASTM D242.

Mineral Filler Requirements

Material Test	Requirement	Standard
Plasticity Index	4 maximum	ASTM D4318

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401-2.3 **ASPHALT BINDER.** Asphalt binder shall conform to ASTM D6373 Performance Grade PG 67-22.

401-2.4 **ANTI-STRIPPING AGENT.** Any anti-stripping agent or additive (anti-strip) shall be heat stable and shall not change the asphalt binder grade beyond specifications. Anti-strip shall be an approved material of the Department of Transportation of the State in which the project is located.

COMPOSITION

401-3.1 **COMPOSITION OF MIXTURE(S).** The asphalt mix shall be composed of a mixture of aggregates, filler and anti-strip agent if required, and asphalt binder. The aggregate fractions shall be sized, handled in separate size groups, and combined in such proportions that the resulting mixture meets the grading requirements of the job mix formula (JMF).

401-3.2 **JOB MIX FORMULA (JMF) LABORATORY.** The laboratory used to develop the JMF shall possess a current certificate of accreditation, listing D3666 from a national accrediting authority and all test methods required for developing the JMF; and be listed on the accrediting authority's website. A copy of the laboratory's current accreditation and accredited test methods shall be submitted to the Resident Project Representative (RPR) prior to start of construction.

401-3.3 **JOB MIX FORMULA (JMF).** No asphalt mixture shall be placed until an acceptable mix design has been submitted to the RPR for review and accepted in writing. The RPR's review shall not relieve the Contractor of the responsibility to select and proportion the materials to comply with this section.

When the project requires asphalt mixtures of differing aggregate gradations and/or binders, a separate JMF shall be submitted for each mix. Add anti-stripping agent to meet tensile strength requirements.

The JMF shall be prepared by an accredited laboratory that meets the requirements of paragraph 401-3.2. The asphalt mixture shall be designed using procedures contained in Asphalt Institute MS-2 Mix Design Manual, 7th Edition**.** Samples shall be prepared and compacted using a Marshall compactor in accordance with ASTM D6926.

Should a change in sources of materials be made, a new JMF must be submitted to the RPR for review and accepted in writing before the new material is used. After the initial production JMF has been approved by the RPR and a new or modified JMF is required for whatever reason, the subsequent cost of the new or modified JMF, including a new control strip when required by the RPR, will be borne by the Contractor.

The RPR may request samples at any time for testing, prior to and during production, to verify the quality of the materials and to ensure conformance with the applicable specifications.

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The JMF shall be submitted in writing by the Contractor at least 30 days prior to the start of paving operations. The JMF shall be developed within the same construction season using aggregates proposed for project use.

The JMF shall be dated, and stamped or sealed by the responsible professional Engineer of the laboratory and shall include the following items as a minimum:

- Manufacturer's Certificate of Analysis (COA) for the asphalt binder used in the JMF in accordance with paragraph 401-2.3. Certificate of asphalt performance grade is with modifier already added, if used and must indicate compliance with ASTM D6373. For plant modified asphalt binder, certified test report indicating grade certification of modified asphalt binder.
- Manufacturer's Certificate of Analysis (COA) for the anti-stripping agent if used in the JMF in accordance with paragraph 401-2.4.
- Certified material test reports for the course and fine aggregate and mineral filler in accordance with paragraphs 401-2.1.
- Percent passing each sieve size for individual gradation of each aggregate cold feed and/or hot bin; percent by weight of each cold feed and/or hot bin used; and the total combined gradation in the JMF.
- Specific Gravity and absorption of each coarse and fine aggregate.
- Percent natural sand.
- Percent fractured faces.
- Percent by weight of flat particles, elongated particles, and flat and elongated particles (and criteria).
- Percent of asphalt.
- Number of blows or gyrations
- Laboratory mixing and compaction temperatures.
- Supplier-recommended field mixing and compaction temperatures.
- Plot of the combined gradation on a 0.45 power gradation curve.
- Graphical plots of air voids, voids in the mineral aggregate (VMA), and unit weight versus asphalt content. To achieve minimum VMA during production, the mix design needs to account for material breakdown during production.
- Tensile Strength Ratio (TSR).
- Type and amount of Anti-strip agent when used.
- Asphalt Pavement Analyzer (APA) or Hamburg Wheel-Track test results.
- Date the JMF was developed. Mix designs that are not dated or which are from a prior construction season shall not be accepted.

Table 1. Asphalt Design Criteria

Test Property	Value	Test Method
Number of blows or gyrations	75	
Air voids (%)	3.5	ASTM D3203
Percent voids in mineral aggregate (VMA), minimum	See Table 2	ASTM D6995
Tensile Strength Ratio (TSR)[1]	not less than 80 at a saturation	ASTM D4867

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Test Property	Value	Test Method
	of 70-80%	
Asphalt Pavement Analyzer (APA)[2]	Less than 10 mm @ 4000 passes	AASHTO T340 at 250 psi hose pressure at 64°C test temperature
Hamburg Wheel-Track Test	Less than 10 mm @ 20,000 passes	AASHTO T324

[1] Test specimens for TSR shall be compacted at 7 ± 1.0 % air voids. In areas subject to freeze-thaw, use freeze-thaw conditioning in lieu of moisture conditioning per ASTM D4867.

[2] AASHTO T340 at 100 psi hose pressure at 64°C test temperature may be used in the interim. If this method is used the required Value shall be less than 5 mm @ 8000 passes

The mineral aggregate shall be of such size that the percentage composition by weight, as determined by laboratory sieves, will conform to the gradation or gradations specified in Table 2 when tested in accordance with ASTM C136 and ASTM C117.

The gradations in Table 2 represent the limits that shall determine the suitability of aggregate for use from the sources of supply; be well graded from coarse to fine and shall not vary from the low limit on one sieve to the high limit on the adjacent sieve, or vice versa.

Table 2. Aggregate - Asphalt Pavements

Sieve Size	Percentage by Weight Passing Sieve
1 inch (25.0 mm)	**100**
3/4 inch (19.0 mm)	**90-100**
1/2 inch (12.5 mm)	**68-88**
3/8 inch (9.5 mm)	**60-82**
No. 4 (4.75 mm)	**45-67**
No. 8 (2.36 mm)	**32-54**
No. 16 (1.18 mm)	**22-44**
No. 30 (600 µm)	**15-35**
No. 50 (300 µm)	**9-25**
No. 100 (150 µm)	**6-18**
No. 200 (75 µm)	**3-6**
Minimum Voids in Mineral Aggregate (VMA)[1]	**14.0**
Asphalt Percent by total weight of mixture:	
Stone or gravel	**4.5-7.0**
Slag	**5.0-7.5**
Recommended Minimum Construction Lift Thickness	**3 inch**

[1] To achieve minimum VMA during production, the mix design needs to account for material breakdown during production.

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The aggregate gradations shown are based on aggregates of uniform specific gravity. The percentages passing the various sieves shall be corrected when aggregates of varying specific gravities are used, as indicated in the Asphalt Institute MS-2 Mix Design Manual, 7th Edition.

401-3.4 RECLAIMED ASPHALT PAVEMENT (RAP). RAP shall not be used.

401-3.5 CONTROL STRIP. Full production shall not begin until an acceptable control strip has been constructed and accepted in writing by the RPR**.** The Contractor shall prepare and place a quantity of asphalt according to the JMF. The underlying grade or pavement structure upon which the control strip is to be constructed shall be the same as the remainder of the course represented by the control strip.

The Contractor will not be allowed to place the control strip until the Contractor quality control program (CQCP), showing conformance with the requirements of paragraph 401-5.1, has been accepted, in writing, by the RPR.

The control strip will consist of at least 250 tons (227 metric tons) or 1/2 sublot, whichever is greater. The control strip shall be placed in two lanes of the same width and depth to be used in production with a longitudinal cold joint. The cold joint must be cut back in accordance with paragraph 401-4.14 using the same procedure that will be used during production. The cold joint for the control strip will be an exposed construction joint at least four (4) hours old or when the mat has cooled to less than 160°F (71°C). The equipment used in construction of the control strip shall be the same type, configuration and weight to be used on the project.

The control strip will be considered acceptable by the RPR if the gradation, asphalt content, and VMA are within the action limits specified in paragraph 401-5.5a; and Mat density, air voids, and joint density meet the requirements specified in paragraphs 401-6.2.

If the control strip is unacceptable, necessary adjustments to the JMF, plant operation, placing procedures, and/or rolling procedures shall be made and another control strip shall be placed. Unacceptable control strips shall be removed at the Contractor's expense.

Payment will only be made for an acceptable control strip in accordance with paragraph 401-8.1 using a lot pay factor equal to 100.

CONSTRUCTION METHODS

401-4.1 WEATHER LIMITATIONS. The asphalt shall not be placed upon a wet surface or when the surface temperature of the underlying course is less than specified in Table 4. The temperature requirements may be waived by the RPR, if requested; however, all other requirements including compaction shall be met.

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Table 4. Surface Temperature Limitations of Underlying Course

Mat Thickness	Base Temperature (Minimum)	
	°F	°C
3 inches (7.5 cm) or greater	40 [1]	4
Greater than 2 inches (50 mm) but less than 3 inches (7.5 cm)	45	7

401-4.2 **ASPHALT PLANT.** Plants used for the preparation of asphalt shall conform to the requirements of American Association of State Highway and Transportation Officials (AASHTO) M156 including the following items.

a. Inspection of plant. The RPR, or RPR's authorized representative, shall have access, at all times, to all areas of the plant for checking adequacy of equipment; inspecting operation of the plant: verifying weights, proportions, and material properties; and checking the temperatures maintained in the preparation of the mixtures.

b. Storage bins and surge bins. The asphalt mixture stored in storage and/or surge bins shall meet the same requirements as asphalt mixture loaded directly into trucks. Asphalt mixture shall not be stored in storage and/or surge bins for a period greater than twelve (12) hours. If the RPR determines there is an excessive heat loss, segregation, or oxidation of the asphalt mixture due to temporary storage, temporary storage shall not be allowed.

401-4.3 **AGGREGATE STOCKPILE MANAGEMENT.** Aggregate stockpiles shall be constructed in a manner that prevents segregation and intermixing of deleterious materials. Aggregates from different sources shall be stockpiled, weighed and batched separately at the asphalt batch plant. Aggregates that have become segregated or mixed with earth or foreign material shall not be used.
A continuous supply of materials shall be provided to the work to ensure continuous placement.

401-4.4 **HAULING EQUIPMENT.** Trucks used for hauling asphalt shall have tight, clean, and smooth metal beds. To prevent the asphalt from sticking to the truck beds, the truck beds shall be lightly coated with a minimum amount of paraffin oil, lime solution, or other material approved by the RPR. Petroleum products shall not be used for coating truck beds. Each truck shall have a suitable cover to protect the mixture from adverse weather. When necessary, to ensure that the mixture will be delivered to the site at the specified temperature, truck beds shall be insulated or heated and covers shall be securely fastened.

401-4.4.1 **MATERIAL TRANSFER VEHICLE (MTV).** Material transfer vehicles used to transfer the material from the hauling equipment to the paver, shall use a self-propelled, material transfer vehicle with a swing conveyor that can deliver material to the paver without making contact with the paver. The MTV shall be able to move back and forth

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between the hauling equipment and the paver providing material transfer to the paver, while allowing the paver to operate at a constant speed. The Material Transfer Vehicle will have remixing and storage capability to prevent physical and thermal segregation.

401-4.5 **ASPHALT PAVERS.** Asphalt pavers shall be self-propelled with an activated heated screed, capable of spreading and finishing courses of asphalt that will meet the specified thickness, smoothness, and grade. The paver shall have sufficient power to propel itself and the hauling equipment without adversely affecting the finished surface. The asphalt paver shall be equipped with a control system capable of automatically maintaining the specified screed grade and elevation.

If the spreading and finishing equipment in use leaves tracks or indented areas or produces other blemishes in the pavement that are not satisfactorily corrected by the scheduled operations, the use of such equipment shall be discontinued.

The paver shall be capable of paving to a minimum width specified in paragraph 401-4.12.

401-4.6 **ROLLERS.** The number, type, and weight of rollers shall be sufficient to compact the asphalt to the required density while it is still in a workable condition without crushing of the aggregate, depressions or other damage to the pavement surface. Rollers shall be in good condition, clean, and capable of operating at slow speeds to avoid displacement of the asphalt. All rollers shall be specifically designed and suitable for compacting asphalt concrete and shall be properly used. Rollers that impair the stability of any layer of a pavement structure or underlying soils shall not be used.

401-4.7 **DENSITY DEVICE.** The Contractor shall have on site a density gauge during all paving operations in order to assist in the determination of the optimum rolling pattern, type of roller and frequencies, as well as to monitor the effect of the rolling operations during production paving. The Contractor shall supply a qualified technician during all paving operations to calibrate the gauge and obtain accurate density readings for all new asphalt. These densities shall be supplied to the RPR upon request at any time during construction. No separate payment will be made for supplying the density gauge and technician.

401-4.8 **PREPARATION OF ASPHALT BINDER.** The asphalt binder shall be heated in a manner that will avoid local overheating and provide a continuous supply of the asphalt binder to the mixer at a uniform temperature. The temperature of unmodified asphalt binder delivered to the mixer shall be sufficient to provide a suitable viscosity for adequate coating of the aggregate particles, but shall not exceed 325°F (160°C) when added to the aggregate. The temperature of modified asphalt binder shall be no more than 350°F (175°C) when added to the aggregate.

401-4.9 **PREPARATION OF MINERAL AGGREGATE.** The aggregate for the asphalt shall be heated and dried. The maximum temperature and rate of heating shall be such that no damage occurs to the aggregates. The temperature of the aggregate and mineral filler shall not exceed 350°F (175°C) when the asphalt binder is added. Particular care

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shall be taken that aggregates high in calcium or magnesium content are not damaged by overheating. The temperature shall not be lower than is required to obtain complete coating and uniform distribution on the aggregate particles and to provide a mixture of satisfactory workability.

401-4.10 PREPARATION OF ASPHALT MIXTURE. The aggregates and the asphalt binder shall be weighed or metered and mixed in the amount specified by the JMF. The combined materials shall be mixed until the aggregate obtains a uniform coating of asphalt binder and is thoroughly distributed throughout the mixture. Wet mixing time shall be the shortest time that will produce a satisfactory mixture, but not less than 25 seconds for batch plants. The wet mixing time for all plants shall be established by the Contractor, based on the procedure for determining the percentage of coated particles described in ASTM D2489, for each individual plant and for each type of aggregate used. The wet mixing time will be set to achieve 95% of coated particles. For continuous mix plants, the minimum mixing time shall be determined by dividing the weight of its contents at operating level by the weight of the mixture delivered per second by the mixer. The moisture content of all asphalt upon discharge shall not exceed 0.5%.

401-4.11 APPLICATION OF PRIME AND TACK COAT. Immediately before placing the asphalt mixture, the underlying course shall be cleaned of all dust and debris.

A prime coat in accordance with Item P-602 shall be applied to aggregate base prior to placing the asphalt mixture.

A tack coat shall be applied in accordance with Item P-603 to all vertical and horizontal asphalt and concrete surfaces prior to placement of the first and each subsequent lift of asphalt mixture.

401-4.12 LAYDOWN PLAN, TRANSPORTING, PLACING, AND FINISHING. Prior to the placement of the asphalt, the Contractor shall prepare a laydown plan with the sequence of paving lanes and width to minimize the number of cold joints; the location of any temporary ramps; laydown temperature; and estimated time of completion for each portion of the work (milling, paving, rolling, cooling, etc.). The laydown plan and any modifications shall be approved by the RPR.

Deliveries shall be scheduled so that placing and compacting of asphalt is uniform with minimum stopping and starting of the paver. Hauling over freshly placed material shall not be permitted until the material has been compacted, as specified, and allowed to cool to approximately ambient temperature. The Contractor, at their expense, shall be responsible for repair of any damage to the pavement caused by hauling operations.

Contractor shall survey each lift of asphalt surface course and certify to RPR that every lot of each lift meets the grade tolerances of paragraph 401-6.2d before the next lift can be placed.

Edges of existing asphalt pavement abutting the new work shall be saw cut and the cut

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off material and laitance removed. Apply a tack coat in accordance with P-603 before new asphalt material is placed against it.

The speed of the paver shall be regulated to eliminate pulling and tearing of the asphalt mat. Placement of the asphalt mix shall begin along the centerline of a crowned section or on the high side of areas with a one-way slope unless shown otherwise on the laydown plan as accepted by the RPR. The asphalt mix shall be placed in consecutive adjacent lanes having a minimum width of 12 feet (m) except where edge lanes require less width to complete the area. Additional screed sections attached to widen the paver to meet the minimum lane width requirements must include additional auger sections to move the asphalt mixture uniformly along the screed extension.

The longitudinal joint in one course shall offset the longitudinal joint in the course immediately below by at least one foot (30 cm); however, the joint in the surface top course shall be at the centerline of crowned pavements. Transverse joints in one course shall be offset by at least 10 feet (3 m) from transverse joints in the previous course. Transverse joints in adjacent lanes shall be offset a minimum of 10 feet (3 m).On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the asphalt may be spread and luted by hand tools.

The RPR may at any time, reject any batch of asphalt, on the truck or placed in the mat, which is rendered unfit for use due to contamination, segregation, incomplete coating of aggregate, or overheated asphalt mixture. Such rejection may be based on only visual inspection or temperature measurements. In the event of such rejection, the Contractor may take a representative sample of the rejected material in the presence of the RPR, and if it can be demonstrated in the laboratory, in the presence of the RPR, that such material was erroneously rejected, payment will be made for the material at the contract unit price.

Areas of segregation in the surface course, as determined by the RPR, shall be removed and replaced at the Contractor's expense. The area shall be removed by saw cutting and milling a minimum of the construction lift thickness as specified in paragraph 401-3.3, Table 2 for the approved mix design. The area to be removed and replaced shall be a minimum width of the paver and a minimum of 10 feet (3 m) long.

401-4.13 COMPACTION OF ASPHALT MIXTURE. After placing, the asphalt mixture shall be thoroughly and uniformly compacted by self-propelled rollers. The surface shall be compacted as soon as possible when the asphalt has attained sufficient stability so that the rolling does not cause undue displacement, cracking or shoving. The sequence of rolling operations and the type of rollers used shall be at the discretion of the Contractor. The speed of the roller shall, at all times, be sufficiently slow to avoid displacement of the hot mixture and be effective in compaction. Any surface defects and/or displacement occurring as a result of the roller, or from any other cause, shall be corrected at the Contractor's expense.

Sufficient rollers shall be furnished to handle the output of the plant. Rolling shall continue until the surface is of uniform texture, true to grade and cross-section, and the required field density is obtained. To prevent adhesion of the asphalt to the roller, the wheels shall be equipped with a scraper and kept moistened with water as necessary.

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In areas not accessible to the roller, the mixture shall be thoroughly compacted with approved power tampers.

Any asphalt that becomes loose and broken, mixed with dirt, contains check-cracking, or in any way defective shall be removed and replaced with fresh hot mixture and immediately compacted to conform to the surrounding area. This work shall be done at the Contractor's expense. Skin patching shall not be allowed.

401-4.14 **JOINTS.** The formation of all joints shall be made to ensure a continuous bond between the courses and obtain the required density. All joints shall have the same texture as other sections of the course and meet the requirements for smoothness and grade.

The roller shall not pass over the unprotected end of the freshly laid asphalt except when necessary to form a transverse joint. When necessary to form a transverse joint, it shall be made by means of placing a bulkhead or by tapering the course. The tapered edge shall be cut back to its full depth and width on a straight line to expose a vertical face prior to placing the adjacent lane. In both methods, all contact surfaces shall be coated with an asphalt tack coat before placing any fresh asphalt against the joint.

Longitudinal joints which have been left exposed for more than four (4) hours; the surface temperature has cooled to less than 175°F (80°C); or are irregular, damaged, uncompacted or otherwise defective shall be cut back with a cutting wheel or pavement saw a maximum of 3 inches (75 mm) to expose a clean, sound, uniform vertical surface for the full depth of the course. All cutback material and any laitance produced from cutting joints shall be removed from the project. Asphalt tack coat in accordance with P-603 shall be applied to the clean, dry joint prior to placing any additional fresh asphalt against the joint. The cost of this work shall be considered incidental to the cost of the asphalt.

401-4.15 **SAW-CUT GROOVING.** Saw-cut grooves shall be provided as specified in Item P-621.

401-4.16 **DIAMOND GRINDING.** Diamond grinding shall be completed prior to pavement grooving. Diamond grinding shall be accomplished by sawing with saw blades impregnated with industrial diamond abrasive.

Diamond grinding shall be performed with a machine designed specifically for diamond grinding capable of cutting a path at least 3 feet (0.9 m) wide. The saw blades shall be 1/8-inch (3-mm) wide with a sufficient number of blades to create grooves between 0.090 and 0.130 inches (2 and 3.5 mm) wide; and peaks and ridges approximately 1/32 inch (1 mm) higher than the bottom of the grinding cut. The actual number of blades will be determined by the Contractor and depend on the hardness of the aggregate. Equipment or grinding procedures that cause ravels, aggregate fractures, spalls or disturbance to the pavement will not be permitted. Contractor shall demonstrate to the RPR that the grinding equipment will produce satisfactory results prior to making corrections to surfaces. Grinding will be tapered in all directions to

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provide smooth transitions to areas not requiring grinding. The slurry resulting from the grinding operation shall be continuously removed and the pavement left in a clean condition. The Contractor shall apply a surface treatment per P-608 to all areas that have been subject to grinding.

401-4.17 NIGHTTIME PAVING REQUIREMENTS. The Contractor shall provide adequate lighting during any nighttime construction. A lighting plan shall be submitted by the Contractor and approved by the RPR prior to the start of any nighttime work. All work shall be in accordance with the approved CSPP and lighting plan.

CONTRACTOR QUALITY CONTROL (CQC)

401-5.1 GENERAL. The Contractor shall develop a Contractor Quality Control Program (CQCP) in accordance with Item C-100. No partial payment will be made for materials without an approved CQCP.

401-5.2 CONTRACTOR QUALITY CONTROL (QC) FACILITIES. The Contractor shall provide or contract for testing facilities in accordance with Item C-100. The RPR shall be permitted unrestricted access to inspect the Contractor's QC facilities and witness QC activities. The RPR will advise the Contractor in writing of any noted deficiencies concerning the QC facility, equipment, supplies, or testing personnel and procedures. When the deficiencies are serious enough to be adversely affecting the test results, the incorporation of the materials into the work shall be suspended immediately and will not be permitted to resume until the deficiencies are satisfactorily corrected.

401-5.3 CONTRACTOR QC TESTING. The Contractor shall perform all QC tests necessary to control the production and construction processes applicable to these specifications and as set forth in the approved CQCP. The testing program shall include, but not necessarily be limited to, tests for the control of asphalt content, aggregate gradation, temperatures, aggregate moisture, field compaction, and surface smoothness. A QC Testing Plan shall be developed as part of the CQCP.

a. **Asphalt content.** A minimum of two tests shall be performed per day in accordance with ASTM D6307 or ASTM D2172 for determination of asphalt content. When using ASTM D6307, the correction factor shall be determined as part of the first test performed at the beginning of plant production; and as part of every tenth test performed thereafter. The asphalt content for the day will be determined by averaging the test results.

b. **Gradation.** Aggregate gradations shall be determined a minimum of twice per day from mechanical analysis of extracted aggregate in accordance with ASTM D5444, ASTM C136, and ASTM C117.

c. **Moisture content of aggregate.** The moisture content of aggregate used for production shall be determined a minimum of once per day in accordance with ASTM C566.

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d. Moisture content of asphalt. The moisture content shall be determined once per day in accordance with AASHTO T329 or ASTM D1461.

e. Temperatures. Temperatures shall be checked, at least four times per day, at necessary locations to determine the temperatures of the dryer, the asphalt binder in the storage tank, the asphalt at the plant, and the asphalt at the job site.

f. In-place density monitoring. The Contractor shall conduct any necessary testing to ensure that the specified density is being achieved. A nuclear gauge may be used to monitor the pavement density in accordance with ASTM D2950.

g. Smoothness for Contractor Quality Control.

The Contractor shall perform smoothness testing in transverse and longitudinal directions daily to verify that the construction processes are producing pavement with variances less than ¼ inch in 12 feet, identifying areas that may pond water which could lead to hydroplaning of aircraft. If the smoothness criteria is not met, appropriate changes and corrections to the construction process shall be made by the Contractor before construction continues

The Contractor may use a 12-foot (3.7 m) straightedge or a rolling inclinometer meeting the requirements of ASTM E2133. Straight-edge testing shall start with one-half the length of the straightedge at the edge of pavement section being tested and then moved ahead one-half the length of the straightedge for each successive measurement. Testing shall be continuous across all joints. The surface irregularity shall be determined by placing the freestanding (unleveled) straightedge on the pavement surface and allowing it to rest upon the two highest spots covered by its length, and measuring the maximum gap between the straightedge and the pavement surface in the area between the two high points. If the rolling inclinometer is used, the data may be evaluated using the FAA profile program, ProFAA, using the 12-foot straightedge simulation function.

Smoothness readings shall not be made across grade changes or cross slope transitions. The transition between new and existing pavement shall be evaluated separately for conformance with the plans.

(1) Transverse measurements. Transverse measurements shall be taken for each day's production placed. Transverse measurements shall be taken perpendicular to the pavement centerline each 50 feet (15 m) or more often as determined by the RPR. The joint between lanes shall be tested separately to facilitate smoothness between lanes.

(2) Longitudinal measurements. Longitudinal measurements shall be taken for each day's production placed. Longitudinal tests shall be parallel to the centerline of paving; at the center of paving lanes when widths of paving lanes are less than 20 feet (6 m); and at the third points of paving lanes when widths of paving lanes are 20 ft (6 m) or greater.

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Deviations on the final surface course in either the transverse or longitudinal direction that will trap water greater than 1/4 inch (6 mm) shall be corrected with diamond grinding per paragraph 401-4.16 or by removing and replacing the surface course to full depth. Grinding shall be tapered in all directions to provide smooth transitions to areas not requiring grinding. All areas in which diamond grinding has been performed shall be subject to the final pavement thickness tolerances specified in paragraph 401-6.1d(3). Areas that have been ground shall be sealed with a surface treatment in accordance with Item P-608. To avoid the surface treatment creating any conflict with runway or taxiway markings, it may be necessary to seal a larger area.

Control charts shall be kept to show area of each day's placement and the percentage of corrective grinding required. Corrections to production and placement shall be initiated when corrective grinding is required. If the Contractor's machines and/or methods produce significant areas that need corrective actions in excess of 10 percent of a day's production, production shall be stopped until corrective measures are implemented by the Contractor.

h. Grade. Grade shall be evaluated daily to allow adjustments to paving operations when grade measurements do not meet specifications. As a minimum, grade shall

be evaluated prior to and after the placement of the first lift and after placement of the surface lift.

Measurements will be taken at appropriate gradelines (as a minimum at center and edges of paving lane) and longitudinal spacing as shown on cross-sections and plans. The final surface of the pavement will not vary from the gradeline elevations and cross-sections shown on the plans by more than 1/2 inch (12 mm) vertically. The documentation will be provided by the Contractor to the RPR within 24 hours.

Areas with humps or depressions that exceed grade or smoothness criteria and that retain water on the surface must be ground off provided the course thickness after grinding is not more than 1/2 inch (12 mm) less than the thickness specified on the plans. Grinding shall be in accordance with paragraph 401-4.16.

The Contractor shall repair low areas or areas that cannot be corrected by grinding by removal of deficient areas to the depth of the final course plus ½ inch and replacing with new material. Skin patching is not allowed.

401-5.4 SAMPLING. When directed by the RPR, the Contractor shall sample and test any material that appears inconsistent with similar material being sampled, unless such material is voluntarily removed and replaced or deficiencies corrected by the Contractor. All sampling shall be in accordance with standard procedures specified.

401-5.5 CONTROL CHARTS. The Contractor shall maintain linear control charts for both individual measurements and range (i.e. difference between highest and lowest

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measurements) for aggregate gradation, asphalt content, and VMA. The VMA for each day will be calculated and monitored by the QC laboratory.

Control charts shall be posted in a location satisfactory to the RPR and kept current. As a minimum, the control charts shall identify the project number, the contract item number, the test number, each test parameter, the Action and Suspension Limits applicable to each test parameter, and the Contractor's test results. The Contractor shall use the control charts as part of a process control system for identifying potential problems and assignable causes before they occur. If the Contractor's projected data during production indicates a problem and the Contractor is not taking satisfactory corrective action, the RPR may suspend production or acceptance of the material.

a. Individual measurements. Control charts for individual measurements shall be established to maintain process control within tolerance for aggregate gradation, asphalt content, and VMA. The control charts shall use the job mix formula target values as indicators of central tendency for the following test parameters with associated Action and Suspension Limits:

Control Chart Limits for Individual Measurements

Sieve	Action Limit	Suspension Limit
3/4 inch (19.0 mm)	±6%	±9%
1/2 inch (12.5 mm)	±6%	±9%
3/8 inch (9.5 mm)	±6%	±9%
No. 4 (4.75 mm)	±6%	±9%
No. 16 (1.18 mm)	±5%	±7.5%
No. 50 (300 µm)	±3%	±4.5%
No. 200 (75 µm)	±2%	±3%
Asphalt Content	±0.45%	±0.70%
Minimum VMA	-0.5%	-1.0%

b. Range. Control charts shall be established to control gradation process variability. The range shall be plotted as the difference between the two test results for each control parameter. The Suspension Limits specified below are based on a sample size of n = 2. Should the Contractor elect to perform more than two tests per lot, the Suspension Limits shall be adjusted by multiplying the Suspension Limit by 1.18 for n = 3 and by 1.27 for n = 4.

Sieve	Suspension Limit
1/2 inch (12.5 mm)	11%
3/8 inch (9.5 mm)	11%
No. 4 (4.75 mm)	11%
No. 16 (1.18 mm)	9%
No. 50 (300 µm)	6%
No. 200 (75 µm)	3.5%
Asphalt Content	0.8%

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c. Corrective Action. The CQCP shall indicate that appropriate action shall be taken when the process is believed to be out of tolerance. The Plan shall contain rules to gauge when a process is out of control and detail what action will be taken to bring the process into control. As a minimum, a process shall be deemed out of control and production stopped and corrective action taken, if:

(1) One point falls outside the Suspension Limit line for individual measurements or range; or

(2) Two points in a row fall outside the Action Limit line for individual measurements.

401-5.6 QC REPORTS. The Contractor shall maintain records and shall submit reports of QC activities daily, in accordance with Item C-100.

MATERIAL ACCEPTANCE

401-6.1 ACCEPTANCE SAMPLING AND TESTING. Unless otherwise specified, all acceptance sampling and testing necessary to determine conformance with the requirements specified in this section will be performed by the RPR at no cost to the Contractor except that coring as required in this section shall be completed and paid for by the Contractor.

a. Quality assurance (QA) testing laboratory. The QA testing laboratory performing these acceptance tests will be accredited in accordance with ASTM D3666. The QA laboratory accreditation will be current and listed on the accrediting authority's website. All test methods required for acceptance sampling and testing will be listed on the lab accreditation.

b. Lot size. A standard lot will be equal to one day's production divided into approximately equal sublots of between 400 to 600 tons. When only one or two sublots are produced in a day's production, the sublots will be combined with the production lot from the previous or next day.

Where more than one plant is simultaneously producing asphalt for the job, the lot sizes will apply separately for each plant.

c. Asphalt air voids. Plant-produced asphalt will be tested for air voids on a sublot basis.

(1) Sampling. Material from each sublot shall be sampled in accordance with ASTM D3665. Samples shall be taken from material deposited into trucks at the plant or at the job site in accordance with ASTM D979. The sample of asphalt may be put in a covered metal tin and placed in an oven for not less than 30 minutes nor more than 60 minutes to maintain the material at or above the compaction temperature as specified in the JMF.

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(2) Testing. Air voids will be determined for each sublot in accordance with ASTM D3203 for a set of compacted specimens prepared in accordance with ASTM D6926.

d. In-place asphalt mat and joint density. Each sublot will be tested for in-place mat and joint density as a percentage of the theoretical maximum density (TMD).

(1) Sampling. The Contractor will cut minimum 5 inch (125 mm) diameter samples in accordance with ASTM D5361. The Contractor shall furnish all tools, labor, and materials for cleaning, and filling the cored pavement. Laitance produced by the coring operation shall be removed immediately after coring, and core holes shall be filled within one day after sampling in a manner acceptable to the RPR.

(2) Bond. Each lift of asphalt shall be bonded to the underlying layer. If cores reveal that the surface is not bonded, additional cores shall be taken as directed by the RPR to determine the extent of unbonded areas. Unbonded areas shall be removed by milling and replaced at no additional cost as directed by the RPR.

(3) Thickness. Thickness of each lift of surface course will be evaluated by the RPR for compliance to the requirements shown on the plans after any necessary corrections for grade. Measurements of thickness will be made using the cores extracted for each sublot for density measurement. The maximum allowable deficiency at any point will not be more than 1/4 inch (6 mm) less than the thickness indicated for the lift. Average thickness of lift, or combined lifts, will not be less than the indicated thickness. Where the thickness tolerances are not met, the lot or sublot shall be corrected by the Contractor at his expense by removing the deficient area and replacing with new pavement. The Contractor, at his expense, may take additional cores as approved by the RPR to circumscribe the deficient area.

(4) Mat density. One core shall be taken from each sublot. Core locations will be determined by the RPR in accordance with ASTM D3665. Cores for mat density shall not be taken closer than one foot (30 cm) from a transverse or longitudinal joint. The bulk specific gravity of each cored sample will be determined in accordance with ASTM D2726. The percent compaction (density) of each sample will be determined by dividing the bulk specific gravity of each sublot sample by the TMD for that sublot.

(5) Joint density. One core centered over the longitudinal joint shall be taken for each sublot that has a longitudinal joint. Core locations will be determined by the RPR in accordance with ASTM D3665. The bulk specific gravity of each core sample will be determined in accordance with ASTM D2726. The percent compaction (density) of each sample will be determined by dividing the bulk specific gravity of each joint density sample by the average TMD for the lot. The TMD used to determine the joint density at joints formed between lots will

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be the lower of the average TMD values from the adjacent lots.

401-6.2 ACCEPTANCE CRITERIA.

a. General. Acceptance will be based on the implementation of the Contractor Quality Control Program (CQCP) and the following characteristics of the asphalt and completed pavements: air voids, mat density, joint density, grade and Profilograph roughness**.**

b. Air Voids and Mat density. Acceptance of each lot of plant produced material for mat density and air voids will be based on the percentage of material within specification limits (PWL). If the PWL of the lot equals or exceeds 90%, the lot will be acceptable. Acceptance and payment will be determined in accordance with paragraph 401-8.1.

c. Joint density. Acceptance of each lot of plant produced asphalt for joint density will be based on the PWL. If the PWL of the lot is equal to or exceeds 90%, the lot will be considered acceptable. If the PWL is less than 90%, the Contractor shall evaluate the reason and act accordingly. If the PWL is less than 80%, the Contractor shall cease operations and until the reason for poor compaction has been determined. If the PWL is less than 71%, the pay factor for the lot used to complete the joint will be reduced by five (5) percentage points. This lot pay factor reduction will be incorporated and evaluated in accordance with paragraph 401-8.1.

d. Grade. The final finished surface of the pavement shall be surveyed to verify that the grade elevations and cross-sections shown on the plans do not deviate more than 1/2 inch (12 mm) vertically or 0.1 feet (30 mm) laterally.

Cross-sections of the pavement shall be taken at a minimum 50-foot (15-m) longitudinal spacing and at all longitudinal grade breaks. Minimum cross-section grade points shall include grade at centerline, ± 10 feet of centerline, and edge of runway or taxiway pavement.

The survey and documentation shall be stamped and signed by a licensed surveyor. Payment for sublots that do not meet grade for over 25% of the sublot shall not be more than 95%.

e. Profilograph roughness for QA Acceptance. The final profilograph shall be the full length of the project to facilitate testing of roughness between lots. The Contractor, in the presence of the RPR shall perform a profilograph roughness test on the completed project with a profilograph meeting the requirements of ASTM E1274 or a Class I inertial profiler meeting ASTM E950. Data and results shall be provided within 48 hrs of profilograph roughness tests.

The pavement shall have an average profile index less than 15 inches per mile per 1/10 mile. The equipment shall utilize electronic recording and automatic computerized reduction of data to indicate “must grind” bumps and the Profile

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Index for the pavement using a 0.2-inch (5 mm) blanking band. The bump template must span one inch (25 mm) with an offset of 0.4 inches (10 mm). The profilograph must be calibrated prior to use and operated by a factory or State DOT approved, trained operator. Profilograms shall be recorded on a longitudinal scale of one inch (25 mm) equals 25 feet (7.5 m) and a vertical scale of one inch (25 mm) equals one inch (25 mm). Profilograph shall be performed one foot right and left of project centerline and 15 feet (4.5 m) right and left of project centerline. Any areas that indicate "must grind" shall be corrected with diamond grinding per paragraph 401-4.16 or by removing and replacing full depth of surface course. as directed by the RPR. Where corrections are necessary, a second profilograph run shall be performed to verify that the corrections produced an average profile index of 15 inches per mile per 1/10 mile or less.

401-6.3 PERCENTAGE OF MATERIAL WITHIN SPECIFICATION LIMITS (PWL).

The PWL will be determined in accordance with procedures specified in Item C-110. The specification tolerance limits (L) for lower and (U) for upper are contained in Table 5.

Table 5. Acceptance Limits for Air Voids and Density

Test Property	Pavements Specification Tolerance Limits	
	L	U
Air Voids Total Mix (%)	2.0	5.0
Surface Course Mat Density (%)	92.8	-
Base Course Mat Density (%)	91.8	-
Joint density (%)	90.5	--

a. Outliers. All individual tests for mat density and air voids will be checked for outliers (test criterion) in accordance with ASTM E178, at a significance level of 5%. Outliers will be discarded, and the PWL will be determined using the remaining test values. The criteria in Table 5 is based on production processes which have a variability with the following standard deviations: Surface Course Mat Density (%), 1.20; Base Course Mat Density (%), 1.55; Joint Density (%), 1.8. The Contractor should note that (1) 90 PWL is achieved when consistently producing a surface course with an average mat density of at least 94% with 1.20% or less variability, (2) 90 PWL is achieved when consistently producing a base course with an average mat density of at least 93.5% with 1.8% or less variability, and (3) 90 PWL is achieved when consistently producing joints with an average joint density of at least 91% with 1.8% or less variability.

401-6.4 RESAMPLING PAVEMENT FOR MAT DENSITY.

a. General. Resampling of a lot of pavement will only be allowed for mat density, and then, only if the Contractor requests same, in writing, within 48 hours after receiving the written test results from the RPR. A retest will consist of all the

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sampling and testing procedures contained in paragraphs 401-6.1d and 401-6.2b. Only one resampling per lot will be permitted.

(1) A redefined PWL will be calculated for the resampled lot. The number of tests used to calculate the redefined PWL will include the initial tests made for that lot plus the retests.

(2) The cost for resampling and retesting shall be borne by the Contractor.

b. Payment for resampled lots. The redefined PWL for a resampled lot will be used to calculate the payment for that lot in accordance with Table 6.

c. Outliers. Check for outliers in accordance with ASTM E178, at a significance level of 5%.

401-6.5 LEVELING COURSE. The leveling course is the first variable thickness lift placed to correct surface irregularities prior to placement of subsequent courses. The leveling course shall be applied in accordance with Item P-403.

METHOD OF MEASUREMENT

401-7.1 MEASUREMENT. Asphalt shall be measured by the number of tons of asphalt used in the accepted work. Batch weights or truck scale weights will be used to determine the basis for the tonnage.

BASIS OF PAYMENT

401-8.1 PAYMENT. Payment for a lot of asphalt meeting all acceptance criteria as specified in paragraph 401-6.2 shall be made based on results of tests for mat density and air voids. Payment for acceptable lots shall be adjusted according to paragraph 401-8.1c format density and air voids; and paragraph 401-6.2c for joint density, subject to the limitation that:

a. The total project payment for plant mix asphalt pavement shall not exceed 100 percent of the product of the contract unit price and the total number of tons (kg) of asphalt used in the accepted work.

b. The price shall be compensation for furnishing all materials, for all preparation, mixing, and placing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

c. Basis of adjusted payment. The pay factor for each individual lot shall be calculated in accordance with Table 6. A pay factor shall be calculated for both mat density and air voids. The lot pay factor shall be the higher of the two values when calculations for both mat density and air voids are 100% or higher. The lot pay factor shall be the product of the two values when only one of the calculations for either mat density or air voids is 100% or higher. The lot pay factor shall be the

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lower of the two values when calculations for both mat density and air voids are less than 100%. If PWL for joint density is less than 71% then the lot pay factor shall be reduced by 5% but be no higher than 95%.

For each lot accepted, the adjusted contract unit price shall be the product of the lot pay factor for the lot and the contract unit price. Payment shall be subject to the total project payment limitation specified in paragraph 401-8.1a. Payment in excess of 100% for accepted lots of asphalt shall be used to offset payment for accepted lots of asphalt pavement that achieve a lot pay factor less than 100%.

Payment for sublots which do not meet grade in accordance with paragraph 401-6.2d after correction for over 25% of the sublot shall be reduced by 5%.

Table 6. Price adjustment schedule[1]

Percentage of material within specification limits (PWL)	Lot pay factor (percent of contract unit price)
96 – 100	106
90 – 95	PWL + 10
75 – 89	0.5 PWL + 55
55 – 74	1.4 PWL – 12
Below 55	Reject [2]

[1] Although it is theoretically possible to achieve a pay factor of 106% for each lot, actual payment above 100% shall be subject to the total project payment limitation specified in paragraph 401-8.1a.

[2] The lot shall be removed and replaced. However, the RPR may decide to allow the rejected lot to remain. In that case, if the RPR and Contractor agree in writing that the lot shall not be removed, it shall be paid for at 50% of the contract unit price and the total project payment shall be reduced by the amount withheld for the rejected lot.

d. Profilograph Roughness. The Contractor will receive full payment when the profilograph average profile index is in accordance with paragraph 401-6.2e. When the final average profile index for the entire length of pavement does not exceed 15 inches per mile per 1/10 mile, payment will be made at the contract unit price for the completed pavement.

401-8.1 PAYMENT.

Payment will be made under:

Item P-401 Asphalt Surface Course - per ton

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

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ASTM C29	Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate
ASTM C88	Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C117	Standard Test Method for Materials Finer than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C127	Standard Test Method for Density, Relative Density (Specific Gravity) and Absorption of Coarse Aggregate
ASTM C131	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C142	Standard Test Method for Clay Lumps and Friable Particles in Aggregates
ASTM C566	Standard Test Method for Total Evaporable Moisture Content of Aggregate by Drying
ASTM D75	Standard Practice for Sampling Aggregates
ASTM D242	Standard Specification for Mineral Filler for Bituminous Paving Mixtures
ASTM D946	Standard Specification for Penetration-Graded Asphalt Cement for Use in Pavement Construction
ASTM D979	Standard Practice for Sampling Asphalt Paving Mixtures
ASTM D1073	Standard Specification for Fine Aggregate for Asphalt Paving Mixtures
ASTM D1188	Standard Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Coated Samples
ASTM D2172	Standard Test Method for Quantitative Extraction of Bitumen from Asphalt Paving Mixtures
ASTM D1461	Standard Test Method for Moisture or Volatile Distillates in Asphalt Paving Mixtures
ASTM D2041	Standard Test Method for Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
ASTM D2419	Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate
ASTM D2489	Standard Practice for Estimating Degree of Particle Coating of Bituminous-Aggregate Mixtures

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ASTM D2726	Standard Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures
ASTM D2950	Standard Test Method for Density of Bituminous Concrete in Place by Nuclear Methods
ASTM D3203	Standard Test Method for Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures
ASTM D3381	Standard Specification for Viscosity-Graded Asphalt Cement for Use in Pavement Construction
ASTM D3665	Standard Practice for Random Sampling of Construction Materials
ASTM D3666	Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials
ASTM D4318	Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
ASTM D4552	Standard Practice for Classifying Hot-Mix Recycling Agents
ASTM D4791	Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
ASTM D4867	Standard Test Method for Effect of Moisture on Asphalt Concrete Paving Mixtures
ASTM D5361	Standard Practice for Sampling Compacted Asphalt Mixtures for Laboratory Testing
ASTM D5444	Standard Test Method for Mechanical Size Analysis of Extracted Aggregate
ASTM D5821	Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate
ASTM D6084	Standard Test Method for Elastic Recovery of Bituminous Materials by Ductilometer
ASTM D6307	Standard Test Method for Asphalt Content of Hot Mix Asphalt by Ignition Method
ASTM D6373	Standard Specification for Performance Graded Asphalt Binder
ASTM D6752	Standard Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Automatic Vacuum Sealing Method
ASTM D6925	Standard Test Method for Preparation and Determination of the Relative Density of Hot Mix Asphalt (HMA) Specimens by Means of the SuperPave

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Gyratory Compactor.

ASTM D6926 Standard Practice for Preparation of Bituminous Specimens Using Marshall Apparatus

ASTM D6927 Standard Test Method for Marshall Stability and Flow of Bituminous Mixtures

ASTM D6995 Standard Test Method for Determining Field VMA based on the Maximum Specific Gravity of the Mix (Gmm)

ASTM E11 Standard Specification for Woven Wire Test Sieve Cloth and Test Sieves

ASTM E178 Standard Practice for Dealing with Outlying Observations

ASTM E1274 Standard Test Method for Measuring Pavement Roughness Using a Profilograph

ASTM E950 Standard Test Method for Measuring the Longitudinal Profile of Traveled Surfaces with an Accelerometer Established Inertial Profiling Reference

ASTM E2133 Standard Test Method for Using a Rolling Inclinometer to Measure Longitudinal and Transverse Profiles of a Traveled Surface

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO M156 Standard Specification for Requirements for Mixing Plants for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures.

AASHTO T329 Standard Method of Test for Moisture Content of Hot Mix Asphalt (HMA) by Oven Method

AASHTO T324 Standard Method of Test for Hamburg Wheel-Track Testing of Compacted Asphalt Mixtures

AASHTO T 340 Standard Method of Test for Determining the Rutting Susceptibility of Hot Mix Asphalt (APA) Using the Asphalt Pavement Analyzer (APA)

Asphalt Institute (AI)

Asphalt Institute Handbook MS-26, Asphalt Binder

Asphalt Institute MS-2 Mix Design Manual, 7th Edition

AI State Binder Specification Database

Federal Highway Administration (FHWA)

Long Term Pavement Performance Binder Program

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Advisory Circulars (AC)

AC 150/5320-6 Airport Pavement Design and Evaluation

FAA Orders

5300.1 Modifications to Agency Airport Design, Construction, and Equipment Standards Software FAARFIELD

END OF ITEM P-401

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ITEM P-603

ASPHALT TACK COAT

DESCRIPTION

603-1.1 This item shall consist of preparing and treating an asphalt or concrete surface with asphalt material in accordance with these specifications and in reasonably close conformity to the lines shown on the plans.

MATERIALS

603-2.1 **ASPHALT MATERIALS.** The asphalt material shall be an asphalt as specified in ASTM D977, ASTM D2028, ASTM D2397, or ASTM D3628 as an asphalt application for tack coat appropriate to local conditions. The asphalt shall not be diluted. The Contractor shall provide a copy of the manufacturer's Certificate of Analysis (COA) for the asphalt material to the Resident Project Representative (RPR) before the asphalt material is applied for review and acceptance. The furnishing of COA for the asphalt material shall not be interpreted as a basis for final acceptance. The manufacturer's COA may be subject to verification by testing the material delivered for use on the project.

CONSTRUCTION METHODS

603-3.1 **WEATHER LIMITATIONS.** The tack coat shall be applied only when the existing surface is dry, and the atmospheric temperature is 50°F (10°C) or above; the temperature has not been below 35°F (2°C) for the 12 hours prior to application; and when the weather is not foggy or rainy. The temperature requirements may be waived when directed by the RPR.

603-3.2 **EQUIPMENT.** The Contractor shall provide equipment for heating and applying the asphalt material. The emulsion shall be applied with a manufacturer-approved computer rate-controlled asphalt distributor. The equipment shall be in good working order and contain no contaminants or diluents in the tank. Spray bar tips must be clean, free of burrs, and of a size to maintain an even distribution of the emulsion. Any type of tip or pressure source is suitable that will maintain predetermined flow rates and constant pressure during the application process with application speeds under eight (8) miles per hour (13 km per hour) or seven (700) feet per minute (213 m per minute).

The equipment will be tested under pressure for leaks and to ensure proper set-up before use to verify truck set-up (via a test-shot area), including but not limited to, nozzle tip size appropriate for application, spray-bar height and pressure and pump speed, evidence of triple-overlap spray pattern, lack of leaks, and any other factors relevant to ensure the truck is in good working order before use.

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The distributor truck shall be equipped with a minimum 12-foot (3.7-m) spreader spray bar with individual nozzle control with computer-controlled application rates. The distributor truck shall have an easily accessible thermometer that constantly monitors the temperature of the emulsion and have an operable mechanical tank gauge that can be used to cross-check the computer accuracy. If the distributor is not equipped with an operable quick shutoff valve, the prime operations shall be started and stopped on building paper.

The distributor truck shall be equipped to effectively heat and mix the material to the required temperature prior to application as required. Heating and mixing shall be done in accordance with the manufacturer's recommendations. Do not overheat or over mix the material.

The distributor shall be equipped with a hand sprayer.

Asphalt distributors must be calibrated annually in accordance with ASTM D2995. The Contractor must furnish a current calibration certification for the asphalt distributor truck from any State or other agency as approved by the RPR.

A power broom and/or power blower suitable for cleaning the surfaces to which the asphalt tack coat is to be applied shall be provided.

603-3.3 **APPLICATION OF ASPHALT MATERIAL.** The asphalt shall not be diluted. Immediately before applying the asphalt tack coat, the full width of surface to be treated shall be swept with a power broom and/or power blower to remove all loose dirt and other objectionable material.

The asphalt material shall be uniformly applied with an asphalt distributor at the rates appropriate for the conditions and surface specified in the table below. The type of asphalt material and application rate shall be approved by the RPR prior to application.

Asphalt

Surface Type	Residual Rate, gal/SY (L/square meter)	Emulsion Application Bar Rate, gal/SY (L/square meter)
New asphalt	0.02-0.05 (0.09-0.23)	0.03-0.07 (0.13-0.32)
Existing asphalt	0.04-0.07 (0.18-0.32)	0.06-0.11 (0.27-0.50)
Milled Surface	0.04-0.08 (0.18-0.36)	.0.06-0.12 (0.27-0.54)
Concrete	0.03-0.05 (0.13-0.23)	0.05-0.08 (0.23-0.36)

After application of the tack coat, the surface shall be allowed to cure without being disturbed for the period of time necessary to permit drying and setting of the tack coat. This period shall be determined by the RPR. The Contractor shall protect the tack coat and maintain the surface until the next course has been placed. When the tack coat has been disturbed by the Contractor, tack coat shall be reapplied at the Contractor's expense.

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603-3.4 **FREIGHT AND WAYBILLS.** The Contractor shall submit waybills and delivery tickets, during progress of the work. Before the final statement is allowed, file with the RPR certified waybills and certified delivery tickets for all asphalt materials used in the construction of the pavement covered by the contract. Do not remove asphalt material from storage until the initial outage and temperature measurements have been taken. The delivery or storage units will not be released until the final outage has been taken.

METHOD OF MEASUREMENT

603-4.1 The asphalt material for tack coat shall be measured by the gallon. Volume shall be corrected to the volume at 60°F (16°C) in accordance with ASTM D1250. The asphalt material paid for will be the measured quantities used in the accepted work, provided that the measured quantities are not 10% over the specified application rate. Any amount of asphalt material more than 10% over the specified application rate for each application will be deducted from the measured quantities, except for irregular areas where hand spraying of the asphalt material is necessary. Water added to asphalt will not be measured for payment.

BASIS OF PAYMENT

603.5-1 Payment shall be made at the contract unit price per gallon of asphalt material. This price shall be full compensation for furnishing all materials, for all preparation, delivery, and application of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-603 Asphalt Tack Coat - per gallon

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D1250	Standard Guide for Use of the Petroleum Measurement Tables
ASTM D2995	Standard Practice for Estimating Application Rate and Residual Application Rate of Bituminous Distributors
ASTM D3628	Standard Practice for Selection and Use of Emulsified Asphalts
ASTM D633	Standard Volume Correction Table for Road Tar
ASTM D977	Standard Specification for Emulsified Asphalt

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ASTM D2028 Standard Specification for Cutback Asphalt (Rapid-Curing Type)

ASTM D2397 Standard Specification for Cationic Emulsified Asphalt

END ITEM P-603

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ITEM P-605

JOINT SEALANTS FOR PAVEMENTS

DESCRIPTION

605-1.1 This item shall consist of providing and installing a resilient and adhesive joint sealing material capable of effectively sealing joints in pavement; joints between different types of pavements; and cracks in existing pavement.

MATERIALS

605-2.1 **JOINT SEALANTS.** Joint sealant materials shall meet the requirements of ASTM D6690 Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements

Each lot or batch of sealant shall be delivered to the jobsite in the manufacturer's original sealed container. Each container shall be marked with the manufacturer's name, batch or lot number, the safe heating temperature, and shall be accompanied by the manufacturer's certification stating that the sealant meets the requirements of this specification.

605-2.2 **BACKER ROD.** The material furnished shall be a compressible, non-shrinking, non-staining, non-absorbing material that is non-reactive with the joint sealant in accordance with ASTM D5249. The backer-rod material shall be 25% ± 5 % larger in diameter than the nominal width of the joint.

605-2.3 **BOND BREAKING TAPES.** Provide a bond breaking tape or separating material that is a flexible, non-shrinkable, non-absorbing, non-staining, and non-reacting adhesive-backed tape. The material shall have a melting point at least 5°F (3°C) greater than the pouring temperature of the sealant being used when tested in accordance with ASTM D789. The bond breaker tape shall be approximately 1/8 inch (3 mm) wider than the nominal width of the joint and shall not bond to the joint sealant.

CONSTRUCTION METHODS

605-3.1 **TIME OF APPLICATION.** Joints shall be sealed as soon after completion of the curing period as feasible and before the pavement is opened to traffic, including construction equipment. The pavement temperature shall be 50°F (10°C) and rising at the time of application of the poured joint sealing material. Do not apply sealant if moisture is observed in the joint.

605-3.2 **EQUIPMENT.** Machines, tools, and equipment used in the performance of the work

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required by this section shall be approved before the work is started and maintained in satisfactory condition at all times. Submit a list of proposed equipment to be used in performance of construction work including descriptive data, 30 days prior to use on the project.

a. Tractor-mounted routing tool. Provide a routing tool, used for removing old sealant from the joints, of such shape and dimensions and so mounted on the tractor that it will not damage the sides of the joints. The tool shall be designed so that it can be adjusted to remove the old material to varying depths as required. The use of V-shaped tools or rotary impact routing devices will not be permitted. Hand-operated spindle routing devices may be used to clean and enlarge random cracks.

b. Concrete saw. Provide a self-propelled power saw, with water-cooled diamond or abrasive saw blades, for cutting joints to the depths and widths specified.

c. Sandblasting equipment. The Contractor must demonstrate sandblasting equipment including the air compressor, hose, guide and nozzle size, under job conditions, before approval in accordance with paragraph 605-3.3. The Contractor shall demonstrate, in the presence of the Resident Project Representative (RPR), that the method cleans the joint and does not damage the joint.

d. Waterblasting equipment. The Contractor must demonstrate waterblasting equipment including the pumps, hose, guide and nozzle size, under job conditions, before approval in accordance with paragraph 605-3.3. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

e. Hand tools. Hand tools may be used, when approved, for removing defective sealant from a crack and repairing or cleaning the crack faces. Hand tools should be carefully evaluated for potential spalling effects prior to approval for use.

f. Hot-poured sealing equipment. The unit applicators used for heating and installing ASTM D6690 joint sealant materials shall be mobile and shall be equipped with a double-boiler, agitator-type kettle with an oil medium in the outer space for heat transfer; a direct-connected pressure-type extruding device with a nozzle shaped for inserting in the joint to be filled; positive temperature devices for controlling the temperature of the transfer oil and sealant; and a recording type thermometer for indicating the temperature of the sealant. The applicator unit shall be designed so that the sealant will circulate through the delivery hose and return to the inner kettle when not in use.

605-3.3 **PREPARATION OF JOINTS.** Pavement joints for application of material in this specification must be dry, clean of all scale, dirt, dust, curing compound, and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

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a. Sawing. All joints shall be sawed in accordance with specifications and plan details. Immediately after sawing the joint, the resulting slurry shall be completely removed from joint and adjacent area by flushing with a jet of water, and by use of other tools as necessary.

b. Sealing. Immediately before sealing, the joints shall be thoroughly cleaned of all remaining laitance, curing compound, filler, protrusions of hardened concrete, old sealant and other foreign material from the sides and upper edges of the joint space to be sealed. Cleaning shall be accomplished by tractor-mounted routing equipment, sandblasting, waterblaster or concrete saw as specified in paragraph 605-3.2. The newly exposed concrete joint faces and the pavement surface extending a minimum of 1/2 inch (12 mm) from the joint edge shall be sandblasted clean. Sandblasting shall be accomplished in a minimum of two passes. One pass per joint face with the nozzle held at an angle directly toward the joint face and not more than 3 inches (75 mm) from it. After final cleaning and immediately prior to sealing, blow out the joints with compressed air and leave them completely free of debris and water. The joint faces shall be surface dry when the seal is applied.

c. Backer Rod. When the joint opening is of a greater depth than indicated for the sealant depth, plug or seal off the lower portion of the joint opening using a backer rod in accordance with paragraph 605-2.2 to prevent the entrance of the sealant below the specified depth. Take care to ensure that the backer rod is placed at the specified depth and is not stretched or twisted during installation.

d. Bond-breaking tape. Where inserts or filler materials contain bitumen, or the depth of the joint opening does not allow for the use of a backup material, insert a bond-separating tape breaker in accordance with paragraph 605-2.3 to prevent incompatibility with the filler materials and three-sided adhesion of the sealant. Securely bond the tape to the bottom of the joint opening so it will not float up into the new sealant.

605-3.4 **INSTALLATION OF SEALANTS.** Joints shall be inspected for proper width, depth, alignment, and preparation, and shall be approved by the RPR before sealing is allowed. Sealants shall be installed in accordance with the following requirements:

Immediately preceding, but not more than 50 feet (15 m) ahead of the joint sealing operations, perform a final cleaning with compressed air. Fill the joints from the bottom up to 1/4 inch ±1/16 inch below the top of pavement surface; or bottom of groove for grooved pavement. Remove and discard excess or spilled sealant from the pavement by approved methods. Install the sealant in such a manner as to prevent the formation of voids and entrapped air. In no case shall gravity methods or pouring pots be used to install the sealant material. Traffic shall not be permitted over newly sealed pavement until authorized by the RPR. When a primer is recommended by the manufacturer, apply it evenly to the joint faces in accordance with the manufacturer's instructions. Check the joints frequently to ensure that the newly installed sealant is cured to a tack-free condition within the time specified.

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605-3.5 **INSPECTION.** The Contractor shall inspect the joint sealant for proper rate of cure and set, bonding to the joint walls, cohesive separation within the sealant, reversion to liquid, entrapped air and voids. Sealants exhibiting any of these deficiencies at any time prior to the final acceptance of the project shall be removed from the joint, wasted, and replaced as specified at no additional cost to the airport.

605-3.6 **CLEAN-UP.** Upon completion of the project, remove all unused materials from the site and leave the pavement in a clean condition.

METHOD OF MEASUREMENT

605-4.1 Joint sealing material shall be considered incidental to pay item P-101 (Joint and Crack Repair) and not measured separately for payment.

BASIS OF PAYMENT

605-5.1 Payment for joint sealing material shall be considered incidental to pay item P-101 (Joint and Crack Repair). The price shall be full compensation for furnishing all materials, for all preparation, delivering, and placing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D789 Standard Test Method for Determination of Relative Viscosity of Polyamide (PA)

ASTM D5249 Standard Specification for Backer Material for Use with Cold- and Hot-Applied Joint Sealants in Portland-Cement Concrete and Asphalt Joints

ASTM D5893 Standard Specification for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements

Advisory Circulars (AC)

AC 150/5340-30 Design and Installation Details for Airport Visual Aids

END ITEM P-605

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ITEM P-620

RUNWAY AND TAXIWAY MARKING

DESCRIPTION

620-1.1 This item shall consist of the preparation and painting of numbers, markings, and stripes on the surface of runways, taxiways, and aprons, in accordance with these specifications and at the locations shown on the plans, or as directed by the Resident Project Representative (RPR). The terms "paint" and "marking material" as well as "painting" and "application of markings" are interchangeable throughout this specification.

MATERIALS

620-2.1 MATERIALS ACCEPTANCE. The Contractor shall furnish manufacturer's certified test reports, for materials shipped to the project. The certified test reports shall include a statement that the materials meet the specification requirements. This certification along with a copy of the paint manufacturer's surface preparation; marking materials, including adhesion, flow promoting and/or floatation additive; and application requirements must be submitted and approved by the Resident Project Representative (RPR) prior to the initial application of markings. The reports can be used for material acceptance or the RPR may perform verification testing. The reports shall not be interpreted as a basis for payment. The Contractor shall notify the RPR upon arrival of a shipment of materials to the site. All material shall arrive in sealed containers that are easily quantifiable for inspection by the RPR.

620-2.2 MARKING MATERIALS.

Table 1. Marking Materials

Paint[1]				Glass Beads[2]	
Type	Color	Fed Std. 595 Number	Application Rate Maximum	Type	Application Rate Minimum
Waterborne Type I or II	Yellow	33538 or 33655	115 ft^2/gal	Type III	10 lb/gal
Waterborne Type I or II	White	37925	115 ft^2/gal	Type III	10 lb/gal
Waterborne Type I or II	Red	31136	115 ft^2/gal	Type I, Gradation A	7 lb/gal

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Waterborne Type I or II	Black	37038	115 ft^2/gal	No Beads	No Beads
Temporary Waterborne Type I or II	Yellow	33538 or 33655	230 ft^2/gal	No Beads	No Beads

Temporary Waterborne Type I or II	White	37925	230 ft^2/gal	No Beads	No Beads
Temporary Waterborne Type I or II	Black	37038	230 ft^2/gal	No Beads	No Beads
Temporary Waterborne Type I or II	Red	31136	230 ft^2/gal	No Beads	No Beads

[1] See paragraph 620-2.2a
[2] See paragraph 620-2.2b

a. Paint. Paint shall be waterborne in accordance with the requirements of this paragraph. Paint colors shall comply with Federal Standard No. 595.

b. Waterborne. Paint shall meet the requirements of Federal Specification TT-P-1952F, Type II. The non-volatile portion of the vehicle for all paint types shall be composed of a 100% acrylic polymer as determined by infrared spectral analysis.

c. Reflective media. Glass beads for white and yellow paint shall meet the requirements for Federal Specification TT-B-1325D Type III.
Glass beads shall be treated with all compatible coupling agents recommended by the manufacturers of the paint and reflective media to ensure adhesion and embedment.

Glass beads shall not be used in black and green paint.

Type III glass beads shall not be used in red and pink paint.

620-2.3 **MICROBICIDE.** All Waterborne paint shall contain a microbicide that provides microbial efficacy for a period of no less than 3 years. The microbicide shall be blended homogeneously with the paint under high-speed dispersion during production by the supplier/manufacturer. The final homogeneous blend of microbicide treated paint shall conform to the same viscosity stability standards as specified in TT-P-1952F.

A. Dow (Formerly Rohm and Hass) Rocima 63 microbicide (or other approved equivalent) shall be added at a rate of 10 pounds per 100 gallons of paint. Other products may be available that meet or exceed these specifications

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CONSTRUCTION METHODS

620-3.1 **WEATHER LIMITATIONS.** Painting shall only be performed when the surface is dry, and the ambient temperature and the pavement surface temperature meet the manufacturer's recommendations in accordance with paragraph 620-2.1. Painting operations shall be discontinued when the ambient or surface temperatures does not meet the manufacturer's recommendations. Markings shall not be applied when the wind speed exceeds 10 mph unless windscreens are used to shroud the material guns. Markings shall not be applied when weather conditions are forecasts to not be within the manufacturers' recommendations for application and dry time.

620-3.2 **EQUIPMENT.** Equipment shall include the apparatus necessary to properly clean the existing surface, a mechanical marking machine, a bead dispensing machine, and such auxiliary hand-painting equipment as may be necessary to satisfactorily complete the job.

The mechanical marker shall be an atomizing spray-type or airless type marking machine with automatic glass bead dispensers suitable for application of traffic paint. It shall produce an even and uniform film thickness and appearance of both paint and glass beads at the required coverage and shall apply markings of uniform cross-sections and clear-cut edges without running or spattering and without over spray. The marking equipment for both paint and beads shall be calibrated daily.

620-3.3 **PREPARATION OF SURFACES.** Immediately before application of the paint, the surface shall be dry and free from dirt, grease, oil, laitance, or other contaminates that would reduce the bond between the paint and the pavement. Use of any chemicals or impact abrasives during surface preparation shall be approved in advance by the RPR. After the cleaning operations, sweeping, blowing, or rinsing with pressurized water shall be performed to ensure the surface is clean and free of grit or other debris left from the cleaning process.

a. Preparation of new pavement surfaces. The area to be painted shall be cleaned by broom, blower, water blasting, or by other methods approved by the RPR to remove all contaminants, including PCC curing compounds, minimizing damage to the pavement surface.

b. Preparation of pavement to remove existing markings. Existing pavement markings shall be removed by rotary grinding, water blasting, or by other methods approved by the RPR minimizing damage to the pavement surface. The removal area may need to be larger than the area of the markings to eliminate ghost markings. After removal of markings on asphalt pavements, apply a fog seal or seal coat to 'block out' the removal area to eliminate 'ghost' markings.

c. Preparation of pavement markings prior to remarking. Prior to remarking existing markings, loose existing markings must be removed minimizing damage to the pavement surface, with a method approved by the RPR. After removal, the surface shall be cleaned of all residue or debris.

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Prior to the application of markings, the Contractor shall certify in writing that the surface is dry and free from dirt, grease, oil, laitance, or other foreign material that would prevent the bond of the paint to the pavement or existing markings. This certification along with a copy of the paint manufactures application and surface preparation requirements must be submitted to the RPR prior to the initial application of markings.

620-3.4 LAYOUT OF MARKINGS. The proposed markings shall be laid out in advance of the paint application. The locations of markings to receive glass beads shall be shown on the plans.

620-3.5 APPLICATION. A period of 30 days shall elapse between placement of surface course or seal coat and application of the permanent paint markings. Paint shall be applied at the locations and to the dimensions and spacing shown on the plans. Paint shall not be applied until the layout and condition of the surface has been approved by the RPR.

The edges of the markings shall not vary from a straight line more than 1/2 inch (12 mm) in 50 feet (15 m), and marking dimensions and spacing shall be within the following tolerances:

Marking Dimensions and Spacing Tolerance

Dimension and Spacing	Tolerance
36 inch (910 mm) or less	±1/2 inch (12 mm)
greater than 36 inch to 6 feet (910 mm to 1.85 m)	±1 inch (25 mm)
greater than 6 feet to 60 feet (1.85 m to 18.3 m)	±2 inch (50 mm)
greater than 60 feet (18.3 m)	±3 inch (76 mm)

The paint shall be mixed in accordance with the manufacturer's instructions and applied to the pavement with a marking machine at the rate shown in Table 1. The addition of thinner will not be permitted.

Glass beads shall be distributed upon the marked areas at the locations shown on the plans to receive glass beads immediately after application of the paint. A dispenser shall be furnished that is properly designed for attachment to the marking machine and suitable for dispensing glass beads. Glass beads shall be applied at the rate shown in Table 1. Glass beads shall not be applied to black paint or green paint. Glass beads shall adhere to the cured paint or all marking operations shall cease until corrections are made. Different bead types shall not be mixed. Regular monitoring of glass bead embedment and distribution should be performed.

620-3.6 APPLICATION--PREFORMED THERMOPLASTIC AIRPORT PAVEMENT MARKINGS.

Preformed thermoplastic pavement markings not used.

620-3.7 CONTROL STRIP. Prior to the full application of airfield markings, the Contractor

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shall prepare a control strip in the presence of the RPR. The Contractor shall demonstrate the surface preparation method and all striping equipment to be used on the project. The marking equipment must achieve the prescribed application rate of paint and population of glass beads (per Table 1) that are properly embedded and evenly distributed across the full width of the marking. Prior to acceptance of the control strip, markings must be evaluated during darkness to ensure a uniform appearance.

620-3.8 **RETRO-REFLECTANCE**. Reflectance shall be measured with a portable retro-reflectometer meeting ASTM E1710 (or equivalent). A total of 6 reading shall be taken over a 6 square foot area with 3 readings taken from each direction. The average shall be equal to or above the minimum levels of all readings which are within 30% of each other.

Minimum Retro-Reflectance Values

Material	**Retro-reflectance mcd/m^2/lux**		
	White	**Yellow**	**Red**
Initial Type I	300	175	35
Initial Type III	600	300	35
Initial Thermoplastic	225	100	35
All materials, remark when less than[1]	100	75	10

[1] Prior to remarking determine if removal of contaminants on markings will restore retro reflectance

620-3.9 **PROTECTION AND CLEANUP.** After application of the markings, all markings shall be protected from damage until dry. All surfaces shall be protected from excess moisture and/or rain and from disfiguration by spatter, splashes, spillage, or drippings. The Contractor shall remove from the work area all debris, waste, loose reflective media, and by-products generated by the surface preparation and application operations to the satisfaction of the RPR. The Contractor shall dispose of these wastes in strict compliance with all applicable state, local, and federal environmental statutes and regulations.

METHOD OF MEASUREMENT

620-4.1 The quantity of markings shall be paid for shall be measured by the number of square feet of painting, including reflective media and microbicide**.**

620-4.2 The quantity of temporary markings to be paid for shall be the number of square feet of painting performed in accordance with the specifications and accepted by the RPR. Temporary marking includes surface preparation, application and complete removal of the temporary marking.

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BASIS OF PAYMENT

620-5.1 This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item complete in place and accepted by the RPR in accordance with these specifications.

620-5.2 Payment for pavement markings shall be made at the contract price for the number of square feet of painting, including reflective media.

620-5.3 Payment for temporary markings shall be made at the contract price for the number of square feet of painting. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item.

620-5.4 Payment for pavement marking removal shall be made at the contract price for the number of square feet of painting. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-620A	Pavement Marking, Yellow (Type II), with Reflective media (Type III Beads), includes Microbicide per square foot
Item P-620B	Pavement Marking, White (Type II), with Reflective media (Type III Beads), includes Microbicide per square foot
Item P-620C	Pavement Marking, Red (Type II), with Reflective media (Type I, Gradation A Beads), includes Microbicide per square foot
Item P-620D	Pavement Marking, Black (Type II), includes Microbicide per square foot
Item P-620E	Temporary Marking, Yellow (Type II), includes Microbicide per square foot
Item P-620F	Temporary Marking, White (Type II), includes Microbicide per square foot
Item P-620G	Temporary Marking, Red (Type II), includes Microbicide per square foot
Item P-620H	Temporary Marking, Black (Type II), includes Microbicide, per square foot
Item P-620I	Pavement Marking Removal, per square foot

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REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D476	Standard Classification for Dry Pigmentary Titanium Dioxide Products
ASTM D968	Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive
ASTM D1652	Standard Test Method for Epoxy Content of Epoxy Resins
ASTM D2074	Standard Test Method for Total, Primary, Secondary, and Tertiary Amine Values of Fatty Amines by Alternative Indicator Method
ASTM D2240	Standard Test Method for Rubber Property - Durometer Hardness
ASTM D7585	Standard Practice for Evaluating Retroreflective Pavement Markings Using Portable Hand-Operated Instruments
ASTM E303	Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester
ASTM E1710	Standard Test Method for Measurement of Retroreflective Pavement Marking Materials with CEN-Prescribed Geometry Using a Portable Retro reflectometer
ASTM E2302	Standard Test Method for Measurement of the Luminance Coefficient Under Diffuse Illumination of Pavement Marking Materials Using a Portable Reflectometer
ASTM G154	Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials

Code of Federal Regulations (CFR)

40 CFR Part 60, Appendix A-7, Method 24	Determination of volatile matter content, water content, density, volume solids, and weight solids of surface coatings
29 CFR Part 1910.1200	Hazard Communication

Federal Specifications (FED SPEC)

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FED SPEC TT-B-1325D	Beads (Glass Spheres) Retro-Reflective
FED SPEC TT-P-1952F	Paint, Traffic and Airfield Marking, Waterborne
FED STD 595	Colors used in Government Procurement

Commercial Item Description

A-A-2886B	Paint, Traffic, Solvent Based

Advisory Circulars (AC)

AC 150/5340-1	Standards for Airport Markings
AC 150/5320-12	Measurement, Construction, and Maintenance of Skid Resistant Airport Pavement Surfaces

END OF ITEM P-620

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ITEM P-621

SAW-CUT GROOVES

DESCRIPTION

621-1.1 This item consists of constructing saw-cut grooves to minimize hydroplaning during wet weather, providing a skid resistant surface in accordance with these specifications and at the locations shown on the plans, or as directed by the Resident Project Representative (RPR).

CONSTRUCTION METHODS

621-2.1 **PROCEDURES.** The Contractor shall submit to the RPR the grooving sequence and method of placing guide lines to control grooving operation. Transverse grooves saw-cut in the pavement must form a 1/4 inch (+1/16 inch, -0 inch) wide by 1/4 inch (±1/16 inch) deep by 1-1/2 inch (-1/8 inch, +0 inch) center-to-center configuration. The grooves must be continuous for the entire runway length. They must be saw-cut transversely (perpendicular to centerline) in the runway and high-speed taxiway pavement to not less than 10 feet (3 m) from the runway pavement edge to allow adequate space for equipment operation.

The saw-cut grooves must meet the following tolerances. The tolerances apply to each day's production and to each piece of grooving equipment used for production. The Contractor is responsible for all controls and process adjustments necessary to meet these tolerances. The Contractor shall routinely spot check for compliance each time the equipment aligns for a grooving pass.

a. Alignment tolerance. The grooves shall not vary more than ±1-1/2 inch (38 mm) in alignment for 75 feet (23 m) along the runway length, allowing for realignment every 500 feet (150 m) along the runway length.

b. Groove tolerance.

(1) Depth. The standard depth is 1/4 inch (6 mm). At least 90% of the grooves must be at least 3/16 inch (5 mm), at least 60% of the grooves must be at least 1/4 inch (6 mm), and not more than 10% of the grooves may exceed 5/16 inch (8 mm).

(2) Width. The standard width is 1/4 inch (6 mm). At least 90% of the grooves must be at least 3/16 inch (5 mm), at least 60% of the grooves must be at least 1/4 inch (6 mm), and not more than 10% of the grooves may exceed 5/16 inch (8 mm).

(3) Center-to-center spacing. The standard spacing is 1-1/2 inch (38 mm). Minimum spacing 1-3/8 inch (34 mm). Maximum spacing 1-1/2 inch (38 mm).

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Saw-cut grooves must not be closer than 3 inches (8 cm) or more than 9 inches (23 cm) from transverse joints in concrete pavements. Grooves must not be closer than 6 inches (150 mm) and no more than 18 inches (0.5 m) from in-pavement light fixtures. Grooves may be continued through longitudinal construction joints. Where neoprene compression seals have been installed and the compression seals are recessed sufficiently to prevent damage from the grooving operation, grooves may be continued through the longitudinal joints. Where neoprene compression seals have been installed and the compression seals are not recessed sufficiently to prevent damage from the grooving operation, grooves must not be closer than 3 inches (8 cm) or more than 5 inches (125 mm) from the longitudinal joints. Where lighting cables are installed, grooving through longitudinal or diagonal saw kerfs shall not be allowed.

621-2.2 **ENVIRONMENTAL REQUIREMENTS.** Grooving operations will not be permitted when freezing conditions prevent the immediate removal of debris and/or drainage of water from the grooved area. Discharge and disposal of waste slurry shall be the Contractor's responsibility.

621-2.3 **CONTROL STRIP.** Groove a control strip in an area of the pavement outside of the trafficked area, as approved by the RPR. The area shall be 500 feet (152 m) long by two lanes wide. Demonstrate the setup and alignment process, the grooving operation, and the waste slurry disposal.

621-2.4 **EXISTING PAVEMENTS.** Bumps, depressed areas, bad or faulted joints, and badly cracked and/or spalled areas in the pavement shall not be grooved until such areas are adequately repaired or replaced.

621-2.5 **NEW PAVEMENTS.** New asphalt and Portland cement concrete pavements shall be allowed to cure for a minimum of 30 days before grooving, to allow the material to become stable enough to prevent closing of the grooves under normal use. All grade corrections must be completed prior to grooving. Spalling along or tearing or raveling of the groove edges shall not be allowed.

621-2.6 **GROOVING MACHINE.** Provide a grooving machine that is power driven, self-propelled, specifically designed and manufactured for pavement grooving, and has a self-contained and integrated continuous slurry vacuum system as the primary method for removing waste slurry. The grooving machine shall be equipped with diamond-saw cutting blades, and capable of making at least 18 inches (0.5 m) in width of multiple parallel grooves in one pass of the machine. Thickness of the cutting blades shall be capable of making the required width and depth of grooves in one pass of the machine. The cutting head shall not contain a mixture of new and worn blades or blades of unequal wear or diameter. Match the blade type and configuration with the hardness of the existing airfield pavement. The wheels on the grooving machine shall be of a design that will not scar or spall the pavement. Provide the machine with devices to control depth of groove and alignment.

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621-2.7 **WATER SUPPLY.** Water for the grooving operation shall be provided by the Contractor.

621-2.8 **CLEAN-UP.** During and after installation of saw-cut grooves, the Contractor must remove from the pavement all debris, waste, and by-products generated by the operations to the satisfaction of the RPR. Cleanup of waste material must be continuous during the grooving operation. Flush debris produced by the machine to the edge of the grooved area or pick it up as it forms. The dust coating remaining shall be picked up or flushed to the edge of the area if the resultant accumulation is not detrimental to the vegetation or storm drainage system. Accomplish all flushing operations in a manner to prevent erosion on the shoulders or damage to vegetation. Waste material must be disposed of in an approved manner. Waste material must not be allowed to enter the airport storm sewer system. The Contractor must dispose of these wastes in strict compliance with all applicable state, local, and federal environmental statutes and regulations

621-2.9 **REPAIR OF DAMAGED PAVEMENT.** Grooving must be stopped, and damaged pavement repaired at the Contractor's expense when directed by the RPR.

621-2.10 **PRODUCTION RATE.** The Contractor must furnish sufficient equipment to complete the saw-cut grooving of the runway as specified and detailed within the contract time.

ACCEPTANCE

621-3.1 **ACCEPTANCE TESTING.** Grooves will be accepted based on results of zone testing. All acceptance testing necessary to determine conformance with the groove tolerances specified will be performed by the RPR.

Instruments for measuring groove width and depth must have a range of at least 0.5 inch (12 mm) and a resolution of at least 0.005 inch (0.13 mm). Gauge blocks or gauges machined to standard grooves width, depth, and spacing may be used.

Instruments for measuring center-to-center spacing must have a range of at least 3 inches (8 cm) and a resolution of at least 0.02 inch (0.5 mm).

The RPR will measure grooves in five zones across the pavement width. Measurements will be made at least three times during each day's production. Measurements in all zones will be made for each cutting head on each piece of grooving equipment used for each day's production.

The five zones are as follows:

Zone 1 Centerline to 5 feet (1.5 m) left or right of the centerline.
Zone 2 5 feet (1.5 m) to 25 feet (7.5 m) left of the centerline.
Zone 3 5 feet (1.5 m) 25 feet (7.5 m) right of the centerline.

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Zone 4 25 feet (7.5 m) to edge of grooving left of the centerline.
Zone 5 25 feet (7.5 m) to edge of grooving right of the centerline.

At a random location within each zone, five consecutive grooves sawed by each cutting head on each piece of grooving equipment will be measured for width, depth, and spacing. The five consecutive measurements must be located about the middle blade of each cutting head ±4 inches (100 mm). Measurements will be made along a line perpendicular to the grooves.

- Width or depth measurements less than 0.170 inch (4 mm) shall be considered less than 3/16 inch (5 mm).
- Width or depth measurements more than 0.330 inch (8 mm) shall be considered more than 5/16 inch (8 mm).
- Width or depth measurements more than 0.235 inch (6 mm) shall be considered more than 1/4 inch (6 mm).

Production must be adjusted when more than one groove on a cutting head fails to meet the standard depth, width, or spacing in more than one zone.

METHOD OF MEASUREMENT

621-4.1 The quantity of grooving to be paid for shall be the number of square yards of grooving performed in accordance with the specifications and accepted by the RPR per paragraph 621-3.1.

BASIS OF PAYMENT

621-5.1 **PAYMENT FOR SAW-CUT GROOVING.** Payment for saw-cut grooving will be made at the contract unit price per square yard for saw-cut grooving. This price shall be full compensation for furnishing all materials, and for all preparation, delivering, and application of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-621 Grooving, unit price per square yard

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.
Advisory Circulars (AC)

AC 150/5320-12 Measurement, Construction, and Maintenance of Skid Resistant Airport Pavement Surfaces

END OF ITEM 621

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ITEM GDOT-163

MISCELLANEOUS EROSION CONTROL ITEMS

SUPPLEMENTAL SPECIFICATION

DESCRIPTION

163-1 DESCRIPTION. This item shall consist of temporary control measures as shown on the plans or as ordered by the Engineer during the life of a contract to control water pollution, soil erosion, and siltation through the use of berms, dikes, dams, sediment basins, fiber mats, temporary sediment traps, inlet sediment traps, skimmers, gravel, mulches, grasses, slope drains, and other erosion control devices or methods. All work performed under this item shall conform to the current GDOT Standard Specifications, Section 163 and all referenced sections and in conformance with the current "Manual for Erosion and Sediment Control In Georgia", unless modified by this specification. Where the term "State" or "Department" or "City" is used it shall mean the Owner or Sponsor in this Contract.

The temporary erosion control measures contained herein shall be coordinated with the permanent erosion control measures specified as part of this contract to the extent practical to assure economical, effective, and continuous erosion control throughout the construction period. In addition, the erosion control items shown on the ES&PCP are considered to be minimum requirements; any additional erosion control measures required due to the phasing of the contractors operations, to minimize sediment from leaving the site, or to meet NPDES Permit requirements shall be installed as needed at no additional cost to the project. ***Refer to the Project ES&PCP for specific details used on this Project.***

Temporary control may include work outside the construction limits such as borrow pit operations, equipment and material storage sites, waste areas, staging areas, and temporary plant sites. Measures required for these areas not specifically shown on the plans shall be provided by the contractor at no additional cost to the project.

MATERIALS

163-2.1 TEMPORARY SILT FENCE/SEDIMENT BARRIER COMPOST FILTER SOCK. Refer to Supplemental Specification Section GDOT 171 and conform to requirements of GDOT Specification Section 163 and the details on the plans.

163-2.2 STABILIZED CONSTRUCTION EXIT/ENTRANCE/ CONCRETE WASHOUT. Stabilized construction exit and concrete washout shall conform to requirements of details and location shown on plans.

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163-2.3 **EROSION CONTROL BLANKET/MATTING.** Temporary erosion control blankets/matting shall conform to requirements of GDOT Specification Section 713 and the details on the plans.

163-2.5 **TEMPORARY STONE CHECK DAM.** Temporary stone check dams shall conform to requirements of GDOT Specification Section 163 and the details on the plans.

163-2.9 **TEMPORARY SEDIMENT TRAP.** Temporary sediment trap shall conform to requirements of GDOT Specification Section 163 and the details on the plans.

163-2.10 **INLET SEDIMENT TRAP.** Temporary inlet sediment traps shall conform to requirements of GDOT Specification Section 163 and the details on the plans.

163-2.12 **TEMPORARY DIVERSION CHANNEL.** Temporary diversion channel shall conform to requirements of P-152 and the details on the plans.

163-2.13 **INSTALLATION, MAINTENANCE AND REMOVAL.** Follow all requirements of the Plans and GDOT Specification Section 163 and 165.

CONSTRUCTION REQUIREMENTS

163-3.1 **GENERAL.** In the event of conflict between these requirements and pollution control laws, rules, or regulations of other Federal, state, or local agencies, the more restrictive laws, rules, or regulations shall apply.

The Engineer shall be responsible for assuring compliance to the extent that construction practices, construction operations, and construction work are involved.

163-3.2 **SCHEDULE.** Prior to the start of construction, the Contractor shall submit schedules that conform to the approved Sediment and Erosion Control Plans for accomplishment of temporary and permanent erosion control work, as are applicable for clearing and grubbing; grading; construction; paving; and structures at watercourses. The Contractor shall also submit a proposed method of erosion and dust control on haul roads and borrow pits and a plan for disposal of waste materials. Work shall not be started until the erosion control schedules and methods of operation for the applicable construction have been accepted by the Engineer.

163-3.3 **AUTHORITY OF ENGINEER.** The Engineer has the authority to limit the surface area of erodible earth material exposed by clearing and grubbing, to limit the surface area of erodible earth material exposed by excavation, borrow and fill operations, and to direct the Contractor to provide immediate permanent or temporary pollution control measures to minimize contamination of adjacent streams or other watercourses, lakes, ponds, or other areas of water impoundment. These changes shall not be measured for payment but shall be incidental to construction.

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163-3.4 **CONSTRUCTION DETAILS.** The Contractor shall be required to incorporate all permanent erosion control features into the project at the earliest practicable time as outlined in the accepted schedule. Except where future construction operations will damage slopes, the Contractor shall perform the permanent seeding and mulching and other specified slope protection work in stages, as soon as substantial areas of exposed slopes can be made available. At no additional cost to the project, additional temporary erosion and pollution control measures will be used for slope drains; to correct conditions that develop during construction that were not foreseen during the design stage; that are needed prior to installation of permanent control features; or that are needed temporarily to control erosion that develops during normal construction practices, but are not associated with permanent control features on the project.

Where erosion is likely to be a problem, clearing and grubbing operations should be scheduled and performed so that grading operations and permanent erosion control features can follow immediately thereafter if the project conditions permit; otherwise, temporary erosion control measures may be required between successive construction stages.

The Engineer will limit the area of clearing and grubbing, excavation, borrow, and embankment operations in progress, commensurate with the Contractor's capability and progress in keeping the finish grading, mulching, seeding, and other such permanent control measures current in accordance with the accepted schedule. Should seasonal limitations make such coordination unrealistic, temporary erosion control measures shall be taken immediately to the extent feasible and justified.

In the event that temporary erosion and pollution control measures are required due to the Contractor's negligence, carelessness, or failure to install permanent controls as a part of the work as scheduled or are ordered by the Engineer, such work shall be performed by the Contractor at his/her own expense.

The Engineer may increase or decrease the area of erodible earth material to be exposed at one time as determined by analysis of project conditions.

The erosion control features installed by the Contractor shall be acceptably maintained by the Contractor during the construction period per the requirements of Section 165 during the construction period, and until the site has reached final stabilization.

Whenever construction equipment must cross watercourses at frequent intervals, and such crossings will adversely affect the sediment levels, temporary structures should be provided.

Pollutants such as fuels, lubricants, bitumen, raw sewage, wash water from concrete mixing operations, and other harmful materials shall not be discharged into or near rivers, streams, and impoundments or into natural or manmade channels leading thereto.

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METHOD OF MEASUREMENT

163-4.1 Temporary erosion and pollution control work required which is not attributed to the Contractor's negligence, carelessness, or failure to install permanent controls will be performed as scheduled or ordered by the Engineer. Completed and accepted work will be measured as follows:

a. Stabilized Construction Exit shall be measured by per each construction exit constructed, and maintained and removed at the end of construction or upon stabilization of the applicable area.

163-4.2 Control work performed for protection of construction areas outside the construction limits, such as borrow and waste areas, haul roads, equipment and material storage sites, and temporary plant sites, will not be measured and paid for directly but shall be considered as a subsidiary obligation of the Contractor with costs included in the contract prices bid for the items to which they apply.

BASIS OF PAYMENT

163-5.1 Accepted quantities of temporary water pollution, soil erosion, and siltation control work ordered by the Engineer and measured as provided in paragraph 163-4.1 will be paid for under:

Item GDOT-163 Construct and Remove Construction Exit – per Each

Where other directed work falls within the specifications for a work item that has a contract price, the units of work shall be measured and paid for at the contract unit price bid for the various items.

END OF ITEM GDOT-163

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SECTION 8

GENERAL CONDITIONS

PART 1 - GENERAL PROVISIONS

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SECTION 10

DEFINITION OF TERMS

Whenever the following terms are used in these specifications, in the contract, or in any documents or other instruments pertaining to construction where these specifications govern, the intent and meaning shall be interpreted as follows:

10-01 **AASHTO**. The American Association of State Highway and Transportation Officials, the successor association to AASHO.

10-02 **ACCESS ROAD**. The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public highway.

10-03 **ADVERTISEMENT**. A public announcement, as required by local law, inviting bids for work to be performed and materials to be furnished.

10-04 **AIRPORT IMPROVEMENT PROGRAM (AIP)**. A grant-in-aid program, administered by the Federal Aviation Administration (FAA).

10-05 **AIR OPERATIONS AREA (AOA)**. For the purpose of these specifications, the term air operations area (AOA) shall mean any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft. An air operation area shall include such paved or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiway, or apron.

10-06 **AIRPORT**. Airport means an area of land or water which is used or intended to be used for the landing and takeoff of aircraft; an appurtenant area used or intended to be used for airport buildings or other airport facilities or rights of way; and airport buildings and facilities located in any of these areas, and includes a heliport.

10-07 **ASTM INTERNATIONAL (ASTM)**. Formerly known as the American Society for Testing and Materials (ASTM).

10-08 **AWARD**. The Owner's notice to the successful bidder of the acceptance of the submitted bid.

10-09 **BIDDER**. Any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a proposal for the work contemplated.

10-10 **BUILDING AREA**. An area on the airport to be used, considered, or intended to be used for airport buildings or other airport facilities or rights-of-way together with all airport buildings and facilities located thereon.

10-11 **CALENDAR DAY**. Every day shown on the calendar.

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10-12 CHANGE ORDER. A written order to the Contractor covering changes in the plans, specifications, or proposal quantities and establishing the basis of payment and contract time adjustment, if any, for the work affected by such changes. The work, covered by a change order, must be within the scope of the contract.

10-13 CONTRACT. The written agreement covering the work to be performed. The awarded contract shall include, but is not limited to: Advertisement, Contract Form, Proposal, Performance Bond, Payment Bond, any required insurance certificates, Specifications, Plans, and any addenda issued to bidders.

10-14 CONTRACT ITEM (PAY ITEM). A specific unit of work for which a price is provided in the contract.

10-15 CONTRACT TIME. The number of calendar days or working days, stated in the proposal, allowed for completion of the contract, including authorized time extensions. If a calendar date of completion is stated in the proposal, in lieu of a number of calendar or working days, the contract shall be completed by that date.

10-16 CONTRACTOR. The individual, partnership, firm, or corporation primarily liable for the acceptable performance of the work contracted and for the payment of all legal debts pertaining to the work who acts directly or through lawful agents or employees to complete the contract work.

10-17 CONTRACTOR'S LABORATORY. The Contractor's quality control organization in accordance with the Contractor Quality Control Program.

10-18 CONSTRUCTION SAFETY AND PHASING PLAN (CSPP). The overall plan for safety and phasing of a construction project developed by the airport operator, or developed by the airport operator's consultant and approved by the airport operator. It is included in the invitation for bids and becomes part of the project specifications.

10-19 DRAINAGE SYSTEM. The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area.

10-20 ENGINEER. The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for engineering observation of the contract work and acting directly or through an authorized representative.

10-21 EQUIPMENT. All machinery, together with the necessary supplies for upkeep and maintenance, and also all tools and apparatus necessary for the proper construction and acceptable completion of the work.

10-22 EXTRA WORK. An item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, but which is found by the Engineer to be necessary to complete the work within the intended scope of the contract as previously modified.

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10-23 **FAA**. The Federal Aviation Administration of the U.S. Department of Transportation. When used to designate a person, FAA shall mean the Administrator or his or her duly authorized representative.

10-24 **FEDERAL SPECIFICATIONS**. The Federal Specifications and Standards, Commercial Item Descriptions, and supplements, amendments, and indices thereto are prepared and issued by the General Services Administration of the Federal Government.

10-25 **FORCE ACCOUNT.** Force account work is planning, engineering, or construction work done by the Sponsor's employees.

10-26 **INSPECTOR**. An authorized representative of the Engineer assigned to make all necessary observations and/or observation of tests of the work performed or being performed, or of the materials furnished or being furnished by the Contractor.

10-27 **INTENTION OF TERMS**. Whenever, in these specifications or on the plans, the words "directed," "required," "permitted," "ordered," "designated," "prescribed," or words of like import are used, it shall be understood that the direction, requirement, permission, order, designation, or prescription of the Engineer is intended; and similarly, the words "approved," "acceptable," "satisfactory," or words of like import, shall mean approved by, or acceptable to, or satisfactory to the Engineer, subject in each case to the final determination of the Owner.

Any reference to a specific requirement of a numbered paragraph of the contract specifications or a cited standard shall be interpreted to include all general requirements of the entire section, specification item, or cited standard that may be pertinent to such specific reference.

10-28 **LABORATORY**. The official testing laboratories of the Owner or such other laboratories as may be designated by the Engineer. Also referred to as "Engineer's Laboratory" or "quality assurance laboratory."

10-29 **LIGHTING**. A system of fixtures providing or controlling the light sources used on or near the airport or within the airport buildings. The field lighting includes all luminous signals, markers, floodlights, and illuminating devices used on or near the airport or to aid in the operation of aircraft landing at, taking off from, or taxiing on the airport surface.

10-30 **MAJOR AND MINOR CONTRACT ITEMS**. A major contract item shall be any item that is listed in the proposal, the total cost of which is equal to or greater than 20% of the total amount of the award contract. All other items shall be considered minor contract items.

10-31 **MATERIALS**. Any substance specified for use in the construction of the contract work.

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10-32 **NOTICE TO PROCEED (NTP).** A written notice to the Contractor to begin the actual contract work on a previously agreed to date. If applicable, the Notice to Proceed shall state the date on which the contract time begins.

10-33 **OWNER**. The term "Owner" shall mean the party of the first part or the contracting agency signatory to the contract. Where the term "Owner" is capitalized in this document, it shall mean airport Sponsor only.

10-34 **PASSENGER FACILITY CHARGE (PFC).** Per 14 CFR Part 158 and 49 USC § 40117, a PFC is a charge imposed by a public agency on passengers enplaned at a commercial service airport it controls."

10-35 **PAVEMENT**. The combined surface course, base course, and subbase course, if any, considered as a single unit.

10-36 **PAYMENT BOND**. The approved form of security furnished by the Contractor and his or her surety as a guaranty that the Contractor will pay in full all bills and accounts for materials and labor used in the construction of the work.

10-37 **PERFORMANCE BOND**. The approved form of security furnished by the Contractor and his or her surety as a guaranty that the Contractor will complete the work in accordance with the terms of the contract.

10-38 **PLANS**. The official drawings or exact reproductions which show the location, character, dimensions and details of the airport and the work to be done and which are to be considered as a part of the contract, supplementary to the specifications.

10-39 **PROJECT**. The agreed scope of work for accomplishing specific airport development with respect to a particular airport.

10-40 **PROPOSAL**. The written offer of the bidder (when submitted on the approved proposal form) to perform the contemplated work and furnish the necessary materials in accordance with the provisions of the plans and specifications.

10-41 **PROPOSAL GUARANTY**. The security furnished with a proposal to guarantee that the bidder will enter into a contract if his or her proposal is accepted by the Owner.

10-42 **RUNWAY**. The area on the airport prepared for the landing and takeoff of aircraft.

10-43 **SPECIFICATIONS**. A part of the contract containing the written directions and requirements for completing the contract work. Standards for specifying materials or testing which are cited in the contract specifications by reference shall have the same force and effect as if included in the contract physically.

10-44 **SPONSOR**. A Sponsor is defined in 49 USC § 47102(24) as a public agency that submits to the FAA for an AIP grant; or a private Owner of a public-use airport that submits to the FAA an application for an AIP grant for the airport.

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10-45 STRUCTURES. Airport facilities such as bridges; culverts; catch basins, inlets, retaining walls, cribbing; storm and sanitary sewer lines; water lines; underdrains; electrical ducts, manholes, handholes, lighting fixtures and bases; transformers; flexible and rigid pavements; navigational aids; buildings; vaults; and, other manmade features of the airport that may be encountered in the work and not otherwise classified herein.

10-46 SUBGRADE. The soil that forms the pavement foundation.

10-47 SUPERINTENDENT. The Contractor's executive representative who is present on the work during progress, authorized to receive and fulfill instructions from the Engineer, and who shall supervise and direct the construction.

10-48 SUPPLEMENTAL AGREEMENT. A written agreement between the Contractor and the Owner covering (1) work that would increase or decrease the total amount of the awarded contract, or any major contract item, by more than 25%, such increased or decreased work being within the scope of the originally awarded contract; or (2) work that is not within the scope of the originally awarded contract.

10-49 SURETY. The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds that are furnished to the Owner by the Contractor.

10-50 TAXIWAY. For the purpose of this document, the term taxiway means the portion of the air operations area of an airport that has been designated by competent airport authority for movement of aircraft to and from the airport's runways, aircraft parking areas, and terminal areas.

10-51 WORK. The furnishing of all labor, materials, tools, equipment, and incidentals necessary or convenient to the Contractor's performance of all duties and obligations imposed by the contract, plans, and specifications.

10-52 WORKING DAY. A working day shall be any day other than a legal holiday, Saturday, or Sunday on which the normal working forces of the Contractor may proceed with regular work for at least six (6) hours toward completion of the contract. When work is suspended for causes beyond the Contractor's control, it will not be counted as a working day.

Saturdays, Sundays and holidays on which the Contractor's forces engage in regular work will be considered as working days.

END OF SECTION 10

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SECTION 20

PROPOSAL REQUIREMENTS AND CONDITIONS

20-01 ADVERTISEMENT (NOTICE TO BIDDERS).

20-02 QUALIFICATION OF BIDDERS. Each bidder shall furnish the Owner satisfactory evidence of his or her competency to perform the proposed work. Such evidence of competency, unless otherwise specified, shall consist of statements covering the bidder's past experience on similar work, a list of equipment that would be available for the work, and a list of key personnel that would be available. In addition, each bidder shall furnish the Owner satisfactory evidence of his or her financial responsibility. Such evidence of financial responsibility, unless otherwise specified, shall consist of a confidential statement or report of the bidder's financial resources and liabilities as of the last calendar year or the bidder's last fiscal year. Such statements or reports shall be certified by a public accountant. At the time of submitting such financial statements or reports, the bidder shall further certify whether his or her financial responsibility is approximately the same as stated or reported by the public accountant. If the bidder's financial responsibility has changed, the bidder shall qualify the public accountant's statement or report to reflect the bidder's true financial condition at the time such qualified statement or report is submitted to the Owner.

Unless otherwise specified, a bidder may submit evidence that he or she is prequalified with the Georgia Department of Transportation and is on the current "bidder's list" of the state in which the proposed work is located.

Each bidder shall submit "evidence of competency" and "evidence of financial responsibility" to the Owner at the time of bid opening.

20-03 CONTENTS OF PROPOSAL FORMS. The Owner shall furnish bidders with proposal forms. All papers bound with or attached to the proposal forms are necessary parts and must not be detached.

The plans, specifications, and other documents designated in the proposal form shall be considered a part of the proposal whether attached or not.

20-04 ISSUANCE OF PROPOSAL FORMS. The Owner reserves the right to refuse to issue a proposal form to a prospective bidder should such bidder be in default for any of the following reasons:

a. Failure to comply with any prequalification regulations of the Owner, if such regulations are cited, or otherwise included, in the proposal as a requirement for bidding.

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b. Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts in force with the Owner at the time the Owner issues the proposal to a prospective bidder.

c. Documented record of Contractor default under previous contracts with the Owner.

d. Documented record of unsatisfactory work on previous contracts with the Owner.

20-05 INTERPRETATION OF ESTIMATED PROPOSAL QUANTITIES. An estimate of quantities of work to be done and materials to be furnished under these specifications is given in the proposal. It is the result of careful calculations and is believed to be correct. It is given only as a basis for comparison of proposals and the award of the contract. The Owner does not expressly, or by implication, agree that the actual quantities involved will correspond exactly therewith; nor shall the bidder plead misunderstanding or deception because of such estimates of quantities, or of the character, location, or other conditions pertaining to the work. Payment to the Contractor will be made only for the actual quantities of work performed or materials furnished in accordance with the plans and specifications. It is understood that the quantities may be increased or decreased as hereinafter provided in the subsection 40-02 titled ALTERATION OF WORK AND QUANTITIES of Section 40 without in any way invalidating the unit bid prices.

20-06 EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE. The bidder is expected to carefully examine the site of the proposed work, the proposal, plans, specifications, and contract forms. Bidders shall satisfy themselves as to the character, quality, and quantities of work to be performed, materials to be furnished, and as to the requirements of the proposed contract. The submission of a proposal shall be prima facie evidence that the bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the proposed contract, plans, and specifications.

Boring logs and other records of subsurface investigations and tests are available for inspection of bidders. It is understood and agreed that such subsurface information, whether included in the plans, specifications, or otherwise made available to the bidder, was obtained and is intended for the Owner's design and estimating purposes only. Such information has been made available for the convenience of all bidders. It is further understood and agreed that each bidder is solely responsible for all assumptions, deductions, or conclusions which the bidder may make or obtain from his or her examination of the boring logs and other records of subsurface investigations and tests that are furnished by the Owner.

20-07 PREPARATION OF PROPOSAL. The bidder shall submit his or her proposal on the forms furnished by the Owner. All blank spaces in the proposal forms must be correctly filled in where indicated for each and every item for which a quantity is given. The bidder shall state the price (written in ink or typed) both in words and numerals for which they propose to do for each pay item furnished in the proposal. In case of conflict between words and numerals, the words, unless obviously incorrect, shall govern.

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The bidder shall sign the proposal correctly and in ink. If the proposal is made by an individual, his or her name and post office address must be shown. If made by a partnership, the name and post office address of each member of the partnership must be shown. If made by a corporation, the person signing the proposal shall give the name of the state under the laws of which the corporation was chartered and the name, titles, and business address of the president, secretary, and the treasurer. Anyone signing a proposal as an agent shall file evidence of his or her authority to do so and that the signature is binding upon the firm or corporation.

20-08 RESPONSIVE AND RESPONSIBLE BIDDER. A responsive bid conforms to all significant terms and conditions contained in the Sponsor's invitation for bid. It is the Sponsor's responsibility to decide if the exceptions taken by a bidder to the solicitation are material or not and the extent of deviation it is willing to accept.

A responsible bidder has the ability to perform successfully under the terms and conditions of a proposed procurement, as defined in 49 CFR § 18.36(b)(8). This includes such matters as Contractor integrity, compliance with public policy, record of past performance, and financial and technical resources.

20-09 IRREGULAR PROPOSALS. Proposals shall be considered irregular for the following reasons:

a. If the proposal is on a form other than that furnished by the Owner, or if the Owner's form is altered, or if any part of the proposal form is detached.

b. If there are unauthorized additions, conditional or alternate pay items, or irregularities of any kind that make the proposal incomplete, indefinite, or otherwise ambiguous.

c. If the proposal does not contain a unit price for each pay item listed in the proposal, except in the case of authorized alternate pay items, for which the bidder is not required to furnish a unit price.

d. If the proposal contains unit prices that are obviously unbalanced.

e. If the proposal is not accompanied by the proposal guaranty specified by the Owner.

The Owner reserves the right to reject any irregular proposal and the right to waive technicalities if such waiver is in the best interest of the Owner and conforms to local laws and ordinances pertaining to the letting of construction contracts.

20-10 BID GUARANTEE. Each separate proposal shall be accompanied by a certified check, or other specified acceptable collateral, in the amount specified in the proposal form. Such check, or collateral, shall be made payable to the Owner.

20-11 DELIVERY OF PROPOSAL. Each proposal submitted shall be placed in a sealed envelope plainly marked with the project number, location of airport, and name and business address of the bidder on the outside. When sent by mail, preferably registered,

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the sealed proposal, marked as indicated above, should be enclosed in an additional envelope. No proposal will be considered unless received at the place specified in the advertisement or as modified by Addendum before the time specified for opening all bids. Proposals received after the bid opening time shall be returned to the bidder unopened.

20-12 WITHDRAWAL OR REVISION OF PROPOSALS. A bidder may withdraw or revise (by withdrawal of one proposal and submission of another) a proposal provided that the bidder's request for withdrawal is received by the Owner in writing before the time specified for opening bids. Revised proposals must be received at the place specified in the advertisement before the time specified for opening all bids.

20-13 PUBLIC OPENING OF PROPOSALS. Proposals shall be opened, and read, publicly at the time and place specified in the advertisement. Bidders, their authorized agents, and other interested persons are invited to attend. Proposals that have been withdrawn (by written or telegraphic request) or received after the time specified for opening bids shall be returned to the bidder unopened.

20-14 DISQUALIFICATION OF BIDDERS. A bidder shall be considered disqualified for any of the following reasons:

a. Submitting more than one proposal from the same partnership, firm, or corporation under the same or different name.

b. Evidence of collusion among bidders. Bidders participating in such collusion shall be disqualified as bidders for any future work of the Owner until any such participating bidder has been reinstated by the Owner as a qualified bidder.

c. If the bidder is considered to be in "default" for any reason specified in the subsection 20-04 titled ISSUANCE OF PROPOSAL FORMS of this section.

END OF SECTION 20

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SECTION 30

AWARD AND EXECUTION OF CONTRACT

30-01 CONSIDERATION OF PROPOSALS. After the proposals are publicly opened and read, they will be compared on the basis of the summation of the products obtained by multiplying the estimated quantities shown in the proposal by the unit bid prices. If a bidder's proposal contains a discrepancy between unit bid prices written in words and unit bid prices written in numbers, the unit price written in words shall govern.

Until the award of a contract is made, the Owner reserves the right to reject a bidder's proposal for any of the following reasons:

a. If the proposal is irregular as specified in the subsection 20-09 titled IRREGULAR PROPOSALS of Section 20.

b. If the bidder is disqualified for any of the reasons specified in the subsection 20-14 titled DISQUALIFICATION OF BIDDERS of Section 20.

In addition, until the award of a contract is made, the Owner reserves the right to reject any or all proposals, waive technicalities, if such waiver is in the best interest of the Owner and is in conformance with applicable state and local laws or regulations pertaining to the letting of construction contracts; advertise for new proposals; or proceed with the work otherwise. All such actions shall promote the Owner's best interests.

30-02 AWARD OF CONTRACT. The award of a contract, if it is to be awarded, shall be made within 90 calendar days of the date specified for publicly opening proposals, unless otherwise specified herein.

Award of the contract shall be made by the Owner to the lowest, qualified bidder whose proposal conforms to the cited requirements of the Owner.

30-03 CANCELLATION OF AWARD. The Owner reserves the right to cancel the award without liability to the bidder, except return of proposal guaranty, at any time before a contract has been fully executed by all parties and is approved by the Owner in accordance with the subsection 30-07 titled APPROVAL OF CONTRACT of this section.

30-04 RETURN OF PROPOSAL GUARANTY. All proposal guaranties, except those of the two lowest bidders, will be returned immediately after the Owner has made a comparison of bids as specified in the subsection 30-01 titled CONSIDERATION OF PROPOSALS of this section. Proposal guaranties of the two lowest bidders will be retained by the Owner until such time as an award is made, at which time, the unsuccessful bidder's proposal guaranty will be returned. The successful bidder's proposal guaranty will be returned as soon as the Owner receives the contract bonds as specified in the subsection 30-05 titled REQUIREMENTS OF CONTRACT BONDS of this section.

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30-05 REQUIREMENTS OF CONTRACT BONDS. At the time of the execution of the contract, the successful bidder shall furnish the Owner a surety bond or bonds that have been fully executed by the bidder and the surety guaranteeing the performance of the work and the payment of all legal debts that may be incurred by reason of the Contractor's performance of the work. The surety and the form of the bond or bonds shall be acceptable to the Owner. Unless otherwise specified in this subsection, the surety bond or bonds shall be in a sum equal to the full amount of the contract.

30-06 EXECUTION OF CONTRACT. The successful bidder shall sign (execute) the necessary agreements for entering into the contract and return the signed contract to the Owner, along with the fully executed surety bond or bonds specified in the subsection 30-05 titled REQUIREMENTS OF CONTRACT BONDS of this section, within 15 calendar days from the date mailed or otherwise delivered to the successful bidder.

30-07 APPROVAL OF CONTRACT. Upon receipt of the contract and contract bond or bonds that have been executed by the successful bidder, the Owner shall complete the execution of the contract in accordance with local laws or ordinances, and return the fully executed contract to the Contractor. Delivery of the fully executed contract to the Contractor shall constitute the Owner's approval to be bound by the successful bidder's proposal and the terms of the contract.

30-08 FAILURE TO EXECUTE CONTRACT. Failure of the successful bidder to execute the contract and furnish an acceptable surety bond or bonds within the 15 calendar day period specified in the subsection 30-06 titled EXECUTION OF CONTRACT of this section shall be just cause for cancellation of the award and forfeiture of the proposal guaranty, not as a penalty, but as liquidation of damages to the Owner.

END OF SECTION 30

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SECTION 40

SCOPE OF WORK

40-01 INTENT OF CONTRACT. The intent of the contract is to provide for construction and completion, in every detail, of the work described. It is further intended that the Contractor shall furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work in accordance with the plans, specifications, and terms of the contract.

40-02 ALTERATION OF WORK AND QUANTITIES. The Owner reserves and shall have the right to make such alterations in the work as may be necessary or desirable to complete the work originally intended in an acceptable manner. Unless otherwise specified herein, the Engineer shall be and is hereby authorized to make such alterations in the work as may increase or decrease the originally awarded contract quantities, provided that the aggregate of such alterations does not change the total contract cost or the total cost of any major contract item by more than 25% (total cost being based on the unit prices and estimated quantities in the awarded contract). Alterations that do not exceed the 25% limitation shall not invalidate the contract nor release the surety, and the Contractor agrees to accept payment for such alterations as if the altered work had been a part of the original contract. These alterations that are for work within the general scope of the contract shall be covered by "Change Orders" issued by the Engineer. Change orders for altered work shall include extensions of contract time where, in the Engineer's opinion, such extensions are commensurate with the amount and difficulty of added work.

Should the aggregate amount of altered work exceed the 25% limitation hereinbefore specified, such excess altered work shall be covered by supplemental agreement. If the Owner and the Contractor are unable to agree on a unit adjustment for any contract item that requires a supplemental agreement, the Owner reserves the right to terminate the contract with respect to the item and make other arrangements for its completion.

Supplemental agreements shall be approved by the GDOT and shall include all applicable contract provisions for procurement and contracting required under state funded programs. Supplemental agreements shall also require consent of the Contractor's surety and separate performance and payment bonds.

40-03 OMITTED ITEMS. The Engineer may, in the Owner's best interest, omit from the work any contract item, except major contract items. Major contract items may be omitted by a supplemental agreement. Such omission of contract items shall not invalidate any other contract provision or requirement.

Should a contract item be omitted or otherwise ordered to be non-performed, the Contractor shall be paid for all work performed toward completion of such item prior to the date of the order to omit such item. Payment for work performed shall be in accordance with the subsection 90-04 titled PAYMENT FOR OMITTED ITEMS of Section 90.

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40-04 **EXTRA WORK**. Should acceptable completion of the contract require the Contractor to perform an item of work for which no basis of payment has been provided in the original contract or previously issued change orders or supplemental agreements, the same shall be called "Extra Work." Extra Work that is within the general scope of the contract shall be covered by written change order. Change orders for such Extra Work shall contain agreed unit prices for performing the change order work in accordance with the requirements specified in the order, and shall contain any adjustment to the contract time that, in the Engineer's opinion, is necessary for completion of such Extra Work.

When determined by the Engineer to be in the Owner's best interest, the Engineer may order the Contractor to proceed with Extra Work as provided in the subsection 90-05 titled PAYMENT FOR EXTRA WORK of Section 90. Extra Work that is necessary for acceptable completion of the project, but is not within the general scope of the work covered by the original contract shall be covered by a Supplemental Agreement as defined in the subsection 10-48 titled SUPPLEMENTAL AGREEMENT of Section 10.

Any claim for payment of Extra Work that is not covered by written agreement (change order or supplemental agreement) shall be rejected by the Owner.

40-05 **MAINTENANCE OF TRAFFIC**. It is the explicit intention of the contract that the safety of aircraft, as well as the Contractor's equipment and personnel, is the most important consideration.

a. It is understood and agreed that the Contractor shall provide for the free and unobstructed movement of aircraft in the air operations areas (AOAs) of the airport with respect to his or her own operations and the operations of all subcontractors as specified in the subsection 80-04 titled LIMITATION OF OPERATIONS of Section 80. It is further understood and agreed that the Contractor shall provide for the uninterrupted operation of visual and electronic signals (including power supplies thereto) used in the guidance of aircraft while operating to, from, and upon the airport as specified in the subsection 70-15 titled CONTRACTOR'S RESPONSIBILITY FOR UTILITY SERVICE AND FACILITIES OF OTHERS in Section 70.

b. With respect to his or her own operations and the operations of all subcontractors, the Contractor shall provide marking, lighting, and other acceptable means of identifying personnel, equipment, vehicles, storage areas, and any work area or condition that may be hazardous to the operation of aircraft, fire-rescue equipment, or maintenance vehicles at the airport.

c. When the contract requires the maintenance of vehicular traffic on an existing road, street, or highway during the Contractor's performance of work that is otherwise provided for in the contract, plans, and specifications, the Contractor shall keep such road, street, or highway open to all traffic and shall provide such maintenance as may be required to accommodate traffic. The Contractor shall be responsible for the repair of any damage caused by the Contractor's equipment and personnel. The Contractor shall furnish, erect, and maintain barricades, warning signs, flag person, and other traffic control devices in reasonable conformity with the Manual on Uniform Traffic

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Control Devices (MUTCD) (http://mutcd.fhwa.dot.gov/), unless otherwise specified. The Contractor shall also construct and maintain in a safe condition any temporary connections necessary for ingress to and egress from abutting property or intersecting roads, streets or highways. Unless otherwise specified herein, the Contractor will not be required to furnish snow removal for such existing road, street, or highway.

40-06 REMOVAL OF EXISTING STRUCTURES. All existing structures encountered within the established lines, grades, or grading sections shall be removed by the Contractor, unless such existing structures are otherwise specified to be relocated, adjusted up or down, salvaged, abandoned in place, reused in the work or to remain in place. The cost of removing such existing structures shall not be measured or paid for directly, but shall be included in the various contract items.

Should the Contractor encounter an existing structure (above or below ground) in the work for which the disposition is not indicated on the plans, the Engineer shall be notified prior to disturbing such structure. The disposition of existing structures so encountered shall be immediately determined by the Engineer in accordance with the provisions of the contract.

Except as provided in the subsection 40-07 titled RIGHTS IN AND USE OF MATERIALS FOUND IN THE WORK of this section, it is intended that all existing materials or structures that may be encountered (within the lines, grades, or grading sections established for completion of the work) shall be used in the work as otherwise provided for in the contract and shall remain the property of the Owner when so used in the work.

40-07 RIGHTS IN AND USE OF MATERIALS FOUND IN THE WORK. Should the Contractor encounter any material such as (but not restricted to) sand, stone, gravel, slag, or concrete slabs within the established lines, grades, or grading sections, the use of which is intended by the terms of the contract to be either embankment or waste, the Contractor may at his or her option either:

a. Use such material in another contract item, providing such use is approved by the Engineer and is in conformance with the contract specifications applicable to such use; or,

b. Remove such material from the site, upon written approval of the Engineer; or

c. Use such material for the Contractor's own temporary construction on site; or,

d. Use such material as intended by the terms of the contract.

Should the Contractor wish to exercise option a., b., or c., the Contractor shall request the Engineer's approval in advance of such use.

Should the Engineer approve the Contractor's request to exercise option a., b., or c., the Contractor shall be paid for the excavation or removal of such material at the applicable

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contract price. The Contractor shall replace, at his or her own expense, such removed or excavated material with an agreed equal volume of material that is acceptable for use in constructing embankment, backfills, or otherwise to the extent that such replacement material is needed to complete the contract work. The Contractor shall not be charged for use of such material used in the work or removed from the site.

Should the Engineer approve the Contractor's exercise of option a., the Contractor shall be paid, at the applicable contract price, for furnishing and installing such material in accordance with requirements of the contract item in which the material is used.

It is understood and agreed that the Contractor shall make no claim for delays by reason of his or her exercise of option a., b., or c.

The Contractor shall not excavate, remove, or otherwise disturb any material, structure, or part of a structure which is located outside the lines, grades, or grading sections established for the work, except where such excavation or removal is provided for in the contract, plans, or specifications.

40-08 **FINAL CLEANUP.** Upon completion of the work and before acceptance and final payment will be made, the Contractor shall remove from the site all machinery, equipment, surplus and discarded materials, rubbish, temporary structures, and stumps or portions of trees. The Contractor shall cut all brush and woods within the limits indicated and shall leave the site in a neat and presentable condition. Material cleared from the site and deposited on adjacent property will not be considered as having been disposed of satisfactorily, unless the Contractor has obtained the written permission of such property Owner.

END OF SECTION 40

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SECTION 50

CONTROL OF WORK

50-01 AUTHORITY OF THE ENGINEER. The Engineer shall decide any and all questions which may arise as to the quality and acceptability of materials furnished, work performed, and as to the manner of performance and rate of progress of the work. The Engineer shall decide all questions that may arise as to the interpretation of the specifications or plans relating to the work. The Engineer shall determine the amount and quality of the several kinds of work performed and materials furnished which are to be paid for the under contract.

The Engineer does not have the authority to accept pavements that do not conform to GDOT specification requirements.

50-02 CONFORMITY WITH PLANS AND SPECIFICATIONS. All work and all materials furnished shall be in reasonably close conformity with the lines, grades, grading sections, cross-sections, dimensions, material requirements, and testing requirements that are specified (including specified tolerances) in the contract, plans or specifications.

If the Engineer finds the materials furnished, work performed, or the finished product not within reasonably close conformity with the plans and specifications but that the portion of the work affected will, in his or her opinion, result in a finished product having a level of safety, economy, durability, and workmanship acceptable to the Owner, the Engineer will advise the Owner of his or her determination that the affected work be accepted and remain in place. In this event, the Engineer will document the determination and recommend to the Owner a basis of acceptance that will provide for an adjustment in the contract price for the affected portion of the work. The Engineer's determination and recommended contract price adjustments will be based on sound engineering judgment and such tests or retests of the affected work as are, in the Engineer's opinion, needed. Changes in the contract price shall be covered by contract change order or supplemental agreement as applicable.

If the Engineer finds the materials furnished, work performed, or the finished product are not in reasonably close conformity with the plans and specifications and have resulted in an unacceptable finished product, the affected work or materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor in accordance with the Engineer's written orders.

For the purpose of this subsection, the term "reasonably close conformity" shall not be construed as waiving the Contractor's responsibility to complete the work in accordance with the contract, plans, and specifications. The term shall not be construed as waiving the Engineer's responsibility to insist on strict compliance with the requirements of the contract, plans, and specifications during the Contractor's execution of the work, when, in the Engineer's opinion, such compliance is essential to provide an acceptable finished portion of the work.

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For the purpose of this subsection, the term "reasonably close conformity" is also intended to provide the Engineer with the authority, after consultation with the GDOT, to use sound engineering judgment in his or her determinations as to acceptance of work that is not in strict conformity, but will provide a finished product equal to or better than that intended by the requirements of the contract, plans and specifications.

The Engineer will not be responsible for the Contractor's means, methods, techniques, sequences, or procedures of construction or the safety precautions incident thereto.

50-03 COORDINATION OF CONTRACT, PLANS, AND SPECIFICATIONS. The contract, plans, specifications, and all referenced standards cited are essential parts of the contract requirements. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of discrepancy, calculated dimensions will govern over scaled dimensions; contract technical specifications shall govern over contract general provisions, plans, cited standards for materials or testing, and cited advisory circulars (ACs); contract general provisions shall govern over plans, cited standards for materials or testing, and cited ACs; plans shall govern over cited standards for materials or testing and cited ACs. If any paragraphs contained in the Special Provisions conflict with General Provisions or Technical Specifications, the Special Provisions shall govern.

From time to time, discrepancies within cited testing standards occur due to the timing of the change, edits, and/or replacement of the standards. If the Contractor discovers any apparent discrepancy within standard test methods, the Contractor shall immediately ask the Engineer for an interpretation and decision, and such decision shall be final.

50-04 COOPERATION OF CONTRACTOR. The Contractor will be supplied with four copies each of the plans and specifications. The Contractor shall have available on the work at all times, one copy each of the plans and specifications. Additional copies of plans and specifications may be obtained by the Contractor for the cost of reproduction.

The Contractor shall give constant attention to the work to facilitate the progress thereof, and shall cooperate with the Engineer and his or her inspectors and with other contractors in every way possible. The Contractor shall have a competent superintendent on the work at all times who is fully authorized as his or her agent on the work. The superintendent shall be capable of reading and thoroughly understanding the plans and specifications and shall receive and fulfill instructions from the Engineer or his or her authorized representative.

50-05 COOPERATION BETWEEN CONTRACTORS. The Owner reserves the right to contract for and perform other or additional work on or near the work covered by this contract.

When separate contracts are let within the limits of any one project, each Contractor shall conduct the work so as not to interfere with or hinder the progress of completion of the work being performed by other Contractors. Contractors working on the same project shall cooperate with each other as directed.

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Each Contractor involved shall assume all liability, financial or otherwise, in connection with his or her contract and shall protect and save harmless the Owner from any and all damages or claims that may arise because of inconvenience, delays, or loss experienced because of the presence and operations of other Contractors working within the limits of the same project.

The Contractor shall arrange his or her work and shall place and dispose of the materials being used so as not to interfere with the operations of the other Contractors within the limits of the same project. The Contractor shall join his or her work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others.

50-06 CONSTRUCTION LAYOUT AND STAKES. The Engineer shall establish horizontal and vertical control only. The Contractor must establish all layout required for the construction of the work. Such stakes and markings as the Engineer may set for either their own or the Contractor's guidance shall be preserved by the Contractor. In case of negligence on the part of the Contractor, or their employees, resulting in the destruction of such stakes or markings, an amount equal to the cost of replacing the same may be deducted from subsequent estimates due the Contractor at the discretion of the Engineer.

The Contractor will be required to furnish all lines, grades and measurements from the control points necessary for the proper execution and control of the work contracted for under these specifications.

The Contractor must give copies of survey notes to the Engineer for each area of construction and for each placement of material as specified to allow the Engineer to make periodic checks for conformance with plan grades, alignments and grade tolerances required by the applicable material specifications. All surveys must be provided to the Engineer prior to commencing work items that will cover or disturb the survey staking as set by the Contractor's surveyor. Survey(s) and notes shall be provided in the following format(s): AUTOCAD 2014 with ASCII point files, and PDF. In the case of error, on the part of the Contractor, their surveyor, employees or subcontractors, resulting in established grades, alignment or grade tolerances that do not concur with those specified or shown on the plans, the Contractor is solely responsible for correction, removal, replacement and all associated costs at no additional cost to the Owner.

No direct payment will be made, unless otherwise specified in contract documents, for this labor, materials, or other expenses. The cost shall be included in the price of the bid for the various items of the Contract.
Construction Staking and Layout includes but is not limited to:

a. Clearing and Grubbing perimeter staking

b. Rough Grade slope stakes at 100-foot (30-m) stations
c. Drainage Swales slope stakes and flow line blue tops at 50-foot (15-m) stations

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Subgrade blue tops at 25-foot (7.5-m) stations and 25-foot (7.5-m) offset distance (maximum) for the following section locations:

a. Runway – minimum five (5) per station

b. Taxiways – minimum three (3) per station

c. Holding apron areas – minimum three (3) per station

d. Roadways – minimum three (3) per station

Base Course blue tops at 25-foot (7.5-m) stations and 25-foot (7.5-m) offset distance (maximum) for the following section locations:

a. Runway – minimum five (5) per station

b. Taxiways – minimum three (3) per station

c. Holding apron areas – minimum three (3) per station

Pavement areas:

a. Edge of Pavement hubs and tacks (for stringline by Contractor) at 100-foot (30-m) stations.

b. Between Lifts at 25-foot (7.5-m) stations for the following section locations:

   (1) Runways – each paving lane width
   (2) Taxiways – each paving lane width
   (3) Holding areas – each paving lane width

c. After finish paving operations at 50-foot (15-m) stations:

   (1) All paved areas – Edge of each paving lane prior to next paving lot

d. Shoulder and safety area blue tops at 50-foot (15-m) stations and at all break points with maximum of 50-foot (15-m) offsets.

e. Fence lines at 100-foot (30-m) stations minimum.

f. Electrical and Communications System locations, lines and grades including but not limited to duct runs, connections, fixtures, signs, lights, Visual Approach Slope Indicators (VASIs), Precision Approach Path Indicators (PAPIs), Runway End Identifier Lighting (REIL), Wind Cones, Distance Markers (signs), pull boxes and manholes.

g. Drain lines, cut stakes and alignment on 25-foot (7.5-m) stations, inlet and manholes.

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h. Painting and Striping layout (pinned with 1.5 inch PK nails) marked for paint Contractor. (All nails shall be removed after painting).

i. Laser, or other automatic control devices, shall be checked with temporary control point or grade hub at a minimum of once per 400 feet (120 m) per pass (that is, paving lane).

The establishment of Survey Control and/or reestablishment of survey control shall be by a State Licensed Land Surveyor.

Controls and stakes disturbed or suspect of having been disturbed shall be checked and/or reset as directed by the Engineer without additional cost to the Owner.

50-07 AUTOMATICALLY CONTROLLED EQUIPMENT. Whenever batching or mixing plant equipment is required to be operated automatically under the contract and a breakdown or malfunction of the automatic controls occurs, the equipment may be operated manually or by other methods for a period 48 hours following the breakdown or malfunction, provided this method of operations will produce results which conform to all other requirements of the contract.

50-08 AUTHORITY AND DUTIES OF INSPECTORS. Inspectors shall be authorized to inspect all work done and all material furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. Inspectors are not authorized to revoke, alter, or waive any provision of the contract. Inspectors are not authorized to issue instructions contrary to the plans and specifications or to act as foreman for the Contractor.

Inspectors are authorized to notify the Contractor or his or her representatives of any failure of the work or materials to conform to the requirements of the contract, plans, or

specifications and to reject such nonconforming materials in question until such issues can be referred to the Engineer for a decision.

50-09 INSPECTION OF THE WORK. All materials and each part or detail of the work shall be subject to inspection. The Engineer shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as is required to make a complete and detailed inspection.

If the Engineer requests it, the Contractor, at any time before acceptance of the work, shall remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the specifications. Should the work thus exposed or examined prove acceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be paid for as extra work; but should the work so exposed or examined prove unacceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be at the Contractor's expense.

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Any work done or materials used without supervision or inspection by an authorized representative of the Owner may be ordered removed and replaced at the Contractor's expense unless the Owner's representative failed to inspect after having been given reasonable notice in writing that the work was to be performed.

Should the contract work include relocation, adjustment, or any other modification to existing facilities, not the property of the (contract) Owner, authorized representatives of the Owners of such facilities shall have the right to inspect such work. Such inspection shall in no sense make any facility owner a party to the contract, and shall in no way interfere with the rights of the parties to this contract.

50-10 REMOVAL OF UNACCEPTABLE AND UNAUTHORIZED WORK. All work that does not conform to the requirements of the contract, plans, and specifications will be considered unacceptable, unless otherwise determined acceptable by the Engineer as provided in the subsection 50-02 titled CONFORMITY WITH PLANS AND SPECIFICATIONS of this section.

Unacceptable work, whether the result of poor workmanship, use of defective materials, damage through carelessness, or any other cause found to exist prior to the final acceptance of the work, shall be removed immediately and replaced in an acceptable manner in accordance with the provisions of the subsection 70-14 titled CONTRACTOR'S RESPONSIBILITY FOR WORK of Section 70.

No removal work made under provision of this subsection shall be done without lines and grades having been established by the Engineer. Work done contrary to the instructions of the Engineer, work done beyond the lines shown on the plans or as established by the Engineer, except as herein specified, or any extra work done without authority, will be considered as unauthorized and will not be paid for under the provisions of the contract. Work so done may be ordered removed or replaced at the Contractor's expense.

Upon failure on the part of the Contractor to comply with any order of the Engineer made under the provisions of this subsection, the Engineer will have authority to cause unacceptable work to be remedied or removed and replaced and unauthorized work to be removed and to deduct the costs incurred by the Owner from any monies due or to become due the Contractor.

50-11 LOAD RESTRICTIONS. The Contractor shall comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of the work. A special permit will not relieve the Contractor of liability for damage that may result from the moving of material or equipment.

The operation of equipment of such weight or so loaded as to cause damage to structures or to any other type of construction will not be permitted. Hauling of materials over the base course or surface course under construction shall be limited as directed. No loads will be permitted on a concrete pavement, base, or structure before the expiration of the curing period. The Contractor shall be responsible for all damage done by his or her hauling equipment and shall correct such damage at his or her own expense.

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50-12 MAINTENANCE DURING CONSTRUCTION. The Contractor shall maintain the work during construction and until the work is accepted. Maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and forces so that the work is maintained in satisfactory condition at all times.

In the case of a contract for the placing of a course upon a course or subgrade previously constructed, the Contractor shall maintain the previous course or subgrade during all construction operations.

All costs of maintenance work during construction and before the project is accepted shall be included in the unit prices bid on the various contract items, and the Contractor will not be paid an additional amount for such work.

50-13 FAILURE TO MAINTAIN THE WORK. Should the Contractor at any time fail to maintain the work as provided in the subsection 50-12 titled MAINTENANCE DURING CONSTRUCTION of this section, the Engineer shall immediately notify the Contractor of such noncompliance. Such notification shall specify a reasonable time within which the Contractor shall be required to remedy such unsatisfactory maintenance condition. The time specified will give due consideration to the exigency that exists.

Should the Contractor fail to respond to the Engineer's notification, the Owner may suspend any work necessary for the Owner to correct such unsatisfactory maintenance condition, depending on the exigency that exists. Any maintenance cost incurred by the Owner, shall be deducted from monies due or to become due the Contractor.

50-14 PARTIAL ACCEPTANCE. If at any time during the execution of the project the Contractor substantially completes a usable unit or portion of the work, the occupancy of which will benefit the Owner, the Contractor may request the Engineer to make final inspection of that unit. If the Engineer finds upon inspection that the unit has been satisfactorily completed in compliance with the contract, the Engineer may accept it as being complete, and the Contractor may be relieved of further responsibility for that unit. Such partial acceptance and beneficial occupancy by the Owner shall not void or alter any provision of the contract.

50-15 FINAL ACCEPTANCE. Upon due notice from the Contractor of presumptive completion of the entire project, the Engineer and Owner will make an inspection. If all construction provided for and contemplated by the contract is found to be complete in accordance with the contract, plans, and specifications, such inspection shall constitute the final inspection. The Engineer shall notify the Contractor in writing of final acceptance as of the date of the final inspection.

If, however, the inspection discloses any work, in whole or in part, as being unsatisfactory, the Engineer will give the Contractor the necessary instructions for correction of same and the Contractor shall immediately comply with and execute such instructions. Upon correction of the work, another inspection will be made which shall constitute the final inspection, provided the work has been satisfactorily completed. In

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such event, the Engineer will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final inspection.

50-16 CLAIMS FOR ADJUSTMENT AND DISPUTES. If for any reason the Contractor deems that additional compensation is due for work or materials not clearly provided for in the contract, plans, or specifications or previously authorized as extra work, the Contractor shall notify the Engineer in writing of his or her intention to claim such additional compensation before the Contractor begins the work on which the Contractor bases the claim. If such notification is not given or the Engineer is not afforded proper opportunity by the Contractor for keeping strict account of actual cost as required, then the Contractor hereby agrees to waive any claim for such additional compensation. Such notice by the Contractor and the fact that the Engineer has kept account of the cost of the work shall not in any way be construed as proving or substantiating the validity of the claim. When the work on which the claim for additional compensation is based has been completed, the Contractor shall, within 10 calendar days, submit a written claim to the Engineer who will present it to the Owner for consideration in accordance with local laws or ordinances.

Nothing in this subsection shall be construed as a waiver of the Contractor's right to dispute final payment based on differences in measurements or computations.

50-17 COST REDUCTION INCENTIVE. The provisions of this subsection will apply only to contracts awarded to the lowest bidder pursuant to competitive bidding.

On projects with original contract amounts in excess of $100,000, the Contractor may submit to the Engineer, in writing, proposals for modifying the plans, specifications or other requirements of the contract for the sole purpose of reducing the cost of construction. The cost reduction proposal shall not impair, in any manner, the essential functions or characteristics of the project, including but not limited to service life, economy of operation, ease of maintenance, desired appearance, design and safety standards. This provision shall not apply unless the proposal submitted is specifically identified by the Contractor as being presented for consideration as a value engineering proposal.

Not eligible for cost reduction proposals are changes in the basic design of a pavement type, runway and taxiway lighting, visual aids, hydraulic capacity of drainage facilities, or changes in grade or alignment that reduce the geometric standards of the project.

As a minimum, the following information shall be submitted by the Contractor with each proposal:

a. A description of both existing contract requirements for performing the work and the proposed changes, with a discussion of the comparative advantages and disadvantages of each.

b. An itemization of the contract requirements that must be changed if the proposal is adopted.

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c. A detailed estimate of the cost of performing the work under the existing contract and under the proposed changes.

d. A statement of the time by which a change order adopting the proposal must be issued.

e. A statement of the effect adoption of the proposal will have on the time for completion of the contract.

f. The contract items of work affected by the proposed changes, including any quantity variation attributable to them.

The Contractor may withdraw, in whole or in part, any cost reduction proposal not accepted by the Engineer, within the period specified in the proposal. The provisions of this subsection shall not be construed to require the Engineer to consider any cost reduction proposal that may be submitted.

The Contractor shall continue to perform the work in accordance with the requirements of the contract until a change order incorporating the cost reduction proposal has been issued. If a change order has not been issued by the date upon which the Contractor's cost reduction proposal specifies that a decision should be made, or such other date as the Contractor may subsequently have requested in writing, such cost reduction proposal shall be deemed rejected.

The Engineer shall be the sole judge of the acceptability of a cost reduction proposal and of the estimated net savings from the adoption of all or any part of such proposal. In determining the estimated net savings, the Engineer may disregard the contract bid prices if, in the Engineer's judgment such prices do not represent a fair measure of the value of the work to be performed or deleted.

The Owner may require the Contractor to share in the Owner's costs of investigating a cost reduction proposal submitted by the Contractor as a condition of considering such proposal. Where such a condition is imposed, the Contractor shall acknowledge acceptance of it in writing. Such acceptance shall constitute full authority for the Owner to deduct the cost of investigating a cost reduction proposal from amounts payable to the Contractor under the contract.

If the Contractor's cost reduction proposal is accepted in whole or in part, such acceptance will be by a contract change order that shall specifically state that it is executed pursuant to this subsection. Such change order shall incorporate the changes in the plans and specifications which are necessary to permit the cost reduction proposal or such part of it as has been accepted and shall include any conditions upon which the Engineer's approval is based. The change order shall also set forth the estimated net savings attributable to the cost reduction proposal. The net savings shall be determined as the difference in costs between the original contract costs for the involved work items and the costs occurring as a result of the proposed change. The change order shall also establish the net savings agreed upon and shall provide for adjustment in the contract price that will divide the net savings equally between the Contractor and the Owner.

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The Contractor's 50% share of the net savings shall constitute full compensation to the Contractor for the cost reduction proposal and the performance of the work.

Acceptance of the cost-reduction proposal and performance of the cost-reduction work shall not extend the time of completion of the contract unless specifically provided for in the contract change order.

END OF SECTION 50

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SECTION 60

CONTROL OF MATERIALS

60-01 SOURCE OF SUPPLY AND QUALITY REQUIREMENTS. The materials used in the work shall conform to the requirements of the contract, plans, and specifications. Unless otherwise specified, such materials that are manufactured or processed shall be new (as compared to used or reprocessed).

In order to expedite the inspection and testing of materials, the Contractor shall furnish complete statements to the Engineer as to the origin, composition, and manufacture of all materials to be used in the work. Such statements shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials.

At the Engineer's option, materials may be approved at the source of supply before delivery is stated. If it is found after trial that sources of supply for previously approved materials do not produce specified products, the Contractor shall furnish materials from other sources.

The Contractor shall furnish airport lighting equipment that conforms to the requirements of cited materials specifications. In addition, where an specification for airport lighting equipment is cited in the plans or specifications, the Contractor shall furnish such equipment that is:

a. Listed in advisory circular (AC) 150/5345-53, Airport Lighting Equipment Certification Program, and Addendum that is in effect on the date of advertisement; and,

b. Produced by the manufacturer as listed in the Addendum cited above for the certified equipment part number.

The following airport lighting equipment is required for this contract and is to be furnished by the Contractor in accordance with the requirements of this subsection.

60-02 SAMPLES, TESTS, AND CITED SPECIFICATIONS. Unless otherwise designated, all materials used in the work shall be inspected, tested, and approved by the Engineer before incorporation in the work. Any work in which untested materials are used without approval or written permission of the Engineer shall be performed at the Contractor's risk. Materials found to be unacceptable and unauthorized will not be paid for and, if directed by the Engineer, shall be removed at the Contractor's expense.

Unless otherwise designated, quality assurance tests in accordance with the cited standard methods of ASTM, American Association of State Highway and Transportation Officials (AASHTO), Federal Specifications, Commercial Item Descriptions, and all other cited methods, which are current on the date of advertisement for bids, will be made by and at the expense of the Engineer.

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The testing organizations performing on-site quality assurance field tests shall have copies of all referenced standards on the construction site for use by all technicians and other personnel, including the Contractor's representative at his or her request. Unless otherwise designated, samples for quality assurance will be taken by a qualified representative of the Engineer. All materials being used are subject to inspection, test, or rejection at any time prior to or during incorporation into the work. Copies of all tests will be furnished to the Contractor's representative at their request after review and approval of the Engineer.

The Contractor shall employ a testing organization to perform all Contractor required Quality Control tests. The Contractor shall submit to the Engineer resumes on all testing organizations and individual persons who will be performing the tests. The Engineer will determine if such persons are qualified. All the test data shall be reported to the Engineer after the results are known. A legible, handwritten copy of all test data shall be given to the Engineer daily, along with printed reports, in an approved format, on a weekly basis. After completion of the project, and prior to final payment, the Contractor shall submit a final report to the Engineer showing all test data reports, plus an analysis of all results showing ranges, averages, and corrective action taken on all failing tests.

60-03 CERTIFICATION OF COMPLIANCE. The Engineer may permit the use, prior to sampling and testing, of certain materials or assemblies when accompanied by manufacturer's certificates of compliance stating that such materials or assemblies fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer. Each lot of such materials or assemblies delivered to the work must be accompanied by a certificate of compliance in which the lot is clearly identified.

Materials or assemblies used on the basis of certificates of compliance may be sampled and tested at any time and if found not to be in conformity with contract requirements will be subject to rejection whether in place or not.

The form and distribution of certificates of compliance shall be as approved by the Engineer.

When a material or assembly is specified by "brand name or equal" and the Contractor elects to furnish the specified "brand name," the Contractor shall be required to furnish the manufacturer's certificate of compliance for each lot of such material or assembly delivered to the work. Such certificate of compliance shall clearly identify each lot delivered and shall certify as to:

a. Conformance to the specified performance, testing, quality or dimensional requirements; and,

b. Suitability of the material or assembly for the use intended in the contract work.

Should the Contractor propose to furnish an "or equal" material or assembly, the Contractor shall furnish the manufacturer's certificates of compliance as hereinbefore

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described for the specified brand name material or assembly. However, the Engineer shall be the sole judge as to whether the proposed "or equal" is suitable for use in the work. The Engineer reserves the right to refuse permission for use of materials or assemblies on the basis of certificates of compliance.

60-04 PLANT INSPECTION. The Engineer or his or her authorized representative may inspect, at its source, any specified material or assembly to be used in the work. Manufacturing plants may be inspected from time to time for the purpose of determining compliance with specified manufacturing methods or materials to be used in the work and to obtain samples required for acceptance of the material or assembly.

Should the Engineer conduct plant inspections, the following conditions shall exist:

a. The Engineer shall have the cooperation and assistance of the Contractor and the producer with whom the Engineer has contracted for materials.

b. The Engineer shall have full entry at all reasonable times to such parts of the plant that concern the manufacture or production of the materials being furnished.

c. If required by the Engineer, the Contractor shall arrange for adequate office or working space that may be reasonably needed for conducting plant inspections. Office or working space should be conveniently located with respect to the plant.

It is understood and agreed that the Owner shall have the right to retest any material that has been tested and approved at the source of supply after it has been delivered to the site. The Engineer shall have the right to reject only material which, when retested, does not meet the requirements of the contract, plans, or specifications.

60-05 ENGINEER'S FIELD OFFICE. The Contractor shall furnish for the duration of the project one building for the use of the field Engineers and inspectors, as a field office. This facility shall be an approved weatherproof building meeting the current State Highway Specifications (for example, Class I Field Office or Type C Structure). This building shall be located conveniently near to the construction and shall be separate from any building used by the Contractor. The Contractor shall furnish facsimile (FAX) machine, photocopy machine, water, sanitary facilities, heat, air conditioning, and electricity. The Contractor and the Contractor's superintendent shall provide all reasonable facilities to enable to the Engineer to inspect the workmanship and materials used into the work.

60-06 STORAGE OF MATERIALS. Materials shall be so stored as to assure the preservation of their quality and fitness for the work. Stored materials, even though approved before storage, may again be inspected prior to their use in the work. Stored materials shall be located to facilitate their prompt inspection. The Contractor shall coordinate the storage of all materials with the Engineer. Materials to be stored on airport property shall not create an obstruction to air navigation nor shall they interfere with the free and unobstructed movement of aircraft. Unless otherwise shown on the plans, the storage of materials and the location of the Contractor's plant and parked equipment or

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vehicles shall be as directed by the Engineer. Private property shall not be used for storage purposes without written permission of the Owner or lessee of such property. The Contractor shall make all arrangements and bear all expenses for the storage of materials on private property. Upon request, the Contractor shall furnish the Engineer a copy of the property Owner's permission.

All storage sites on private or airport property shall be restored to their original condition by the Contractor at his or her entire expense, except as otherwise agreed to (in writing) by the Owner or lessee of the property.

60-07 UNACCEPTABLE MATERIALS. Any material or assembly that does not conform to the requirements of the contract, plans, or specifications shall be considered unacceptable and shall be rejected. The Contractor shall remove any rejected material or assembly from the site of the work, unless otherwise instructed by the Engineer.

Rejected material or assembly, the defects of which have been corrected by the Contractor, shall not be returned to the site of the work until such time as the Engineer has approved its use in the work.

60-08 OWNER FURNISHED MATERIALS. The Contractor shall furnish all materials required to complete the work, except those specified, if any, to be furnished by the Owner. Owner-furnished materials shall be made available to the Contractor at the location specified.

All costs of handling, transportation from the specified location to the site of work, storage, and installing Owner-furnished materials shall be included in the unit price bid for the contract item in which such Owner-furnished material is used.

After any Owner-furnished material has been delivered to the location specified, the Contractor shall be responsible for any demurrage, damage, loss, or other deficiencies that may occur during the Contractor's handling, storage, or use of such Owner-furnished material. The Owner will deduct from any monies due or to become due the Contractor any cost incurred by the Owner in making good such loss due to the Contractor's handling, storage, or use of Owner-furnished materials.

END OF SECTION 60

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SECTION 70

LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC

70-01 LAWS TO BE OBSERVED. The Contractor shall keep fully informed of all Federal and state laws, all local laws, ordinances, and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the work, or which in any way affect the conduct of the work. The Contractor shall at all times observe and comply with all such laws, ordinances, regulations, orders, and decrees; and shall protect and indemnify the Owner and all his or her officers, agents, or servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by the Contractor or the Contractor's employees.

70-02 PERMITS, LICENSES, AND TAXES. The Contractor shall procure all permits and licenses, pay all charges, fees, and taxes, and give all notices necessary and incidental to the due and lawful execution of the work.

70-03 PATENTED DEVICES, MATERIALS, AND PROCESSES. If the Contractor is required or desires to use any design, device, material, or process covered by letters of patent or copyright, the Contractor shall provide for such use by suitable legal agreement with the Patentee or Owner. The Contractor and the surety shall indemnify and hold harmless the Owner, any third party, or political subdivision from any and all claims for infringement by reason of the use of any such patented design, device, material or process, or any trademark or copyright, and shall indemnify the Owner for any costs, expenses, and damages which it may be obliged to pay by reason of an infringement, at any time during the execution or after the completion of the work.

70-04 RESTORATION OF SURFACES DISTURBED BY OTHERS. The Owner reserves the right to authorize the construction, reconstruction, or maintenance of any public or private utility service, FAA or National Oceanic and Atmospheric Administration (NOAA) facility, or a utility service of another government agency at any time during the progress of the work. To the extent that such construction, reconstruction, or maintenance has been coordinated with the Owner, such authorized work (by others) is indicated as follows:

Except as listed above, the Contractor shall not permit any individual, firm, or corporation to excavate or otherwise disturb such utility services or facilities located within the limits of the work without the written permission of the Engineer.

Should the Owner of public or private utility service, FAA, or NOAA facility, or a utility service of another government agency be authorized to construct, reconstruct, or maintain such utility service or facility during the progress of the work, the Contractor shall cooperate with such Owners by arranging and performing the work in this contract to facilitate such construction, reconstruction or maintenance by others whether or not such work by others is listed above. When ordered as extra work by the Engineer, the Contractor shall make all necessary repairs to the work which are due to such authorized

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work by others, unless otherwise provided for in the contract, plans, or specifications. It is understood and agreed that the Contractor shall not be entitled to make any claim for damages due to such authorized work by others or for any delay to the work resulting from such authorized work.

70-05 FEDERAL AID PARTICIPATION. N/A

70-06 SANITARY, HEALTH, AND SAFETY PROVISIONS. The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of his or her employees as may be necessary to comply with the requirements of the state and local Board of Health, or of other bodies or tribunals having jurisdiction.

Attention is directed to Federal, state, and local laws, rules and regulations concerning construction safety and health standards. The Contractor shall not require any worker to work in surroundings or under conditions that are unsanitary, hazardous, or dangerous to his or her health or safety.

70-07 PUBLIC CONVENIENCE AND SAFETY. The Contractor shall control his or her operations and those of his or her subcontractors and all suppliers, to assure the least inconvenience to the traveling public. Under all circumstances, safety shall be the most important consideration.

The Contractor shall maintain the free and unobstructed movement of aircraft and vehicular traffic with respect to his or her own operations and those of his or her subcontractors and all suppliers in accordance with the subsection 40-05 titled MAINTENANCE OF TRAFFIC of Section 40 hereinbefore specified and shall limit such operations for the convenience and safety of the traveling public as specified in the subsection 80-04 titled LIMITATION OF OPERATIONS of Section 80 hereinafter.

70-08 BARRICADES, WARNING SIGNS, AND HAZARD MARKINGS. The Contractor shall furnish, erect, and maintain all barricades, warning signs, and markings for hazards necessary to protect the public and the work. When used during periods of darkness, such barricades, warning signs, and hazard markings shall be suitably illuminated. Unless otherwise specified, barricades, warning signs, and markings for hazards that are in the air operations area (AOAs) shall be a maximum of 18 inches (0.5 m) high. Unless otherwise specified, barricades shall be spaced not more than 4 feet (1.2 m) apart. Barricades, warning signs, and markings shall be paid for under subsection 40-05.

For vehicular and pedestrian traffic, the Contractor shall furnish, erect, and maintain barricades, warning signs, lights and other traffic control devices in reasonable conformity with the Manual on Uniform Traffic Control Devices.

When the work requires closing an air operations area of the airport or portion of such area, the Contractor shall furnish, erect, and maintain temporary markings and associated lighting conforming to the requirements of advisory circular (AC) 150/5340-1, Standards for Airport Markings.

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The Contractor shall furnish, erect, and maintain markings and associated lighting of open trenches, excavations, temporary stock piles, and the Contractor's parked construction equipment that may be hazardous to the operation of emergency fire-rescue or maintenance vehicles on the airport in reasonable conformance to AC 150/5370-2, Operational Safety on Airports During Construction.

The Contractor shall identify each motorized vehicle or piece of construction equipment in reasonable conformance to AC 150/5370-2.

The Contractor shall furnish and erect all barricades, warning signs, and markings for hazards prior to commencing work that requires such erection and shall maintain the barricades, warning signs, and markings for hazards until their removal is directed by the Engineer.

Open-flame type lights shall not be permitted.

70-09 USE OF EXPLOSIVES. When the use of explosives is necessary for the execution of the work, the Contractor shall exercise the utmost care not to endanger life or property, including new work. The Contractor shall be responsible for all damage resulting from the use of explosives.

All explosives shall be stored in a secure manner in compliance with all laws and ordinances, and all such storage places shall be clearly marked. Where no local laws or ordinances apply, storage shall be provided satisfactory to the Engineer and, in general, not closer than 1,000 feet (300 m) from the work or from any building, road, or other place of human occupancy.

The Contractor shall notify each property Owner and public utility company having structures or facilities in proximity to the site of the work of his or her intention to use explosives. Such notice shall be given sufficiently in advance to enable them to take such steps as they may deem necessary to protect their property from injury.

The use of electrical blasting caps shall not be permitted on or within 1,000 feet (300 m) of the airport property.

70-10 PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE. The Contractor shall be responsible for the preservation of all public and private property, and shall protect carefully from disturbance or damage all land monuments and property markers until the Engineer has witnessed or otherwise referenced their location and shall not move them until directed.

The Contractor shall be responsible for all damage or injury to property of any character, during the execution of the work, resulting from any act, omission, neglect, or misconduct in manner or method of executing the work, or at any time due to defective work or materials, and said responsibility shall not be released until the project has been completed and accepted.

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When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or in consequence of the non-execution thereof by the Contractor, the Contractor shall restore, at his or her own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, or otherwise restoring as may be directed, or the Contractor shall make good such damage or injury in an acceptable manner.

70-11 RESPONSIBILITY FOR DAMAGE CLAIMS. The Contractor shall indemnify and save harmless the Engineer and the Owner and their officers, and employees from all suits, actions, or claims, of any character, brought because of any injuries or damage received or sustained by any person, persons, or property on account of the operations of the Contractor; or on account of or in consequence of any neglect in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect, or misconduct of said Contractor; or because of any claims or amounts recovered from any infringements of patent, trademark, or copyright; or from any claims or amounts arising or recovered under the "Workmen's Compensation Act," or any other law, ordinance, order, or decree. Money due the Contractor under and by virtue of his or her contract considered necessary by the Owner for such purpose may be retained for the use of the Owner or, in case no money is due, his or her surety may be held until such suits, actions, or claims for injuries or damages shall have been settled and suitable evidence to that effect furnished to the Owner, except that money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that he or she is adequately protected by public liability and property damage insurance.

70-12 THIRD PARTY BENEFICIARY CLAUSE. It is specifically agreed between the parties executing the contract that it is not intended by any of the provisions of any part of the contract to create for the public or any member thereof, a third party beneficiary or to authorize anyone not a party to the contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of the contract.

70-13 OPENING SECTIONS OF THE WORK TO TRAFFIC. Should it be necessary for the Contractor to complete portions of the contract work for the beneficial occupancy of the Owner prior to completion of the entire contract, such "phasing" of the work shall be specified herein and indicated on the plans. When so specified, the Contractor shall complete such portions of the work on or before the date specified or as otherwise specified. The Contractor shall make his or her own estimate of the difficulties involved in arranging the work to permit such beneficial occupancy by the Owner as described below:

Upon completion of any portion of the work listed above, such portion shall be accepted by the Owner in accordance with the subsection 50-14 titled PARTIAL ACCEPTANCE of Section 50.

No portion of the work may be opened by the Contractor for public use until ordered by the Engineer in writing. Should it become necessary to open a portion of the work to public traffic on a temporary or intermittent basis, such openings shall be made when, in

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the opinion of the Engineer, such portion of the work is in an acceptable condition to support the intended traffic. Temporary or intermittent openings are considered to be inherent in the work and shall not constitute either acceptance of the portion of the work so opened or a waiver of any provision of the contract. Any damage to the portion of the work so opened that is not attributable to traffic which is permitted by the Owner shall be repaired by the Contractor at his or her expense.

The Contractor shall make his or her own estimate of the inherent difficulties involved in completing the work under the conditions herein described and shall not claim any added compensation by reason of delay or increased cost due to opening a portion of the contract work.

Contractor shall be required to conform to safety standards contained AC 150/5370-2 (see Special Provisions).

Contractor shall refer to the approved Construction Safety Phasing Plan (CSPP) to identify barricade requirements and other safety requirements prior to opening up sections of work to traffic.

70-14 CONTRACTOR'S RESPONSIBILITY FOR WORK. Until the Engineer's final written acceptance of the entire completed work, excepting only those portions of the work accepted in accordance with the subsection 50-14 titled PARTIAL ACCEPTANCE of Section 50, the Contractor shall have the charge and care thereof and shall take every precaution against injury or damage to any part due to the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof except damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God such as earthquake, tidal wave, tornado, hurricane or other cataclysmic phenomenon of nature, or acts of the public enemy or of government authorities.

If the work is suspended for any cause whatever, the Contractor shall be responsible for the work and shall take such precautions necessary to prevent damage to the work. The Contractor shall provide for normal drainage and shall erect necessary temporary structures, signs, or other facilities at his or her expense. During such period of suspension of work, the Contractor shall properly and continuously maintain in an acceptable growing condition all living material in newly established planting, seeding, and sodding furnished under the contract, and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

70-15 CONTRACTOR'S RESPONSIBILITY FOR UTILITY SERVICE AND FACILITIES OF OTHERS. As provided in the subsection 70-04 titled RESTORATION OF SURFACES DISTURBED BY OTHERS of this section, the Contractor shall cooperate with the Owner of any public or private utility service, FAA or NOAA, or a utility service of another government agency that may be authorized by the

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Owner to construct, reconstruct or maintain such utility services or facilities during the progress of the work. In addition, the Contractor shall control their operations to prevent the unscheduled interruption of such utility services and facilities.

To the extent that such public or private utility services, FAA, or NOAA facilities, or utility services of another governmental agency are known to exist within the limits of the contract work, the approximate locations have been indicated on the plans and the Owners are indicated as follows:

It is understood and agreed that the Owner does not guarantee the accuracy or the completeness of the location information relating to existing utility services, facilities, or structures that may be shown on the plans or encountered in the work. Any inaccuracy or omission in such information shall not relieve the Contractor of the responsibility to protect such existing features from damage or unscheduled interruption of service.

It is further understood and agreed that the Contractor shall, upon execution of the contract, notify the Owners of all utility services or other facilities of his or her plan of operations. Such notification shall be in writing addressed to THE PERSON TO CONTACT as provided in this subsection and subsection 70-04 titled RESTORATION OF SURFACES DISTURBED BY OTHERS of this section. A copy of each notification shall be given to the Engineer.

In addition to the general written notification provided, it shall be the responsibility of the Contractor to keep such individual Owners advised of changes in their plan of operations that would affect such Owners.

Prior to beginning the work in the general vicinity of an existing utility service or facility, the Contractor shall again notify each such Owner of their plan of operation. If, in the Contractor’s opinion, the Owner’s assistance is needed to locate the utility service or facility or the presence of a representative of the Owner is desirable to observe the work, such advice should be included in the notification. Such notification shall be given by the most expeditious means to reach the utility owner’s PERSON TO CONTACT no later than two normal business days prior to the Contractor’s commencement of operations in such general vicinity. The Contractor shall furnish a written summary of the notification to the Engineer.

The Contractor’s failure to give the two days’ notice shall be cause for the Owner to suspend the Contractor’s operations in the general vicinity of a utility service or facility.

Where the outside limits of an underground utility service have been located and staked on the ground, the Contractor shall be required to use hand excavation methods within 3 feet (1 m) of such outside limits at such points as may be required to ensure protection from damage due to the Contractor’s operations.

Should the Contractor damage or interrupt the operation of a utility service or facility by accident or otherwise, the Contractor shall immediately notify the proper authority and the Engineer and shall take all reasonable measures to prevent further damage or

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interruption of service. The Contractor, in such events, shall cooperate with the utility service or facility owner and the Engineer continuously until such damage has been repaired and service restored to the satisfaction of the utility or facility owner.

The Contractor shall bear all costs of damage and restoration of service to any utility service or facility due to their operations whether due to negligence or accident. The Owner reserves the right to deduct such costs from any monies due or which may become due the Contractor, or his or her surety.

70-15.1 FAA FACILITIES AND CABLE RUNS. The Contractor is hereby advised that the construction limits of the project include existing facilities and buried cable runs that are owned, operated and maintained by the FAA. The Contractor, during the execution of the project work, shall comply with the following:

a. The Contractor shall permit FAA maintenance personnel the right of access to the project work site for purposes of inspecting and maintaining all existing FAA owned facilities.

b. The Contractor shall provide notice to the FAA Air Traffic Organization (ATO)/Technical Operations/System Support Center (SSC) Point-of-Contact through the airport operator a minimum of seven (7) calendar days prior to commencement of construction activities in order to permit sufficient time to locate and mark existing buried cables and to schedule any required facility outages.

c. If execution of the project work requires a facility outage, the Contractor shall contact the FAA Point-of-Contact a minimum of 72 hours prior to the time of the required outage.

d. Any damage to FAA cables, access roads, or FAA facilities during construction caused by the Contractor's equipment or personnel whether by negligence or accident will require the Contractor to repair or replace the damaged cables, access road, or FAA facilities to FAA requirements. The Contractor shall not bear the cost to repair damage to underground facilities or utilities improperly located by the FAA.

e. If the project work requires the cutting or splicing of FAA owned cables, the FAA Point-of-Contact shall be contacted a minimum of 72 hours prior to the time the cable work commences. The FAA reserves the right to have a FAA representative on site to observe the splicing of the cables as a condition of acceptance. All cable splices are to be accomplished in accordance with FAA specifications and require approval by the FAA Point-of-Contact as a condition of acceptance by the Owner. The Contractor is hereby advised that FAA restricts the location of where splices may be installed. If a cable splice is required in a location that is not permitted by FAA, the Contractor shall furnish and install a sufficient length of new cable that eliminates the need for any splice.

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70-16 FURNISHING RIGHTS-OF-WAY. The Owner will be responsible for furnishing all rights-of-way upon which the work is to be constructed in advance of the Contractor's operations.

70-17 PERSONAL LIABILITY OF PUBLIC OFFICIALS. In carrying out any of the contract provisions or in exercising any power or authority granted by this contract, there shall be no liability upon the Engineer, his or her authorized representatives, or any officials of the Owner either personally or as an official of the Owner. It is understood that in such matters they act solely as agents and representatives of the Owner.

70-18 NO WAIVER OF LEGAL RIGHTS. Upon completion of the work, the Owner will expeditiously make final inspection and notify the Contractor of final acceptance. Such final acceptance, however, shall not preclude or stop the Owner from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the Owner be precluded or stopped from recovering from the Contractor or his or her surety, or both, such overpayment as may be sustained, or by failure on the part of the Contractor to fulfill his or her obligations under the contract. A waiver on the part of the Owner of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor, without prejudice to the terms of the contract, shall be liable to the Owner for latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the Owner's rights under any warranty or guaranty.

70-19 ENVIRONMENTAL PROTECTION. The Contractor shall comply with all Federal, state, and local laws and regulations controlling pollution of the environment. The Contractor shall take necessary precautions to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, bitumens, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

70-20 ARCHAEOLOGICAL AND HISTORICAL FINDINGS. Unless otherwise specified in this subsection, the Contractor is advised that the site of the work is not within any property, district, or site, and does not contain any building, structure, or object listed in the current National Register of Historic Places published by the United States Department of Interior.

Should the Contractor encounter, during his or her operations, any building, part of a building, structure, or object that is incongruous with its surroundings, the Contractor shall immediately cease operations in that location and notify the Engineer. The Engineer will immediately investigate the Contractor's finding and the Owner will direct the Contractor to either resume operations or to suspend operations as directed.

Should the Owner order suspension of the Contractor's operations in order to protect an archaeological or historical finding, or order the Contractor to perform extra work, such shall be covered by an appropriate contract change order or supplemental agreement as provided in the subsection 40-04 titled EXTRA WORK of Section 40 and the subsection 90-05 titled PAYMENT FOR EXTRA WORK of Section 90. If appropriate, the contract

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change order or supplemental agreement shall include an extension of contract time in accordance with the subsection 80-07 titled DETERMINATION AND EXTENSION OF CONTRACT TIME of Section 80.

END OF SECTION 70

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SECTION 80

EXECUTION AND PROGRESS

80-01 **SUBLETTING OF CONTRACT**. The Owner will not recognize any subcontractor on the work. The Contractor shall at all times when work is in progress be represented either in person, by a qualified superintendent, or by other designated, qualified representative who is duly authorized to receive and execute orders of the Engineer.

The Contractor shall provide copies of all subcontracts to the Engineer. The Contractor shall perform, with his organization, an amount of work equal to at least 40 percent of the total contract cost.

Should the Contractor elect to assign his or her contract, said assignment shall be concurred in by the surety, shall be presented for the consideration and approval of the Owner, and shall be consummated only on the written approval of the Owner.

80-02 **NOTICE TO PROCEED**. The notice to proceed shall state the date on which it is expected the Contractor will begin the construction and from which date contract time will be charged. The Contractor shall begin the work to be performed under the contract within 10 days of the date set by the Engineer in the written notice to proceed, but in any event, the Contractor shall notify the Engineer at least 24 hours in advance of the time actual construction operations will begin. The Contractor shall not commence any actual construction prior to the date on which the notice to proceed is issued by the Owner.

80-03 **EXECUTION AND PROGRESS**. Unless otherwise specified, the Contractor shall submit their progress schedule for the Engineer's approval within 10 days after the effective date of the notice to proceed. The Contractor's progress schedule, when approved by the Engineer, may be used to establish major construction operations and to check on the progress of the work. The Contractor shall provide sufficient materials, equipment, and labor to guarantee the completion of the project in accordance with the plans and specifications within the time set forth in the proposal.

If the Contractor falls significantly behind the submitted schedule, the Contractor shall, upon the Engineer's request, submit a revised schedule for completion of the work within the contract time and modify their operations to provide such additional materials, equipment, and labor necessary to meet the revised schedule. Should the execution of the work be discontinued for any reason, the Contractor shall notify the Engineer at least 24 hours in advance of resuming operations.

The Contractor shall not commence any actual construction prior to the date on which the notice to proceed is issued by the Owner.

80-04 **LIMITATION OF OPERATIONS**. The Contractor shall control his or her operations and the operations of his or her subcontractors and all suppliers to provide

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for the free and unobstructed movement of aircraft in the air operations areas (AOA) of the airport.

When the work requires the Contractor to conduct his or her operations within an AOA of the airport, the work shall be coordinated with airport operations (through the Engineer) at least 48 hours prior to commencement of such work. The Contractor shall not close an AOA until so authorized by the Engineer and until the necessary temporary marking and associated lighting is in place as provided in the subsection 70-08 titled BARRICADES, WARNING SIGNS, AND HAZARD MARKINGS of Section 70.

When the contract work requires the Contractor to work within an AOA of the airport on an intermittent basis (intermittent opening and closing of the AOA), the Contractor shall maintain constant communications as specified; immediately obey all instructions to vacate the AOA; immediately obey all instructions to resume work in such AOA. Failure to maintain the specified communications or to obey instructions shall be cause for suspension of the Contractor's operations in the AOA until the satisfactory conditions are provided. The following AOA cannot be closed to operating aircraft to permit the Contractor's operations on a continuous basis and will therefore be closed to aircraft operations intermittently as follows:

Contractor shall be required to conform to safety standards contained in AC 150/5370-2, Operational Safety on Airports During Construction (see Special Provisions).

80-04.1 OPERATIONAL SAFETY ON AIRPORT DURING CONSTRUCTION. All Contractors' operations shall be conducted in accordance with the project Construction Safety and Phasing Plan (CSPP) and the provisions set forth within the current version of AC 150/5370-2. The CSPP included within the contract documents conveys minimum requirements for operational safety on the airport during construction activities. The Contractor shall prepare and submit a Safety Plan Compliance Document that details how it proposes to comply with the requirements presented within the CSPP.

The Contractor shall implement all necessary safety plan measures prior to commencement of any work activity. The Contractor shall conduct routine checks to assure compliance with the safety plan measures.

The Contractor is responsible to the Owner for the conduct of all subcontractors it employs on the project. The Contractor shall assure that all subcontractors are made aware of the requirements of the CSPP and that they implement and maintain all necessary measures.

No deviation or modifications may be made to the approved CSPP unless approved in writing by the Owner or Engineer.

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80-05 **CHARACTER OF WORKERS, METHODS, AND EQUIPMENT**. The Contractor shall, at all times, employ sufficient labor and equipment for prosecuting the work to full completion in the manner and time required by the contract, plans, and specifications.

All workers shall have sufficient skill and experience to perform properly the work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform the work satisfactorily.

Any person employed by the Contractor or by any subcontractor who violates any operational regulations or operational safety requirements and, in the opinion of the Engineer, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the Engineer, be removed forthwith by the Contractor or subcontractor employing such person, and shall not be employed again in any portion of the work without approval of the Engineer.

Should the Contractor fail to remove such persons or person, or fail to furnish suitable and sufficient personnel for the proper execution of the work, the Engineer may suspend the work by written notice until compliance with such orders.

All equipment that is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the work shall be such that no injury to previously completed work, adjacent property, or existing airport facilities will result from its use.

When the methods and equipment to be used by the Contractor in accomplishing the work are not prescribed in the contract, the Contractor is free to use any methods or equipment that will accomplish the work in conformity with the requirements of the contract, plans, and specifications.

When the contract specifies the use of certain methods and equipment, such methods and equipment shall be used unless others are authorized by the Engineer. If the Contractor desires to use a method or type of equipment other than specified in the contract, the Contractor may request authority from the Engineer to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed and of the reasons for desiring to make the change. If approval is given, it will be on the condition that the Contractor will be fully responsible for producing work in conformity with contract requirements. If, after trial use of the substituted methods or equipment, the Engineer determines that the work produced does not meet contract requirements, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining work with the specified methods and equipment. The Contractor shall remove any deficient work and replace it with work of specified quality, or take such other corrective action as the Engineer may direct. No change will be made in basis of payment for the contract

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items involved nor in contract time as a result of authorizing a change in methods or equipment under this subsection.

80-06 **TEMPORARY SUSPENSION OF THE WORK**. The Owner shall have the authority to suspend the work wholly, or in part, for such period or periods as the Owner may deem necessary, due to unsuitable weather, or such other conditions as are considered unfavorable for the execution of the work, or for such time as is necessary due to the failure on the part of the Contractor to carry out orders given or perform any or all provisions of the contract.

In the event that the Contractor is ordered by the Owner, in writing, to suspend work for some unforeseen cause not otherwise provided for in the contract and over which the Contractor has no control, the Contractor may be reimbursed for actual money expended on the work during the period of shutdown. No allowance will be made for anticipated profits. The period of shutdown shall be computed from the effective date of the Engineer's order to suspend work to the effective date of the Engineer's order to resume the work. Claims for such compensation shall be filed with the Engineer within the time period stated in the Engineer's order to resume work. The Contractor shall submit with his or her claim information substantiating the amount shown on the claim. The Engineer will forward the Contractor's claim to the Owner for consideration in accordance with local laws or ordinances. No provision of this article shall be construed as entitling the Contractor to compensation for delays due to inclement weather, for suspensions made at the request of the Owner, or for any other delay provided for in the contract, plans, or specifications.

If it should become necessary to suspend work for an indefinite period, the Contractor shall store all materials in such manner that they will not become an obstruction nor become damaged in any way. The Contractor shall take every precaution to prevent damage or deterioration of the work performed and provide for normal drainage of the work. The Contractor shall erect temporary structures where necessary to provide for traffic on, to, or from the airport.

80-07 **DETERMINATION AND EXTENSION OF CONTRACT TIME**. The number of calendar or working days allowed for completion of the work shall be stated in the proposal and contract and shall be known as the CONTRACT TIME.

Should the contract time require extension for reasons beyond the Contractor's control, it shall be adjusted as follows:

a. CONTRACT TIME based on WORKING DAYS shall be calculated weekly by the Engineer. The Engineer will furnish the Contractor a copy of his or her weekly statement of the number of working days charged against the contract time during the week and the number of working days currently specified for completion of the contract (the original contract time plus the number of working days, if any, that have been included in approved CHANGE ORDERS or SUPPLEMENTAL AGREEMENTS covering EXTRA WORK).

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The Engineer shall base his or her weekly statement of contract time charged on the following considerations:

(1) No time shall be charged for days on which the Contractor is unable to proceed with the principal item of work under construction at the time for at least six (6) hours with the normal work force employed on such principal item. Should the normal work force be on a double-shift, 12 hours shall be used. Should the normal work force be on a triple-shift, 18 hours shall apply. Conditions beyond the Contractor's control such as strikes, lockouts, unusual delays in transportation, temporary suspension of the principal item of work under construction or temporary suspension of the entire work which have been ordered by the Owner for reasons not the fault of the Contractor, shall not be charged against the contract time.

(2) The Engineer will not make charges against the contract time prior to the effective date of the notice to proceed.

(3) The Engineer will begin charges against the contract time on the first working day after the effective date of the notice to proceed.

(4) The Engineer will not make charges against the contract time after the date of final acceptance as defined in the subsection 50-15 titled FINAL ACCEPTANCE of Section 50.

(5) The Contractor will be allowed one (1) week in which to file a written protest setting forth his or her objections to the Engineer's weekly statement. If no objection is filed within such specified time, the weekly statement shall be considered as acceptable to the Contractor.

The contract time (stated in the proposal) is based on the originally estimated quantities as described in the subsection 20-05 titled INTERPRETATION OF ESTIMATED PROPOSAL QUANTITIES of Section 20. Should the satisfactory completion of the contract require performance of work in greater quantities than those estimated in the proposal, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in contract time shall not consider either the cost of work or the extension of contract time that has been covered by change order or supplemental agreement and shall be made at the time of final payment.

b. Contract Time based on calendar days shall consist of the number of calendar days stated in the contract counting from the effective date of the notice to proceed and including all Saturdays, Sundays, holidays, and non-work days. All calendar days elapsing between the effective dates of the Owner's orders to suspend and resume all work, due to causes not the fault of the Contractor, shall be excluded.

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At the time of final payment, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in the contract time shall not consider either cost of work or the extension of contract time that has been covered by a change order or supplemental agreement. Charges against the contract time will cease as of the date of final acceptance.

c. When the contract time is a specified completion date, it shall be the date on which all contract work shall be substantially complete.

If the Contractor finds it impossible for reasons beyond his or her control to complete the work within the contract time as specified, or as extended in accordance with the provisions of this subsection, the Contractor may, at any time prior to the expiration of the contract time as extended, make a written request to the Owner for an extension of time setting forth the reasons which the Contractor believes will justify the granting of his or her request. Requests for extension of time on calendar day projects, caused by inclement weather, shall be supported with National Weather Bureau data showing the actual amount of inclement weather exceeded what could normally be expected during the contract period. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time. If the supporting documentation justify the work was delayed because of conditions beyond the control and without the fault of the Contractor, the Owner may extend the time for completion by a change order that adjusts the contract time or completion date. The extended time for completion shall then be in full force and effect, the same as though it were the original time for completion.

80-08 **FAILURE TO COMPLETE ON TIME.** For each calendar day or working day, as specified in the contract, that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in the subsection 80-07 titled DETERMINATION AND EXTENSION OF CONTRACT TIME of this Section) the sum specified in the contract and proposal as liquidated damages will be deducted from any money due or to become due the Contractor or his or her surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages including but not limited to additional engineering services that will be incurred by the Owner should the Contractor fail to complete the work in the time provided in their contract.

Schedule	Liquidated Damages Cost	Allowed Construction Time
Base Bid	$1,000 per 15 min interval	30 calendar days
Alternate Bid	$1,000 per 15 min interval	15 calendar days

The maximum construction time allowed for this project is Thirty calendar days. Permitting the Contractor to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a wavier on the part of the Owner of any of its rights under the contract.

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80-09 **DEFAULT AND TERMINATION OF CONTRACT**. The Contractor shall be considered in default of his or her contract and such default will be considered as cause for the Owner to terminate the contract for any of the following reasons if the Contractor:

a. Fails to begin the work under the contract within the time specified in the Notice to Proceed, or

b. Fails to perform the work or fails to provide sufficient workers, equipment and/or materials to assure completion of work in accordance with the terms of the contract, or

c. Performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable, or

d. Discontinues the execution of the work, or

e. Fails to resume work which has been discontinued within a reasonable time after notice to do so, or

f. Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or

g. Allows any final judgment to stand against the Contractor unsatisfied for a period of 10 days, or

h. Makes an assignment for the benefit of creditors, or

i. For any other cause whatsoever, fails to carry on the work in an acceptable manner.

Should the Engineer consider the Contractor in default of the contract for any reason above, the Engineer shall immediately give written notice to the Contractor and the Contractor's surety as to the reasons for considering the Contractor in default and the Owner's intentions to terminate the contract.

If the Contractor or surety, within a period of 10 days after such notice, does not proceed in accordance therewith, then the Owner will, upon written notification from the Engineer of the facts of such delay, neglect, or default and the Contractor's failure to comply with such notice, have full power and authority without violating the contract, to take the execution of the work out of the hands of the Contractor. The Owner may appropriate or use any or all materials and equipment that have been mobilized for use in the work and are acceptable and may enter into an agreement for the completion of said contract according to the terms and provisions thereof, or use such other methods as in the opinion of the Engineer will be required for the completion of said contract in an acceptable manner.

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All costs and charges incurred by the Owner, together with the cost of completing the work under contract, will be deducted from any monies due or which may become due the Contractor. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay to the Owner the amount of such excess.

80-10 TERMINATION FOR NATIONAL EMERGENCIES. The Owner shall terminate the contract or portion thereof by written notice when the Contractor is prevented from proceeding with the construction contract as a direct result of an Executive Order of the President with respect to the execution of war or in the interest of national defense.

When the contract, or any portion thereof, is terminated before completion of all items of work in the contract, payment will be made for the actual number of units or items of work completed at the contract price or as mutually agreed for items of work partially completed or not started. No claims or loss of anticipated profits shall be considered.

Reimbursement for organization of the work, and other overhead expenses, (when not otherwise included in the contract) and moving equipment and materials to and from the job will be considered, the intent being that an equitable settlement will be made with the Contractor.

Acceptable materials, obtained or ordered by the Contractor for the work and that are not incorporated in the work shall, at the option of the Contractor, be purchased from the Contractor at actual cost as shown by receipted bills and actual cost records at such points of delivery as may be designated by the Engineer.

Termination of the contract or a portion thereof shall neither relieve the Contractor of his or her responsibilities for the completed work nor shall it relieve his or her surety of its obligation for and concerning any just claim arising out of the work performed.

80-11 WORK AREA, STORAGE AREA AND SEQUENCE OF OPERATIONS. The Contractor shall obtain approval from the Engineer prior to beginning any work in all areas of the airport. No operating runway, taxiway, or air operations area (AOA) shall be crossed, entered, or obstructed while it is operational. The Contractor shall plan and coordinate his or her work in such a manner as to ensure safety and a minimum of hindrance to flight operations. All Contractor equipment and material stockpiles shall be stored a minimum of 400 feet from the centerline of an active runway. No equipment will be allowed to park within the approach area of an active runway at any time. No equipment shall be within 250 feet of an active runway at any time.

END OF SECTION 80

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SECTION 90

MEASUREMENT AND PAYMENT

90-01 MEASUREMENT OF QUANTITIES. All work completed under the contract will be measured by the Engineer, or his or her authorized representatives, using United States Customary Units of Measurement or the International System of Units.

The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.
Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures (or leave-outs) having an area of 9 square feet (0.8 square meters) or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered in writing by the Engineer.

Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.

Unless otherwise specified, all contract items which are measured by the linear foot such as electrical ducts, conduits, pipe culverts, underdrains, and similar items shall be measured parallel to the base or foundation upon which such items are placed.

In computing volumes of excavation the average end area method or other acceptable methods will be used.

The thickness of plates and galvanized sheet used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing will be specified and measured in decimal fraction of inch.

The term “ton” will mean the short ton consisting of 2,000 lb (907 km) avoirdupois. All materials that are measured or proportioned by weights shall be weighed on accurate, approved scales by competent, qualified personnel at locations designed by the Engineer. If material is shipped by rail, the car weight may be accepted provided that only the actual weight of material is paid for. However, car weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being paid for by weight shall be weighed empty daily at such times as the Engineer directs, and each truck shall bear a plainly legible identification mark.

Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable for the materials hauled, provided that the body is of such shape that the actual contents may be readily and accurately determined. All vehicles shall be loaded to at least their water level capacity, and all loads shall be leveled when the vehicles arrive at the point of delivery.

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When requested by the Contractor and approved by the Engineer in writing, material specified to be measured by the cubic yard (cubic meter) may be weighed, and such weights will be converted to cubic yards (cubic meters) for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the Engineer and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.

Bituminous materials will be measured by the gallon (liter) or ton (kg). When measured by volume, such volumes will be measured at 60°F (16°C) or will be corrected to the volume at 60°F (16°C) using ASTM D1250 for asphalts or ASTM D633 for tars.

Net certified scale weights or weights based on certified volumes in the case of rail shipments will be used as a basis of measurement, subject to correction when bituminous material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work.

When bituminous materials are shipped by truck or transport, net certified weights by volume, subject to correction for loss or foaming, may be used for computing quantities.

Cement will be measured by the ton (kg) or hundredweight (km).

Timber will be measured by the thousand feet board measure (MFBM) actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece.

The term “lump sum” when used as an item of payment will mean complete payment for the work described in the contract.

When a complete structure or structural unit (in effect, “lump sum” work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

Rental of equipment will be measured by time in hours of actual working time and necessary traveling time of the equipment within the limits of the work. Special equipment ordered by the Engineer in connection with force account work will be measured as agreed in the change order or supplemental agreement authorizing such force account work as provided in the subsection 90-05 titled PAYMENT FOR EXTRA WORK of this section.

When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gauge, unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.

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Scales for weighing materials which are required to be proportioned or measured and paid for by weight shall be furnished, erected, and maintained by the Contractor, or be certified permanently installed commercial scales.

Scales shall be accurate within 1/2% of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of the inspector before beginning work and at such other times as requested. The intervals shall be uniform in spacing throughout the graduated or marked length of the beam or dial and shall not exceed one-tenth of 1% of the nominal rated capacity of the scale, but not less than 1 pound (454 grams). The use of spring balances will not be permitted.

Beams, dials, platforms, and other scale equipment shall be so arranged that the operator and the inspector can safely and conveniently view them.

Scale installations shall have available ten standard 50-pound (2.3 km) weights for testing the weighing equipment or suitable weights and devices for other approved equipment.

Scales must be tested for accuracy and serviced before use at a new site. Platform scales shall be installed and maintained with the platform level and rigid bulkheads at each end.

Scales "overweighing" (indicating more than correct weight) will not be permitted to operate, and all materials received subsequent to the last previous correct weighting-accuracy test will be reduced by the percentage of error in excess of one-half of 1%.

In the event inspection reveals the scales have been underweighing (indicating less than correct weight), they shall be adjusted, and no additional payment to the Contractor will be allowed for materials previously weighed and recorded.

All costs in connection with furnishing, installing, certifying, testing, and maintaining scales; for furnishing check weights and scale house; and for all other items specified in this subsection, for the weighing of materials for proportioning or payment, shall be included in the unit contract prices for the various items of the project.

When the estimated quantities for a specific portion of the work are designated as the pay quantities in the contract, they shall be the final quantities for which payment for such specific portion of the work will be made, unless the dimensions of said portions of the work shown on the plans are revised by the Engineer. If revised dimensions result in an increase or decrease in the quantities of such work, the final quantities for payment will be revised in the amount represented by the authorized changes in the dimensions.

90-02 SCOPE OF PAYMENT. The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing all materials, for performing all work under the contract in a complete and acceptable manner, and for all risk, loss, damage, or expense of whatever character arising out of the nature of the work or the execution thereof, subject to the provisions of the subsection 70-18 titled NO WAIVER OF LEGAL RIGHTS of Section 70.

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When the "basis of payment" subsection of a technical specification requires that the contract price (price bid) include compensation for certain work or material essential to the item, this same work or material will not also be measured for payment under any other contract item which may appear elsewhere in the contract, plans, or specifications.

90-03 COMPENSATION FOR ALTERED QUANTITIES. When the accepted quantities of work vary from the quantities in the proposal, the Contractor shall accept as payment in full, so far as contract items are concerned, payment at the original contract price for the accepted quantities of work actually completed and accepted. No allowance, except as provided for in the subsection 40-02 titled ALTERATION OF WORK AND QUANTITIES of Section 40 will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor which results directly from such alterations or indirectly from his or her unbalanced allocation of overhead and profit among the contract items, or from any other cause.

90-04 PAYMENT FOR OMITTED ITEMS. As specified in the subsection 40-03 titled OMITTED ITEMS of Section 40, the Engineer shall have the right to omit from the work (order nonperformance) any contract item, except major contract items, in the best interest of the Owner.

Should the Engineer omit or order nonperformance of a contract item or portion of such item from the work, the Contractor shall accept payment in full at the contract prices for any work actually completed and acceptable prior to the Engineer's order to omit or non-perform such contract item.

Acceptable materials ordered by the Contractor or delivered on the work prior to the date of the Engineer's order will be paid for at the actual cost to the Contractor and shall thereupon become the property of the Owner.

In addition to the reimbursement hereinbefore provided, the Contractor shall be reimbursed for all actual costs incurred for the purpose of performing the omitted contract item prior to the date of the Engineer's order. Such additional costs incurred by the Contractor must be directly related to the deleted contract item and shall be supported by certified statements by the Contractor as to the nature the amount of such costs.

90-05 PAYMENT FOR EXTRA WORK. Extra work, performed in accordance with the subsection 40-04 titled EXTRA WORK of Section 40, will be paid for at the contract prices or agreed prices specified in the change order or supplemental agreement authorizing the extra work.

90-06 PARTIAL PAYMENTS. Partial payments will be made to the Contractor at least once each month as the work progresses. Said payments will be based upon estimates, prepared by the Engineer, of the value of the work performed and materials complete and in place, in accordance with the contract, plans, and specifications. Such partial payments may also include the delivered actual cost of those materials stockpiled and stored in accordance with the subsection 90-07 titled PAYMENT FOR MATERIALS ON HAND

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of this section. No partial payment will be made when the amount due to the Contractor since the last estimate amounts to less than five hundred dollars.

The Contractor is required to pay all subcontractors for satisfactory performance of their contracts no later than 30 days after the Contractor has received a partial payment. The Owner must ensure prompt and full payment of retainage from the prime Contractor to the subcontractor within 30 days after the subcontractor's work is satisfactorily completed. A subcontractor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished and documented as required by the Owner. When the Owner has made an incremental acceptance of a portion of a prime contract, the work of a subcontractor covered by that acceptance is deemed to be satisfactorily completed.

From the total of the amount determined to be payable on a partial payment, 10 percent of such total amount will be deducted and retained by the Owner until the final payment is made, except as may be provided (at the Contractor's option) in the subsection 90-08 titled PAYMENT OF WITHHELD FUNDS of this section. The balance of the amount payable, less all previous payments, shall be certified for payment. Should the Contractor exercise his or her option, as provided in the subsection 90-08 titled PAYMENT OF WITHHELD FUNDS of this section, no such percent retainage shall be deducted.

When at least 95% of the work has been completed, the Engineer shall, at the Owner's discretion and with the consent of the surety, prepare estimates of both the contract value and the cost of the remaining work to be done.

The Owner may retain an amount not less than twice the contract value or estimated cost, whichever is greater, of the work remaining to be done. The remainder, less all previous payments and deductions, will then be certified for payment to the Contractor.

It is understood and agreed that the Contractor shall not be entitled to demand or receive partial payment based on quantities of work in excess of those provided in the proposal or covered by approved change orders or supplemental agreements, except when such excess quantities have been determined by the Engineer to be a part of the final quantity for the item of work in question.

No partial payment shall bind the Owner to the acceptance of any materials or work in place as to quality or quantity. All partial payments are subject to correction at the time of final payment as provided in the subsection 90-09 titled ACCEPTANCE AND FINAL PAYMENT of this section.

The Contractor shall deliver to the Owner a complete release of all claims for labor and material arising out of this contract before the final payment is made. If any subcontractor or supplier fails to furnish such a release in full, the Contractor may furnish a bond or other collateral satisfactory to the Owner to indemnify the Owner against any potential lien or other such claim. The bond or collateral shall include all costs, expenses, and attorney fees the Owner may be compelled to pay in discharging any such lien or claim.

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90-07 PAYMENT FOR MATERIALS ON HAND. Partial payments may be made to the extent of the delivered cost of materials to be incorporated in the work, provided that such materials meet the requirements of the contract, plans, and specifications and are delivered to acceptable sites on the airport property or at other sites in the vicinity that are acceptable to the Owner. Such delivered costs of stored or stockpiled materials may be included in the next partial payment after the following conditions are met:

a. The material has been stored or stockpiled in a manner acceptable to the Engineer at or on an approved site.

b. The Contractor has furnished the Engineer with acceptable evidence of the quantitand quality of such stored or stockpiled materials.

c. The Contractor has furnished the Engineer with satisfactory evidence that the material and transportation costs have been paid.

d. The Contractor has furnished the Owner legal title (free of liens or encumbrances of any kind) to the material so stored or stockpiled.

e. The Contractor has furnished the Owner evidence that the material so stored or stockpiled is insured against loss by damage to or disappearance of such materials at any time prior to use in the work.

It is understood and agreed that the transfer of title and the Owner's payment for such stored or stockpiled materials shall in no way relieve the Contractor of his or her responsibility for furnishing and placing such materials in accordance with the requirements of the contract, plans, and specifications.

In no case will the amount of partial payments for materials on hand exceed the contract price for such materials or the contract price for the contract item in which the material is intended to be used.

No partial payment will be made for stored or stockpiled living or perishable plant materials.

The Contractor shall bear all costs associated with the partial payment of stored or stockpiled materials in accordance with the provisions of this subsection.

90-08 PAYMENT OF WITHHELD FUNDS. At the Contractor's option, if an Owner withholds retainage in accordance with the methods described in subsection 90-06 PARTIAL PAYMENTS, the Contractor may request that the Owner deposit the retainage into an escrow account. The Owner's deposit of retainage into an escrow account is subject to the following conditions:

a. The Contractor shall bear all expenses of establishing and maintaining an escrow account and escrow agreement acceptable to the Owner.

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b. The Contractor shall deposit to and maintain in such escrow only those securities or bank certificates of deposit as are acceptable to the Owner and having a value not less than the retainage that would otherwise be withheld from partial payment.

c. The Contractor shall enter into an escrow agreement satisfactory to the Owner.

d. The Contractor shall obtain the written consent of the surety to such agreement.

90-09 ACCEPTANCE AND FINAL PAYMENT. When the contract work has been accepted in accordance with the requirements of the subsection 50-15 titled FINAL ACCEPTANCE of Section 50, the Engineer will prepare the final estimate of the items of work actually performed. The Contractor shall approve the Engineer's final estimate or advise the Engineer of the Contractor's objections to the final estimate which are based on disputes in measurements or computations of the final quantities to be paid under the contract as amended by change order or supplemental agreement. The Contractor and the Engineer shall resolve all disputes (if any) in the measurement and computation of final quantities to be paid within 30 calendar days of the Contractor's receipt of the Engineer's final estimate. If, after such 30-day period, a dispute still exists, the Contractor may approve the Engineer's estimate under protest of the quantities in dispute, and such disputed quantities shall be considered by the Owner as a claim in accordance with the subsection 50-16 titled CLAIMS FOR ADJUSTMENT AND DISPUTES of Section 50.

After the Contractor has approved, or approved under protest, the Engineer's final estimate, and after the Engineer's receipt of the project closeout documentation required in subsection 90-11 Project Closeout, final payment will be processed based on the entire sum, or the undisputed sum in case of approval under protest, determined to be due the Contractor less all previous payments and all amounts to be deducted under the provisions of the contract. All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

If the Contractor has filed a claim for additional compensation under the provisions of the subsection 50-16 titled CLAIMS FOR ADJUSTMENTS AND DISPUTES of Section 50 or under the provisions of this subsection, such claims will be considered by the Owner in accordance with local laws or ordinances. Upon final adjudication of such claims, any additional payment determined to be due the Contractor will be paid pursuant to a supplemental final estimate.

90-10 CONSTRUCTION WARRANTY.

a. In addition to any other warranties in this contract, the Contractor warrants that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, workmanship, or design furnished, or performed by the Contractor or any subcontractor or supplier at any tier.

b. This warranty shall continue for a period of one year from the date of final acceptance of the work. If the Owner takes possession of any part of the work before final acceptance, this warranty shall continue for a period of one year from the date the

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Owner takes possession. However, this will not relieve the Contractor from corrective items required by the final acceptance of the project work.

c. The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Owner real or personal property, when that damage is the result of:

(1) The Contractor's failure to conform to contract requirements; or

(2) Any defect of equipment, material, workmanship, or design furnished by the Contractor.

d. The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for one year from the date of repair or replacement.

e. The Owner will notify the Contractor, in writing, within seven (7) days after the discovery of any failure, defect, or damage.

f. If the Contractor fails to remedy any failure, defect, or damage within 14 days after receipt of notice, the Owner shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

g. With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall: (1) Obtain all warranties that would be given in normal commercial practice; (2) Require all warranties to be executed, in writing, for the benefit of the Owner, as directed by the Owner, and (3) Enforce all warranties for the benefit of the Owner.

h. This warranty shall not limit the Owner's rights with respect to latent defects, gross mistakes, or fraud.

90-11 PROJECT CLOSEOUT. Approval of final payment to the Contractor is contingent upon completion and submittal of the items listed below. The final payment will not be approved until the Engineer approves the Contractor's final submittal. The Contractor shall:

a. Provide two (2) copies of all manufacturers warranties specified for materials, equipment, and installations.

b. Provide weekly payroll records (not previously received) from the general Contractor and all subcontractors.

c. Complete final cleanup in accordance with subsection 40-08, FINAL CLEANUP.

d. Complete all punch list items identified during the Final Inspection.

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e. Provide complete release of all claims for labor and material arising out of the Contract.
f. Provide a certified statement signed by the subcontractors, indicating actual amounts paid to the Disadvantaged Business Enterprise (DBE) subcontractors and/or suppliers associated with the project.

g. When applicable per state requirements, return copies of sales tax completion forms.

h. Manufacturer's certifications for all items incorporated in the work.

i. All required record drawings, as-built drawings or as-constructed drawings.

j. Project Operation and Maintenance (O&M) Manual.

k. Security for Construction Warranty.

l. Equipment commissioning documentation submitted, if required.

END OF SECTION 90

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SUPPLEMENTARY CONDITIONS

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SECTION 00800

SUPPLEMENTARY CONDITIONS

The following conditions amend or supplement the referenced "Standard Federal Aviation Administration General Provisions". All provisions which are not so amended or supplemented remain in full force and effect.

SECTION 10 - DEFINITION OF TERMS

SC-1 DELETE THE FOLLOWING DEFINITIONS AND REPLACE WITH THE FOLLOWING DEFINITIONS:

DELETE "10-04 AIRPORT"; REPLACE WITH:

10-04 AIRPORT. Any area of land or water which is used or intended for use, for the landing and takeoff of aircraft, and any appurtenant areas which are used, or intended for use, for airport buildings, pavements, and other facilities or rights of way; and airport buildings and facilities located thereon and as they may from time to time be revised, extended or defined.

DELETE "10-12 CALENDAR DAY"; REPLACE WITH:

10-12 CALENDAR DAY. A calendar day of 24 hours measured from midnight to the next midnight constituting a day.

DELETE "10-16 CONTRACT"; REPLACE WITH:

10-16 CONTRACT. The written agreement between the Owner and the Contractor covering the work to be performed. The awarded contract shall include, but is not limited to: The Advertisement; The Contract Form; The Proposal; The Performance Bond; The Payment Bond; any required insurance certificates; The General Provisions; The Special Provisions; The Specifications; The Plans, and any addenda issued to bidders; Change Orders and agreements which are required to complete the construction of the work in an acceptable manner, including authorized extensions thereof, all of which constitute one instrument.

DELETE "10-18 CONTRACT TIME"; REPLACE WITH:

10-18 CONTRACT TIME. The number of calendar days stated in the Bid, allowed for completion of the contract, including authorized time extensions. If a calendar date of completion is stated in the proposal, in lieu of a number of calendar days, the contract shall be completed by that date. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period fall on a

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Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

DELETE "10-25 ENGINEER"; REPLACE WITH:

10-25 ENGINEER. The person, firm or corporation named as such in the Agreement.

DELETE "10-29 FEDERAL SPECIFICATION"; REPLACE WITH:

10-29 FEDERAL SPECIFICATION. The Federal Specifications and Standards, and supplements, amendments, and indices thereto are prepared and issued by the General Services Administration of the Federal Government. They may be obtained from Standardization Documents - Order Desk, 700 Robbins Avenue, Building 4 - Section D, Philadelphia, Pennsylvania 19111-5094, Telephone (215) 697-2197.

DELETE "10-37 OWNER", REPLACE WITH:

10-37 OWNER. The term Owner shall mean the party of the first part or the contracting agency signatory to the contract. For AIP contracts, the term sponsor shall have the same meaning as the term Owner.

DELETE "10-40 PAYMENT BOND" REPLACE WITH:

10-40 PAYMENT BOND. The approved form of security furnished by the Contractor and his/her surety as a guaranty of good faith and ability on the part of the Contractor to execute the work in accordance with their terms of the Plans, Specifications, and Contract, and as a guaranty that he will pay in full all bills and accounts for materials and labor used in the construction of the work, as provided by law.

DELETE "10-55 SPONSOR"; REPLACE WITH:

10-55 SPONSOR. A public agency or a political subdivision of a State in whom rests the title to the airport at which the construction under this contract is to be performed. Political subdivision refers to a County, City, Village, Township, or any combination or authority thereof as provided by law for the construction and operation of airports. The Sponsor may also be referred to as the Owner in several parts of the contract.

DELETE "10-58 SUPERINTENDENT"; REPLACE WITH:

10-58 SUPERINTENDENT. The Contractor's executive representative, who shall be appointed by the Contractor by a letter and a resume and after receipt of Engineer's approval, must be present on the work during progress, authorized to

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receive and fulfill instructions from the Engineer, and who shall supervise and direct the construction.

DELETE "10-60 SURETY"; REPLACE WITH:

10-60 SURETY. The corporate body which is bound with the Contractor and which engages to be responsible for the Contractor and his acceptable performance of the work and his payment of all debts pertaining to the work.

DELETE "10-64 WORK"; REPLACE WITH:

10-64 WORK. The entire complete construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work is the result of performing services, furnishing labor and furnishing and incorporating materials and equipment into the construction, all as required by the Contract Documents.

SC-2 AFTER THE LAST DEFINITION OF SECTION 10, ADD THE FOLLOWING NEW DEFINITIONS:

10-67 ADVISORY CIRCULAR. A document issued by the FAA containing informational material and guidance. When referred to in the plans and specifications, advisory circulars shall have the same force as supplemental specifications.

10-68 GENERAL PROVISIONS. Standard FAA conditions of the Contract identified as Sections 10, 20, 30, 40, 50, 60, 70, 80, 90.

10-69 MIL SPECIFICATION. The Military Specifications and Standards, and indices thereto, are prepared and issued by the Department of Defense. They may be obtained from the same address noted in paragraph 10-22.

10-70 PRODUCTS. The materials, systems and equipment to be incorporated into the work.

10-71 PROJECT MANUAL. These compiled documents comprising Bidding Requirements, Bid Forms, Contract Forms, General Conditions, Supplementary Conditions, Specifications, Addenda and modifications.

10- 72 SUBSTANTIAL COMPLETION. The Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer as evidenced by Engineer's definitive certificate of Substantial Completion, it is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part) can be utilized for the purposes for which it is intended; or if there be no such certificate issued, when final payment is due in accordance with

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Section 90. The terms "substantially complete" and "substantially completed" as applied to any Work refer to "Substantial Completion thereof."

10-73 SPECIAL PROVISIONS. The part of the Contract Documents which amends or supplements these Standard FAA General Provisions.

10-74 SUBCONTRACTOR. The prequalified (where required) individual, partnership or corporation, or a combination thereof, undertaking the execution of a part of the work under the terms of the contract, by virtue of an agreement with the Contractor approved by the Owner.

10-75 SUPPLEMENTARY CONDITIONS. The part of the Contract Documents which amends or supplements these Standard FAA General Provisions.

SECTION 20 - PROPOSAL REQUIREMENTS AND CONDITIONS

SC-4 IN ADDITION TO THE STANDARD GENERAL PROVISIONS, THE FOLLOWING SECTION SHALL BE USED IN LEIU OF SECTION 20-06:

“EXAMINATION OF PLANS, SPECIFICATIONS AND PHYSICAL CONDITIONS:

The Bidder is expected to carefully examine the site of the proposed work, the bid, plans, specifications, and contract forms. He shall satisfy himself as to the character, quality, and quantities of work to be performed, materials to be furnished, and as to the requirements of the proposed contract. The submission of a bid shall be prima facie evidence that the Bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the proposed contract, plans, and specifications.

Boring logs and other records of subsurface investigations and tests are attached to these specifications. It is understood and agreed that such subsurface information was obtained and is intended for the Owner's design and estimating purposes only. Such information has been made available for the convenience of all Bidders. It is further understood and agreed that each Bidder is solely responsible for all assumptions, deductions, or conclusions which he may make or obtain from his examination of the boring logs and other records of subsurface investigations and tests that are furnished by the Owner.”

SECTION 30 - AWARD AND EXECUTION OF CONTRACT

SC-5 IN ADDITION TO THE STANDARD GENERAL PROVISIONS, THE FOLLOWING SECTION SHALL BE ADDED TO SECTION 30:

“PERFORMANCE AND OTHER BONDS:

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a. Contractor shall furnish Performance and Payment Bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all Contractor's obligations under the Contract Documents. These Bonds shall remain in effect at least until one year after the date when final payment becomes due, except as otherwise provided by Law or Regulation or by the Contract Documents. Contractor shall also furnish such other Bonds as are required by the Supplementary Conditions. All Bonds shall be in the forms prescribed by the Contract Documents and be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, U.S. Treasury Department. All Bonds signed by an agent must be accompanied by a certified copy of the authority to act.

b. If the Surety on any Bond furnished by Contractor is declared a bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located, or it ceases to meet the requirements of paragraph a. above, the Contractor shall within five days thereafter substitute another Bond and Surety, both of which must be acceptable to Owner."

SECTION 40 SCOPE OF WORK

SC-6 ALTERATION OF WORK AND QUANTITIES

The Owner reserves and shall have the right to make such alterations in the work as may be necessary or desirable to complete the work originally intended in an acceptable manner. Unless otherwise specified herein, the Engineer, shall be and is hereby authorized to make such alterations in the work as may increase or decrease the originally awarded contract quantities, provided that the aggregate of such alterations does not change the total contract cost, (total cost being based on the contract unit prices and proposal quantities in the awarded contract) or the total cost of any major contract item (a major item shall be construed as any item, the total cost of which is equal to or greater than or greater than 20% of the total contract amount, computed on the basis of the proposal quantity and the contract unit price) by more than 25 percent. Alterations which do not exceed the 25 percent limitation shall not invalidate the contract nor release the surety, and the Contractor agrees to accept payment for such alterations at the awarded contract unit price as if the altered work had been a part of the original contract. These alterations that are for work within the general scope of the contract shall be covered by "Change Orders" issued by the Engineer and approved by the Owner. In no case shall the Contractor exceed the total contract cost without prior written approval from the Engineer and Owner via Change Order. Any work performed that exceeds the total contract cost without prior written approval of the Engineer and Owner will not be measured for payment and will be performed at the Contractor's expense. Change orders for altered work shall include extensions of contract time where, in the Engineer's opinion, such extensions are commensurate with the amount and difficulty of added work.

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All supplemental agreements shall require consent of the Contractor's surety and separate performance and payment bonds.

SC-7 ADD THE FOLLOWING PARAGRAPH TO THE END OF SUBSECTION 40-05 "MAINTENANCE OF TRAFFIC":

The Contractor shall indemnify and hold harmless the Owner, its agents, servants, employees, of and from any and all claims, demands, debts, liabilities, or causes of action, of every kind or nature whatsoever, whether in law or in equity, resulting from the acts or omissions of the Contractor, its agents, servants, employees and subcontractors with respect to the requirements of this subsection and in the performance of this contract.

SC-8 ADD THE FOLLOWING SUBSECTION TO THE END OF SECTION 40 "SCOPE OF WORK":

40-09 ACCESS TO THE WORK. Access to the work will be via the access routes shown on the plans or as directed by the Engineer. The Contractor shall identify access routes with suitable signs, barricades and similar equipment.

The entire access route and construction site shall be kept free and clean of all debris at all times and maintained in good repair by the Contractor. All damage to the access route caused by the actions of the Contractor or his agents shall be immediately repaired to the satisfaction of the Owner.

No additional payment will be made to the Contractor for complying with the requirements of this subsection.

No other access to the work sites will be permitted without written approval by the Engineer. Contractor's vehicles and equipment, including vehicles and equipment of subcontractors and others coming under the Contractor's control, will not be permitted to traverse other airfield areas or pavements without written approval of the Engineer.

Contractor's vehicles, equipment, and materials may be stored in the area designated on the Plans, or by the Engineer. Upon completion of the work, the storage area shall be cleaned up and returned to its original condition to the satisfaction of the Engineer. No special payment will be made for clean up and restoration of the storage area.

Space will be allotted by the Engineer for the use of employees of the Contractor and his subcontractor(s) for the daily parking of their automobiles during the construction period. Personal vehicles of employees and vehicles operated by vendors of goods or services will not be permitted beyond the Contractor's parking area. Drivers of vehicles being operated beyond this area shall be subject to loss of permission to enter the construction site.

SECTION 50 - CONTROL OF WORK

SC-9 DELETE PARAGRAPH 50-03 "COORDINATION OF CONTRACT, PLANS, AND

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SPECIFICATIONS" IN ITS ENTIRETY AND INSERT THE FOLLOWING:

50-03 COORDINATION OF CONTRACT, PLANS AND SPECIFICATIONS. The contract, plans, specifications, and all referenced standards cited are essential parts of the contract requirements. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In resolving conflicts, discrepancies, or errors in the various contract documents, the documents shall be given the order of precedence, as follows: Contract, Supplemental Agreement, Change Order, Addenda, Special Provision, Plans, Specifications, General Provisions. In case of discrepancy, figured dimensions, unless obviously incorrect, shall govern over scaled dimensions. Cited standards for materials or testing, and cited FAA Advisory Circulars shall be considered as standard specifications.

Any table, gradation, size, dimension, rate, mix, method, nomenclature, pay item number, basis of payment or method of measurement shown on the plans, which is at variance with the standard specifications, shall be considered an amendment or supplement to the applicable specification.

The Contractor shall not take advantage of any apparent error or omission on the plans or specifications. In the event the Contractor discovers any apparent error or discrepancy, he shall immediately call upon the Engineer for his interpretation and decision, and such decision shall be final.

SC-10 DELETE THE FIRST FOUR SUBPARAGRAPHS OF PARAGRAPH 50-06 "CONSTRUCTION LAYOUT AND STAKES" IN ITS ENTIRETY AND INSERT THE FOLLOWING:

50-07 CONSTRUCTION LAYOUT AND STAKES. Utilizing the data shown on the plans and/or furnished by the Engineer, the Contractor shall establish all horizontal and vertical controls necessary to construct the work in conformance with the plans and specifications. The work shall include performing all calculations required and setting all stakes needed, such as offset stakes, reference point stakes, slope stakes, and other reference marks or points necessary to provide lines and grades for construction.
The Contractor shall employ only competent personnel and utilize only suitable equipment in performing layout work.

The Contractor shall not engage the services of any person or persons in the employ of the Engineer for performance of layout work.

Adequate field notes and records shall be kept as layout work is accomplished. These field notes and records shall be available for review by the Engineer as the work progresses and copies shall be furnished to the Engineer at the time of completion of the project. Any inspection or checking of the Contractor's field notes or layout work by the Engineer and the acceptance of all or any part thereof,

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shall not relieve the Contractor of his/her responsibility to achieve the lines, grades, and dimensions shown in the plans and specifications.

The cost of all stakes and the cost of performing layout work as described above shall be included in the contract unit prices for the various items of work to which it is incidental.

SC-11 ADD THE FOLLOWING PARAGRAPH TO THE END OF PARAGRAPH 50-16 "CLAIMS FOR ADJUSTMENT AND DISPUTES":

"The following documentation and information must be presented in order for the Engineer to properly evaluate such claim:

a. Definition of the basis of the claim, including a detailed identification of which materials and what work is considered to represent a change to the original contract, an explanation of why the work or material is different than what was called for by the original contract, and an identification of the contract provisions and anything else which the Contractor relied upon;

b. An explanation of how and why the work which is considered a change will result in any additional cost or performance time for the Contractor;

c. An identification of the categories of additional costs which may be incurred, an estimate of the dollar magnitude of each, and a statement of the impact this work will have on the construction schedule, including the contract completion dates;

d. An indication of how the additional costs which is believed that may be incurred can be, and are to be, quantified;

e. Documentation of any actual additional costs and any actual impact to the construction schedule due to this work;

f. Documentation of the cost of performing all similar "unchanged" work, to provide the Engineer a basis for comparison;

g. All backup and other documentation which is believed to support or relate to the claim;

h. Documentation quantifying the amount of work which is believed to constitute this "changed" work, and the time period and the areas where such work was or is to be performed."

SC-12 DELETE SUBSECTION 50-17 "COST REDUCTION INCENTIVE" IN ITS ENTIRETY.

SC-13 ADD THE FOLLOWING PARAGRAPHS TO THE END OF SECTION 50:

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50-18 **RETEST OF WORK** When as provided for in the contract documents, the Owner performs sampling and tests of the work and the tests show a failure to meet the requirements of the contract documents, the expense of retesting, after reworking or substitution by the Contractor will be at the expense of the Contractor and such costs will be deducted from the payments otherwise due to the Contractor.

50-19 **CORRECTION OF WORK AFTER FINAL PAYMENT.** Neither the final certificate nor payment, nor any provision in the contract documents shall relieve the Contractor of responsibility for faulty materials or workmanship and, unless otherwise specified, he shall remedy any defect due thereto and pay for any damage to other work resulting therefrom, which shall appear within a period of one year from date of final acceptance. Wherever the word "acceptance" occurs, it shall be understood to mean final acceptance.

The Owner shall give notice of observed defects with reasonable promptness. If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after the receipt of notice, the Owner shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense. With respect to all warranties, expressed or implied, from subcontractors, manufacturer, or suppliers for work performed and materials furnished under this Contract, the Contractor shall:

a. Obtain all warranties that would be given in normal commercial practice;

b. Require all warranties to be executed, in writing, for the benefit of the Owner.

50-20 **VENUE.** This contract has been executed by, delivered to an accepted by the Owner (or the Authority) in the state where the Airport is located, and the provisions hereof shall be governed by the laws of that state. Any disputes arising out of or related to this contract shall be resolved in accordance with said laws. The parties agree that any action or legal proceeding arising out of or related to this contract shall be brought in the state courts of the county in which the Airport lies, or in the federal court in the district where the Airport is located; and the parties hereby consent to and waive any objection to jurisdiction or venue in said courts.

SECTION 60 - CONTROL OF MATERIALS

SC-14 DELETE PARAGRAPH 60-02 "SAMPLES, TESTS, AND CITED SPECIFCIATION" IN ITS ENTIRETY AND INSERT THE FOLLOWING:

60-02 **SAMPLES, TESTS AND CITED SPECIFICATIONS.** All materials used in

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the work shall be inspected, tested, and approved by the Engineer before incorporation in the work. Any work in which untested materials are used without approval or written permission of the Engineer shall be performed at the Contractor's risk. Materials found to be unacceptable and unauthorized will not be paid for and, if directed by the Engineer, shall be removed at the Contractor's expense. Unless otherwise designated, tests in accordance with the cited standard methods of AASHTO of ASTM which are current on the date of advertisement for bids will be made by and at the expense of the Owner. All materials being used are subject to inspection, test, or rejection at any time prior to or during incorporation into the work. Copies of all tests will be furnished to the Contractor's representative at his request. In the event that any tests show a failure to meet the requirements of the contract documents, the expense of retesting, after substitution or modification by the Contractor will be at the expense of the Contractor and such costs will be deducted from the payments otherwise due to the Contractor. The Contractor shall furnish the required samples without charge. The Contractor shall give sufficient notification of the placing of orders for materials to permit testing.

SECTION 70 - LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

SC-15 ADD THE FOLLOWING PARAGRAPH TO THE END OF PARAGRAPH 70-01 "LAWS TO BE OBSERVED":

"If the Contractor observes that the drawings and specifications are at variance with any laws, codes, ordinances, and regulations, he shall promptly notify the Engineer in writing, and any necessary changes shall be adjusted as provided in the contract for changes in the work. If the Contractor performs any work contrary to such laws, codes, ordinances, and regulations, and without such notice to the Engineer, he shall bear all costs arising therefrom."

SC-16 DELETE PARAGRAPH 70-02 IN ITS ENTIRETY AND INSERT THE FOLLOWING:

70-02 PERMITS AND INSPECTION FEES. Permits shall be secured by the Contractor and inspections will be required, but the County will not charge the Contractor for such permits and inspections obtained from the County. The Contractor shall secure and pay for any permits and inspection fees required by any other governmental entity or agency."

SC-17 DELETE PARAGRAPH 70-04 "RESORATION OF SURFACES DISTURBED BY OTHERS" IN ITS ENTIRETY AND INSERT THE FOLLOWING:

70-04 RESTORATION OF SURFACES DISTURBED BY OTHERS. The Owner reserves the right to authorize the construction, reconstruction, or maintenance of any public or private utility service, FAA or National Oceanic and Atmospheric Administration (NOAA) facility, or a utility service of another government

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agency at any time during the progress of the work. Except as listed on the plans or contract documents, the Contractor shall not permit any individual, firm or corporation to excavate or otherwise disturb such utility services or facilities located within the limits of the work without the written permission of the Project Engineer.

Should the Owner of public or private utility service, FAA, or NOAA facility, or a utility service of another government agency be authorized to construct, reconstruct, or maintain such utility service or facility during the progress of the work, the Contractor shall cooperate with such Owners by arranging and performing the work in this contract so as to facilitate such construction, reconstruction or maintenance by others. When ordered as extra work by the Engineer, the Contractor shall make all necessary repairs to the work which are due to contract, plans, or specifications. It is understood and agreed that the Contractor shall not be entitled to make any claim for damages due to such authorized work by others or for any delay to the work resulting from such authorized work.

SC-18 ADD THE FOLLOWING PARAGRAPH TO THE END OF PARAGRAPH 70-05 "FEDERAL AND STATE AID PARTICIPATION":

"The attention of the Contractor is also invited to the fact that the State in which this project is located may pay a portion of the cost of this improvement. In accordance with said State's rules and regulations, work will be subject to such inspections of the State, or its representative, may deem necessary to protect the interests of the people of the State. The Contractor shall furnish the inspecting party with every reasonable assistance to ascertain whether or not the requirements and intent of the contract are being met. Such inspections will in no way infer that the State is party to the contract, except for those contracts wherein the State is a signatory."

SC-19 ADD THE FOLLOWING PARAGRAPHS TO THE END OF PARAGRAPH 70-07 "PUBLIC CONVENIENCE AND SAFETY":

The Contractor shall provide initial and continuing instructions to all supervisors, employees, subcontractors, and suppliers to enable them to conduct their work in a manner that will provide the maximum safety with the least hindrance to air and ground traffic, the general public, airport employees, and to the workmen employed on the site.
All safety provisions specified by the plans and documents or received from the Project Engineer, and those required by laws, codes and ordinances, shall be thoroughly disseminated and rigidly enforced. "

SC-20 ADD THE FOLLOWING PARAGRAPH TO THE END OF SUBSECTION 70-08 "BARRICADES, WARNING SIGNS, AND HAZARD MARKINGS":

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This work, including required materials and equipment, and labor, etc., shall be incidental to the various items of work and all costs hereto are to be included in the various unit bid items, except as otherwise provided for in the contract documents.

It shall be clarified that the Advisory Circulars listed are per the FAA Standard; however, the current versions of these Advisory Circulars shall be used and are available on the FAA website.

SC-21 DELETE SUBSECTION 70-09 "USE OF EXPLOSIVES" IN ITS ENTIRETY AND INSERT THE FOLLOWING:

70-09 USE OF EXPLOSIVES. Explosives will not be permitted.

SC-22 ADD THE FOLLOWING PARAGRAPHS TO THE END OF PARAGRAPH 70-10 "PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE":

"Work that is to remain in place which is damaged or defaced by reasons of work performed under this contract, shall be restored at no additional cost to the Owner.

Items removed, indicated to be salvaged for Owner, or reused in new work, which are damaged beyond repair, shall be replaced with equal new materials under this contract at no additional cost to the Owner.

Existing pavement or other existing work not specified for removal which is temporarily removed, damaged, exposed or in any way disturbed or altered by work under this contract shall be repaired, patched, or replaced to the complete satisfaction of the Engineer at no additional cost to the Owner.

Where it is necessary to cut, alter, remove, or temporarily remove and replace existing property or equipment, the cost shall be included in the contract price for the item creating such work. It is recognized that the Owner will incur the costs for employees' salaries, engineering fees, and otherwise in connection with the damage and inspection and repair of any such damage caused by the Contractor; and that such expenses and loss of income are not measurable now and may not be reasonably ascertainable at the time of any incident caused by this Contractor. The Owner and the Contractor hereby agree to the assessment of liquidated damages in lieu of such expenses of other damages incurred by the Owner. In addition to the obligation of this Contractor to immediately repair any facilities damaged by the Contractor, as set forth above, the sum of not greater than $1,000.00 per incident may be deducted from any money due the Contractor, or if no money is due the Contractor, the Owner shall have the right to recover said sum or sums from the Contractor, from the surety or from both. The amount of these deductions is to cover liquidated damages to the sponsor incurred by additional inspection and other expenses and damages arising from the incident or incidents caused by the Contractor, and such deductions are not considered as penalties."

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SC-23 DELETE SUBSECTION 70-11 "RESPONSIBILITY FOR DAMAGE CLAIMS" IN ITS ENTIRETY AND INSERT THE FOLLOWING:

70-11 RESPONSIBILITY FOR DAMAGE CLAIMS.

a. INSURANCE:

Contractor shall purchase and maintain such comprehensive general liability, comprehensive automobile liability and other insurance as is appropriate for the Work being performed and furnished and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance and furnishing of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed or furnished by Contractor, by any Subcontractor, by anyone directly or indirectly employed by any of them to perform or furnish any of the Work, or by anyone for whose acts any of them may be liable:

(1) Claims under workers' or workmen's compensation, disability benefits and other similar employee benefit acts;

(2) Claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

(3) Claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

(4) Claims for damages insured by personal injury liability coverage which are sustained (a) by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or (b) by any other person for any other reason;

(5) Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use of resulting therefrom;

(6) Claims arising out of operation of Laws or Regulations for damages because of bodily injury or death of any person or for damage to property; and

(7) Claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

The insurance required by this paragraph 70-11.1 shall include the specific coverages and be written for no less than the limits of liability and specified in 70-11.3 or required by law, whichever is greater. The comprehensive general liability insurance shall include completed operations insurance. All

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of the policies of insurance so required to be purchased and maintained (or the certificates or other evidence thereof) shall contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least thirty days prior written notice has been given to Owner and Engineer by certified mail. All such insurance shall remain in effect until final payment and at all times thereafter when Contractor may be correcting, removing or replacing defective Work in accordance with section GP-50. In addition, contractor shall maintain such completed operations insurance for at least two years after final payment and furnish Owner with evidence of continuation of such insurance at final payment and one year thereafter, with the exception of Owner's Protective Liability coverage.

b. INDEMNIFICATION:

(1) The Contractor shall indemnify and hold harmless Owner and Engineer and their consultants, agents and employees from and against all claims, damages, losses and expenses, direct, indirect or consequential (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs) arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom and (b) is caused in whole or in part by any negligent act or omission of Contractor, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any or them may be liable, regardless of whether or not it is caused by a party indemnified hereunder or arises by or is imposed by Law or Regulations regardless of the negligence of any such party.

(2) In any and all claims against Owner or Engineer or any of their consultants, agents or employees by any employee of Contractor, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 11.2.1 above shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for Contractor or any such Subcontractor or other person or organization under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

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The Fulton County, Georgia, its officials and staff; Michael Baker International, Inc., its staff and consultants; and Georgia Department of Transportation shall be named as additional insureds with right of notice in the policy.

c. COVERAGES:

The limits of liability for the insurance required by Paragraphs 70-11.1 shall provide coverage for not less than the following amounts or greater where required by law:

(1) Workers' Compensation, etc.:

(a)	State:	Statutory
(b)	Applicable Federal	Statutory
(c)	Employer's Liability	$1,000,000 each accident $1,000,000 each employee $1,000,000 each policy limit

(2) Comprehensive General Liability:

(a) $2,000,000 per occurrence for bodily injury and property damage liability
$2,000,000 personal and advertising injury liability
$4,000,000 general aggregate
$4,000,000 products-completed operations aggregate
$2,000,000 damage to rented premises (each occurrence)
$ 10,000 medical expense (any one person)

(b) The Contractor's General Liability insurance shall provide coverage for the following: (1) Premises - Operations, (2) Independent Contractors, (3) Products/Completed Operations Hazard, (5) Underground Hazard, (6) Broad Form Property Damage, (7) Where applicable, Explosion and Collapse Hazard, and (8) Personal Injury.

(3) Comprehensive Automobile Liability:

(a) Bodily Injury and Property Damage:

$2,000,000	Combined Single Limit (Per Occurrence)

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(b) The Contractor's Comprehensive Automobile Liability Insurance shall provide coverage for Bodily Injury and Property Damage Per Occurrence for owned, hired and non-owned vehicles.

(4) Professional Liability (Errors and Omissions):

$2,000,000 per claim

(5) Umbrella or excess insurance is to be provided with General Liability, Auto Liability and Employers Liability scheduled as underlying policies with limits not less than $10,000,000 per each occurrence and per aggregate.

(6) Contractor shall purchase and maintain such Protective and Contractual Bodily Injury Liability Insurance and such Protective and Contractual Property Damage Liability Insurance as shall be required by any public bodies or utility companies whose property, facilities, or right-of-way may be affected by the Work to be done under this Contract.

(7) Contractor will provide such additional information in respect of insurance provided by him as the Owner may reasonably request. Failure by Owner to give any such notice of objection within the time provided shall constitute an acceptance of such insurance purchased by Contractor as complying with the Contract Documents.

(8) Certificates in triplicate from the insurance carrier stating the limits of liability and expiration date shall be filed with Owner before operations are begun. Certificates shall not merely name the types of policy provided but shall specifically refer to this Contract and shall contain a separate express statement of compliance with each of the requirements as set forth in this subsection. The certificates shall, in addition to the information relative to the insurance required, contain the following:

(a) Inception and expiration dates of insurance policy.

(b) Limits of liability provided (Public Liability and Property Damage).

(c) Coverage provided, including special hazards if required.

(d) Name of insurance company.

(e) Policy Number.

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(f) Additional interests covered.

(g) Statement that the Explosion, Collapse, and Underground exclusions do not apply.

(h) Certificate shall reflect self-insured retention applicable to any contract of insurance.

(i) Excess liability certified contracts must state underlying insurance requirements.

(j) Project number and nature of work.

No certificate will be accepted which exculpates the issuer or reduces any rights conferred on the Owner by the above certificates, nor will they be accepted unless the certificates bear a live signature of a direct representative of a company authorized to do business in the state where the work is located.

No certificate will be accepted unless the person signing the certificate certifies, in a separate letter, his exact relationship with the insurance carrier or carriers indicated in the certificate.

The Owner may, at his discretion, modify or waive any of the foregoing requirements.

No contract of insurance containing a "claims made" insuring agreement will be acceptable unless the contractor offering such insurance to fulfill the requirements of this Contract agrees that each such contract of insurance shall be renewed for the entire existence of the Contractor, their successors or assigns; and that on termination of such coverage which is not replaced by a similar contract with the required limits of liability, a "tail policy" will be purchased with limits not less than those required by this Contract."

SC-24 DELETE PARAGRAPH 70-13 "OPENING SECTION OF THE WORK TO TRAFFIC" IN ITS ENTIRETY AND INSERT THE FOLLOWING:

"Whenever in the opinion of the Owner, any portion of the work is in an acceptable condition, it may be opened to traffic upon the written order of the Owner. The opening of any portion of the work shall be held as an acceptance of said runway but shall not be considered as a waiver of any of the provisions of these specifications or contract. Pending final completion and acceptance of the work, all necessary repairs and renewals on any portion of the work so opened, due to defective material or work, to natural causes other than ordinary wear and tear, or to the operations of the Contractor, shall be performed by and at the expense of the Contractor."

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SC-25 DELETE PARAGRAPH 70-16 IN ITS ENTIRETY AND INSERT THE FOLLOWING:

70-16 LAND AND RIGHTS-OF-WAY.

Prior to entering on any land or right-of-way, the Contractor shall ascertain the requirements of applicable permits or easements obtained by the County and shall conduct his work in accordance with requirements thereof including the giving of notice. The Contractor shall be fully responsible for performing work to the requirements of any permit or easement granting entity even though such requirements may exceed or be more stringent than otherwise required by the Contract Documents and shall compensate the County fully for any loss or expense arising from failure of the Contractor to perform as required by such entity.

The Contractor shall provide at his own expense and without liability to the County any additional land and access thereto that the Contractor may desire for temporary construction facilities, or for storage of materials."

SC-26 ADD THE FOLLOWING PARAGRAPHS TO THE END OF PARAGRAPH 70-19 "ENVIRONMENTAL PROTECTION":

"In the event of conflict between Federal, State or local laws, codes, ordinances, rules and regulations concerning pollution control, the most restrictive applicable ones shall apply. The Contractor shall pay special attention to the pollution control requirements of the several specifications. Work items which may cause excessive pollution and shall be closely controlled by the Contractor are:

(a) Clearing, grubbing, or other disposal.

(b) Stripping, excavation, and embankment.

(c) Drainage and ditching.

(d) Aggregate production, handling and placing.

(e) Cement, lime, or other stabilization.

(f) Concrete and bituminous materials handling, production, and paving.

(g) Seeding, fertilizing, mulching and use of herbicides or insecticides.

(h) Contractor's own housekeeping items; haul roads; sanitary facilities; water supply; equipment fueling; servicing and cleaning; job clean up and disposal.

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When the Contractor submits his tentative progress schedule in accordance with EXECUTION and PROGRESS, Section 80, he shall also submit for acceptance of the project engineer, his schedules for accomplishment of temporary and permanent erosion control work, as are applicable for clearing, grading, structures at watercourses, construction, and paving, and his proposed method of erosion control on haul roads and borrow pits and his plan for disposal of waste materials. No work shall be started until the erosion control schedules and methods of operations have been accepted by the Engineer.

All bituminous and portland cement concrete proportioning and mixing plants shall meet state requirements.

The following listed stipulations shall apply to this contract unless more restrictive ones are specified by the plans, special provisions, laws, codes, ordinances, etc. Cost of pollution control shall be incidental to the appropriate work items unless otherwise specified.

(1) Control of Water Pollution and Siltation.

a. All work of water pollution and siltation control is subject to inspection by the local and/or state governmental enforcing agent.

b. All applicable regulations of fish and wildlife agencies and statutes relating to the prevention and abatement of pollution shall be complied with in the performance of the contract.

c. Construction operations shall be conducted in such manner as to reduce erosion to the practicable minimum and to prevent damaging siltation of watercourses, streams, lakes or reservoirs. The surface area of erodible land, either on or off the airport site, exposed to the elements by clearing, grubbing or grading operations, including gravel pits, waste or disposal areas and haul roads, at any one time, for this contract, shall be subject to approval of the Engineer and the duration of such exposure prior to final trimming and finishing of the areas shall be held to the minimum practical. The Engineer shall have full authority to order the suspension of grading and other operations pending adequate and proper performance of trimming, finishing and maintenance work or to restrict the area of erodible land exposed to the elements.

d. Materials used for permanent erosion control measures shall meet the requirements of the applicable specifications. Gravel or stone, consisting of durable particles of fines, shall be used for construction pads, haul roads and temporary roads in or across streams.

e. Where called for on the plans, a stilling basin shall be constructed to prevent siltation in the stream from construction operations.

f. The disturbance of lands and waters that are outside the limits of construction as staked is prohibited, except as found necessary and approved by the Engineer.

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g. The Contractor shall conduct his work in such manner as to prevent the entry of fuels, oils, bituminous materials, chemicals, sewage or other harmful materials into streams, rivers, lakes or reservoirs.

h. Water from aggregate washing or other operations containing sediment shall be treated by filtration, by use of a settling basin or other means to reduce the sediment content to a level acceptable to the local and/or state governmental enforcing agent.

i. All waterways shall be cleared as soon as practicable of falsework, piling, debris or other obstructions placed during construction operations and not a part of the finished work. Care shall be taken during construction and removal of such barriers to minimize the muddying of a stream.

j. The Contractor shall care for the temporary erosion and siltation control measures during the period that the temporary measures are required and for the permanent erosion control measures until the contract has been completed and accepted. Such care shall consist of the repair of areas damaged by erosion, wind, fire or other causes.

k. Permanent and temporary erosion control work that is damaged due to the Contractor's operations or where the work required is attributed to the Contractor's negligence, carelessness, or failure to install permanent controls at the proper time shall be repaired at the Contractor's expense.

(2) Control of Other Air Pollutants.

a. Minimum possible areas of open grading borrow or aggregate excavation shall be exposed at one time, consistent with the progress of the work.

b. Grading areas shall be kept at proper moisture conditions.

c. Sand or dust blows shall be temporarily mulched, with or without seeding, or otherwise controlled with stabilizing agents.

d. Temporary roads, haul routes, traffic or work areas shall be maintained so as to create no dust.

e. Cements, fertilizers, chemicals, volatiles, etc., shall be stored in proper containers or with proper coverings to prevent accidental discharge into the air.

f. Aggregate bins, cement bins, and dry material batch trucks shall be properly covered to prevent loss of material to the air.

g. Drilling, grinding, and sand blasting apparatus shall be equipped with water, chemical, or vacuum dust controlling systems.

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h. Applications of chemicals and bitumens shall be held to recommended rates.

i. Bituminous mixing plants shall be equipped with dust collectors as noted in the specifications.

j. Quarrying, batching, and mixing operations and the transfer of materials between trucks, bins, or stockpiles shall be properly controlled to minimize dust diffusion.

k. When necessary, certain operations shall be delayed until proper wind or climatic conditions exist to dissipate or inhibit potential pollutants to the satisfaction of the Project Engineer."

SC-27 ADD THE FOLLOWING SUBSECTION TO THE END OF SECTION 70 "LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC":

70-21 NO DAMAGES FOR DELAY. In all cases where the Contractor is delayed, obstructed, or hindered in the execution of the work, or any part thereof, for any reason whatsoever, the Contractor shall not be entitled to claim or recover any damages or additional payment from the Owner or Engineer. However, it is the intent of this Contract that in all cases where the Contractor is substantially delayed, obstructed, or hindered in the execution of the work through no fault of the Contractor and because of conditions beyond the Contractor's control, the Engineer may recommend an extension on the contract time under Subsection 80-07 by such amount as conditions, in the judgment of the Engineer, justify, and such extension of the contract time shall be the exclusive remedy of the Contractor for delay, hindrance or obstruction occurring through no fault of the Contractor and because of conditions beyond the Contractor's control.

SECTION 80 - PROSECUTION AND PROGRESS

SC-28 DELETE THE THIRD AND FOURTH SUBPARAGRAPHS OF PARAGRAPH 80-04 "LIMITS OF OPERATIONS" IN ITS ENTIRETY AND REPLACE WITH:

"When the contract work requires the Contractor to work within an AIR OBSERVATION AREA of the airport, the Contractor shall maintain constant two-way radio communications with the FAA control tower. The Contractor will immediately obey all instructions to vacate the AIR OPERATIONS AREA. Failure to maintain constant radio communications with the control tower or to obey instructions shall be cause for suspension of the Contractor's operations in the AIR OPERATIONS AREA until the satisfactory conditions are provided."

"The failure to provide adequate labor and equipment may be considered cause for terminating the contract."

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SC-29 ADD THE FOLLOWING PARAGRAPHS TO THE END OF SUBSECTION 80-05 "CHARACTER OF WORKERS, METHODS, AND EQUIPMENT":

Any person employed by the Contractor or by a subcontractor who, in the opinion of the Engineer, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the Engineer, be removed forthwith by the Contractor or subcontractor employing such person, and shall not be employed again in any portion of the work without the approval of the Engineer.

Should the Contractor fail to remove such person or persons or fail to furnish suitable and sufficient personnel for the proper prosecution of the work, the Engineer may suspend the work by written notice until compliance with such orders.

The failure to provide adequate labor and equipment may be considered cause for terminating the contract.

SC-30 ADD THE FOLLOWING PARAGRAPHS TO THE END OF PARAGRAPH 80-06 "TEMPORARY SUSPENSION OF THE WORK":

"If the Contractor requests a suspension of the work in whole or part for such period or periods as he may need, due to unsuitable weather or such other conditions as Contractor considers unfavorable for the prosecution of work, or if ordered by OWNER or ENGINEER due to inclement weather or the failure on the part of the Contractor to carry out orders given, or to perform any or all provisions of the contract, a suspension may be granted provided the Contractor shall perform the following without additional compensations:

1. Suitably store all materials.

2. Implement measures to protect existing work from damage or deterioration.

3. Erect such temporary structures and barricades as ENGINEER may require providing for traffic on, to, or from the airport and air operations area.

4. Periodically inspect and maintain the work and temporary measures during the suspension period. Repair any damage to the work during the suspension period.

5. Pay all costs to OWNER associated with the suspension including but limited to cost of ENGINEER, inspection and OWNER'S testing laboratory to perform their contractual requirements with respect to the project during the work suspension.

6. Maintain all insurance and bond coverages.

7. Perform such other work as required by the Contract Documents with respect to the Project."

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SC-31 DELETE PARAGRAPH 80-08 IN ITS ENTIRETY AND INSERT THE FOLLOWING:

80-08 FAILURE TO COMPLETE ON TIME. For each calendar day as specified in the contract, that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in the subsection titled DETERMINATION AND EXTENSION OF CONTRACT TIME of this Section) liquidated damages shall be deducted from any money due to become due the Contractor or his surety; in the amount specified in the Special Provisions.

Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages that will be incurred by the Owner should the Contractor fail to complete the work in the time provided in his contract.

Permitting the Contractor to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a waiver on the part of the Owner of any of its rights under the contract.

80-08.1 LIQUIDATED DAMAGES.

Failure to complete the entire project within the Contract Time specified shall result in liquidated damages in the amount of $1,000.00 per 15 min interval or portion thereof.

SC-32 ADD THE FOLLOWING PARAGRAPH TO THE END OF SUBSECTION 80-10 "TERMINATION FOR NATIONAL EMERGENCIES":

The Engineer and the Owner shall be given full access to all books, cost records, correspondence and papers of the Contractor relating to the contract in order to determine amounts to be paid the Contractor due to any termination of the contract.

SECTION 90 - MEASUREMENT AND PAYMENT

SC-33 DELETE SUBSECTION 90-05 "PAYMENT FOR EXTRA AND FORCE ACCOUNT WORK" IN ITS ENTIRETY AND INSERT THE FOLLOWING:

90-05 PAYMENT FOR EXTRA AND FORCE ACCOUNT WORK. Extra work, performed in accordance with subsection 40-04 EXTRA WORK, will be paid for at the contract prices or agreed prices specified in the change order or supplemental agreement authorizing the extra work. When the change order or supplemental agreement authorizing the extra work requires that it be done by force account, such force account shall be measured and paid for as follows:

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a. Labor. For all labor (skilled and unskilled) and foremen in direct charge of a specific force account item, the Contractor shall receive the rate of wage (or scale) for every hour that such labor or foreman is actually engaged in the specified force account work. Such wage (or scale) shall be agreed upon in writing before the beginning of the work.

The Contractor shall receive the actual costs paid to, or on behalf of, workers by reason of subsistence and travel allowances, health and welfare benefits, pension fund benefits or other benefits, when such amounts are required by collective bargaining agreement or other employment contract generally applicable to the classes of labor employed on the work.

An amount equal to 15 percent of the sum of the above items will also be paid to the Contractor.

b. Insurance and Taxes. For property damage, liability, and workmen's compensation insurance premiums, unemployment insurance contributions, and social security taxes on the force account work the Contractor shall receive the actual cost, to which cost (sum) 5 percent will be added. The Contractor shall furnish satisfactory evidence of the rate or rates paid for such insurance and taxes.

c. Materials. For materials accepted by the Engineer and then used, the Contractor shall receive the actual cost of such material delivered on the work, including transportation charges paid by him (exclusive of machinery rentals as hereinafter set forth), to which cost (sum) 15 percent will be added.

d. Equipment. For any machinery or special equipment (other than small tools) including fuel and lubricants, plus transportation costs, the use of which has been authorized by the Engineer, the Contractor shall receive the rental rates agreed upon in writing before such work is begun for the actual time that such equipment is committed to the work, to which rental sum 15 percent will be added.

e. Miscellaneous. No additional allowance will be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided.

f. Comparison of Record. The Contractor and the Engineer shall compare records of the cost of force account work at the end of each day. Agreement shall be indicated by signature of the Contractor and the Engineer or their duly authorized representatives.

g. Statement. No payment will be made for work performed on a force account basis until the Contractor has furnished the Engineer with duplicate itemized statements of the cost of such force account work detailed as follows:

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(1) Name, classification, date, daily hours, total hours, rate and extension for each laborer and foreman.

(2) Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment

(3) Quantities of materials.

(4) Transportation of materials.

(5) Cost of property damage, liability and workman's compensation insurance premiums, unemployment insurance contributions, and social security tax.

Statements shall be accomplished and supported by a receipted invoice for all materials used and transportation charges. However, if material used on the force account work are not specifically purchased for such work but are taken from the Contractor's stock, then in lieu of the invoices the Contractor shall furnish an affidavit certifying that such materials were taken from his/her stock, that the quantity claimed was actually used, and that the price and transportation claimed represent the actual cost to the Contractor.

The additional payment, based on the percentages specified above, shall constitute full compensation for all items of expense not specifically provided for the force account work. The total payment made as provided above shall constitute full compensation for such work.

SC-34 DELETE PARAGRAPH 90-06 "PARTIAL PAYMENTS" IN ITS ENTIRETY AND INSERT THE FOLLOWING:

90-06 PROGRESS PAYMENTS.

Progress payments will be made once each month as the Work progresses. Said payments will be based upon estimates prepared by the Engineer of the value of the work performed and materials complete in place in accordance with the contract, plans, and specifications. Such progress payments may also include the delivered actual cost of those materials stockpiled and stored in the accordance with the subsection titled PAYMENT FOR MATERIALS ON HAND of this section.

No progress payment will be made when the amount due the Contractor since the last estimate amounts to less than five hundred dollars.

From the total of the amount determined to be payable on a progress payment, ten percent (10%) of each progress payment shall be withheld as retainage until the value of ninety-five (95%) of the Contract Price, including change orders and other authorized additions provided in the Contract, is due. When ninety five

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percent (95%) of the contract value, as described above, becomes due and the manner of completion of the contract work and its progress are reasonably satisfactory to the OWNER, the withholding of retainage may be discontinued. If after discontinuing the retention, the OWNER determines that the Work is unsatisfactory or has fallen behind schedule, retention may be resumed at the previous level.

When not less than 95% of the work has been completed the Engineer may, at his/her discretion and with the consent of the surety, prepare an estimate covering any remaining incomplete minor items from which will be retained an amount equal to two hundred percent (200%) of the value of each time. That retained amount shall be withheld until such items are completed. The remainder, less all previous payments and deductions, will then be certified for payment to the Contractor.

It is understood and agreed that the Contractor shall not be entitled to demand or receive partial payment based on quantities of work in excess of those provided in the bid or covered by approved change orders or supplemental agreements, except when such excess quantities have been determined by the Engineer to be a part of the final quantity for the item of work in question.

No partial payment shall bind the OWNER to the acceptance of any materials or work in place as to quality or quantity. All partial payments are subject to correction at the time of final payment as provided in the subsection title ACCEPTANCE AND FINAL PAYMENT of this section."

SC-35 DELETE PARAGRAPH 90-07 "PAYMENT FOR MATERIALS ON HAND":

Stored materials shall not be paid for per GDOT.

SC-36 THE FOLLOWING PARAGRAPH SHALL BE ADDED AT THE END OF SECTION 90-09 "ACCEPTANCE AND FINAL PAYMENT":

"Prior to final payment the Contractor shall submit to the Owner a sworn affidavit that all bills for labor, materials, equipment, service, subcontractors and incidentals have been paid and that there are no suits pending in connection with the work done or labor and materials furnished under the contract."

SC-37 ADD THE FOLLOWING SUBSECTION TO THE END OF SECTION 90 "MEASUREMENT AND PAYMENT":

90-10 LIENS. Neither the final payment nor any part of the retained percentage shall become due until the Contractor delivers to the Owner: (a) an affidavit stating, if that be in fact, that all subcontractors and suppliers have been paid in full, or if the fact be otherwise, showing the name of each subcontractor and supplier who has not been paid in full and the amount due or to become due each for labor, service or material furnished; (b) consent of

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surety, if any, to final payment; and (c) if required by Owner, other data establishing payment for satisfaction of all obligations, such as receipt, releases, and waivers of lien arising out of the Contract to the extent and in such form as designated by the Owner.

SECTION 120 – CONSTRUCTION CONTRACT CLAUSES AIRPORT DEVELOPMENT PROGRAM

SC-40 REMOVED – N/A

SC-41 THE FOLLOWING PARAGRAPH SHALL BE ADDED AT THE END OF PART III "MISCELLANEOUS CONTRACT PROVISIONS":

"After the last subsection, add the following new provisions

H. Nondiscrimination Assurance. The contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the County may deem appropriate.

I. Prompt Payment. The prime contractor shall certify in writing that all subcontractors, sub-consultants and suppliers have been paid for work and materials from previous progress payments received, less any retainage, by the prime contractor prior to receipt of any further progress payments. The prime contractor shall include a payment provision in their agreements with their various subcontractors, providing for payment within ten (10) calendar days after the prime contractor's receipt of payment from the Owner. The prime contractor shall also include a provision in their agreement with various subcontractors providing for payment of retainage to those subcontractors who have submitted an invoice for completed work accepted by the County within ten (10) calendar days. This provision in no way creates any contractual relationship between any subcontractor, sub-consultant or supplier and the Airport or any liability on the County for the contractor's failure to make timely payment to the subcontractor, sub-consultant or suppliers."

J. Contractor Reporting Requirements. The Prime Contractor shall submit, with each invoice, a report of DBE expenditures. The report shall show all DBE and non-DBE subcontractors, the amount of their subcontract, the amount earned to date, the amount earned for that respective invoice and the amount remaining to be earned. The report shall also have each DBE subcontractor verify the amounts earned and received by the DBE to date. The contractor's invoice may be delayed in processing payment or disapproved until the progress report is submitted as required.

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K. Measurement and Payment. Measurement of Quantities – Unless otherwise specified, longitudinal measurements for length and area computations will be made **horizontally**, and no deductions will be made for individual fixtures (or leave-outs) having an area of 9 square feet or less. Unless otherwise specified, transverse measurements for length and area computations will be the neat dimensions shown on the plans or ordered in writing by the Engineer. Note that quantities for Permanent and Temporary Erosion Control Matting will not be measured horizontally but will be measured along the slope.

L. Federal Requirements. The following Federal provisions shall apply to this contract. In a case where these provisions conflict with other sections of the project documents, the more stringent requirement shall apply.

All Construction Contracts

- Lobbying and Influencing Federal Employees (49 CFR Part 20)
- Trade Restriction Clause (49 CFR Part 30)
- Access to Records and Reports (49 CFR Part 18.36(i))
- Rights to Inventions (49 CFR Part 18.36(i)(8))
- Buy American Preferences (Title 49 U.S.C. Chapter 501)
- Energy Conservation Requirements (49 CFR Part 18.36)
- Federal Fair Labor Standards Act
- Civil Rights Act of 1964, Title VI – Contractual Requirements (49 CFR Part 21)
- Airport and Airway Improvement Act of 1982 (Section 520-General Civil Rights Provision)
- Occupational Safety and Health Act
- Tax Delinquency and Felony Conviction
- Veteran's Preference (Title U.S.C. 47112(c))

As Required by the Sponsor's Approved DBE Program

- Disadvantaged Business Enterprises (49 CFR Part 26)
  - Contract Assurance and Prompt Payment Clauses

$2,000 and Greater

- Davis Bacon Requirements (29 CFR Part 5.5)
- Distracted Driving

$10,000 and Greater

- Equal Employment Opportunity Clause (41 CFR Part 60.1.4(b))
- Certification of Nonsegregated Facilities – Notice for Subcontractors (41 CFR Part 60-1.8)
- Debarment and Suspension
- Standard Federal Equal Employment Opportunity Construction Contract Specifications (41 CFR Part 60.4.3)
- E.E.O. Compliance (41 CFR Part 60-1.7)

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- Requirement of Affirmative Actions to Ensure E.E.O. (41 CFR Part 60-2)
- Termination of Contract (49 CFR Part 18.36(i)(2))
- Prohibition of Segregated Facilities
- Recovered Materials

$100,000 and Greater

- Breach of Contract Terms (49 CFR Part 18.36(i))
- Contract Workhours and Safety Standards Act Requirements (29 CFR Part 5)
- Clean Air and Water Pollution Control (49 CFR Part 18.36(i)(12))

END OF SECTION 00800

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DIVISION 3

FAA ADVISORY CIRCULARS

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FAA ADVISORY CIRCULAR

150/5370-2G

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U.S. Department
of Transportation
**Federal Aviation
Administration**

Advisory Circular

Subject: Operational Safety on Airports During Construction	**Date:** 12/13/2017 **Initiated By:** AAS-100	**AC No:** 150/5370-2G **Change:**

1 **Purpose.**

This AC sets forth guidelines for operational safety on airports during construction.

2 **Cancellation.**

This AC cancels AC 150/5370-2F, *Operational Safety on Airports during Construction*, dated September 29, 2011.

3 **Application.**

This AC assists airport operators in complying with Title 14 Code of Federal Regulations (CFR) Part 139, *Certification of Airports*. For those certificated airports, this AC provides one way, but not the only way, of meeting those requirements. The use of this AC is mandatory for those airport construction projects receiving funds under the Airport Improvement Program (AIP). See Grant Assurance No. 34, *Policies, Standards, and Specifications*. While we do not require non-certificated airports without grant agreements or airports using Passenger Facility Charge (PFC) Program funds for construction projects to adhere to these guidelines, we recommend that they do so to help these airports maintain operational safety during construction.

4 **Related Documents.**

ACs and Orders referenced in the text of this AC do not include a revision letter, as they refer to the latest version. Appendix A contains a list of reading material on airport construction, design, and potential safety hazards during construction, as well as instructions for obtaining these documents.

5 **Principal Changes.**

The AC incorporates the following principal changes:

1. Notification about impacts to both airport owned and FAA-owned NAVAIDs was added. See paragraph 2.13.5.3, NAVAIDs.

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2. Guidance for the use of orange construction signs was added. See paragraph 2.18.4.2, Temporary Signs.
3. Open trenches or excavations may be permitted in the taxiway safety area while the taxiway is open to aircraft operations, subject to restrictions. See paragraph 2.22.3.4, Excavations.
4. Guidance for temporary shortened runways and displaced thresholds has been enhanced. See Figure 2-1 and Figure 2-2.
5. Figures have been improved and a new Appendix F on the placement of orange construction signs has been added.

Hyperlinks (allowing the reader to access documents located on the internet and to maneuver within this document) are provided throughout this document and are identified with underlined text. When navigating within this document, return to the previously viewed page by pressing the "ALT" and " ←" keys simultaneously.

Figures in this document are schematic representations and are not to scale.

6 **Use of Metrics.**

Throughout this AC, U.S. customary units are used followed with "soft" (rounded) conversion to metric units. The U.S. customary units govern.

7 **Where to Find this AC.**

You can view a list of all ACs at http://www.faa.gov/regulations_policies/advisory_circulars/. You can view the Federal Aviation Regulations at http://www.faa.gov/regulations_policies/faa_regulations/.

8 **Feedback on this AC.**

If you have suggestions for improving this AC, you may use the Advisory Circular Feedback form at the end of this AC.

John R. Dermody
Director of Airport Safety and Standards

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CHAPTER 1. PLANNING AN AIRFIELD CONSTRUCTION PROJECT

1.1 Overview.

Airports are complex environments, and procedures and conditions associated with construction activities often affect aircraft operations and can jeopardize operational safety. Safety considerations are paramount and may make operational impacts unavoidable. However, careful planning, scheduling, and coordination of construction activities can minimize disruption of normal aircraft operations and avoid situations that compromise the airport's operational safety. The airport operator must understand how construction activities and aircraft operations affect one another to be able to develop an effective plan to complete the project. While the guidance in this AC is primarily used for construction operations, the concepts, methods and procedures described may also enhance the day-to-day airport maintenance operations, such as lighting maintenance and snow removal operations.

1.2 Plan for Safety.

Safety, maintaining aircraft operations, and construction costs are all interrelated. Since safety must not be compromised, the airport operator must strike a balance between maintaining aircraft operations and construction costs. This balance will vary widely depending on the operational needs and resources of the airport and will require early coordination with airport users and the FAA. As the project design progresses, the necessary construction locations, activities, and associated costs will be identified and their impact to airport operations must be assessed. Adjustments are made to the proposed construction activities, often by phasing the project, and/or to airport operations to maintain operational safety. This planning effort will ultimately result in a project Construction Safety and Phasing Plan (CSPP). The development of the CSPP takes place through the following five steps:

1.2.1 Identify Affected Areas.

The airport operator must determine the geographic areas on the airport affected by the construction project. Some, such as a runway extension, will be defined by the project. Others may be variable, such as the location of haul routes and material stockpiles.

1.2.2 Describe Current Operations.

Identify the normal airport operations in each affected area for each phase of the project. This becomes the baseline from which the impact on operations by construction activities can be measured. This should include a narrative of the typical users and aircraft operating within the affected areas. It should also include information related to airport operations: the Aircraft Approach Category (AAC) and Airplane Design Group (ADG) of the airplanes that operate on each runway; the ADG and Taxiway Design Group (TDG)[1] for each affected taxiway; designated approach visibility minimums;

[1] Find Taxiway Design Group information in AC 150/5300-13, *Airport Design.*

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available approach and departure procedures; most demanding aircraft; declared distances; available air traffic control services; airport Surface Movement Guidance and Control System (SMGCS) plan; and others. The applicable seasons, days and times for certain operations should also be identified as applicable.

1.2.3 Allow for Temporary Changes to Operations.

To the extent practical, current airport operations should be maintained during the construction. In consultation with airport users, Aircraft Rescue and Fire Fighting (ARFF) personnel, and FAA Air Traffic Organization (ATO) personnel, the airport operator should identify and prioritize the airport's most important operations. The construction activities should be planned, through project phasing if necessary, to safely accommodate these operations. When the construction activities cannot be adjusted to safely maintain current operations, regardless of their importance, then the operations must be revised accordingly. Allowable changes include temporary revisions to approach procedures, restricting certain aircraft to specific runways and taxiways, suspension of certain operations, decreased weights for some aircraft due to shortened runways, and other changes. An example of a table showing temporary operations versus current operations is shown in Appendix E.

1.2.4 Take Required Measures to Revise Operations.

Once the level and type of aircraft operations to be maintained are identified, the airport operator must determine the measures required to safely conduct the planned operations during the construction. These measures will result in associated costs, which can be broadly interpreted to include not only direct construction costs, but also loss of revenue from impacted operations. Analysis of costs may indicate a need to reevaluate allowable changes to operations. As aircraft operations and allowable changes will vary widely among airports, this AC presents general guidance on those subjects.

1.2.5 Manage Safety Risk.

The FAA is committed to incorporating proactive safety risk management (SRM) tools into its decision-making processes. FAA Order 5200.11, *FAA Airports (ARP) Safety Management System (SMS)*, requires the FAA to conduct a Safety Assessment for certain triggering actions. Certain airport projects may require the airport operator to provide a Project Proposal Summary to help the FAA determine whether a Safety Assessment is required prior to FAA approval of the CSPP. The airport operator must coordinate with the appropriate FAA Airports Regional or District Office early in the development of the CSPP to determine the need for a Safety Risk Assessment. If the FAA requires an assessment, the airport operator must at a minimum:

1. Notify the appropriate FAA Airports Regional or District Office during the project "scope development" phase of any project requiring a CSPP.
2. Provide documents identified by the FAA as necessary to conduct SRM.
3. Participate in the SRM process for airport projects.
4. Provide a representative to participate on the SRM panel.

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5. Ensure that all applicable SRM identified risks elements are recorded and mitigated within the CSPP.

1.3 **Develop a Construction Safety and Phasing Plan (CSPP).**

Development of an effective CSPP will require familiarity with many other documents referenced throughout this AC. See Appendix A for a list of related reading material.

1.3.1 List Requirements.

A CSPP must be developed for each on-airfield construction project funded by the Airport Improvement Program (AIP) or located on an airport certificated under Part 139. For on-airfield construction projects at Part 139 airports funded without AIP funds, the preparation of a CSPP represents an acceptable method the certificate holder may use to meet Part 139 requirements during airfield construction activity. As per FAA Order 5200.11, projects that require Safety Assessments do not include construction, rehabilitation, or change of any facility that is entirely outside the air operations area, does not involve any expansion of the facility envelope and does not involve construction equipment, haul routes or placement of material in locations that require access to the air operations area, increase the facility envelope, or impact line-of-sight. Such facilities may include passenger terminals and parking or other structures. However, extraordinary circumstances may trigger the need for a Safety Assessment and a CSPP. The CSPP is subject to subsequent review and approval under the FAA's Safety Risk Management procedures (see paragraph 1.2.5).

1.3.2 Prepare a Safety Plan Compliance Document (SPCD).

The Safety Plan Compliance Document (SPCD) details how the contractor will comply with the CSPP. Also, it will not be possible to determine all safety plan details (for example specific hazard equipment and lighting, contractor's points of contact, construction equipment heights) during the development of the CSPP. The successful contractor must define such details by preparing an SPCD that the airport operator reviews for approval prior to issuance of a notice-to-proceed. The SPCD is a subset of the CSPP, similar to how a shop drawing review is a subset to the technical specifications.

1.3.3 Assume Responsibility for the CSPP.

The airport operator is responsible for establishing and enforcing the CSPP. The airport operator may use the services of an engineering consultant to help develop the CSPP. However, writing the CSPP cannot be delegated to the construction contractor. Only those details the airport operator determines cannot be addressed before contract award are developed by the contractor and submitted for approval as the SPCD. The SPCD does not restate nor propose differences to provisions already addressed in the CSPP.

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1.4 Who Is Responsible for Safety During Construction?

1.4.1 Establish a Safety Culture.

Everyone has a role in operational safety on airports during construction: the airport operator, the airport's consultants, the construction contractor and subcontractors, airport users, airport tenants, ARFF personnel, Air Traffic personnel, including Technical Operations personnel, FAA Airports Division personnel, and others, such as military personnel at any airport supporting military operations (e.g. national guard or a joint use facility). Close communication and coordination between all affected parties is the key to maintaining safe operations. Such communication and coordination should start at the project scoping meeting and continue through the completion of the project. The airport operator and contractor should conduct onsite safety inspections throughout the project and immediately remedy any deficiencies, whether caused by negligence, oversight, or project scope change.

1.4.2 Assess Airport Operator's Responsibilities.

An airport operator has overall responsibility for all activities on an airport, including construction. This includes the predesign, design, preconstruction, construction, and inspection phases. Additional information on the responsibilities listed below can be found throughout this AC. The airport operator must:

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1.4.2.1 Develop a CSPP that complies with the safety guidelines of Chapter 2, Construction Safety and Phasing Plans, and Chapter 3, Guidelines for Writing a CSPP. The airport operator may develop the CSPP internally or have a consultant develop the CSPP for approval by the airport operator. For tenant sponsored projects, approve a CSPP developed by the tenant or its consultant.

1.4.2.2 Require, review and approve the SPCD by the contractor that indicates how it will comply with the CSPP and provides details that cannot be determined before contract award.

1.4.2.3 Convene a preconstruction meeting with the construction contractor, consultant, airport employees and, if appropriate, tenant sponsor and other tenants to review and discuss project safety before beginning construction activity. The appropriate FAA representatives should be invited to attend the meeting. See AC 150/5370-12, *Quality Management for Federally Funded Airport Construction Projects.* (Note "FAA" refers to the Airports Regional or District Office, the Air Traffic Organization, Flight Standards Service, and other offices that support airport operations, flight regulations, and construction/environmental policies.)

1.4.2.4 Ensure contact information is accurate for each representative/point of contact identified in the CSPP and SPCD.

1.4.2.5 Hold weekly or, if necessary, daily safety meetings with all affected parties to coordinate activities.

1.4.2.6 Notify users, ARFF personnel, and FAA ATO personnel of construction and conditions that may adversely affect the operational safety of the airport via Notices to Airmen (NOTAM) and other methods, as appropriate. Convene a meeting for review and discussion if necessary.

1.4.2.7 Ensure construction personnel know applicable airport procedures and changes to those procedures that may affect their work.

1.4.2.8 Ensure that all temporary construction signs are located per the scheduled list for each phase of the project.

1.4.2.9 Ensure construction contractors and subcontractors undergo training required by the CSPP and SPCD.

1.4.2.10 Ensure vehicle and pedestrian operations addressed in the CSPP and SPCD are coordinated with airport tenants, the airport traffic control tower (ATCT), and construction contractors.

1.4.2.11 At certificated airports, ensure each CSPP and SPCD is consistent with Part 139.

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1.4.2.12 Conduct inspections sufficiently frequently to ensure construction contractors and tenants comply with the CSPP and SPCD and that there are no altered construction activities that could create potential safety hazards.

1.4.2.13 Take immediate action to resolve safety deficiencies.

1.4.2.14 At airports subject to 49 CFR Part 1542, *Airport Security*, ensure construction access complies with the security requirements of that regulation.

1.4.2.15 Notify appropriate parties when conditions exist that invoke provisions of the CSPP and SPCD (for example, implementation of low-visibility operations).

1.4.2.16 Ensure prompt submittal of a Notice of Proposed Construction or Alteration (Form 7460-1) for conducting an aeronautical study of potential obstructions such as tall equipment (cranes, concrete pumps, other), stock piles, and haul routes. A separate form may be filed for each potential obstruction, or one form may be filed describing the entire construction area and maximum equipment height. In the latter case, a separate form must be filed for any object beyond or higher than the originally evaluated area/height. The FAA encourages online submittal of forms for expediency at https://oeaaa.faa.gov/oeaaa/external/portal.jsp. The appropriate FAA Airports Regional or District Office can provide assistance in determining which objects require an aeronautical study.

1.4.2.17 Ensure prompt transmission of the Airport Sponsor Strategic Event Submission, FAA Form 6000-26, located at https://oeaaa.faa.gov/oeaaa/external/content/AIRPORT_SPONSOR_STRATEGIC_EVENT_SUBMISSION_FORM.pdf, to assure proper coordination for NAS Strategic Interruption per Service Level Agreement with ATO.

1.4.2.18 Promptly notify the FAA Airports Regional or District Office of any proposed changes to the CSPP prior to implementation of the change. Changes to the CSPP require review and approval by the airport operator and the FAA. The FAA Airports Regional or District office will determine if further coordination within the FAA is needed. Coordinate with appropriate local and other federal government agencies, such as Environmental Protection Agency (EPA), Occupational Safety and Health Administration (OSHA), Transportation Security Administration (TSA), and the state environmental agency.

1.4.3 Define Construction Contractor's Responsibilities.

The contractor is responsible for complying with the CSPP and SPCD. The contractor must:

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1.4.3.1 Submit a Safety Plan Compliance Document (SPCD) to the airport operator describing how it will comply with the requirements of the CSPP and supply any details that could not be determined before contract award. The SPCD must include a certification statement by the contractor, indicating an understanding of the operational safety requirements of the CSPP and the assertion of compliance with the approved CSPP and SPCD unless written approval is granted by the airport operator. Any construction practice proposed by the contractor that does not conform to the CSPP and SPCD may impact the airport's operational safety and will require a revision to the CSPP and SPCD and re-coordination with the airport operator and the FAA in advance.

1.4.3.2 Have available at all times copies of the CSPP and SPCD for reference by the airport operator and its representatives, and by subcontractors and contractor employees.

1.4.3.3 Ensure that construction personnel are familiar with safety procedures and regulations on the airport. Provide a point of contact who will coordinate an immediate response to correct any construction-related activity that may adversely affect the operational safety of the airport. Many projects will require 24-hour coverage.

1.4.3.4 Identify in the SPCD the contractor's on-site employees responsible for monitoring compliance with the CSPP and SPCD during construction. At least one of these employees must be on-site when active construction is taking place.

1.4.3.5 Conduct sufficient inspections to ensure construction personnel comply with the CSPP and SPCD and that there are no altered construction activities that could create potential safety hazards.

1.4.3.6 Restrict movement of construction vehicles and personnel to permitted construction areas by flagging, barricading, erecting temporary fencing, or providing escorts, as appropriate, and as specified in the CSPP and SPCD.

1.4.3.7 Ensure that no contractor employees, employees of subcontractors or suppliers, or other persons enter any part of the air operations area (AOA) from the construction site unless authorized.

1.4.3.8 Ensure prompt submittal through the airport operator of Form 7460-1 for the purpose of conducting an aeronautical study of contractor equipment such as tall equipment (cranes, concrete pumps, and other equipment), stock piles, and haul routes when different from cases previously filed by the airport operator. The FAA encourages online submittal of forms for expediency at https://oeaaa.faa.gov/oeaaa/external/portal.jsp.

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1.4.3.9 Ensure that all necessary safety mitigations are understood by all parties involved, and any special requirements of each construction phase will be fulfilled per the approved timeframe.

1.4.3.10 Participate in pre-construction meetings to review construction limits, safety mitigations, NOTAMs, and understand all special airport operational needs during each phase of the project.

1.4.4 Define Tenant's Responsibilities.

If planning construction activities on leased property, Airport tenants, such as airline operators, fixed base operators, and FAA ATO/Technical Operations sponsoring construction are strongly encouraged to:

1. Develop, or have a consultant develop, a project specific CSPP and submit it to the airport operator. The airport operator may forgo a complete CSPP submittal and instead incorporate appropriate operational safety principles and measures addressed in the advisory circular within their tenant lease agreements.
2. In coordination with its contractor, develop an SPCD and submit it to the airport operator for approval issued prior to issuance of a Notice to Proceed.
3. Ensure that construction personnel are familiar with safety procedures and regulations on the airport during all phases of the construction.
4. Provide a point of contact of who will coordinate an immediate response to correct any construction-related activity that may adversely affect the operational safety of the airport.
5. Identify in the SPCD the contractor's on-site employees responsible for monitoring compliance with the CSPP and SPCD during construction. At least one of these employees must be on-site when active construction is taking place.
6. Ensure that no tenant or contractor employees, employees of subcontractors or suppliers, or any other persons enter any part of the AOA from the construction site unless authorized.
7. Restrict movement of construction vehicles to construction areas by flagging and barricading, erecting temporary fencing, or providing escorts, as appropriate, as specified in the CSPP and SPCD.
8. Ensure prompt submittal through the airport operator of Form 7460-1 for conducting an aeronautical study of contractor equipment such as tall equipment (cranes, concrete pumps, other), stock piles, and haul routes. The FAA encourages online submittal of forms for expediency at https://oeaaa.faa.gov/oeaaa/external/portal.jsp.
9. Participate in pre-construction meetings to review construction limits, safety mitigations, NOTAMs, and understand all special airport operational needs during each phase of the project.

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CHAPTER 2. CONSTRUCTION SAFETY AND PHASING PLANS

2.1 Overview.

Aviation safety is the primary consideration at airports, especially during construction. The airport operator's CSPP and the contractor's Safety Plan Compliance Document (SPCD) are the primary tools to ensure safety compliance when coordinating construction activities with airport operations. These documents identify all aspects of the construction project that pose a potential safety hazard to airport operations and outline respective mitigation procedures for each hazard. They must provide information necessary for the Airport Operations department to conduct airfield inspections and expeditiously identify and correct unsafe conditions during construction. All aviation safety provisions included within the project drawings, contract specifications, and other related documents must also be reflected in the CSPP and SPCD.

2.2 Assume Responsibility.

Operational safety on the airport remains the airport operator's responsibility at all times. The airport operator must develop, certify, and submit for FAA approval each CSPP. It is the airport operator's responsibility to apply the requirements of the FAA approved CSPP. The airport operator must revise the CSPP when conditions warrant changes and must submit the revised CSPP to the FAA for approval. The airport operator must also require and approve a SPCD from the project contractor.

2.3 Submit the CSPP.

Construction Safety and Phasing Plans should be developed concurrently with the project design. Milestone versions of the CSPP should be submitted for review and approval as follows. While these milestones are not mandatory, early submission will help to avoid delays. Submittals are preferred in 8.5 × 11 inch or 11 × 17 inch format for compatibility with the FAA's Obstruction Evaluation / Airport Airspace Analysis (OE / AAA) process.

2.3.1 Submit an Outline/Draft.

By the time approximately 25% to 30% of the project design is completed, the principal elements of the CSPP should be established. Airport operators are encouraged to submit an outline or draft, detailing all CSPP provisions developed to date, to the FAA for review at this stage of the project design.

2.3.2 Submit a CSPP.

The CSPP should be formally submitted for FAA approval when the project design is 80 percent to 90 percent complete. Since provisions in the CSPP will influence contract costs, it is important to obtain FAA approval in time to include all such provisions in the procurement contract.

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2.3.3 Submit an SPCD.

The contractor should submit the SPCD to the airport operator for approval to be issued prior to the Notice to Proceed.

2.3.4 Submit CSPP Revisions.

All revisions to a previously approved CSPP must be re-submitted to the FAA for review and approval/disapproval action.

2.4 Meet CSPP Requirements.

2.4.1 To the extent possible, the CSPP should address the following as outlined in Chapter 3, Guidelines for Writing a CSPP. Details that cannot be determined at this stage are to be included in the SPCD.

1. Coordination.
    a. Contractor progress meetings.
    b. Scope or schedule changes.
    c. FAA ATO coordination.
2. Phasing.
    a. Phase elements.
    b. Construction safety drawings.
3. Areas and operations affected by the construction activity.
    a. Identification of affected areas.
    b. Mitigation of effects.
4. Protection of navigation aids (NAVAIDs).
5. Contractor access.
    a. Location of stockpiled construction materials.
    b. Vehicle and pedestrian operations.
6. Wildlife management.
    a. Trash.
    b. Standing water.
    c. Tall grass and seeds.
    d. Poorly maintained fencing and gates.
    e. Disruption of existing wildlife habitat.
7. Foreign Object Debris (FOD) management.
8. Hazardous materials (HAZMAT) management.
9. Notification of construction activities.

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a. Maintenance of a list of responsible representatives/ points of contact.
b. NOTAM.
c. Emergency notification procedures.
d. Coordination with ARFF Personnel.
e. Notification to the FAA.

10. Inspection requirements.
    a. Daily (or more frequent) inspections.
    b. Final inspections.
11. Underground utilities.
12. Penalties.
13. Special conditions.
14. Runway and taxiway visual aids. Marking, lighting, signs, and visual NAVAIDs.
    a. General.
    b. Markings.
    c. Lighting and visual NAVAIDs.
    d. Signs, temporary, including orange construction signs, and permanent signs.
15. Marking and signs for access routes.
16. Hazard marking and lighting.
    a. Purpose.
    b. Equipment.
17. Work zone lighting for nighttime construction (if applicable).
18. Protection of runway and taxiway safety areas, object free areas, obstacle free zones, and approach/departure surfaces.
    a. Runway Safety Area (RSA).
    b. Runway Object Free Area (ROFA).
    c. Taxiway Safety Area (TSA). Provide details for any adjustments to Taxiway Safety Area width to allow continued operation of smaller aircraft. See paragraph 2.22.3.
    d. Taxiway Object Free Area (TOFA). Provide details for any continued aircraft operations while construction occurs within the TOFA. See paragraph 2.22.4.
    e. Obstacle Free Zone (OFZ).
    f. Runway approach/departure surfaces.
19. Other limitations on construction.
    a. Prohibitions.

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b. Restrictions.

2.4.2 The Safety Plan Compliance Document (SPCD) should include a general statement by the construction contractor that he/she has read and will abide by the CSPP. In addition, the SPCD must include all supplemental information that could not be included in the CSPP prior to the contract award. The contractor statement should include the name of the contractor, the title of the project CSPP, the approval date of the CSPP, and a reference to any supplemental information (that is, "I, (Name of Contractor), have read the (Title of Project) CSPP, approved on (Date), and will abide by it as written and with the following additions as noted:"). The supplemental information in the SPCD should be written to match the format of the CSPP indicating each subject by corresponding CSPP subject number and title. If no supplemental information is necessary for any specific subject, the statement, "No supplemental information," should be written after the corresponding subject title. The SPCD should not duplicate information in the CSPP:

1. Coordination. Discuss details of proposed safety meetings with the airport operator and with contractor employees and subcontractors.
2. Phasing. Discuss proposed construction schedule elements, including:
   a. Duration of each phase.
   b. Daily start and finish of construction, including "night only" construction.
   c. Duration of construction activities during:
      i. Normal runway operations.
      ii. Closed runway operations.
      iii. Modified runway "Aircraft Reference Code" usage.
3. Areas and operations affected by the construction activity. These areas and operations should be identified in the CSPP and should not require an entry in the SPCD.
4. Protection of NAVAIDs. Discuss specific methods proposed to protect operating NAVAIDs.
5. Contractor access. Provide the following:
   a. Details on how the contractor will maintain the integrity of the airport security fence (gate guards, daily log of construction personnel, and other).
   b. Listing of individuals requiring driver training (for certificated airports and as requested).
   c. Radio communications.
      i. Types of radios and backup capabilities.
      ii. Who will be monitoring radios.
      iii. Who to contact if the ATCT cannot reach the contractor's designated person by radio.

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d. Details on how the contractor will escort material delivery vehicles.

6. Wildlife management. Discuss the following:
   a. Methods and procedures to prevent wildlife attraction.
   b. Wildlife reporting procedures.
7. Foreign Object Debris (FOD) management. Discuss equipment and methods for control of FOD, including construction debris and dust.
8. Hazardous Materials (HAZMAT) management. Discuss equipment and methods for responding to hazardous spills.
9. Notification of construction activities. Provide the following:
   a. Contractor points of contact.
   b. Contractor emergency contact.
   c. Listing of tall or other requested equipment proposed for use on the airport and the timeframe for submitting 7460-1 forms not previously submitted by the airport operator.
   d. Batch plant details, including 7460-1 submittal.
10. Inspection requirements. Discuss daily (or more frequent) inspections and special inspection procedures.
11. Underground utilities. Discuss proposed methods of identifying and protecting underground utilities.
12. Penalties. Penalties should be identified in the CSPP and should not require an entry in the SPCD.
13. Special conditions. Discuss proposed actions for each special condition identified in the CSPP.
14. Runway and taxiway visual aids. Including marking, lighting, signs, and visual NAVAIDs. Discuss proposed visual aids including the following:
   a. Equipment and methods for covering signage and airfield lights.
   b. Equipment and methods for temporary closure markings (paint, fabric, other).
   c. Temporary orange construction signs.
   d. Types of temporary Visual Guidance Slope Indicators (VGSI).
15. Marking and signs for access routes. Discuss proposed methods of demarcating access routes for vehicle drivers.
16. Hazard marking and lighting. Discuss proposed equipment and methods for identifying excavation areas.
17. Work zone lighting for nighttime construction (if applicable). Discuss proposed equipment, locations, aiming, and shielding to prevent interference with air traffic control and aircraft operations.

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18. Protection of runway and taxiway safety areas, object free areas, obstacle free zones, and approach/departure surfaces. Discuss proposed methods of identifying, demarcating, and protecting airport surfaces including:
    a. Equipment and methods for maintaining Taxiway Safety Area standards.
    b. Equipment and methods to ensure the safe passage of aircraft where Taxiway Safety Area or Taxiway Object Free Area standards cannot be maintained.
    c. Equipment and methods for separation of construction operations from aircraft operations, including details of barricades.
19. Other limitations on construction should be identified in the CSPP and should not require an entry in the SPCD.

2.5 **Coordination.**

Airport operators, or tenants responsible for design, bidding and conducting construction on their leased properties, should ensure at all project developmental stages, such as predesign, prebid, and preconstruction conferences, they capture the subject of airport operational safety during construction (see AC 150/5370-12, *Quality Management for Federally Funded Airport Construction Projects*). In addition, the following should be coordinated as required:

2.5.1 Progress Meetings.

Operational safety should be a standing agenda item for discussion during progress meetings throughout the project developmental stages.

2.5.2 Scope or Schedule Changes.

Changes in the scope or duration at any of the project stages may require revisions to the CSPP and review and approval by the airport operator and the FAA (see paragraph 1.4.2.17).

2.5.3 FAA ATO Coordination.

Early coordination with FAA ATO is highly recommended during the design phase and is required for scheduling Technical Operations shutdowns prior to construction. Coordination is critical to restarts of NAVAID services and to the establishment of any special procedures for the movement of aircraft. Formal agreements between the airport operator and appropriate FAA offices are recommended. All relocation or adjustments to NAVAIDs, or changes to final grades in critical areas, should be coordinated with FAA ATO and may require an FAA flight inspection prior to restarting the facility. Flight inspections must be coordinated and scheduled well in advance of the intended facility restart. Flight inspections may require a reimbursable agreement between the airport operator and FAA ATO. Reimbursable agreements should be coordinated a minimum of 12 months prior to the start of construction. (See paragraph 2.13.5.3.2 for required FAA notification regarding FAA-owned NAVAIDs.)

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2.6 **Phasing.**

Once it has been determined what types and levels of airport operations will be maintained, the most efficient sequence of construction may not be feasible. In this case, the sequence of construction may be phased to gain maximum efficiency while allowing for the required operations. The development of the resulting construction phases should be coordinated with local Air Traffic personnel and airport users. The sequenced construction phases established in the CSPP must be incorporated into the project design and must be reflected in the contract drawings and specifications.

2.6.1 Phase Elements.

For each phase the CSPP should detail:

- Areas closed to aircraft operations.
- Duration of closures.
- Taxi routes and/or areas of reduced TSA and TOFA to reflect reduced ADG use.
- ARFF access routes.
- Construction staging, disposal, and cleanout areas.
- Construction access and haul routes.
- Impacts to NAVAIDs.
- Lighting, marking, and signing changes.
- Available runway length and/or reduced RSA and ROFA to reflect reduced ADG use.
- Declared distances (if applicable).
- Required hazard marking, lighting, and signing.
- Work zone lighting for nighttime construction (if applicable).
- Lead times for required notifications.

2.6.2 Construction Safety Drawings.

Drawings specifically indicating operational safety procedures and methods in affected areas (i.e., construction safety drawings) should be developed for each construction phase. Such drawings should be included in the CSPP as referenced attachments and should also be included in the contract drawing package.

2.7 **Areas and Operations Affected by Construction Activity.**

Runways and taxiways should remain in use by aircraft to the maximum extent possible without compromising safety. Pre-meetings with the FAA ATO will support operational simulations. See Appendix E for an example of a table showing temporary operations versus current operations. The tables in Appendix E can be useful for coordination among all interested parties, including FAA Lines of Business.

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2.7.1 Identification of Affected Areas.

Identifying areas and operations affected by the construction helps to determine possible safety problems. The affected areas should be identified in the construction safety drawings for each construction phase. (See paragraph 2.6.2.) Of particular concern are:

2.7.1.1 **Closing, or Partial Closing, of Runways, Taxiways and Aprons, and Displaced Thresholds.**

When a runway is partially closed, a portion of the pavement is unavailable for any aircraft operation, meaning taxiing, landing, or takeoff in either direction on that pavement is prohibited. A displaced threshold, by contrast, is established to ensure obstacle clearance and adequate safety area for landing aircraft. The pavement prior to the displaced threshold is normally available for take-off in the direction of the displacement and for landing and takeoff in the opposite direction. Misunderstanding this difference, may result in issuance of an inaccurate NOTAM, and can lead to a hazardous condition.

2.7.1.1.1 Partially Closed Runways.

The temporarily closed portion of a partially closed runway will generally extend from the threshold to a taxiway that may be used for entering and exiting the runway. If the closed portion extends to a point between taxiways, pilots will have to back-taxi on the runway, which is an undesirable operation. See Figure 2-1 for a desirable configuration.

2.7.1.1.2 Displaced Thresholds.

Since the portion of the runway pavement between the permanent threshold and a standard displaced threshold is available for takeoff and for landing in the opposite direction, the temporary displaced threshold need not be located at an entrance/exit taxiway. See Figure 2-2.

2.7.1.2 Closing of aircraft rescue and fire fighting access routes.

2.7.1.3 Closing of access routes used by airport and airline support vehicles.

2.7.1.4 Interruption of utilities, including water supplies for fire fighting.

2.7.1.5 Approach/departure surfaces affected by heights of objects.

2.7.1.6 Construction areas, storage areas, and access routes near runways, taxiways, aprons, or helipads.

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Figure 2-1. Temporary Partially Closed Runway

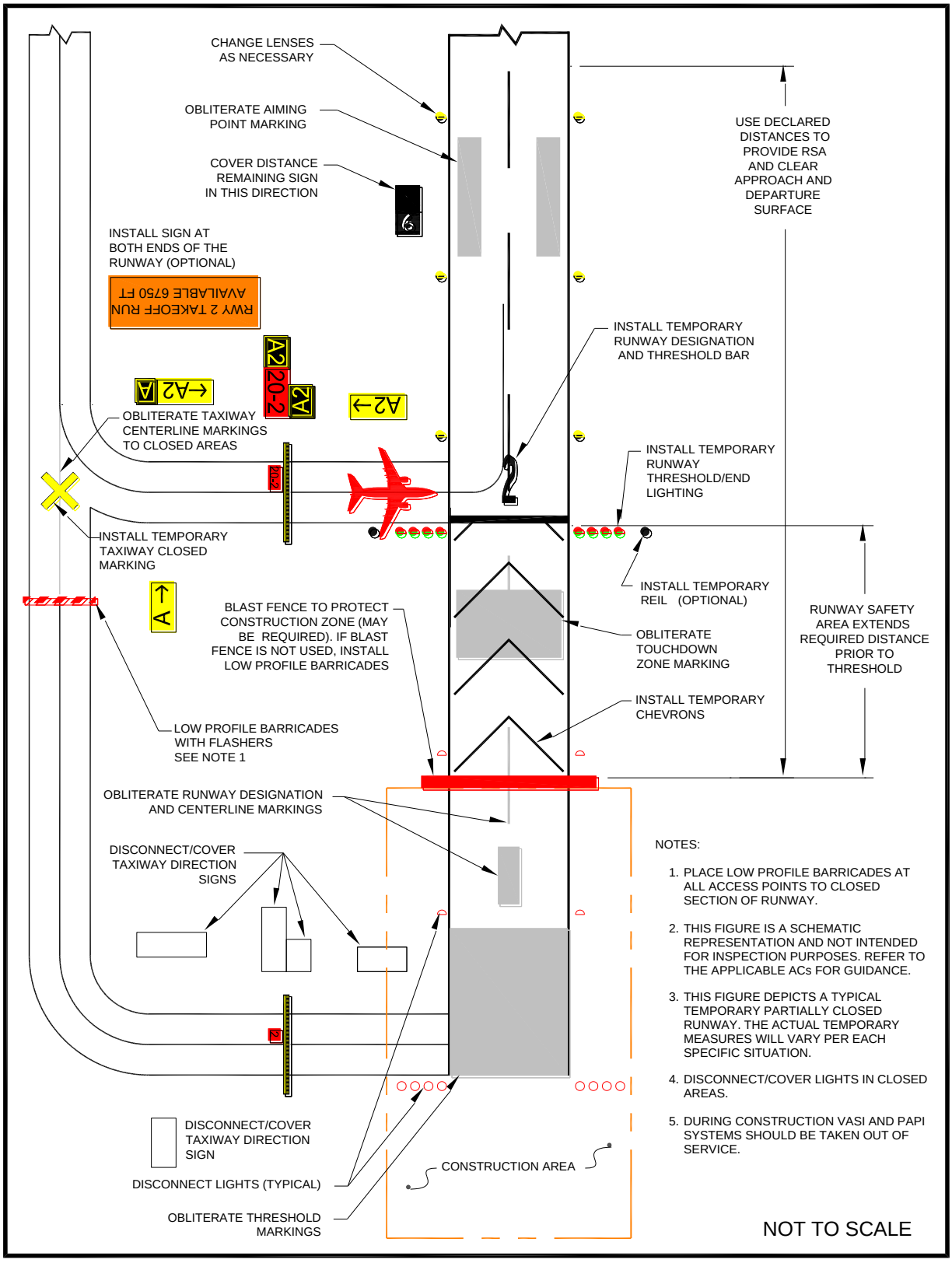

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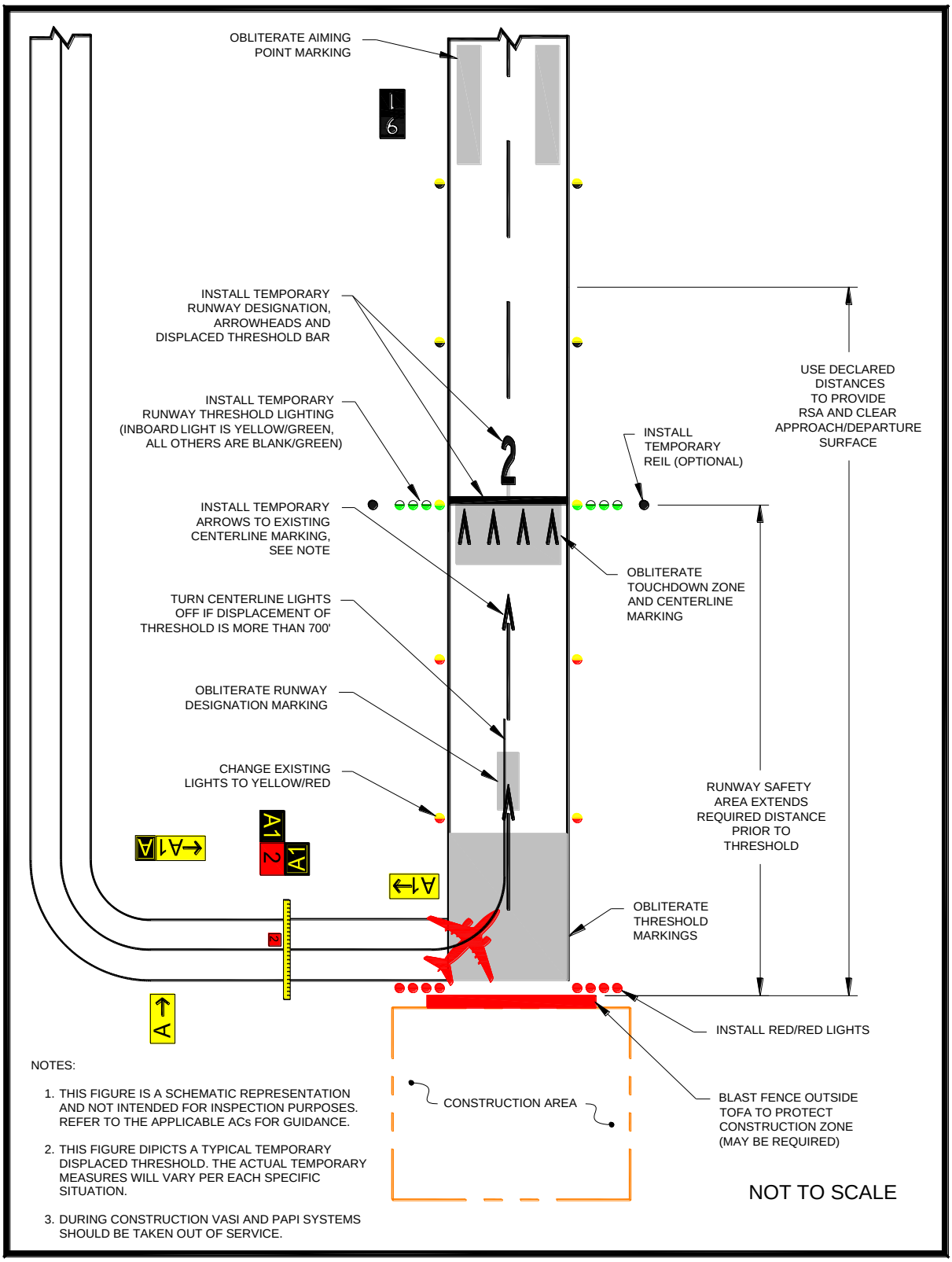
Figure 2-2. Temporary Displaced Threshold



Note: See paragraph 2.18.2.5.

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2.7.2 Mitigation of Effects.

Establishment of specific procedures is necessary to maintain the safety and efficiency of airport operations. The CSPP must address:

2.7.2.1 Temporary changes to runway and/or taxi operations.

2.7.2.2 Detours for ARFF and other airport vehicles.

2.7.2.3 Maintenance of essential utilities.

2.7.2.4 Temporary changes to air traffic control procedures. Such changes must be coordinated with the ATO.

2.8 Navigation Aid (NAVAID) Protection.

Before commencing construction activity, parking vehicles, or storing construction equipment and materials near a NAVAID, coordinate with the appropriate FAA ATO/Technical Operations office to evaluate the effect of construction activity and the required distance and direction from the NAVAID. (See paragraph 2.13.5.3.) Construction activities, materials/equipment storage, and vehicle parking near electronic NAVAIDs require special consideration since they may interfere with signals essential to air navigation. If any NAVAID may be affected, the CSPP and SPCD must show an understanding of the "critical area" associated with each NAVAID and describe how it will be protected. Where applicable, the operational critical areas of NAVAIDs should be graphically delineated on the project drawings. Pay particular attention to stockpiling material, as well as to movement and parking of equipment that may interfere with line of sight from the ATCT or with electronic emissions. Interference from construction equipment and activities may require NAVAID shutdown or adjustment of instrument approach minimums for low visibility operations. This condition requires that a NOTAM be filed (see paragraph 2.13.2). Construction activities and materials/equipment storage near a NAVAID must not obstruct access to the equipment and instruments for maintenance. Submittal of a 7460-1 form is required for construction vehicles operating near FAA NAVAIDs. (See paragraph 2.13.5.3.)

2.9 Contractor Access.

The CSPP must detail the areas to which the contractor must have access, and explain how contractor personnel will access those areas. Specifically address:

2.9.1 Location of Stockpiled Construction Materials.

Stockpiled materials and equipment storage are not permitted within the RSA and OFZ, and if possible should not be permitted within the Object Free Area (OFA) of an operational runway. Stockpiling material in the OFA requires submittal of a 7460-1 form and justification provided to the appropriate FAA Airports Regional or District Office for approval. The airport operator must ensure that stockpiled materials and equipment adjacent to these areas are prominently marked and lighted during hours of restricted visibility or darkness. (See paragraph 2.18.2.) This includes determining and

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verifying that materials are stabilized and stored at an approved location so as not to be a hazard to aircraft operations and to prevent attraction of wildlife and foreign object damage from blowing or tracked material. See paragraphs 2.10 and 2.11.

2.9.2 Vehicle and Pedestrian Operations.

The CSPP should include specific vehicle and pedestrian requirements. Vehicle and pedestrian access routes for airport construction projects must be controlled to prevent inadvertent or unauthorized entry of persons, vehicles, or animals onto the AOA. The airport operator should coordinate requirements for vehicle operations with airport tenants, contractors, and the FAA air traffic manager. In regard to vehicle and pedestrian operations, the CSPP should include the following, with associated training requirements:

2.9.2.1 **Construction Site Parking.**

Designate in advance vehicle parking areas for contractor employees to prevent any unauthorized entry of persons or vehicles onto the AOA. These areas should provide reasonable contractor employee access to the job site.

2.9.2.2 **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 well lighted. Employees should also park construction vehicles outside the OFA when not in use by construction personnel (for example, overnight, on weekends, or during other periods when construction is not active). Parking areas must not obstruct the clear line of sight by the ATCT to any taxiways or runways under air traffic control nor obstruct any runway visual aids, signs, or navigation aids. The FAA must also study those areas to determine effects on airport design criteria, surfaces established by 14 CFR Part 77, Safe, Efficient Use, and Preservation of the Navigable Airspace (Part 77), and on NAVAIDs and Instrument Approach Procedures (IAP). See paragraph 2.13.1 for further information.

2.9.2.3 **Access and Haul Roads.**

Determine the construction contractor’s access to the construction sites and haul roads. Do not permit the construction contractor to use any access or haul roads other than those approved. Access routes used by contractor vehicles must be clearly marked to prevent inadvertent entry to areas open to airport operations. Pay special attention to ensure that if construction traffic is to share or cross any ARFF routes that ARFF right of way is not impeded at any time, and that construction traffic on haul

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roads does not interfere with NAVAIDs or approach surfaces of operational runways. Address whether access gates will be blocked or inoperative or if a rally point will be blocked or inaccessible.

2.9.2.4 Marking and lighting of vehicles in accordance with AC 150/5210-5, *Painting, Marking, and Lighting of Vehicles Used on an Airport.*

2.9.2.5 Description of proper vehicle operations on various areas under normal, lost communications, and emergency conditions.

2.9.2.6 Required escorts.

2.9.2.7 **Training Requirements for Vehicle Drivers to Ensure Compliance with the Airport Operator's Vehicle Rules and Regulations.**

Specific training should be provided to vehicle operators, including those providing escorts. See AC 150/5210-20, *Ground Vehicle Operations on Airports*, for information on training and records maintenance requirements.

2.9.2.8 **Situational Awareness.**

Vehicle drivers must 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. In addition, it is the responsibility of the escort vehicle driver to verify the movement/position of all escorted vehicles at any given time. At non-towered airports, all aircraft movements and flight operations rely on aircraft operators to self-report their positions and intentions. However, there is no requirement for an aircraft to have radio communications. Because aircraft do not always broadcast their positions or intentions, visual checking, radio monitoring, and situational awareness of the surroundings is critical to safety.

2.9.2.9 **Two-Way Radio Communication Procedures.**

2.9.2.9.1 General.

The airport operator must ensure that tenant and construction contractor personnel engaged in activities involving unescorted operation on aircraft movement areas observe the proper procedures for communications, including using appropriate radio frequencies at airports with and without ATCT. When operating vehicles on or near open runways or taxiways, construction personnel must understand the critical importance of maintaining radio contact, as directed by the airport operator, with:

1. Airport operations
2. ATCT

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3. Common Traffic Advisory Frequency (CTAF), which may include UNICOM, MULTICOM.
4. Automatic Terminal Information Service (ATIS). This frequency is useful for monitoring conditions on the airport. Local air traffic will broadcast information regarding construction related runway closures and "shortened" runways on the ATIS frequency.

2.9.2.9.2 Areas Requiring Two-Way Radio Communication with the ATCT.

Vehicular traffic crossing active movement areas must be controlled either by two-way radio with the ATCT, escort, flagman, signal light, or other means appropriate for the particular airport.

2.9.2.9.3 Frequencies to be Used.

The airport operator will specify the frequencies to be used by the contractor, which may include the CTAF for monitoring of aircraft operations. Frequencies may also be assigned by the airport operator for other communications, including any radio frequency in compliance with Federal Communications Commission requirements. At airports with an ATCT, the airport operator will specify the frequency assigned by the ATCT to be used between contractor vehicles and the ATCT.

2.9.2.9.4 Proper radio usage, including read back requirements.

2.9.2.9.5 Proper phraseology, including the International Phonetic Alphabet.

2.9.2.9.6 Light Gun Signals.

Even though radio communication is maintained, escort vehicle drivers must also familiarize themselves with ATCT light gun signals in the event of radio failure. See the FAA safety placard "Ground Vehicle Guide to Airport Signs and Markings." This safety placard may be downloaded through the Runway Safety Program Web site at http://www.faa.gov/airports/runway_safety/publications/ (see "Signs & Markings Vehicle Dashboard Sticker") or obtained from the FAA Airports Regional Office.

2.9.2.10 **Maintenance of the secured area of the airport, including:**

2.9.2.10.1 Fencing and Gates.

Airport operators and contractors must take care to maintain security during construction when access points are created in the security fencing to permit the passage of construction vehicles or personnel. Temporary gates should be equipped so they can be securely closed and locked to prevent access by animals and unauthorized people. Procedures should be in place to ensure that only authorized persons and vehicles have access to the AOA and to prohibit "piggybacking" behind another person or vehicle. The Department of Transportation (DOT) document DOT/FAA/AR-

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00/52, *Recommended Security Guidelines for Airport Planning and Construction*, provides more specific information on fencing. A copy of this document can be obtained from the Airport Consultants Council, Airports Council International, or American Association of Airport Executives.

2.9.2.10.2 Badging Requirements.

Airports subject to 49 CFR Part 1542, *Airport Security*, must meet standards for access control, movement of ground vehicles, and identification of construction contractor and tenant personnel.

2.10 Wildlife Management.

The CSPP and SPCD must be in accordance with the airport operator's wildlife hazard management plan, if applicable. See AC 150/5200-33, *Hazardous Wildlife Attractants On or Near Airports,* and CertAlert 98-05, *Grasses Attractive to Hazardous Wildlife.* Construction contractors must carefully control and continuously remove waste or loose materials that might attract wildlife. Contractor personnel must be aware of and avoid construction activities that can create wildlife hazards on airports, such as:

2.10.1 Trash.

Food scraps must be collected from construction personnel activity.

2.10.2 Standing Water.

2.10.3 Tall Grass and Seeds.

Requirements for turf establishment can be at odds with requirements for wildlife control. Grass seed is attractive to birds. Lower quality seed mixtures can contain seeds of plants (such as clover) that attract larger wildlife. Seeding should comply with the guidance in AC 150/5370-10, *Standards for Specifying Construction of Airports,* Item T-901, Seeding. Contact the local office of the United Sates Department of Agriculture Soil Conservation Service or the State University Agricultural Extension Service (County Agent or equivalent) for assistance and recommendations. These agencies can also provide liming and fertilizer recommendations.

2.10.4 Poorly Maintained Fencing and Gates.

See paragraph 2.9.2.10.1.

2.10.5 Disruption of Existing Wildlife Habitat.

While this will frequently be unavoidable due to the nature of the project, the CSPP should specify under what circumstances (location, wildlife type) contractor personnel should immediately notify the airport operator of wildlife sightings.

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2.11 Foreign Object Debris (FOD) Management.

Waste and loose materials, commonly referred to as FOD, are capable of causing damage to aircraft landing gears, propellers, and jet engines. Construction contractors must not leave or place FOD on or near active aircraft movement areas. Materials capable of creating FOD must be continuously removed during the construction project. Fencing (other than security fencing) or covers may be necessary to contain material that can be carried by wind into areas where aircraft operate. See AC 150/5210-24, *Foreign Object Debris (FOD) Management.*

2.12 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. Transport and handling of other hazardous materials on an airport also requires special procedures. See AC 150/5320-15, *Management of Airport Industrial Waste.*

2.13 Notification of Construction Activities.

The CSPP and SPCD must detail procedures for the immediate notification of airport users and the FAA of any conditions adversely affecting the operational safety of the airport. It must address the notification actions described below, as applicable.

2.13.1 List of Responsible Representatives/points of contact for all involved parties, and procedures for contacting each of them, including after hours.

2.13.2 NOTAMs.

Only the airport operator may initiate or cancel NOTAMs on airport conditions, and is the only entity that can close or open a runway. The airport operator must coordinate the issuance, maintenance, and cancellation of NOTAMs about airport conditions resulting from construction activities with tenants and the local air traffic facility (control tower, approach control, or air traffic control center), and must either enter the NOTAM into NOTAM Manager, or provide information on closed or hazardous conditions on airport movement areas to the FAA Flight Service Station (FSS) so it can issue a NOTAM. The airport operator must file and maintain a list of authorized representatives with the FSS. Refer to AC 150/5200-28, *Notices to Airmen (NOTAMs) for Airport Operators,* for a sample NOTAM form. Only the FAA may issue or cancel NOTAMs on shutdown or irregular operation of FAA owned facilities. Any person having reason to believe that a NOTAM is missing, incomplete, or inaccurate must notify the airport operator. See paragraph 2.7.1.1 about issuing NOTAMs for partially closed runways versus runways with displaced thresholds.

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2.13.3 Emergency notification procedures for medical, fire fighting, and police response.

2.13.4 Coordination with ARFF.

The CSPP must detail procedures for coordinating through the airport sponsor with ARFF personnel, mutual aid providers, and other emergency services if construction requires:

1. The deactivation and subsequent reactivation of water lines or fire hydrants, or
2. The rerouting, blocking and restoration of emergency access routes, or
3. The use of hazardous materials on the airfield.

2.13.5 Notification to the FAA.

2.13.5.1 **Part 77.**

Any person proposing construction or alteration of objects that affect navigable airspace, as defined in Part 77, must notify the FAA. This includes construction equipment and proposed parking areas for this equipment (i.e., cranes, graders, other equipment) on airports. FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, can be used for this purpose and submitted to the appropriate FAA Airports Regional or District Office. See Appendix A to download the form. Further guidance is available on the FAA web site at oeaaa.faa.gov.

2.13.5.2 **Part 157.**

With some exceptions, Title 14 CFR Part 157, *Notice of Construction, Alteration, Activation, and Deactivation of Airports*, requires that the airport operator notify the FAA in writing whenever a non-Federally funded project involves the construction of a new airport; the construction, realigning, altering, activating, or abandoning of a runway, landing strip, or associated taxiway; or the deactivation or abandoning of an entire airport. Notification involves submitting FAA Form 7480-1, *Notice of Landing Area Proposal*, to the nearest FAA Airports Regional or District Office. See Appendix A to download the form.

2.13.5.3 **NAVAIDs.**

For emergency (short-notice) notification about impacts to both airport owned and FAA owned NAVAIDs, contact: 866-432-2622.

2.13.5.3.1 Airport Owned/FAA Maintained.

If construction operations require a shutdown of 24 hours or greater in duration, or more than 4 hours daily on consecutive days, of a NAVAID owned by the airport but maintained by the FAA, provide a 45-day minimum notice to FAA ATO/Technical Operations prior to facility shutdown, using Strategic Event Coordination (SEC) Form 6000.26 contained within FAA Order 6000.15, *General Maintenance Handbook for National Airspace System (NAS) Facilities*.

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2.13.5.3.2 FAA Owned.

1. The airport operator must notify the appropriate FAA ATO Service Area Planning and Requirements (P&R) Group a minimum of 45 days prior to implementing an event that causes impacts to NAVAIDs, using SEC Form 6000.26.
2. Coordinate work for an FAA owned NAVAID shutdown with the local FAA ATO/Technical Operations office, including any necessary reimbursable agreements and flight checks. Detail procedures that address unanticipated utility outages and cable cuts that could impact FAA NAVAIDs. Refer to active Service Level Agreement with ATO for specifics.

2.14 **Inspection Requirements.**

2.14.1 Daily Inspections.

Inspections should be conducted at least daily, but more frequently if necessary to ensure conformance with the CSPP. A sample checklist is provided in Appendix D, Construction Project Daily Safety Inspection Checklist. See also AC 150/5200-18, *Airport Safety Self-Inspection.* Airport operators holding a Part 139 certificate are required to conduct self-inspections during unusual conditions, such as construction activities, that may affect safe air carrier operations.

2.14.2 Interim Inspections.

Inspections should be conducted of all areas to be (re)opened to aircraft traffic to ensure the proper operation of lights and signs, for correct markings, and absence of FOD. The contractor should conduct an inspection of the work area with airport operations personnel. The contractor should ensure that all construction materials have been secured, all pavement surfaces have been swept clean, all transition ramps have been properly constructed, and that surfaces have been appropriately marked for aircraft to operate safely. Only if all items on the list meet with the airport operator's approval should the air traffic control tower be notified to open the area to aircraft operations. The contractor should be required to retain a suitable workforce and the necessary equipment at the work area for any last minute cleanup that may be requested by the airport operator prior to opening the area.

2.14.3 Final Inspections.

New runways and extended runway closures may require safety inspections at certificated airports prior to allowing air carrier service. Coordinate with the FAA Airport Certification Safety Inspector (ACSI) to determine if a final inspection will be necessary.

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2.15 **Underground Utilities.**

The CSPP and/or SPCD must include procedures for locating and protecting existing underground utilities, cables, wires, pipelines, and other underground facilities in excavation areas. This may involve coordinating with public utilities and FAA ATO/Technical Operations. Note that "One Call" or "Miss Utility" services do not include FAA ATO/Technical Operations.

2.16 **Penalties.**

The CSPP should detail penalty provisions for noncompliance with airport rules and regulations and the safety plans (for example, if a vehicle is involved in a runway incursion). Such penalties typically include rescission of driving privileges or access to the AOA.

2.17 **Special Conditions.**

The CSPP must detail any special conditions that affect the operation of the airport and will require the activation of any special procedures (for example, low-visibility operations, snow removal, aircraft in distress, aircraft accident, security breach, Vehicle / Pedestrian Deviation (VPD) and other activities requiring construction suspension/resumption).

2.18 **Runway and Taxiway Visual Aids.**

This includes marking, lighting, signs, and visual NAVAIDs. The CSPP must ensure that areas where aircraft will be operating are clearly and visibly separated from construction areas, including closed runways. Throughout the duration of the construction project, verify that these areas remain clearly marked and visible at all times and that marking, lighting, signs, and visual NAVAIDs that are to continue to perform their functions during construction remain in place and operational. Visual NAVAIDs that are not serving their intended function during construction must be temporarily disabled, covered, or modified as necessary. The CSPP must address the following, as appropriate:

2.18.1 General.

Airport markings, lighting, signs, and visual NAVAIDs must be clearly visible to pilots, not misleading, confusing, or deceptive. All must be secured in place to prevent movement by prop wash, jet blast, wing vortices, and other wind currents and constructed of materials that will minimize damage to an aircraft in the event of inadvertent contact. Items used to secure such markings must be of a color similar to the marking.

2.18.2 Markings.

During the course of construction projects, temporary pavement markings are often required to allow for aircraft operations during or between work periods. During the design phase of the project, the designer should coordinate with the project manager,

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airport operations, airport users, the FAA Airports project manager, and Airport Certification Safety Inspector for Part 139 airports to determine minimum temporary markings. The FAA Airports project manager will, wherever a runway is closed, coordinate with the appropriate FAA Flight Standards Office and disseminate findings to all parties. Where possible, the temporary markings on finish grade pavements should be placed to mirror the dimensions of the final markings. Markings must be in compliance with the standards of AC 150/5340-1, *Standards for Airport Markings*, except as noted herein. Runways and runway exit taxiways closed to aircraft operations are marked with a yellow X. The preferred visual aid to depict temporary runway closure is the lighted X signal placed on or near the runway designation numbers. (See paragraph 2.18.2.1.2.)

2.18.2.1 **Closed Runways and Taxiways.**

2.18.2.1.1 Permanently Closed Runways.

For runways, obliterate the threshold marking, runway designation marking, and touchdown zone markings, and place an X at each end and at 1,000-foot (300 m) intervals. For a multiple runway environment, if the lighted X on a designated number will be located in the RSA of an adjacent active runway, locate the lighted X farther down the closed runway to clear the RSA of the active runway. In addition, the closed runway numbers located in the RSA of an active runway must be marked with a flat yellow X.

2.18.2.1.2 Temporarily Closed Runways.

For runways that have been temporarily closed, place an X at each end of the runway directly on or as near as practicable to the runway designation numbers. For a multiple runway environment, if the lighted X on a designated number will be located in the RSA of an adjacent active runway, locate the lighted X farther down the closed runway to clear the RSA of the active runway. In addition, the closed runway numbers located in the RSA of an active runway must be marked with a flat yellow X. See Figure 2-3. See also paragraph 2.18.3.3.

2.18.2.1.3 Partially Closed Runways and Displaced Thresholds.

When threshold markings are needed to identify the temporary beginning of the runway that is available for landing, the markings must comply with AC 150/5340-1. An X is not used on a partially closed runway or a runway with a displaced threshold. See paragraph 2.7.1.1 for the difference between partially closed runways and runways with displaced thresholds. Because of the temporary nature of threshold displacement due to construction, it is not necessary to re-adjust the existing runway centerline markings to meet standard spacing for a runway with a visual approach. Some of the requirements below may be waived in the cases of low-activity airports and/or short duration changes that are measured in days rather than weeks. Consider whether the presence of an airport traffic

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control tower allows for the development of special procedures. Contact the appropriate FAA Airports Regional or District Office for assistance.

Figure 2-3. Markings for a Temporarily Closed Runway

1. **Partially Closed Runways.** Pavement markings for temporary closed portions of the runway consist of a runway threshold bar, runway designation, and yellow chevrons to identify pavement areas that are unsuitable for takeoff or landing (see AC 150/5340-1). Obliterate or cover markings prior to the moved threshold. Existing touchdown zone markings beyond the moved threshold may remain in place. Obliterate aiming point markings. Issue appropriate NOTAMs regarding any nonstandard markings. See Figure 2-4.
2. **Displaced Thresholds.** Pavement markings for a displaced threshold consist of a runway threshold bar, runway designation, and white arrowheads with and without arrow shafts. These markings are required to identify the portion of the runway before the displaced threshold to provide centerline guidance for pilots during approaches, takeoffs, and landing rollouts from the opposite direction. See AC 150/5340-1. Obliterate markings prior to the displaced threshold. Existing touchdown zone markings beyond the displaced threshold may remain in place. Obliterate aiming point markings. Issue appropriate NOTAMs regarding any nonstandard markings. See Figure 2-2.

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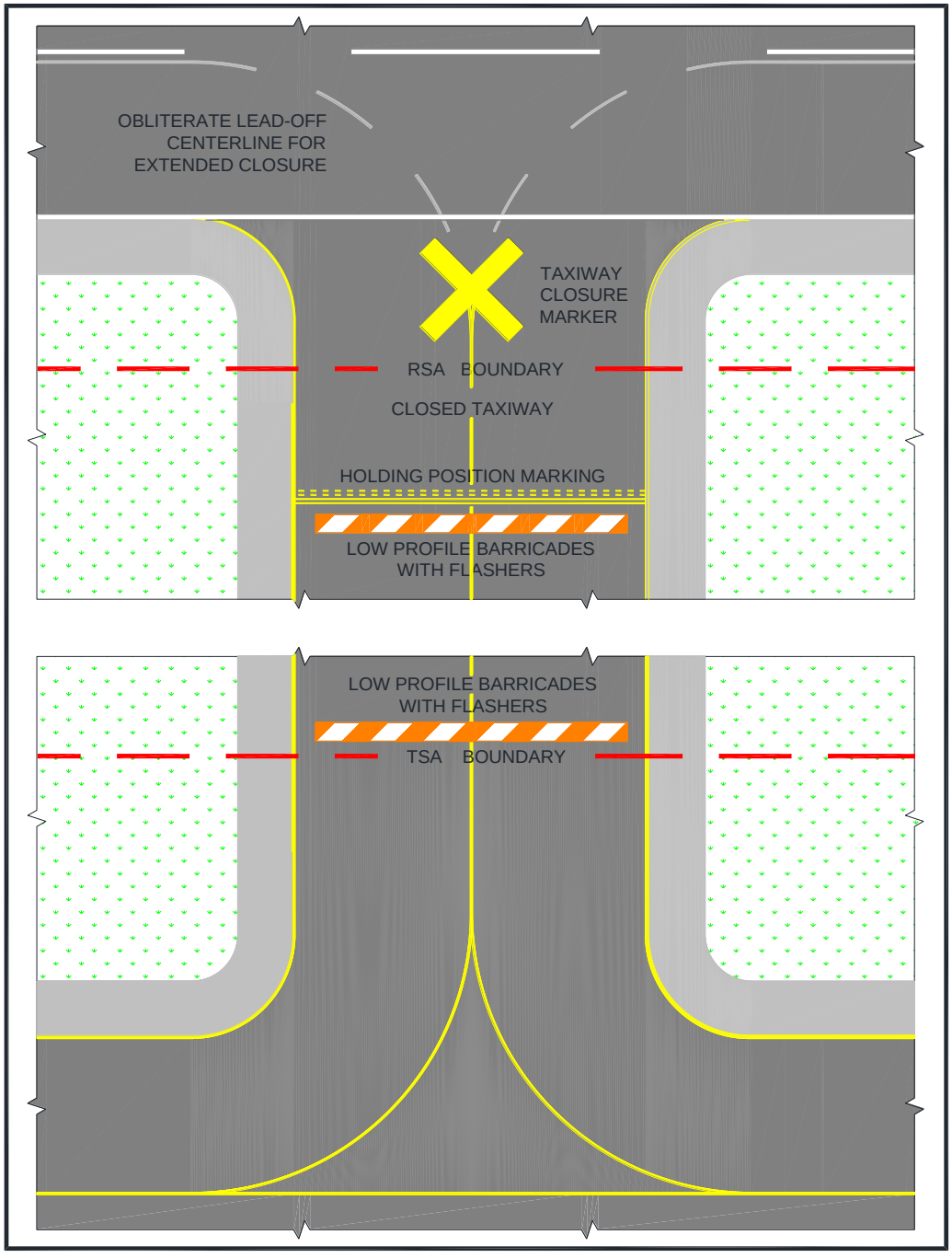
2.18.2.1.4 Taxiways.

1. **Permanently Closed Taxiways.** AC 150/5300-13 *Airport Design*, notes that it is preferable to remove the pavement, but for pavement that is to remain, place an X at the entrance to both ends of the closed section. Obliterate taxiway centerline markings, including runway leadoff lines, leading to the closed taxiway. See Figure 2-4.

Figure 2-4. Temporary Taxiway Closure



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2. **Temporarily Closed Taxiways.** Place barricades outside the safety area of intersecting taxiways. For runway/taxiway intersections, place an X at the entrance to the closed taxiway from the runway. If the taxiway will be closed for an extended period, obliterate taxiway centerline markings, including runway leadoff lines and taxiway to taxiway turns, leading to the closed section. Always obliterate runway lead-off lines for high speed exits, regardless of the duration of the closure. If the centerline markings will be reused upon reopening the taxiway, it is preferable to paint over the marking. This will result in less damage to the pavement when the upper layer of paint is ultimately removed. See Figure 2-4.

2.18.2.1.5 Temporarily Closed Airport.

When the airport is closed temporarily, mark all the runways as closed.

2.18.2.2 If unable to paint temporary markings on the pavement, construct them from any of the following materials: fabric, colored plastic, painted sheets of plywood, or similar materials. They must be properly configured and appropriately secured to prevent movement by prop wash, jet blast, or other wind currents. Items used to secure such markings must be of a color similar to the marking.

2.18.2.3 It may be necessary to remove or cover runway markings, including but not limited to, runway designation markings, threshold markings, centerline markings, edge stripes, touchdown zone markings and aiming point markings, depending on the length of construction and type of activity at the airport. When removing runway markings, apply the same treatment to areas between stripes or numbers, as the cleaned area will appear to pilots as a marking in the shape of the treated area.

2.18.2.4 If it is not possible to install threshold bars, chevrons, and arrows on the pavement, "temporary outboard white threshold bars and yellow arrowheads", see Figure 2-5, may be used. Locate them outside of the runway pavement surface on both sides of the runway. The dimensions must be as shown in Figure 2-5. If the markings are not discernible on grass or snow, apply a black background with appropriate material over the ground to ensure they are clearly visible.

2.18.2.5 The application rate of paint to mark a short-term temporary runway and taxiway markings may deviate from the standard (see Item P-620, "Runway and Taxiway Painting," in AC 150/5370-10), but the dimensions must meet the existing standards. When applying temporary markings at night, it is recommended that the fast curing, Type II paint be used to help offset the higher humidity and cooler temperatures often experienced at night. Diluting the paint will substantially increase cure time and is not recommended. Glass beads are not recommended for temporary markings. Striated markings may also be used for certain temporary markings. AC

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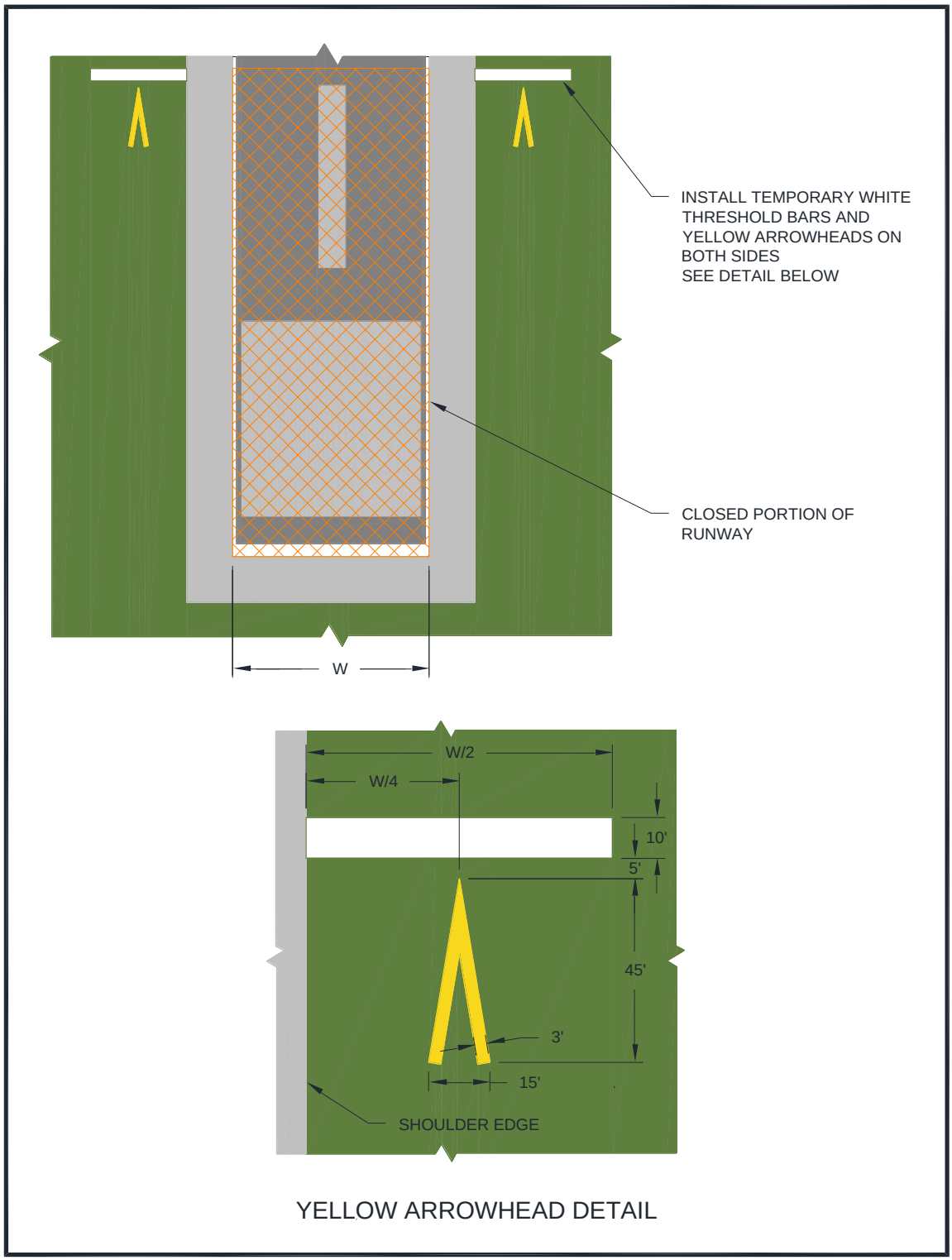
150/5340-1, *Standards for Airport Markings*, has additional guidance on temporary markings.

Figure 2-5. Temporary Outboard White Threshold Bars and Yellow Arrowheads



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2.18.3 Lighting and Visual NAVAIDs.

This paragraph refers to standard runway and taxiway lighting systems. See below for hazard lighting. Lighting installation must be in conformance with AC 150/5340-30, *Design and Installation Details for Airport Visual Aids,* and fixture design in conformance with AC 150/5345-50, *Specification for Portable Runway and Taxiway Lights.* When disconnecting runway and taxiway lighting fixtures, disconnect the associated isolation transformers. See AC 150/5340-26, *Maintenance of Airport Visual Aid Facilities*, for disconnect procedures and safety precautions. Alternately, cover the light fixture in such a way as to prevent light leakage. Avoid removing the lamp from energized fixtures because an excessive number of isolation transformers with open secondaries may damage the regulators and/or increase the current above its normal value. Secure, identify, and place any above ground temporary wiring in conduit to prevent electrocution and fire ignition sources. Maintain mandatory hold signs to operate normally in any situation where pilots or vehicle drivers could mistakenly be in that location. At towered airports certificated under Part 139, holding position signs are required to be illuminated on open taxiways crossing to closed or inactive runways. If the holding position sign is installed on the runway circuit for the closed runway, install a jumper to the taxiway circuit to provide power to the holding position sign for nighttime operations. Where it is not possible to maintain power to signs that would normally be operational, install barricades to exclude aircraft. Figure 2-1, Figure 2-2, Figure 2-3, and Figure 2-4 illustrate temporary changes to lighting and visual NAVAIDs.

2.18.3.1 **Permanently Closed Runways and Taxiways.**

For runways and taxiways that have been permanently closed, disconnect the lighting circuits.

2.18.3.2 **Temporarily Closed Runways and New Runways Not Yet Open to Air Traffic.**

If available, use a lighted X, both at night and during the day, placed at each end of the runway on or near the runway designation numbers facing the approach. (Note that the lighted X must be illuminated at all times that it is on a runway.) The use of a lighted X is required if night work requires runway lighting to be on. See AC 150/5345-55, *Specification for L-893, Lighted Visual Aid to Indicate Temporary Runway Closure.* For runways that have been temporarily closed, but for an extended period, and for those with pilot controlled lighting, disconnect the lighting circuits or secure switches to prevent inadvertent activation. For runways that will be opened periodically, coordinate procedures with the FAA air traffic manager or, at airports without an ATCT, the airport operator. Activate stop bars if available. Figure 2-6 shows a lighted X by day. Figure 2-7 shows a lighted X at night.

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Figure 2-6. Lighted X in Daytime

Figure 2-7. Lighted X at Night

2.18.3.3 **Partially Closed Runways and Displaced Thresholds.**

When a runway is partially closed, a portion of the pavement is unavailable for any aircraft operation, meaning taxiing and landing or taking off in either direction. A displaced threshold, by contrast, is put in place to ensure obstacle clearance by landing aircraft. The pavement prior to the displaced threshold is available for takeoff in the direction of the displacement, and for landing and takeoff in the opposite direction. Misunderstanding this difference and issuance of a subsequently inaccurate NOTAM can result in a hazardous situation. For both partially

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closed runways and displaced thresholds, approach lighting systems at the affected end must be placed out of service.

2.18.3.3.1 Partially Closed Runways.

Disconnect edge and threshold lights on that part of the runway at and behind the threshold (that is, the portion of the runway that is closed). Alternately, cover the light fixtures in such a way as to prevent light leakage. See Figure 2-1.

2.18.3.3.2 Temporary Displaced Thresholds.

Edge lighting in the area of the displacement emits red light in the direction of approach and yellow light (white for visual runways) in the opposite direction. If the displacement is 700 feet or less, blank out centerline lights in the direction of approach or place the centerline lights out of service. If the displacement is over 700 feet, place the centerline lights out of service. See AC 150/5340-30 for details on lighting displaced thresholds. See Figure 2-2.

2.18.3.3.3 Temporary runway thresholds and runway ends must be lighted if the runway is lighted and it is the intended threshold for night landings or instrument meteorological conditions.

2.18.3.3.4 A temporary threshold on an unlighted runway may be marked by retroreflective, elevated markers in addition to markings noted in paragraph 2.18.2.1.3. Markers seen by aircraft on approach are green. Markers at the rollout end of the runway are red. At certificated airports, temporary elevated threshold markers must be mounted with a frangible fitting (see 14 CFR Part 139.309). At non-certificated airports, the temporary elevated threshold markings may either be mounted with a frangible fitting or be flexible. See AC 150/5345-39, *Specification for L-853, Runway and Taxiway Retroreflective Markers.*

2.18.3.3.5 Temporary threshold lights and runway end lights and related visual NAVAIDs are installed outboard of the edges of the full-strength pavement only when they cannot be installed on the pavement. They are installed with bases at grade level or as low as possible, but not more than 3 inch (7.6 cm) above ground. (The standard above ground height for airport lighting fixtures is 14 inches (35 cm)). When any portion of a base is above grade, place properly compacted fill around the base to minimize the rate of gradient change so aircraft can, in an emergency, cross at normal landing or takeoff speeds without incurring significant damage. See AC 150/5370-10.

2.18.3.3.6 Maintain threshold and edge lighting color and spacing standards as described in AC 150/5340-30. Battery powered, solar, or portable lights that meet the criteria in AC 150/5345-50 may be used. These systems are intended primarily for visual flight rules (VFR) aircraft operations but may

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be used for instrument flight rules (IFR) aircraft operations, upon individual approval from the Flight Standards Division of the applicable FAA Regional Office.

2.18.3.3.7 When runway thresholds are temporarily displaced, reconfigure yellow lenses (caution zone), as necessary, and place the centerline lights out of service.

2.18.3.3.8 Relocate the Visual Glide Slope Indicator (VGSI), such as Visual Approach Slope Indicator (VASI) and Precision Approach Path Indicator (PAPI); other airport lights, such as Runway End Identifier Lights (REIL); and approach lights to identify the temporary threshold. Another option is to disable the VGSI or any equipment that would give misleading indications to pilots as to the new threshold location. Installation of temporary visual aids may be necessary to provide adequate guidance to pilots on approach to the affected runway. If the FAA owns and operates the VGSI, coordinate its installation or disabling with the local ATO/Technical Operations Office. Relocation of such visual aids will depend on the duration of the project and the benefits gained from the relocation, as this can result in great expense. See FAA JO 6850.2, *Visual Guidance Lighting Systems,* for installation criteria for FAA owned and operated NAVAIDs.

2.18.3.3.9 Issue a NOTAM to inform pilots of temporary lighting conditions.

2.18.3.4 **Temporarily Closed Taxiways.**

If possible, deactivate the taxiway lighting circuits. When deactivation is not possible (for example other taxiways on the same circuit are to remain open), cover the light fixture in a way as to prevent light leakage.

2.18.4 Signs.

To the extent possible, signs must be in conformance with AC 150/5345-44, *Specification for Runway and Taxiway Signs*, and AC 150/5340-18, *Standard for Airport Sign Systems.*

2.18.4.1 **Existing Signs.**

Runway exit signs are to be covered for closed runway exits. Outbound destination signs are to be covered for closed runways. Any time a sign does not serve its normal function or would provide conflicting information, it must 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. For long term construction projects, consider relocating signs, especially runway distance remaining signs.

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2.18.4.2 **Temporary Signs.**

Orange construction signs comprise a message in black on an orange background. Orange construction signs may help pilots be aware of changed conditions. The airport operator may choose to introduce these signs as part of a movement area construction project to increase situational awareness when needed. Locate signs outside the taxiway safety limits and ahead of construction areas so pilots can take timely action. Use temporary signs judiciously, striking a balance between the need for information and the increase in pilot workload. When there is a concern of pilot "information overload," the applicability of mandatory hold signs must take precedence over orange construction signs recommended during construction. Temporary signs must meet the standards for such signs in Engineering Brief 93, *Guidance for the Assembly and Installation of Temporary Orange Construction Signs.* Many criteria in AC 150/5345-44, *Specification for Runway and Taxiway Signs*, are referenced in the Engineering Brief. Permissible sign legends are:

1. CONSTRUCTION AHEAD,
2. CONSTRUCTION ON RAMP, and
3. RWY XX TAKEOFF RUN AVAILABLE XXX FT.

Phasing, supported by drawings and sign schedule, for the installation of orange construction signs must be included in the CSPP or SPCD.

2.18.4.2.1 Takeoff Run Available (TORA) signs.

Recommended: Where a runway has been shortened for takeoff, install orange TORA signs well before the hold lines, such as on a parallel taxiway prior to a turn to a runway hold position. See EB 93 for sign size and location.

2.18.4.2.2 Sign legends are shown in Figure F-1.

Note: See Figure E-1, Figure E-2, Figure E-3, Figure F-2, and Figure F-3 for examples of orange construction sign locations.

2.19 **Marking and Signs for Access Routes.**

The CSPP should indicate that pavement markings and signs for construction personnel will conform to AC 150/5340-18 and, to the extent practicable, with the Federal Highway Administration Manual on Uniform Traffic Control Devices (MUTCD) and/or State highway specifications. Signs adjacent to areas used by aircraft must comply with the frangibility requirements of AC 150/5220-23, *Frangible Connections*, which may require modification to size and height guidance in the MUTCD.

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2.20 **Hazard Marking, Lighting and Signing.**

2.20.1 Hazard marking, lighting, and signing prevent pilots from entering areas closed to aircraft, and prevent construction personnel from entering areas open to aircraft. The CSPP must specify prominent, comprehensible warning indicators for any area affected by construction that is normally accessible to aircraft, personnel, or vehicles. Hazard marking and lighting must also be specified to identify open manholes, small areas under repair, stockpiled material, waste areas, and areas subject to jet blast. Also consider less obvious construction-related hazards and include markings to identify FAA, airport, and National Weather Service facilities cables and power lines; instrument landing system (ILS) critical areas; airport surfaces, such as RSA, OFA, and OFZ; and other sensitive areas to make it easier for contractor personnel to avoid these areas.

2.20.2 Equipment.

2.20.2.1 **Barricades.**

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 must be given to selecting equipment that poses the least danger to aircraft but is sturdy enough to remain in place when subjected to typical winds, prop wash and jet blast. The spacing of barricades must be such that a breach is physically prevented barring a deliberate act. For example, if barricades are intended to exclude aircraft, gaps between barricades must be smaller than the wingspan of the smallest aircraft to be excluded; if barricades are intended to exclude vehicles, gaps between barricades must be smaller than the width of the excluded vehicles, generally 4 feet (1.2 meters). Provision must be made for ARFF access if necessary. If barricades are intended to exclude pedestrians, they must be continuously linked. Continuous linking may be accomplished through the use of ropes, securely attached to prevent FOD.

2.20.2.2 **Lights.**

Lights must be red, either steady burning or flashing, and must meet the luminance requirements of the State Highway Department. Batteries powering lights will last longer if lights flash. Lights must be mounted on barricades and spaced at no more than 10 feet (3 meters). Lights must be operated between sunset and sunrise and during periods of low visibility whenever the airport is open for operations. They may be operated by photocell, but this may require that the contractor turn them on manually during periods of low visibility during daytime hours.

2.20.2.3 **Supplement Barricades with Signs (for example) As Necessary.**

Examples are “No Entry” and “No Vehicles.” Be aware of the increased effects of wind and jet blast on barricades with attached signs.

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2.20.2.4 **Air Operations Area – General.**

Barricades are not permitted in any active safety area or on the runway side of a runway hold line. Within a runway or taxiway object free area, and on aprons, use orange traffic cones, flashing or steady burning red lights as noted above, highly reflective collapsible barricades marked with diagonal, alternating orange and white stripes; and/or signs to separate all construction/maintenance areas from the movement area. Barricades may be supplemented with alternating orange and white flags at least 20 by 20 inch (50 by 50 cm) square and securely fastened to eliminate FOD. All barricades adjacent to any open runway or taxiway / taxilane safety area, or apron must be as low as possible to the ground, and no more than 18 inches high, exclusive of supplementary lights and flags. Barricades must be of low mass; easily collapsible upon contact with an aircraft or any of its components; and weighted or sturdily attached to the surface to prevent displacement from prop wash, jet blast, wing vortex, and other surface wind currents. If affixed to the surface, they must be frangible at grade level or as low as possible, but not to exceed 3 inch (7.6 cm) above the ground. Figure 2-8 and Figure 2-9 show sample barricades with proper coloring and flags.

Figure 2-8. Interlocking Barricades

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Figure 2-9. Low Profile Barricades

2.20.2.5 **Air Operations Area – Runway/Taxiway Intersections.**

Use highly reflective barricades with lights to close taxiways leading to closed runways. Evaluate all operating factors when determining how to mark temporary closures that can last from 10 to 15 minutes to a much longer period of time. However, even for closures of relatively short duration, close all taxiway/runway intersections with barricades. The use of traffic cones is appropriate for short duration closures.

2.20.2.6 **Air Operations Area – Other.**

Beyond runway and taxiway object free areas and aprons, barricades intended for construction vehicles and personnel may be many different shapes and made from various materials, including railroad ties, sawhorses, jersey barriers, or barrels.

2.20.2.7 **Maintenance.**

The construction specifications must include a provision requiring the contractor to have a person on call 24 hours a day for emergency maintenance of airport hazard lighting and barricades. The contractor must file the contact person's information with the airport operator. Lighting should be checked for proper operation at least once per day, preferably at dusk.

2.21 Work Zone Lighting for Nighttime Construction.

Lighting equipment must adequately illuminate the work area if the construction is to be performed during nighttime hours. Refer to AC 150/5370-10 for minimum illumination levels for nighttime paving projects. Additionally, it is recommended that all support equipment, except haul trucks, be equipped with artificial illumination to safely

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illuminate the area immediately surrounding their work areas. The lights should be positioned to provide the most natural color illumination and contrast with a minimum of shadows. The spacing must be determined by trial. Light towers should be positioned and adjusted to aim away from ATCT cabs and active runways to prevent blinding effects. Shielding may be necessary. Light towers should be removed from the construction site when the area is reopened to aircraft operations. Construction lighting units should be identified and generally located on the construction phasing plans in relationship to the ATCT and active runways and taxiways.

2.22 **Protection of Runway and Taxiway Safety Areas.**

Runway and taxiway safety areas, OFZs, OFAs, and approach surfaces are described in AC 150/5300-13. Protection of these areas includes limitations on the location and height of equipment and stockpiled material. An FAA airspace study may be required. Coordinate with the appropriate FAA Airports Regional or District Office if there is any doubt as to requirements or dimensions (see paragraph 2.13.5) as soon as the location and height of materials or equipment are known. The CSPP should include drawings showing all safety areas, object free areas, obstacle free zones and approach departure surfaces affected by construction.

2.22.1 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 (see AC 150/5300-13). Construction activities within the existing RSA are subject to the following conditions:

2.22.1.1 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. (See AC 150/5300-13). The temporary use of declared distances and/or partial runway closures may provide the necessary RSA under certain circumstances. Coordinate with the appropriate FAA Airports Regional or District Office to have declared distances information published, and appropriate NOTAMs issued. See AC 150/5300-13 for guidance on the use of declared distances.

2.22.1.2 The airport operator must coordinate the adjustment of RSA dimensions as permitted above with the appropriate FAA Airports Regional or District Office and the local FAA air traffic manager and issue a NOTAM.

2.22.1.3 The CSPP and SPCD must provide procedures for ensuring adequate distance for protection from blasting operations, if required by operational considerations.

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2.22.1.4 **Excavations.**

2.22.1.4.1 Open trenches or excavations are not permitted within the RSA while the runway is open. Backfill trenches before the runway is opened. If backfilling excavations before the runway must be opened is impracticable, 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.

2.22.1.4.2 Construction contractors 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.

2.22.1.5 **Erosion Control.**

Soil erosion must be controlled to maintain RSA standards, that is, the RSA 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 fire fighting equipment, and the occasional passage of aircraft without causing structural damage to the aircraft.

2.22.2 Runway Object Free Area (ROFA).

Construction, including excavations, may be permitted in the ROFA. However, equipment must be removed from the ROFA when not in use, and material should not be stockpiled in the ROFA if not necessary. Stockpiling material in the OFA requires submittal of a 7460-1 form and justification provided to the appropriate FAA Airports Regional or District Office for approval.

2.22.3 Taxiway Safety Area (TSA).

2.22.3.1 A taxiway safety area is a defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway. (See AC 150/5300-13.) Since the width of the TSA is equal to the wingspan of the design aircraft, 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. Give special consideration to TSA dimensions at taxiway turns and intersections. (see AC 150/5300-13).

2.22.3.2 The airport operator must coordinate the adjustment of the TSA width as permitted above with the appropriate FAA Airports Regional or District Office and the FAA air traffic manager and issue a NOTAM.

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2.22.3.3 The CSPP and SPCD must provide procedures for ensuring adequate distance for protection from blasting operations.

2.22.3.4 **Excavations.**

1. Curves. Open trenches or excavations are not permitted within the TSA while the taxiway is open. Trenches should be backfilled before the taxiway is opened. If backfilling excavations before the taxiway must be opened is impracticable, 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.
2. Straight Sections. Open trenches or excavations are not permitted within the TSA while the taxiway is open for unrestricted aircraft operations. Trenches should be backfilled before the taxiway is opened. If backfilling excavations before the taxiway must be opened is impracticable, cover the excavations to allow the safe passage of ARFF equipment and of the heaviest aircraft operating on the taxiway across the trench without causing damage to the equipment or aircraft. In rare circumstances where the section of taxiway is indispensable for aircraft movement, open trenches or excavations may be permitted in the TSA while the taxiway is open to aircraft operations, subject to the following restrictions:
   a. Taxiing speed is limited to 10 mph.
   b. Appropriate NOTAMs are issued.
   c. Marking and lighting meeting the provisions of paragraphs 2.18 and 2.20 are implemented.
   d. Low mass, low-profile lighted barricades are installed.
   e. Appropriate temporary orange construction signs are installed.
3. Construction contractors 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.

2.22.3.5 **Erosion control.**

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.

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2.22.4 Taxiway Object Free Area (TOFA).

Unlike the Runway Object Free Area, aircraft wings regularly penetrate the taxiway object free area during normal operations. Thus, the restrictions are more stringent. Except as provided below, no construction may occur within the taxiway object free area while the taxiway is open for aircraft operations.

2.22.4.1 The taxiway object free area dimensions may be temporarily adjusted if the taxiway is restricted to aircraft operations requiring a taxiway object free area that is equal to the taxiway object free area width available. Give special consideration to TOFA dimensions at taxiway turns and intersections.

2.22.4.2 Offset taxiway centerline and edge pavement markings (do not use glass beads) may be used as a temporary measure to provide the required taxiway object free area. Where offset taxiway pavement markings are provided, centerline lighting, centerline reflectors, or taxiway edge reflectors are required. Existing lighting that does not coincide with the temporary markings must be taken out of service.

2.22.4.3 Construction activity, including open excavations, may be accomplished without adjusting the width of the taxiway object free area, subject to the following restrictions:

2.22.4.3.1 Taxiing speed is limited to 10 mph.

2.22.4.3.2 NOTAMs issued advising taxiing pilots of hazard and recommending reduced taxiing speeds on the taxiway.

2.22.4.3.3 Marking and lighting meeting the provisions of paragraphs 2.18 and 2.20 are implemented.

2.22.4.3.4 If desired, appropriate orange construction signs are installed. See paragraph 2.18.4.2 and Appendix F.

2.22.4.3.5 Five-foot clearance is maintained between equipment and materials and any part of an aircraft (includes wingtip overhang). If such clearance can only be maintained if an aircraft does not have full use of the entire taxiway width (with its main landing gear at the edge of the usable pavement), then it will be necessary to move personnel and equipment for the passage of that aircraft.

2.22.4.3.6 Flaggers furnished by the contractor must be used to direct and control construction equipment and personnel to a pre-established setback distance for safe passage of aircraft, and airline and/or airport personnel. Flaggers must also be used to direct taxiing aircraft. Due to liability issues, the airport operator should require airlines to provide flaggers for directing taxiing aircraft.

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2.22.5 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. Coordinate with the FAA through the appropriate FAA Airports Regional or District Office.

2.22.6 Runway Approach/Departure Areas and Clearways.

All personnel, materials, and/or equipment must remain clear of the applicable threshold siting surfaces, as defined in AC 150/5300-13. Objects that do not penetrate these surfaces may still be obstructions to air navigation and may affect standard instrument approach procedures. Coordinate with the FAA through the appropriate FAA Airports Regional or District Office.

2.22.6.1 Construction activity in a runway approach/departure area may result in the need to partially close a runway or displace the existing runway threshold. Partial runway closure, displacement of the runway threshold, as well as closure of the complete runway and other portions of the movement area also require coordination through the airport operator with the appropriate FAA air traffic manager (FSS if non-towered) and ATO/Technical Operations (for affected NAVAIDS) and airport users.

2.22.6.2 **Caution About Partial Runway Closures.**

When filing a NOTAM for a partial runway closure, clearly state that the portion of pavement located prior to the threshold is not available for landing and departing traffic. In this case, the threshold has been moved for both landing and takeoff purposes (this is different than a displaced threshold). There may be situations where the portion of closed runway is available for taxiing only. If so, the NOTAM must reflect this condition).

2.22.6.3 **Caution About Displaced Thresholds.**

Implementation of a displaced threshold affects runway length available for aircraft landing over the displacement. Depending on the reason for the displacement (to provide obstruction clearance or RSA), such a displacement may also require an adjustment in the landing distance available and accelerate-stop distance available in the opposite direction. If project scope includes personnel, equipment, excavation, or other work within the existing RSA of any usable runway end, do not implement a displaced threshold unless arrivals and departures toward the construction activity are prohibited. Instead, implement a partial closure.

2.23 **Other Limitations on Construction.**

The CSPP must specify any other limitations on construction, including but not limited to:

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2.23.1 Prohibitions.

2.23.1.1 No use of tall equipment (cranes, concrete pumps, and so on) unless a 7460-1 determination letter is issued for such equipment.

2.23.1.2 No use of open flame welding or torches unless fire safety precautions are provided and the airport operator has approved their use.

2.23.1.3 No use of electrical blasting caps on or within 1,000 feet (300 meters) of the airport property. See AC 150/5370-10.

2.23.2 Restrictions.

2.23.2.1 Construction suspension required during specific airport operations.

2.23.2.2 Areas that cannot be worked on simultaneously.

2.23.2.3 Day or night construction restrictions.

2.23.2.4 Seasonal construction restrictions.

2.23.2.5 Temporary signs not approved by the airport operator.

2.23.2.6 Grades changes that could result in unplanned effects on NAVAIDs.

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CHAPTER 3. GUIDELINES FOR WRITING A CSPP

3.1 General Requirements.

The CSPP is a standalone document written to correspond with the subjects outlined in paragraph 2.4. The CSPP is organized by numbered sections corresponding to each subject listed in paragraph 2.4, and described in detail in paragraphs 2.5 - 2.23. Each section number and title in the CSPP matches the corresponding subject outlined in paragraph 2.4 (for example, 1. Coordination, 2. Phasing, 3. Areas and Operations Affected by the Construction Activity, and so on). With the exception of the project scope of work outlined in Section 2. Phasing, only subjects specific to operational safety during construction should be addressed.

3.2 Applicability of Subjects.

Each section should, to the extent practical, focus on the specific subject. Where an overlapping requirement spans several sections, the requirement should be explained in detail in the most applicable section. A reference to that section should be included in all other sections where the requirement may apply. For example, the requirement to protect existing underground FAA ILS cables during trenching operations could be considered FAA ATO coordination (Coordination, paragraph 2.5.3), an area and operation affected by the construction activity (Areas and Operations Affected by the Construction Activity, paragraph 2.7.1.4), a protection of a NAVAID (Protection of Navigational Aids (NAVAIDs), paragraph 2.8), or a notification to the FAA of construction activities (Notification of Construction Activities, paragraph 2.13.5.3.2). However, it is more specifically an underground utility requirement (Underground Utilities, paragraph 2.15). The procedure for protecting underground ILS cables during trenching operations should therefore be described in 2.4.2.11: "The contractor must coordinate with the local FAA System Support Center (SSC) to mark existing ILS cable routes along Runway 17-35. The ILS cables will be located by hand digging whenever the trenching operation moves within 10 feet of the cable markings." All other applicable sections should include a reference to 2.4.2.11: "ILS cables shall be identified and protected as described in 2.4.2.11" or "See 2.4.2.11 for ILS cable identification and protection requirements." Thus, the CSPP should be considered as a whole, with no need to duplicate responses to related issues.

3.3 Graphical Representations.

Construction safety drawings should be included in the CSPP as attachments. When other graphical representations will aid in supporting written statements, the drawings, diagrams, and/or photographs should also be attached to the CSPP. References should be made in the CSPP to each graphical attachment and may be made in multiple sections.

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3.4 **Reference Documents.**

The CSPP must not incorporate a document by reference unless reproduction of the material in that document is prohibited. In that case, either copies of or a source for the referenced document must be provided to the contractor. Where this AC recommends references (e.g. as in paragraph 3.9) the intent is to include a reference to the corresponding section in the CSPP, not to this Advisory Circular.

3.5 **Restrictions.**

The CSPP should not be considered as a project design review document. The CSPP should also avoid mention of permanent ("as-built") features such as pavements, markings, signs, and lighting, except when such features are intended to aid in maintaining operational safety during the construction.

3.6 **Coordination.**

Include in this section a detailed description of conferences and meetings to be held both before and during the project. Include appropriate information from AC 150/5370-12. Discuss coordination procedures and schedules for each required FAA ATO Technical Operations shutdown and restart and all required flight inspections.

3.7 **Phasing.**

Include in this section a detailed scope of work description for the project as a whole and each phase of work covered by the CSPP. This includes all locations and durations of the work proposed. Attach drawings to graphically support the written scope of work. Detail in this section the sequenced phases of the proposed construction. Include a reference to paragraph 3.8, as appropriate.

3.8 **Areas and Operations Affected by Construction.**

Focus in this section on identifying the areas and operations affected by the construction. Describe corresponding mitigation that is not covered in detail elsewhere in the CSPP. Include references to paragraphs below as appropriate. Attach drawings as necessary to graphically describe affected areas and mechanisms proposed. See Appendix F for sample operational effects tables and figures.

3.9 **NAVAID Protection.**

List in this section all NAVAID facilities that will be affected by the construction. Identify NAVAID facilities that will be placed out of service at any time prior to or during construction activities. Identify individuals responsible for coordinating each shutdown and when each facility will be out of service. Include a reference to paragraph 3.6 for FAA ATO NAVAID shutdown, restart, and flight inspection coordination. Outline in detail procedures to protect each NAVAID facility remaining in service from interference by construction activities. Include a reference to paragraph 3.14 for the

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issuance of NOTAMs as required. Include a reference to paragraph 3.16 for the protection of underground cables and piping serving NAVAIDs. If temporary visual aids are proposed to replace or supplement existing facilities, include a reference to paragraph 3.19. Attach drawings to graphically indicate the affected NAVAIDS and the corresponding critical areas.

3.10 **Contractor Access.**

This will necessarily be the most extensive section of the CSPP. Provide sufficient detail so that a contractor not experienced in working on airports will understand the unique restrictions such work will require. Due to this extent, it should be broken down into subsections as described below:

3.10.1 Location of Stockpiled Construction Materials.

Describe in this section specific locations for stockpiling material. Note any height restrictions on stockpiles. Include a reference to paragraph 3.21 for hazard marking and lighting devices used to identify stockpiles. Include a reference to paragraph 3.11 for provisions to prevent stockpile material from becoming wildlife attractants. Include a reference to paragraph 3.12 for provisions to prevent stockpile material from becoming FOD. Attach drawings to graphically indicate the stockpile locations.

3.10.2 Vehicle and Pedestrian Operations.

While there are many items to be addressed in this major subsection of the CSPP, all are concerned with one main issue: keeping people and vehicles from areas of the airport where they don't belong. This includes preventing unauthorized entry to the AOA and preventing the improper movement of pedestrians or vehicles on the airport. In this section, focus on mechanisms to prevent construction vehicles and workers traveling to and from the worksite from unauthorized entry into movement areas. Specify locations of parking for both employee vehicles and construction equipment, and routes for access and haul roads. In most cases, this will best be accomplished by attaching a drawing. Quote from AC 150/5210-5 specific requirements for contractor vehicles rather than referring to the AC as a whole, and include special requirements for identifying HAZMAT vehicles. Quote from, rather than incorporate by reference, AC 150/5210-20 as appropriate to address the airport's rules for ground vehicle operations, including its training program. Discuss the airport's recordkeeping system listing authorized vehicle operators.

3.10.3 Two-Way Radio Communications.

Include a special section to identify all individuals who are required to maintain communications with Air Traffic (AT) at airports with active towers, or monitor CTAF at airports without or with closed ATCT. Include training requirements for all individuals required to communicate with AT. Individuals required to monitor AT frequencies should also be identified. If construction employees are also required to communicate by radio with Airport Operations, this procedure should be described in detail. Usage of vehicle mounted radios and/or portable radios should be addressed. Communication procedures for the event of disabled radio communication (that is, light

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signals, telephone numbers, others) must be included. All radio frequencies should by identified (Tower, Ground Control, CTAF, UNICOM, ATIS, and so on).

3.10.4 Airport Security.

Address security as it applies to vehicle and pedestrian operations. Discuss TSA requirements, security badging requirements, perimeter fence integrity, gate security, and other needs. Attach drawings to graphically indicate secured and/or Security Identification Display Areas (SIDA), perimeter fencing, and available access points.

3.11 **Wildlife Management.**

Discuss in this section wildlife management procedures. Describe the maintenance of existing wildlife mitigation devices, such as perimeter fences, and procedures to limit wildlife attractants. Include procedures to notify Airport Operations of wildlife encounters. Include a reference to paragraph 3.10 for security (wildlife) fence integrity maintenance as required.

3.12 **FOD Management.**

In this section, discuss methods to control and monitor FOD: worksite housekeeping, ground vehicle tire inspections, runway sweeps, and so on. Include a reference to paragraph 3.15 for inspection requirements as required.

3.13 **HAZMAT Management.**

Describe in this section HAZMAT management procedures: fuel deliveries, spill recovery procedures, Safety Data Sheet (SDS), Material Safety Data Sheet (MSDS) or Product Safety Data Sheet (PSDS) availability, and other considerations. Any specific airport HAZMAT restrictions should also be identified. Include a reference to paragraph 3.10 for HAZMAT vehicle identification requirements. Quote from, rather than incorporate by reference, AC 150/5320-15.

3.14 **Notification of Construction Activities.**

List in this section the names and telephone numbers of points of contact for all parties affected by the construction project. We recommend a single list that includes all telephone numbers required under this section. Include emergency notification procedures for all representatives of all parties potentially impacted by the construction. Identify individual representatives – and at least one alternate – for each party. List both on-duty and off-duty contact information for each individual, including individuals responsible for emergency maintenance of airport construction hazard lighting and barricades. Describe procedures to coordinate immediate response to events that might adversely affect the operational safety of the airport (such as interrupted NAVAID service). Explain requirements for and the procedures for the issuance of Notices to Airmen (NOTAMs), notification to FAA required by 14 CFR Part 77 and Part 157 and in the event of affected NAVAIDs. For NOTAMs, identify an individual, and at least one alternate, responsible for issuing and cancelling each specific type of Notice to

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Airmen (NOTAM) required. Detail notification methods for police, fire fighting, and medical emergencies. This may include 911, but should also include direct phone numbers of local police departments and nearby hospitals. Identify the E911 address of the airport and the emergency access route via haul roads to the construction site. Require the contractor to have this information available to all workers. The local Poison Control number should be listed. Procedures regarding notification of Airport Operations and/or the ARFF Department of such emergencies should be identified, as applicable. If airport radio communications are identified as a means of emergency notification, include a reference to paragraph 3.10. Differentiate between emergency and nonemergency notification of ARFF personnel, the latter including activities that affect ARFF water supplies and access roads. Identify the primary ARFF contact person and at least one alternate. If notification is to be made through Airport Operations, then detail this procedure. Include a method of confirmation from the ARFF department.

3.15 **Inspection Requirements.**

Describe in this section inspection requirements to ensure airfield safety compliance. Include a requirement for routine inspections by the resident engineer (RE) or other airport operator's representative and the construction contractors. If the engineering consultants and/or contractors have a Safety Officer who will conduct such inspections, identify this individual. Describe procedures for special inspections, such as those required to reopen areas for aircraft operations. Part 139 requires daily airfield inspections at certificated airports, but these may need to be more frequent when construction is in progress. Discuss the role of such inspections on areas under construction. Include a requirement to immediately remedy any deficiencies, whether caused by negligence, oversight, or project scope change.

3.16 **Underground Utilities.**

Explain how existing underground utilities will be located and protected. Identify each utility owner and include contact information for each company/agency in the master list. Address emergency response procedures for damaged or disrupted utilities. Include a reference to paragraph 3.14 for notification of utility owners of accidental utility disruption as required.

3.17 **Penalties.**

Describe in this section specific penalties imposed for noncompliance with airport rules and regulations, including the CSPP: SIDA violations, VPD, and others.

3.18 **Special Conditions.**

Identify any special conditions that may trigger specific safety mitigation actions outlined in this CSPP: low visibility operations, snow removal, aircraft in distress, aircraft accident, security breach, VPD, and other activities requiring construction suspension/resumption. Include a reference to paragraph 3.10 for compliance with airport safety and security measures and for radio communications as required. Include

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a reference to paragraph 3.14 for emergency notification of all involved parties, including police/security, ARFF, and medical services.

3.19 **Runway and Taxiway Visual Aids.**

Include marking, lighting, signs, and visual NAVAIDS. Detail temporary runway and taxiway marking, lighting, signs, and visual NAVAIDs required for the construction. Discuss existing marking, lighting, signs, and visual NAVAIDs that are temporarily, altered, obliterated, or shut down. Consider non-federal facilities and address requirements for reimbursable agreements necessary for alteration of FAA facilities and for necessary flight checks. Identify temporary TORA signs or runway distance remaining signs if appropriate. Identify required temporary visual NAVAIDs such as REIL or PAPI. Quote from, rather than incorporate by reference, AC 150/5340-1, *Standards for Airport Markings;* AC 150/5340-18, *Standards for Airport Sign Systems;* and AC 150/5340-30, as required. Attach drawings to graphically indicate proposed marking, lighting, signs, and visual NAVAIDs.

3.20 **Marking and Signs for Access Routes.**

Detail plans for marking and signs for vehicle access routes. To the extent possible, signs should be in conformance with the Federal Highway Administration MUTCD and/or State highway specifications, not hand lettered. Detail any modifications to the guidance in the MUTCD necessary to meet frangibility/height requirements.

3.21 **Hazard Marking and Lighting.**

Specify all marking and lighting equipment, including when and where each type of device is to be used. Specify maximum gaps between barricades and the maximum spacing of hazard lighting. Identify one individual and at least one alternate responsible for maintenance of hazard marking and lighting equipment in the master telephone list. Include a reference to paragraph 3.14. Attach drawings to graphically indicate the placement of hazard marking and lighting equipment.

3.22 **Work Zone Lighting for Nighttime Construction.**

If work is to be conducted at night, specify all lighting equipment, including when and where each type of device is to be used. Indicate the direction lights are to be aimed and any directions that aiming of lights is prohibited. Specify any shielding necessary in instances where aiming is not sufficient to prevent interference with air traffic control and aircraft operations. Attach drawings to graphically indicate the placement and aiming of lighting equipment. Where the plan only indicates directions that aiming of lights is prohibited, the placement and positioning of portable lights must be proposed by the Contractor and approved by the airport operator’s representative each time lights are relocated or repositioned.

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3.23 **Protection of Runway and Taxiway Safety Areas.**

This section should focus exclusively on procedures for protecting all safety areas, including those altered by the construction: methods of demarcation, limit of access, movement within safety areas, stockpiling and trenching restrictions, and so on. Reference AC 150/5300-13, as required. Include a reference to paragraph 3.10 for procedures regarding vehicle and personnel movement within safety areas. Include a reference to paragraph 3.10 for material stockpile restrictions as required. Detail requirements for trenching, excavations, and backfill. Include a reference to paragraph 3.21 for hazard marking and lighting devices used to identify open excavations as required. If runway and taxiway closures are proposed to protect safety areas, or if temporary displaced thresholds and/or revised declared distances are used to provide the required Runway Safety Area, include a reference to paragraphs 3.14 and 3.19. Detail procedures for protecting the runway OFZ, runway OFA, taxiway OFA and runway approach surfaces including those altered by the construction: methods of demarcation, limit of cranes, storage of equipment, and so on. Quote from, rather than incorporate by reference, AC 150/5300-13, as required. Include a reference to paragraph 3.24 for height (i.e., crane) restrictions as required. One way to address the height of equipment that will move during the project is to establish a three-dimensional "box" within which equipment will be confined that can be studied as a single object. Attach drawings to graphically indicate the safety area, OFZ, and OFA boundaries.

3.24 **Other Limitations on Construction.**

This section should describe what limitations must be applied to each area of work and when each limitation will be applied: limitations due to airport operations, height (i.e., crane) restrictions, areas which cannot be worked at simultaneously, day/night work restrictions, winter construction, and other limitations. Include a reference to paragraph 3.7 for project phasing requirements based on construction limitations as required.

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APPENDIX A. RELATED READING MATERIAL

Obtain the latest version of the following free publications from the FAA on its Web site at http://www.faa.gov/airports/.

Table A-1. FAA Publications

Number	Title and Description
AC 150/5200-28	*Notices to Airmen (NOTAMs) for Airport Operators* Guidance for using the NOTAM System in airport reporting.
AC 150/5200-30	*Airport Field Condition Assessments and Winter Operations Safety* Guidance for airport owners/operators on the development of an acceptable airport snow and ice control program and on appropriate field condition reporting procedures.
AC 150/5200-33	*Hazardous Wildlife Attractants On or Near Airports* Guidance on locating certain land uses that might attract hazardous wildlife to public-use airports.
AC 150/5210-5	*Painting, Marking, and Lighting of Vehicles Used on an Airport* Guidance, specifications, and standards for painting, marking, and lighting vehicles operating in the airport air operations areas.
AC 150/5210-20	*Ground Vehicle Operations to include Taxiing or Towing an Aircraft on Airports* Guidance to airport operators on developing ground vehicle operation training programs.
AC 150/5300-13	*Airport Design* FAA standards and recommendations for airport design. Establishes approach visibility minimums as an airport design parameter, and contains the Object Free area and the obstacle free-zone criteria.
AC 150/5210-24	*Airport Foreign Object Debris (FOD) Management* Guidance for developing and managing an airport foreign object debris (FOD) program

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Number	Title and Description
AC 150/5320-15	*Management of Airport Industrial Waste* Basic information on the characteristics, management, and regulations of industrial wastes generated at airports. Guidance for developing a Storm Water Pollution Prevention Plan (SWPPP) that applies best management practices to eliminate, prevent, or reduce pollutants in storm water runoff with particular airport industrial activities.
AC 150/5340-1	*Standards for Airport Markings* FAA standards for the siting and installation of signs on airport runways and taxiways.
AC 150/5340-18	*Standards for Airport Sign Systems* FAA standards for the siting and installation of signs on airport runways and taxiways.
AC 150/5345-28	*Precision Approach Path Indicator (PAPI) Systems* FAA standards for PAPI systems, which provide pilots with visual glide slope guidance during approach for landing.
AC 150/5340-30	*Design and Installation Details for Airport Visual Aids* Guidance and recommendations on the installation of airport visual aids.
AC 150/5345-39	*Specification for L-853, Runway and Taxiway Retroreflective Markers*
AC 150/5345-44	*Specification for Runway and Taxiway Signs* FAA specifications for unlighted and lighted signs for taxiways and runways.
AC 150/5345-53	*Airport Lighting Equipment Certification Program* Details on the Airport Lighting Equipment Certification Program (ALECP).
AC 150/5345-50	*Specification for Portable Runway and Taxiway Lights* FAA standards for portable runway and taxiway lights and runway end identifier lights for temporary use to permit continued aircraft operations while all or part of a runway lighting system is inoperative.
AC 150/5345-55	*Specification for L-893, Lighted Visual Aid to Indicate Temporary Runway Closure*

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Number	Title and Description
AC 150/5370-10	*Standards for Specifying Construction of Airports* Standards for construction of airports, including earthwork, drainage, paving, turfing, lighting, and incidental construction.
AC 150/5370-12	*Quality Management for Federally Funded Airport Construction Projects*
EB 93	*Guidance for the Assembly and Installation of Temporary Orange Construction Signs*
FAA Order 5200.11	FAA Airports (ARP) Safety Management System (SMS) Basics for implementing SMS within ARP. Includes roles and responsibilities of ARP management and staff as well as other FAA lines of business that contribute to the ARP SMS.
FAA Certalert 98-05	*Grasses Attractive to Hazardous Wildlife* Guidance on grass management and seed selection.
FAA Form 7460-1	Notice of Proposed Construction or Alteration
FAA Form 7480-1	Notice of Landing Area Proposal
FAA Form 6000.26	National NAS Strategic Interruption Service Level Agreement, Strategic Events Coordination, Airport Sponsor Form

Obtain the latest version of the following free publications from the Electronic Code of Federal Regulations at http://www.ecfr.gov/.

Table A-2. Code of Federal Regulation

Number	Title
Title 14 CFR Part 77	Safe, Efficient Use and Preservation of the Navigable Airspace
Title 14 CFR Part 139	Certification of Airports
Title 49 CFR Part 1542	Airport Security

Obtain the latest version of the Manual on Uniform Traffic Control Devices from the Federal Highway Administration at http://mutcd.fhwa.dot.gov/.

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APPENDIX B. TERMS AND ACRONYMS

Table B-1. Terms and Acronyms

Term	Definition
Form 7460-1	Notice of Proposed Construction or Alteration. For on-airport projects, the form submitted to the FAA regional or airports division office as formal written notification of any kind of construction or alteration of objects that affect navigable airspace, as defined in 14 CFR Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace*. (See guidance available on the FAA web site at https://oeaaa.faa.gov.) The form may be downloaded at http://www.faa.gov/airports/resources/forms/, or filed electronically at: https://oeaaa.faa.gov.
Form 7480-1	Notice of Landing Area Proposal. Form submitted to the FAA Airports Regional Division Office or Airports District Office as formal written notification whenever a project without an airport layout plan on file with the FAA involves the construction of a new airport; the construction, realigning, altering, activating, or abandoning of a runway, landing strip, or associated taxiway; or the deactivation or abandoning of an entire airport The form may be downloaded at http://www.faa.gov/airports/resources/forms/.
Form 6000-26	Airport Sponsor Strategic Event Submission Form
AC	Advisory Circular
ACSI	Airport Certification Safety Inspector
ADG	Airplane Design Group
AIP	Airport Improvement Program
ALECP	Airport Lighting Equipment Certification Program
ANG	Air National Guard
AOA	Air Operations Area, as defined in 14 CFR Part 107. Means a portion of an airport, specified in the airport security program, in which security measures are carried out. This area includes aircraft movement areas, aircraft parking areas, loading ramps, and safety areas, and any adjacent areas (such as general aviation areas) that are not separated by adequate security systems, measures, or procedures. This area does not include the secured area of the airport terminal building.
ARFF	Aircraft Rescue and Fire Fighting
ARP	FAA Office of Airports
ASDA	Accelerate-Stop Distance Available
AT	Air Traffic
ATCT	Airport Traffic Control Tower
ATIS	Automatic Terminal Information Service
ATO	Air Traffic Organization
Certificated Airport	An airport that has been issued an Airport Operating Certificate by the FAA under

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Term	Definition
	the authority of 14 CFR Part 139, *Certification of Airports*.
CFR	Code of Federal Regulations
Construction	The presence of construction-related personnel, equipment, and materials in any location that could infringe upon the movement of aircraft.
CSPP	Construction Safety and Phasing Plan. The overall plan for safety and phasing of a construction project developed by the airport operator, or developed by the airport operator's consultant and approved by the airport operator. It is included in the invitation for bids and becomes part of the project specifications.
CTAF	Common Traffic Advisory Frequency
Displaced Threshold	A threshold that is located at a point on the runway other than the designated beginning of the runway. The portion of pavement behind a displaced threshold is available for takeoffs in either direction or landing from the opposite direction.
DOT	Department of Transportation
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FOD	Foreign Object Debris/Damage
FSS	Flight Service Station
GA	General Aviation
HAZMAT	Hazardous Materials
HMA	Hot Mix Asphalt
IAP	Instrument Approach Procedures
IFR	Instrument Flight Rules
ILS	Instrument Landing System
LDA	Landing Distance Available
LOC	Localizer antenna array
Movement Area	The runways, taxiways, and other areas of an airport that are used for taxiing or hover taxiing, air taxiing, takeoff, and landing of aircraft, exclusive of loading aprons and aircraft parking areas (reference 14 CFR Part 139).
MSDS	Material Safety Data Sheet
MUTCD	Manual on Uniform Traffic Control Devices
NAVAID	Navigation Aid
NAVAID Critical Area	An area of defined shape and size associated with a NAVAID that must remain clear and graded to avoid interference with the electronic signal.
Non-Movement Area	The area inside the airport security fence exclusive of the Movement Area. It is important to note that the non-movement area includes pavement traversed by aircraft.

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Term	Definition
NOTAM	Notices to Airmen
Obstruction	Any object/obstacle exceeding the obstruction standards specified by 14 CFR Part 77, subpart C.
OCC	Operations Control Center
OE / AAA	Obstruction Evaluation / Airport Airspace Analysis
OFA	Object Free Area. An area on the ground centered on the runway, taxiway, or taxi lane centerline provided to enhance safety of aircraft operations by having the area free of objects except for those objects that need to be located in the OFA for air navigation or aircraft ground maneuvering purposes. (See AC 150/5300-13 for additional guidance on OFA standards and wingtip clearance criteria.)
OFZ	Obstacle Free Zone. The airspace below 150 ft (45 m) above the established airport elevation and along the runway and extended runway centerline that is required to be clear of all objects, except for frangible visual NAVAIDs that need to be located in the OFZ because of their function, in order to provide clearance protection for aircraft landing or taking off from the runway and for missed approaches. The OFZ is subdivided as follows: Runway OFZ, Inner Approach OFZ, Inner Transitional OFZ, and Precision OFZ. Refer to AC 150/5300-13 for guidance on OFZ.
OSHA	Occupational Safety and Health Administration
OTS	Out of Service
P&R	Planning and Requirements Group
NPI	NAS Planning & Integration
PAPI	Precision Approach Path Indicator
PFC	Passenger Facility Charge
PLASI	Pulse Light Approach Slope Indicator
Project Proposal Summary	A clear and concise description of the proposed project or change that is the object of Safety Risk Management.
RA	Reimbursable Agreement
RE	Resident Engineer
REIL	Runway End Identifier Lights
RNAV	Area Navigation
ROFA	Runway Object Free Area
RSA	Runway Safety Area. A 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, in accordance with AC 150/5300-13.
SDS	Safety Data Sheet
SIDA	Security Identification Display Area
SMS	Safety Management System

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Term	Definition
SPCD	Safety Plan Compliance Document. Details developed and submitted by a contractor to the airport operator for approval providing details on how the performance of a construction project will comply with the CSPP.
SRM	Safety Risk Management
SSC	System Support Center
Taxiway Safety Area	A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway, in accordance with AC 150/5300-13.
TDG	Taxiway Design Group
Temporary	Any condition that is not intended to be permanent.
Temporary Runway End	The beginning of that portion of the runway available for landing and taking off in one direction, and for landing in the other direction. Note the difference from a displaced threshold.
Threshold	The beginning of that portion of the runway available for landing. In some instances, the landing threshold may be displaced.
TODA	Takeoff Distance Available
TOFA	Taxiway Object Free Area
TORA	Takeoff Run Available. The length of the runway less any length of runway unavailable and/or unsuitable for takeoff run computations. See AC 150/5300-13 for guidance on declared distances.
TSA	Taxiway Safety Area, or Transportation Security Administration
UNICOM	A radio communications system of a type used at small airports.
VASI	Visual Approach Slope Indicator
VGSI	Visual Glide Slope Indicator. A device that provides a visual glide slope indicator to landing pilots. These systems include precision approach path indicator (PAPI), visual approach slope indicator (VASI), and pulse light approach slope indicator (PLASI).
VFR	Visual Flight Rules
VOR	Very High Frequency Omnidirectional Radio Range
VPD	Vehicle / Pedestrian Deviation

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APPENDIX C. SAFETY AND PHASING PLAN CHECKLIST

This appendix is keyed to Chapter 2. In the electronic version of this AC, clicking on the paragraph designation in the Reference column will access the applicable paragraph. There may be instances where the CSPP requires provisions that are not covered by the list in this appendix.

This checklist is intended as an aid, not a required submittal.

Table C-1. CSPP Checklist

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
General Considerations					
Requirements for predesign, prebid, and preconstruction conferences to introduce the subject of airport operational safety during construction are specified.	2.5				
Operational safety is a standing agenda item for construction progress meetings.	2.5				
Scheduling of the construction phases is properly addressed.	2.6				
Any formal agreements are established.	2.5.3				
Areas and Operations Affected by Construction Activity					
Drawings showing affected areas are included.	2.7.1				
Closed or partially closed runways, taxiways, and aprons are depicted on drawings.	2.7.1.1				
Access routes used by ARFF vehicles affected by the project are addressed.	2.7.1.2				
Access routes used by airport and airline support vehicles affected by the project are addressed.	2.7.1.3				
Underground utilities, including water supplies for firefighting and drainage.	2.7.1.4				

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Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
Approach/departure surfaces affected by heights of temporary objects are addressed.	2.7.1.5				
Construction areas, storage areas, and access routes near runways, taxiways, aprons, or helipads are properly depicted on drawings.	2.7.1				
Temporary changes to taxi operations are addressed.	2.7.2.1				
Detours for ARFF and other airport vehicles are identified.	2.7.2.2				
Maintenance of essential utilities and underground infrastructure is addressed.	2.7.2.3				
Temporary changes to air traffic control procedures are addressed.	2.7.2.4				
NAVAIDs					
Critical areas for NAVAIDs are depicted on drawings.	2.8				
Effects of construction activity on the performance of NAVAIDS, including unanticipated power outages, are addressed.	2.8				
Protection of NAVAID facilities is addressed.	2.8				
The required distance and direction from each NAVAID to any construction activity is depicted on drawings.	2.8				
Procedures for coordination with FAA ATO/Technical Operations, including identification of points of contact, are included.	2.8, 2.13.1, 2.13.5.3.1, 2.18.1				
Contractor Access					
The CSPP addresses areas to which contractor will have access and how	2.9				

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Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
the areas will be accessed.					
The application of 49 CFR Part 1542 Airport Security, where appropriate, is addressed.	2.9				
The location of stockpiled construction materials is depicted on drawings.	2.9.1				
The requirement for stockpiles in the ROFA to be approved by FAA is included.	2.9.1				
Requirements for proper stockpiling of materials are included.	2.9.1				
Construction site parking is addressed.	2.9.2.1				
Construction equipment parking is addressed.	2.9.2.2				
Access and haul roads are addressed.	2.9.2.3				
A requirement for marking and lighting of vehicles to comply with AC 150/5210-5, *Painting, Marking and Lighting of Vehicles Used on an Airport,* is included.	2.9.2.4				
Proper vehicle operations, including requirements for escorts, are described.	2.9.2.5, 2.9.2.6				
Training requirements for vehicle drivers are addressed.	2.9.2.7				
Two-way radio communications procedures are described.	2.9.2.9				
Maintenance of the secured area of the airport is addressed.	2.9.2.10				
Wildlife Management					
The airport operator's wildlife management procedures are addressed.	2.10				

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Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
Foreign Object Debris Management					
The airport operator's FOD management procedures are addressed.	2.11				
Hazardous Materials Management					
The airport operator's hazardous materials management procedures are addressed.	2.12				
Notification of Construction Activities					
Procedures for the immediate notification of airport user and local FAA of any conditions adversely affecting the operational safety of the airport are detailed.	2.13				
Maintenance of a list by the airport operator of the responsible representatives/points of contact for all involved parties and procedures for contacting them 24 hours a day, seven days a week is specified.	2.13.1				
A list of local ATO/Technical Operations personnel is included.	2.13.1				
A list of ATCT managers on duty is included.	2.13.1				
A list of authorized representatives to the OCC is included.	2.13.2				
Procedures for coordinating, issuing, maintaining and cancelling by the airport operator of NOTAMS about airport conditions resulting from construction are included.	2.8, 2.13.2, 2.18.3.3.9				
Provision of information on closed or hazardous conditions on airport movement areas by the airport operator to the OCC is specified.	2.13.2				
Emergency notification procedures for medical, fire fighting, and police	2.13.3				

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Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
response are addressed.					
Coordination with ARFF personnel for non-emergency issues is addressed.	2.13.4				
Notification to the FAA under 14 CFR parts 77 and 157 is addressed.	2.13.5				
Reimbursable agreements for flight checks and/or design and construction for FAA owned NAVAIDs are addressed.	2.13.5.3.2				
Inspection Requirements					
Daily and interim inspections by both the airport operator and contractor are specified.	2.14.1, 2.14.2				
Final inspections at certificated airports are specified when required.	2.14.3				
Underground Utilities					
Procedures for protecting existing underground facilities in excavation areas are described.	2.15				
Penalties					
Penalty provisions for noncompliance with airport rules and regulations and the safety plans are detailed.	2.16				
Special Conditions					
Any special conditions that affect the operation of the airport or require the activation of any special procedures are addressed.	2.17				
Runway and Taxiway Visual Aids - Marking, Lighting, Signs, and Visual NAVAIDs					
The proper securing of temporary airport markings, lighting, signs, and visual NAVAIDs is addressed.	2.18.1				
Frangibility of airport markings, lighting, signs, and visual NAVAIDs is specified.	2.18.1, 2.18.3, 2.18.4.2, 2.20.2.4				

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Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
The requirement for markings to be in compliance with AC 150/5340-1, *Standards for Airport Markings*, is specified.	2.18.2				
Detailed specifications for materials and methods for temporary markings are provided.	2.18.2				
The requirement for lighting to conform to AC 150/5340-30, *Design and Installation Details for Airport Visual Aids;* AC 150/5345-50, *Specification for Portable Runway and Taxiway Lights;* and AC 150/5345-53, *Airport Lighting Certification Program*, is specified.	2.18.3				
The use of a lighted X is specified where appropriate.	2.18.2.1.2, 2.18.3.2				
The requirement for signs to conform to AC 150/5345-44, *Specification for Runway and Taxiway Signs;* AC 50/5340-18, *Standards for Airport Sign Systems;* and AC 150/5345-53, *Airport Lighting Certification Program*, is specified.	2.18.4				
Marking and Signs For Access Routes					
The CSPP specifies that pavement markings and signs intended for construction personnel should conform to AC 150/5340-18 and, to the extent practicable, with the MUTCD and/or State highway specifications.	2.18.4.2				
Hazard Marking and Lighting					
Prominent, comprehensible warning indicators for any area affected by construction that is normally accessible to aircraft, personnel, or vehicles are specified.	2.20.1				

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Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
Hazard marking and lighting are specified to identify open manholes, small areas under repair, stockpiled material, and waste areas.	2.20.1				
The CSPP considers less obvious construction-related hazards.	2.20.1				
Equipment that poses the least danger to aircraft but is sturdy enough to remain in place when subjected to typical winds, prop wash and jet blast is specified.	2.20.2.1				
The spacing of barricades is specified such that a breach is physically prevented barring a deliberate act.	2.20.2.1				
Red lights meeting the luminance requirements of the State Highway Department are specified.	2.20.2.2				
Barricades, temporary markers, and other objects placed and left in areas adjacent to any open runway, taxiway, taxi lane, or apron are specified to be as low as possible to the ground, and no more than 18 inch high.	2.20.2.3				
Barricades are specified to indicate construction locations in which no part of an aircraft may enter.	2.20.2.3				
Highly reflective barriers with lights are specified to barricade taxiways leading to closed runways.	2.20.2.5				
Markings for temporary closures are specified.	2.20.2.5				
The provision of a contractor's representative on call 24 hours a day for emergency maintenance of airport hazard lighting and barricades is specified.	2.20.2.7				

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Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
Work Zone Lighting for Nighttime Construction					
If work is to be conducted at night, the CSPP identifies construction lighting units and their general locations and aiming in relationship to the ATCT and active runways and taxiways.	2.21				
Protection of Runway and Taxiway Safety Areas					
The CSPP clearly states that no construction may occur within a safety area while the associated runway or taxiway is open for aircraft operations.	2.22.1.1, 2.22.3.1				
The CSPP specifies that the airport operator coordinates the adjustment of RSA or TSA dimensions with the ATCT and the appropriate FAA Airports Regional or District Office and issues a local NOTAM.	2.22.1.2, 2.22.3.2				
Procedures for ensuring adequate distance for protection from blasting operations, if required by operational considerations, are detailed.	2.22.3.3				
The CSPP specifies that open trenches or excavations are not permitted within a safety area while the associated runway or taxiway is open, subject to approved exceptions.	2.22.1.4				
Appropriate covering of excavations in the RSA or TSA that cannot be backfilled before the associated runway or taxiway is open is detailed.	2.22.1.4				
The CSPP includes provisions for prominent marking of open trenches and excavations at the construction site.	2.22.1.4				
Grading and soil erosion control to maintain RSA/TSA standards are	2.22.3.5				

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Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
addressed.					
The CSPP specifies that equipment is to be removed from the ROFA when not in use.	2.22.2				
The CSPP clearly states that no construction may occur within a taxiway safety area while the taxiway is open for aircraft operations.	2.22.3				
Appropriate details are specified for any construction work to be accomplished in a taxiway object free area.	2.22.4				
Measures to ensure that personnel, material, and/or equipment do not penetrate the OFZ or threshold siting surfaces while the runway is open for aircraft operations are included.	2.22.4.3.6				
Provisions for protection of runway approach/departure areas and clearways are included.	2.22.6				
Other Limitations on Construction					
The CSPP prohibits the use of open flame welding or torches unless adequate fire safety precautions are provided and the airport operator has approved their use.	2.23.1.2				
The CSPP prohibits the use of electrical blasting caps on or within 1,000 ft (300 m) of the airport property.	2.23.1.3				

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APPENDIX D. CONSTRUCTION PROJECT DAILY SAFETY INSPECTION CHECKLIST

The situations identified below are potentially hazardous conditions that may occur during airport construction projects. Safety area encroachments, unauthorized and improper ground vehicle operations, and unmarked or uncovered holes and trenches near aircraft operating surfaces pose the most prevalent threats to airport operational safety during airport construction projects. The list below is one tool that the airport operator or contractor may use to aid in identifying and correcting potentially hazardous conditions. It should be customized as appropriate for each project including information such as the date, time and name of the person conducting the inspection.

Table D-1. Potentially Hazardous Conditions

Item	Action Required (Describe)	No Action Required (Check)
Excavation adjacent to runways, taxiways, and aprons improperly backfilled.		
Mounds of earth, construction materials, temporary structures, and other obstacles near any open runway, taxiway, or taxi lane; in the related Object Free area and aircraft approach or departure areas/zones; or obstructing any sign or marking.		
Runway resurfacing projects resulting in lips exceeding 3 inch (7.6 cm) from pavement edges and ends.		
Heavy equipment (stationary or mobile) operating or idle near AOA, in runway approaches and departures areas, or in OFZ.		
Equipment or material near NAVAIDs that may degrade or impair radiated signals and/or the monitoring of navigation and visual aids. Unauthorized or improper vehicle operations in localizer or glide slope critical areas, resulting in electronic interference and/or facility shutdown.		
Tall and especially relatively low visibility units (that is, equipment with slim profiles) — cranes, drills, and similar objects — located in critical areas, such as OFZ and		

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Item	Action Required (Describe)	No Action Required (Check)
approach zones.		
Improperly positioned or malfunctioning lights or unlighted airport hazards, such as holes or excavations, on any apron, open taxiway, or open taxi lane or in a related safety, approach, or departure area.		
Obstacles, loose pavement, trash, and other debris on or near AOA. Construction debris (gravel, sand, mud, paving materials) on airport pavements may result in aircraft propeller, turbine engine, or tire damage. Also, loose materials may blow about, potentially causing personal injury or equipment damage.		
Inappropriate or poorly maintained fencing during construction intended to deter human and animal intrusions into the AOA. Fencing and other markings that are inadequate to separate construction areas from open AOA create aviation hazards.		
Improper or inadequate marking or lighting of runways (especially thresholds that have been displaced or runways that have been closed) and taxiways that could cause pilot confusion and provide a potential for a runway incursion. Inadequate or improper methods of marking, barricading, and lighting of temporarily closed portions of AOA create aviation hazards.		
Wildlife attractants — such as trash (food scraps not collected from construction personnel activity), grass seeds, tall grass, or standing water — on or near airports.		
Obliterated or faded temporary markings on active operational areas.		
Misleading or malfunctioning obstruction lights. Unlighted or unmarked obstructions in the approach to any open runway pose aviation hazards.		

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Item	Action Required (Describe)	No Action Required (Check)
Failure to issue, update, or cancel NOTAMs about airport or runway closures or other construction related airport conditions.		
Failure to mark and identify utilities or power cables. Damage to utilities and power cables during construction activity can result in the loss of runway / taxiway lighting; loss of navigation, visual, or approach aids; disruption of weather reporting services; and/or loss of communications.		
Restrictions on ARFF access from fire stations to the runway / taxiway system or airport buildings.		
Lack of radio communications with construction vehicles in airport movement areas.		
Objects, regardless of whether they are marked or flagged, or activities anywhere on or near an airport that could be distracting, confusing, or alarming to pilots during aircraft operations.		
Water, snow, dirt, debris, or other contaminants that temporarily obscure or derogate the visibility of runway/taxiway marking, lighting, and pavement edges. Any condition or factor that obscures or diminishes the visibility of areas under construction.		
Spillage from vehicles (gasoline, diesel fuel, oil) on active pavement areas, such as runways, taxiways, aprons, and airport roadways.		
Failure to maintain drainage system integrity during construction (for example, no temporary drainage provided when working on a drainage system).		

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Item	Action Required (Describe)	No Action Required (Check)
Failure to provide for proper electrical lockout and tagging procedures. At larger airports with multiple maintenance shifts/workers, construction contractors should make provisions for coordinating work on circuits.		
Failure to control dust. Consider limiting the amount of area from which the contractor is allowed to strip turf.		
Exposed wiring that creates an electrocution or fire ignition hazard. Identify and secure wiring, and place it in conduit or bury it.		
Site burning, which can cause possible obscuration.		
Construction work taking place outside of designated work areas and out of phase.		

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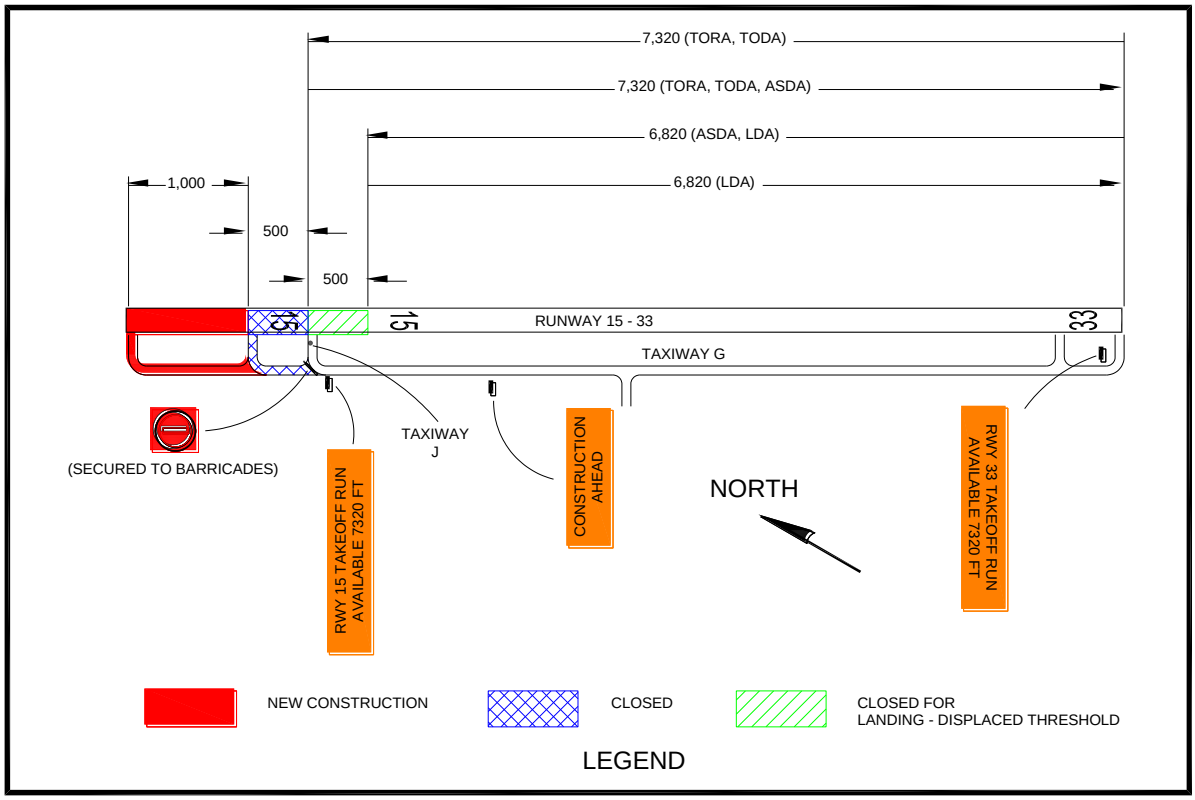
APPENDIX E. SAMPLE OPERATIONAL EFFECTS TABLE

E.1 **Project Description.**

Runway 15-33 is currently 7820 feet long, with a 500 foot stopway on the north end. This project will remove the stopway and extend the runway 1000 feet to the north and 500 feet to the south. Finally, the existing portion of the runway will be repaved. The runway 33 glide slope will be relocated. The new runway 33 localizer has already been installed by FAA Technical Operations and only needs to be switched on. Runway 15 is currently served only by a localizer, which will remain in operation as it will be beyond the future RSA. Appropriate NOTAMS will be issued throughout the project.

E.1.1 During Phase I, the runway 15 threshold will be displaced 1000 feet to keep construction equipment below the approach surface. The start of runway 15 takeoff and the departure end of runway 33 will also be moved 500 feet to protect workers from jet blast. Declared distances for runway 33 will be adjusted to provide the required RSA and applicable departure surface. Excavation near Taxiway G will require its ADG to be reduced from IV to III. See Figure E-1.

Figure E-1. Phase I Example



Note 1: Where hold signs are installed on both sides of a taxiway, install the TORA sign on the left side of the taxiway before the final turn to the runway intersection.

Note 2: Based on the declared distances for Runway 33 departures, the maximum equipment height in the construction area is 12.5 feet (500/40 = 12.5).

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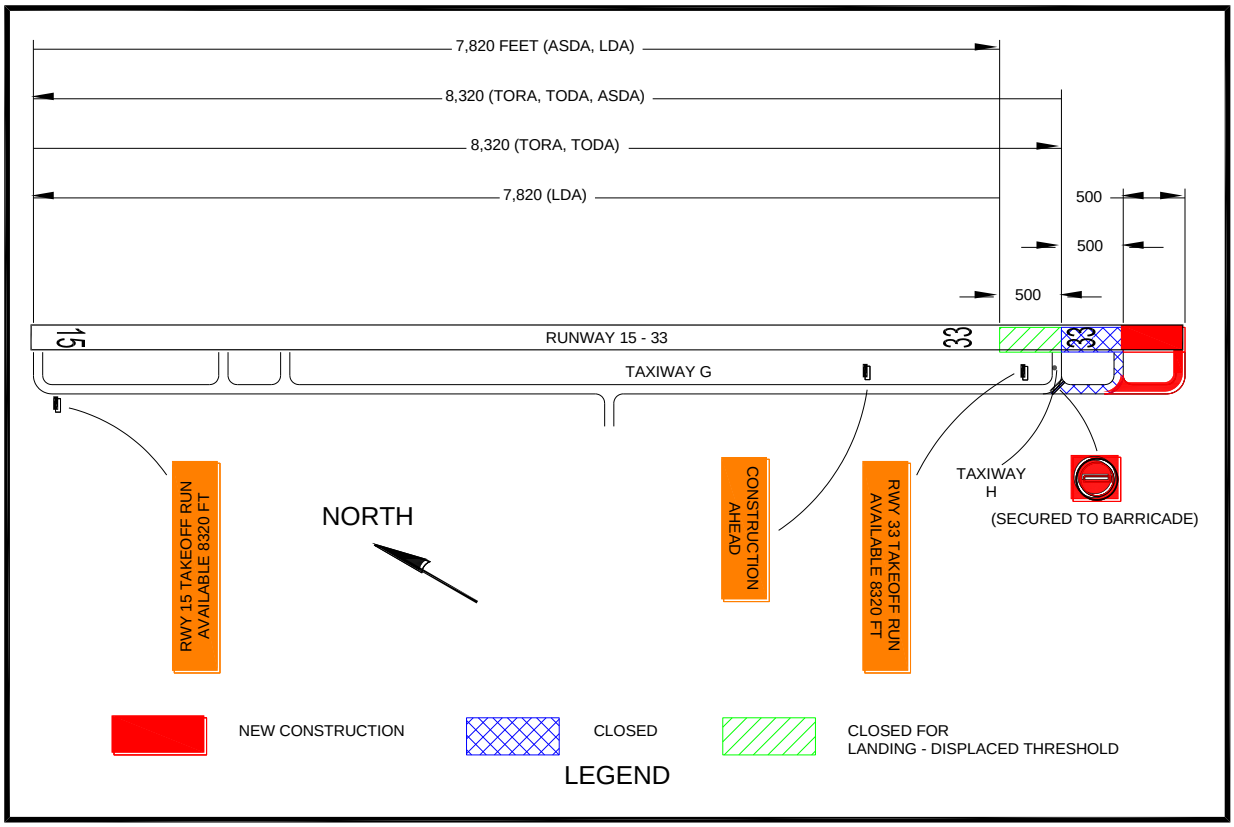
E.2 During Phase II, the runway 33 threshold will be displaced 1000 feet to keep construction equipment below the approach surface. The start of runway 33 takeoff and the departure end of runway 15 will also be moved 500 feet to protect workers from jet blast. Declared distances for runway 15 will be adjusted to provide the required RSA and applicable departure surface. See Figure E-2.

Figure E-2. Phase II Example



Note 1: Where hold signs are installed on both sides of a taxiway, install the TORA sign on the left side of the taxiway before the final turn to the runway intersection.

Note 2: Based on the declared distances for Runway 15 departures, the maximum equipment height in the construction area is 12.5 feet (500/40 = 12.5).

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E.3 During Phase III, the existing portion of the runway will be repaved with Hot Mix Asphalt (HMA) and the runway 33 glide slope will be relocated. Construction will be accomplished between the hours of 8:00 pm and 5:00 am, during which the runway will be closed to operations.

Figure E-3. Phase III Example

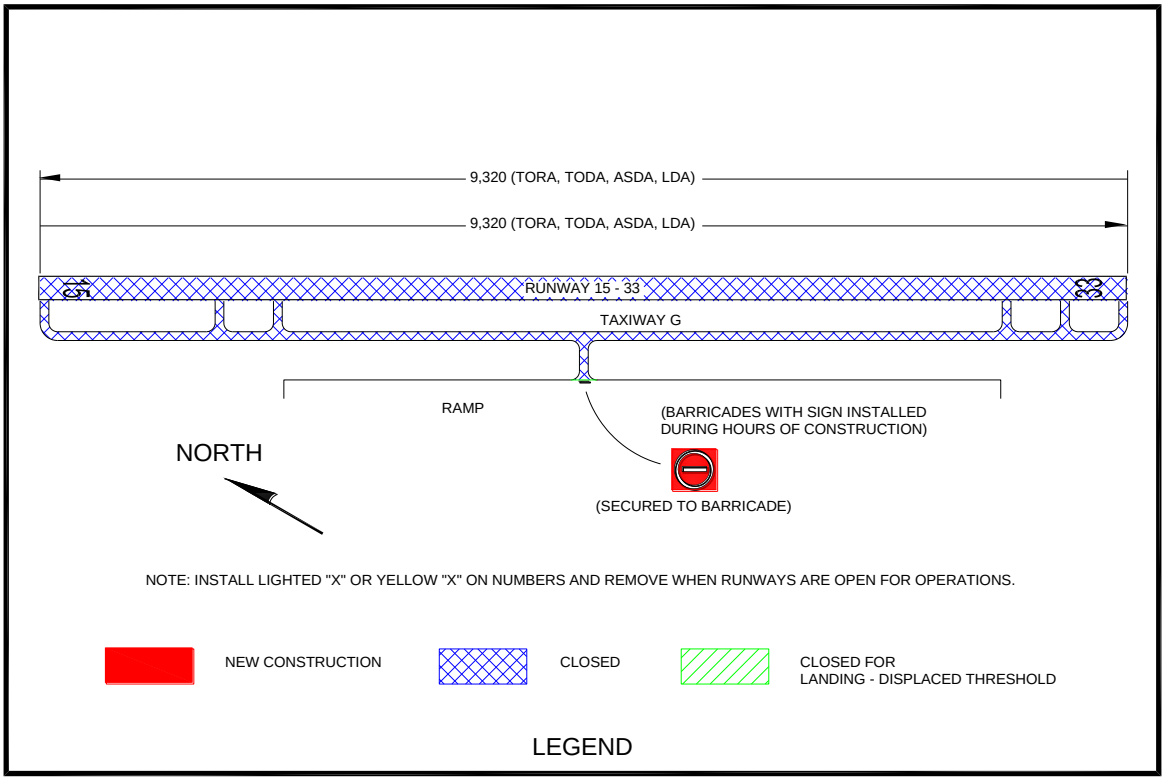

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Table E-1. Operational Effects Table

Project	**Runway 15-33 Extension and Repaving**			
Phase	**Normal (Existing)**	**Phase I: Extend Runway 15 End**	**Phase II: Extend Runway 33 End**	**Phase III: Repave Runway**
Scope of Work	N/A	Extend Runway 15-33 1,000 ft on north end with Hot Mix Asphaltic Concrete (HMA).	Extend Runway 15-33 500 ft on south end with Hot Mix Asphaltic Concrete (HMA).	Repave existing runway with HMA Relocate Runway 33 Glide Slope
Effects of Construction Operations	N/A	Existing North 500 ft closed	Existing South 500 ft closed	Runway closed between 8:00 pm and 5:00 am Edge lighting out of service
Construction Phase	N/A	Phase I (Anticipated)	Phase II (Anticipated)	Phase III (Anticipated)
Runway 15 Average Aircraft Operations	Carrier: 52 /day GA: 26 /day Military: 11 /day	Carrier: 40 /day GA: 26 /day Military: 0 /day	Carrier: 45 /day GA: 26 /day Military: 5 /day	Carrier: 45 / day GA: 20 / day Military: 0 /day
Runway 33 Average Aircraft Operations	Carrier: 40 /day GA: 18 /day Military: 10 /day	Carrier: 30 /day GA: 18 /day Military: 0 /day	Carrier: 25 /day GA: 18 /day Military: 5 /day	Carrier: 20 /day GA: 5 /day Military: 0 /day
Runway 15-33 Aircraft Category	C-IV	C-IV	C-IV	C-IV
Runway 15 Approach Visibility Minimums	1 mile	1 mile	1 mile	1 mile
Runway 33 Approach Visibility Minimums	¾ mile	¾ mile	¾ mile	1 mile

Note: Proper coordination with Flight Procedures group is necessary to maintain instrument approach procedures during construction.

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Project		**Runway 15-33 Extension and Repaving**			
Phase		**Normal (Existing)**	**Phase I: Extend Runway 15 End**	**Phase II: Extend Runway 33 End**	**Phase III: Repave Runway**
Runway 15 Declared Distances	**TORA**	7,820	7,320	8,320	9,320
	TODA	7,820	7,320	8,320	9,320
	ASDA	7,820	7,320	7,820	9,320
	LDA	7,820	6,820	7,820	9,320
Runway 33 Declared Distances	**TORA**	7,820	7,320	8,320	9,320
	TODA	7,820	7,320	8,320	9,320
	ASDA	8,320	6,820	8,320	9,320
	LDA	7,820	6,820	7,820	9,320
Runway 15 Approach Procedures		LOC only	LOC only	LOC only	LOC only
		RNAV	RNAV	RNAV	RNAV
		VOR	VOR	VOR	VOR
Runway 33 Approach Procedures		ILS	ILS	ILS	LOC only
		RNAV	RNAV	RNAV	RNAV
		VOR	VOR	VOR	VOR
Runway 15 NAVAIDs		LOC	LOC	LOC	LOC
Runway 33 NAVAIDs		ILS, MALSR	ILS, MALSR	ILS, MALSR	LOC, MALSR
Taxiway G ADG		IV	III	IV	IV
Taxiway G TDG		4	4	4	4
ATCT (hours open)		24 hours	24 hours	24 hours	0500 - 2000
ARFF Index		D	D	D	D

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Project	**Runway 15-33 Extension and Repaving**			
Phase	**Normal (Existing)**	**Phase I: Extend Runway 15 End**	**Phase II: Extend Runway 33 End**	**Phase III: Repave Runway**
Special Conditions	Air National Guard (ANG) military operations	All military aircraft relocated to alternate ANG Base	Some large military aircraft relocated to alternate ANG Base	All military aircraft relocated to alternate ANG Base
Information for NOTAMs		Refer above for applicable declared distances. Taxiway G limited to 118 ft wingspan	Refer above for applicable declared distances.	Refer above for applicable declared distances. Airport closed 2000 – 0500. Runway 15 glide slope OTS.

Note: This table is one example. It may be advantageous to develop a separate table for each project phase and/or to address the operational status of the associated NAVAIDs per construction phase.

Complete the following chart for each phase to determine the area that must be protected along the runway and taxiway edges:

Table E-2. Runway and Taxiway Edge Protection

Runway/Taxiway	**Aircraft Approach Category*** **A, B, C, or D**	**Airplane Design Group*** **I, II, III, or IV**	**Safety Area Width in Feet Divided by 2***

*See AC 150/5300-13 to complete the chart for a specific runway/taxiway.

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Complete the following chart for each phase to determine the area that must be protected before the runway threshold:

Table E-3. Protection Prior to Runway Threshold

Runway End Number	Airplane Design Group* I, II, III, or IV	Aircraft Approach Category* A, B, C, or D	Minimum Safety Area Prior to the Threshold*	Minimum Distance to Threshold Based on Required Approach Slope*	
			ft	ft	: 1
			ft	ft	: 1
			ft	ft	: 1
			ft	ft	: 1

*See AC 150/5300-13 to complete the chart for a specific runway.

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APPENDIX F. ORANGE CONSTRUCTION SIGNS

Figure F-1. Approved Sign Legends

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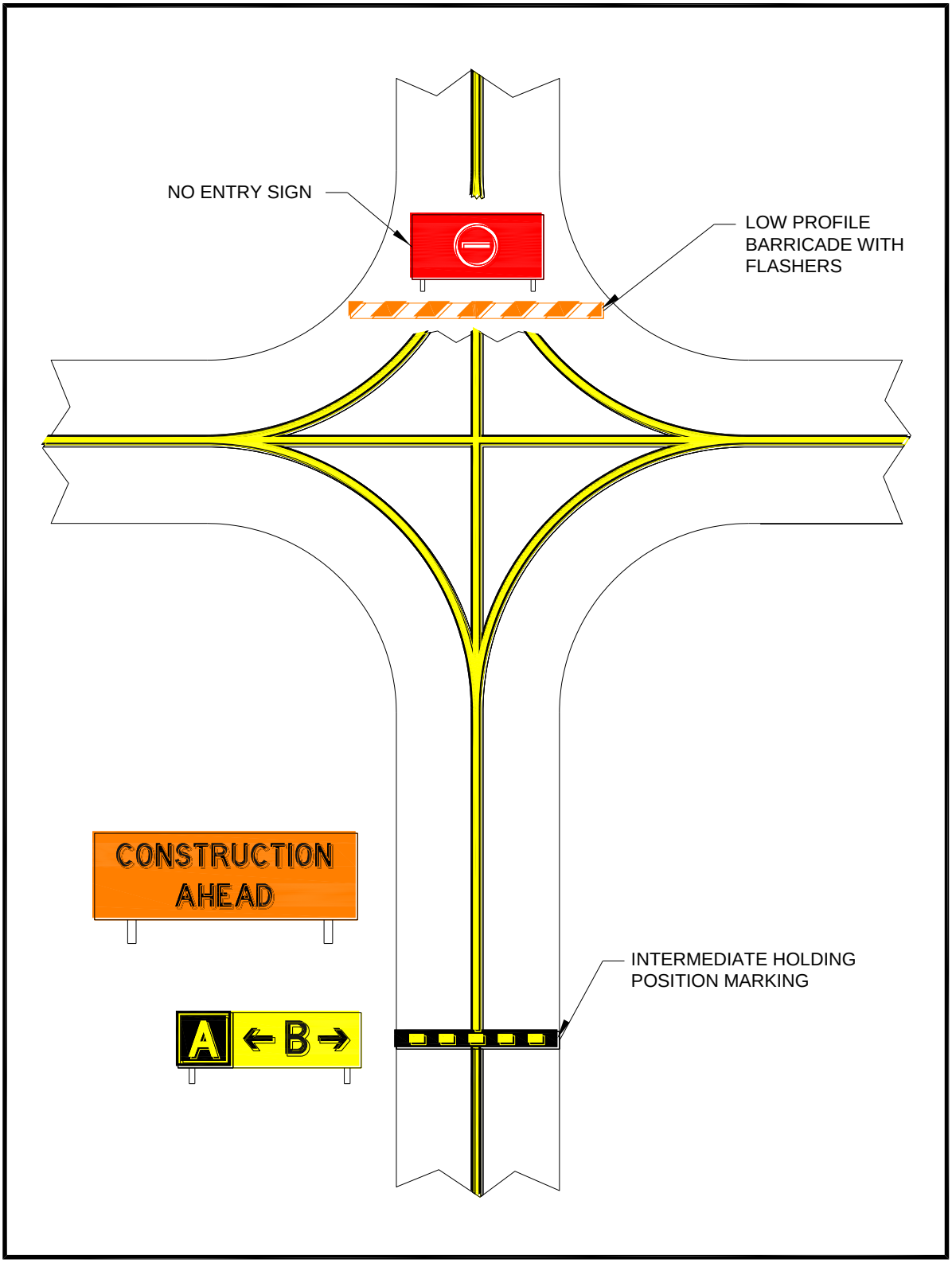
Figure F-2. Orange Construction Sign Example 1



Note: For proper placement of signs, refer to EB 93.

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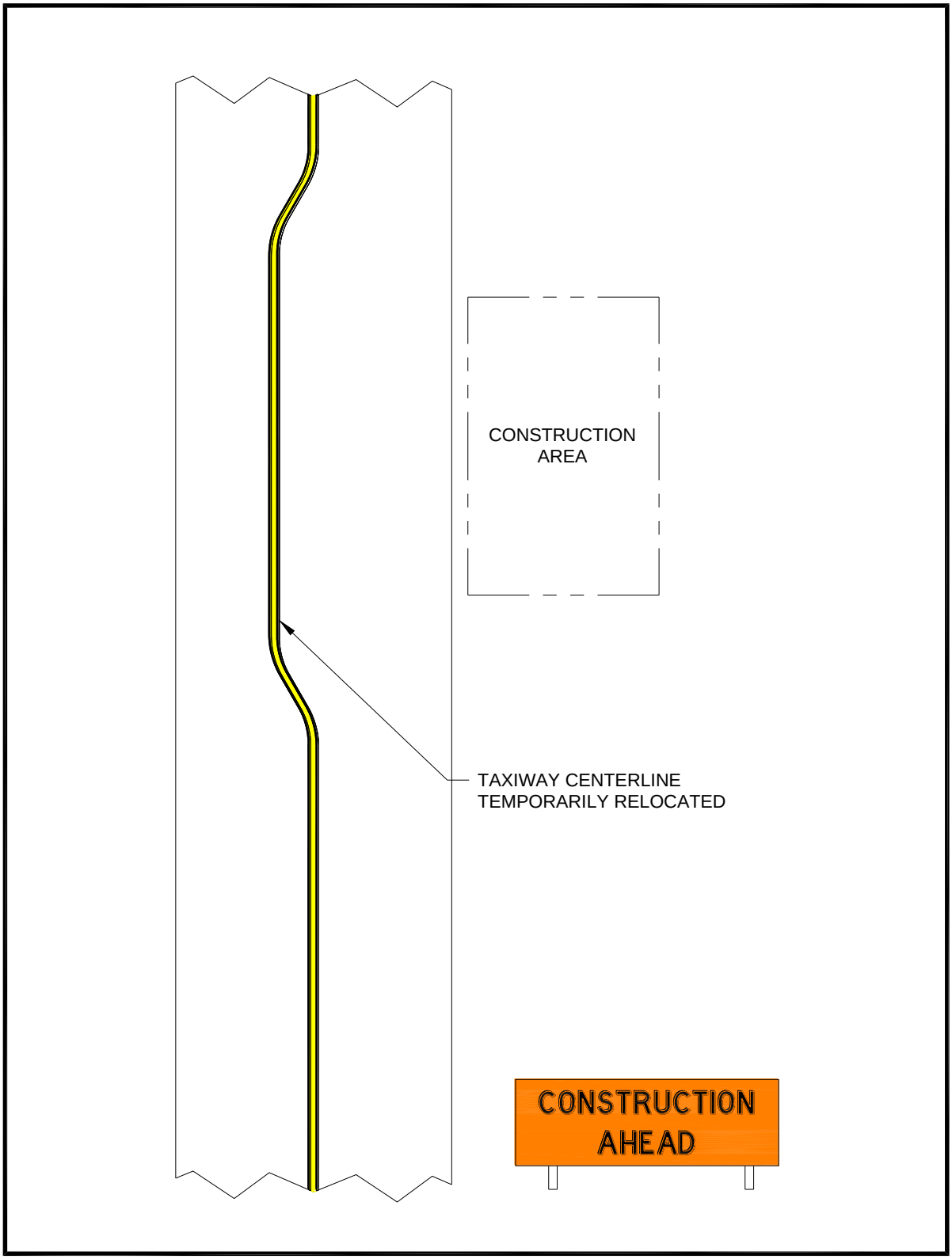
Figure F-3. Orange Construction Sign Example 2



Note: For proper placement of signs, refer to EB 93.

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Advisory Circular Feedback

If you find an error in this AC, have recommendations for improving it, or have suggestions for new items/subjects to be added, you may let us know by (1) mailing this form to Manager, Airport Engineering Division, Federal Aviation Administration ATTN: AAS-100, 800 Independence Avenue SW, Washington DC 20591 or (2) faxing it to the attention of the Office of Airport Safety and Standards at (202) 267-5383.

Subject: AC 150/5370-2G Date: _____

Please check all appropriate line items:

☐ An error (procedural or typographical) has been noted in paragraph _____ on page _____.

☐ Recommend paragraph _____ on page _____ be changed as follows:

_____
_____
_____

☐ In a future change to this AC, please cover the following subject:
(Briefly describe what you want added.)

_____
_____
_____

☐ Other comments:

_____
_____
_____

☐ I would like to discuss the above. Please contact me at (phone number, email address).

_____

Submitted by: _____ Date: _____

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FAA ADVISORY CIRCULAR

150/5210-5D

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

U.S. Department of Transportation

Federal Aviation Administration

Advisory Circular

Subject: Painting, Marking, and Lighting of Vehicles Used on an Airport

Date: April 1, 2010 **AC No:** AC 150/5210-5D

Initiated by: AAS-100 **Change:**

1. PURPOSE. This advisory circular (AC) provides guidance, specifications, and standards for painting, marking, and lighting of vehicles operating in the airport air operations area (AOA). The approved lights, colors, and markings herein assure the conspicuity of vehicles operating in the AOA from both the ground and the air.

2. CANCELLATION. This AC cancels AC 150/5210-5C, Painting, Marking, and Lighting of Vehicles Used on an Airport, dated August 31, 2007.

3. APPLICATION. The Federal Aviation Administration (FAA) recommends the guidelines and standards in this Advisory Circular for vehicles operating in the airport AOA. In general, use of this AC is not mandatory. ***However***, use of this AC is mandatory for vehicles funded with federal grant monies through the Airport Improvement Program (AIP) and/or with revenue from the Passenger Facility Charges (PFC) Program. See Grant Assurance No. 34, "Policies, Standards, and Specifications," and PFC Assurance No. 9, "Standard and Specifications."

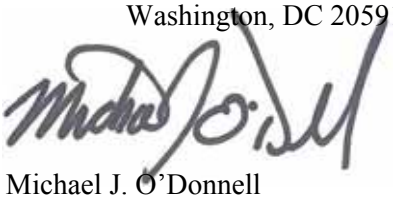
Vehicles covered by this AC that do not meet this standard may be used until the vehicle is repainted or replaced, but no later than **December 31, 2010.**

4. PRINCIPAL CHANGES. This AC contains new specifications and recommendations for the painting, marking, and lighting of Towbarless Tow Vehicles (TLTVs).

5. METRIC UNITS. To promote an orderly transition to metric units, this AC includes both English and metric dimensions. The metric conversions may not be exact equivalents, and until there is an official changeover to the metric system, the English dimensions will govern.

6. COMMENTS OR SUGGESTIONS for improvements to this AC should be sent to:

Manager, Airport Engineering Division
Federal Aviation Administration
ATTN: AAS-100
800 Independence Avenue, S.W.
Washington, DC 20591



Michael J. O'Donnell
Director of Airport Safety and Standards

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PAINTING, MARKING, AND LIGHTING OF VEHICLES USED ON AN AIRPORT

1. SOURCES OF APPLICABLE DOCUMENTS.

a. American National Standards Institute, Inc. (ANSI), 25 West 43rd St. 4th Floor, New York, NY 10036. Website: **www.ansi.org**

b. American Society for Testing & Materials (ASTM), ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Website: **www.astm.org**

c. The National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, Massachusetts 02169-7471. Website: **www.nfpa.org**

d. The U. S. General Services Administration (GSA), Centralized Mailing List Services, 501 West Felix Street, Whse 9, South End P.O. Box 6477, Fort Worth, Texas 76115-6477. Website: **www.gsa.gov**

e. The Superintendent of Documents, U.S. Government Printing Office, 732 North Capitol St. NW, Washington, DC 20401.

f. Society of Automotive Engineers, Inc. (SAE), 400 Commonwealth Drive, Warrendale, PA 15096-0001. Website: **www.sae.org**

g. FAA Advisory Circulars: U.S. Department of Transportation, Subsequent Distribution Office, Ardmore East Business Center, 3341 Q 75th Ave., Landover, MD 20785. Website: **www.faa.gov**

h. FAA Engineering Briefs: **www.faa.gov/airports/engineering/engineering_briefs/**

2. DEFINITIONS.

The following definitions apply in this AC:

a. **Vehicle –** All conveyances, except aircraft, used on the ground to transport persons, cargo, equipment or those required to perform maintenance, construction, service, and security duties.

b. **Air Operations Area (AOA) –** The portion of airport that encompasses the landing, take off, taxiing, and parking areas for aircraft.

c. **Airport Emergency Vehicles** – Vehicles that are authorized in the AOA for emergency purposes (e.g., ambulances, aircraft rescue and fire fighting (ARFF) vehicles and emergency response vehicles) as authorized by the airport traffic control tower (ATCT) or an authorized on-site accident/incident commander.

d. **Airport Operations Vehicles –** Vehicles routinely used by airport operations personnel for airport inspection and duties associated with airfield operations (such as airfield condition reporting and Incident Command) on the AOA and Movement Area.

e. **Airport Security Vehicles –** Vehicles that are authorized in the AOA for security purposes, as needed (e.g. police cars).

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f. Airfield Service Vehicles – Vehicles that are routinely used in the AOA for airfield service, maintenance, or construction (e.g. snow blowers, snowplows, maintenance trucks, and tractors).

g. Aircraft Support Vehicles – Vehicles that are routinely used in the AOA to support aircraft operations (e.g. aircraft pushback tractors, baggage/cargo tractors or trucks, air conditioning and aviation fuel trucks). These vehicles are typically owned by airlines, vendors, or contractors and are not eligible for Federal funding.

h. Reduced Visibility – Prevailing visibility is less than one statute mile (1609 meters) and/or the runway visual range (RVR) is less than 6,000 feet (1830 meters).

i. Movement Area – The runways, taxiways, and other areas of an airport/heliport that are used for taxiing/hover taxiing, air taxiing, takeoff, and landing of aircraft, exclusive of loading ramps and parking areas. At those airports/heliports with an operating airport traffic control tower (ATCT), specific approval for entry onto the movement area must be obtained from air traffic control (ATC).

j. Other Vehicles – Vehicles that are not routinely authorized in the AOA (e.g. construction vehicles). These vehicles are typically owned by airlines, vendors, or contractors and are not eligible for Federal funding.

k. Peak Intensity – Peak intensity, for purposes of this document, means the maximum magnitude of luminescence as measured in candela.

l. Towbarless Tow Vehicle (TLTV) – a type of aircraft support vehicle whose main purpose is to tow aircraft in the AOA by way of nose gear capture.

3. VEHICLE PAINTING.

NOTE: *Airport vehicle paint and markings are a safety of flight requirement. The approved colors/markings herein assure conspicuity of vehicles operating in the AOA from both the ground and air.*

a. Airport Emergency Vehicles.

(1) Ambulances. Ambulance vehicles are painted per the most current version of Federal Specification KKK-A-1822, *Federal Specification for the Star-of-Life Ambulance*. Ambulances are not considered vehicles routinely operating on the AOA.

(2) Aircraft Rescue and Fire Fighting (ARFF) Vehicles. Yellowish-green is the vehicle color standard. Color specifications are per Appendix A.

NOTE: *A yellowish-green color provides optimum visibility during all light levels encountered during a 24-hour day and under variations of light that result from weather and seasonal changes.*

b. Airport Operations Vehicles. Airport operations vehicles may be painted in colors designated by the airport operator. The characteristics must be coordinated with the respective ATCT and identified in the tower letter of agreement.

c. Airport Security Vehicles. Comply with specific state or local requirements.

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d. Airfield Service Vehicles. Chrome yellow is the vehicle color standard. Color specifications are per Appendix A. When vehicles are equipped with bumper bars 8 inches (200 mm) or more in depth, the bars must be painted in alternate stripes 4 inches (100 mm) in width of chrome yellow and black inclined 45° to the vertical.

e. Aircraft Support Vehicles.

(1) Any color or combination of colors other than yellowish-green or chrome yellow. The bumper bar paint scheme in paragraph 3.d (of alternating chrome yellow and black stripe) is recommended.

(2) TLTVs. International orange is the vehicle color standard. Retroreflective tape covering more than 25 percent of the vehicle's vertical surfaces may be used as a temporary measure to meet this standard prior to scheduled vehicle painting.

f. Other Vehicles. Any color or combination of colors other than solid black or white.

4. VEHICLE MARKING.

a. Airport Emergency Vehicles.

(1) Ambulances. Ambulances are marked per the most current version of Federal Specification KKK-A-1822.

(2) ARFF Vehicles. Emergency rescue and fire fighting vehicles are marked with the letters "ARFF, "Fire," or "Rescue" and in accordance with 4.c.(1)-(5) of this AC.

b. Airport Operations Vehicles. Airport operations vehicles may be marked as designated by the airport operator. Marking must be coordinated with the respective ATCT and identified in the tower letter of agreement.

c. Airfield Service Vehicles and Aircraft Support Vehicles.

(1) Airport operator owned vehicles must display an identification number on each side and on the roof (the hood should be used if the vehicle has no roof).

(2) Side numbers will be a minimum of 16 inches (410 mm) in height and conspicuously located.

(3) Roof numbers will be a minimum of 24 inches (610 mm) in height and affixed with their bases toward the front of the vehicle. The identification numbers should provide sharp color contrast to the vehicle color.

(4) In addition to the identification numbers, airport operator-owned vehicles must display either the name of the airport and/or the airport insignia.

(5) To further improve night-time recognition of vehicles, a minimum 8 inch (200 mm) wide horizontal band of high gloss white paint or white reflective tape (Retroreflective, ASTM-D 4956-09, *Standard Specification for Retroreflective Sheeting for Traffic Control*, Type III & above) must be used around the vehicle's surface. Figures 1, 2, and 3 show suggested locations for the horizontal reflective band.

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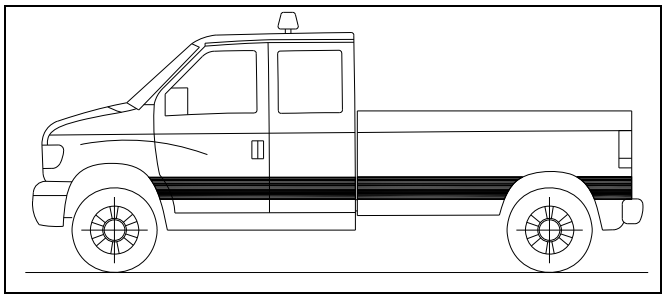

Figure 1: Suggested location for the horizontal reflective band, Option 1

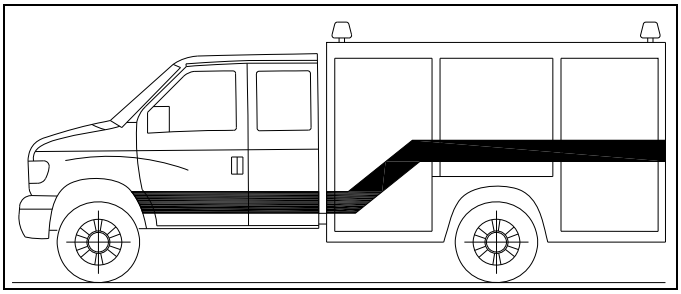

Figure 2: Suggested location for the horizontal reflective band, Option 2

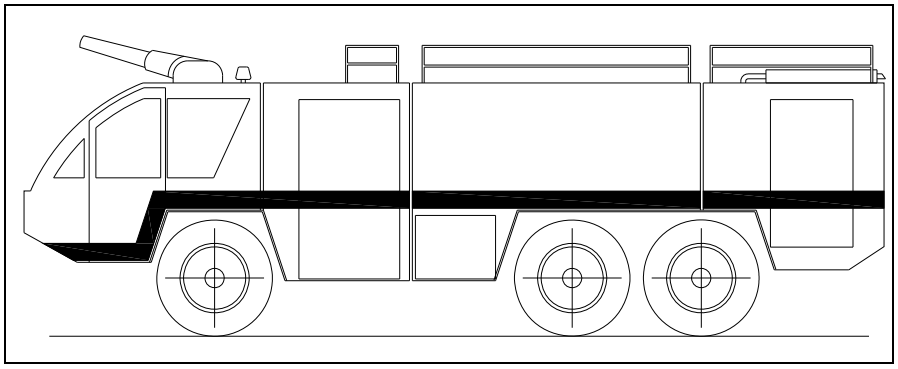

Figure 3: Suggested location for the horizontal reflective band, Option 3

(6) TLTVs. Retroreflective tape is used to outline the shape of a TLTV. If the vertical edge of the vehicle is rounded, the tape should be placed on the rounded portion to reflect light in both the horizontal and vertical planes. Where the placement of the tape may interfere with, or may be worn down by, maintenance or operational activities, tape is not required. Suggested locations for the retroreflective bands are shown in Figure 4.

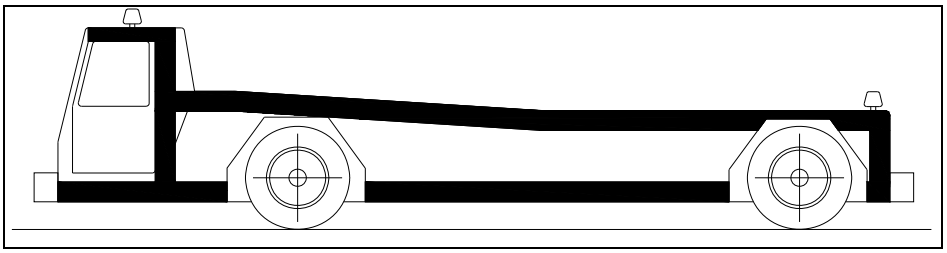

Figure 4: Suggested placement of retroreflective tape on a TLTV

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d. Airport Security and Other Vehicles.

(1) Vehicles other than those that routinely traverse any portion of the AOA under the control of ATC, which are not escorted by a vehicle in constant two-way radio communication with ATC and properly equipped and authorized to operate in the AOA, must be provided with a flag on a staff attached to the vehicle so that the flag will be readily visible.

(2) At airports without air traffic control facilities, flags must be provided on all vehicles.

(3) The flag must be at least a 3-foot by 3-foot (0.9 meter by 0.9 meter) square having a checkered pattern of international orange and white squares at least 1 foot (300 mm) on each side (see Appendix A for the fabric color specification).

5. VEHICLE LIGHTING.

a. Airfield Service, Aircraft Support, and Airport Operations Vehicles.

(1) The standard for identification lighting is a yellow flashing light that is mounted on the uppermost part of the vehicle structure. A steady yellow light designates vehicles limited to non-movement areas.

(2) The light must be visible from any direction, day and night, including from the air.

(3) Color specifications for vehicle identification lights are per Appendix B.

(4) TLTVs. An LED light bar placed above the operator's cab may be used in place of the rotating yellow flashing light. In addition, a yellow flashing light (of any type) must be installed on the upper left-rear and right-rear corners of the TLTV, and must be activated when an aircraft is in tow. The size of the rear flashing lights must be large enough to meet the requirements of Section 5.c, but not so large as to interfere with the normal or towing operations of the TLTV.

b. Airport Emergency, Security, and Other Vehicles, which are not escorted by a properly lighted vehicle, must be identified during periods of low visibility by a light.

c. Characteristics of Flashing Lights:

(1) Ambulance lights must meet the specifications in the most current version of Federal Specification KKK-A-1822, and ARFF vehicles must meet NFPA, state, and local requirements.

(2) Lights must have peak intensity within the range of 40 to 400 candelas (effective) from 0^{o} (horizontal) up to 10^{o} above the horizontal and for 360^{o} horizontally. The upper limit of 400 candelas (effective) is necessary to avoid damage to night vision.

(3) From 10^{o} to 15^{o} above the horizontal plane, the light output must be $1/10^{th}$ of peak intensity or between 4 and 40 candelas (effective).

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(4) Lights must flash at 75 ± 15 flashes per minute.

NOTES:

1. The effective intensity of a flashing light is equal to the intensity of a steady-burning (fixed) light of the same color that produces the same visual range under identical conditions of observation.

2. If xenon flashtubes are used, refer to AC 150/5345-43, Specification for Obstruction Lighting Equipment, for guidance concerning methods of calculating effective intensity.

d. Light Colors.

(1) Airport Emergency Vehicles.

(a) **Ambulances.** Per the most current version of Federal Specification KKK-A-1822.

(b) **ARFF Vehicles.** Red or a combination of red-and-white flashing lights per the chromaticity requirements in Appendix B.

(2) Airport Security Vehicles. Signal blue or a combination of red and signal blue flashing light per the chromaticity requirements in Appendix B.

(3) Airfield Service, Aircraft Support, Airport Operations, and Other Vehicles. Yellow flashing light per the chromaticity requirements in Appendix B.

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APPENDIX A. COLOR SPECIFICATIONS

A-1. SPECIFICATIONS. Colors specified in Table A-1 are per the Commission Internationale de l'Eclairage (CIE) L*a*b* system of color specification. For a description of this system, refer to American Society for Testing & Materials (ASTM) D 2244, *Standard Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates.*

Table A-1. Specification for vehicle and flag colors

Standard Illuminant D65 Usage	Chrome Yellow			Yellowish-Green			International Orange		
	Vehicle Paint			Vehicle Paint			Vehicle Paint / Flag Fabric		
CIELAB DATA	**L***	**a***	**b***	**L***	**a***	**b***	**L***	**a***	**b***
Centroid Color	72.8	24.4	77.6	78.3	-10.2	80.4	45.0	53.5	52.0
Point 1	72.8	31.8	82.9	78.3	-9.0	92.0	45.0	61.4	47.8
Point 2	72.8	25.5	66.7	78.3	-7.6	73.2	45.0	53.9	41.4
Point 3	72.8	18.0	69.3	78.3	-11.0	69.3	45.0	53.5	53.4
Point 4	72.8	22.4	86.0	78.3	-13.4	86.2	45.0	49.7	60.4
Light Limit	77.8			83.3			49.9		
Dark Limit	67.8			73.3			41.6		
Max ΔE	11.1			11.7			10.7		

A-2. COLOR TESTS. Acceptable colors are those that meet the gloss rating test and either a visual or an instrumental color test as follows:

NOTE: *Flag fabric colors must meet either the instrumental tests in Table A-1 or the visual method described in paragraph A-2b(1).*

a. Gloss Rating Test. This test is performed per ASTM D 523, *Standard Test Method for Specular Gloss,* on a paint sample of the color to be applied on the vehicle. An acceptable color sample is high gloss with a minimum gloss rating of 70 units, for 60° geometry.

b. Color Test Methods:

(1) Visual. Prepare a master specimen of the color (per Table A-1) and gloss (per paragraph A-2a). This specimen will be the master color and be used as the basis of comparison per ASTM D 5531-05, *Standard Guide for the Preparation, Maintenance, and Distribution of Physical Product Standards for Color and Geometric Appearance of Coatings.* To verify the paint color of a vehicle visually, vehicle paint samples must be

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prepared and viewed per ASTM D 1729-96 (Reapproved 2009), *Standard Practice for Visual Appraisal of Colors and Color Differences of Diffusely-Illuminated Opaque Materials.*

(2) Instrumental. This test requires a test specimen sample and reference to Table A-1. All test specimen measurements should be conducted per ASTM E 1164-09a *Standard Practice for Obtaining Spectrometric Data for Object-Color Evaluation.* Test specimen tolerances must be per Table A-1 per the following:

(a) Plot the centroid color using the a* and b* CIELAB coordinate data from Table A-1 on graph paper or by entry of the coordinate data into a computer program. Plot and connect points 1 through 4 from the same table to form a quadrilateral; noting that the centroid color is within this figure. See Figure A-1 for plots of all three color specifications in Table A-1.

(b) Perform color sample measurements per ASTM E 1164-09a. If necessary, convert measurements to CIELAB L*, a*, and b* color space. See ASTM E 308-08, *Standard Practice for Computing the Colors of Objects by Using the CIE System,* for color space conversion formulae.

(c) An acceptable color is one that meets:

(i) the chromaticity requirements of the color samples a* and b* CIELAB coordinate data by falling within the quadrilateral;

(ii) the L* data lightness requirement by falling within the range defined by the light and dark data of Table A-1;

(iii) the total color difference (ΔE) by not exceeding the limits in Table A-1 when the CIELAB data are computed in the following formula:

$$\Delta E = (\Delta L^{*2} + \Delta a^{*2} + \Delta b^{*2})^{\frac{1}{2}}$$

where ΔL*, Δa*, and Δb* values are the differences between those values for the centroid color in Table A-1 and those of the color sample measurements.

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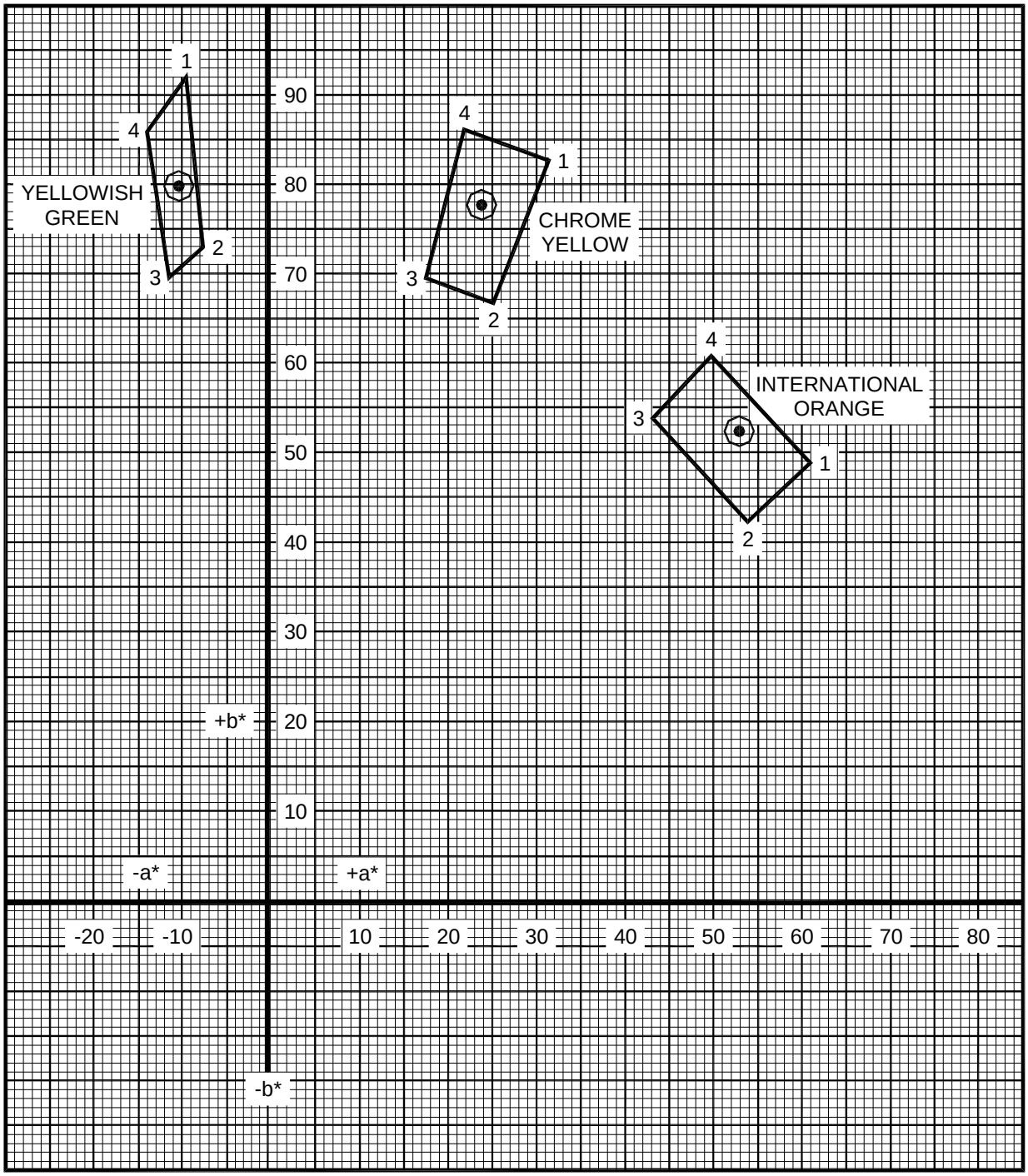

Figure A-1. Plot of selected color paint specifications

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APPENDIX B. COLOR SPECIFICATIONS FOR VEHICLE IDENTIFICATION LIGHTS

B-1. SPECIFICATIONS. The Society of Automotive Engineers (SAE) Standard J578 Revised December 2006, *Color Specification*, defines the acceptable color boundary limits and measurement of emitted red, white, signal blue, and yellow light for vehicle lights. This standard applies to the overall emitted color of light from the device in lieu of emitted light from any small area of the lens. The color of emitted light must fall within the color boundaries per SAE J578 Revised December 2006 (color boundary equations are in the standard) using color measurement methods detailed in the standard. See FAA Engineering Brief #67, Light Sources Other Than Incandescent and Xenon for Airport and Obstruction Lighting Fixtures, for additional information and Alternative Lighting Devices.

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EXHIBIT F

EXHIBITS (DRAWINGS)

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100% CONSTRUCTION PLANS

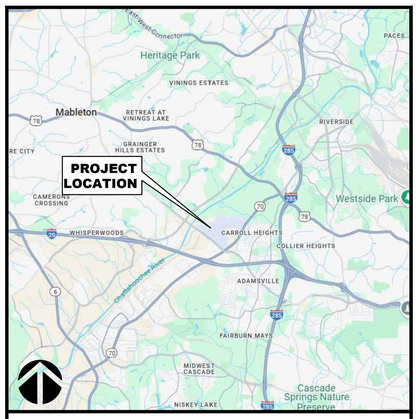
FOR

RUNWAY 8-26 PAVEMENT REHABILITATION

GDOT PROJECT NO. T008996, FULTON

AT

FULTON COUNTY EXECUTIVE AIRPORT - BROWN FIELD



Vicinity Map **N.T.S.**

3952 AVIATION CIRCLE NW
ATLANTA, GA 30336
(404) 699-4200

FULTON COUNTY

SHEET TITLE	DWG. No.
COVER SHEET	C-1
GENERAL NOTES	GN-1
SUMMARY OF QUANTITIES	SQ-1
PROJECT SAFETY AND PHASING PLAN NOTES	PSPN-1
PROJECT SAFETY AND PHASING PLAN LAYOUT	PSPL-1
PROJECT SAFETY AND PHASING PLAN	PSPP-1
PROJECT SAFETY AND PHASING PLAN DETAILS	PSPD-1
SITE BENCHMARK DATA	BM-1
EXISTING CONDITIONS NO. 1-5	EXC-1 TO EXC-5
STAKING AND DEMOLITION PLAN NO. 1-5	ST-1 TO ST-5
TYPICAL SECTIONS NO. 1	TS-1
GRADING PLAN NO. 1-5	GP-1
MILLING DEPTH SPOT ELEVATION PLAN NO. 1-5	ME-1
CRACK SEAL DETAIL	CS-1
GROOVING PLAN	GV-1
MARKING PLAN NO. 1-5	MP-1 TO MP-5
MARKING DETAILS NO. 1-2	MD-1 TO MD-2

PREPARED FOR

FULTON COUNTY BOARD OF COMMISSIONERS

FEBRUARY 4, 2025

Michael Baker
INTERNATIONAL

ALL MATERIALS USED SHALL BE IN ACCORDANCE WITH FAA AND GEORGIA DEPARTMENT OF TRANSPORTATION, STATE OF GEORGIA, STANDARD SPECIFICATIONS CONSTRUCTION OF TRANSPORTATION SYSTEMS, CURRENT EDITIONS UNLESS MODIFIED BY SPECIAL PROVISION.

SET NO. _____

Y:\Airports\FTY_Fulton County\204307 - TO 24-06_RW 8-26 Pavement Rehab (Design)\CADD-dwg\01_COVER.dwg Plotted on: Feb 04, 2025 - 10:59am by Christopher.Bachmann

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GENERAL NOTES

SAFETY AND SECURITY

S-1 THE CONTRACTOR WILL OBTAIN, HAVE KNOWLEDGE OF, AND INCORPORATE THE FOLLOWING SAFETY PROVISIONS INTO THE CONSTRUCTION REPORT.

* OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION– AC150/5370-2F
* AIRPORT SAFETY SELF-INSPECTION – AC 150/5200-18C.
* PAINTING, MARKING AND LIGHTING OF VEHICLES USED ON AIRPORT – AC150/5210-5D.

S-2 CONTRACTORS SHALL MAINTAIN RADIO COMMUNICATION WITH AIRPORT GROUND CONTROL AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL HAVE WORKING RADIO(S) ON-SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL ASSIGN RESPONSIBLE PERSONNEL TO CONTINUOUSLY MONITOR THE GROUND CONTROL FREQUENCY (121.7 MHz). PROVIDE A RADIO AT EACH SEPARATE WORK LOCATION.

S-3 NOTICE TO AIR MISSIONS (NOTAMS) – THE CONTRACTOR SHALL SCHEDULE AND PROVIDE THE NECESSARY INFORMATION ON CONSTRUCTION CONDITIONS SO THAT THE OWNER CAN ADVISE THE FLIGHT SERVICE STATION AND ISSUE NOTAM(S) IN ACCORDANCE WITH ESTABLISHED CRITERIA NO LESS THAN 72 HOURS PRIOR TO OPERATION BEGINNING.

S-4 ALL CONSTRUCTION TRAFFIC SHALL ENTER AND EXIT THE PROJECT AREA THROUGH THE PROJECT ACCESS GATES. CONTRACTOR WILL BE RESPONSIBLE FOR SECURITY OF ALL GATES IN ACCORDANCE WITH THE AIRPORT'S APPROVED SECURITY PROGRAM.

S-5 CONTRACTOR SHALL UTILIZE EXISTING GATES AS TEMPORARY ACCESS FOR THE CONSTRUCTION ENTRANCE. THE CONTRACTOR HALL MAN THESE GATES WITH PERSONNEL OR LOCK GATES AT ALL TIMES DURING CONSTRUCTION NON-CONSTRUCTION HOURS. THE SECURITY GUARD SHALL HAVE A CELL PHONE AND OPERATIONAL RADIO, THE GUARD'S DUTIES SHALL INCLUDE MONITORING TRAFFIC IN AND OUT OF THE GATE AND PREVENTING UNAUTHORIZED PERSONNEL FROM ENTERING THE SECURITY AREA.

S-6 AREAS OUTSIDE THE PROJECT LIMITS ARE DESIGNATED AS RESTRICTED AREAS. THE CONTRACTOR'S FORCES ARE PROHIBITED FROM ENTERING RESTRICTED AREAS AT ANY TIME, UNLESS SPECIFICALLY AUTHORIZED BY THE ENGINEER OR AIRPORT OWNER. NO CONSTRUCTION MAY OCCUR WITHIN A SAFETY AREA WHILE THE ASSOCIATED RUNWAY OR TAXIWAY IS OPEN FOR AIRCRAFT OPERATIONS.

S-7 ALL VEHICLES USED ON THE AIRFIELD SHALL MEET AIRPORT REQUIREMENTS FOR MARKING AND LIGHTING.

S-8 FOR ADDITIONAL SAFETY AND SECURITY REQUIREMENTS , SEE SPECIFICATIONS. (SECTION 01030).

S-9. OPEN TRENCHES OR EXCAVATIONS ARE NOT PERMITTED WITHIN THE RSA OR TSA WHILE THE RUNWAY OR TAXIWAY IS OPEN. IF POSSIBLE, BACKFILL TRENCHES BEFORE THE RUNWAY OR TAXIWAY IS OPENED. IF THE RUNWAY OR 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 RUNWAY OR TAXIWAY ACROSS THE TRENCH WITHOUT DAMAGE TO THE AIRCRAFT.

S-10. THE CONTRACTOR SHALL PROMINENTLY MARK OPEN TRENCHES AND EXCAVATIONS AT THE CONSTRUCTION SITE WITH RED OR ORANGE FLAGS, AS APPROVED BY THE ENGINEER, AND LIGHT THEM WITH RED LIGHTS DURING HOURS OF RESTRICTED VISIBILITY OR DARKNESS.

S-11. SOIL EROSION MUST BE CONTROLLED TO MAINTAIN SAFETY AREA STANDARDS. THE SAFETY AREAS 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 FIRE FIGHTING EQUIPMENT, AND THE OCCASIONAL PASSAGE OF AIRCRAFT WITHOUT CAUSING STRUCTURAL DAMAGE TO THE AIRCRAFT.

HAUL ROUTES, STAGING AREAS AND CONSTRUCTION ACTIVITIES

C-1 THE CONTRACTOR SHALL CONDUCT HIS CONSTRUCTION OPERATIONS AS SHOWN ON THE PROJECT LAYOUT AND SAFETY PLAN AND HIS APPROVED PHASING PLAN. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE ENGINEER TO MINIMIZE DISRUPTION TO AIRPORT OPERATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSURE COMPLIANCE WITH SAFETY REQUIREMENTS AND TO MINIMIZE INTERFERENCE TO AIRCRAFT OPERATIONS DURING CONSTRUCTION.

C-2 ALL EXISTING GRASSED AREAS WHICH ARE DISTURBED AS PART OF THE CONTRACTOR'S ACCESS ROAD, CONTRACTORS STAGING AREA, AND HAUL ROUTES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AFTER COMPLETION OF THE PROJECT. IN ADDITION, ALL EXISTING ROADS, APRONS AND TAXIWAYS THAT WILL BE USED AS THE CONTRACTOR'S HAUL ROUTE SHALL BE MAINTAINED DURING CONSTRUCTION AND RESTORED TO THEIR PRE-CONSTRUCTION CONDITION. NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE FOR THIS ITEM.

C-3 EXCEPT WHERE DESIGNATED ON PLANS OR AS AUTHORIZED BY ENGINEER, CONTRACTOR WILL NOT BE ALLOWED TO USED ANY OF THE EXISTING RUNWAYS, TAXIWAYS, OR RAMPS AS PART OF THEIR HAUL ROAD.

C-4 ACTIVE TAXIWAYS, RUNWAYS, AND RAMPS SHALL BE KEPT FREE OF ALL DEBRIS, DIRT, ETC., AT ALL TIMES. ANY SPILLAGE OR SOIL, DEBRIS, OR OTHER MATERIALS SHALL BE CLEANED UP IMMEDIATELY USING APPROPRIATE POWER SWEEPERS, BLOWERS, OR OTHER APPROVED EQUIPMENT, BY THE CONTRACTOR AFTER PROMPT NOTIFICATION BY THE ENGINEER OR AIRPORT OWNER. DUST GENERATED DUE TO CONSTRUCTION ACTIVITIES SHALL BE ADEQUATELY CONTROLLED AT ALL TIMES. A PROGRAM OF REGULAR RUNWAY AND TAXIWAY INSPECTION SHALL BE IMPLEMENTED BY THE CONTRACTOR, AND CONTINUED WITH THE AIRPORT OWNER, AND THE ENGINEER.

C-5 ALL EQUIPMENT MUST BE RETURNED TO THE STAGING AREA AT THE END OF EACH WORK DAY AND WHEN NOT ENGAGED IN CONSTRUCTION DURING NON-WORKING DAYS AND NIGHTS. OWNER WILL DESIGNATE AREAS FOR CONTRACTOR'S EMPLOYEES AUTO PARKING.

C-6 THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND PROVIDING ALL PERMANENT AND TEMPORARY UTILITY CONNECTIONS TO THE STAGING AREA.

C-7 CONTRACTOR SHALL MAINTAIN ALL AIRFIELD SAFETY DEVICES SUCH AS STAKED LIMIT LINES, FOR THE DURATION OF THE PROJECT AS REQUIRED. DAMAGED STAKES OR FLAGGING SHALL BE REPLACED IMMEDIATELY. CONTRACTOR TO SUBMIT PLAN SHOWING LOCATION OF LIMIT LINES FOR EACH PHASE AND FOR PROJECT DURATION TO THE ENGINEER FOR APPROVAL.

C-8 BURNING OF DEBRIS WILL NOT BE TOLERATED ON AIRPORT PROPERTY.

C-9 CONTRACTOR SHALL CONTROL DUST TO AN ACCEPTABLE LEVEL. THE CONTRACTOR SHALL BE REQUIRED TO KEEP A WATER TRUCK AT THE PROJECT SITE DURING HAULING OPERATIONS. IF ONE WATER TRUCK IS INADEQUATE TO CONTROL DUST PROPERLY, THE CONTRACTOR SHALL FURNISH THE PROPER NUMBER OF TRUCKS OR OTHER SUITABLE MEANS TO ACCOMPLISH THIS ITEM.

C-10 CONTRACTOR SHALL BE REQUIRED TO MOVE MEN AND EQUIPMENT OUTSIDE THE TAXIWAY AND RUNWAY SAFETY AREAS AS REQUIRED FOR AIRCRAFT OPERATIONS.

C-11 CONTRACTOR MUST COORDINATE WITH OWNER AND OTHERS INVOLVED WITH ALL CONSTRUCTION PROJECT AT THE AIRPORT.

C-12. CONTRACTOR IS SOLELY RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR THE PROJECT PRIOR TO ANY CONSTRUCTION ACTIVITIES.

EXISTING CONDITIONS/UNDERGROUND AND CONCEALED FACILITIES

E-1. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION AND REPORT TO ENGINEER ANY VARIATIONS FROM THE INFORMATION SHOWN ON CONSTRUCTION PLANS.

E-2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND IDENTIFICATION OF ALL EXISTING UTILITIES AND PIPELINES IN THE CONSTRUCTION AREA. ANY EXISTING UTILITIES OR PIPELINES (ON OR OFF AIRPORT PROPERTY) DAMAGED BY CONTRACTOR SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL REPAIR ALL UTILITIES/PIPELINES DAMAGED BY CONTRACTOR AT NO ADDITIONAL COST TO OWNER. CONTRACTOR SHALL BE ASSESSED A CABLE CUT PENALTY OF $1,000 PER OCCURRENCE.

E-3. FAA CABLES WILL BE LOCATED AND MARKED BY FAA PRIOR TO CONSTRUCTION. CONTRACTOR IS TO NOTIFY FAA 30 DAYS IN ADVANCE SO THAT FAA CAN SCHEDULE THE REQUIRED MARKING TO PROTECT CABLES DURING CONSTRUCTION. ANY CABLES DAMAGED DURING CONSTRUCTION WILL BE REPLACED BY CONTRACTOR. CONTRACTOR SHALL PAY ALL COSTS ASSOCIATED WITH THE REPAIR OF DAMAGED CABLES AT NO COST TO OWNER.

E-4. CONTRACTOR SHALL PROTECT ALL EXISTING LIGHTING SYSTEMS THAT ARE TO REMAIN, OR IF TO BE REMOVED, UNTIL THEY ARE DESIGNATED FOR REMOVAL.

E-5. ANY UNPLANNED, UNAPPROVED OR ACCIDENTAL SHUTDOWN OR INTERRUPTION OF SERVICE TO ANY LIGHTING CIRCUIT OR NAVIGATIONAL AID REQUIRES IMMEDIATE NOTIFICATION OF THE AIRPORT MANAGER AND ENGINEER BY THE CONTRACTOR. ALL NECESSARY REPAIRS WILL BE MADE IMMEDIATELY AND AT CONTRACTORS EXPENSE.

E-6. THE CONTRACTOR WILL BE RESPONSIBLE FOR STAKING AND GRADE CONTROL OF ALL ELEMENTS OF THE CONSTRUCTION.

TEMPORARY MARKINGS, BARRICADES, TRAFFIC CONTROL

T-1. SEE SPECIFICATION SECTION 01030 AND 01530.

SPILL PREVENTION

ANY LEAKS OR SPILLS OF PETROLEUM PRODUCTS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTAIN, CONTROL, AND REMEDIATE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL GUIDELINES, ORDINANCES, AND LAWS.

CONTROL OF POLLUTANTS: POLLUTANTS OF POTENTIALLY HAZARDOUS MATERIALS, SUCH AS FUELS, LUBRICANTS, LEAD PAINT, CHEMICALS OR BATTERIES, SHALL BE TRANSPORTED, STORED AND UTILIZED IN A MANNER TO PREVENT LEAKAGE OR SPILLAGE INTO THE ENVIRONMENT. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PROPER AND LEGAL DISPOSAL OF ALL SUCH MATERIALS. EQUIPMENT, ESPECIALLY CONCRETE OR ASPHALT TRUCKS, SHALL NOT BE WASHED OR CLEANED OUT ON THE PROJECT EXCEPT IN AREAS WHERE UNUSED PRODUCT CONTAMINANTS CAN BE PREVENTED FROM ENTERING WATERWAYS.

AN SPCC PLAN WILL BE DEVELOPED BY THE CONTRACTOR AND APPROVED PRIOR TO INSTALLATION OF FUEL TANKS. THIS PLAN WILL REQUIRE THE FOLLOWING:

1. ALL BARE SOIL AROUND FUELING AREA LINED TO PREVENT SEEPAGE INTO SOIL. IN ADDITION, A SPILL KIT WILL BE KEPT ON SITE IN CASE OF LEAKS.
2. TERTIARY CONTAINMENT WILL BE PROVIDED IN THE MOBILE TRUCK AREA.
3. SECONDARY CONTAINMENT WILL BE PROVIDED IN THE FORM OF A CONTAINMENT PAD WITH A VALVE SIZED (OR APPROVED EQUAL) FOR THE APPROPRIATE REFUELING TRUCK.

FULTON COUNTY EXECUTIVE AIRPORT

FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer: **EP/CG**	
Technician: **EP/CG**	
Checked by: **CA**	
Project Number: **204307**	

Notes:

REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

GENERAL NOTES

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date:	Sheet Number:
02/04/2025	**02** of **38**
Scale: **N.T.S.**	Drawing Number: **GN-1**

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SUMMARY OF QUANTITIES

BASE BID

ITEM NO	SPEC NO.	ITEM DESCRIPTION	UNIT	PLAN	FINAL
1	C-105	MOBILIZATION	L.SUM	1	
2	C-100	CONTRACTOR QUALITY CONTROL PROGRAM (CQCP)	L.SUM	1	
3	P-101-A	COLD MILLING - (VARIABLE: 1/2" - 2")	SQ.YD.	65,000	
4	P-101-B	JOINT AND CRACK REPAIR, SMALL (1/8" - 1" WIDTH)	LIN.FT.	45,000	
5	P-101-C	JOINT AND CRACK REPAIR, LARGE (>1" WIDTH)	LIN.FT.	30,000	
6	P-401	ASPHALT SURFACE COURSE	TON	8,000	
7	P-603	ASPHALT TACK COAT	GAL.	12,000	
8	P-620-A	PAVEMENT MARKING, YELLOW (TYPE II), WITH REFLECTIVE MEDIA(TYPE III BEADS), INCLUDES MICROBICIDE	SQ.FT.	9,100	
9	P-620-B	PAVEMENT MARKING, WHITE (TYPE II), WITH REFLECTIVE MEDIA(TYPE III BEADS), INCLUDES MICROBICIDE	SQ.FT.	80,300	
10	P-620-C	PAVEMENT MARKING, RED (TYPE II), WITH REFLECTIVE MEDIA (TYPE 1, GRADATION A BEADS), INCLUDES MICROBICIDE	SQ.FT.	30	
11	P-620-D	PAVEMENT MARKING, BLACK(TYPE II), INCLUDES MICROBICIDE	SQ.FT.	26,500	
12	P-620-E	TEMPORARY MARKING, YELLOW(TYPE II), INCLUDES MICROBICIDE	SQ.FT.	9,100	
13	P-620-F	TEMPORARY MARKING, WHITE(TYPE II), INCLUDES MICROBICIDE	SQ.FT.	160,600	
14	P-620-G	TEMPORARY MARKING, RED (TYPE II), INCLUDES MICROBICIDE	SQ.FT.	30	
15	P-620-H	TEMPORARY MARKING, BLACK (TYPE II), INCLUDES MICROBICIDE	SQ.FT.	26,500	
16	P-620-I	PAVEMENT MARKING REMOVAL	SQ.FT.	800	
17	P-621	GROOVING	SQ.YD.	58,500	
18	GDOT 163	CONSTRUCT AND REMOVE CONSTRUCTION EXIT	EACH	1	

SUMMARY OF QUANTITIES

ALTERNATE BID (24/7)

ITEM NO	SPEC NO.	ITEM DESCRIPTION	UNIT	PLAN	FINAL
1	C-105	MOBILIZATION	L.SUM	1	
2	C-100	CONTRACTOR QUALITY CONTROL PROGRAM (CQCP)	L.SUM	1	
3	P-101-A	COLD MILLING - (VARIABLE: 1/2" - 2")	SQ.YD.	65,000	
4	P-101-B	JOINT AND CRACK REPAIR, SMALL (1/8" - 1" WIDTH)	LIN.FT.	45,000	
5	P-101-C	JOINT AND CRACK REPAIR, LARGE (>1" WIDTH)	LIN.FT.	30,000	
6	P-401	ASPHALT SURFACE COURSE	TON	8,000	
7	P-603	ASPHALT TACK COAT	GAL.	12,000	
8	P-620-A	PAVEMENT MARKING, YELLOW (TYPE II), WITH REFLECTIVE MEDIA(TYPE III BEADS), INCLUDES MICROBICIDE	SQ.FT.	9,100	
9	P-620-B	PAVEMENT MARKING, WHITE (TYPE II), WITH REFLECTIVE MEDIA(TYPE III BEADS), INCLUDES MICROBICIDE	SQ.FT.	80,300	
10	P-620-C	PAVEMENT MARKING, RED (TYPE II), WITH REFLECTIVE MEDIA (TYPE 1, GRADATION A BEADS), INCLUDES MICROBICIDE	SQ.FT.	30	
11	P-620-D	PAVEMENT MARKING, BLACK(TYPE II), INCLUDES MICROBICIDE	SQ.FT.	26,500	
12	P-620-E	TEMPORARY MARKING, YELLOW(TYPE II), INCLUDES MICROBICIDE	SQ.FT.	9,100	
13	P-620-F	TEMPORARY MARKING, WHITE(TYPE II), INCLUDES MICROBICIDE	SQ.FT.	160,600	
14	P-620-G	TEMPORARY MARKING, RED (TYPE II), INCLUDES MICROBICIDE	SQ.FT.	30	
15	P-620-H	TEMPORARY MARKING, BLACK (TYPE II), INCLUDES MICROBICIDE	SQ.FT.	26,500	
16	P-620-I	PAVEMENT MARKING REMOVAL	SQ.FT.	800	
17	P-621	GROOVING	SQ.YD.	58,500	
18	GDOT 163	CONSTRUCT AND REMOVE CONSTRUCTION EXIT	EACH	1	

FULTON COUNTY EXECUTIVE AIRPORT

FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer: **EP/CG**
Technician: **EP/CG**
Checked by: **CA**
Project Number: **204307**
Notes:

REVISIONS

No.	Description	Date	By

Project Name:
RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:
SUMMARY OF QUANTITIES

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date: **02/04/2025**
Sheet Number: **03** of **38**
Scale: **N.T.S.**
Drawing Number: **SQ-1**

Y:\Airports\FTY_Fulton County\204307 - TO 24-06_RW 8-26 Pavement Rehab (Design)\CADD-dwg\03_SQ.dwg Plotted on: Feb 04, 2025 - 10:59am by Christopher.Bachmann

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

CONSTRUCTION SAFETY AND PHASING PLAN (CSPP)

GENERAL:

1. THIS CSPP HAS BEEN DEVELOPED IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF FAA ADVISORY CIRCULAR 150/5370-2G AND IS CONSIDERED AN INTEGRAL PART TO THE CONTRACTOR'S WORK. THE FOLLOWING DRAWINGS ARE CONSIDERED PART OF THE CSPP:
2.
   - GN-1 GENERAL NOTES
   - PSPN-1 PROJECT SAFETY & PHASING PLAN NOTES
   - PSPL-1 PROJECT SAFETY & PHASING PLAN LAYOUT
   - PSPP-1 PROJECT SAFETY & PHASING PLAN
   - PSPD-1 PROJECT SAFETY & PHASING PLAN DETAILS
2. THE CSPP FOR THIS PROJECT WAS SUBMITTED TO THE FAA ON JANUARY 22, 2025 AND APPROVED BY THE FAA ON _____.
3. THE CONTRACTOR SHALL PREPARE AND SUBMIT FAA FORM 7460-1 DETAILING CONSTRUCTION EQUIPMENT AND PROPOSED PARKING AREAS FOR THIS EQUIPMENT (SUCH AS CRANES AND GRADING MACHINES). THE CONTRACTOR SHOULD SUBMIT THIS FORM AT THE TIME OF THE PRE-CONSTRUCTION CONFERENCE OR SUFFICIENTLY IN ADVANCE OF THE WORK TO ALLOW FOR FAA REVIEW AND APPROVAL.
4. THE CONTRACTOR SHALL SUBMIT A SAFETY PLAN COMPLIANCE DOCUMENT (SPCD) FOR REVIEW AND APPROVAL PRIOR TO NOTICE-TO-PROCEED. FOR INFORMATION PERTAINING TO THE REQUIREMENTS OF THIS DOCUMENT, REFER TO THE SECTION "CONTRACTOR RESPONSIBILITIES".
5. CONTACT INFORMATION:
   - AIRPORT OWNER: DENVER GARRETT
ASSISTANT AIRPORT MANAGER
404-613-4203
   - ENGINEER: MICHAEL BAKER INTERNATIONAL
CHARLES ADEOGUN, PE PROJECT MANAGER
770-263-9118
   - CONTRACTOR: TBD

AIRPORT OPERATOR'S RESPONSIBILITIES:

THE AIRPORT OPERATOR WILL:

1. DEVELOP A CSPP THAT COMPLIES WITH THE SAFETY GUIDELINES OF FAA ADVISORY CIRCULAR 150/5370-2G.
2. REQUIRE THE REVIEW AND APPROVAL OF THE SPCD PROVIDED BY THE CONTRACTOR. THIS SPCD SHALL INDICATE HOW THE CONTRACTOR WILL COMPLY WITH THE CSPP AND PROVIDE DETAILS THAT CANNOT BE DETERMINED BEFORE CONTRACT AWARD.
3. CONVENE A PRECONSTRUCTION MEETING WITH THE CONSTRUCTION CONTRACTOR, ENGINEER, ATC PERSONNEL AIRPORT EMPLOYEES AND TENANT REPRESENTATIVES (IF APPROPRIATE) TO REVIEW AND DISCUSS PROJECT SAFETY BEFORE BEGINNING CONSTRUCTION ACTIVITY. THE FAA WILL BE INVITED TO ATTEND THIS MEETING.
4. ENSURE CONTACT INFORMATION IS ACCURATE FOR EACH REPRESENTATIVE/POINT OF CONTACT IDENTIFIED IN THE CSPP.
5. HOLD WEEKLY OR, IF NECESSARY, DAILY SAFETY MEETINGS WITH ALL AFFECTED PARTIES TO COORDINATE ACTIVITIES.
6. NOTIFY USERS, ARFF PERSONNEL, AND FAA ATO PERSONNEL OF CONSTRUCTION AND CONDITIONS THAT MAY ADVERSELY AFFECT THE OPERATIONAL SAFETY OF THE AIRPORT VIA NOTICES TO AIR MISSIONS (NOTAM) AND OTHER METHODS, AS APPROPRIATE. CONVENE A MEETING FOR REVIEW AND DISCUSSION IF NECESSARY.
7. ENSURE CONSTRUCTION PERSONNEL KNOW OF ANY APPLICABLE AIRPORT PROCEDURES AND OF CHANGES TO THOSE PROCEDURES THAT MAY AFFECT THEIR WORK.
8. ENSURE CONSTRUCTION CONTRACTORS AND SUBCONTRACTORS UNDERGO TRAINING REQUIRED BY THE CSPP AND SPCD.
9. ENSURE VEHICLE AND PEDESTRIAN OPERATIONS ADDRESSED IN THE CSPP AND SPCD ARE COORDINATED WITH AIRPORT TENANTS, AIRPORT OPERATIONS, AND CONSTRUCTION CONTRACTORS.
10. AT CERTIFICATED AIRPORTS, ENSURE EACH CSPP AND SPCD IS CONSISTENT WITH PART 139.
11. CONDUCT INSPECTIONS SUFFICIENTLY FREQUENTLY TO ENSURE CONSTRUCTION CONTRACTORS AND TENANTS COMPLY WITH THE CSPP AND SPCD AND THAT THERE ARE NO ALTERED CONSTRUCTION ACTIVITIES THAT COULD CREATE POTENTIAL SAFETY HAZARDS.
12. RESOLVE SAFETY DEFICIENCIES IMMEDIATELY. AT AIRPORTS SUBJECT TO 49 CFR PART 1542, AIRPORT SECURITY, ENSURE CONSTRUCTION ACCESS COMPLIES WITH THE SECURITY REQUIREMENTS OF THAT REGULATION.
13. NOTIFY APPROPRIATE PARTIES WHEN CONDITIONS EXIST THAT INVOKE PROVISIONS OF THE CSPP AND SPCD (FOR EXAMPLE, IMPLEMENTATION OF LOW-VISIBILITY OPERATIONS).
14. ENSURE PROMPT SUBMITTAL OF A NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION (FORM 7460-1) FOR CONDUCTING AN AERONAUTICAL STUDY OF POTENTIAL OBSTRUCTIONS SUCH AS TALL EQUIPMENT (CRANES, CONCRETE PUMPS, ETC.), STOCK PILES, AND HAUL ROUTES. A SEPARATE FORM MAY BE FILED FOR EACH POTENTIAL OBSTRUCTION, OR ONE FORM MAY BE FILED DESCRIBING THE ENTIRE CONSTRUCTION AREA AND MAXIMUM EQUIPMENT HEIGHT. IN THE LATTER CASE, A SEPARATE 7460 FORM MUST BE FILED TO THE FAA FOR ANY OBJECT BEYOND OR HIGHER THAN THE ORIGINALLY EVALUATED AREA/HEIGHT. NOTIFY GDOT SO THAT THE DEPARTMENT IS AWARE OF THE SUBMITTALS TO EXPEDITE CIRCULATION
15. PROMPTLY NOTIFY THE ENGINEER OF ANY PROPOSED CHANGES TO THE CSPP PRIOR TO IMPLEMENTATION OF THE CHANGE. CHANGES TO THE CSPP REQUIRE REVIEW AND APPROVAL BY THE ENGINEER.

CONTRACTOR RESPONSIBILITIES:

THE CONTRACTOR SHALL:

1. SUBMIT A SAFETY PLAN COMPLIANCE DOCUMENT (SPCD) TO THE AIRPORT OPERATOR DESCRIBING HOW IT WILL COMPLY WITH THE REQUIREMENTS OF THE CSPP AND SUPPLYING ANY DETAILS THAT COULD NOT BE DETERMINED BEFORE CONTRACT AWARD. THE SPCD MUST INCLUDE A CERTIFICATION STATEMENT BY THE CONTRACTOR THAT INDICATES IT UNDERSTANDS THE OPERATIONAL SAFETY REQUIREMENTS OF THE CSPP AND IT ASSERTS IT WILL NOT DEVIATE FROM THE APPROVED CSPP AND SPCD UNLESS WRITTEN APPROVAL IS GRANTED BY THE AIRPORT OPERATOR. ANY CONSTRUCTION PRACTICE PROPOSED BY THE CONTRACTOR THAT DOES NOT CONFORM TO THE CSPP AND SPCD MAY IMPACT THE AIRPORT'S OPERATIONAL SAFETY AND WILL REQUIRE A REVISION TO THE CSPP AND SPCD AND RE-COORDINATION WITH THE AIRPORT OPERATOR AND THE FAA IN ADVANCE.
2. HAVE AVAILABLE AT ALL TIMES COPIES OF THE CSPP AND SPCD FOR REFERENCE BY THE AIRPORT OPERATOR AND ITS REPRESENTATIVES, AND BY SUBCONTRACTORS AND CONTRACTOR EMPLOYEES.
3. ENSURE THAT CONSTRUCTION PERSONNEL ARE FAMILIAR WITH SAFETY PROCEDURES AND REGULATIONS ON THE AIRPORT. PROVIDE A POINT OF CONTACT WHO WILL COORDINATE AN IMMEDIATE RESPONSE TO CORRECT ANY CONSTRUCTION-RELATED ACTIVITY THAT MAY ADVERSELY AFFECT THE OPERATIONAL SAFETY OF THE AIRPORT. MANY PROJECTS WILL REQUIRE 24-HOUR COVERAGE.
4. IDENTIFY IN THE SPCD THE CONTRACTOR'S ON-SITE EMPLOYEES RESPONSIBLE FOR MONITORING COMPLIANCE WITH THE CSPP AND SPCD DURING CONSTRUCTION. AT LEAST ONE OF THESE EMPLOYEES MUST BE ON-SITE WHENEVER ACTIVE CONSTRUCTION IS TAKING PLACE.
5. CONDUCT INSPECTIONS SUFFICIENTLY FREQUENTLY TO ENSURE CONSTRUCTION PERSONNEL COMPLY WITH THE CSPP AND SPCD AND THAT THERE ARE NO ALTERED CONSTRUCTION ACTIVITIES THAT COULD CREATE POTENTIAL SAFETY HAZARDS.
6. RESTRICT MOVEMENT OF CONSTRUCTION VEHICLES AND PERSONNEL TO PERMITTED CONSTRUCTION AREAS BY FLAGGING, BARRICADING, ERECTING TEMPORARY FENCING, OR PROVIDING ESCORTS, AS APPROPRIATE AND AS SPECIFIED IN THE CSPP AND SPCD.
7. ENSURE THAT NO CONTRACTOR EMPLOYEES, EMPLOYEES OF SUBCONTRACTORS OR SUPPLIERS, OR OTHER PERSONS ENTER ANY PART OF THE AIR OPERATIONS AREA (AOA) FROM THE CONSTRUCTION SITE UNLESS AUTHORIZED.
8. ENSURE PROMPT SUBMITTAL THROUGH THE AIRPORT OPERATOR OF FORM 7460-1 FOR THE PURPOSE OF CONDUCTING AN AERONAUTICAL STUDY OF CONTRACTOR EQUIPMENT SUCH AS TALL EQUIPMENT (CRANES, CONCRETE PUMPS, AND OTHER EQUIPMENT), STOCK PILES, AND HAUL ROUTES WHEN DIFFERENT FROM CASES PREVIOUSLY FILED BY THE AIRPORT OPERATOR. NOTIFY GDOT SO THAT THE DEPARTMENT IS AWARE OF THE SUBMITTALS TO EXPEDITE CIRCULATION.

THE CONTRACTOR'S SAFETY PLAN COMPLIANCE DOCUMENT (SPCD) SHALL INCLUDE A STATEMENT BY THE CONSTRUCTION CONTRACTOR THAT THEY HAVE READ AND WILL ABIDE BY THE CSPP. IN ADDITION, THE SPCD MUST INCLUDE ALL SUPPLEMENTAL INFORMATION THAT COULD NOT BE INCLUDED IN THE CSPP PRIOR TO THE CONTRACT AWARD. THE CONTRACTOR STATEMENT SHOULD INCLUDE THE NAME OF THE CONTRACTOR, THE TITLE OF THE PROJECT CSPP, THE APPROVAL DATE OF THE CSPP, AND A REFERENCE TO ANY SUPPLEMENTAL INFORMATION (THAT IS, "I , NAME OF CONTRACTOR , HAVE READ THE TITLE OF PROJECT CSPP, APPROVED ON DATE , AND WILL ABIDE BY IT AS WRITTEN AND WITH THE FOLLOWING ADDITIONS AS NOTED:"). THE SUPPLEMENTAL INFORMATION IN THE SPCD SHOULD BE WRITTEN TO MATCH THE FORMAT OF THE CSPP INDICATING EACH SUBJECT BY CORRESPONDING CSPP SUBJECT NUMBER AND TITLE. IF NO SUPPLEMENTAL INFORMATION IS NECESSARY FOR ANY SPECIFIC SUBJECT, THE STATEMENT, "NO SUPPLEMENTAL INFORMATION," SHOULD BE WRITTEN AFTER THE CORRESPONDING SUBJECT TITLE. THE SPCD SHOULD NOT DUPLICATE INFORMATION IN THE CSPP:

THE CONTRACTOR'S SAFETY PLAN COMPLIANCE DOCUMENT SHALL CONFORM TO THE FOLLOWING FORMAT:

1. COORDINATION. DISCUSS DETAILS OF PROPOSED SAFETY MEETINGS WITH THE AIRPORT OPERATOR AND WITH CONTRACTOR EMPLOYEES AND SUBCONTRACTORS.
2. PHASING. DISCUSS PROPOSED CONSTRUCTION SCHEDULE ELEMENTS, INCLUDING:
   A. DURATION OF EACH PHASE.
   B. DAILY START AND FINISH OF CONSTRUCTION, INCLUDING "NIGHT ONLY" CONSTRUCTION.
   C. DURATION OF CONSTRUCTION ACTIVITIES DURING NORMAL RUNWAY OPERATIONS, CLOSED RUNWAY OPERATIONS AND MODIFIED RUNWAY "AIRCRAFT REFERENCE CODE" USAGE.
3. AREAS AND OPERATIONS AFFECTED BY THE CONSTRUCTION ACTIVITY. THESE AREAS ARE SHOWN ON THE CSPP.
4. PROTECTION OF NAVAIDS. DISCUSS SPECIFIC METHODS PROPOSED TO PROTECT OPERATING NAVAIDS.
5. CONTRACTOR ACCESS. PROVIDE THE FOLLOWING:
   A. DETAILS ON HOW THE CONTRACTOR WILL MAINTAIN THE INTEGRITY OF THE AIRPORT SECURITY FENCE (GATE GUARDS, DAILY LOG OF CONSTRUCTION PERSONNEL, AND OTHER).
   B. LISTING OF INDIVIDUALS REQUIRING DRIVER TRAINING (FOR CERTIFICATED AIRPORTS AND AS REQUESTED).
   C. RADIO COMMUNICATIONS INCLUDING: TYPES OF RADIOS AND BACKUP CAPABILITIES; WHO WILL BE MONITORING RADIOS; WHOM TO CONTACT IF THE ATCT CANNOT REACH THE CONTRACTOR'S DESIGNATED PERSON BY RADIO.
   D. DETAILS ON HOW THE CONTRACTOR WILL ESCORT MATERIAL DELIVERY VEHICLES.
6. WILDLIFE MANAGEMENT. DISCUSS THE FOLLOWING:
   A. METHODS AND PROCEDURES TO PREVENT WILDLIFE ATTRACTION.
   B. WILDLIFE REPORTING PROCEDURES.
7. FOREIGN OBJECT DEBRIS (FOD) MANAGEMENT. DISCUSS EQUIPMENT AND METHODS FOR CONTROL OF FOD, INCLUDING CONSTRUCTION DEBRIS AND DUST.
8. HAZARDOUS MATERIAL (HAZMAT) MANAGEMENT. DISCUSS EQUIPMENT AND METHODS FOR RESPONDING TO HAZARDOUS SPILLS.
9. NOTIFICATION OF CONSTRUCTION ACTIVITIES. PROVIDE THE FOLLOWING:
   A. CONTRACTOR'S POINTS OF CONTACT.
   B. CONTRACTOR'S EMERGENCY CONTACT.
   C. LISTING OF TALL OR OTHER REQUESTED EQUIPMENT PROPOSED FOR USE ON THE AIRPORT AND THE TIMEFRAME FOR SUBMITTING 7460-1 FORMS NOT PREVIOUSLY SUBMITTED BY THE AIRPORT OPERATOR.
   D. BATCH PLANT DETAILS, INCLUDING 7460-1 SUBMITTAL.
10. INSPECTION REQUIREMENTS. DISCUSS DAILY (OR MORE FREQUENT) INSPECTIONS AND SPECIAL INSPECTION PROCEDURES.
11. UNDERGROUND UTILITIES. DISCUSS PROPOSED METHODS OF IDENTIFYING AND PROTECTING UNDERGROUND UTILITIES.
12. PENALTIES. PENALTIES SHOULD BE IDENTIFIED IN THE CSPP AND SHOULD NOT REQUIRE AN ENTRY IN THE SPCD.
13. SPECIAL CONDITIONS. DISCUSS PROPOSED ACTIONS FOR EACH SPECIAL CONDITION IDENTIFIED IN THE CSPP.
14. RUNWAY AND TAXIWAY VISUAL AIDS. INCLUDING MARKING, LIGHTING, SIGNS, AND VISUAL NAVAIDS. DISCUSS PROPOSED VISUAL AIDS INCLUDING THE FOLLOWING:
   A. EQUIPMENT AND METHODS FOR COVERING SIGNAGE AND AIRFIELD LIGHTS.
   B. EQUIPMENT AND METHODS FOR TEMPORARY CLOSURE MARKINGS (PAINT, FABRIC, OTHER).
   C. TYPES OF TEMPORARY VISUAL GUIDANCE SLOPE INDICATORS (VGSI).
15. MARKING AND SIGNS FOR ACCESS ROUTES. DISCUSS PROPOSED METHODS OF DEMARCATING ACCESS ROUTES FOR VEHICLE DRIVERS.
16. HAZARD MARKING AND LIGHTING. DISCUSS PROPOSED EQUIPMENT AND METHODS FOR IDENTIFYING EXCAVATION AREAS.
17. PROTECTION OF RUNWAY AND TAXIWAY SAFETY AREAS INCLUDING OBJECT FREE AREAS, OBSTACLE FREE ZONES, AND APPROACH/DEPARTURE SURFACES. DISCUSS PROPOSED METHODS OF IDENTIFYING, DEMARCATING, AND PROTECTING AIRPORT SURFACES INCLUDING:
   A. EQUIPMENT AND METHODS FOR MAINTAINING TAXIWAY SAFETY AREA STANDARDS.
   B. EQUIPMENT AND METHODS FOR SEPARATION OF CONSTRUCTION OPERATIONS FROM AIRCRAFT OPERATIONS, INCLUDING DETAILS OF BARRICADES.
18. OTHER LIMITATIONS ON CONSTRUCTION SHOULD BE IDENTIFIED IN THE CSPP AND SHOULD NOT REQUIRE AN ENTRY IN THE SPCD.

FULTON COUNTY EXECUTIVE AIRPORT

FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer:	**EP/CG**
Technician:	**EP/CG**
Checked by:	**CA**
Project Number:	**204307**

Notes:

REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

PROJECT SAFETY AND PHASING PLAN NOTES

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date: **02/04/2025**	Sheet Number: **04** of **38**
Scale: **N.T.S.**	Drawing Number: **PSPN-1**

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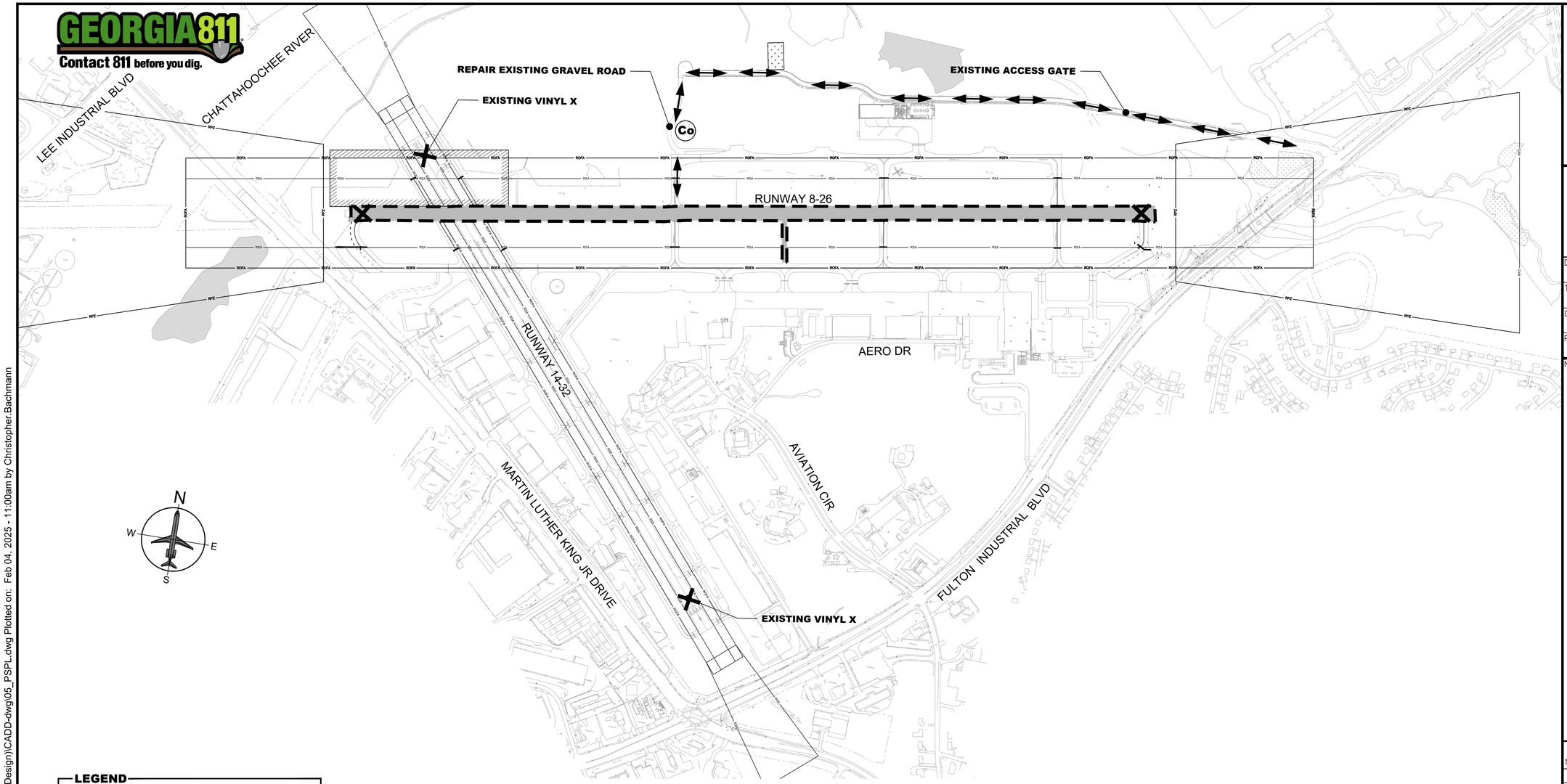

LEGEND

- GLIDE SLOPE CRITICAL AREA
- APPROXIMATE WORK LIMITS
- CONTRACTOR'S STAGING AREA
- RSA — RUNWAY SAFETY AREA
- RPZ — RUNWAY PROTECTION ZONE
- ROFA — RUNWAY OBJECT FREE AREA
- HAUL ROUTE
- Co — CONSTRUCTION ENTRANCE
- LIGHTED CLOSED RUNWAY MARKER
- BASE/ALTERNATE BID

NOTES

1. THE CONTRACTOR SHALL COORDINATE WITH THE AIRPORT AND ENGINEER TO OBTAIN APPROPRIATE APPROVALS AND ESTABLISH WORK CONDITIONS AND TIMING PRIOR TO ANY WORK WITHIN THE RUNWAY SAFETY AREAS AND RUNWAY PROTECTION ZONES. THE REQUIRED ACTIONS MAY INCLUDE TEMPORARY RUNWAY CLOSURES OR LIMITED RUNWAY OPERATIONS.
2. ANY WORK PERFORMED WITHIN THE RUNWAY SAFETY AREAS OR TAXIWAY SAFETY AREAS REQUIRES THE CLOSURE OF RUNWAY OR TAXIWAY. ALL CLOSURES SHALL BE COORDINATED WITH THE OWNER AND ENGINEER NO LESS THAN 7 DAYS PRIOR.
3. THE CONTRACTOR SHALL NOT MOVE EQUIPMENT OR PERSONNEL THROUGH ACTIVE PORTIONS OF THE AIRPORT WITHOUT PRIOR COORDINATION AND APPROVAL FROM AIRPORT OPERATIONS AND THE ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO AVOID CONFLICT BETWEEN THEIR PERSONNEL, EQUIPMENT, VEHICLES, AND THE AIRCRAFT.
4. ANY ACCESS GATES USED BY THE CONTRACTOR SHALL BE MANNED BY A CONTRACTOR-PAID GATE GUARD ANYTIME THE GATE IS UNLOCKED OR OPEN. THE GATE GUARD SHALL CONTROL ACCESS TO ONLY ALLOW AUTHORIZED CONSTRUCTION TRAFFIC TO ENTER THE SITE.
5. THE CONTRACTOR SHALL PROTECT ALL FENCES FROM DAMAGE. ANY DAMAGE TO FENCES CAUSED BY CONTRACTOR ACTIVITY WILL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE AIRPORT OWNER.
6. ANY DAMAGE TO EXISTING AIRCRAFT LIGHTING SYSTEMS CAUSED BY CONSTRUCTION ACTIVITIES SHALL BE IMMEDIATELY NOTED TO THE OWNER AND REPAIRED BY QUALIFIED PERSONNEL AT CONTRACTORS EXPENSE TO THE SATISFACTION OF THE OWNER.
7. INSTALLATION OF THE CONSTRUCTION EXIT WILL REQUIRE MINOR FILL AND GRADING WORK ON THE AIRFIELD SIDE OF THE SECURITY FENCE. CONTRACTOR WILL BE REQUIRED TO ASSESS THE EXTENTS OF THIS WORK AND INCLUDE ITS COST IN THE UNIT PRICE FOR MOBILIZATION.
8. REFER TO DRAWING PSPN-1 FOR PROJECT SAFETY AND PHASING NOTES.
9. REFER TO DRAWINGS PSPD-1 FOR PROJECT SAFETY AND PHASING DETAILS.

FULTON COUNTY EXECUTIVE AIRPORT

FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer:	**EP/CG**
Technician:	**EP/CG**
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Notes:

1. THE CONTRACTOR, AT THEIR OWN EXPENSE, SHALL BE RESPONSIBLE FOR THE REPAIR TO EQUAL OR BETTER THAN PRECONSTRUCTION CONDITIONS OF ANY DAMAGE CAUSED BY THE CONTRACTOR'S EQUIPMENT AND PERSONNEL INCLUDING AREAS AND ROADS USED FOR THE HAUL ROUTE AND FIRE ACCESS LANE.
2. EXISTING GRAVEL ROAD SHALL BE REPAIRED PRIOR TO CONSTRUCTION. ALL COSTS ASSOCIATED TO THE REPAIR SHALL BE INCIDENTAL TO MOBILIZATION SPECIFICATION C-105.

REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

PROJECT SAFETY AND PHASING PLAN LAYOUT

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date:	Sheet Number:
02/04/2025	**05** of **38**
Scale:	Drawing Number:
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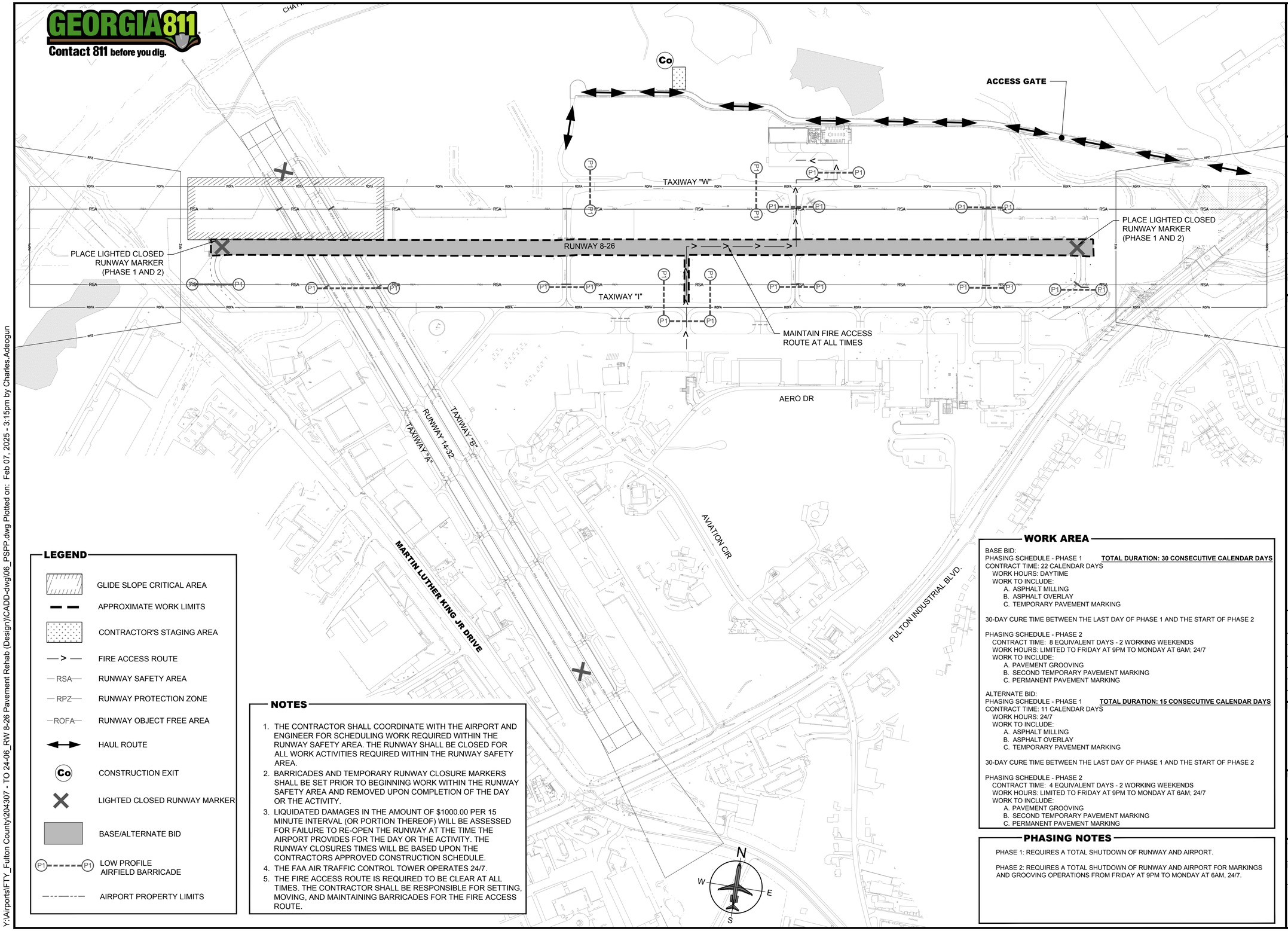

LEGEND

- GLIDE SLOPE CRITICAL AREA
- APPROXIMATE WORK LIMITS
- CONTRACTOR'S STAGING AREA
- FIRE ACCESS ROUTE
- RSA — RUNWAY SAFETY AREA
- RPZ — RUNWAY PROTECTION ZONE
- ROFA — RUNWAY OBJECT FREE AREA
- HAUL ROUTE
- Co — CONSTRUCTION EXIT
- LIGHTED CLOSED RUNWAY MARKER
- BASE/ALTERNATE BID
- P1 ---------- P1 — LOW PROFILE AIRFIELD BARRICADE
- AIRPORT PROPERTY LIMITS

NOTES

1. THE CONTRACTOR SHALL COORDINATE WITH THE AIRPORT AND ENGINEER FOR SCHEDULING WORK REQUIRED WITHIN THE RUNWAY SAFETY AREA. THE RUNWAY SHALL BE CLOSED FOR ALL WORK ACTIVITIES REQUIRED WITHIN THE RUNWAY SAFETY AREA.
2. BARRICADES AND TEMPORARY RUNWAY CLOSURE MARKERS SHALL BE SET PRIOR TO BEGINNING WORK WITHIN THE RUNWAY SAFETY AREA AND REMOVED UPON COMPLETION OF THE DAY OR THE ACTIVITY.
3. LIQUIDATED DAMAGES IN THE AMOUNT OF $1000.00 PER 15 MINUTE INTERVAL (OR PORTION THEREOF) WILL BE ASSESSED FOR FAILURE TO RE-OPEN THE RUNWAY AT THE TIME THE AIRPORT PROVIDES FOR THE DAY OR THE ACTIVITY. THE RUNWAY CLOSURES TIMES WILL BE BASED UPON THE CONTRACTORS APPROVED CONSTRUCTION SCHEDULE.
4. THE FAA AIR TRAFFIC CONTROL TOWER OPERATES 24/7.
5. THE FIRE ACCESS ROUTE IS REQUIRED TO BE CLEAR AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING, MOVING, AND MAINTAINING BARRICADES FOR THE FIRE ACCESS ROUTE.

WORK AREA

BASE BID:
PHASING SCHEDULE - PHASE 1 **TOTAL DURATION: 30 CONSECUTIVE CALENDAR DAYS**
CONTRACT TIME: 22 CALENDAR DAYS
WORK HOURS: DAYTIME
WORK TO INCLUDE:
A. ASPHALT MILLING
B. ASPHALT OVERLAY
C. TEMPORARY PAVEMENT MARKING

30-DAY CURE TIME BETWEEN THE LAST DAY OF PHASE 1 AND THE START OF PHASE 2

PHASING SCHEDULE - PHASE 2
CONTRACT TIME: 8 EQUIVALENT DAYS - 2 WORKING WEEKENDS
WORK HOURS: LIMITED TO FRIDAY AT 9PM TO MONDAY AT 6AM; 24/7
WORK TO INCLUDE:
A. PAVEMENT GROOVING
B. SECOND TEMPORARY PAVEMENT MARKING
C. PERMANENT PAVEMENT MARKING

ALTERNATE BID:
PHASING SCHEDULE - PHASE 1 **TOTAL DURATION: 15 CONSECUTIVE CALENDAR DAYS**
CONTRACT TIME: 11 CALENDAR DAYS
WORK HOURS: 24/7
WORK TO INCLUDE:
A. ASPHALT MILLING
B. ASPHALT OVERLAY
C. TEMPORARY PAVEMENT MARKING

30-DAY CURE TIME BETWEEN THE LAST DAY OF PHASE 1 AND THE START OF PHASE 2

PHASING SCHEDULE - PHASE 2
CONTRACT TIME: 4 EQUIVALENT DAYS - 2 WORKING WEEKENDS
WORK HOURS: LIMITED TO FRIDAY AT 9PM TO MONDAY AT 6AM; 24/7
WORK TO INCLUDE:
A. PAVEMENT GROOVING
B. SECOND TEMPORARY PAVEMENT MARKING
C. PERMANENT PAVEMENT MARKING

PHASING NOTES

PHASE 1: REQUIRES A TOTAL SHUTDOWN OF RUNWAY AND AIRPORT.

PHASE 2: REQUIRES A TOTAL SHUTDOWN OF RUNWAY AND AIRPORT FOR MARKINGS AND GROOVING OPERATIONS FROM FRIDAY AT 9PM TO MONDAY AT 6AM, 24/7.

FULTON COUNTY EXECUTIVE AIRPORT

FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer:	EP/CG
Technician:	EP/CG
Checked by:	CA
Project Number:	204307

Notes:

REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

PROJECT SAFETY AND PHASING PLAN

GDOT PROJECT NUMBER:
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Date: 02/04/2025	Sheet Number: 06 of 38
Scale: 1"=300'	Drawing Number: PSPP-1

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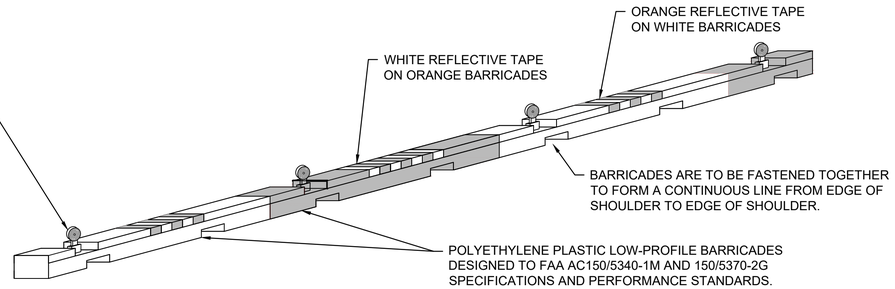
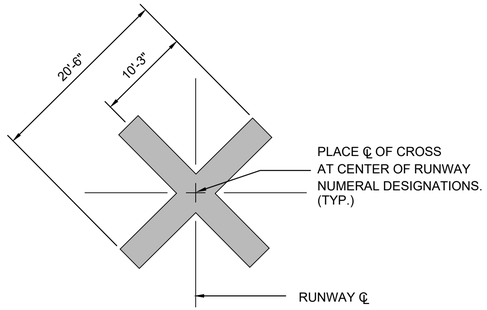
1 - FLASHING RED SOLAR POWERED HAZARD LIGHT ON EACH BARRICADE. LIGHTS SHALL MEET THE FOLLOWING REQUIREMENTS:
SIZE - 12"(H) X 8"(W) X 3"(D)
FLASHING RATE 60+/- TIMES/MINUTE
.4 WATT SOLAR PANEL POWER
1200MA NICKEL HYDRIDE CELLS ENERGY
L.E.D. (20,000 HOURS LIFE) ILLUMINATION
OVERCHARGE PROTECTION BUILT IN
THREE NIGHTS USE WITH 6 HOURS SUNCHARGE
ON/OFF SWITCH-AUTOMATIC ON DUSK, OFF DAWN



TYPE I "LOW PROFILE" BARRICADE DETAIL
N.T.S.

NOTES:

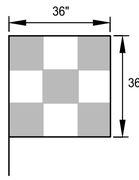
1. THE CONTRACTOR SHALL INSTALL LOW-PROFILE BARRICADES TO ADEQUATELY DELINEATE THE RUNWAY AND/OR TAXIWAY CLOSURE AREA(S). THE CONTRACTOR SHALL ENSURE THAT THE BARRICADE LIGHTS ARE WORKING AT ALL TIMES.
3. THE CONTRACTOR SHALL PLACE BARRICADES OUTSIDE OF EACH RUNWAY GROUP V SAFETY AREA (250'), UNLESS OTHERWISE NOTED ON PLANS. SPECIFIC LOCATION FOR PLACEMENT OF BARRICADES WILL BE APPROVED/DIRECTED BY AN AIRSIDE OPERATIONS REPRESENTATIVE.
4. CONTRACTOR SHALL HAVE BRICK BAGS AVAILABLE TO SECURE BARRICADES AS NEEDED OR AS REQUIRED BY THE CM AND/OR AIRSIDE OPERATIONS.
5. CONTRACTOR SHALL PROVIDE 24-HOUR CONTACT INFORMATION FOR EMERGENCY MAINTENANCE OF AIRPORT HAZARD LIGHTING AND BARRICADES. CONTACT INFORMATION MUST BE FILED WITH THE DOA PRIOR TO PLACING BARRICADES OR LIGHTS.
6. CONTRACTOR SHALL IMMEDIATELY REPLACE ANY LIGHT NOT MEETING THE STATED REQUIREMENTS.
7. PAYMENT FOR TYPE I `LOW PROFILE' BARRICADES SHALL BE MADE IN ACCORDANCE WITH SPECIFICATION 01530



LIGHTED PORTABLE CLOSED RUNWAY MARKER
N.T.S.

NOTES:

1. MARKER SHALL BE PLACED IN OVERRUN AREA BEYOND PAVEMENT ENDS WHILE WORK IS PROGRESSING ON RUNWAY SURFACES.
2. THE CONTRACTOR SHALL FURNISH TWO (2) LIGHTED RUNWAY CLOSURE MARKERS (ONE ON EACH END OF THE RUNWAY) FOR USE ON THE PROJECT. THE CONTRACTOR SHALL MAINTAIN, POSITION, OPERATE, FUEL AND STORE THE MARKERS THROUGHOUT THE DURATION OF THE PROJECT. THE CONTRACTOR SHALL RETAIN AND REMOVE THESE MARKERS AT THE END OF THE PROJECT.
3. NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE FOR LIGHTED PORTABLE CLOSED RUNWAY MARKERS. PAYMENT WILL BE MADE UNDER THE UNIT PRICE FOR MOBILIZATION.
4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MOVE AND STORE THE LIGHTED X'S DURING THE PROJECT. THE CONTRACTOR SHALL STORE THE LIGHTED X'S IN THE STAGING AREA WHILE NOT BEING USED.



TRUCK SIGNAL FLAG
N.T.S.

NOTES:

1. VEHICULAR MARKINGS: CONTRACTOR VEHICLES AND EQUIPMENT SHALL BE MARKED WITH CHECKERED FLAGS AND LIGHTED WITH FLASHING BEACONS TO COMPLY WITH REQUIREMENTS OF FAA AC 150/5210-5D.

   A) ALL CONSTRUCTION EQUIPMENT, SUCH AS DOZERS, BACKHOES, GRADERS, END LOADERS, PANS, OFF-ROAD ARTICULATED DUMP TRUCKS, TRADITIONAL DUMP TRUCKS STATIONED ON-SITE, PAVING TRAIN EQUIPMENT, MILLING EQUIPMENT, AND SIMILAR EQUIPMENT, SHALL BE MARKED WITH AN ORANGE/WHITE CHECKERED FLAG ATTACHED TO THE HIGHEST STATIONARY PART OF THE PIECE OF EQUIPMENT;

   B) ALL OTHER CONSTRUCTION-RELATED VEHICLES, SUCH AS SUPERVISOR'S VEHICLES, EQUIPMENT MAINTENANCE AND SUPPORT VEHICLES (STEP VANS, ONE-TON PICK-UPS, ETC.), DUMP TRUCKS THAT TRANSPORT MATERIALS BETWEEN OFF-SITE AND ON-SITE LOCATIONS, AND SIMILAR EQUIPMENT, SHALL BE LIGHTED WITH A YELLOW FLASHING BEACON THAT IS VISIBLE DURING BOTH LOW VISIBILITY AND DAYLIGHT CONDITIONS AND MARKED WITH PERMANENT OR MAGNETIC PLACARDS IDENTIFYING THE COMPANY NAME ON BOTH SIDES OF THE VEHICLE.

2. THE FLAG SHALL BE A 3 FOOT SQUARE HAVING A CHECKERED PATTERN OF ORANGE AND WHITE SQUARES AT LEAST 1 FOOT ON EACH SIDE.
3. NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE FOR TRUCK SIGNAL FLAGS OR FLASHING BEACONS. PAYMENT WILL BE MADE UNDER THE UNIT PRICE FOR MOBILIZATION.

Co

CONSTRUCTION EXIT

DEFINITION
A stone-stabilized pad located at any point where traffic will be leaving a construction site to a public right-of-way, street, alley, sidewalk, or parking area.

PURPOSE
- Reduce or eliminate the transport of mud from the construction area onto public right-of-ways.

INSTALLATION
- Install according to the approved plan.
- Use 1.5"-3.5" stone.
- Minimum pad thickness of 6".
- Minimum pad width of 20 ft.
- Minimum pad length of 50 ft.
- When the construction is less than 50 ft from the paved access, the length shall be from the edge of the existing pavement to the permitted building being constructed.
- When washing is required, conduct on an area stabilized with crushed stone and route runoff to an approved sediment trap or sediment basin.
- Place the geotextile liner the full length and width of the entrance.

Co

CRUSHED STONE CONSTRUCTION EXIT

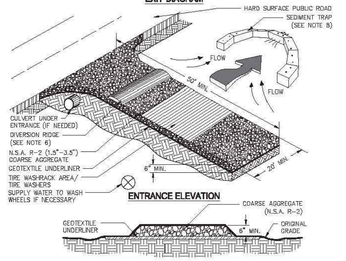


Figure 1. Crushed Stone Construction Exit Installation Requirements

Figure 2. Geotextile Underliner

MAINTENANCE
- Periodically dress with 1.5"-3.5" stone.
- Maintain in a condition that will prevent tracking or flow of mud onto public rights-of way.
- Immediately remove mud and debris tracked or spilled onto roadways.

FULTON COUNTY EXECUTIVE AIRPORT

FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer: **EP/CG**	
Technician: **EP/CG**	
Checked by: **CA**	
Project Number: **204307**	

Notes:

REVISIONS

No.	Description	Date	By

Project Name:
RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:
PROJECT SAFETY AND PHASING PLAN DETAILS

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date:	Sheet Number:
02/04/2025	**07** of **38**
Scale: **N.T.S.**	Drawing Number: **PSPD-1**

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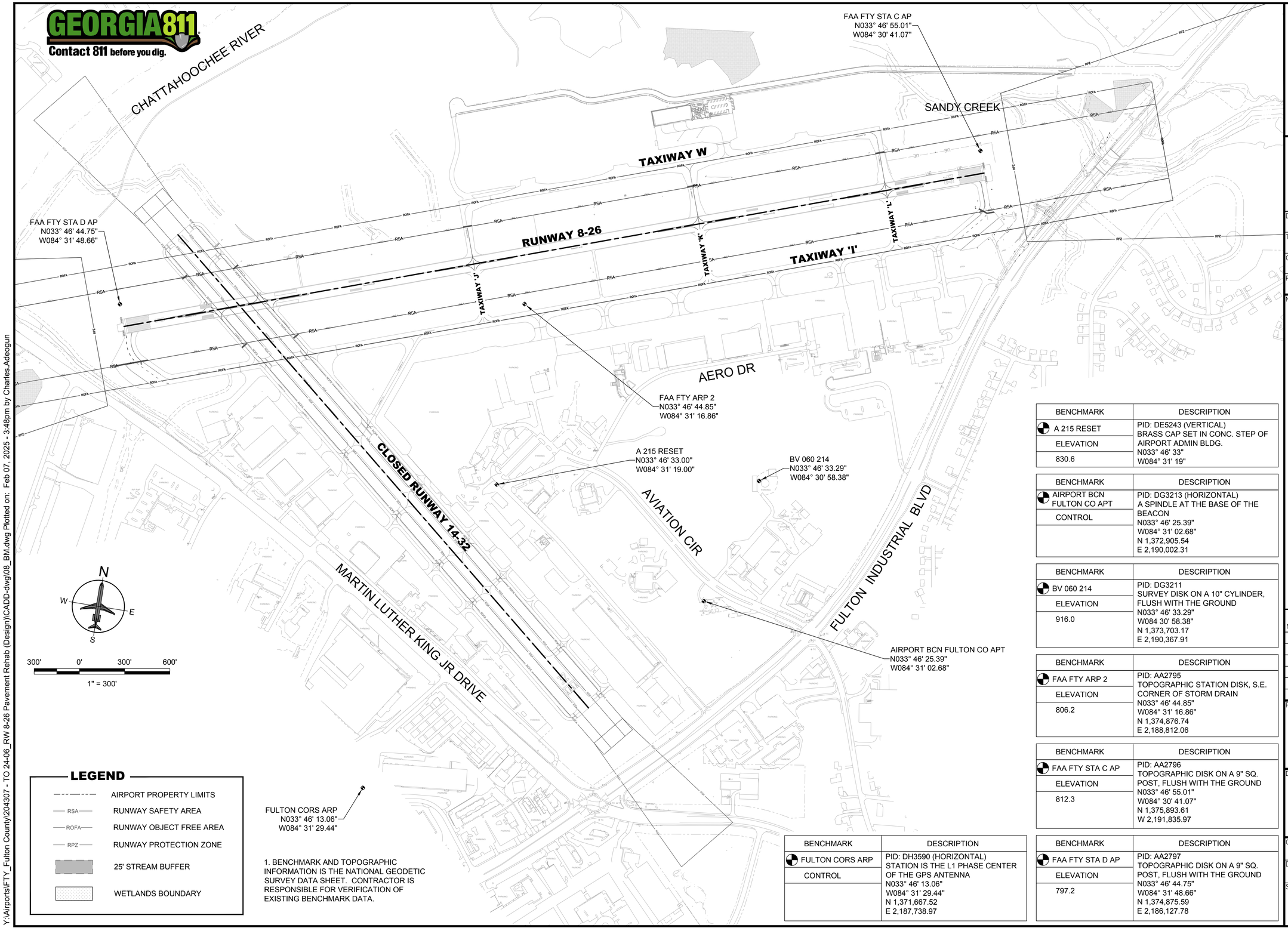

LEGEND

- AIRPORT PROPERTY LIMITS
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- RPZ — RUNWAY PROTECTION ZONE
- 25' STREAM BUFFER
- WETLANDS BOUNDARY

1. BENCHMARK AND TOPOGRAPHIC INFORMATION IS THE NATIONAL GEODETIC SURVEY DATA SHEET. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING BENCHMARK DATA.

BENCHMARK	DESCRIPTION
A 215 RESET	PID: DE5243 (VERTICAL) BRASS CAP SET IN CONC. STEP OF AIRPORT ADMIN BLDG. N033° 46' 33" W084° 31' 19"
ELEVATION	
830.6	

BENCHMARK	DESCRIPTION
AIRPORT BCN FULTON CO APT	PID: DG3213 (HORIZONTAL) A SPINDLE AT THE BASE OF THE BEACON N033° 46' 25.39" W084° 31' 02.68" N 1,372,905.54 E 2,190,002.31
CONTROL	

BENCHMARK	DESCRIPTION
BV 060 214	PID: DG3211 SURVEY DISK ON A 10" CYLINDER, FLUSH WITH THE GROUND N033° 46' 33.29" W084 30' 58.38" N 1,373,703.17 E 2,190,367.91
ELEVATION	
916.0	

BENCHMARK	DESCRIPTION
FAA FTY ARP 2	PID: AA2795 TOPOGRAPHIC STATION DISK, S.E. CORNER OF STORM DRAIN N033° 46' 44.85" W084° 31' 16.86" N 1,374,876.74 E 2,188,812.06
ELEVATION	
806.2	

BENCHMARK	DESCRIPTION
FAA FTY STA C AP	PID: AA2796 TOPOGRAPHIC DISK ON A 9" SQ. POST, FLUSH WITH THE GROUND N033° 46' 55.01" W084° 30' 41.07" N 1,375,893.61 W 2,191,835.97
ELEVATION	
812.3	

BENCHMARK	DESCRIPTION
FULTON CORS ARP	PID: DH3590 (HORIZONTAL) STATION IS THE L1 PHASE CENTER OF THE GPS ANTENNA N033° 46' 13.06" W084° 31' 29.44" N 1,371,667.52 E 2,187,738.97
CONTROL	

BENCHMARK	DESCRIPTION
FAA FTY STA D AP	PID: AA2797 TOPOGRAPHIC DISK ON A 9" SQ. POST, FLUSH WITH THE GROUND N033° 46' 44.75" W084° 31' 48.66" N 1,374,875.59 E 2,186,127.78
ELEVATION	
797.2	

FULTON COUNTY EXECUTIVE AIRPORT

FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer:	**EP/CG**
Technician:	**EP/CG**
Checked by:	**CA**
Project Number:	**204307**

Notes:

REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

SITE BENCHMARK DATA

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date:	Sheet Number:
02/04/2025	**08** of **38**
Scale:	Drawing Number:
1" = 300'	**BM-1**

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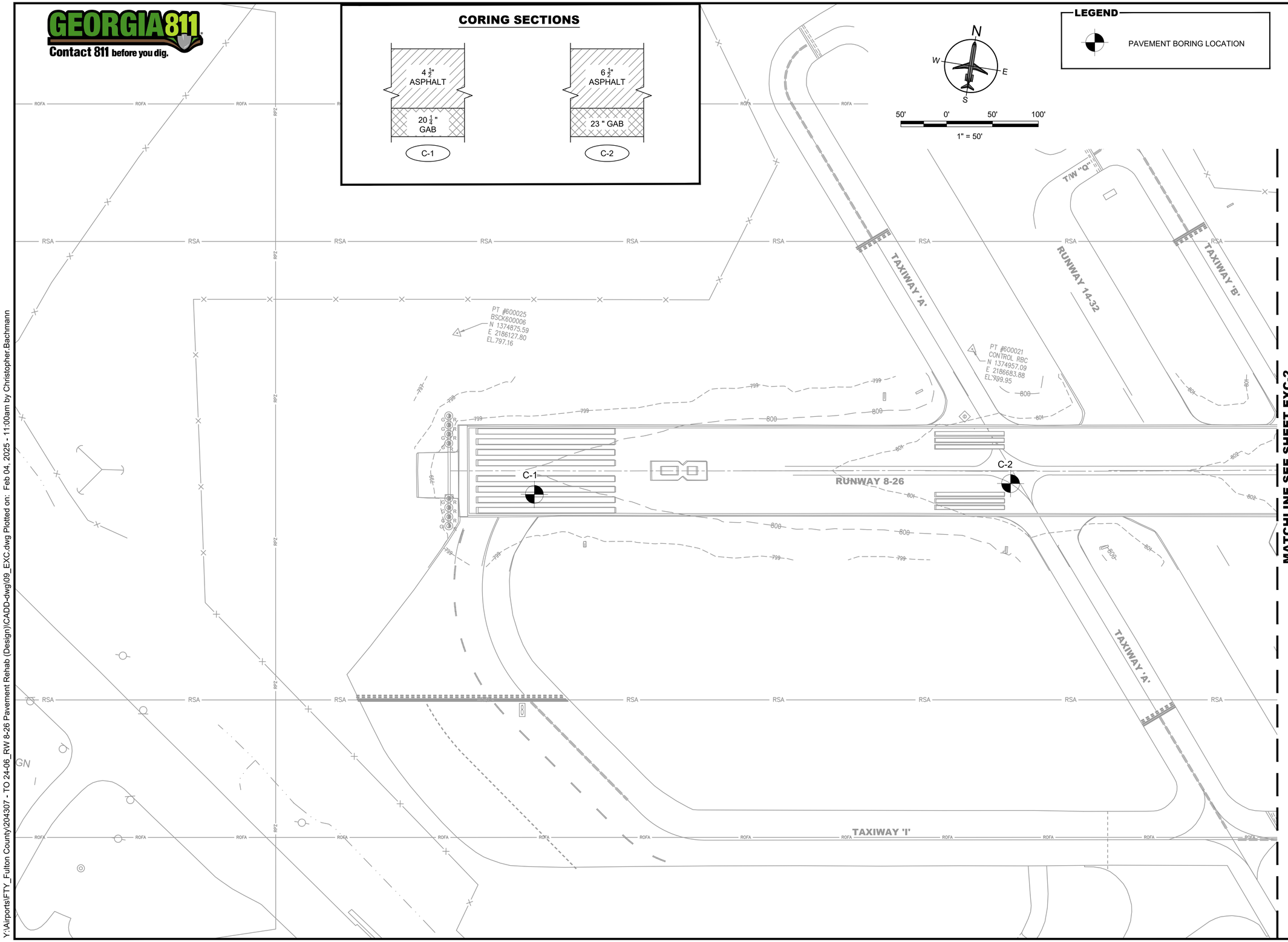
CORING SECTIONS



MATCHLINE SEE SHEET EXC-2

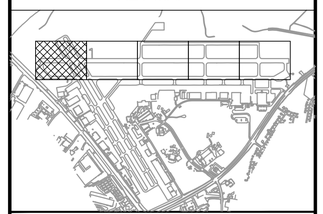
FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer: EP	
Technician: EP	
Checked by: CA	
Project Number: 204307	

Notes:

KEY MAP



REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

EXISTING CONDITIONS NO. 1

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date:	Sheet Number:
02/04/2025	09 of 38
Scale:	Drawing Number:
1" = 50'	EXC-1

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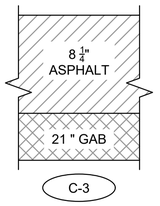
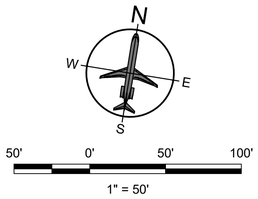
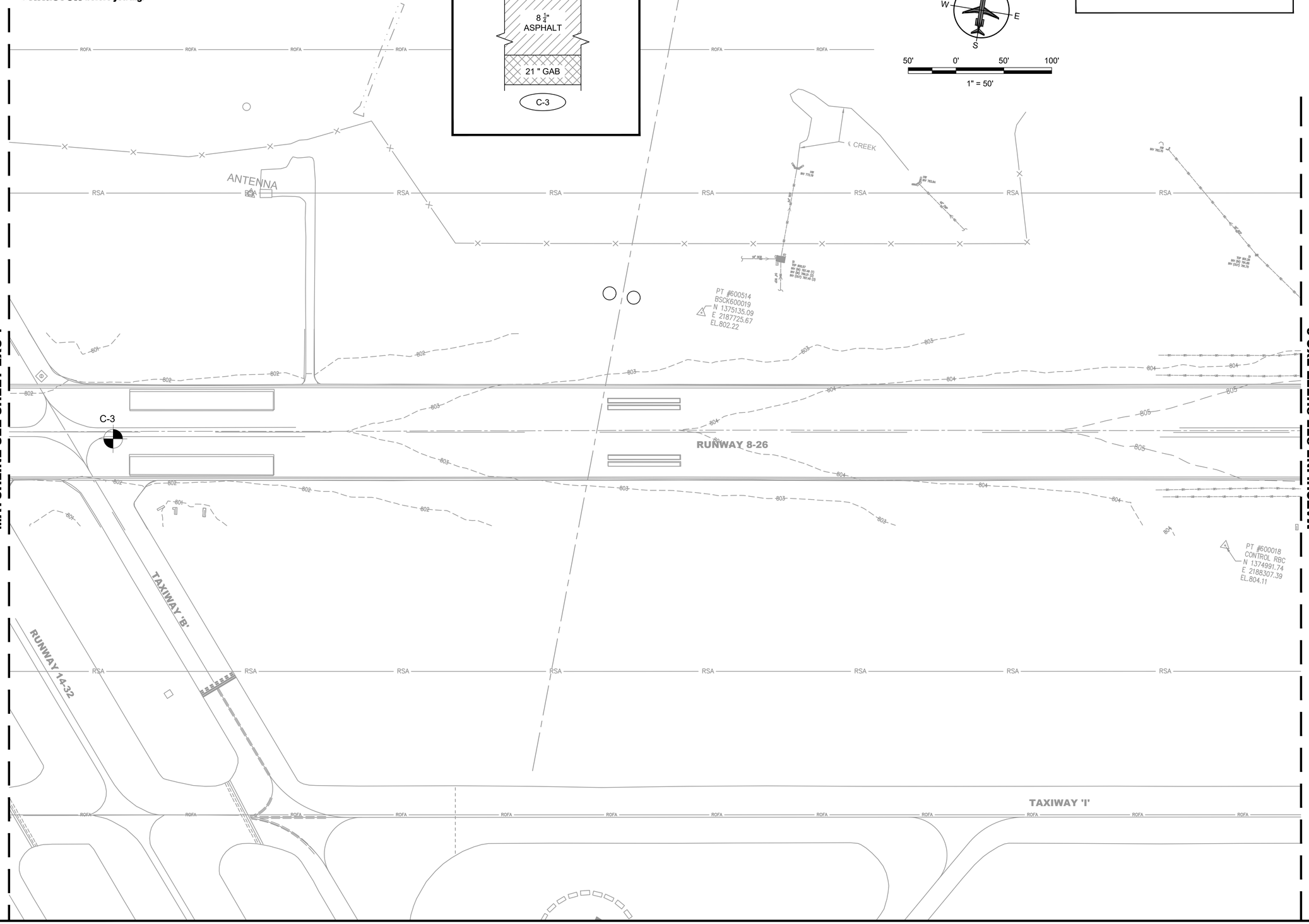


LEGEND

PAVEMENT BORING LOCATION





FULTON COUNTY EXECUTIVE AIRPORT

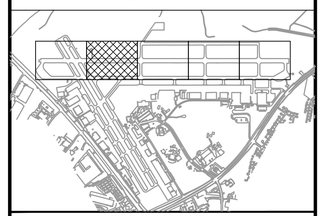
FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer:	**EP/CG**
Technician:	**EP/CG**
Checked by:	**CA**
Project Number:	**204307**

Notes:

KEY MAP



REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

EXISTING CONDITIONS NO. 2

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date:	Sheet Number:
02/04/2025	**10** of **38**
Scale:	Drawing Number:
1" = 50'	**EXC-2**

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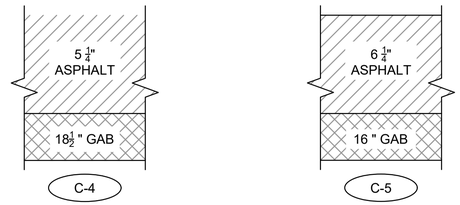

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50' 0' 50' 100'
1" = 50'

LEGEND

PAVEMENT BORING LOCATION

MATCHLINE SEE SHEET EXC-2

MATCHLINE SEE SHEET EXC-4

TAXIWAY 'W'
TAXIWAY 'J'
TAXIWAY 'J'
TAXIWAY 'I'
RUNWAY 8-26
C-4
C-5
ROFA
RSA
PT #600017
CONTROL RBC
N 1375327.81
E 2188803.54
EL.804.21
PT #600016
CONTROL RBC
N 1375175.06
E 2189383.51
EL.805.27
DI
TOP 804.12
INV OUT 801.00
SSMH
TOP 807.10
INV (IN) 794.06 (1)
INV (IN) 781.33 (2)
INV (OUT) 781.16 (3)
TOP 807.20
INV (IN) 791.7
INV (OUT) 791.7

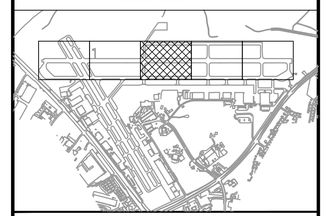
FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer:	EP/CG
Technician:	EP/CG
Checked by:	CA
Project Number:	204307

Notes:

KEY MAP



REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

EXISTING CONDITIONS NO. 3

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date: 02/04/2025	Sheet Number: 11 of 38
Scale: 1" = 50'	Drawing Number: EXC-3

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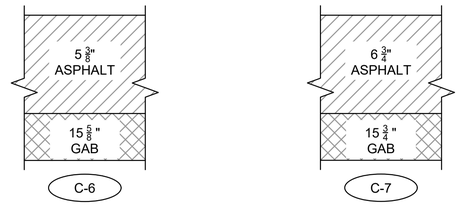

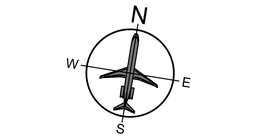

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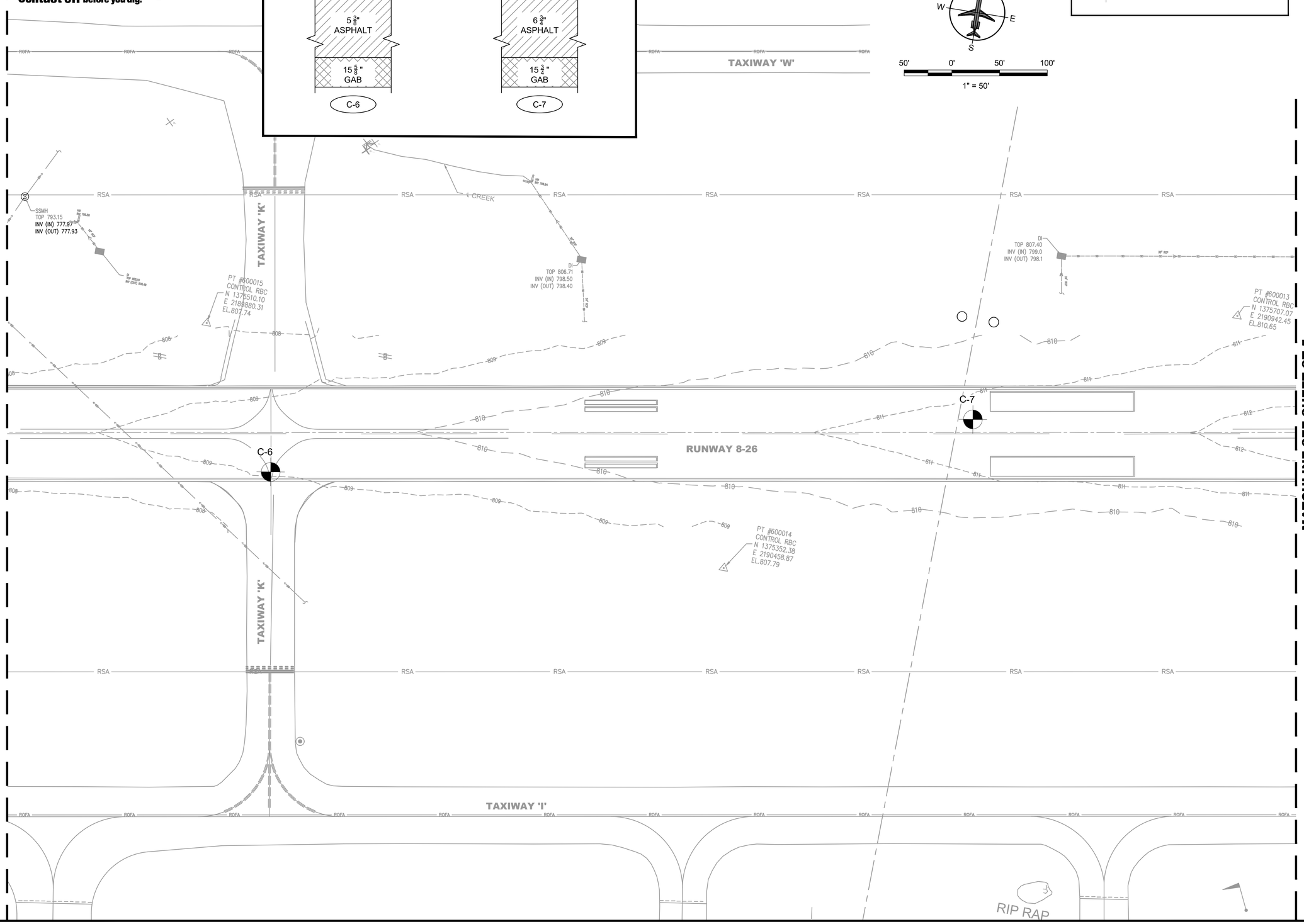
1" = 50'

LEGEND

PAVEMENT BORING LOCATION



MATCHLINE SEE SHEET EXC-3

MATCHLINE SEE SHEET ST-5

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FULTON COUNTY EXECUTIVE AIRPORT

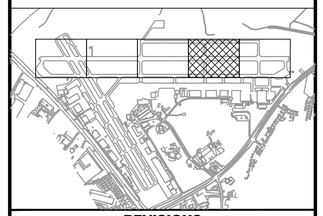
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer:	**EP/CG**
Technician:	**EP/CG**
Checked by:	**CA**
Project Number:	**204307**

Notes:

KEY MAP



REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

EXISTING CONDITIONS NO. 4

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date:	Sheet Number:
02/04/2025	**12** of **38**
Scale:	Drawing Number:
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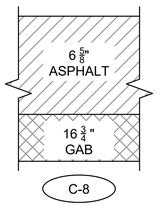
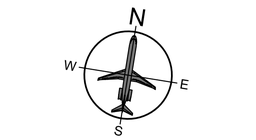
CORING SECTIONS

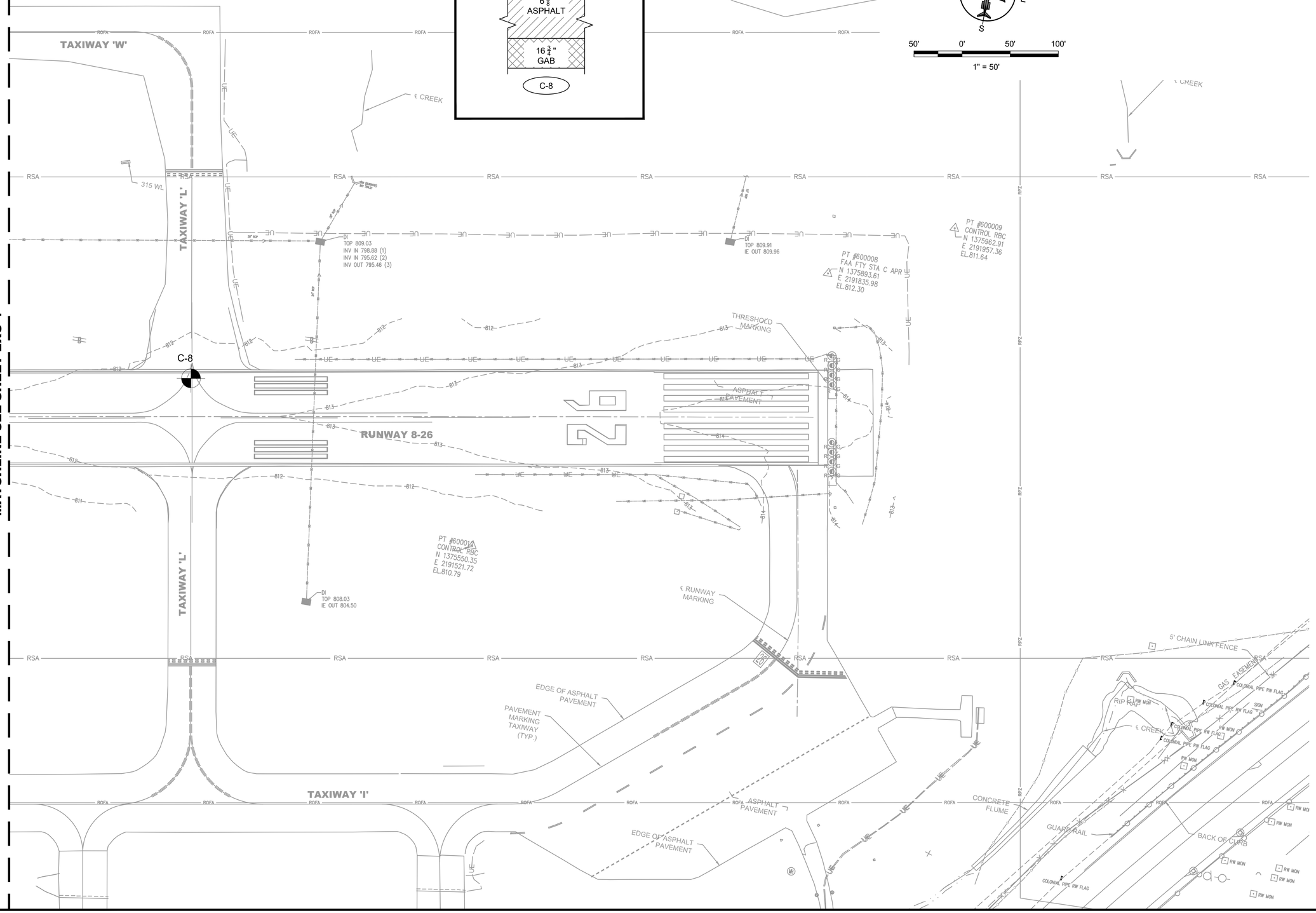




LEGEND

PAVEMENT BORING LOCATION

MATCHLINE SEE SHEET EXC-4



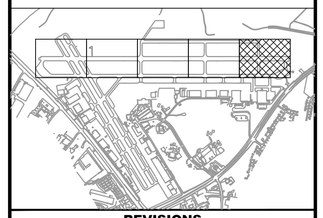
FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer:	EP/CG
Technician:	EP/CG
Checked by:	CA
Project Number:	204307

Notes:

KEY MAP



REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

EXISTING CONDITIONS NO. 5

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date:	Sheet Number:
02/04/2025	13 of 38
Scale:	Drawing Number:
1" = 50'	EXC-5

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

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NOTES

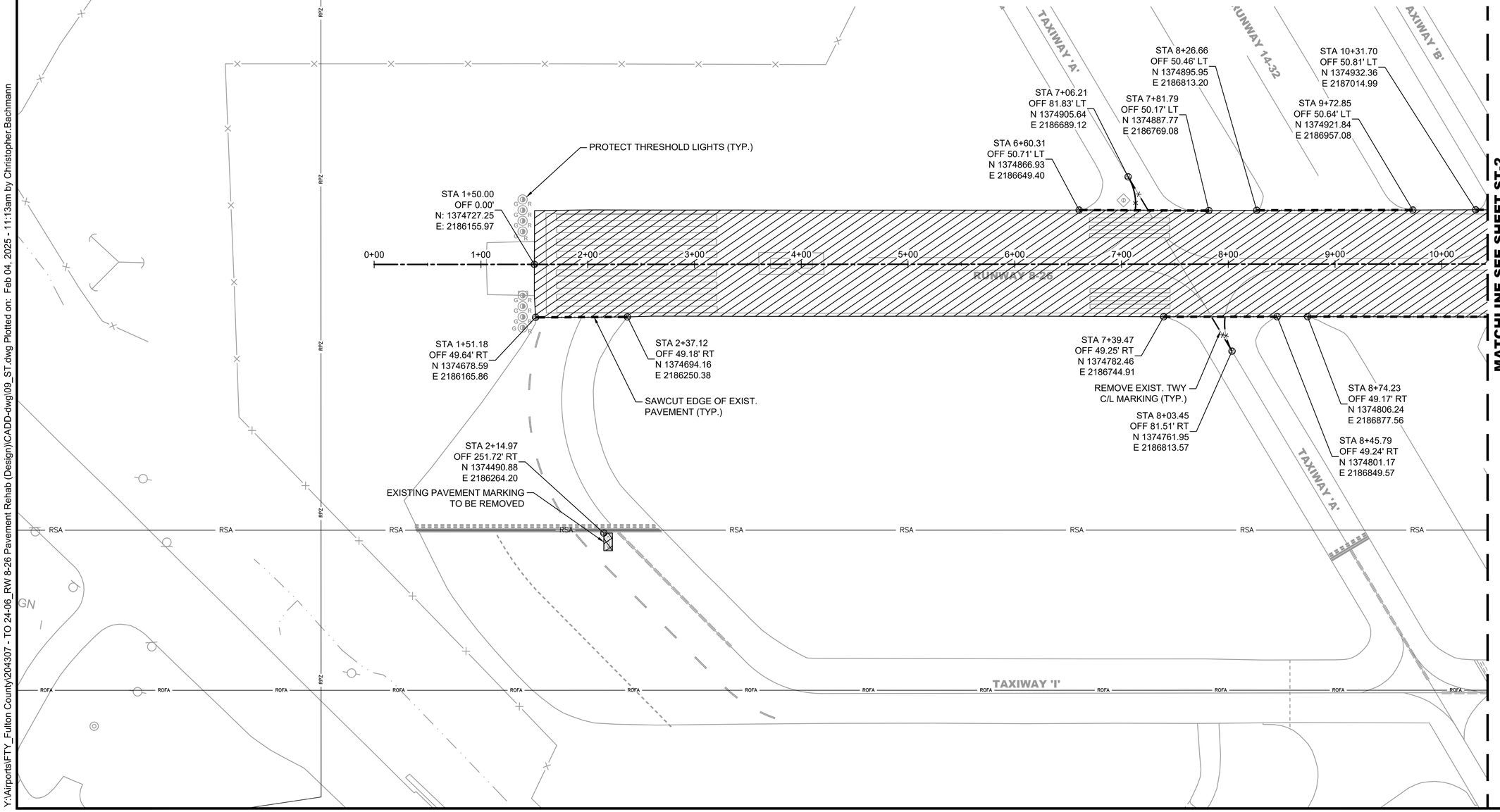
1. CONTRACTOR SHALL MAINTAIN AIRFIELD PERIMETER SECURITY AND PREVENT UNAUTHORIZED ACCESS THROUGHOUT DEMOLITION DURATION. DURING CONTRACTOR NON-ACTIVITY, ALL PERIMETER FENCING MUST REMAIN SECURE AS DIRECTED BY THE OWNER AT ALL TIMES.
2. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL PERFORM AN EXISTING CONDITION FIELD SURVEY IN ACCORDANCE WITH THE SPECIFICATIONS AND PLANS, AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING UTILITY COMPANIES AND FAA TO IDENTIFY AND LOCATE ANY UNDERGROUND UTILITIES AND/OR CABLE WITHIN THE PROJECT LIMITS. THE CONTRACTOR SHALL ASSIST UTILITY COMPANY IN EFFORTS TO FIELD VERIFY UNDERGROUND UTILITIES. ANY UTILITIES DAMAGED SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR TO THE OWNER'S SATISFACTION AT NO ADDITIONAL COST TO THE OWNER.
4. EXISTING LIGHTING SYSTEM SHALL REMAIN UNDISTURBED. DO NOT DISTURB OR DAMAGE ANY EXISTING CONDUITS, CABLES, DUCT BANKS, LIGHTS, OR EQUIPMENT THAT ARE NOT WITHIN THE SCOPE OF THIS PROJECT. ANY DAMAGE TO THE EXISTING LIGHTING SYSTEM SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR TO THE OWNER'S SATISFACTION AT NO ADDITIONAL COST TO THE OWNER.
5. EXISTING PAVEMENT OUTSIDE OF DEMOLITION LIMITS SHALL BE PROTECTED. ANY DAMAGE TO EXISTING PAVEMENT TO BE REPAIRED AT CONTRACTOR'S EXPENSE.

N
W E
S

50' 0' 50' 100'
1" = 50'

LEGEND

- VARIABLE DEPTH MILL, CRACK SEAL AND OVERLAY LIMITS
- PAVEMENT MARKING DEMOLITION
- ASPHALT MILL-TIE
- 2" ASPHALT OVERLAY
- SAWCUT EDGE OF EXIST. PAVEMENT



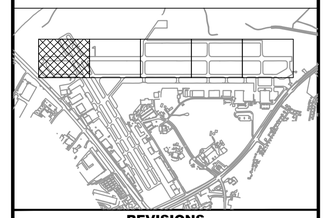
FULTON COUNTY EXECUTIVE AIRPORT
FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer:	EP
Technician:	EP
Checked by:	CA
Project Number:	204307

Notes:

KEY MAP



REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

STAKING AND DEMOLITION PLAN NO. 1

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date: 02/04/2025	Sheet Number: 14 of 38
Scale: 1" = 50'	Drawing Number: ST-1

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NOTES

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N W E S

50' 0' 50' 100'
1" = 50'

LEGEND

- VARIABLE DEPTH MILL, CRACK SEAL AND OVERLAY LIMITS
- PAVEMENT MARKING DEMOLITION
- ASPHALT MILL-TIE
- 2" ASPHALT OVERLAY
- SAWCUT EDGE OF EXIST. PAVEMENT

MATCHLINE SEE SHEET ST-1

MATCHLINE SEE SHEET ST-3

ROFA ROFA ROFA ROFA ROFA

RSA RSA RSA

ANTENNA

STA 10+53.35
OFF 80.76' LT
N 1374965.66
E 2187031.03

SAWCUT EDGE OF EXIST. PAVEMENT (TYP.)

STA 11+27.81
OFF 50.52' LT
N 1374948.99
E 2187109.65

STA 13+49.21
OFF 50.56' LT
N 1374987.97
E 2187327.59

STA 13+66.34
OFF 50.76' LT
N 1374991.18
E 2187344.42

11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00

RUNWAY 8-26

STA 11+97.79
OFF 49.65' RT
N 1374862.69
E 2187196.16

REMOVE EXIST. TWY C/L MARKING (TYP.)

STA 10+96.79
OFF 48.82' RT
N 1374845.74
E 2187096.58

STA 11+50.90
OFF 82.83' RT
N 1374821.77
E 2187155.83

STA 10+48.17
OFF 49.37' RT
N 1374836.64
E 2187048.82

TAXIWAY 'B'

RUNWAY 14-32

RSA RSA RSA RSA RSA RSA RSA RSA

ROFA ROFA ROFA ROFA ROFA ROFA ROFA ROFA ROFA ROFA ROFA ROFA ROFA

TAXIWAY 'I'

FULTON COUNTY EXECUTIVE AIRPORT

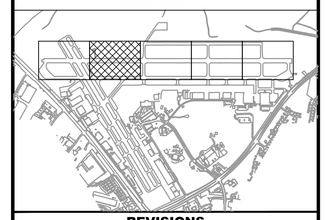
FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer:	EP/CG
Technician:	EP/CG
Checked by:	CA
Project Number:	204307

Notes:

KEY MAP



REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

STAKING AND DEMOLITION PLAN NO. 2

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date: 02/04/2025	Sheet Number: 15 of 38
Scale: 1" = 50'	Drawing Number: ST-2

Y:\Airports\FTY_Fulton County\204307 - TO 24-06_RW 8-26 Pavement Rehab (Design)\CADD-dwg\09_ST.dwg Plotted on: Feb 04, 2025 - 11:13am by Christopher.Bachmann

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

Y:\Airports\FTY_Fulton County\204307 - TO 24-06_RW 8-26 Pavement Rehab (Design)\CADD-dwg\09_ST.dwg Plotted on: Feb 04, 2025 - 11:13am by Christopher.Bachmann

GEORGIA811
Contact 811 before you dig.

NOTES

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N
W E
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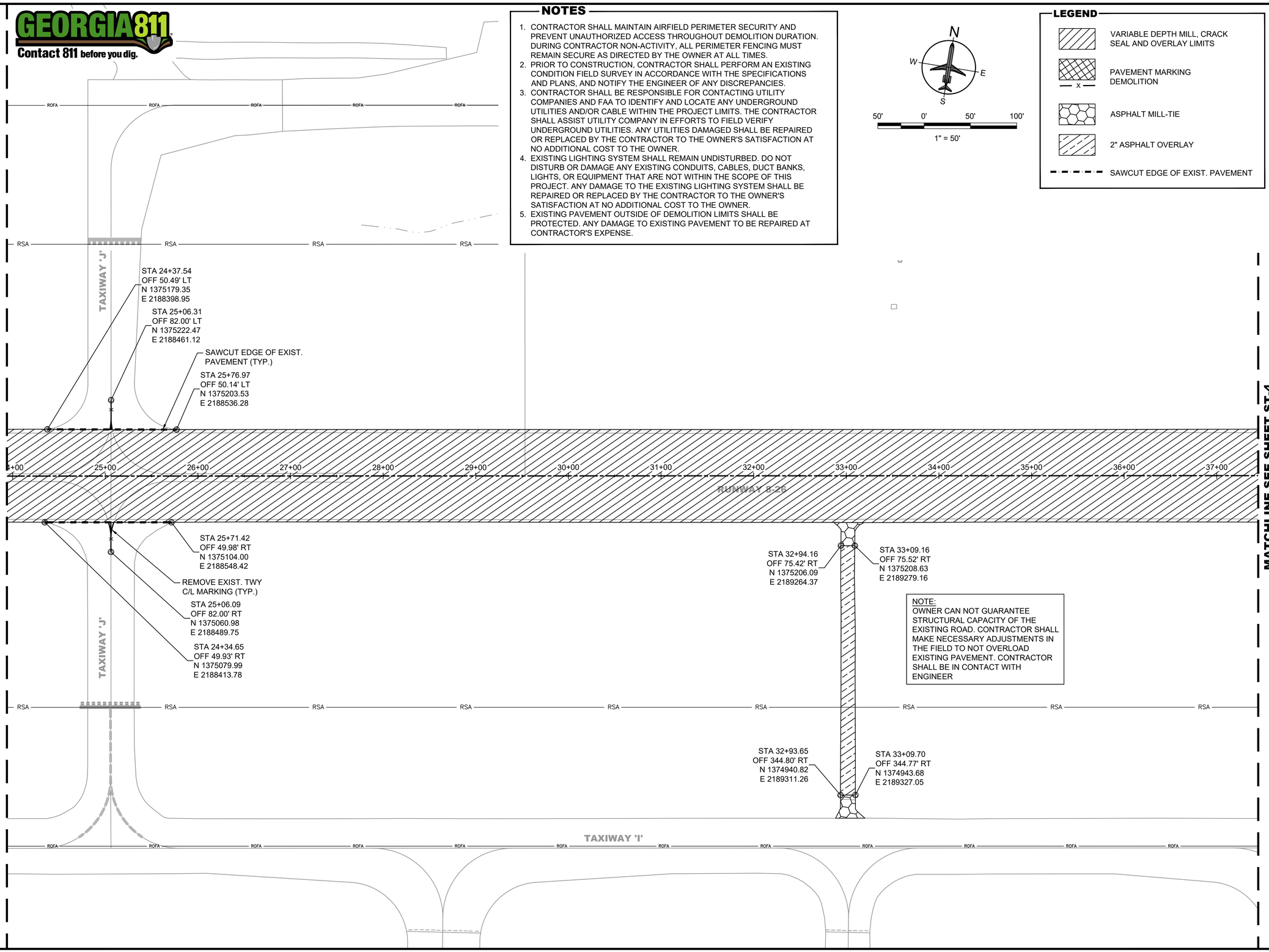
50' 0' 50' 100'
1" = 50'

LEGEND

- VARIABLE DEPTH MILL, CRACK SEAL AND OVERLAY LIMITS
- PAVEMENT MARKING DEMOLITION
- ASPHALT MILL-TIE
- 2" ASPHALT OVERLAY
- SAWCUT EDGE OF EXIST. PAVEMENT



FULTON COUNTY EXECUTIVE AIRPORT

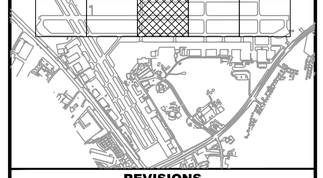
FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer:	**EP/CG**
Technician:	**EP/CG**
Checked by:	**CA**
Project Number:	**204307**

Notes:

KEY MAP



REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

STAKING AND DEMOLITION PLAN NO. 3

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date:	Sheet Number:
02/04/2025	**16** of **38**
Scale:	Drawing Number:
1" = 50'	**ST-3**

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

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Contact 811 before you dig.

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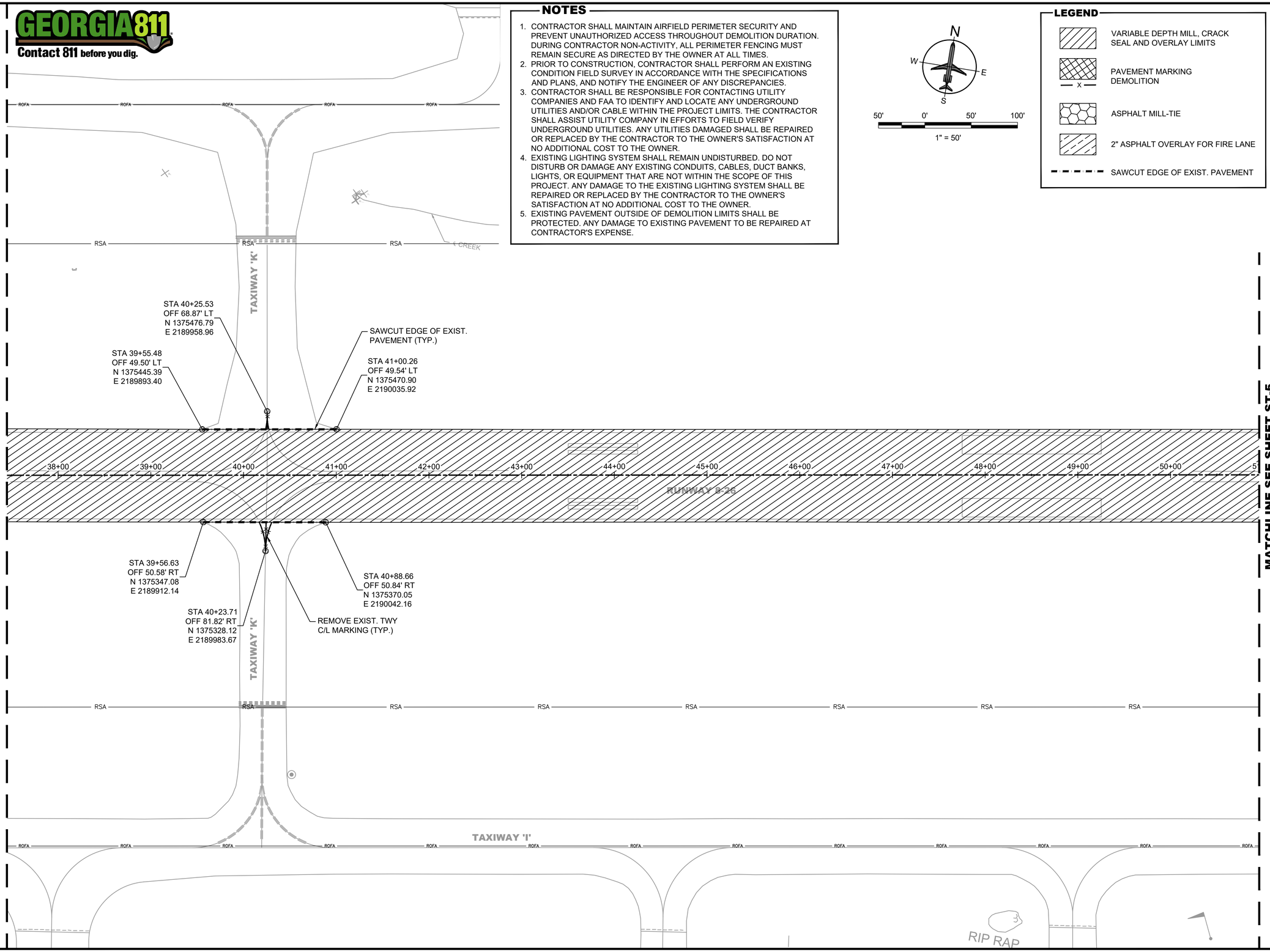
50' 0' 50' 100'
1" = 50'

LEGEND

- VARIABLE DEPTH MILL, CRACK SEAL AND OVERLAY LIMITS
- PAVEMENT MARKING DEMOLITION
- ASPHALT MILL-TIE
- 2" ASPHALT OVERLAY FOR FIRE LANE
- SAWCUT EDGE OF EXIST. PAVEMENT



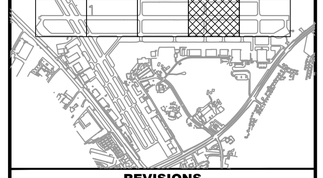
FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer:	EP/CG
Technician:	EP/CG
Checked by:	CA
Project Number:	204307

Notes:

KEY MAP



REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

STAKING AND DEMOLITION PLAN NO. 4

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date: 02/04/2025	Sheet Number: 17 of 38
Scale: 1" = 50'	Drawing Number: ST-4

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Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

GEORGIA811
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50' 0' 50' 100'
1" = 50'

LEGEND

- VARIABLE DEPTH MILL, CRACK SEAL AND OVERLAY LIMITS
- PAVEMENT MARKING DEMOLITION
- ASPHALT MILL-TIE
- 2" ASPHALT OVERLAY
- SAWCUT EDGE OF EXIST. PAVEMENT

MATCHLINE SEE SHEET ST-4

TAXIWAY 'W'
TAXIWAY 'L'
TAXIWAY 'I'
RUNWAY 8-26
ROFA
RSA
RPZ
UE

STA 52+85.27
OFF 82.00' LT
N 1375711.31
E 2191196.74

STA 52+22.21
OFF 49.23' LT
N 1375667.96
E 2191140.43

SAWCUT EDGE OF EXIST. PAVEMENT (TYP.)

STA 53+56.54
OFF 49.07' LT
N 1375691.43
E 2191272.69

PROTECT THRESHOLD LIGHT (TYP.)

STA 59+46.27
OFF 0.00'
N: 1375746.87
E: 2191861.86

52+00 53+00 54+00 55+00 56+00 57+00 58+00 59+00 60+00 61+00

STA 52+25.13
OFF 51.63' RT
N 1375569.18
E 2191161.04

STA 52+84.44
OFF 82.00' RT
N 1375549.72
E 2191224.77

STA 53+47.56
OFF 51.34' RT
N 1375591.01
E 2191281.51

REMOVE EXIST. TWY C/L MARKING (TYP.)

STA 58+42.20
OFF 51.29' RT
N 1375678.07
E 2191768.43

STA 59+46.30
OFF 50.06' RT
N 1375697.59
E 2191870.69

STA 58+77.69
OFF 241.31' RT
N 1375497.25
E 2191836.80

EXISTING PAVEMENT MARKING TO BE REMOVED

RIP RAP

KEY MAP

REVISIONS

No.	Description	Date	By

FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer: EP/CG	
Technician: EP/CG	
Checked by: CA	
Project Number: 204307	

Notes:

Project Name:
RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:
STAKING AND DEMOLITION PLAN NO. 5

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date: 02/04/2025	Sheet Number: 18 of 38
Scale: 1" = 50'	Drawing Number: ST-5

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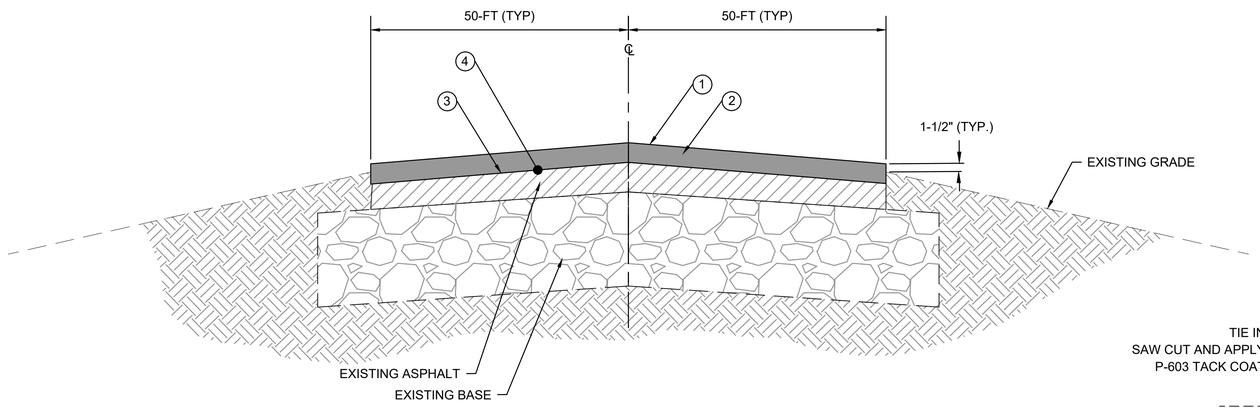
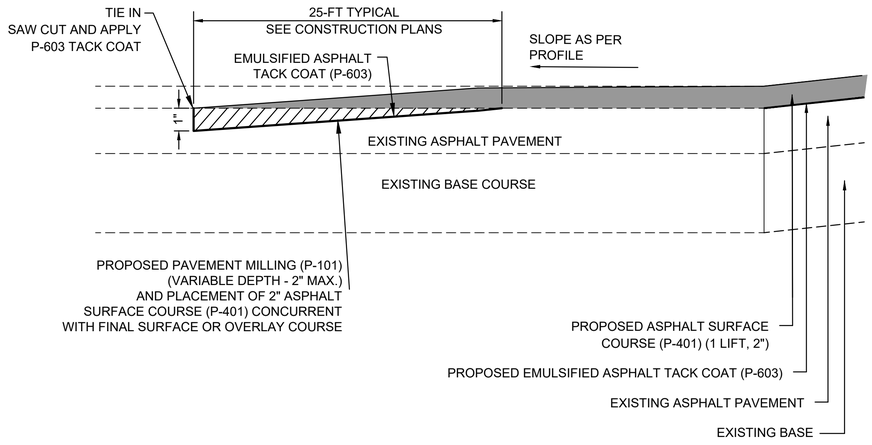


LEGEND

1. 2" ASPHALT SURFACE COURSE - 1 LIFT (P-401)
2. VARIABLE DEPTH MILLING (P-101)
3. CRACK SEAL OF EXISTING SURFACE AFTER MILLING (P-101)
4. ASPHALT TACK COAT (BETWEEN EACH ASPHALT LIFT) (P-603)

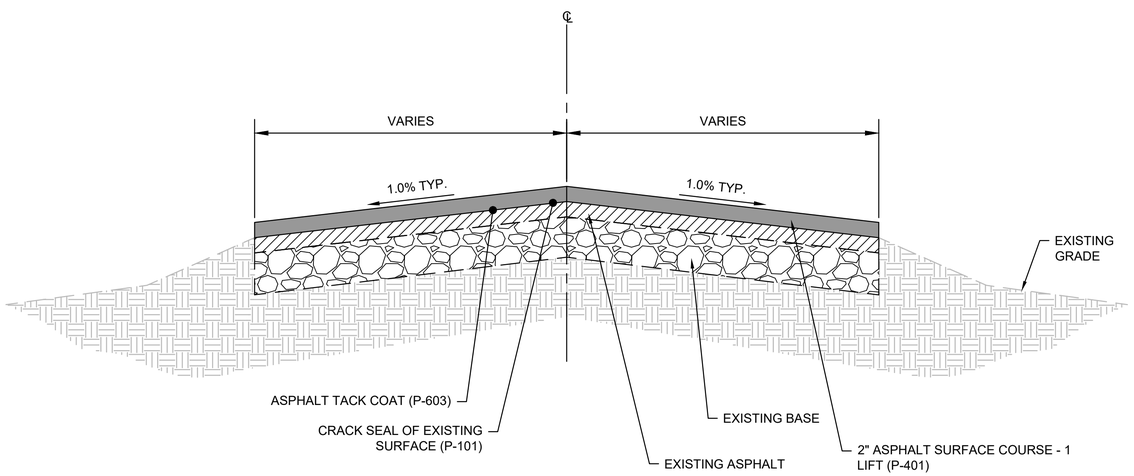
TYPICAL SECTION - PAVEMENT MILL AND OVERLAY

N.T.S.



TYPICAL ASPHALT PAVEMENT MILL-TIE DETAIL

N.T.S



TYPICAL SECTION- FIRE ACCESS ROAD OVERLAY

N.T.S.

FULTON COUNTY EXECUTIVE AIRPORT

FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer: **EP/CG**	
Technician: **EP/CG**	
Checked by: **CA**	
Project Number: **204307**	

Notes:

REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

TYPICAL SECTIONS NO. 1

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date:	Sheet Number:
02/04/2025	**19** of **38**
Scale: **N.T.S.**	Drawing Number: **TS-1**

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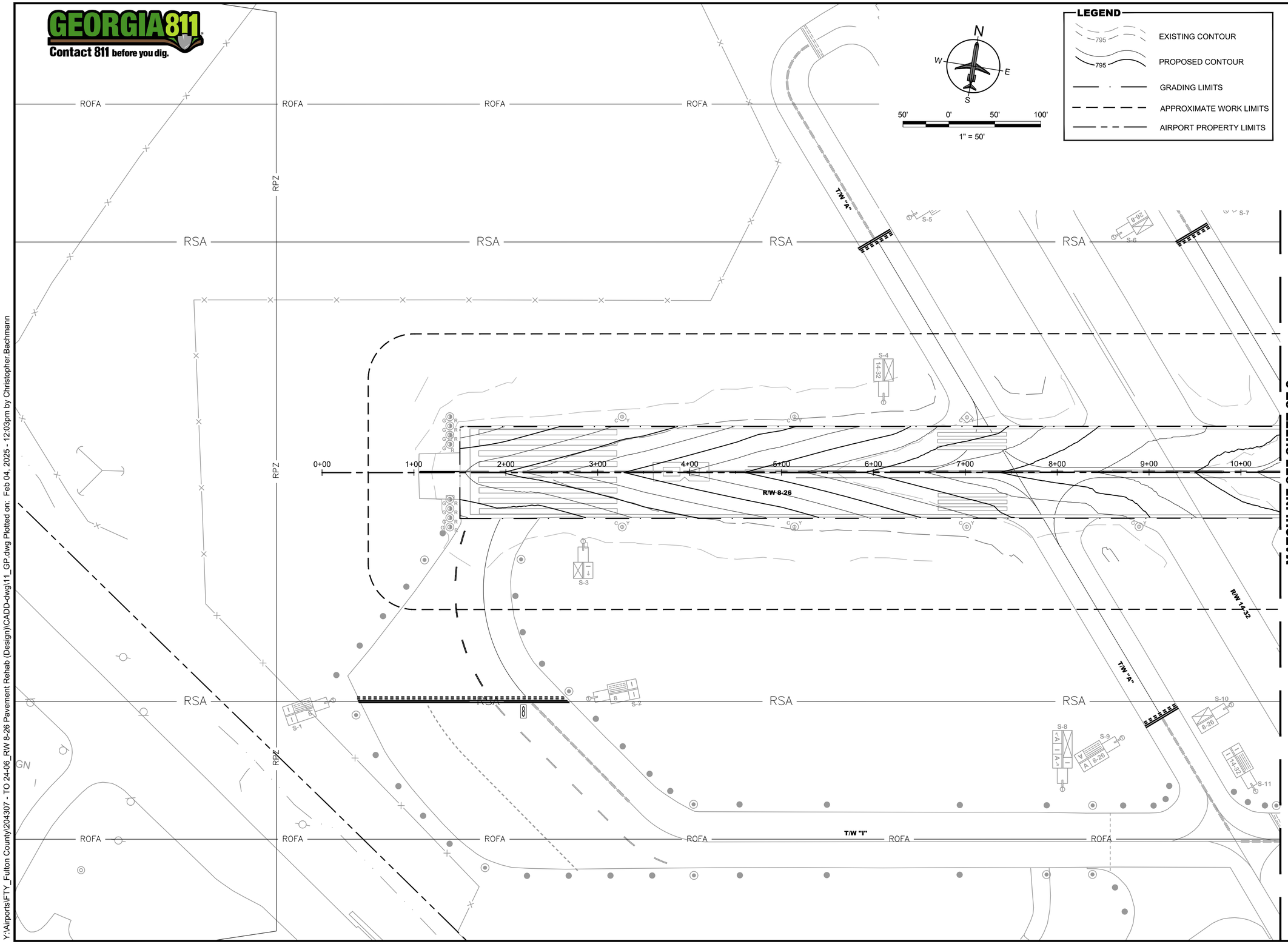

LEGEND

- 795 — EXISTING CONTOUR
- 795 — PROPOSED CONTOUR
- GRADING LIMITS
- APPROXIMATE WORK LIMITS
- AIRPORT PROPERTY LIMITS

FULTON COUNTY EXECUTIVE AIRPORT

FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer: **EP/CG**	
Technician: **EP/CG**	
Checked by: **CA**	
Project Number: **204307**	

Notes:
1. EXISTING CONTOUR INTERVAL IS 1'. PROPOSED CONTOUR INTERVAL IS 1.0' ON GROUND AND 0.2' INTERVAL ON PAVEMENT
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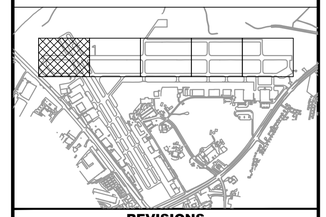
4. ELEVATIONS ARE BASED ON NAVD 88.

KEY MAP



REVISIONS

No.	Description	Date	By

Project Name:
RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:
GRADING PLAN NO. 1

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date:	Sheet Number:
01/22/2025	**20** of **38**
Scale:	Drawing Number:
1" = 50'	**GP-1**

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GEORGIA811
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50' 0' 50' 100'
1" = 50'

LEGEND

- 795 EXISTING CONTOUR
- 795 PROPOSED CONTOUR
- GRADING LIMITS
- APPROXIMATE WORK LIMITS
- AIRPORT PROPERTY LIMITS

ROFA ROFA ROFA ROFA ROFA

RSA RSA RSA RSA

APPROXIMATE LANDFILL LINE

ANTENNA

℄ CREEK

S-16

MATCHLINE SEE SHEET GP-1

11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00

R/W 8-26

R/W 8-26

MATCHLINE SEE SHEET GP-3

S-15 32-14

S-19

T/W "B"

R/W 14-32

S-14 B 8-26

RSA RSA RSA RSA

ROFA ROFA ROFA T/W "H" ROFA ROFA ROFA T/W "I" ROF

S-13 14-32

S-17 B

S-18 C

FULTON COUNTY EXECUTIVE AIRPORT

FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer:	**EP/CG**
Technician:	**EP/CG**
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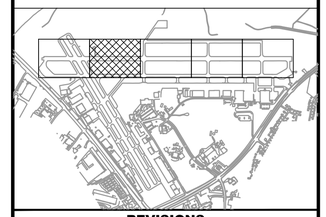

REVISIONS

No.	Description	Date	By

Project Name:
RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:
GRADING PLAN NO. 2

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date:	Sheet Number:
02/04/2025	**21** of **38**
Scale:	Drawing Number:
1" = 50'	**GP-2**

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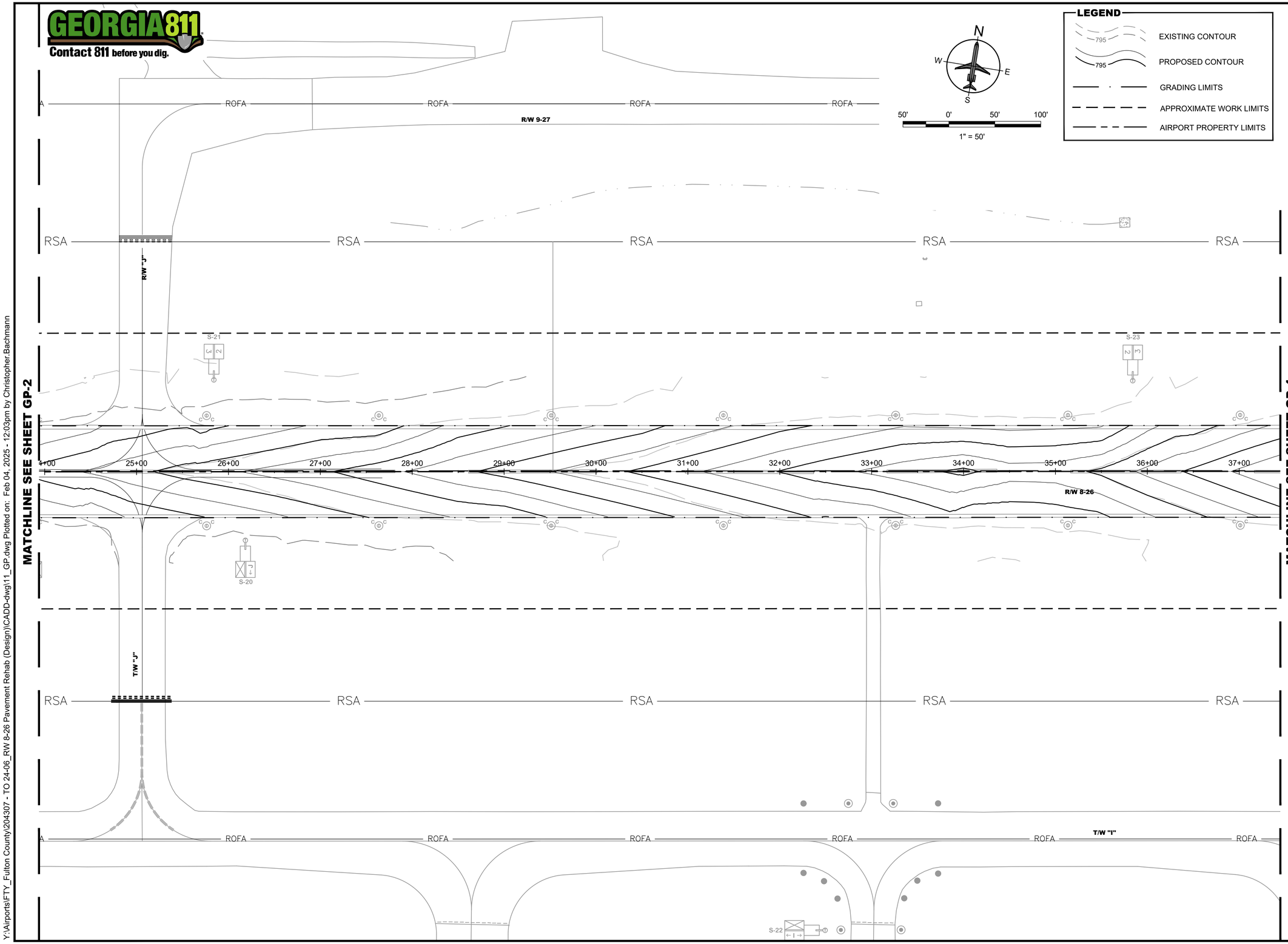

FULTON COUNTY EXECUTIVE AIRPORT

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ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer: **EP/CG**	
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Project Number: **204307**	

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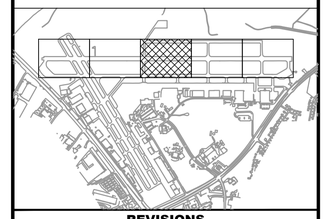

REVISIONS

No.	Description	Date	By

Project Name:
RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:
GRADING PLAN NO. 3

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date: **02/04/2025**	Sheet Number: **22** of **38**
Scale: **1" = 50'**	Drawing Number: **GP-3**

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GEORGIA811
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50' 0' 50' 100'
1" = 50'

LEGEND

- 795 — EXISTING CONTOUR
- 795 — PROPOSED CONTOUR
- GRADING LIMITS
- APPROXIMATE WORK LIMITS
- AIRPORT PROPERTY LIMITS

ROFA ROFA ROFA ROFA

R/W 9-27

RSA RSA RSA RSA

T/W "K"

T CREEK

S-28

MATCHLINE SEE SHEET GP-3

38+00 39+00 40+00 41+00 42+00 43+00 44+00 45+00 46+00 47+00 48+00 49+00 50+00 5

R/W 8-26

MATCHLINE SEE SHEET GP-5

S-24 S-27

T/W "K" T/W "K"

S-25 K 8-26

RSA RSA RSA RSA

S-26 S-29 S-30

ROFA ROFA ROFA T/W "L" ROFA ROFA ROFA

RIP RAP

FULTON
COUNTY EXECUTIVE AIRPORT

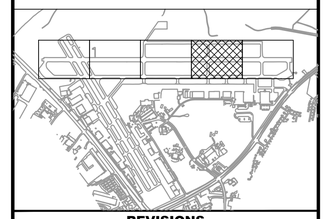
FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker
INTERNATIONAL

Designer: **EP/CG**	
Technician: **EP/CG**	
Checked by: **CA**	
Project Number: **204307**	

Notes:
1. EXISTING CONTOUR INTERVAL IS 1'. PROPOSED CONTOUR INTERVAL IS 1.0' ON GROUND AND 0.2' INTERVAL ON PAVEMENT
2. CONTRACTOR TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION ACTIVITIES.
3. CONTRACTOR SHALL LOCATE FAA AND AIRFIELD ELECTRICAL CABLES PRIOR TO CONSTRUCTION AND HAVE CABLE LOCATIONS FIELD VERIFIED BY AIRPORT PRIOR TO DEMOLITION AND GRADING TO ENSURE NO CABLES ARE CUT. CONTRACTOR SHALL PAY ALL FEES ASSOCIATED WITH REPAIRS AND FINES PER PROJECT SPECIFICATIONS.
4. ELEVATIONS ARE BASED ON NAVD 88.

KEY MAP



REVISIONS

No.	Description	Date	By

Project Name:
RUNWAY 8-26 PAVEMENT REHABILITATION

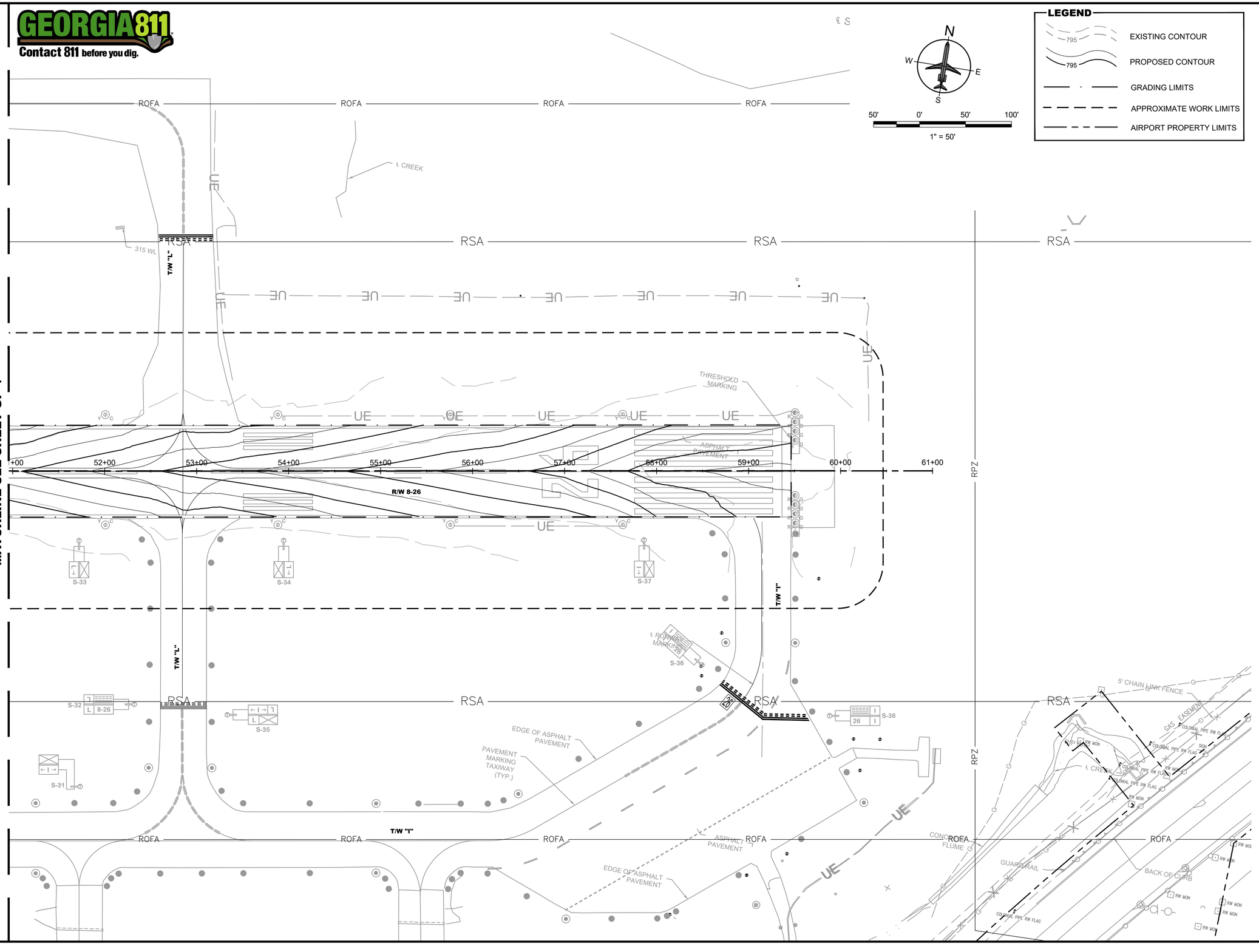
Drawing Name:
GRADING PLAN NO. 4

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date:	Sheet Number:
02/04/2025	**23** of **38**
Scale:	Drawing Number:
1" = 50'	**GP-4**

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

GEORGIA811
Contact 811 before you dig.



MATCHLINE SEE SHEET GP-4

N
W
E
S
50' 0' 50' 100'
1" = 50'

LEGEND

- 795 — EXISTING CONTOUR
- 795 — PROPOSED CONTOUR
- GRADING LIMITS
- APPROXIMATE WORK LIMITS
- AIRPORT PROPERTY LIMITS

FULTON COUNTY EXECUTIVE AIRPORT

FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer:	**EP/CG**
Technician:	**EP/CG**
Checked by:	**CA**
Project Number:	**204307**

Notes:
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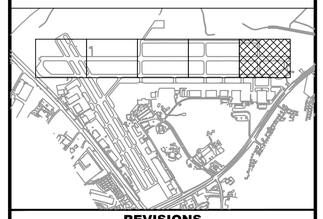
KEY MAP



REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

GRADING PLAN NO. 5

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date:	Sheet Number:
02/04/2025	**24** of **38**
Scale:	Drawing Number:
1" = 50'	**GP-5**

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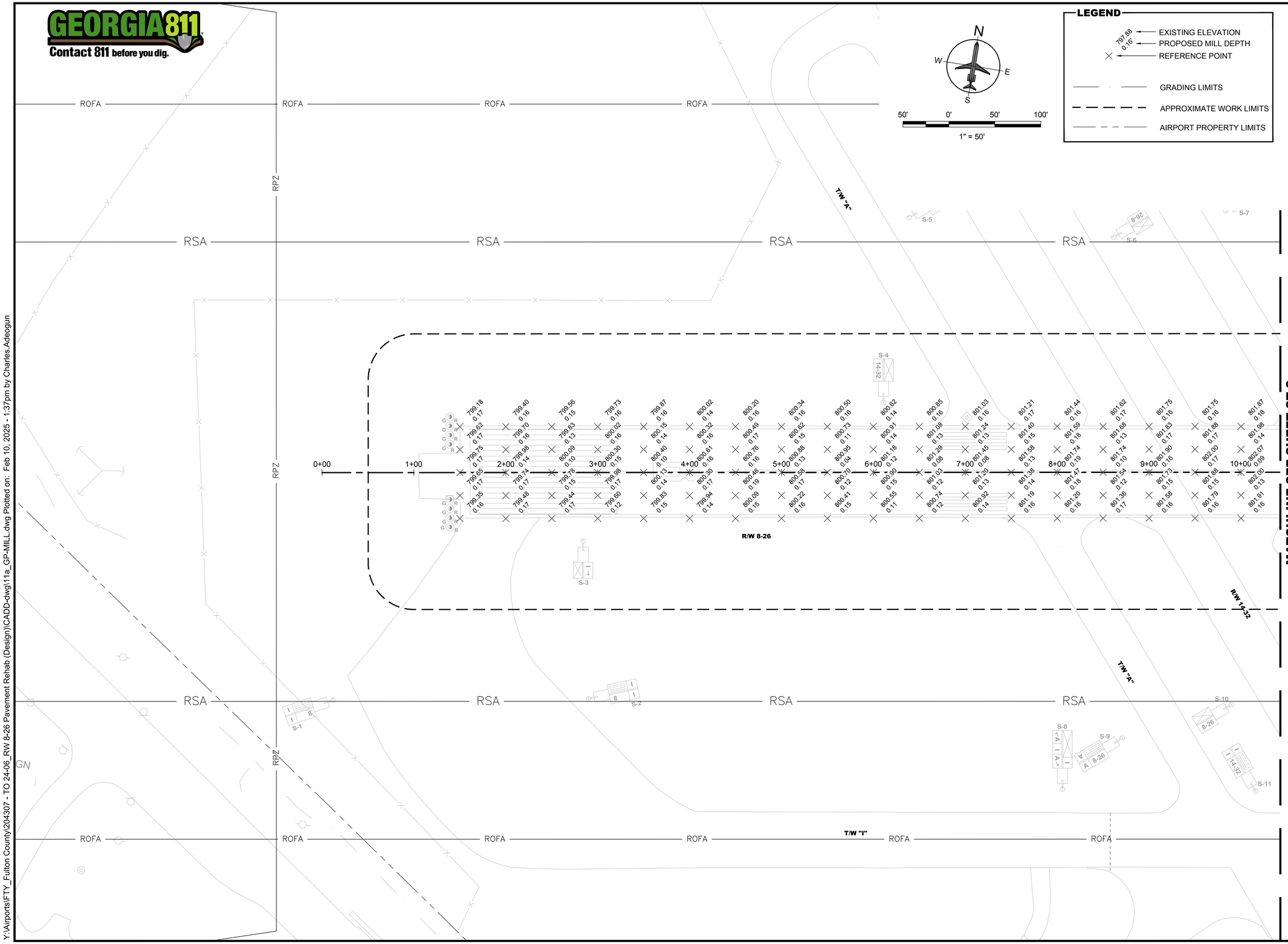

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FULTON COUNTY EXECUTIVE AIRPORT

FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

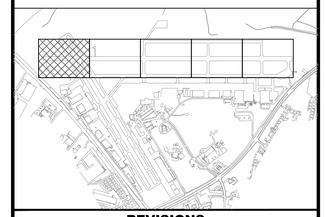
Michael Baker INTERNATIONAL

Designer: **EP/CG**	
Technician: **EP/CG**	
Checked by: **CA**	
Project Number: **204307**	

Notes:

1. ELEVATIONS ARE BASED ON NAVD 88.
2. CONTRACTOR SHALL VERIFY EXISTING ELEVATIONS PRIOR TO STARTING CONSTRUCTION AND IMMEDIATELY REPORT DISCREPANCIES TO THE ENGINEER.
3. ALL MILLINGS SHALL BE REMOVED AND DISPOSED OFF AIRPORT PROPERTY, UNLESS OTHERWISE SPECIFIED.
4. AS AN ALTERNATIVE, CONTRACTOR MAY DISPOSE MILLINGS AT 7520 COCHRAN ROAD, ATLANTA GA 30349.

KEY MAP



REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

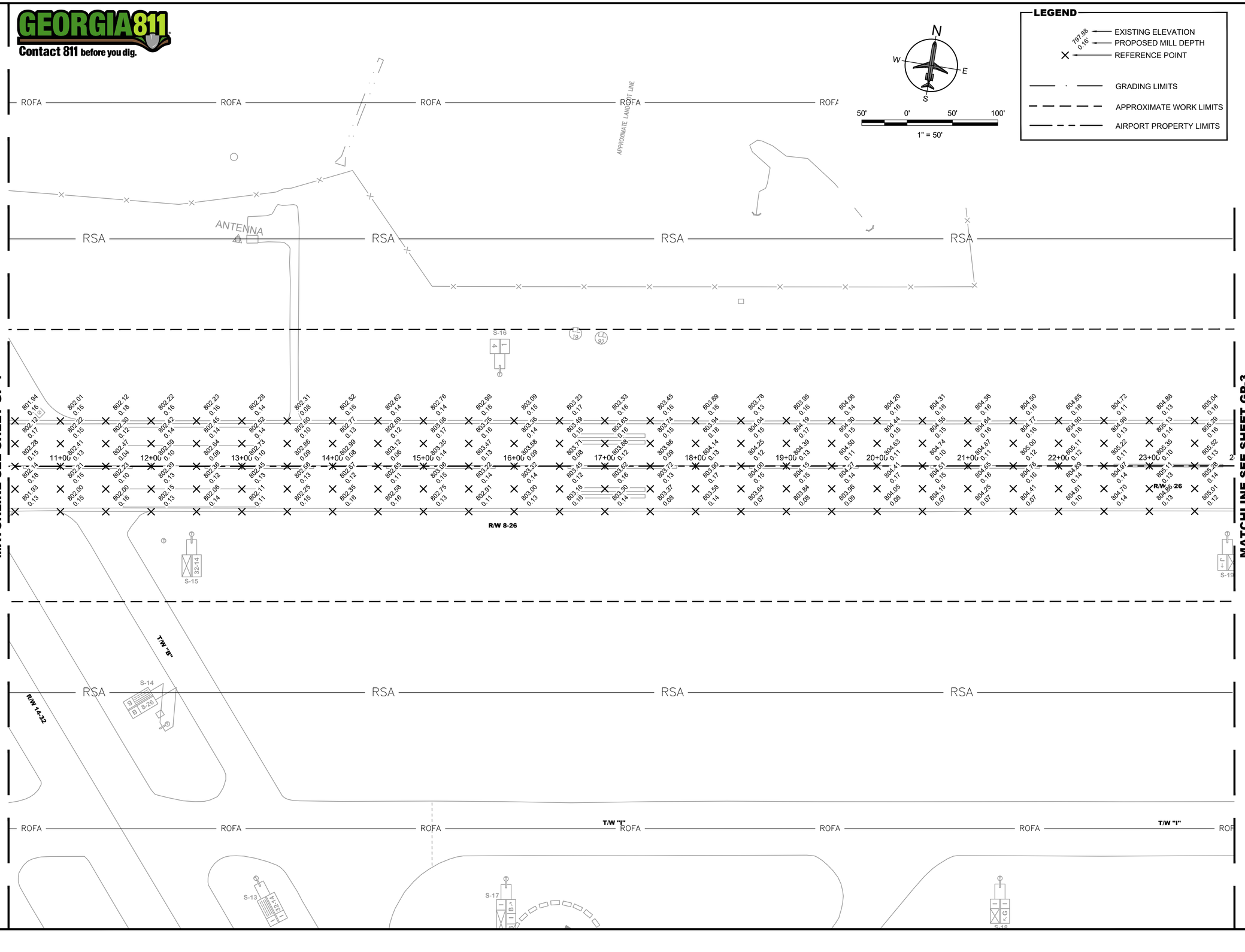
MILLING DEPTH SPOT ELEVATION PLAN NO. 1

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date:	Sheet Number:
02/04/2025	**25** of **38**
Scale:	Drawing Number:
1" = 50'	**ME-1**

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

GEORGIA811
Contact 811 before you dig.



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FULTON COUNTY EXECUTIVE AIRPORT

ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer: **EP/CG**	
Technician: **EP/CG**	
Checked by: **CA**	
Project Number: **204307**	

Notes:

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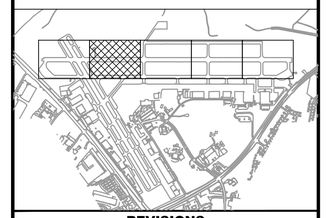
KEY MAP



REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

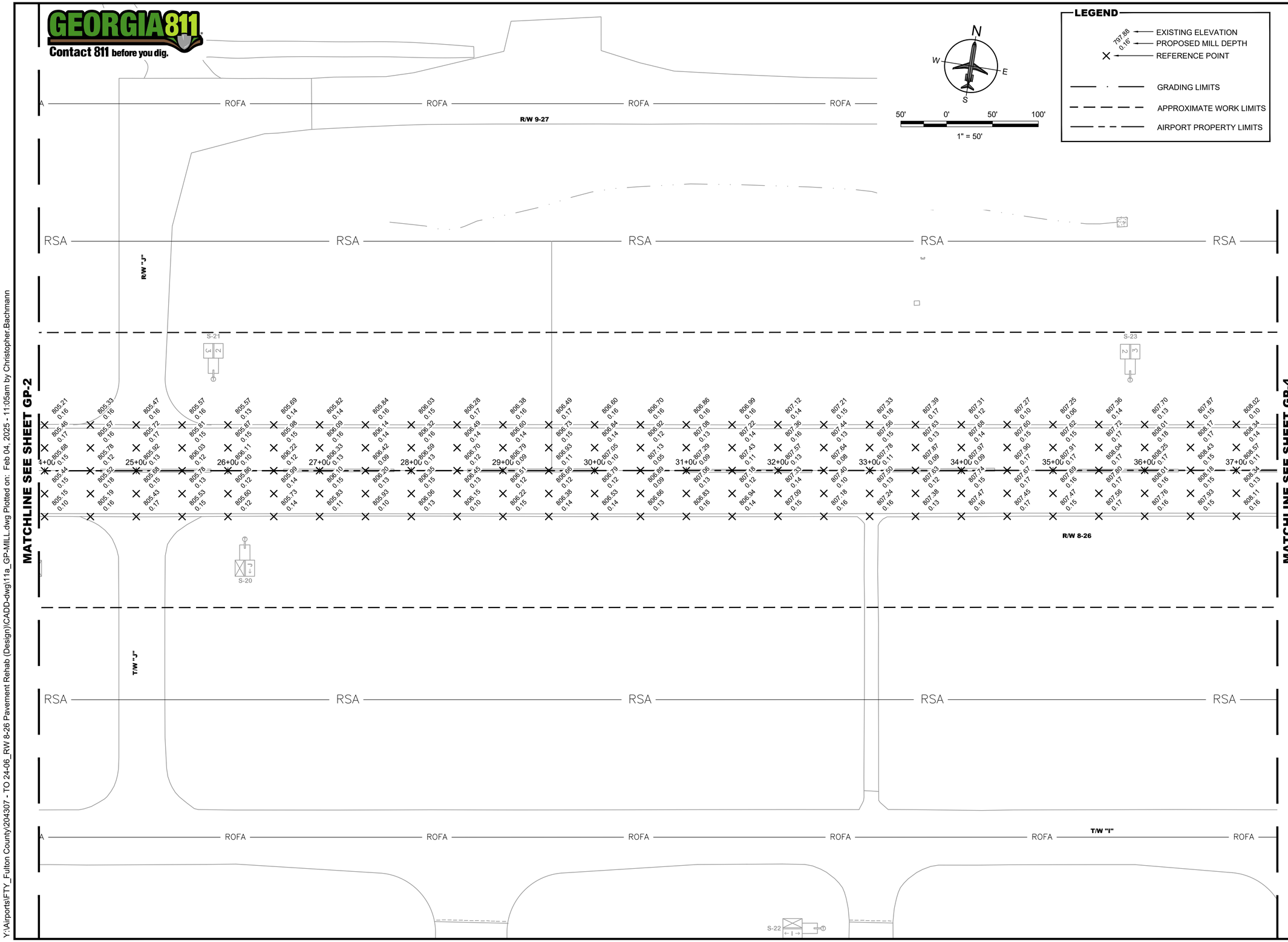
MILLING DEPTH SPOT ELEVATION PLAN NO. 2

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date:	Sheet Number:
02/04/2025	**26** of **38**
Scale:	Drawing Number:
1" = 50'	**ME-2**

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

GEORGIA811
Contact 811 before you dig.



50' 0' 50' 100'

1" = 50'

LEGEND

- 797.88 / 0.16 — EXISTING ELEVATION / PROPOSED MILL DEPTH
- REFERENCE POINT
- GRADING LIMITS
- APPROXIMATE WORK LIMITS
- AIRPORT PROPERTY LIMITS

FULTON COUNTY EXECUTIVE AIRPORT

FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer: **EP/CG**	
Technician: **EP/CG**	
Checked by: **CA**	
Project Number: **204307**	

Notes:

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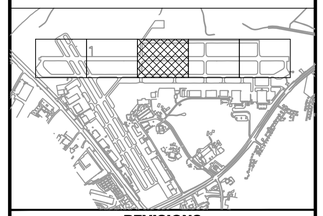
KEY MAP



REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

MILLING DEPTH SPOT ELEVATION PLAN NO. 3

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date:	Sheet Number:
02/04/2025	**27** of **38**
Scale:	Drawing Number:
1" = 50'	**ME-3**

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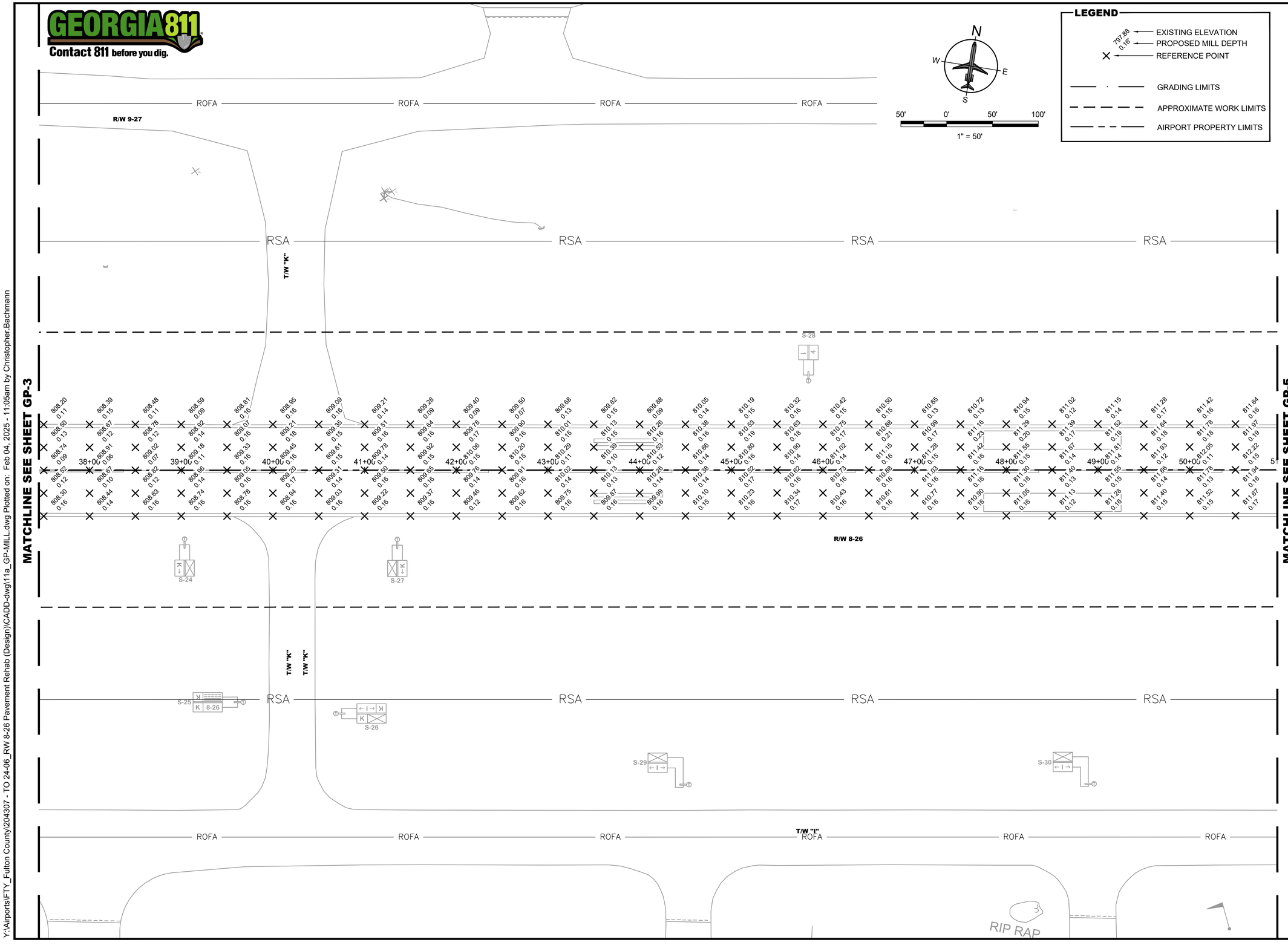
GEORGIA811
Contact 811 before you dig.



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50' 0' 50' 100'
1" = 50'

LEGEND

- 797.88 / 0.16 — EXISTING ELEVATION / PROPOSED MILL DEPTH
- REFERENCE POINT
- GRADING LIMITS
- APPROXIMATE WORK LIMITS
- AIRPORT PROPERTY LIMITS

FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer:	EP/CG
Technician:	EP/CG
Checked by:	CA
Project Number:	204307

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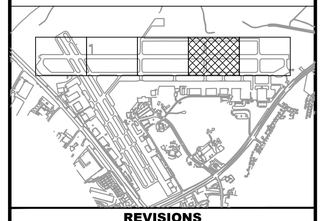

REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

MILLING DEPTH SPOT ELEVATION PLAN NO. 4

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date:	Sheet Number:
02/04/2025	28 of 38
Scale:	Drawing Number:
1" = 50'	ME-4

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Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

GEORGIA811
Contact 811 before you dig.

N
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50' 0' 50' 100'
1" = 50'

LEGEND

- 797.88 / 0.16 — EXISTING ELEVATION / PROPOSED MILL DEPTH
- REFERENCE POINT
- GRADING LIMITS
- APPROXIMATE WORK LIMITS
- AIRPORT PROPERTY LIMITS

ROFA RSA T/W "L" R/W 8-26 T/W "I" RPZ

MATCHLINE SEE SHEET GP-4

+00 811.72 0.16 / 812.31 0.10 / 812.05 0.13 / 811.79 0.16
812.04 0.15 / 812.20 0.16 / 812.36 0.20 / 812.50 0.16 / 812.19 0.14 / 811.88 0.13
812.00 0.15 / 812.36 0.20 / 812.63 0.16 / 812.34 0.16 / 812.04 0.16
812.19 0.16 / 812.47 0.15 / 812.75 0.14 / 812.45 0.16 / 812.13 0.16
52+00 812.30 0.16 / 812.60 0.18 / 812.86 0.15 / 812.60 0.18 / 812.29 0.16
812.36 0.15 / 812.67 0.16 / 812.84 0.13 / 812.52 0.15 / 812.30 0.16 / 812.39 0.13
812.41 0.16 / 812.76 0.17 / 813.05 0.13 / 812.71 0.13
53+00 812.54 0.16 / 812.88 0.18 / 813.16 0.15 / 812.86 0.15
812.65 0.13 / 813.01 0.20 / 813.29 0.18 / 812.99 0.17 / 812.70 0.17
54+00 812.78 0.13 / 813.08 0.15 / 813.36 0.15 / 813.06 0.13 / 812.77 0.12
812.89 0.16 / 813.21 0.20 / 813.46 0.15 / 813.20 0.16 / 812.93 0.16
55+00 812.96 0.14 / 813.26 0.15 / 813.52 0.11 / 813.27 0.14 / 813.02 0.16
813.11 0.12 / 813.40 0.14 / 813.63 0.12 / 813.37 0.14 / 813.10 0.16
56+00 813.33 0.16 / 813.63 0.17 / 813.84 0.09 / 813.57 0.15 / 813.27 0.17
813.54 0.16 / 813.89 0.21 / 814.10 0.12 / 813.91 0.20 / 813.59 0.16
57+00 813.70 0.16 / 813.97 0.18 / 814.16 0.13 / 813.99 0.18 / 813.75 0.16
813.69 0.16 / 814.04 0.23 / 814.25 0.16 / 814.09 0.11 / 814.05 0.17
58+00 813.82 0.19 / 814.05 0.19 / 814.26 0.17 / 814.19 0.19 / 814.08 0.16
59+00
60+00
61+00

S-31 S-32 L 8-26 S-33 S-34 S-35 S-36 26 S-37 S-38 26

FULTON COUNTY EXECUTIVE AIRPORT
FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer:	**EP/CG**
Technician:	**EP/CG**
Checked by:	**CA**
Project Number:	**204307**

Notes:

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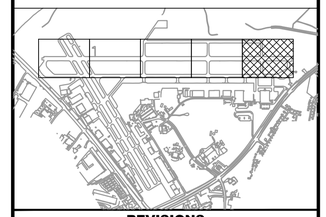
KEY MAP



REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

MILLING DEPTH SPOT ELEVATION PLAN NO. 5

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date:	Sheet Number:
02/04/2025	**29** of **38**
Scale:	Drawing Number:
1" = 50'	**ME-5**

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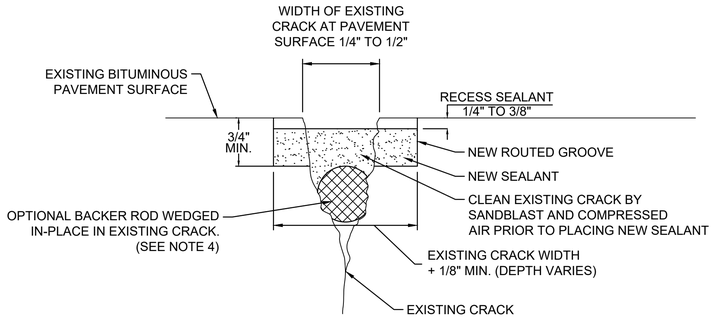
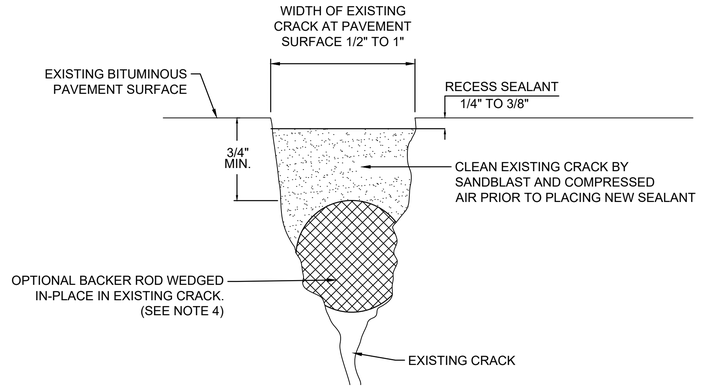
Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7



DETAIL 1 - SEALING SMALL CRACK IN BITUMINOUS PAVEMENT

N.T.S.

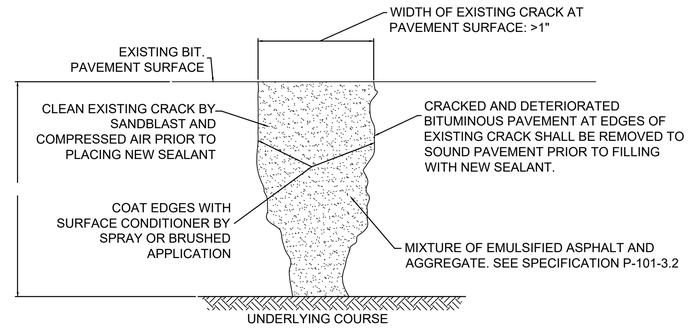


DETAIL 2 - SEALING MEDIUM CRACK IN BITUMINOUS PAVEMENT

N.T.S.

GENERAL NOTES: SEALING CRACKS IN BITUMINOUS PAVEMENT

1. EXISTING CRACKS TO BE SEALED AND REPAIRED SHALL BE CLEANED AND PREPARED AS SPECIFIED P-101.
2. EXISTING CRACKS < 1/4" WIDE SHALL NOT BE SEALED.
3. EXISTING SEALED CRACKS IN SATISFACTORY CONDITION AS DETERMINED BY ENGINEER SHALL NOT BE DISTURBED.
4. AT OPTION OF CONTRACTOR, BACKER ROD BACK-UP MATERIAL SHALL BE INSERTED IN SMALL AND MEDIUM WIDTH CRACKS DEEPER THAN 3/4" TO LIMIT DEPTH OF NEW SEALANT TO 3/4" MINIMUM.



DETAIL 3 - SEALING LARGE CRACK IN BITUMINOUS PAVEMENT

N.T.S.

FULTON COUNTY EXECUTIVE AIRPORT

FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer:	**EP/CG**
Technician:	**EP/CG**
Checked by:	**CA**
Project Number:	**204307**

Notes:

REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

CRACK SEAL DETAIL

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date: **02/04/2025**	Sheet Number: **30** of **38**
Scale: **N.T.S.**	Drawing Number: **CS-1**

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Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

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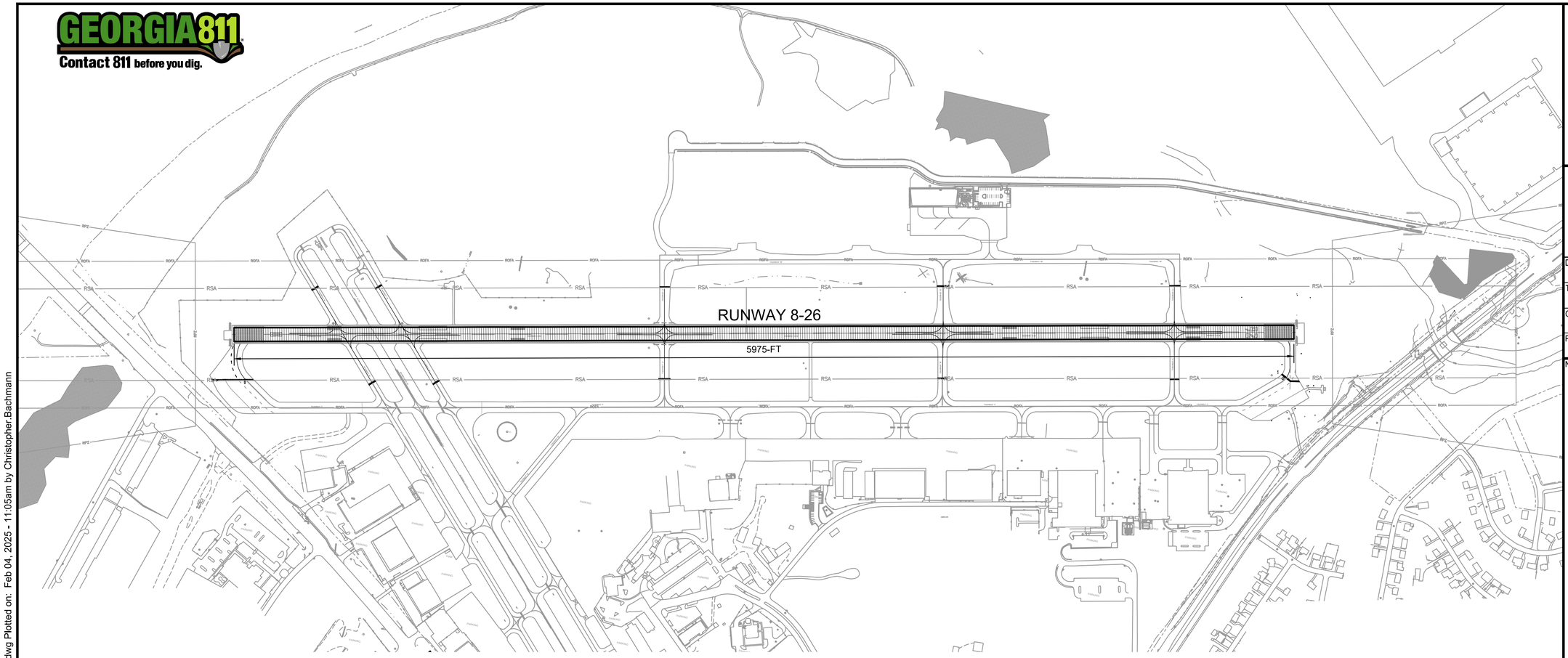
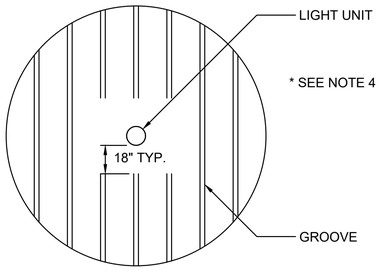
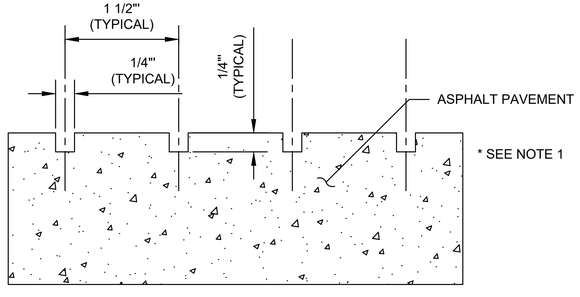
Contact 811 before you dig.





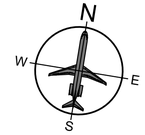
GROOVE AROUND
IN-PAVEMENT LIGHT
NTS



TYPICAL GROOVING DETAIL
NTS

NOTES:

1. GROOVE SHALL BE 1/4 INCH IN DEPTH BY 1/4 INCH IN WIDTH BY 1-1/2 INCH CENTER TO CENTER SPACING.
2. THE GROOVES SHALL BE TRANSVERSE (PERPENDICULAR) TO THE DIRECTION OF AIRCRAFT LANDING AND TAKEOFF OPERATIONS.
3. THE GROOVES SHALL BE TERMINATED WITHIN 10 FEET OF THE RUNWAY PAVEMENT EDGE TO ALLOW ADEQUATE SPACE FOR OPERATION OF THE GROOVING EQUIPMENT.
4. GROOVES SHALL BE SAWED NO LESS THAN 6 INCHES NOR MORE THAN 18 INCHES FROM IN-PAVEMENT LIGHT FIXTURES.
5. GROOVES SHALL RUN THROUGH LONGITUDINAL JOINTS.
6. CLEAN-UP MUST BE CONTINUOUS THROUGHOUT THE GROOVING OPERATIONS, THE WASTE MATERIAL (SLURRY) SHOULD NOT DRAIN ONTO THE RUNWAY SHOULDER OR GRASS AREA AND MUST BE REMOVED FROM ALL PAVED AREAS TO A LEVEL ACCEPTABLE TO THE ENGINEER AT ALL TIMES.
7. PRIOR TO OPENING THE RUNWAY, THE CONTRACTOR SHALL PERFORM RUNWAY FRICTION TESTING. THE CONTRACTOR WILL BE REQUIRED TO DEMONSTRATE A MINIMUM FRICTION VALUE TO MEET FAA AC 150/5320-12C REQUIREMENTS (INCLUDING CURRENT CHANGES). COST OF FRICTION TEST TO BE INCIDENTAL TO PAVEMENT GROOVING PAY ITEM.



300' 0' 300' 600'
1" = 300'

FULTON COUNTY EXECUTIVE AIRPORT

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ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer:	**EP/CG**
Technician:	**EP/CG**
Checked by:	**CA**
Project Number:	**204307**

Notes:

REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

GROOVING PLAN

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date: **01/15/2024**	Sheet Number: **21** of **28**
Scale: **1"=300'**	Drawing Number: **GV-1**

Y:\Airports\FTY_Fulton County\204307 - TO 24-06_RW 8-26 Pavement Rehab (Design)\CADD-dwg\14A_GV.dwg Plotted on: Feb 04, 2025 - 11:05am by Christopher.Bachmann

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GEORGIA811
Contact 811 before you dig.

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50' 0' 50' 100'
1" = 50'

LEGEND
- PROPOSED MARKINGS
- EXISTING MARKINGS

T/W "A"
REMARK RUNWAY HOLD BAR MARKING, YELLOW
REMARK TAXIWAY CENTERLINE MARKING, YELLOW
PAINT RUNWAY TOUCHDOWN ZONE MARKING, WHITE
PAINT RUNWAY CENTERLINE MARKING, WHITE
PAINT RUNWAY SIDE MARKING, WHITE
PAINT RUNWAY THRESHOLD MARKING, WHITE
PAINT RUNWAY DESIGNATION MARKING, WHITE
TIE TO EXISTING AT THE PT OF CURVE
REMARK TAXIWAY CENTERLINE MARKING, YELLOW
PAINT RUNWAY SIDE MARKING, WHITE
PAINT RUNWAY CENTERLINE MARKING, WHITE
R50'
R75'
200' TYP.
0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00 9+00 10+00
48'
3'
PAINT RUNWAY THRESHOLD BAR, WHITE
THRESHOLD POINT STA. 1+50.00
5'
10'
R/W 8-26
R75'
R50'
PAINT TAXIWAY TO RUNWAY TURN MARKING, YELLOW
10' 150' 40' 60' 39.999' 120' TYP. 80' TYP. 75'
TIE TO EXISTING AT THE PT OF CURVE
500' 500'
R/W 14-32
REMARK TAXIWAY EDGE MARKING, YELLOW
REMARK TAXIWAY CENTER LINE MARKING, YELLOW
STA 1+50.00 OFF 250.72' RT
REMARK RUNWAY HOLDING POSITION MARKING, YELLOW
REMARK TAXIWAY CENTERLINE MARKING, YELLOW
T/W "A"
8-26
MARK SURFACE-PAINTED SIGN SEE INSET, THIS SHEET
PAINT ILS HOLDING POSITION MARKING, YELLOW
REMARK RUNWAY HOLD BAR MARKING, YELLOW
T/W "I"

MATCHLINE SEE SHEET MP-2

EXISTING ENHANCED CENTERLINE MARKING
2'
EXISTING HOLD POSITION MARKING
12' LETTER HEIGHT
3'
8-26
NOTE: DIMENSIONS ARE FROM THE EDGE OF THE MARKING

INSET
SURFACE-PAINTED SIGN DETAIL
SCALE : 1" = 5'

FULTON COUNTY EXECUTIVE AIRPORT

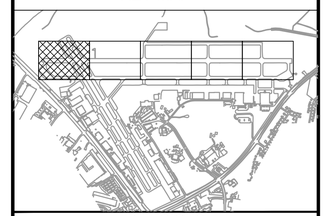
FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer:	EP/CG
Technician:	EP/CG
Checked by:	CA
Project Number:	204307

Notes:

KEY MAP



REVISIONS

No.	Description	Date	By

Project Name:
RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:
MARKING PLAN NO. 1

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date: 02/04/2025	Sheet Number: 32 of 38
Scale: 1" = 50'	Drawing Number: MP-1

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N
W
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50' 0' 50' 100'
1" = 50'

LEGEND
- PROPOSED MARKINGS
- EXISTING MARKINGS

ANTENNA

REMARK TAXIWAY CENTERLINE MARKING, YELLOW

TIE TO EXISTING AT THE PT OF CURVE

R50'

150'

R75'

200' TYP.

20' TYP.

48'

PAINT RUNWAY TOUCHDOWN ZONE MARKING, WHITE

PAINT RUNWAY CENTERLINE MARKING, WHITE

11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00

200' TYP.

R/W 8-26

PAINT RUNWAY AIMING POINT MARKING, WHITE

120' TYP.

80' TYP.

75'

PAINT RUNWAY SIDE MARKING, WHITE

500'

REMARK TAXIWAY CENTERLINE MARKING, YELLOW

T/W "B"

REMARK RUNWAY HOLD BAR MARKING, YELLOW

R/W 14-32

T/W "I"

MATCHLINE SEE SHEET MP-1

MATCHLINE SEE SHEET MP-3

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FULTON COUNTY EXECUTIVE AIRPORT

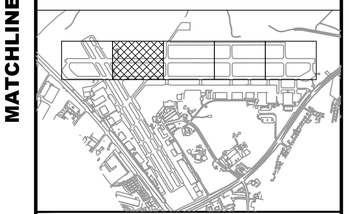
FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer:	**EP/CG**
Technician:	**EP/CG**
Checked by:	**CA**
Project Number:	**204307**

Notes:

KEY MAP



REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

MARKING PLAN NO. 2

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date: **02/04/2025**	Sheet Number: **33** of **38**
Scale: **1" = 50'**	Drawing Number: **MP-2**

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

GEORGIA811
Contact 811 before you dig.

N
W
E
S

50' 0' 50' 100'
1" = 50'

LEGEND
- PROPOSED MARKINGS
- EXISTING MARKINGS

REMARK RUNWAY HOLD BAR MARKING, YELLOW
REMARK TAXIWAY CENTERLINE MARKING, YELLOW
T/W "J"
TIE TO EXISTING
PAINT TAXIWAY TO RUNWAY TURN MARKING, YELLOW
32'
PAINT RUNWAY CENTERLINE MARKING, WHITE
60' 100' 60' 96.3' 60' 100' 60' 120' TYP. 80' TYP.
24+00 25+00 26+00 27+00 28+00 29+00 30+00 31+00 32+00 33+00 34+00 35+00 36+00 37+00
R/W 8-26
R80' TYP.
80' TYP. 120' TYP.
PAINT RUNWAY SIDE MARKING, WHITE
REMARK TAXIWAY CENTERLINE MARKING, YELLOW
REMARK RUNWAY HOLD BAR MARKING, YELLOW
T/W "I"

MATCHLINE SEE SHEET MP-2
MATCHLINE SEE SHEET MP-4

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FULTON COUNTY EXECUTIVE AIRPORT

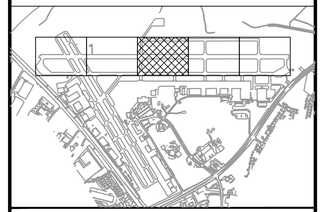
FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer: **EP/CG**	
Technician: **EP/CG**	
Checked by: **CA**	
Project Number: **204307**	

Notes:

KEY MAP



REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

MARKING PLAN NO. 3

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date: **02/04/2025**	Sheet Number: **34** of **38**
Scale: **1" = 50'**	Drawing Number: **MP-3**

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

GEORGIA811
Contact 811 before you dig.

N
W
E
S

50' 0' 50' 100'
1" = 50'

LEGEND
- PROPOSED MARKINGS
- EXISTING MARKINGS

REMARK RUNWAY HOLD BAR MARKING, YELLOW
REMARK TAXIWAY CENTERLINE MARKING, YELLOW
T/W "K"
TIE TO EXISTING AT THE PT OF CURVE
PAINT TAXIWAY TO RUNWAY TURN MARKING, YELLOW
PAINT TAXIWAY TO RUNWAY TURN MARKING, YELLOW
PAINT RUNWAY SIDE MARKING, WHITE
PAINT RUNWAY CENTERLINE MARKING, WHITE
PAINT RUNWAY AIMING POINT MARKING, WHITE
150'
20' TYP.
48'
200' TYP.
38+00 39+00 40+00 41+00 42+00 43+00 44+00 45+00 46+00 47+00 48+00 49+00 50+00 51
R60' TYP.
200' TYP.
R/W 8-26
TIE TO EXISTING AT THE PT OF CURVE
PAINT RUNWAY TOUCHDOWN ZONE MARKING, WHITE
75'
120' TYP.
80' TYP.
500.001'
REMARK TAXIWAY CENTERLINE MARKING, YELLOW
T/W "K"
REMARK RUNWAY HOLD BAR MARKING, YELLOW
T/W "I"

MATCHLINE SEE SHEET MP-3
MATCHLINE SEE SHEET MP-5

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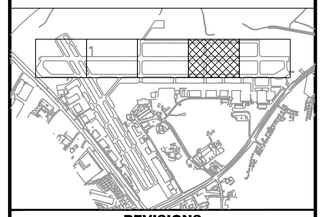
FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer:	**EP/CG**
Technician:	**EP/CG**
Checked by:	**CA**
Project Number:	**204307**

Notes:

KEY MAP



REVISIONS

No.	Description	Date	By

Project Name:
RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:
MARKING PLAN NO. 4

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date: **02/04/2025**	Sheet Number: **35** of **38**
Scale: **1" = 50'**	Drawing Number: **MP-4**

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

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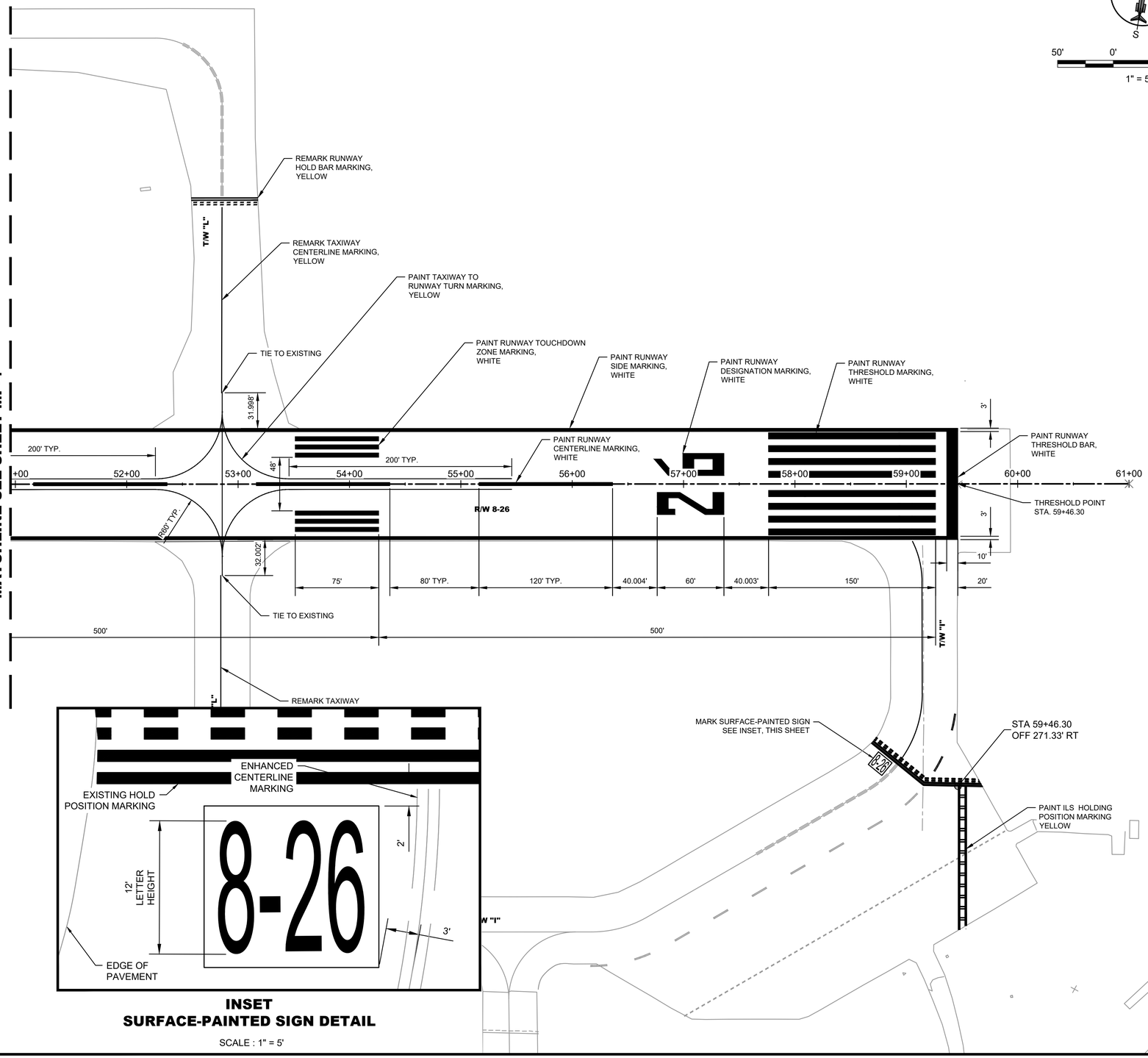
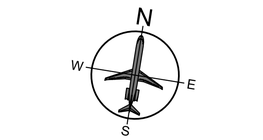
MATCHLINE SEE SHEET MP-4



INSET
SURFACE-PAINTED SIGN DETAIL

SCALE : 1" = 5'



50' 0' 50' 100'

1" = 50'

LEGEND

PROPOSED MARKINGS

EXISTING MARKINGS

FULTON COUNTY EXECUTIVE AIRPORT

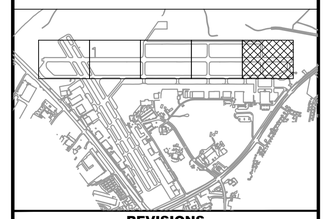
FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer: **EP/CG**	
Technician: **EP/CG**	
Checked by: **CA**	
Project Number: **204307**	

Notes:

KEY MAP



REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

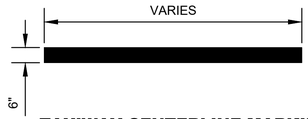
Drawing Name:

MARKING PLAN NO. 5

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date:	Sheet Number:
02/04/2025	**36** of **38**
Scale:	Drawing Number:
1" = 50'	**MP-5**

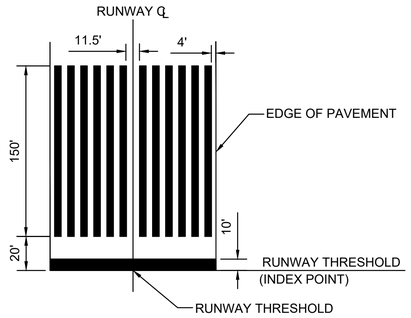
Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7



TAXIWAY CENTERLINE MARKING
N.T.S.

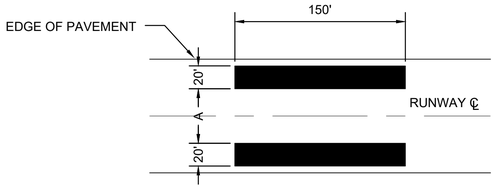
NOTES:

1. TAXIWAY CENTERLINE MARKINGS ARE YELLOW, REFLECTIVE WITH A 6-INCH BLACK, NON-REFLECTIVE BORDER (NOT SHOWN).



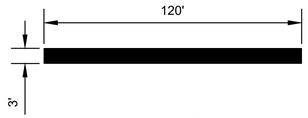
RUNWAY THRESHOLD MARKING - CONFIGURATION B
N.T.S.

1. THRESHOLD MARKINGS ARE WHITE, REFLECTIVE WITH A 6-INCH BLACK, NON-REFLECTIVE BORDER (NOT SHOWN).
2. THE STRIPES ARE 150 FEET LONG AND 5.75 FEET WIDE WITH 5.75-FOOT SPACING, EXCEPT THE CENTER SPACE IS 11.5 FEET.
3. THE NUMBER OF STRIPES REQUIRED IS AS SHOWN ON PLANS.



RUNWAY AIMING POINT MARKING
N.T.S.

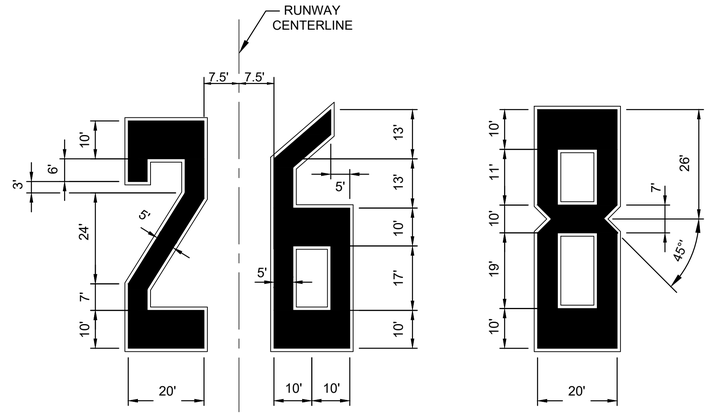
1. AIMING POINT MARKINGS ARE WHITE, REFLECTIVE WITH A 6-INCH BLACK, NON-REFLECTIVE BORDER (NOT SHOWN).
2. DIMENSION 'A' IS MEASURED AS FOLLOWS:
   150' WIDE RUNWAY: 72'
   100' WIDE RUNWAY: 48'
   75' WIDE RUNWAY: 36'



RUNWAY CENTERLINE MARKING
N.T.S.

NOTES:

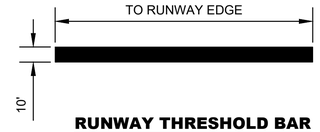
1. RUNWAY CENTERLINE MARKINGS ARE WHITE, REFLECTIVE WITH A 6-INCH BLACK , NON-REFLECTIVE BORDER (NOT SHOWN).
2. WIDTH OF CENTERLINE MARKINGS ARE 36".



RUNWAY DESIGNATION MARKINGS
N.T.S.

NOTE:

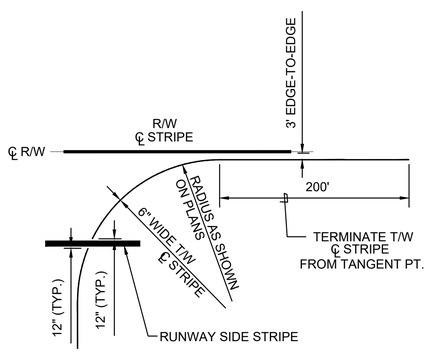
1. ALL RUNWAY DESIGNATION MARKINGS ARE WHITE, REFLECTIVE WITH A 6-INCH BLACK, NON-REFLECTIVE BORDER.



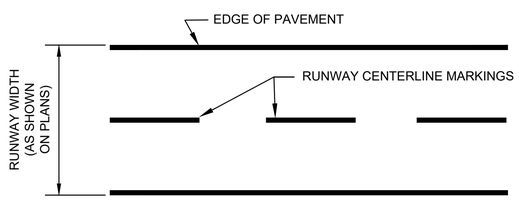
RUNWAY THRESHOLD BAR
N.T.S.

NOTES:

1. RUNWAY THRESHOLD BAR MARKING IS WHITE, REFLECTIVE WITH A 6-INCH BLACK, NON-REFLECTIVE BORDER (NOT SHOWN).



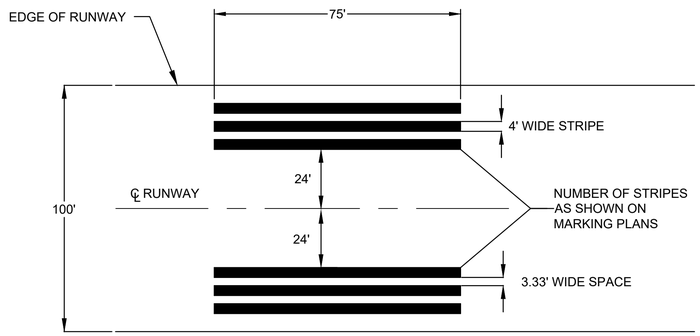
TAXIWAY TURN RADIUS DETAIL
N.T.S.



RUNWAY SIDE STRIPE MARKING
N.T.S.

NOTES:

1. RUNWAY SIDE STRIPE MARKINGS ARE WHITE, REFLECTIVE WITH A 6' BLACK, NON-REFLECTIVE BORDER (NOT SHOWN).
2. RUNWAY SIDE STRIPES ARE 36" WIDE.



RUNWAY TOUCHDOWN ZONE MARKING
N.T.S.

NOTE:

1. TOUCHDOWN ZONE MARKINGS ARE WHITE, REFLECTIVE WITH A 6-INCH BLACK, NON-REFLECTIVE BORDER (NOT SHOWN).

FULTON COUNTY EXECUTIVE AIRPORT

FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer: **EP/CG**	
Technician: **EP/CG**	
Checked by: **CA**	
Project Number: **204307**	

Notes:

REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

MARKING DETAILS NO. 1

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date:	Sheet Number:
02/04/2025	**37** of **38**
Scale: **N.T.S.**	Drawing Number: **MD-1**

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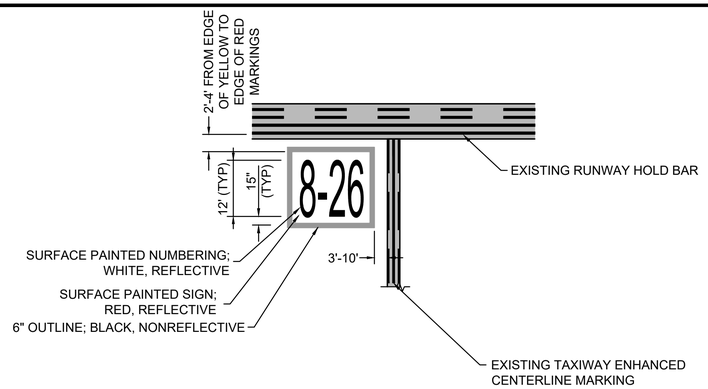
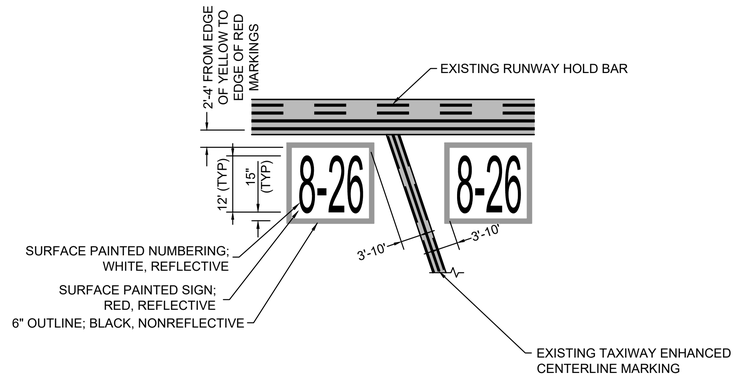


RUNWAY HOLD POSITION SURFACE-PAINTED SIGN

N.T.S.

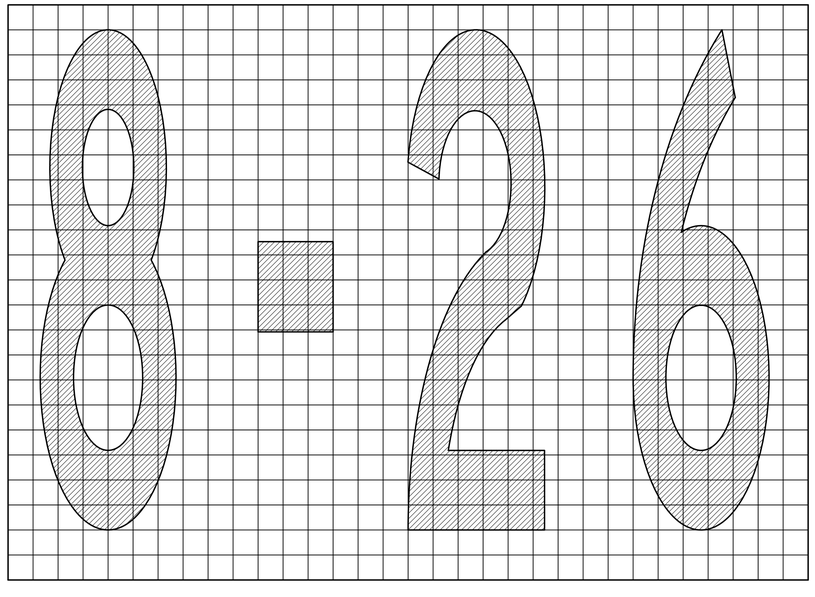
NOTES:

1. COLORS FOR PAINTED SIGN SHALL BE WHITE, REFLECTIVE LETTERS ON RED, REFLECTIVE BACKGROUND.
2. 6" OUTLINE SHALL BE BLACK, NON-REFLECTIVE.
3. ALL MARKINGS LAYOUTS AND SPACING SHALL BE APPROVED BY THE FIELD ENGINEER PRIOR TO MARKING.
4. ALL SURFACE PAINTED SIGN LETTERS AND NUMBERS SHALL BE 12' IN HEIGHT UNLESS OTHERWISE NOTED.
5. SURFACE PAINTED SIGNS SHALL BE LINED UP AS SHOWN WITH THE HOLD BAR, AND SHALL BE OFFSET THE MINIMUM DISTANCE FROM THE CENTERLINE (3') AND THE MINIMUM DISTANCE FROM THE HOLD BAR (2') UNLESS THE UNIQUE SITUATION REQUIRES IT BE INCREASED. THIS CHANGE SHALL NO EXCEED THE MAXIMUM DISTANCE AND MUST BE APPROVED BY THE FIELD ENGINEER PRIOR TO MARKING.



RUNWAY HOLD POSITION SURFACE-PAINTED SIGN
WHEN TAXIWAY CENTERLINE IS NOT PERPENDICULAR

N.T.S.



SURFACE PAINTED SIGN LETTERING GUIDE

N.T.S.

FULTON COUNTY EXECUTIVE AIRPORT

FULTON COUNTY EXECUTIVE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

Designer: **EP/CG**	
Technician: **EP/CG**	
Checked by: **CA**	
Project Number: **204307**	

Notes:

REVISIONS

No.	Description	Date	By

Project Name:

RUNWAY 8-26 PAVEMENT REHABILITATION

Drawing Name:

MARKING DETAILS NO. 2

GDOT PROJECT NUMBER:
PI#: T008996, FULTON

Date:	Sheet Number:
02/04/2025	**38** of **38**
Scale: **N.T.S.**	Drawing Number: **MD-2**

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EXHIBIT G

PURCHASING FORMS

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

FORM A: GEORGIA SECURITY AND IMMIGRATION CONTRACTOR AFFIDAVIT AND AGREEMENT

Instructions:

Contractors must attest to compliance with the requirements of O.C.G.A 13-10-91 and the Georgia Department of Labor Rule 300-10-01-.02 by executing the Contractor Affidavit provided.

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

STATE OF GEORGIA

COUNTY OF FULTON

FORM A: GEORGIA SECURITY AND IMMIGRATION CONTRACTOR AFFIDAVIT AND AGREEMENT

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services[1] under a contract with **[insert name of prime contractor]** C. W. MATTHEWS CONTRACTING CO., INC. on behalf of **Fulton County Government** has registered with and is participating in a federal work authorization program*,[2] in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

The undersigned further agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services to this contract with **Fulton County Government**, contractor will secure from such subcontractor(s) similar verification of compliance with O.C.G.A. 13-10-91 on the Subcontractor Affidavit provided in Rule 300-10-01-.08 or a substantially similar form. Contractor further agrees to maintain records of such compliance and provide a copy of each such verification to the **Fulton County Government** at the time the subcontractor(s) is retained to perform such service.

32751
EEV/Basic Pilot Program* User Identification Number

BY: Authorized Officer of Agent
(Insert Contractor Name)

Vice President
Title of Authorized Officer or Agent of Contractor

Michael Kleuckling
Printed Name of Authorized Officer or Agent

C.W. MATTHEWS CONTRACTING CO. MARIETTA GA CORPORATE SEAL

Sworn to and subscribed before me this 12th day of March, 2025

Notary Public: Brenda B. Nation
Brenda B. Nation

County: Fayette

Commission Expires: June 26, 2028

BRENDA B NATION NOTARY PUBLIC FAYETTE COUNTY, GEORGIA MY COMMISSION EXPIRES JUNE 26, 2028

[1]O.C.G.A.§ 13-10-90(4), as amended by Senate Bill 160, provides that "physical performance of services" means any performance of labor or services for a public employer (e.g., Fulton County) using a bidding process (e.g., ITB, RFQ, RFP, etc.) or contract wherein the labor or services exceed $2,499.99, except for those individuals licensed pursuant to title 26 or Title 43 or by the State Bar of Georgia and is in good standing when such contract is for service to be rendered by such individual.

[2]*[Any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603].

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

FORM B: GEORGIA SECURITY AND IMMIGRATION SUBCONTRACTOR AFFIDAVIT

Instructions:

In the event that your company is awarded the contract for this project, and will be utilizing the services of any subcontractor(s) in connection with the physical performance of services pursuant to this contract, the following affidavit must be completed by such subcontractor(s). Your company must provide a copy of each such affidavit to Fulton County Government, Department of Purchasing & Contract Compliance with the proposal submittal.

All subcontractor affidavit(s) shall become a part of the contract and all subcontractor(s) affidavits shall be maintained by your company and available for inspection by Fulton County Government at any time during the term of the contract. All subcontractor(s) affidavit(s) shall become a part of any contractor/subcontractor agreement(s) entered into by your company.

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

STATE OF ~~GEORGIA~~ Pennsylvania

COUNTY OF ~~FULTON~~ Montgomery

FORM B: GEORGIA SECURITY AND IMMIGRATION SUBCONTRACTOR AFFIDAVIT

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services[3] under a contract with **[insert name of prime contractor]** C. W. MATTHEWS CONTRACTING CO., INC. behalf of **Fulton County Government** has registered with and is participating in a federal work authorization program*,[4] in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

170423

EEV/~~Basic Pilot~~ Program* User Identification Number

BY: Authorized Officer of Agent
(Insert Subcontractor Name)

President

Title of Authorized Officer or Agent of Subcontractor

Philip Zinelo

Printed Name of Authorized Officer or Agent

Sworn to and subscribed before me this 11 day of March, 20 25

Notary Public: Stephanie Weber

County: Montgomery

Commission Expires: 12/9/27

Commonwealth of Pennsylvania - Notary Seal
Stephanie Weber, Notary Public
Montgomery County
My commission expires December 9, 2027
Commission number 1360695
Member, Pennsylvania Association of Notaries

[3]O.C.G.A.§ 13-10-90(4), as amended by Senate Bill 160, provides that "physical performance of services" means any performance of labor or services for a public employer (e.g., Fulton County) using a bidding process (e.g., ITB, RFQ, RFP, etc.) or contract wherein the labor or services exceed $2,499.99, except for those individuals licensed pursuant to title 26 or Title 43 or by the State Bar of Georgia and is in good standing when such contract is for service to be rendered by such individual.

[4]*[Any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603].

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

STATE OF GEORGIA

COUNTY OF FULTON

FORM B: GEORGIA SECURITY AND IMMIGRATION SUBCONTRACTOR AFFIDAVIT

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services[3] under a contract with **[insert name of prime contractor]** C. W. MATTHEWS CONTRACTING CO., INC. behalf of **Fulton County Government** has registered with and is participating in a federal work authorization program*,[4] in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

826089
EEV/Basic Pilot Program* User Identification Number

Ashton Garcia
BY: Authorized Officer of Agent
(Insert Subcontractor Name)

Secretary
Title of Authorized Officer or Agent of Subcontractor

Ashton Garcia
Printed Name of Authorized Officer or Agent

Sworn to and subscribed before me this 11 day of March, 2025

Notary Public: Jenny Rcom-Nie

County: Guilford

Commission Expires: 6/24/29

JENNY RCOM-NIE
My Commission Expires
NOTARY PUBLIC
June 24, 2029
GUILFORD COUNTY, NC

[3]O.C.G.A.§ 13-10-90(4), as amended by Senate Bill 160, provides that "physical performance of services" means any performance of labor or services for a public employer (e.g., Fulton County) using a bidding process (e.g., ITB, RFQ, RFP, etc.) or contract wherein the labor or services exceed $2,499.99, except for those individuals licensed pursuant to title 26 or Title 43 or by the State Bar of Georgia and is in good standing when such contract is for service to be rendered by such individual.

[4]*[Any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603].

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

STATE OF GEORGIA

COUNTY OF FULTON

FORM B: GEORGIA SECURITY AND IMMIGRATION SUBCONTRACTOR AFFIDAVIT

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services[3] under a contract with **[insert name of prime contractor]** C. W. MATTHEWS CONTRACTING CO., INC. behalf of **Fulton County Government** has registered with and is participating in a federal work authorization program*,[4] in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

_____
EEV/Basic Pilot Program* User Identification Number

_____
BY: Authorized Officer of Agent
(Insert Subcontractor Name)

_____
Title of Authorized Officer or Agent of Subcontractor

_____
Printed Name of Authorized Officer or Agent

Sworn to and subscribed before me this _____ day of _____, 20__.

Notary Public: _____

County: _____

Commission Expires: _____

[3]O.C.G.A.§ 13-10-90(4), as amended by Senate Bill 160, provides that "physical performance of services" means any performance of labor or services for a public employer (e.g., Fulton County) using a bidding process (e.g., ITB, RFQ, RFP, etc.) or contract wherein the labor or services exceed $2,499.99, except for those individuals licensed pursuant to title 26 or Title 43 or by the State Bar of Georgia and is in good standing when such contract is for service to be rendered by such individual.

[4]*[Any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603].

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

FORM C1: CONTRACTOR'S GEORGIA UTILITY LICENSE CERTIFICATION (not applicable)

Contractor's Name: C. W. MATTHEWS CONTRACTING CO., INC.

Utility Contractor's Name: Kevin Thomas Eubanks

Expiration Date of License: April 30, 2027

I certify that the above information is true and correct and that the classification noted is applicable to the Bid for this Project.

Signed: _____

Michael Kleuckling, Vice President

Date: March 12, 2025

C.W. MATTHEWS CONTRACTING CO. MARIETTA GA CORPORATE SEAL

(ATTACH COPY OF LICENSE)

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
Georgia Construction Industry Licensing Board
LICENSE NO. UC300337
C. W. Matthews Contracting Co., Inc.

P.O. Drawer 970
Marietta GA 30061

Utility Contractor

EXP DATE - 04/30/2027 Status: Active
Issue Date: 06/21/1994

A pocket-sized license card is below. Above is an enlarged copy of your pocket card.

Please make note of the expiration date on your license. It is your responsibility to renew your license before it expires. Please notify the Board if you have a change of address.

Wall certificates suitable for framing are available at cost, see board fee schedule. To order a wall certificate, please order from the web site – www.sos.ga.gov/plb.

Please refer to Board Rules for any continuing education requirements your profession may require.

Georgia State Board of Professional Licensing
237 Coliseum Drive
Macon GA 31217
Phone: (404) 424-9966
www.sos.ga.gov/plb

C. W. Matthews Contracting Co., Inc.
P.O. Drawer 970
Marietta GA 30061

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
Georgia Construction Industry Licensing Board
License No. UC300337
C. W. Matthews Contracting Co., Inc.

P.O. Drawer 970
Marietta GA 30061

Utility Contractor

EXP DATE - 04/30/2027 Status: Active
Issue Date: 06/21/1994

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
Georgia Construction Industry Licensing Board
LICENSE NO. UM101554
Kevin Thomas Eubanks

161 Celestial Ridge Drive
Dallas GA 30132

Utility Manager

EXP DATE - 04/30/2027 Status: Active
Issue Date: 06/27/2002

A pocket-sized license card is below. Above is an enlarged copy of your pocket card.

Please make note of the expiration date on your license. It is your responsibility to renew your license before it expires. Please notify the Board if you have a change of address.

Wall certificates suitable for framing are available at cost, see board fee schedule. To order a wall certificate, please order from the web site – www.sos.ga.gov/plb.

Please refer to Board Rules for any continuing education requirements your profession may require.

Georgia State Board of Professional Licensing
237 Coliseum Drive
Macon GA 31217
Phone: (404) 424-9966
www.sos.ga.gov/plb

Kevin Thomas Eubanks
161 Celestial Ridge Drive
Dallas GA 30132

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
Georgia Construction Industry Licensing Board
License No. UM101554
Kevin Thomas Eubanks

161 Celestial Ridge Drive
Dallas GA 30132

Utility Manager

EXP DATE - 04/30/2027 Status: Active
Issue Date: 06/27/2002

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

FORM C2: CONTRACTOR'S GEORGIA GENERAL CONTRACTOR'S LICENSE CERTIFICATION

Contractor's Name: C. W. MATTHEWS CONTRACTING CO., INC.

General Contractor's License Number: GCCO007346

Expiration Date of License: June 30, 2026

I certify that the above information is true and correct and that the classification noted is applicable to the Bid for this Project.

Signed: _____

Michael Kleuckling, Vice President

Date: March 12, 2025

C.W. MATTHEWS CONTRACTING CO. MARIETTA GA CORPORATE SEAL

(ATTACH COPY OF LICENSE)

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
State Licensing Board for Residential and General Contractors
LICENSE NO. GCCO007346
C.W. Matthews Contracting Co. Inc.
Daniel P. Garcia
1600 Kenview Drive
Marietta GA 30060

Qualifying Agent: Kevin Thomas Eubanks
Qualifying Agent License NO: GCQA007342
General Contractor Company

EXP DATE - 06/30/2026 Status: Active
Issue Date: 08/05/2021

A pocket-sized license card is below. Above is an enlarged copy of your pocket card.

Please make note of the expiration date on your license. It is your responsibility to renew your license before it expires. Please notify the Board if you have a change of address.

Wall certificates suitable for framing are available at cost, see board fee schedule. To order a wall certificate, please order from the web site – www.sos.ga.gov/plb.

Please refer to Board Rules for any continuing education requirements your profession may require.

Georgia State Board of Professional Licensing
237 Coliseum Drive
Macon GA 31217
Phone: (404) 424-9966
www.sos.ga.gov/plb

C.W. Matthews Contracting Co. Inc.
1600 Kenview Drive
Marietta GA 30060

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
State Licensing Board for Residential and General Contractors
License No. GCCO007346
C.W. Matthews Contracting Co. Inc.
Daniel P. Garcia
1600 Kenview Drive
Marietta GA 30060

Qualifying Agent: Kevin Thomas Eubanks
Qualifying Agent License NO: GCQA007342
General Contractor Company

EXP DATE - 06/30/2026 Status: Active
Issue Date: 08/05/2021

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
State Licensing Board for Residential and General Contractors
LICENSE NO. GCQA007342
Kevin Thomas Eubanks
161 Celestial Ridge Drive
Dallas GA 30132

Company Name: C.W. Matthews Contracting Co. Inc.
Company License NO: GCCO007346
General Contractor Qualifying Agent

EXP DATE - 06/30/2026 Status: Active
Issue Date: 08/05/2021

A pocket-sized license card is below. Above is an enlarged copy of your pocket card.

Please make note of the expiration date on your license. It is your responsibility to renew your license before it expires. Please notify the Board if you have a change of address.

Wall certificates suitable for framing are available at cost, see board fee schedule. To order a wall certificate, please order from the web site – www.sos.ga.gov/plb.

Please refer to Board Rules for any continuing education requirements your profession may require.

Georgia State Board of Professional Licensing
237 Coliseum Drive
Macon GA 31217
Phone: (404) 424-9966
www.sos.ga.gov/plb

Kevin Thomas Eubanks
161 Celestial Ridge Drive
Dallas GA 30132

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
State Licensing Board for Residential and General Contractors
License No. GCQA007342
Kevin Thomas Eubanks

161 Celestial Ridge Drive
Dallas GA 30132

Company Name: C.W. Matthews Contracting Co. Inc.
Company License NO: GCCO007346
General Contractor Qualifying Agent

EXP DATE - 06/30/2026 Status: Active
Issue Date: 08/05/2021

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

FORM C3: GEORGIA PROFESSIONAL LICENSE CERTIFICATION

NOTE: Please complete this form for the work your firm will perform on this project.

Contractor's Name: C. W. MATTHEWS CONTRACTING CO., INC.

Performing work as: Prime Contractor ✓ Sub-Contractor ____

* Professional License Type: None

* Professional License Number: None

Expiration Date of License: None

I certify that the above information is true and correct and that the classification noted is applicable to the Bid for this Project.

Signed: _____
Michael Kleuckling, Vice President

Date: March 12, 2025

C.W. MATTHEWS CONTRACTING CO. MARIETTA GA CORPORATE SEAL

(ATTACH COPY OF LICENSE)

*C. W. MATTHEWS CONTRACTING CO., INC. does not currently have a Georgia Professional License because C. W. MATTHEWS CONTRACTING CO., INC. does not perform any of the work described in the Instructions to Bidder Item #18. C. W. MATTHEWS CONTRACTING CO., INC. does have a Georgia General Contractors License (attached)

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

FORM D: DISCLOSURE FORM AND QUESTIONNAIRE

1. Please provide the names and business addresses of each of the Offeror's firm's officers and directors. Please See Attached

   For the purposes of this form, the term "Offeror" means an entity that responds to a solicitation for a County contract by either submitting a proposal in response to a Request for Proposal or a Request for Qualification or a Bid in response to an Invitation to Bid. Describe accurately, fully and completely, their respective relationships with said Offeror, including their ownership interests and their anticipated role in the management and operations of said Offeror. Please See Attached

2. Please describe the general development of said Offeror's business during the past five (5) years, or such shorter period of time that said Offeror has been in business.

   C. W. MATTHEWS CONTRACTING CO., INC. has been in business since 1946. The Company has performed (and continues to perform) numberous street projects, major highway and heavy construction contracts for various governmental and private entities. The Company has performed many contracts for the City of Atlanta, mostly at Hartsfield-Jackson International Airport; most notably is the Fifth Runway Site Preparation, Phase 1 & 2 project. Please See Projects Completed for 2019, 2020, 2021, 2022, 2023

3. Please state whether any employee, agent or representative of said Offeror who is or will be directly involved in the subject project has or has ever: (i) directly or indirectly had a business relationship with Fulton County; (ii) directly or indirectly received revenues from Fulton County; or (iii) directly or indirectly receives revenues from the result of conducting business on Fulton County property or pursuant to any contract with Fulton County. Please describe in detail any such relationship. None

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

C. W. MATTHEWS CONTRACTING CO., INC.
OFFICERS AND DIRECTORS
P. O. Drawer 970, Marietta, Georgia 30061

Robert E. Matthews
Chairman Emeritus
Director
Bobm@cwmatthews.com
(770) 422-7520

Matthew D. Burton
Chairman of the Board
Director
Mattb@cwmatthews.com
(770) 422-7520

Daniel P. Garcia
President
Dgarcia@cwmatthews.com
(770) 422-7520

Michael D. Bell
Executive Vice President
Secretary/Treasurer
Michaelb@cwmatthews.com
(770) 422-7520

Jeff C. Shropshire
Senior Vice President
Major Projects
Jeffs@cwmatthews.com
(770) 422-7520

William G. White
Senior Vice President
Asphalt Construction
Billw@cwmatthews.com
(770) 422-7520

Frank P. Crumbley
Senior Vice President
Roadway Construction
Frankc@cwmatthews.com
(770) 422-7520

Lee T. Smith, Jr.
Senior Vice President
Asphalt Plants
Lees@cwmatthews.com
(770) 422-7520

Mike L. Kleuckling
Vice President
Estimating
Mikek@cwmatthews.com
(770) 422-7520

Benny M. Brown, Jr.
Vice President
General & Administration
Assistant Secretary
Bennyb@cwmatthews.com
(770) 422-7520

John M. Faress
Vice President
Equipment
Jfaress@cwmatthews.com
(770) 422-7520

Adam M. Grist
Vice President
Structures
Agrist@cwmatthews.com
(770) 422-7520

Sheldon K. Fram
Corporate Counsel
Risk Management
Sfram@cwmatthews.com
(770) 422-7520

Robert W. Thompson, Jr.
Division Vice President
Estimating & Design Build
Bobt@cwmatthews.com
(770) 422-7520

Jarrod W. Crum
Division Vice President
Safety
Jcrum@cwmatthews.com
(770) 422-7520

Stoy F. Marlow
Senior Vice President
Baker
Smarlow@cwmatthews.com
(770) 422-7520

Thomas J. Roginsky
Division Vice President
Information Technology
Jeffr@cwmatthews.com
(770) 422-7520

Ray A. Rodriguez
Division Vice President
Human Resources
Rayr@cwmatthews.com
(770) 422-7520

Kevin T. Eubanks
Division Vice President
Roadway Construction
Kevine@cwmatthews.com
(770) 422-7520

Ryan L. Beech
Division Vice President
Major Projects
Rbeech@cwmatthews.com
(770) 422-7520

Andrew G. Brooks
Division Vice President
Terminal & Quality Control
Andrewb@cwmatthews.com
(770) 422-7520

Michael P. Nadolski
Division Vice President
Design Build
MNadolski@cwmatthews.com
(770) 422-7520

Ronald C. Eubanks, Jr.
Division Vice President
Water & Sewer Construction
Ceubanks@cwmatthews.com
(770) 422-7520

Robert B. Forrest
Division Vice President
Baker
Bforrest@cwmatthews.com
(770) 422-7520

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

C. W. MATTHEWS CONTRACTING CO., INC.
SCHEDULE OF PRINCIPAL INDIVIDUALS
January 1, 2025

Individual's Name	Present Position Or Office	Years of Construction Experience	Hire Date	Years With CWM	Magnitude and Type of Work	In What Capacity
Robert E. Matthews	Chairman Emeritus Director	62	1965	60	Executive	Management
Matthew D. Burton	Chairman of Board Director	35	1990	33	Executive	Management
Daniel P. Garcia	President	30	2013	13	Executive	Management
Michael D. Bell	Executive Vice President Secretary/Treasurer	30	1995	30	Executive	Management
Jeff C. Shropshire	Senior Vice President	37	1990	35	Major Projects	Field Management
William G. White	Senior Vice President	37	1988	37	Asphalt Construction	Field Management
Frank P. Crumbley	Senior Vice President	42	1996	29	Roadway Construction	Field Management
Lee T. Smith, Jr.	Senior Vice President	25	2000	25	Asphalt Plants	Field Management
Stoy F. Marlow	Senior Vice President	36	2024	1	Baker Division	Field Management
Mike L. Kleuckling	Vice President	43	1988	37	Estimating	Management
Benny M. Brown, Jr.	Vice President Assistant Secretary	22	2003	22	General & Administration	Management
John M. Faress	Vice President	32	2009	16	Equipment	Field Management
Adam M. Grist	Vice President	26	2005	20	Structures Division	Field Management
Kevin T. Eubanks	Vice President	27	1998	27	Roadway Constructoin	Field Management
Sheldon K. Fram	Corporate Counsel	28	2006	19	Risk Management	Management
Robert W. Thompson, Jr.	Division Vice President	47	1979	46	Estimating & Design Build	Management
Thomas J. Roginsky	Division Vice President	43	1995	30	Information Technology	Management
Ray A. Rodriguez	Division Vice President	33	1995	30	Human Resources	Management
Ryan L. Beech	Division Vice President	25	2006	19	Major Projects	Field Management
Andrew G. Brooks	Division Vice President	22	2005	20	Terminal and Quality Control	Field Management
Michael P. Nadolski	Division Vice President	19	2008	17	Design Build	Management
Ronald C. Eubanks, Jr.	Division Vice President	25	2023	2	Water & Sewer	Field Management
Jarrod W. Crum	Division Vice President	29	2023	2	Safety	Field Management
Robert B. Forrest	Division Vice President	35	2024	1	Baker Division	Field Management
Joe J. DeFiore	Division Vice President	25	2024	1	Estimating & Design Build	Management
Robert L. Bird III	Division Vice President	30	2024	1	Major Projects	Field Management

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

C. W. MATTHEWS CONTRACTING CO., INC.
INDIVIDUALS AUTHORIZED TO SUBMIT BIDS

NAME	TITLE
Daniel P. Garcia	President
Michael D. Bell	Executive Vice President, Secretary/Treasurer
Jeff C. Shropshire	Senior Vice President - Major Projects
Stoy F. Marlow	Senior Vice President - Baker Division
Mike L. Kleuckling	Vice President - Estimating
Benny M. Brown	Vice President - General & Administration, Asstistant Secretary
Robert W. Thompson, Jr.	Division Vice President - Estimating & Design/Build
Thomas J. Roginsky	Division Vice President - Information Technology
Robert B. Forrest	Division Vice President - Baker Division

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

FORM A: GEORGIA SECURITY AND IMMIGRATION CONTRACTOR AFFIDAVIT AND AGREEMENT

Instructions:

Contractors must attest to compliance with the requirements of O.C.G.A 13-10-91 and the Georgia Department of Labor Rule 300-10-01-.02 by executing the Contractor Affidavit provided.

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

STATE OF GEORGIA

COUNTY OF FULTON

FORM A: GEORGIA SECURITY AND IMMIGRATION CONTRACTOR AFFIDAVIT AND AGREEMENT

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services[1] under a contract with **[insert name of prime contractor]** C. W. MATTHEWS CONTRACTING CO., INC. on behalf of **Fulton County Government** has registered with and is participating in a federal work authorization program*,[2] in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

The undersigned further agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services to this contract with **Fulton County Government**, contractor will secure from such subcontractor(s) similar verification of compliance with O.C.G.A. 13-10-91 on the Subcontractor Affidavit provided in Rule 300-10-01-.08 or a substantially similar form. Contractor further agrees to maintain records of such compliance and provide a copy of each such verification to the **Fulton County Government** at the time the subcontractor(s) is retained to perform such service.

32751
EEV/Basic Pilot Program* User Identification Number

BY: Authorized Officer of Agent
(Insert Contractor Name)

Vice President
Title of Authorized Officer or Agent of Contractor

Michael Kleuckling
Printed Name of Authorized Officer or Agent

C.W. MATTHEWS CONTRACTING CO. MARIETTA GA CORPORATE SEAL

Sworn to and subscribed before me this 12th day of March, 2025

Notary Public: Brenda B. Nation
Brenda B. Nation

County: Fayette

Commission Expires: June 26, 2028

BRENDA B NATION NOTARY PUBLIC FAYETTE COUNTY, GEORGIA MY COMMISSION EXPIRES JUNE 26, 2028

[1]O.C.G.A.§ 13-10-90(4), as amended by Senate Bill 160, provides that "physical performance of services" means any performance of labor or services for a public employer (e.g., Fulton County) using a bidding process (e.g., ITB, RFQ, RFP, etc.) or contract wherein the labor or services exceed $2,499.99, except for those individuals licensed pursuant to title 26 or Title 43 or by the State Bar of Georgia and is in good standing when such contract is for service to be rendered by such individual.

[2]*[Any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603].

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

FORM B: GEORGIA SECURITY AND IMMIGRATION SUBCONTRACTOR AFFIDAVIT

Instructions:

In the event that your company is awarded the contract for this project, and will be utilizing the services of any subcontractor(s) in connection with the physical performance of services pursuant to this contract, the following affidavit must be completed by such subcontractor(s). Your company must provide a copy of each such affidavit to Fulton County Government, Department of Purchasing & Contract Compliance with the proposal submittal.

All subcontractor affidavit(s) shall become a part of the contract and all subcontractor(s) affidavits shall be maintained by your company and available for inspection by Fulton County Government at any time during the term of the contract. All subcontractor(s) affidavit(s) shall become a part of any contractor/subcontractor agreement(s) entered into by your company.

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

STATE OF GEORGIA Pennsylvania

COUNTY OF ~~FULTON~~ Montgomery

FORM B: GEORGIA SECURITY AND IMMIGRATION SUBCONTRACTOR AFFIDAVIT

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services[3] under a contract with **[insert name of prime contractor]** C. W. MATTHEWS CONTRACTING CO., INC. behalf of **Fulton County Government** has registered with and is participating in a federal work authorization program*,[4] in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

170423
EEV/Basic Pilot Program* User Identification Number

BY: Authorized Officer of Agent
(Insert Subcontractor Name)

President
Title of Authorized Officer or Agent of Subcontractor

Philip Zurek
Printed Name of Authorized Officer or Agent

Sworn to and subscribed before me this 11 day of March, 20 25

Notary Public: Stephanie Weber

County: Montgomery

Commission Expires: 12/9/27

Commonwealth of Pennsylvania - Notary Seal
Stephanie Weber, Notary Public
Montgomery County
My commission expires December 9, 2027
Commission number 1360695
Member, Pennsylvania Association of Notaries

[3]O.C.G.A.§ 13-10-90(4), as amended by Senate Bill 160, provides that "physical performance of services" means any performance of labor or services for a public employer (e.g., Fulton County) using a bidding process (e.g., ITB, RFQ, RFP, etc.) or contract wherein the labor or services exceed $2,499.99, except for those individuals licensed pursuant to title 26 or Title 43 or by the State Bar of Georgia and is in good standing when such contract is for service to be rendered by such individual.

[4]*[Any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603].

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

STATE OF GEORGIA

COUNTY OF FULTON

FORM B: GEORGIA SECURITY AND IMMIGRATION SUBCONTRACTOR AFFIDAVIT

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services[3] under a contract with **[insert name of prime contractor]** C. W. MATTHEWS CONTRACTING CO., INC. behalf of **Fulton County Government** has registered with and is participating in a federal work authorization program*,[4] in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

826089
EEV/Basic Pilot Program* User Identification Number

Ashton Garcia
BY: Authorized Officer of Agent
(Insert Subcontractor Name)

Secretary
Title of Authorized Officer or Agent of Subcontractor

Ashton Garcia
Printed Name of Authorized Officer or Agent

Sworn to and subscribed before me this 11 day of March, 2025

Notary Public: Jenny Rcom-nie

County: Guilford

Commission Expires: 6/24/29

JENNY RCOM-NIE
My Commission Expires
NOTARY
PUBLIC
June 24, 2029
GUILFORD COUNTY, NC

[3]O.C.G.A.§ 13-10-90(4), as amended by Senate Bill 160, provides that "physical performance of services" means any performance of labor or services for a public employer (e.g., Fulton County) using a bidding process (e.g., ITB, RFQ, RFP, etc.) or contract wherein the labor or services exceed $2,499.99, except for those individuals licensed pursuant to title 26 or Title 43 or by the State Bar of Georgia and is in good standing when such contract is for service to be rendered by such individual.

[4]*[Any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603].

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

STATE OF GEORGIA

COUNTY OF FULTON

FORM B: GEORGIA SECURITY AND IMMIGRATION SUBCONTRACTOR AFFIDAVIT

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services[3] under a contract with **[insert name of prime contractor]** C. W. MATTHEWS CONTRACTING CO., INC. behalf of **Fulton County Government** has registered with and is participating in a federal work authorization program*,[4] in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

_____
EEV/Basic Pilot Program* User Identification Number

_____
BY: Authorized Officer of Agent
(Insert Subcontractor Name)

_____
Title of Authorized Officer or Agent of Subcontractor

_____
Printed Name of Authorized Officer or Agent

Sworn to and subscribed before me this _____ day of _____, 20__.

Notary Public: _____

County: _____

Commission Expires: _____

[3]O.C.G.A.§ 13-10-90(4), as amended by Senate Bill 160, provides that "physical performance of services" means any performance of labor or services for a public employer (e.g., Fulton County) using a bidding process (e.g., ITB, RFQ, RFP, etc.) or contract wherein the labor or services exceed $2,499.99, except for those individuals licensed pursuant to title 26 or Title 43 or by the State Bar of Georgia and is in good standing when such contract is for service to be rendered by such individual.

[4]*[Any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603].

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

FORM C1: CONTRACTOR'S GEORGIA UTILITY LICENSE CERTIFICATION (not applicable)

Contractor's Name: C. W. MATTHEWS CONTRACTING CO., INC.

Utility Contractor's Name: Kevin Thomas Eubanks

Expiration Date of License: April 30, 2027

I certify that the above information is true and correct and that the classification noted is applicable to the Bid for this Project.

Signed: _____
Michael Kleuckling, Vice President

Date: March 12, 2025

C.W. MATTHEWS CONTRACTING CO. MARIETTA GA
CORPORATE SEAL

(ATTACH COPY OF LICENSE)

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
Georgia Construction Industry Licensing Board
LICENSE NO. UC300337
C. W. Matthews Contracting Co., Inc.

P.O. Drawer 970
Marietta GA 30061

Utility Contractor

EXP DATE - 04/30/2027 Status: Active
Issue Date: 06/21/1994

A pocket-sized license card is below. Above is an enlarged copy of your pocket card.

Please make note of the expiration date on your license. It is your responsibility to renew your license before it expires. Please notify the Board if you have a change of address.

Wall certificates suitable for framing are available at cost, see board fee schedule. To order a wall certificate, please order from the web site – www.sos.ga.gov/plb.

Please refer to Board Rules for any continuing education requirements your profession may require.

Georgia State Board of Professional Licensing
237 Coliseum Drive
Macon GA 31217
Phone: (404) 424-9966
www.sos.ga.gov/plb

C. W. Matthews Contracting Co., Inc.
P.O. Drawer 970
Marietta GA 30061

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
Georgia Construction Industry Licensing Board
License No. UC300337
C. W. Matthews Contracting Co., Inc.

P.O. Drawer 970
Marietta GA 30061

Utility Contractor

EXP DATE - 04/30/2027 Status: Active
Issue Date: 06/21/1994

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
Georgia Construction Industry Licensing Board
LICENSE NO: UM101554
Kevin Thomas Eubanks

161 Celestial Ridge Drive
Dallas GA 30132

Utility Manager

EXP DATE - 04/30/2027 Status: Active
Issue Date: 06/27/2002

A pocket-sized license card is below. Above is an enlarged copy of your pocket card.

Please make note of the expiration date on your license. It is your responsibility to renew your license before it expires. Please notify the Board if you have a change of address.

Wall certificates suitable for framing are available at cost, see board fee schedule. To order a wall certificate, please order from the web site – www.sos.ga.gov/plb.

Please refer to Board Rules for any continuing education requirements your profession may require.

Georgia State Board of Professional Licensing
237 Coliseum Drive
Macon GA 31217
Phone: (404) 424-9966
www.sos.ga.gov/plb

Kevin Thomas Eubanks
161 Celestial Ridge Drive
Dallas GA 30132

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
Georgia Construction Industry Licensing Board
License No. UM101554
Kevin Thomas Eubanks

161 Celestial Ridge Drive
Dallas GA 30132

Utility Manager

EXP DATE - 04/30/2027 Status: Active
Issue Date: 06/27/2002

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

FORM C2: CONTRACTOR'S GEORGIA GENERAL CONTRACTOR'S LICENSE CERTIFICATION

Contractor's Name: C. W. MATTHEWS CONTRACTING CO., INC.

General Contractor's License Number: GCCO007346

Expiration Date of License: June 30, 2026

I certify that the above information is true and correct and that the classification noted is applicable to the Bid for this Project.

Signed: _____

Michael Kleuckling, Vice President

Date: March 12, 2025

C.W. MATTHEWS CONTRACTING CO. MARIETTA GA CORPORATE SEAL

(ATTACH COPY OF LICENSE)

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
State Licensing Board for Residential and General Contractors
LICENSE NO. GCCO007346
C.W. Matthews Contracting Co. Inc.
Daniel P. Garcia
1600 Kenview Drive
Marietta GA 30060

Qualifying Agent: Kevin Thomas Eubanks
Qualifying Agent License NO: GCQA007342
General Contractor Company

EXP DATE - 06/30/2026 Status: Active
Issue Date: 08/05/2021

A pocket-sized license card is below. Above is an enlarged copy of your pocket card.

Please make note of the expiration date on your license. It is your responsibility to renew your license before it expires. Please notify the Board if you have a change of address.

Wall certificates suitable for framing are available at cost, see board fee schedule. To order a wall certificate, please order from the web site – www.sos.ga.gov/plb.

Please refer to Board Rules for any continuing education requirements your profession may require.

Georgia State Board of Professional Licensing
237 Coliseum Drive
Macon GA 31217
Phone: (404) 424-9966
www.sos.ga.gov/plb

C.W. Matthews Contracting Co. Inc.
1600 Kenview Drive
Marietta GA 30060

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
State Licensing Board for Residential and General Contractors
License No. GCCO007346
C.W. Matthews Contracting Co. Inc.
Daniel P. Garcia
1600 Kenview Drive
Marietta GA 30060

Qualifying Agent: Kevin Thomas Eubanks
Qualifying Agent License NO: GCQA007342
General Contractor Company

EXP DATE - 06/30/2026 Status: Active
Issue Date: 08/05/2021

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
State Licensing Board for Residential and General Contractors
LICENSE NO. GCQA007342
Kevin Thomas Eubanks
161 Celestial Ridge Drive
Dallas GA 30132

Company Name: C.W. Matthews Contracting Co. Inc.
Company License NO: GCCO007346
General Contractor Qualifying Agent

EXP DATE - 06/30/2026 Status: Active
Issue Date: 08/05/2021

A pocket-sized license card is below. Above is an enlarged copy of your pocket card.

Please make note of the expiration date on your license. It is your responsibility to renew your license before it expires. Please notify the Board if you have a change of address.

Wall certificates suitable for framing are available at cost, see board fee schedule. To order a wall certificate, please order from the web site – www.sos.ga.gov/plb.

Please refer to Board Rules for any continuing education requirements your profession may require.

Georgia State Board of Professional Licensing
237 Coliseum Drive
Macon GA 31217
Phone: (404) 424-9966
www.sos.ga.gov/plb

Kevin Thomas Eubanks
161 Celestial Ridge Drive
Dallas GA 30132

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
State Licensing Board for Residential and General Contractors
License No. GCQA007342
Kevin Thomas Eubanks

161 Celestial Ridge Drive
Dallas GA 30132

Company Name: C.W. Matthews Contracting Co. Inc.
Company License NO: GCCO007346
General Contractor Qualifying Agent

EXP DATE - 06/30/2026 Status: Active
Issue Date: 08/05/2021

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

FORM C3: GEORGIA PROFESSIONAL LICENSE CERTIFICATION

NOTE: Please complete this form for the work your firm will perform on this project.

Contractor's Name: C. W. MATTHEWS CONTRACTING CO., INC.

Performing work as: Prime Contractor ✓ Sub-Contractor _____

* Professional License Type: None

* Professional License Number: None

Expiration Date of License: None

I certify that the above information is true and correct and that the classification noted is applicable to the Bid for this Project.

Signed: _____

Michael Kleuckling, Vice President

Date: March 12, 2025

C. W. MATTHEWS CONTRACTING CO. MARIETTA GA CORPORATE SEAL

(ATTACH COPY OF LICENSE)

*C. W. MATTHEWS CONTRACTING CO., INC. does not currently have a Georgia Professional License because C. W. MATTHEWS CONTRACTING CO., INC. does not perform any of the work described in the Instructions to Bidder Item #18. C. W. MATTHEWS CONTRACTING CO., INC. does have a Georgia General Contractors License (attached)

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

FORM D: DISCLOSURE FORM AND QUESTIONNAIRE

1. Please provide the names and business addresses of each of the Offeror's firm's officers and directors. Please See Attached

   For the purposes of this form, the term "Offeror" means an entity that responds to a solicitation for a County contract by either submitting a proposal in response to a Request for Proposal or a Request for Qualification or a Bid in response to an Invitation to Bid. Describe accurately, fully and completely, their respective relationships with said Offeror, including their ownership interests and their anticipated role in the management and operations of said Offeror.
   Please See Attached

2. Please describe the general development of said Offeror's business during the past five (5) years, or such shorter period of time that said Offeror has been in business.

   C. W. MATTHEWS CONTRACTING CO., INC. has been in business since 1946. The Company has performed (and continues to perform) numberous street projects, major highway and heavy construction contracts for various governmental and private entities. The Company has performed many contracts for the City of Atlanta, mostly at Hartsfield-Jackson International Airport; most notably is the Fifth Runway Site Preparation, Phase 1 & 2 project. Please See Projects Completed for 2019, 2020, 2021, 2022, 2023

3. Please state whether any employee, agent or representative of said Offeror who is or will be directly involved in the subject project has or has ever: (i) directly or indirectly had a business relationship with Fulton County; (ii) directly or indirectly received revenues from Fulton County; or (iii) directly or indirectly receives revenues from the result of conducting business on Fulton County property or pursuant to any contract with Fulton County. Please describe in detail any such relationship. None

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

C. W. MATTHEWS CONTRACTING CO., INC.
OFFICERS AND DIRECTORS
P. O. Drawer 970, Marietta, Georgia 30061

Robert E. Matthews
Chairman Emeritus
Director
Bobm@cwmatthews.com
(770) 422-7520

Matthew D. Burton
Chairman of the Board
Director
Mattb@cwmatthews.com
(770) 422-7520

Daniel P. Garcia
President
Dgarcia@cwmatthews.com
(770) 422-7520

Michael D. Bell
Executive Vice President
Secretary/Treasurer
Michaelb@cwmatthews.com
(770) 422-7520

Jeff C. Shropshire
Senior Vice President
Major Projects
Jeffs@cwmatthews.com
(770) 422-7520

William G. White
Senior Vice President
Asphalt Construction
Billw@cwmatthews.com
(770) 422-7520

Frank P. Crumbley
Senior Vice President
Roadway Construction
Frankc@cwmatthews.com
(770) 422-7520

Lee T. Smith, Jr.
Senior Vice President
Asphalt Plants
Lees@cwmatthews.com
(770) 422-7520

Mike L. Kleuckling
Vice President
Estimating
Mikek@cwmatthews.com
(770) 422-7520

Benny M. Brown, Jr.
Vice President
General & Administration
Assistant Secretary
Bennyb@cwmatthews.com
(770) 422-7520

John M. Faress
Vice President
Equipment
Jfaress@cwmatthews.com
(770) 422-7520

Adam M. Grist
Vice President
Structures
Agrist@cwmatthews.com
(770) 422-7520

Sheldon K. Fram
Corporate Counsel
Risk Management
Sfram@cwmatthews.com
(770) 422-7520

Robert W. Thompson, Jr.
Division Vice President
Estimating & Design Build
Bobt@cwmatthews.com
(770) 422-7520

Jarrod W. Crum
Division Vice President
Safety
Jcrum@cwmatthews.com
(770) 422-7520

Stoy F. Marlow
Senior Vice President
Baker
Smarlow@cwmatthews.com
(770) 422-7520

Thomas J. Roginsky
Division Vice President
Information Technology
Jeffr@cwmatthews.com
(770) 422-7520

Ray A. Rodriguez
Division Vice President
Human Resources
Rayr@cwmatthews.com
(770) 422-7520

Kevin T. Eubanks
Division Vice President
Roadway Construction
Kevine@cwmatthews.com
(770) 422-7520

Ryan L. Beech
Division Vice President
Major Projects
Rbeech@cwmatthews.com
(770) 422-7520

Andrew G. Brooks
Division Vice President
Terminal & Quality Control
Andrewb@cwmatthews.com
(770) 422-7520

Michael P. Nadolski
Division Vice President
Design Build
MNadolski@cwmatthews.com
(770) 422-7520

Ronald C. Eubanks, Jr.
Division Vice President
Water & Sewer Construction
Ceubanks@cwmatthews.com
(770) 422-7520

Robert B. Forrest
Division Vice President
Baker
Bforrest@cwmatthews.com
(770) 422-7520

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

C. W. MATTHEWS CONTRACTING CO., INC.
SCHEDULE OF PRINCIPAL INDIVIDUALS
January 1, 2025

Individual's Name	Present Position Or Office	Years of Construction Experience	Hire Date	Years With CWM	Magnitude and Type of Work	In What Capacity
Robert E. Matthews	Chairman Emeritus Director	62	1965	60	Executive	Management
Matthew D. Burton	Chairman of Board Director	35	1990	33	Executive	Management
Daniel P. Garcia	President	30	2013	13	Executive	Management
Michael D. Bell	Executive Vice President Secretary/Treasurer	30	1995	30	Executive	Management
Jeff C. Shropshire	Senior Vice President	37	1990	35	Major Projects	Field Management
William G. White	Senior Vice President	37	1988	37	Asphalt Construction	Field Management
Frank P. Crumbley	Senior Vice President	42	1996	29	Roadway Construction	Field Management
Lee T. Smith, Jr.	Senior Vice President	25	2000	25	Asphalt Plants	Field Management
Stoy F. Marlow	Senior Vice President	36	2024	1	Baker Division	Field Management
Mike L. Kleuckling	Vice President	43	1988	37	Estimating	Management
Benny M. Brown, Jr.	Vice President Assistant Secretary	22	2003	22	General & Administration	Management
John M. Faress	Vice President	32	2009	16	Equipment	Field Management
Adam M. Grist	Vice President	26	2005	20	Structures Division	Field Management
Kevin T. Eubanks	Vice President	27	1998	27	Roadway Constructoin	Field Management
Sheldon K. Fram	Corporate Counsel	28	2006	19	Risk Management	Management
Robert W. Thompson, Jr.	Division Vice President	47	1979	46	Estimating & Design Build	Management
Thomas J. Roginsky	Division Vice President	43	1995	30	Information Technology	Management
Ray A. Rodriguez	Division Vice President	33	1995	30	Human Resources	Management
Ryan L. Beech	Division Vice President	25	2006	19	Major Projects	Field Management
Andrew G. Brooks	Division Vice President	22	2005	20	Terminal and Quality Control	Field Management
Michael P. Nadolski	Division Vice President	19	2008	17	Design Build	Management
Ronald C. Eubanks, Jr.	Division Vice President	25	2023	2	Water & Sewer	Field Management
Jarrod W. Crum	Division Vice President	29	2023	2	Safety	Field Management
Robert B. Forrest	Division Vice President	35	2024	1	Baker Division	Field Management
Joe J. DeFiore	Division Vice President	25	2024	1	Estimating & Design Build	Management
Robert L. Bird III	Division Vice President	30	2024	1	Major Projects	Field Management

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

C. W. MATTHEWS CONTRACTING CO., INC.
INDIVIDUALS AUTHORIZED TO SUBMIT BIDS

NAME	TITLE
Daniel P. Garcia	President
Michael D. Bell	Executive Vice President, Secretary/Treasurer
Jeff C. Shropshire	Senior Vice President - Major Projects
Stoy F. Marlow	Senior Vice President - Baker Division
Mike L. Kleuckling	Vice President - Estimating
Benny M. Brown	Vice President - General & Administration, Asstistant Secretary
Robert W. Thompson, Jr.	Division Vice President - Estimating & Design/Build
Thomas J. Roginsky	Division Vice President - Information Technology
Robert B. Forrest	Division Vice President - Baker Division

LIST OF REFERENCES FOR PROJECTS COMPLETED IN 2023

C. W. MATTHEWS CONTRACTING CO., INC.
SCHEDULE OF CONTRACTS COMPLETED
December 31, 2023

CONTRACT NO., DESCRIPTION, LOCATION	AMOUNT OF CONTRACT	TYPE OF WORK	OWNER	ENGINEER/OFFICER	PHONE #
NHIMO-0016-01(092),WIDEN/RECONST I-16, BIBB	70,047,146	WIDENING AND RECONSTRUCTION	GEORGIA DOT	DONALD STULL	478-757-2601
0000297 WIDEN/RECONST US19/SR3, UPSON	16,228,228	WIDENING & RECONSTRUCTION	GEORGIA DOT	CRAIG SEWELL	706-646-6100
BL016-19 HARBINS RD AT SR316, GWINNETT	30,311,137	ROAD IMPROVEMENTS	GWINNETT COUNTY PURCHASING DEPARTMENT	FRANCES MOUAFONG	678-445-4144
0009801 US41 OVER ROCKY CREEK PAVING,BIBB (Sub to Brasfield)	2,353,422	MILLING/ RESURFACING	GEORGIA DOT	ISABEL REYES (BRASFIELD & GORRIE, LLC)	678-5816400
0008314 SR138 CONN AND EXT TO SR515, PICKENS	15,471,770	REALIGNMENT	GEORGIA DOT	TIM GRIFFIN	678-356-2729
0013545 DB I-85 WIDENING PH 2, JACKSON	97,498,637	WIDENING AND RECONSTRUCTION - DESIGN BUILD	GEORGIA DOT	TIM KNIGHT-HNTB	404-931-6428
009678 SPOUT SPRINGS ROAD, HALL (Sub to GP's)	8,500,300	MILLING/ RESURFACING	GEORGIA DOT	GARY PHILLIPS (G. P.'S ENTERPRISES)	770-945-0810
#20-48 WIDEN WEST VILLAGE PKWY/PANOLA RD, HENRY	6,549,047	WIDENING	HENRY COUNTY PURCHASING DEPT.	ROQUE ROMERO	770-288-6027
GREENSBORO E LOOP C204096, GUILFORD COUNTY NC	19,983,117	CONCRETE PAVING	NORTH CAROLINA DOT	CINDY MIKOLAJCZYK (E.S. WAGNER CO.)	419-691-8651
21008-TERMINAL T, NORTH-CPTC FC-8913 JV W/TECHNIQUE	18,798,686	SITE PAVING & CONCRETE	CITY OF ATLANTA	JOHN CARMICHAEL (SNFSJV)	404-387-5382
IFB-C-1210316 HJAIA SOUTH CARGO PARKIKNG LOT EXP, CLAYTON	2,309,215	PARKING LOT EXPANSION	CITY OF ATLANTA	TREVIS SCOTT	404-382-1120
AIRPORT TERMINAL AREA SITE PREP & PAVING	736,697	RESURFACING	PICKENS COUNTY	KEITH DAY	770-387-3680
M006127 RESURFACING & SHOULDER REHAB, FRANKLIN	4,487,020	RESURFACING & SHOULDER REHAB	GEORGIA DOT	Jackson Orr	706-384-7269
111906-Lagrange GA 2021 LMIG Resurfacing	755,900	RESURFACING	CITY OF LAGRANGE	Brenda Leverett	706-302-2869
M006382 MILL, INLAY, RESURFACING & SHOULDER REHAB, CHATHAM	2,674,111	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	Randy Rhodes	(912) 651-2144
M005980 MILL, INLAY, RESURFACING, DEKALB	3,498,161	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	Borden Polk	770-216-3810
M006222 MILL, INLAY RESURFACING SR 113, CARROLL	2,826,662	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	Estevan Rodriguez	(770)646-5522
M006096 MILL, RESURFACING, SHOULDER REHAB SR 83, MONROE	3,586,684	MILLING/ RESURFACING/ SHOULDER REHAB	GEORGIA DOT	Jonathan Galvin	478-757-2601
0016440 RECONSTRUCT & REHAB FOR TURN LANES SR 85, MUSCOGEE	1,284,609	RECONSTRUCTION & REHAB FOR TURN LANES	GEORGIA DOT	Tony Richardson	706-568-2165
M006244 MILLING & RESURFACING SR 247/SR 11, BIBB	6,744,428	MILLING/ RESURFACING	GEORGIA DOT	Danny Miller	478-757-2601
M006050 MILL, INLAY, RESURFACING I-75/SR 401, FULTON	27,859,405	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	Ruben McCullers	404-559-6699
M006083 MILLING, RESURFACING SR 21, SCREVEN	8,579,549	MILLING/ RESURFACING	GEORGIA DOT	Kevin Cribbs	(912) 871-1103
M008175 MILL, RESURFACING, SHOULDER REHAB SR 184, STEPHENS	1,739,834	RESURFACING & SHOULDER REHAB	GEORGIA DOT	Kevin Barrett	(706) 384-7269
EA-C-1220285 DB CHESHIRE BRIDGE ROAD REPLACE BRIDGE, DEKALB	9,727,036	BRIDGE REPLACEMENT	CITY OF ATLANTA	Courtney Hunt	404-330-6204
FY23 CAPACITY IMPROVEMENTS, RAPID DISPATCH (SUB TO BAKER)	747,071	MILLING/ RESURFACING	BAKER CONSTRUCTION	Mischa Turner	912-307-9400
M004842 MILL, INLAY, RESURFACING SR 54, CLAYTONDEKALB	800,587	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	Terrence Cooper	404-559-6659
M006180 MILL/RESURFACING SR17/SR 184, STEPHENS	2,216,214	MILLING/ RESURFACING	GEORGIA DOT	Shane Jones	706-384-7269
M006290 MILL, INLAY, RESURFACING SR 280, COBB	5,688,366	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	Jean Luma	770-528-3232
TSPLOST RESURFACING PHASE 1 2022-0006, SPALDING	7,185,095	RESURFACING	SPALDING COUNTY PUBLIC WORKS	Scott Sullivan	770-467-4774
SOUTH HOUSTON LAKE RD & FEAGIN MILL INTERSECT IMPRV, HOUSTON	2,536,081	INTERSECTION IMPROVEMENTS	HOUSTON COUNTY PUBLIC WORKS	Alon Mason	478-987-4280
M006292 MILL, INLAY, RESURFACING SR 155, DEKALB	7,135,858	MILL/ INLAY/ RESURFACING	GEORGIA DOT	LEE UPKINS	770-216-3810
M006267 MILL, INLAY, RESURFACING SR 141, FORSYTH	7,847,865	MILL/ INLAY/ RESURFACING	GEORGIA DOT	SIMON FOX	770-531-5880
M006265 MILL, INLAY, RESURFACING SR3, FULTON	2,306,333	MILL/ INLAY/ RESURFACING	GEORGIA DOT	Kevin Bailey	404-559-6699
T01601734 PATCH, MILL & RESURF OF VARIOUS ROADS, DOUGLAS	9,863,468	MILLING/ RESURFACING	DOUGLAS COUNTY BOC	Jack Burnside	770-920-7266
M006213 MILL, INLAY, RESURFACING SR 26, CHATHAM	1,649,294	MILL/ INLAY/ RESURFACING	GEORGIA DOT	Randy Rhodes	912-651-2144
#22-T001 RESURFACING 40 ROADS, CITY OF LOCUST GROVE	3,877,643	RESURFACING	THE CITY OF LOCUST GROVE	Andrew Johnson	770-265-3416
2022 LMIG PAVING PW-2022-LMIG-COUNTY, MURRAY COUNTY	6,128,322	MILLING/ RESURFACING	MURRAY COUNTY GOVERNMENT	Matt Sanford	706-423-2141
M006343 MILL, INLAY, RESURFACING SR 16/SR 1, CARROL	669,957	MILL/ INLAY/ RESURFACING	GEORGIA DOT	Estevan Rodriguez	(770)646-5522
M006398 MILL, INLAY, RESURFACING SR13, DEKALB	1,082,413	MILL/ INLAY/ RESURFACING	GEORGIA DOT	Borden Polk	(770) 216-3810
IFB-C-1220143 HJAIA CENTER AIRFIELD (SUB TO BBH), FULTON	1,784,920	PANEL REPLACEMENT	CITY OF ATLANTA	STEVE WOODS (BBH)	770-874-1182
2022 STREET RESURFACING, CITY OF KENNESAW	1,774,097	RESURFACING	CITY OF KENNESAW	Ricky Stewart	678-458-4179
EMAS INSTALL-PHASE II, CARTERSVILLE-BARTOW AIRPORT AUTHORITY	730,000	EMAS INSTALL	CARTERSVILLE-BARTOW COUNTY AIRPORT AUTHORITY	THOMAS ROBINSON (CROY)	770-971-5407
GDOT SR 5 PVMT PRESERVATION, FANNIN	424,525	PAVEMENT PRESERVATION	GEORGIA DOT	Chance Stokes	706-272-2211
M006320 MILL, INLAY, RESURFACING SR 120, GWINNETT	4,640,999	MILL/ INLAY/ RESURFACING	GEORGIA DOT	Kevin Matthew Bailey	770-531-5880
GATE 69 MODULAR YARD (HOLDER, MOODY, AND BRYSON A JV)	1,500,000	RELOCATION LOT	CITY OF ATLANTA	ERIC DURHAM (HOLDER)	770-886-3045
M004985 MILL, INLAY, RESURFACING SR92, DOUGLAS	5,058,178	MILL/ INLAY/ RESURFACING	GEORGIA DOT	Rubin McCullers	404-559-6659
M006321; MILL, INLAY, RESURF, SHOULDER REHAB SR 59, FRANKLIN	6,302,196	MILL/ INLAY/ RESURFACING/ SHOULDER REHAB	GEORGIA DOT	Glenn Gosnell	706-384-7269
M006103 MILL, RESURFACING, SHOULDER REHAB SR 219, HARRIS	3,409,044	MILL/ RESURFACING/ SHOULDER REHAB	GEORGIA DOT	JD Abercrombie	706-568-2165
M005262 MILL, INLAY, RESURF, SHOULDERF REHAB SR 18, MONROE	4,409,550	MILL/ INLAY/ RESURFACING/ SHOULDER REHAB	GEORGIA DOT	Daniel Emmons	478-757-2601
M006102 MILL, INLAY, RESURFACING, SR 219, MUSCOGEE	4,768,094	MILL/ INLAY/ RESURFACING	GEORGIA DOT	James Hines	706-568-2165
GDOT SR 145 PVMT PRESERVATION, FRANKLIN	522,020	PAVEMENT PRESERVATION	GEORGIA DOT	Phillip Shane Jones	(706) 384-7269
M006319 MILL, INLAY, RESURFACING SR 15 & SR 10, CLARKE	2,994,773	MILL/ INLAY/ RESURFACING	GEORGIA DOT	Rodney Harpe	706-583-2644
M006328 MILL, INLAY, RESURF, SHOULDER REHAB SR 136, COBB	3,212,544	MILL/ INLAY/ RESURFACING/ SHOULDER REHAB	GEORGIA DOT	Percy Combay	(478) 234-7985
M006249 MILL, INLAY, RESURFACING SR 34 & SR 16, COWETA	3,922,316	MILL/ INLAY/ RESURFACING	GEORGIA DOT	Guilberne Jean Millien	(706) 845-1115
M006272 MILL, INLAY, RESURF, SHOULDER REHAB, DAWON/FORSYTH	4,380,152	MILL/ INLAY/ RESURFACING/ SHOULDER REHAB	GEORGIA DOT	Kevin Bailey	770-531-5880
M006253 MILL, INLAY, RESURF, SURFACE TREAT SR 1, FLOYD/POLK	7,226,128	MILL/ INLAY/ RESURFACING/ SURFACE TREATMENT	GEORGIA DOT	Carol Tate	478-955-7151
M006322 MILL, INLAY, RESURF, SHOULDER REHAB SR 60, HALL	3,497,079	MILL/ INLAY/ RESURFACING/ SHOULDER REHAB	GEORGIA DOT	Kevin Matthew Bailey	(770) 531-5880
	483,229,565				

We are Subcontractors on these jobs.
Joint Ventures
Five year contract was agreed upon with unit prices, not quantities. No official contract amount

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LIST OF REFERENCES FOR PROJECTS COMPLETED IN 2022

C. W. MATTHEWS CONTRACTING CO., INC.
SCHEDULE OF CONTRACTS COMPLETED
December 31, 2022

CONTRACT NO., DESCRIPTION, LOCATION	AMOUNT OF CONTRACT	TYPE OF WORK	OWNER	ENGINEER/OFFICER	PHONE #
STP00-0002-00(526), Bartow, US 41 / SR 3 Widening and Reconstruction	38,074,220	WIDENING/ RECONSTRUCTION/ CONSTRUCT BRIDGES	GEORGIA DOT	SAM WHEELER	770-387-3680
STPIM-0180-01(006) RECONST SR 151 ALABAMA HWY,CATOOSA	37,036,113	WIDENING AND RECONSTRUCTION	GEORGIA DOT	JEREMY SCOTT	706-272-2211
JEFFERSONVILLE RD #18-026,MACON-BIBB	17,166,121	WIDENING AND RECONSTRUCTION	MACON-BIBB COUNTY	DAVID SPIVEY - MORELAND ALTOBELI & ASSOCIATES	770-985-8520
DB1801-IMNH-75-1(131) I-75/I-24, HAMILTON CO TN	133,500,989	MODIFICATION & RECONSTRUCTION I-75/I -24 DESIGN BUILD	TENNESSEE DOT	JEFF BLEVINS	423-510-1218
007174 CONSTRUCT 2 BRIDGES US41/PEACHTREE CRK, FULTON	20,548,846	CONSTRUCTION OF 2 BRIDGES & APPROACHES	GEORGIA DOT	BRIAN MCHUGH	404-965-6721
* N.PERIMETER/FERROVIAL RFP102 (BRIDGE 2,3,4,5), FULTON	4,344,589	CONSTRUCTION OF BRIDGES	GEORGIA DOT	PHILLIP WOOD (NORTH PERIMETER CONTRACTORS, LI	404-609-4600
FC-1190065 CITY OF ATLANTA RESURFACE GROUP B, FULTON	19,435,366	RESURFACING	CITY OF ATLANTA	LISA SHEARER	404-540-1885
PI 631260 WIDEN & RECONSTRUCT SR382, GILMER	8,648,302	WIDENING & RECONSTRUCTION	GEORGIA DOT	BRENTLEY PRITCHARD	706-272-2211
PI 0012621 MAXHAM ROAD IMPROVEMENTS, DOUGLAS	2,874,976	CONGESTION REDUCTION & TRAFFIC FLOW IMPROVEMENTS	DOUGLAS COUNTY BOC	HAMID KAZEMIAN	678-384-2486
* PI 0012698 GRAVEL SPGS SOUND BARRIER GWINNETT (Sub to ERS)	2,930,668	SOUND BARRIER	ER SNELL CONTRACTOR, INC.	ZACK HAMILTON	770-985-0800
X2309 X2704 E7350 MCCOLLUM PKWY, COBB	3,836,380	ROAD INSTERSECTION/PEDESTRIAN IMPROVEMENTS	COBB COUNTY DOT	DENISE HATABIAN	770-528-3656
2020 RESURF & STRIPING, UPSON	6,984,432	MILLING/ RESURFACING	UPSON COUNTY BOC	CHRISTOPHER BRAZELL	706-565-5985
ITB#20-324-/ ROSWELL HOLCOMB BRIDGE RD IMP, FULTON (PROJECT CANCELED)	5,760,689	INTERSECTION IMPROVEMENTS	CITY OF ROSWELL	MICHAEL MCNITT	770-594-6420
M006009 US27/SR1 & NORTH OF SR 20, FLOYD	1,865,383	RESURFACING & MAINTENANCE	GEORGIA DOT	CAROL TATE	706-676-3356
M005987 SR 139 TO SR 279, FULTON	1,746,077	RESURFACING & MAINTENANCE	GEORGIA DOT	JOSHUA A JOHNSON	404-559-6699
M005989 SR 92 BEG. @ GREENE ST, FULTON	2,862,432	RESURFACING & MAINTENANCE	GEORGIA DOT	DANNY JACKSON	404-559-6699
M006005 US 27/SR 1 POLK	4,231,498	RESURFACING & MAINTENANCE	GEORGIA DOT	NATHAN HOWELL	770-646-5522
M006006 SR 1 EXTENDING TO SR 166, CARROL	1,734,331	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	NATHAN HOWELL	770-646-5522
COBB CO. LMIG X2515 RESURF 2021-1 COUNTYWIDE MAJ THOROUGHFAR	7,858,068	RESURFACING	COBB COUNTY DOT	DENISE HATABIAN	770-528-3656
ITB#21-08 CLAYTON CO. 2021 SPLOST MILL & RESURF DIST. 3&4	5,040,528	MILLING/ RESURFACING	CLAYTON COUNTY BOC	LINDSEY WATTERS	770-477-3587
CITY OF SOUTH FULTON-TSPLOST ROAD RESURFACING, FULTON	15,827,366	MILLING/ RESURFACING	CITY OF SOUTH FULTON	DREXAL D. PAULK SR	470-809-7731
# TROUP COUNTY RESURFACING, TROUP. 2021 5 YEAR CONTRACT	-	RESURFACING	TROUP COUNTY BOC	PATRICK CREWS	706-883-1610
M006093 SR 247 RESURF, BIBB	2,735,586	RESURFACING	GEORGIA DOT	LENROY GIBSON	478-757-2801
M005261 SR 154 RESUR & SHOULDER REHAB, MERIWETHER	1,242,987	RESURFACING & SHOULDER REHAB	GEORGIA DOT	BRAD FULLER	706-845-4115
M006092 US80/SR 22 MILL, INLAY, RESURF, MUSCOGEE	3,041,540	RESURFACING	GEORGIA DOT	RYAN PRUITT	706-568-2155
0016845 CONST OF A BRIDGE OVER SHAW BRANCH, WALKER	991,715	BRIDGE REPLACEMENT	GEORGIA DOT	PATRICK MCWHORTHER	706-295-6025
M005509 SR 116/SR 219 RESURF & SHOULD REHAB, HARRIS	2,474,542	RESURFACING & SHOULDER REHAB	GEORGIA DOT	JD ABERCROMBIE	706-741-3630
M005150 SR 83, MILL, INLAY. RESURF, JASPER	3,409,560	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	CHARLES SMITH	706-343-5837
M005910 SR 74, MILL, INLAY, RESURF, SHOULDER REHAB, MONROE	1,902,463	MILLING/ RESURFACING	GEORGIA DOT	DANNY MILLER	478-757-2801
PERRY-HOUSTON CO AIRPORT-RUNWAY 18-36 REHAB & EXT., HOUSTON	2,158,668	RUNWAY REHAB	HOUSTON COUNTY PUBLIC WORKS	JIM PIKE (HOLT CONSULTING)	770-285-6754
CHEROKEE CO.-2021 RESURF PROJECT #75708, CHEROKEE	3,339,851	MILLING/ RESURFACING	CHEROKEE COUNTY	JIM WILGUS	678-493-6077
20017-M005857 BRIDGE RESTORATION I-675 SB OVER I-285, DEKALB	1,663,738	BRIDGE RESTORATION	GEORGIA DOT	CEDRIC TIGNER	770-216-3810
M005916 MILLING & RESURF SR 72/SR 8/SR 172, CLARKE & MADISON	4,144,460	MILLING/ RESURFACING	GEORGIA DOT	DEREK WADE	706-384-7259
M005985 MILLING/INLAY/RESURF SR 360, COBB	2,348,748	REHAB/ RESURFACING	GEORGIA DOT	JON-WESLEY DUNCAN	770-528-3232
M006126 MILLING/INLAY/RESURF SR 140, FULTON	2,027,402	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	DALE FERRIS	404-559-6699
M006121 MILLING/INLAY/RESURF SR20/SR 316, GWINNETT	4,251,042	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	JOEL NELMS	770-535-5759
* 1910-10: IC-GCT CAPACITY IMPROVEMENTS, PHASE 2, CHATHAM	3,536,923	MILLING/ RESURFACING	GEORGIA PORT AUTHORITY	ALEX BENDER	912-655-4862
GDOT PVMT PRESERVATION SR 13, GWINNETT	748,140	PAVEMENT PRESERVATION	GEORGIA DOT	SONJA GARLAND	770-533-7242
LMIG RECLAMATION, RESURFACING & PATCHING, JONES COUNTY	1,324,794	RESURFACING	JONES COUNTY BOC	LESLIE FAULK	478-986-8261
CCPW 2021-15 LMIG RESURFACING, CATOOSA	2,869,083	RESURFACING	CATOOSA COUNTY DOT	JEREMY BRYSON	706-935-3574
M006115 MILL & RESURF SR 92, CHEROKEE	6,229,591	MILLING/ RESURFACING	GEORGIA DOT	TITUS MCGUIRE	770-387-3680
M005834 MILL, INLAY, RESURFACING US 411/SR 20, BARTOW/FLOYD	3,783,945	MILL/ INLAY/ RESURFACING	GEORGIA DOT	Keith Day	770-387-3680
M005744 MILL, RESURF, SHOULDER REHAB SR 52, HALL/JACKSON	3,879,580	MILLING/ RESURFACING/ SHOULDER REHAB	GEORGIA DOT	JEAN DESTIN	770-535-5759
M006095 MILL, RESURF, SHOULDER REHAB US27/SR1, HEARD	7,469,586	MILLING/ RESURFACING/ SHOULDER REHAB	GEORGIA DOT	WILLIAM BOYD	706-845-4115
M006131 MILL, RESURF, SHOULDER REHAB US 129/SR 11, LUMPKIN	2,710,550	MILLING/ RESURFACING/ SHOULDER REHAB	GEORGIA DOT	DANIEL FREEMAN	706-949-8150
JONESBORO ROAD RESURFACING, HENRY	2,426,000	RESURFACING	HENRY COUNTY BOC	OLIVIA MCPHERSON	770-288-6263
ITB#21-73 MILLING & RESURFACING OF MCDONOUGH ROAD, CLAYTON	4,330,111	MILLING/ RESURFACING	CLAYTON COUNTY BOC	MAKWEEM CHARLES	770-477-3587
2021 LMIG PAVING (4200-22-01-071421), BUTTS COUNTY	1,492,700	RESURFACING	BUTTS COUNTY BOC	KIP WASHINGTON	478-955-7151
M006145 MILL, INLAY, PLANT RESURF MIX SR 155 @ SR 10, DEKALB	4,827,608	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	BORDEN POLK	770-216-3810
M006144 MILL, INLAY, PLANT RESURF MIX SR 5, DOUGLAS	2,247,462	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	JOSHUA JOHNSON	404-783-4395
0008598 CONSTR OF A BRIDGE & APPROACHES, FAYETTE	4,477,188	BRIDGE REHABILITATION	GEORGIA DOT	WILLIAM BOYD	706-845-4115
NELSON STREET BRIDGE	4,146,988	CONSTRUCTION OF A BRIDGE	NEW SOUTH CONSTRUCTION	DAN CHAMPAGNE	404-409-8750
HARDEN HILL ROAD RESURFACING, CITY OF WATKINSVILLE	166,892	MILLING/ RESURFACING	CITY OF WATKINSVILLE	SHARYN DICKERSON	706-769-5181
5.8T-RIVERBEND ROAD @ SR 3, WHITFIELD	1,887,004	INTERSECTION IMPROVEMENTS	WHITFIELD COUNTY	KENT BENSON	706-876-1673
EA- C1220057, Cheshire Bridge Road Demolition	800,179	BRIDGE DEMOLITION	CITY OF ATLANTA	JESSICA FULTON	404-330-6764
M006128 MILL, INLAY, RESURF, SHOULDER REHAB SR 15, CLARKE	1,792,764	MILLING/ INLAY/ RESURFACING/ SHOULDER REHAB	GEORGIA DOT	RODNEY HARPE	706-583-2644
M006096 MILL, INLAY, RESURF, SHOULD REHAB SR 34, COWETA	3,802,951	MILLING/ INLAY/ RESURFACING/ SHOULDER REHAB	GEORGIA DOT	WILLIAM BOYD	706-845-4115
M006148 MILL, INLAY, RESURF SR 5, DOUGLAS	2,553,197	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	JOSHUA JOHNSON	404-559-6699
M005745 MILL, INLAY, RESURF, SHOULDER REHAB SR 98, MADISON	2,419,677	MILLING/ INLAY/ RESURFACING/ SHOULDER REHAB	GEORGIA DOT	SHANE JONES	478-955-7151
GDOT PVMT PRESERVATION SR 96, PEACH	853,400	PAVEMENT PRESERVATION	GEORGIA DOT	TIM SWINK	404-631-1387
GDOT PVMT PRESERVATION SR 10 LOOP, CLARKE & OCONEE	1,124,700	PAVEMENT PRESERVATION	GEORGIA DOT	BLAKE JENNINGS	706-583-2644
#201TB125848K-ADDITIONAL 2021 ROADS DB ROAD RESURF, FULTON	1,632,444	MILLING/ RESURFACING	FULTON COUNTY DEPARTMNET OF PUBLIC WORKS	DARLENE BANKS	404-612-7879
GDOT PVMT PRESERVATION SR 197, RABUN	606,130	PAVEMENT PRESERVATION	GEORGIA DOT	MITCH GARMON	706-348-4848
M006117 MILL, INLAY, & PLANT MIX RESURFACING SR 166, CARROLL	3,915,082	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	LEE WEBB	770-646-5522
GDOT PVMT PRESERVATION SR 36, BUTTS	249,158	PAVEMENT PRESERVATION	GEORGIA DOT	EURIKA THOMAS	706-846-6100
GDOT PVMT PRESERVATION SR 85, MUSCOGEE	953,122	PAVEMENT PRESERVATION	GEORGIA DOT	JEFF PRUITT	706-565-2165
M006173 RESURFACING & SHOULDE REHAB, FRANKLIN & STEPHENS	2,083,066	RESURFACING & SHOULDER REHAB	GEORGIA DOT	ROBERT NELSON	706-384-7259
M006226 RESURFACING & SHOULDE REHAB, HALL & JACKSON	1,860,384	RESURFACING & SHOULDER REHAB	GEORGIA DOT	SHANNON GILES	770-531-5880
2022 LMIG STREET IMPROVEMENTS, CRAWFORD	795,185	RESURFACING	CRAWFORD COUNTY BOC	HAYES HOFSTADTER	478-757-1169
MARTIN MARIETTA QUARRY, CUMMING	1,031,413	GRADING, RESURFACING	MARTIN MARIETTA	JASON WEATHERFORD	404-807-9151
GDOT PVMT PRESERVATION SR 83/42/16, MONROE	640,000	PAVEMENT PRESERVATION	GEORGIA DOT	DANNY MILLER	478-757-2801
#2026-B WINTER RESURFACING, FAYETTE	1,816,632	MILLING/ RESURFACING	FAYETTE COUNTY BOC	BRAD KLINGER	770-320-6039
2021 TSPLOST & LMIG SAP Project, Oglethorpe	2,453,836	PATCHING/ WIDENING/ LEVELING/ RESURFACING/ RESTRIPING	OGLETHROPE COUNTY BOC	JOSH HAWKINS	706-743-5270
M006186 RESURFACING & SHOULDER REHAB, JONES	3,676,578	RESURFACING & SHOULDER REHAB	GEORGIA DOT	Erika Coons-Andrews	478-757-2601
ITB# 2021-015 CHAMBLEE TUCKER ROAD LANE DIET, CITY OF TUCKER	2,340,642	MILLING/ RESURFACING	CITY OF TUCKER	LISA OWEN	678-597-8040
WOODLAND BROOK PIPE REPLACEMENT	180,538	PIPE REPLACEMENT	COBB COUNTY DOT	DENISE HATABIAN	770-528-3656
I-75 GRASSDALE BRIDGE EMERGENCY-A006900, BARTOW	1,798,540	BRIDGE EMERGENCY	GEORGIA DOT	Keith Day	770-387-3680
M006286 MILL, INLAY, RESURFACING, COBB	1,368,340	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	Jon-Wesley Duncan	770-528-3232
0017709 RESURF, PVMT MARKING UPGRADES, SHOULDER REHAB COWETA	569,500	RESURFACING/ PVMT MARKINGS UPGRADES, SHOULDER REHAB	GEORGIA DOT	William Boyd	706-645-4115
# TROUP COUNTY RESURFACING, TROUP. 2022 5 YEAR CONTRACT		RESURFACING	TROUP COUNTY BOC	JAMES EMERY	706-523-1165

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C. W. MATTHEWS CONTRACTING CO., INC.
SCHEDULE OF CONTRACTS COMPLETED
December 31, 2022

	CONTRACT NO., DESCRIPTION, LOCATION	AMOUNT OF CONTRACT	TYPE OF WORK	OWNER	ENGINEER/OFFICER	PHONE #
	GDOT PVMT PRESERVATION SR 98, SR 326, SR 15, JACKSON	824,100	PAVEMENT PRESERVATION	GEORGIA DOT	Blake Jennings	706-583-2644
	D2875, TWIN BRANCHES CIRCLE DRAINAGE, COBB EMERGENCY	406,715	DRAINAGE REPAIR	COBB COUNTY DOT	DENISE HATABIAN	770-528-3656
	HARALSON COUNTY LMIG & TSPLOST ROAD PROJECT 2022	2,353,697	MILLING/ RESURFACING	HARALSON COUNTY COB	Terry Edwards	770-646-3278
	GDOT PVMT PRESERVATION SR 60, LUMPKIN	486,503	PAVEMENT PRESERVATION	GEORGIA DOT	Ruben McCullers	706-348-4848
	2022 RECLAMATION & RESURFACING VARIOUS ROADS, LAMAR	1,276,753	RESURFACING	LAMAR COUNTY BOC	JAMES RIGDON	770-358-5090
*	T-North PBB Foundations-Sub To Player & Company	190,975	FOUNDATION DEMO & INSTALL	CITY OF ATLANTA	BRIAN RISCHAR (PLAYER & COMPANY)	678-469-5301
	2022 ASPHALT CONTRACT 1, PAULDING COUNTY	4,530,162	MILLING/ RESURFACING	PAULDING COUNTY BOC	DERRICK BAXTER	770-445-4759
	GDOT PVMT PRESERVATION SR11, WHITE	576,820	PAVEMENT PRESERVATION	GEORGIA DOT	Mitch Garmon	706-348-4848
	NCCS MCPHAIL DRIVE, COBB	79,500	ROAD IMPROVEMENTS	NORTH COBB CHRISTIAN SCHOOL	TODD CLINGMAN	770-975-0252
*	TERMINAL B EMERGENCY REPAIRS	20,017	EMERGENCY REPAIR	CITY OF ATLANTA	JIM REZAC (BRENT SCARBROUGH)	770-461-8603
	GDOT PVMT PRESERVATION SR 17, WHITE	1,080,050	PAVEMENT PRESERVATION	GEORGIA DOT	Mitch Garmon	706-348-4848
	GDOT PVMT PRESERVATION SR 115, WHITE	1,116,600	PAVEMENT PRESERVATION	GEORGIA DOT	TIMOTHY SWINK	404-631-1357
	COBB EMERGENCY GORDY PARKWAY	499,212	EMERGENCY REPAIR	COBB COUNTY DOT	DENISE HATABIAN	770-528-3656
#	CITY OF LAGRANGE RENEWABLE FOB	-	MILLING/ RESURFACING	CITY OF LAGRANGE	CHRIS PRATHER	706-302-2899
*	Fuel Slab Replacement (Player & Company)	148,294	FUEL SLAB REPLACEMENT	CITY OF ATLANTA	BRIAN RISCHAR (PLAYER & COMPANY)	678-469-5301
		490,974,660				

* We are Subcontractors on these jobs.
^ Joint Ventures
# Five year contract was agreed upon with unit prices, not quantities. No official contract amount

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C. W. MATTHEWS CONTRACTING CO., INC
SCHEDULE OF CONTRACTS COMPLETED
December 31, 2021

LIST OF REFERENCES FOR PROJECTS COMPLETED IN 2021

CONTRACT NO., DESCRIPTION, LOCATION	AMOUNT OF CONTRACT	TYPE OF WORK	OWNER	ENGINEER/OFFICER	PHONE #
CITY OF ATLANTA FC-9403 VARIOUS ST RESURF, FULTON	14,393,616	STREET RESURFACING & MAINTENANCE	CITY OF ATLANTA	MICHAEL WORD	404-330-6204
CITY OF ALPHARETTA, RUCKER RD IMPR. ITB17-011	18,552,622	COORIDOR IMPROVEMENTS	CITY OF ALPHARETTA	AARON WADLEY	404-326-4522
FC-9982 CITY OF ATL LOCAL GROUP 2 RESURF, FULTON	3,983,335	RESURFACING	CITY OF ATLANTA	JESSEE R. DAGEN	404-546-0110
CW12-02 BID 18-20 LAKE JOY RD IMP PHASE 4, HOUSTON	9,017,208	ROAD IMPROVEMENTS	HOUSTON COUNTY PUBLIC WORK	RONNIE HEALD	478-987-4280
CASS WHITE RD 0015144, BARTOW	7,712,081	IMPROVEMENTS	BARTOW COUNTY COMMISSIONER	DAVID MOORE - SOUTHLAND ENGINEERING	770-387-0440
IFB#17-004 CITY OF POWDER SPRINGS, COBB	2,024,693	WIDENING/RECONSTRUCTION	CITY OF POWDER SPRINGS	BUDDY ALLISON	770-971-5407
X2116 OLD HWY 41 OVER CSX RR, COBB	5,484,241	HIGHWAY BRIDGE REPLACEMENT	COBB COUNTY DOT	DENISE HATABIAN	770-528-3656
CHURCH ST WIDENING, HOUSTON	1,847,070	WIDENING	HOUSTON COUNTY PUBLIC WORKS	BRIAN JONES	478-542-2115
X2409 I-20 EASTBOUND RAMPS @ RIVERSIDE PKWY, COBB	2,658,980	THROUGHFARE IMPROVEMENTS	COBB COUNTY DOT	DENISE HATABIAN	770-528-3656
X2308 LOST MTN RD @ MIDWAY/MIRROR LAKE, COBB	1,387,442	INTERSECTION IMPROVEMENTS	COBB COUNTY DOT	DENISE HATABIAN	770-528-3656
#18-6448 NORTH APRON HANGAR AREA REHAB, COBB	2,321,455	AREA REHABILITATION	COBB COUNTY DOT	JAMES MIORIN	770-263-9118
M005911 SR53, DAWSON/FORSYTH	5,614,626	MILLING/ RESURFACING/SHOULDER REHAB	GEORGIA DOT	GERALL SMALLS	770-535-5759
CW18-03 2018 SPLOST THOMPSON MILL RD WIDEN, HOUSTON	2,632,282	WIDENING	HOUSTON COUNTY PUBLIC WORKS	RICK SAUNDERS	478-953-1228
M005340 SR 109 RESURF/SHOULDER REHAB, LAMAR/PIKE	1,585,045	MILLING/RESURFACING/SURFACE TREATMENT	GEORGIA DOT	CHASITY WALKER	706-646-8100
M005669 I-475,SR408 RESURF, BIBB/MONROE	20,514,086	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	JONATHAN GALVIN	478-757-2601
M005883 SR422/SR10 RESURF, CLARKE	10,798,150	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	KELVIN MULLINS	770-532-5500
M004808 SHOULDER REHAB I85/SR403, BANKS/FRANKLIN	19,041,300	MILLING/ RESURFACING/SHOULDER REHAB	GEORGIA DOT	JOEY DAVIS	706-384-7269
M005874 I-75 BUTTS/LAMAR/MONROE	24,829,704	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	GEORGE JOHNSON	706-646-8100
M005926 SR11 RESURFACING, BIBB	656,540	MILLING/ RESURFACING	GEORGIA DOT	TWILLIE LOVETT	478-955-7151
M005998 SR400 RESURFACING, FULTON	9,047,584	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	CHRIS WOODS	770-216-3810
RUNWAY 12/30 THOMASTON UPSON CO AIRPORT, UPSON	1,964,380	PAVEMENT REHAB	THOMASTON-UPSON COUNTY AIRPORT AUTHORITY	LESLEY WEAVER (CROY)	770-971-5407
0016058 ITB #1781-B FY2019 RESURFACING, FAYETTE	3,026,648	MILLING/ RESURFACING	FAYETTE COUNTY BOC	CHRISTINA PILOTTI (CROY)	770-971-5407
M005919 SR21 N OF SMITH AVE, CHATHAM	2,390,591	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	RAY SAPP	912-651-2144
M005943 SR 120 ALT BEGN AT SR 120 TO US 41 COBB PKWY,COBB	1,177,217	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	LINDSEY HOOKS	770-528-3232
# TROUP COUNTY RESURFACING, TROUP, 2020 5 YEAR CONTRACT	-	RESURFACING	TROUP COUNTY BOC	PATRICK CREWS	706-883-1610
CITY OF PERRY-HOUSTON COUNTY LMIG CONTRACTS	334,017	GRADING, RESURFACING	CITY OF PERRY	RONNIE KENT	478-972-2274
M005103 SR 14 RESURFACING, HARRIS/TROUP	3,275,931	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	WILLIAM BOYD	706-646-6900
M005300 SR224 RESURF & SHLDR REHAB, HOUSTON/MACON	4,944,410	MILLING/ RESURFACING/SHOULDER REHAB	GEORGIA DOT	BRANDON NASH	478-988-7151
M006040 US19/SR3 (HWY 41) MILL INLAY RESURF, CLAYTON	5,737,595	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	DALE FERRS	404-559-6699
M006041 US19/SR3 (HWY 41) MILL INLAY RESURF, COBB	8,560,565	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	DALE FERRS	404-559-6699
M006043 SR166 MILL & RESURF, DOUGLAS	3,252,632	MILLING/ RESURFACING	GEORGIA DOT	DALE FERRIS	404-559-6699
^ 20-101257 PDK 11 TAXIWAY IMP, DEKALB (Sub to Astra)	1,130,094	RESURFACING	DEKALB COUNTY	SHELLY MERENESS (Astra Group)	770-992-6300
M005839 SR184 AT SR17 TO SC LINE, STEPHENS	1,417,373	MILLING/ RESURFACING/SHOULDER REHAB	GEORGIA DOT	JILL GARLAND	770-532-5500
M005871 I-75/SR401 RESURFACING, MONROE	10,819,600	MILLING/ RESURFACING	GEORGIA DOT	DONNALD STULL	478-955-7151
#20ITB125848K-DB ROAD RESURF, FULTON	4,385,934	MILLING/ RESURFACING	FULTON COUNTY DEPARTMENT OF PUBLIC WORKS	BEBE LOVE	404-612-6316
CARTERSVILLE-BARTOW AIRPORT RNWY REHAB & EMAS, BARTOW	8,039,824	RUNWAY PAVEMENT REHAB	CARTERSVILLE-BARTWO COUNTY AIRPORT	LESLEY WEAVER (CROY)	770-971-5407
M006003-M006004 SR 113 SR274 CARROLL/HARALSON	2,772,836	MILLING/ RESURFACING/SHOULDER REHAB	GEORGIA DOT	ESTEVAN RODRIGUEZ	770-646-5522
0016885 VARIOUS COUNTY ROADS, HEARD	337,604	RESURFACING/SHOULDER REHAB	GEORGIA DOT	CHRISTOPHER STEWART	706-845-4115
M006007 US 27 SR1, CHATOOGA/FLOYD	3,360,347	RESURFACING & MAINTENANCE	GEORGIA DOT	KATHY ZAHUL	404-520-8427
M006001 SR 60 SPUR, FANNIN	1,404,379	RESURFACING & MAINTENANCE	GEORGIA DOT	JORDAN CLEMENT	706-272-2211
M005989 SR 14, FULTON	3,368,023	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	RUBIN MCCULLORS	404-559-6699
M005906 SR 247, HOUSTON	5,505,559	MILLING/ RESURFACING	GEORGIA DOT	GREG L. JONES	706-846-7521
M005998 SR 515, PICKENS	1,604,613	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	ROBERT BELL	706-936-7606
M005860 SR 15, RABUN	8,244,550	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	ROBBIE BRITTAIN	770-533-7343
M006000 SR 52, GILMER	4,344,200	PAVEMENT MARKINGS UPGRADES	GEORGIA DOT	JORDAN CLEMONT	770-387-3609
RFP 220-926 SR 59 ROUNDABOUT, BANKS (Inside ROW)	1,147,682	CONSTRUCTION OF A ROUNDABOUT	BANKS COUNTY	ERIN DECKER	706-677-6901
2021 Paving Rebid, Macon/Bibb	4,172,495	MILLING/ RESURFACING	MACON-BIBB COUNTY	AISHA ANDERSON	478-751-7651
M005992 SR13, DEKALB	2,095,908	RESURFACING & MAINTENANCE	GEORGIA DOT	BORDEN POLK	470-432-5749
2021 LMIG STREET IMP, CRAWFORD	542,257	RESURFACING	CRAWFORD COUNTY BOC	HAYES HOFSTADTER	478-757-1109
RFP 220-926 SR 59 ROUNDABOUT, BANKS (Outside ROW)	395,753	CONSTRUCTION OF A ROUNDABOUT	REINICKE ATHENS, INC.	RYAN SIMMONS	706-208-4323
GDOT PVMT PRESERVATION VAR ROUTES, HENRY/SPALDING	517,593	PAVEMENT PRESERVATION	GEORGIA DOT	KRAIG COLLINS	706-646-7031
M005993 Resurfacing US 19/SR 3, Clayton	2,113,091	RESURFACING & MAINTENANCE	GEORGIA DOT	AARON GILMORE	404-559-6699
GDOT PVMT PRESERVATION SR60, FANNIN	559,741	PAVEMENT PRESERVATION	GEORGIA DOT	SAMANTHA HENRY	678-721-5278
M005001 SR 18 TO SR 42, LAMAR/MONROE	3,239,840	MILLING/ RESURFACING	GEORGIA DOT	GEORGE JOHNSON	706-646-8100
IFB#21-001 OAKLEY INDUSTRIAL BLVD, CITY OF FAIRBURN	2,609,883	MILLING/ RESURFACING	CITY OF FAIRBURN	LESTER THOMPSON	770-964-2244
HARRIS CO. 2021 LMIG PAVING	992,610	RESURFACING	HARRIS COUNTY BOC	NANCY MCMICHAEL	706-628-4958
OCONEE CO. RESURFACING FY 2021 LMIG ADDED ROADS	3,652,258	MILLING/ RESURFACING	OCONEE COUNTY BOC	MELISSA BRASWELL	706-769-2944
GDOT PVMT PRESERVATION SR 1 BUS, WALKER	364,940	MILLING/ RESURFACING	GEORGIA DOT	SAMANTHA HENRY	678-721-5374
GDOT PVMT PRESERVATION SR 2, RABUN	547,400	RESURFACING	GEORGIA DOT	SONJA GARLAND	706-348-4848
ASPHALT RESURFACING VARIOUS ROADS, HEARD CO.	794,323	MILLING/ RESURFACING	HEARD COUNTY BOC	HOPE COLE	706-675-3821
GDOT PVMT PRESERVATION I-85 @ SR 20, GWINNETT	1,493,000	PAVEMENT PRESERVATION	GEORGIA DOT	SONJA GARLAND	770-533-7242
PAULDING CO. 2021 ASPHALT CONTRACT 1, PAULDING	3,975,274	MILLING/ RESURFACING	PAULDING COUNTY BOC	DERRICK BAXTER	770-510-3209
19009-FC-1190311, TAXIWAY & RUNWAY 9L-27R PAVEMENT REPL,2019	5,448,772	PAVEMENT REPLACEMENT	CITY OF ATLANTA	CRAIG GARLAND	404-427-5375
20005-FC-1190579, AIRFIELD REPAIRS 19/20	3,420,127	AIRFIELD REPAIRS	CITY OF ATLANTA	CRAIG GARLAND	404-427-5375
GDOT PVMT PRESERVATION SR 16/SR 14, COWETA	570,723	RESURFACING	GEORGIA DOT	BRIAN JOHNSON	706-845-4115
PEACHTREE MEDIAN ISLANDS	107,439	DOWELS & CONCRETE	BUCKHEAD COMMUNITY IMPROVEMENT DISTRICT	TONY PETERS	404-431-3880
GDOT PVMT PRESERVATION I-575, CHEROKEE	348,260	PAVEMENT PRESERVATION	GEORGIA DOT	ADRIAN HARRIS	770-387-3680
GDOT PVMT PRESERVATION SR 1, HARALSON	663,690	PAVEMENT PRESERVATION	GEORGIA DOT	ANJA FERGUSON	678-721-5278
	294,576,441				

^ We are Subcontractors on these jobs.
^ Joint Ventures
# Five year contract was agreed upon with unit prices, not quantities. No official contract amount

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LIST OF REFERENCES FOR PROJECTS COMPLETED IN 2020

C. W. MATTHEWS CONTRACTING CO., INC.
SCHEDULE OF CONTRACTS COMPLETED
December 31, 2020

	CONTRACT NO., DESCRIPTION, LOCATION	AMOUNT OF CONTRACT	TYPE OF WORK	OWNER	ENGINEER/OFFICER	PHONE #
	CSNHS-0008-00(406),HOUSTON,SR96	27,047,296	WIDENING/RECONSTRUCTION	GEORGIA DOT	MICHAEL WILLIAMS	770-228-7205
	STP00-0000-00(568),BARDIS,BIBB	58,710,015	WIDENING/ RECONSTRUCTION	GEORGIA DOT	KRAIG COLLINS	478-757-2601
*	CSSTP-0009-00(316)-BETHELVIEW RD/COUNTY RD - SUB TO CMES, Forsyth	8,075,979	MILLING/ RESURFACING	CMES	CHETAN VEKARIYA	770-982-1905
	0009884 0.549 MILES OF CONSTRUCTION OF A BRIDGE AND APPROACHES ON SR 120 OVER BEECH CREEK, Haralson	9,830,448	CONSTRUCTION OF A BRIDGE & APPROACHES	GEORGIA DOT	BILL DUNGAN	770-646-5522
	FORSYTH CO-WIDEN UNION HILL	19,708,908	WIDENING/ RECONSTRUCTION	FORSYTH COUNTY BOC	TIM ALLEN	770-205-4550
	0010412 SR49 OVER NORFOLK SOUTHERN RAIL, JONES	8,806,191	CONSTRUCTION OF A BRIDGE & APPROACHES	GEORGIA DOT	KRAIG COLLINS	478-757-2601
	CITY OF KENNESAW,PINE MTN RD IMP, COBB	6,375,613	SAFETY AND OPERATIONAL IMPROVEMENTS	CITY OF KENNESAW	CROY ENGINEERING	770-971-5407
	RFP 17-88-3150 SHARON RD WIDENING,FORSYTH	9,008,385	WIDENING AND RECONSTRUCTION	FORSYTH COUNTY PROCUREMENT DEPARTMEN	CHARLIE CROWE	770-781-2165
	GDOT DESIGN BUILD I-85 WIDENING, GWINNETT/BARROW	118,077,915	WIDENING AND RECONSTRUCTION - DESIGN BUILD	GEORGIA DOT	HEATHER BARTLETT-HNTB	404-946-5700
*	MCINTOSH PKWY NEWNAN (SUB TO SE SITE), COWETA	1,016,585	MILLING/ RESURFACING	SOUTHEASTERN SITE DEVELOPMENT	JENNIFER AVERY	678-423-7770
	E6060 SANDY PLAINS RD IMPROVMENTS, COBB	4,391,585	SAFETY AND OPERATIONAL IMPROVEMENTS	COBB COUNTY DOT	DENISE HATABIAN	770-528-3656
	ITB 18-04 2018 SPLOST MILL&RESURF DIST 3&4, CLAYTON	7,045,459	MILLING/ RESURFACING	CLAYTON COUNTY BOC CENTRAL SERVICES	LYNN HOOVER	770-477-3592
*	HJAIA TAXI&RUNWAY 9L,(SUB TO ArchWest), FULTON	4,135,519	MILLING/ RESURFACING	ARCHER-WESTERN CONSTRUCTOIN	MICHAEL GANTT	404-495-8700
	0009950 ROUNDABOUT US19/SR9, LUMPKIN	5,511,225	CONSTRUCTION OF A ROUNDABOUT	GEORGIA DOT	ROBBIE BRITTAIN	706-348-4848
	BRIDGE ON GREENVILLE STREET OVER CSX, TROUP	8,779,211	CONSTRUCTION OF A BRIDGE & APPROACHES	GEORGIA DOT	ANTHONY RICHARDSON	706-845-4115
	0011691 BRIDGE BLACKHALL OVER RUM CREEK, HENRY	5,030,924	BRIDGE REPLACEMENT	GEORGIA DOT	KRAIG COLLINS	706-646-6100
	ITB#18-100921 PHASE1 SPLOST AREA A, DEKALB	12,955,725	RESURFACING	DEKALB CO DEPT OF PURCHASING/CONTRACTIN	CHARLES SMITH	404-371-6337
	M005800 SR6 RESURF, FULTON/CLAYTON	2,973,561	RESURFACING	GEORGIA DOT	LANKSTON JOHNSON	404-559-6699
	M005663 SR54 RESURF, FULTON	3,275,620	RESURFACING	GEORGIA DOT	LANKSTON JOHNSON	404-559-6699
	M005292 SR100 MILL-RESURF, MERIWETHER	4,254,178	RESURFACING & SIGNLE SURFACE TREATMENT	GEORGIA DOT	WILLIAM BOYD	706-845-4115
*	0007043 SR53 RESURF, PICKENS (SUB TO VERT EARTH)	1,737,031	MILLING/ RESURFACING	VERTICAL EARTH	ELISABETH SHELTON	770-888-2224
*	ITB#18-003 SR400 @ WINDWARD PH2, FULTON (SUB TO VERT EARTH)	818,346	MILLING/ RESURFACING	VERTICAL EARTH	JUSTIN THOMPSON	770-888-2224
	M005788 RESURF SR52, MURRAY	2,994,055	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	CARSON DAVIS	706-272-2211
^	M005199 MILLING/RESURF I-20/SR402 EBL,DOUGLAS-JV	14,994,216	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	MARQUISE WEBB	404-978-7552
	X2911 2019-3 LOCAL ROADS NORTH, COBB	3,920,596	RESURFACING	COBB COUNTY DOT	DENISE HATABIAN	770-528-3656
	2019 ASPHALT CONTRACT I (2019-ASPH-1), PAULDING	4,291,054	PATCHING, LEVELING, MILLING & RESURFACING	PAULDING COUNTY BOC	VALERIE SHELNUTT	678-224-4067
	M005805 RESURF SR70 CHATTAHOOCHIE, DOUGLAS	1,685,140	MILLING/ RESURFACING	GEORGIA DOT	GREGORY LNEGBEDION	470-371-7445
	M005653 RESURF SR14 PALMETTO HWY TO ROOSEVELT HWY, FULTON	4,124,968	MILLING/ RESURFACING	GEORGIA DOT	JOSHUA JOHNSON	404-559-6699
	M005796 RESURF SR92 TO BAY STREET, FULTON	1,064,735	MILLING/ RESURFACING	GEORGIA DOT	CELESTE KING	404-559-4983
	M005809 RESURF SR140 TO GWINNETT CNTY LINE, FULTON	4,692,585	RESURFACE & MAINTENANCE	GEORGIA DOT	LEE UPKINS	404-978-7552
	M005812 RESURF SR141 TO FORSYTH CNTY LINE, FULTON	3,935,985	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	LEE UPKINS	404-978-7552
	0011429 WIDEN/RECONST US27/SR1, HARRIS	1,961,963	WIDENING & RECONSTRUCTION	GEORGIA DOT	DAVID COLEMAN	678-588-7019
	2019 SPLOST & LMIG RESURF, DOUGLAS	5,918,980	RESURFACING	DOUGLAS COUNTY BOC	LAVON KING	678-626-0158
	2019 TROUP COUNTY RESURFACING, TROUP	1,762,524	RESURFACING	TROUP COUNTY BOC	JAMES EMERY	706-883-1610
	HC-19-33 BASE RECLAM, MILL, RESURF VARIOUS RDS, HENRY	3,623,183	MILLING, PATCHING, & RESURFACING	HENRY COUNTY BOC	DAVID SIMMONS	770-688-6027
	DOUGLAS BLVD RESURF,CITY OF DOUGLASVILLE	1,289,725	MILLING/ RESURFACING	CITY OF DOUGLASVILLE	MELISSA DICKINSON	770-920-3005
	CSBRG-0007-00(054), TWIGGS	9,721,841	MILLING/ RESURFACING	GEORGIA DOT	BRIDGET THOMAS	478-757-2601
*	M005670 BIBB,LAMAR,MONROE (SUB TO LC WHITFORD)	761,033	RESURFACING	L. C. WHITFORD	GARY HOAGLAND	770-346-0610
	SOUTH CLEVELAND CHURCH ROAD	1,016,667	GRADING, WIDENING, & PAVING	HENRY COUNTY BOC	DENISE STEGER	770-288-6027
	M005339 SR 42, CRAWFORD	3,616,638	MILLING, INLAY, RESURFACING, & SHOULDER REHABILITATION	GEORGIA DOT	BRIDGET THOMAS	478-757-2601
*	BRSTO-0054-01(065), BUTTS (SUB TO GREGORY BR)	382,784	RESURFACING	GREGORY BRIDGE COMPNAY	JAY GREGORY	706-485-7283
*	0011685 HOUSTON (SUB TO SE SITE, GA ASPH)	351,633	MILLING/ RESURFACING	SOUTHEASTERN SITE DEVELOPMENT	JENNIFER AVERY	678-423-7770
	SR16 AT WINDY LANE, BUTTS DEV AUTHORITY	520,153	INTERSECTION IMPROVEMENTS	BUTTS COUNTY DEVELOPMENT AUTHORITY	BOB WHITE	770-775-4851
*	ATL AIRPORT 42" AERIAL SEWER, CLAYTON	1,404,535	SANITARY SEWER PIPE REPAIR	MANHATTAN/RFB, A JOINT VENTURE	SHERRAE BARLOW	404-290-7094
	ROADWAY IMP SOFKEE/IRVING/ALLEN RD, MACON-BIBB	1,404,472	ROADWAY SYSTEM IMPROVEMENTS	MACON-BIBB COUNTY INDUSTRIAL AUTHORITY	JOE WOOD	478-219-2600
	2019 LMIG RESURF, BID 2019-0118, SPALDING	1,931,226	RESURFACING	SPALDING COUNTY PUBLIC WORKS	JASON GRAHAM	770-412-7700
	RB19.14 CRACK RELIEF, DBL TRTMT, RESURF VAR RDS, COWETA	1,777,558	CRACK RELIEFT & RESURFACING	COWETA COUNTY DEPARTMENT OF PUBLIC WOF	TODD HANDLEY	770-683-2300
	M005799 SR138 BAMBY TO I75 RAMPS, CLAYTON/HENRY	2,344,222	MILLING/ RESURFACING	GEORGIA DOT	RUBIN MCCULLORS	404-559-6699
	M004935 SR5 CONN 41 TO I-575, COBB	2,864,371	RESTORE REHAB RESURFACING	GEORGIA DOT	RODNEY SIMON	770-528-3238
	M005810 SR237, FULTON	1,161,139	RESTORE REHAB RESURFACING	GEORGIA DOT	SAMSON GUESESSE	404-559-6699
	M005737 SR17, HABERSHAM/STEPHENS	4,858,685	MILLING, RESURFACING, & SHOULDER REHABILITATION	GEORGIA DOT	JERRY THOMASON	706-384-7269
	M005247 SR18, MERIWETHER	3,507,060	MILLING/ INLAY, RESURFACING/ SHOULDER REHABILITATION	GEORGIA DOT	RICHARD LEE	706-845-4115
	2019-1 RESURFACING, CATOOSA	1,986,237	RESURFACING	CATOOSA COUNTY	CHRISTAL THOMAS	706-965-2500
	CITY OF DALTON 2019 LMIG MILL & RESURF, WHITFIELD	1,525,704	MILLING/ RESURFACING	CITY OF DALTON PUBLIC WORKS DEPARTMENT	ANDREW PARKER	706-278-7077
	M005190 SR74 POTATO CRK BRIDGE, PIKE/UPSON	3,017,206	MILLING/ RESURFACING	GEORGIA DOT	GEORGE JOHNSON	706-646-6100
	ITB#19-0074 2019 PAVEMENT REHAB, CHATHAM	1,236,549	PAVEMENT REHAB	CHATHAM COUNTY GA COMMISSIONERS	ROBERT MARSHALL	912-790-1622
	#908908 2019 LMIG RESURF, MONROE	1,191,801	RESURFACING	MONROE COUNTY	SHON HAMPTON	229-388-8823
	2019 RESURFACING & STRIPING PROJECT, UPSON	5,387,826	RESURFACING & STRIPING	UPSON COUNTY BOC	JAMES MELTON	706-647-7012
	CARTERSVILLE AIRPORT RUNWAY 19 RSA GRADING, BARTOW	2,859,271	GRADING IMPROVEMENTS	CARTERSVILLE-BARTOW COUNTY AIRPORT AUTH	ANTHONY BROWN	770-971-5407
	M005819 MILL/RESURF SR 19, BIBB	730,279	MILLING/ RESURFACING	GEORGIA DOT	MIKA LADOUX	478-955-7151
	FID 17-1065 FULTON COUNTY RESUFACING PROJECT, FULTON	2,989,546	MILLING/ RESURFACING	FULTON COUNTY	WYVERN BUDRAM	404-612-4000
	ITB#1714-B RESURFACE MCDONOUGH & RAMAH, FAYETTE	594,287	RESURFACING	FAYETTE COUNTY BOC	TED CRUMBLEY	770-305-5115
*	SLIDE REPAIR SR87, TWIGGS (Sub to Gregory Bridge)	63,699	RESURFACING	GREGORY BRIDGE COMPNAY	JAY GREGORY	706-485-7283
	CITY OF DOUGLASVILLE 2019 SPLOST RESURF, DOUGLAS	497,601	MILLING/ RESURFACING	CITY OF DOUGLASVILLE	MELISSA DICKINSON	770-920-3005
	PAVING PKG#2 8 ROADS, HARALSON	1,284,308	MILLING/ RESURFACING	HARALSON COUNTY BOC	TERRY EDWARDS	770-646-3278
	ITB19-05 ROBERTS DR RESURF, CITY OF DUNWOODY	388,380	MILLING/ RESURFACING	CITY OF DUNWOODY	DAVID AYERS	678-382-6750
	2020 LMIG STREET IMP, CRAWFORD	539,949	MILLING/ RESURFACING	CRAWFORD COUNTY BOC	FABIAN HOLLIS	478-757-1169
	GDOT SR 1 PVMT PRESERVATION, FLOYD	239,600	PAVEMENT PRESERVATION	GEORGIA DOT	ANJA FERGUSON	770-387-3602
*	ACWORTH DUE WEST @ JIM OWENS, COBB (Sub to Ohmshiv)	527,273	MILLING/ RESURFACING	OHMSHIV CONSTRUCTION, LLC	VIJAY MANGROLLYA	404-987-0020
	#19-134 FDR & RESURF FOREST PKWY, CLAYTON	5,853,212	MILLING/ RESURFACING	CLAYTON COUNTY BOC CENTRAL SERVICES	JEFF METARKO	770-477-3592

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LIST OF REFERENCES FOR PROJECTS COMPLETED IN 2020

C. W. MATTHEWS CONTRACTING CO., INC.
SCHEDULE OF CONTRACTS COMPLETED
December 31, 2020

CONTRACT NO., DESCRIPTION, LOCATION	AMOUNT OF CONTRACT	TYPE OF WORK	OWNER	ENGINEER/OFFICER	PHONE #
M005740 SR9 RESURF, LUMPKIN	2,446,027	MILLING/ RESURFACING	GEORGIA DOT	KEVIN BARRETT	706-348-4848
M005904 SR3 RESURF, PIKE/SPALDING/UPSON	13,692,599	MILLING/ RESURFACING	GEORGIA DOT	CHASITY WALKER	706-646-6120
M005902 SR114, CHATOOGA	1,921,063	MILLING/ RESURFACING	GEORGIA DOT	GRANT WALDROP	678-721-5286
M005806 SR10 TO PONCE, FULTON	1,145,518	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	CHRIS WOODS	770-216-3891
3 LMIG ROADS 2020, HARRIS	1,004,472	MILLING/ RESURFACING	HARRIS COUNTY BOC	MIKE BROWN	706-628-4958
20-037-1 JOHNS CREEK 2020 MAIN RDS RESURF, FULTON	1,408,904	MILLING/ RESURFACING	CITY OF JOHNS CREEK	NEIL TRUST	678-512-3233
20-0211 RICHARD B RUSSELL REG AIRPORT RNWY 1 IMP, FLOYD	1,188,040	SAFETY AREA & RUNWAY AREA IMPROVEMENTS	FLOYD COUNTY BOC	CHARLES ADEOGUN	678-966-6823
* I-85 EMERGENCY REPAIR (SUB TO BLOUNT SANFORD)	220,416	WALL REPAIR	BLOUNT-SANFORD CONSTRUCTION CO.	JAMES D. GREESON	770-638-2859
M005813 SR 280 MLK TO COBB CO LINE, FULTON	2,287,334	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	SAHR PESSIMA	770-986-1011
2020 ASPHALT CONTRACT II SUB, PAULDING	2,602,345	MILLING/ RESURFACING	PAULDING COUNTY BOC	DAVID HUFF	678-224-4067
CITY OF SOUTH FULTON 2019 TSPLOST/LMIG, FULTON	7,947,595	MILLING/ RESURFACING	FULTON COUNTY	ANTONIO VALENZUELA	470-809-7451
20-19 JOINT 2020 LMIG, HOUSTON AND VARIOUS COUNTIES	1,118,789	MILLING/ RESURFACING	HOUSTON COUNTY PUBLIC WORKS	JEFF SMITH	478-542-2115
2020-ASPH-3 RESURFACING CONTRACT, PAULDING	3,244,205	MILLING/ RESURFACING	PAULDING COUNTY BOC	DAVID HUFF	678-224-4067
2001-03 2020 LMIG RESURFACE, LAMAR	1,131,747	RESURFACING	LAMAR COUNTY BOC	JAMES RIGDON	770-358-5091
FY 2020-21 PAVING, OCONEE (2434 EXT)	2,094,137	MILLING/ RESURFACING	OCONEE COUNTY BOC	JODY WOODALL	706-769-2937
CITY OF FAIRBURN RDWY IMP VARIOUS ROADS, FULTON	1,157,670	MILLING/ RESURFACING	CITY OF FAIRBURN	LESTER THOMPSON	770-964-2244
GDOT PVMT PRESERVATION SR 157, WALKER	863,100	RESURFACING	GEORGIA DOT	ADRIAN HARRIS	678-420-5500
M005898 SR30 @ EFFINGHAM COUNTY LINE, CHATHAM	792,845	RESURFACING & MAINTENANCE	GEORGIA DOT	ROB MCCALL	912-427-5711
M005802 SR 120 W OF NORTH MARIETTA PKWY, COBB	1,594,259	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	WESLEY COMBAY	770-528-3232
ITB 20-PW09 CITY OF MILTON RESURF, FULTON	3,953,337	MILLING/ RESURFACING	CITY OF MILTON	MATT FALSTROM	678-242-2507
CITY OF NEWNAN RECLAMATION & PAVING 2 STRTS, COWETA	851,674	RESURFACING	CITY OF NEWMAN PUBILC WORKS DEPT.	MICHAEL KLAHR	678-673-5479
RFB 2020-023 RESURFACING PROJECT 75708, CHEROKEE	2,992,178	MILLING/ RESURFACING	CHEROKEE COUNTY	JAMES WILGUS	770-721-7818
CITY OF NEWNAN MILL & RESURF VARIOUS STREETS, COWETA	902,090	RESURFACING	CITY OF NEWMAN PUBILC WORKS DEPT.	MICHAEL KLAHR	678-673-5479
2020 LMIG CONTRACTS - CITY OF BYRON	157,903	RESURFACING	CITY OF BYRON	JOHNNY BROOKS	478-956-3600
2020 LMIG CONTRACTS - CITY OF CENTERVILLE	162,460	MILLING/ RESURFACING	CITY OF CENTERVILLE	MIKE BRUMFIELD	478-953-3222
2020 LMIG CONTRACTS - CITY OF HAWKINSVILLE	109,167	RESURFACING	CITY OF HAWKINSVILLE	RONNIE KENT	478-972-2274
2020 LMIG CONTRACTS - CITY OF WARNER ROBBINS	1,156,756	MILLING/ RESURFACING	WARNER ROBINS PUBLIC WORKS	DOUGLAS WEB	478-929-1144
2020 LMIG CONTRACTS - DOOLY COUNTY	700,766	RESURFACING	DOOLY COUNTY COMMISSIONERS	STEPHEN SANDERS	229-268-4228
2020 LMIG CONTRACTS - PULASKI COUNTY	574,938	RESURFACING	PULASKI COUNTY	JENNA MASHBURN	478-783-4154
GDOT PVMT PRESERVATION SR 180 SPUR,TOWNS	765,850	RESURFACING	GEORGIA DOT	GLEN GOSNELL	770-533-7242
RFB-PS-20-05 UNION CITY RESURF 2020, FULTON	1,300,271	MILLING/ RESURFACING	CITY OF UNION HILL	LONNIE FERGUSON	770-965-2288
GDOT PVMT PRESERVATION SR 136, DAWSON	590,529	MILLING/ RESURFACING	GEORGIA DOT	GLEN GOSNELL	770-533-7242
GPA TERMINAL CONTAINERIZATION (Sub to Baker Constructors)	3,573,781	RESURFACING	BAKER CONSTRUCTORS, INC.	MATTHEW BURDEN	706-678-1507
SB-4200-20-02-061020 PAVE 2 ROADS, BUTTS	669,601	RESURFACING	BUTTS COUNTY BOC	KIP WASHINGTON	770-775-8200
SB027-20 CITY OF LAWRENCEVILLE 2020 LMIG, GWINNETT	1,284,817	MILLING/ RESURFACING	CITY OF LAWERCEVILLE	JOHANNES LOUW	770-277-7533
CITY OF WATKINSVILLE MILL & RESURF 3 STREETS, OCONEE	47,184	MILLING/ RESURFACING	CITY OF WATKINSVILLE	JUSTIN DUNAWAY	706-769-5181
* TOM B DAVID AIRPORT CALHOUN, GORDON (Sub to Barnett Sthrn)	138,872	RESURFACING	BARNETT SOUTHERNCORPORATION	NICK WHITMER	706-678-1507
GDOT PVMT PRESERVATION SR 520, MUSCOGEE	332,444	RESURFACING	GEORGIA DOT	TIM SWINKS	706-568-2165
GDOT PVMT PRESERVATION SR 332 - 107604, HALL/JACKSON	256,970	RESURFACING	GEORGIA DOT	GLEN GOSNELL	770-533-7242
PW 2020 LMIG LEVEL& RESURF, MURRAY	1,225,067	RESURFACING	MURRAY COUNTY PUBLIC WORKS	MATTHEW SANFORD	706-695-3231
GDOT PVMT PRESERVATION SR 219/SR 190, HARRIS	1,002,775	RESURFACING	GEORGIA DOT	BRIAN JOHNSTON	706-646-7521
GDOT PVMT PRESERVATION SR 1, TROUP/HEARD	1,049,250	MILLING/ RESURFACING	GEORGIA DOT	BRIAN JOHNSTON	706-646-7521
* 42" SEWER EROSION REPAIR (Sub to Manhattan)	421,060	SEWER EROSION REPAIR	MANHATTAN/RFB, A JOINT VENTURE	SHERRAE BARLOW	404-290-7094
	524,743,297				

* We are Subcontractors on these jobs.
^ Joint Ventures
# Subcontractor did not complete work on time.
~ Joint Venture partners to share LD's for delayed completion.

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LIST OF REFERENCES FOR PROJECTS COMPLETED IN 2019

C. W. MATTHEWS CONTRACTING CO., INC.
SCHEDULE OF CONTRACTS COMPLETED
December 31, 2019

CONTRACT NO., DESCRIPTION, LOCATION	AMOUNT OF CONTRACT	TYPE OF WORK	OWNER	ENGINEER/OFFICER	PHONE #
Northwest Corridor Project (Archer Western), Cobb/Cherokee	35,506,778	PAVING	NORTHWEST EXPRESS ROAD BUILDERS	PARSONS TRANSPORTATION GROUP	770-446-4900
STP00-0002-00(392), Forsyth, SR 20, Buford Highway	22,897,599	WIDENING/ RECONSTRUCTION	GEORGIA DOT	SAM PANAH	770-535-5759
STP00-0222-01(001), Cobb, I-285 / SR 407 Atlanta Road,	43,322,373	WIDENING/ RECONSTRUCTION/ CONSTRUCT BRIDGES	GEORGIA DOT	BORDEN POLK	470-432-5749
STP00-0011-01(053), MUSCOGEE	3,895,454	PAVING	McMath-Turner Construction Co.	LUTHER WILSON	706-687-0303
GEORGIA DOT GA 400 Widening Design Build, Forsyth	58,125,831	DESIGN BUILD- WIDENING	GEORGIA DOT	DARRYL VANMETER	404-631-1000
NHS00-0005-00(320) I75/SR 401, Dooly	20,180,489	INTERCHANGE IMPROVEMENTS	GEORGIA DOT	MICHAEL KEENE	478-983-7151
Gwinnett Co-Design Build I-85 Express Lanes	150,233,968	DESIGN BUILD- EXPRESS LANES	GEORGIA DOT	MATTHEW NEEDHAM	770-535-5759
IMSTP-0075-03 (208), CARBONDALE ROAD-WHITFIELD	19,169,511	WIDENING/ RECONSTRUCTION/ CONSTRUCT BRIDGES	GEORGIA DOT	RICHARD BAIRD	706-272-2211
0014176-DESIGN BUILD BRIDGE REPLACEMENT VARIOUS LOCATIONS, Coweta/Crawford/Harris/Marion/Meriwether/Pike	6,605,785	BRIDGE REPLACEMENTS-DESIGN BUILD	GEORGIA DOT	LISA S. WOODS	404-304-5795
0014175-DESIGN BUILD BRIDGE REPLACE, Greene/Jackson/Morgan/Walton	6,875,035	BRIDGE REPLACEMENTS-DESIGN BUILD	GEORGIA DOT	DAMON FROST	706-343-5836
0009887 CONST. OF ROUNDABOUT SR 369 HIGHTOWER RD, Cherokee	5,027,404	CONSTRUCTION OF A ROUNDABOUT	GEORGIA DOT	JEREMY SCOTT	770-387-3680
X2604 CUMBERLAND BLVD ROADWAY IMP, COBB	7,838,362	WIDENING/ ADDITIONAL LANES	COBB COUNTY DOT	DENISE HATABIAN	770-528-1642
R20170 STEWART MILL RD, DOUGLAS	1,792,413	INTERSECTION IMPROVEMENTS	DOUGLAS COUNTY BOC	BILL C. PEACOCK	770-920-7247
HENRY CO-ANVIL BLOCK RD IN PLACE CMES	1,480,902	INTERSECTION IMPROVEMENTS	CMES	CHETAN VEKARIYA	770-982-1907
BUFORD DR SR20,OLD SUWANEE RD, F1084-02 & F1140-01,GWINNETT	5,049,188	WIDENING AND RECONSTRUCTION	GWINNETT COUNTY BOC	OTIS CLARK	678-521-6433
CSBRG-0006(658) THREE NOTCH RD OVER PEAVINE CR, CATOOSA	2,262,793	CONSTRUCTION OF A BRIDGE & APPROACHES	GEORGIA DOT	LISA TAYLOR	706-272-2211
CSSTP-0002-00(882) SR155 BILL GARDNER-STONEY BROOK WY, HENRY	2,869,411	WIDENING AND RECONSTRUCTION	GEORGIA DOT	MICHAEL WILLIAMS	706-646-6100
COURTLAND STREET BRIDGE REPLACEMENT	21,295,095	BRIDGE REPLACEMENTS-DESIGN BUILD	GEORGIA DOT	RICK O'HARA	404-821-9388
EAST RIDGE TN SR8@I-75 INTERCHANGE IMP, HAMILTON	5,914,028	INTERCHANGE RECONFIGURATION	CITY OF EAST RIDGE	CRYSTAL MYERS	865-671-6774
HABERSHAM CO. AIRPORT- PHASE4, HABERSHAM	2,873,018	PARALLEL TAXIWAY	HABERSHAM COUNTY BOC	JAMES MIORIN	770-263-9118
BID#18-04 RESURFACE VARIOUS COUNTY ROADS, HENRY	4,483,276	CONSTRUCTION AND RESURFACING	HENRY COUNTY PURCHASING DEPARTMENT	ROQUE ROMERO	770-288-6027
I-985 NEW INTERCHANGE(SUB TO GP'S), HALL	4,737,599	MILLING/ RESURFACING	G. P.'S ENTERPRISES	GARY PHILLIPS	770-945-0810
BROOKWOOD RD WIDEN (SUB TO CMES), FORSYTH	1,399,564	ROAD WIDENING	CMES	CHETAN VEKARIYA	770-982-1907
PLAYER-T/W ALPHA CATHODIC PROTECTION REPAIR,CLAYTON/FULTON	337,309	CASING & SOD	PLAYER AND COMPANY	BRIAN RISCHAR	678-469-5301
SR103 PASSING LANES (SUB TO MCCOY),HARRIS	1,109,781	RESURFACING	MCCOY GRADING	KIM SINCLAIR	706-672-3527
EVERMORE NORTH BLVD(SUB TO CMES), GWINNETT	470,181	MILLING/ RESURFACING	CMES	CHETAN VEKARIYA	770-982-1907
CITY OF SOUTH FULTON RESURFACING, FULTON	10,619,106	ROAD RESURFACING	FULTON COUNTY DEPARTMENT OF PUBLIC WOR	DARLENE BANKS	404-612-7878
M005494 RESURF SR20, CHEROKEE/FORSYTH	2,409,829	RESURFACING	GEORGIA DOT	SAM PANAH	770-387-3680
M005649 RESURF US78/SR8, FULTON	3,842,455	MILLING/ RESURFACING	GEORGIA DOT	CHRIS RAYMOND	404-326-6097
M004978 RESURF SR369, HALL	1,486,806	MILLING/ RESURFACING	GEORGIA DOT	KRIS PHILLIPS	770-535-5759
M004814 RESURF SR 8, CLARK/MADISION	3,293,278	MILLING/ RESURFACING	GEORGIA DOT	ROBERT SIMPSON	706-583-2644
M005717 RESURF SR 92, SPALDING	610,304	MILLING/ RESURFACING	GEORGIA DOT	LARNELL JEWELL	706-646-6100
M005045 RESURF SR7, LAMAR/PIKE/SPALDING	10,354,312	MILLING/ RESURFACING	GEORGIA DOT	MATT EARNEST	706-646-6100
M005402-I-285/SR 407 RESURFACE, CLAYTON/DEKALB/FULTON	11,731,730	MILLING/ RESURFACING	GEORGIA DOT	GEORGE BALDWIN	404-559-6699
M005651 SR9 RESURFACE, FULTON	3,752,083	MILLING/ RESURFACING	GEORGIA DOT	STEVE HUBBARD	770-528-3238
M005652-SR9@SR3 (NORTHSIDE DR TO ALLEN RD.), FULTON	5,160,801	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	SAMSON GUESESSE	770-986-1011
M005713 RESURF I-75/SR401,COBB-JV	47,221,008	MILLING/ RESURFACING	GEORGIA DOT	JAMES HARRY	770-528-3238
CHEROKEE RD WIDEN & RESURF, POLK	865,325	WIDENING & RESURFACING	POLK COUNTY BOC	BARRY ATKISON	770-749-2100
M005658 RESURF SR42,FULTON	1,335,617	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	JONATHAN BILLUPS	404-805-4752
M004922 RESURF I-75/SR401,GORDON/WHITFIELD	37,319,782	MILLING/ RESURFACING	GEORGIA DOT	KEITH DAY	770-387-3680
ITB#18-13 2017 SPLOST 1A ROAD REHAB, ROCKDALE	4,314,712	MILLING/ RESURFACING	ROCKDALE DOT	DAWN SPIVEY	770-278-7553
RICHARD B RUSSELL REG AIRPORT RUNWAY, FLOYD	1,447,659	REHABILITATION & OVERLAY PROJECT	FLOYD COUNTY BOC	JAMES MIORIN	770-263-9118
M005837-RESURF I-75/SR401, BARTOW	10,548,108	MILLING/ RESURFACING	GEORGIA DOT	ROBERT BELL	770-387-3680
#18-002 FAIRBURN GA FDR&PAVE, FULTON	1,776,282	FULL-DEPTH RECLAMATION	CITY OF FAIRBURN	LESTER THOMPSON	770-964-2244
DELTA GSE SITE PREP (MKJV SUB TO SNFS JV)	8,637,772	UTILITY, EMBANKMENT, STORM DRAIN, SITE PREP	SNFS JOINT VENTURE	ANDREW HOLBROOK	404-360-1432
BEN EPPS AIRPORT RUNWAY 9-27, ATHENS-CLARKE	10,583,882	REHABILITATION & OVERLAY PROJECT	UNIFIED GOVT ATHENS-CLARKE	JACOB REDWINE	770-4035114
18-008 2018 SPLOST RESURF, DOUGLAS CO	2,392,689	MILLING/ RESURFACING	DOUGLAS COUNTY BOC	BILL PEACOCK	770-920-7219
0015821 PAVE-SHOULDER REHAB, CATOOSA	1,405,081	MILLING/ RESURFACING, SHOULDER REHABILITATION	GEORGIA DOT	EMORY HARRIS	706-272-2211
M0005731 RESUR SR 15, BANKS	6,356,445	MILLING/ RESURFACING	GEORGIA DOT	DOUG WOOD	706-384-7269
M005724 RESURF SR 154/SR 155, DEKALB/FULTON	2,923,255	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	SAMSON GUESESSE	770-986-1011
M005003 RESURF SR 92/SR 85, FAYETTE/SPALDING	3,970,456	MILLING/ RESURFACING	GEORGIA DOT	LARNELL JEWELL	706-646-6100
CITY OF CORNELIA 2018 PAVING, HABERSHAM	501,521	MILLING/ RESURFACING	HABERSHAM COUNTY BOARD OF COMMISSIONEI	CHASE WEST	706-769-4119
M005637 RESURF SR 3, BARTOW	3,227,368	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	JORDAN CLEMENT	770-387-3680
M005798 RESURF SR139, CLAYTON	1,415,368	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	JOSHUA JOHNSON	404-559-6699
M005732 RESURF&SHOULDER REHAB SR15, HABERSHAM/RABUN	7,100,927	MILLING /INLAY/ RESURFACING/ SHOULDER REHABILITATION	GEORGIA DOT	JERRY THOMASON	706-348-4848
M005801 SR92 RESURF, COBB	875,017	MILLING/ RESURFACING	GEORGIA DOT	SAM HENDOW	770-528-3238
M005689 SR141 RESURF, DEKALB/GWINNETT	5,717,352	MILLING/ RESURFACING	GEORGIA DOT	SAMSON GUESESSE	770-216-3920
FY 2018-19 PAVING, OCONEE (2344 EXT)	2,223,339	MILLING/ RESURFACING	OCONEE COUNTY BOC	KAREN BARNETT	706-769-2944
18-309-003 WEST GA REG AIRPORT, CARROLL (SUB TO SE SITE)	208,453	RESURFACING	SOUTHEASTERN SITE DEVELOPMENT	JENNIFER AVERY	678-423-7770
SFS-ATL-01-2018 AIRSIDE OVERLAY (SIG FLIGHT SUPPORT)	1,087,223	PAVEMENT OVERLAY	SIGNATURE FLIGHT SUPPORT CORPORATION	MARK JANSEN	321-695-5061
M005004 Resurf SR 22, Talbot	5,444,272	MILLING/ RESURFACING	GEORGIA DOT	J.D. ABERCROMBIE	706-568-2165
M005690 RESURF SR74, FULTON	2,093,677	MILLING/ RESURFACING	GEORGIA DOT	JOSHUA JOHNSON	404-559-6699
M004921 RESURF I-85/SR403, HARRIS/TROUP	31,412,509	MILLING/ RESURFACING/ SHOULDER REHABILITATION	GEORGIA DOT	WILLIAM BOYD	706-845-4115
CP335-204-1(2019),WESTMORELAND RD, WHITE	803,343	MILLING/ RESURFACING	WHITE COUNTY BOC	DAVID CANGEMI	706-865-2510
M005931 RESURF I-75 SB, SBL BUTTLS/HENRY/SPALDING-JV	17,075,340	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	CARL CONES	706-646-6100
A000841 STATE ROUTE 136 WALKER LANDSLIDE	3,522,218	LANDSLIDE REPAIR	GEORGIA DOT	BRANDON CLAYTON	770-387-3605
SR1 CHATOOGA COUNTY (EMERGENCY CONTRACT)	274,962	CRACKING/ LEVELING EXISTING ROADWAY	GEORGIA DOT	BRANDON CLAYTON	770-387-3605

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C. W. MATTHEWS CONTRACTING CO., INC.
SCHEDULE OF CONTRACTS COMPLETED
December 31, 2019

CONTRACT NO., DESCRIPTION, LOCATION	AMOUNT OF CONTRACT	TYPE OF WORK	OWNER	ENGINEER/OFFICER	PHONE #
M005817 MILL,RESURF I75 BUTTS/HENRY/SPALDING-JV	17,045,873	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	CARL CONES	706-646-6100
M005838 RESURF SR1 SPRINGDALE TO MAPLE, CARROLL	2,189,906	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	JOHN LANKFORD	770-648-5522
M005942 RESURF I20 SWEETWATER CRK TO SR5 WBL,DOUGLAS-JV	15,259,075	MILLING/ INLAY/ RESURFACING	GEORGIA DOT	MARQUISE WEBB	404-559-6699
M005864 RESURF SR20, FORSYTH	3,083,461	MILLING/ RESURFACING	GEORGIA DOT	SAM PANAH	770-535-5759
RESURF BAXTER AND LOFTIS RD, HARALSON	635,181	MILLING/ RESURFACING	HARALSON COUNTY PUBLIC WORKS	TERRY EDWARDS	770-646-3278
WAUGH ST BRIDGE REHAB CITY OF DALTON, WHITFIELD	124,197	BRIDGE REHAB	CITY OF DALTON PUBLIC WORKS	MEGAN ELLIOTT	706-278-7077
2019 HEARD COUNTY RESURF MULTI RDS, HEARD	627,772	RESURFACING	HEARD COUNTY BOC	DAROLD WIGGINS	706-675-3523
JONES COUNTY 2018, JONES	1,035,678	RESURFACING & FULL DEPTH RECLAMATION	JONES COUNTY BOC	JOHN LOWE	478-986-6405
CITY OF GRIFFIN EXPERIMENT ST, SPALDING	463,459	MILLING/ RESURFACING	CITY OF GRIFFIN	CHRIS WALKER	770-229-6603
THOMASTON-UPSON CO CIVIC CENTER, UPSON	187,645	MILLING/ RESURFACING	UPSON COUNTY BOC	JASON TINSLEY	706-647-7012
S015124 SR247 AT DAVIDSON RD, HOUSTON	239,130	TURN LANE-DESIGN BUILD	GEORGIA DOT/HOUSTON COUNTY BOC	BRIAN JONES	478-987-4280
0001595 PPM 48400, JASPER	554,140	RESURFACING	GEORGIA DOT	SHANNON PASSMORE	478-552-4600
2019 LMIG GOOLSBY RD, JASPER COUNTY	616,493	RESURFACING	JASPER COUNTY BOC	MIKE BENTON	706-468-4900
2019 LMIG, Lamar County	605,593	RESURFACING	LAMAR COUNTY	SEAN TOWNSEND	770-358-5146
THORNTON RD WIDENING, MONROE	259,181	WIDENING/ IMPROVEMENTS	MONROE COUNTY BOC	DON CARTER	478-219-2600
DAVIDSON RD WIDENING, HOUSTON	229,130	WIDENING	HOUSTON COUNTY PUBLIC WORKS	BLAKE STUDSTILL	478-987-4280
NORTH COBB CC CUT THRU, COBB	124,437	PAVING/ BLOCKWALL	NORTCH COBB CHRISTIAN SCHOOL	NORTH COBB CHRISTIAN SCHOOL	770-975-0252
CITY OF BARNESVILLE 2019 LMIG, LAMAR	202,314	RESURFACING	CITY OF BARNESVILLE	DAVID ROSE	770-358-0181
HOUSTON COUNTY LANDFILL	46,808	RESURFACING	PEED BROTHERS	TERRIE SALTER	478-862-5238
4200-19-07-061919 2019 LMIG, BUTTS	587,592	RESURFACING	BUTTS COUNTY BOC	KIP WASHINGTON	770-775-8200
M004960 SR127, HOUSTON	320,612	MILLING/ RESURFACING	GEORGIA DOT	JEMARQUIS BAKER	478-988-7158
2019 LMIG RESURFACING, MURRAY	945,116	RESURFACING	MURRAY COUNTY PUBLIC WORKS	MATTHEW SANFORD	706-695-3231
48400-DOT 0001595 PAVEMENT MAINT, WILKINSON (Sub to Dykes)	228,150	RESURFACING	EVERETT DYKES GRASSING	WILL DELOACH	478-934-2707
2019 ASPHALT PAVING PHASE II, PICKENS	1,207,084	RESURFACING	PICKENS COUNTY	JOHN NICHOLSON	706-253-8817
EMERGENCY REPAIR-INTERSTATE NORTH PARKWAY, CCDOT	90,411	INTERSTATE RESTORATION	COBB COUNTY DOT	DENISE HATABIAN	770-528-1642
	750,424,055				

We are Subcontractors on these jobs.
Joint Ventures
Subcontractor did not complete work on time.
Joint Venture partners to share LD's for delayed completion.

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LITIGATION DISCLOSURE:

Failure to fully and truthfully disclose the information required, may result in the disqualification of your bid or proposal from consideration or termination of the Contract, once awarded.

1. Please state whether any of the following events have occurred in the last five (5) years with respect to said Offeror. If any answer is yes, explain fully the following:

   (a) whether a petition under the federal bankruptcy laws or state insolvency laws was filed by or against said Offeror, or a receiver fiscal agent or similar officer was appointed by a court for the business or property of said Offeror;

   Circle One: YES (NO)

   (b) whether Offeror was subject of any order, judgment, or decree not subsequently reversed, suspended or vacated by any court of competent jurisdiction, permanently enjoining said Offeror from engaging in any type of business practice, or otherwise eliminating any type of business practice; and

   Circle One: YES (NO)

   (c) whether said Offeror's business was the subject of any civil or criminal proceeding in which there was a final adjudication adverse to said or Offeror, which directly arose from activities conducted by the business unit or corporate division of said Offeror which submitted a bid or proposal for the subject project. If so please explain.

   Circle One: YES (NO)

2. Have you or any member of your firm or team to be assigned to this engagement ever been indicted or convicted of a criminal offense within the last five (5) years?

   Circle One: YES (NO)

3. Have you or any member of your firm or team been terminated (for cause or otherwise) from any work being performed for Fulton County or any other Federal, State or Local Government?

   Circle One: YES (NO)

4. Have you or any member of your firm or team been involved in any claim or litigation adverse to Fulton County or any other federal, state or local government, or private entity during the last three (3) years?

   Circle One: YES (NO)

5. Has any offeror, member of offeror's team, or officer of any of them (with respect to any matter involving the business practices or activities of his or her employer), been notified within the five (5) years preceding the date of this offer that any of them are the target of a criminal investigation, grand jury investigation, or civil enforcement proceeding?

   Circle One: YES (NO)

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If you have answered "YES" to any of the above questions, please indicate the name(s) of the person(s), the nature, and the status and/or outcome of the information, indictment, conviction, termination, claim or litigation, the name of the court and the file or reference number of the case, as applicable. Any such information should be provided on a separate page, attached to this form and submitted with your proposal.

NOTE: If any response to any question set forth in this questionnaire has been disclosed in any other document, a response may be made by attaching a copy of such disclosure. (For example, said Offeror's most recent filings with the Securities and Exchange Commission ("SEC") may be provided if they are responsive to certain items within the questionnaire.) However, for purposes of clarity, Offeror should correlate its responses with the exhibits by identifying the exhibit and its relevant text.

Disclosures must specifically address, completely respond and comply with all information requested and fully answer all questions requested by Fulton County. Such disclosure must be submitted at the time of the bid or proposal submission and included as a part of the bid/proposal submitted for this project. Disclosure is required for Offerors, joint venture partners and first-tier subcontractors.

Failure to provide required disclosure, submit officially signed and notarized documents or respond to any and all information requested/required by Fulton County can result in the bid/proposal declared as non-responsive. This document must be completed and included as a part of the bid/proposal package along with other required documents.

[SIGNATURES ON NEXT PAGE]

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Under penalty or\f perjury, I declare that I have examined this questionnaire and all attachments hereto, if applicable, to the best of my knowledge and belief, and all statements contained hereto are true, correct, and complete.

On this 12th day of March, 20 25

C. W. MATTHEWS CONTRACTING CO., INC. March 12, 2025
(Legal Name of Proponent) (Date)

March 12, 2025
(Signature of Authorized Representative) (Date)

Michael Kleuckling, Vice President
(Title)

Sworn to and subscribed before me,

This 12th day of March, 20 25

(Notary Public) Brenda B. Nation (Seal)

Commission Expires June 26, 2028
(Date)

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Georgia Department of Transportation

Russell R. McMurry, P.E., Commissioner
One Georgia Center
600 West Peachtree Street, NW
Atlanta, GA 30308
(404) 631-1000 Main Office

July 24, 2024

CERTIFICATE OF QUALIFICATION
Vendor ID: 2MA850

C. W. Matthews Contracting Company, Inc.
1600 Kenview Drive
Marietta, GA 30060

In accordance with The Rules and Regulations governing the Prequalification of Prospective Bidders, the Georgia Department of Transportation has assigned the following Rating. This Certificate of Qualification is effective on the date of issue stated above and cancels and supersedes all Certificates previously issued:

MAXIMUM CAPACITY RATING:	**$3,683,400,000.00**
CERTIFICATE EXPIRES:	**June 30, 2026**
PRIMARY WORK CLASS/CODE:	**400**
SECONDARY WORK CLASS(ES)/CODE(S):	**149, 150, 163, 167, 201, 205, 208, 209, 310, 432, 439, 441, 452, 461, 500, 500A, 501, 502, 507, 511, 513, 520, 524, 525, 550, 603A, 615, 622, 624, 626, 636, 660, 668 and 670.**

The total amount of incomplete work, regardless of its location and with whom it is contracted, whether in progress or awarded but not yet begun, shall not exceed the Maximum Capacity Rating. If dissatisfied with the Rating, we direct you to the Appeals Procedures in §672-5-.08 (1) & (2) and §672-1-.05, Rules of the State Department of Transportation.

A Prequalified Contractor may request an extension of its current prequalification **prior** to the expiration date of the prequalification by providing the Department with the following information: the amount of time requested for the extension (either 30, 60 or 90 days), the reason for the extension request and the original expiration date of the prequalification. The Department in its discretion will determine whether the extension should be granted and will notify the Contractor of its determination.

Allowing approved prequalification to lapse will leave the Contractors without the ability to bid work until such time as the standing returns to an approved status. If you desire to apply at some intermediate period before the expiration date, your Rating will be reviewed based on the new application.

This Prequalification Certificate is issued for contractors to be eligible for work with the Georgia Department of Transportation (GDOT) only. GDOT does not certify contractors as eligible to do business with entities other than GDOT. *Work class codes are for reference only and do not represent a certification to be provided in support of contractor ability or NAICS code determinations. NAICS Codes are assigned by the office of Equal Employment Opportunity.*

Sincerely,

Patrick Allen, P.E.
Chairman, Prequalification Committee/Contractors

PA:TKA

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EXHIBIT H

OFFICE OF CONTRACT COMPLIANCE FORMS

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SECTION 7

CONTRACT COMPLIANCE REQUIREMENTS

NON-DISCRIMINATION IN PURCHASING AND CONTRACTING

It is the policy of Fulton County Government that discrimination against businesses by reason of the race, color, gender, or national origin of the ownership of any such business is prohibited. Furthermore, it is the policy of the Board of Commissioners ("Board") that Fulton County and all vendors and contractors doing business with Fulton County shall provide to all businesses the opportunity to participate in contracting and procurement paid, in whole or in part, with monetary appropriations of the Board without regard to the race, color, gender or national origin of the ownership of any such business. Similarly, it is the policy of the Board that the contracting and procurement practices of Fulton County should not implicate Fulton County as either an active or passive participant in the discriminatory practices engaged in by private contractors or vendors seeking to obtain contracts with Fulton County.

Title VI Non-Discrimination Policy

The Fulton County Board of Commissioners is committed to compliance with Title VI of the Civil Rights Act of 1964 as amended and all related regulations and directives. In this regard, Fulton County assures that no person shall on the basis of race, color or national origin, as provided by Title VI of the Civil Rights Act of 1964, as amended and the Civil Rights Restoration Act of 1987 (P.L. 100.259) be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity. Fulton County further assures every effort will be made to ensure nondiscrimination in all of its programs and activities, whether or not those programs and activities are federally funded. In addition, Fulton County will take reasonable steps to provide meaningful access to services for persons with Limited English Proficiency at no additional cost.

UTILIZATION PLAN

A Utilization Plan must be submitted if your firm fails to meet the work category availability listed for this project category.

The Utilization Plan is designed to enhance the utilization of a particular racial, gender or ethnic group by a bidder/proposer, contractor, or vendor. The bidder/proposer **must** outline a plan of action to encourage and achieve diversity and equality in the available procurement and contracting opportunities with *this solicitation*.

DETERMINATION OF GOOD FAITH/UTILIZATION EFFORTS

In accordance with Fulton County Code Section §102-426, the Prime Contractor **must** demonstrate that they have made all efforts reasonably possible to ensure that certified firms have had a full and fair opportunity to compete and win subcontracts on this project. The Prime

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Contractor is required to include all outreach attempts that would demonstrate a "Good Faith Effort" in the solicitation of sub-consultants/subcontractors.

Documentation of efforts made by the Prime Contractor with regard to this the project should be documented using Exhibit C, Subcontractor Contact Form.

Prime contractors must provide documentation of efforts to include, but not limited to:

1. A list of firms contacted during the solicitation phase but are not included as a subcontractor or supplier participant.

2. Written documentation demonstrating the Prime Contractor's outreach efforts to identify, contact, contract with or utilize certified firms shall include:

    - Pre-bid/proposal conferences, Meet and Greet the Prime, Pre-qualification meetings
    - Other efforts to solicit participation.

3. A list of publications where the advertisement was placed as well as a copy of the advertisement that must include at a minimum:

    - Project scope of work,
    - Project location
    - Location(s) of where plans and specifications may be viewed or obtained and
    - Subcontracting/trade opportunities

PROMPT PAYMENT

The prime contractor must certify in writing and must document that all subcontractors, sub-consultants and suppliers have been promptly paid for work and materials, (less any retainage by the prime contractor prior to receipt of any further progress payments). In the event the prime contractor is unable to pay subcontractors, sub-consultants or suppliers until it has received a progress payment from Fulton County, the prime contractor shall pay all subcontractors, sub-consultants or suppliers funds due from said progress payment within ten days (10) of receipt of payment from Fulton County. In no event shall a subcontractor, sub-consultant or supplier be paid later than ten (10) days as provided for by state regulation.

REQUIRED FORMS

In order to be compliant with the intent and provisions of the County's Non-Discrimination in Purchasing and Contracting Policy, bidders/proposers **must** complete and upload Exhibits A through C and the Utilization Plan, if applicable, as described in Section 3.2, Format & Proposal Submission Instructions.

- Exhibit A – Promise of Non-Discrimination
- Exhibit B1 – Schedule of Intended Subcontractor Utilization
- Exhibit B2 – Subcontractors & Suppliers Form
- Exhibit C – Subcontractor Contact Form Utilization Plan (If applicable)

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UTILIZATION REPORTING (Post Award)

The awardee(s) will be required to report **all** payments from the County to the prime contractor, and prime contractor payments to subcontractors, sub-consultants and suppliers (if applicable) during the project using the B2GNow software program. This requirement will be further explained by the Office of Contract Compliance upon determination of all awarded contracts.

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NON-DISCRIMINATION IN PURCHASING & CONTRACTING PROJECT REQUIREMENTS

PROJECT NO: 25ITB124532K-JAJ

Runway 8-26 Pavement Rehabilitation

For

PUBLIC WORKS

WORK CATEGORY: CONSTRUCTION

Based on the above-referenced work category, the availability of MBE and FBE firms available for subcontracting participation/opportunities is:

WORK CATEGORY AVAILABILITY:

34.71% MBE and 11.45% FBE

Any firm designated as certified by the County and is engaged by the successful Prime Contractor who performs a commercially useful function in the execution of the project will be eligible for participation credit using the following certified designations:

MBE –Minority Business Enterprise

FBE - Female Business Enterprise

SBE – Small Business Enterprise

DBE – Disadvantage Business Enterprise

SDVBE – Veteran Owned Business Enterprise

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NON-DISCRIMINATION IN PURCHASING & CONTRACTING PROGRAM REMINDERS

1. Certification: It is the Prime Contractor's responsibility to verify that subcontractor/sub-consultants included in their bid/proposal are certified. The County accepts certifications from the Georgia Minority Supplier Development Council (GMSDC); Women Business Enterprise National Council (WBENC), Small Business Administration (SBA); VETBIZ; Department of Transportation (GDOT) and; the City of Atlanta, Office of Contract Compliance.

2. Reporting: The successful bidder/proposer must submit a monthly subcontractor utilization report of all payments using the automated B2GNOW Payment Software Program. This requirement will be discussed with the awardee at the Kick-Off/Pre-Construction meeting.

3. Exhibit B1 – Schedule of Intended Subcontractor Utilization: It is required that the bidder/proposer designated as the "Prime Contractor" list and submit information on all subcontractors ***(including majority firms)*** they solicited for quotes and plan to utilize for the project. Failure to submit this form may result in your bid/proposal being declared non-responsive.

4. Directories of Certified Firms: To access Directories of certified firms of Fulton County or the entities from whom Fulton County accepts certifications, see web links below:

Fulton County Government
https://fultoncountyga.diversitycompliance.com Click "Search Registered Directory" for Certified Vendors

City of Atlanta Government
https://atlantaga.gob2g.com/
Scroll down and Click "Portal" to search for Certified Vendors

VETBIZ
https://vip-vems-hotfixdev.powerappsportals.us/services/service-find-verified-firm/
Scroll down to bottom. You will see "Search Business" to search for Service-Disabled Veteran Business Enterprise Certified Vendors.

GDOT
http://www.dot.ga.gov/
Click drop down arrow on "Doing Business" then click "DBE Program". Scroll down, click on " Directories" drop down arrow then click on "UPC Directories" to search for Certified Vendors.

GMSDC – Georgia Minority Supplier Development Council
https://gmsdc.org/

WBENC – Women's Business Enterprise National Council
https://www.wbenc.org/certification

SBA – Small Business Administration
https://web.sba.gov/pro-net/search/dsp_dsbs.cfm

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EXHIBIT A – PROMISE OF NON-DISCRIMINATION

"Know all persons by these presents, that I/We (Michael Kleuckling), Name

Vice President, Title — C. W. MATTHEWS CONTRACTING CO., INC., Company Name

Hereinafter "Company", in consideration of the privilege to bid on or obtain contracts funded, in whole or in part, by Fulton County, hereby consent, covenant and agree as follows:

1) No person shall be excluded from participation in, denied the benefit of, or otherwise discriminated against on the basis of race, color, national origin or gender in connection with any bid submitted to Fulton County for the performance of any resulting there from,

2) That it is and shall be the policy of this Company to provide equal opportunity to all businesses seeking to contract or otherwise interested in contracting with this Company without regard to the race, color, gender or national origin of the ownership of this business,

3) That the promises of non-discrimination as made and set forth herein shall be continuing in nature and shall remain in full force and effect without interruption,

4) That the promise of non-discrimination as made and set forth herein shall be made a part of, and incorporated by reference into, any contract or portion thereof which this Company may hereafter obtain,

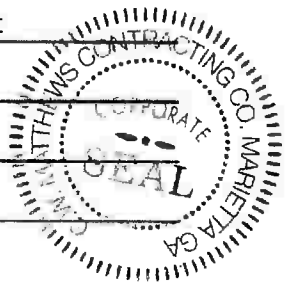
5) That the failure of this Company to satisfactorily discharge any of the promises of non-discrimination as made and set forth herein shall constitute a material breach of contract entitling the Board to declare the contract in default and to exercise any and all applicable rights and remedies, including but not limited to cancellation of the contract, termination of the contract, suspension and debarment from future contracting opportunities, and withholding and/or forfeiture of compensation due and owning on a contract; and

6) That the bidder shall provide such information as may be required by the Director of Purchasing & Contract Compliance pursuant to Section 102.436 of the Fulton County Non-Discrimination in Purchasing and Contracting Policy.

NAME: Michael Kleuckling **TITLE:** Vice President

SIGNATURE:

ADDRESS: 1600 Kenview Drive, Marietta, Georgia 30060



Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

PHONE NUMBER: 770-422-7520 Ext. 1254 **EMAIL:** mikek@cwmatthews.com

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

EXHIBIT B1 - SCHEDULE OF INTENDED SUBCONTRACTOR UTILIZATION

This form **must be** completed and **submitted with the bid/proposal.** All prime bidders/proposers **must** submit this form which lists all intended subcontractors/suppliers who will be utilized under the scope of work/services.

Prime Bidder/Proposer Company Name C. W. MATTHEWS CONTRACTING CO., INC.

ITB/RFP Name & Number: 25ITB124532K-JAJ, Runway 8-26 Pavement Rehabilitation

1. My firm, as **Prime** Bidder/Proposer on this scope of work/service(s) **is NOT☒ is☐** a minority or female owned and controlled business enterprise. ☐**African American (AABE);** ☐**Asian American (ABE);** ☐ **Hispanic American (HBE);** ☐**Native American (NABE);** ☐ **White Female American (WFBE);** ☐**Small Business (SBE);** ☐**Service Disable Veteran (SDVBE)** ☐**Disadvantage Business (DBE) **If yes, Prime must submit a copy of recent certification.**
☐ Male or ☐ Female (Check the appropriate boxes).

Indicate below the portion of work, including, percentage of bid/proposal amount that your firm will carry out directly as the Prime Contractor:
$ 1,605,721.00 Or 67.93 %

2. This information below must be completed and submitted with the bid/proposal if a **joint venture (JV)** approach is to be undertaken. Please provide JV breakdown information below and attach a copy of the executed Joint Venture Agreement.

JV Partner(s) information:

Business Name (a.)		**Business Name** (b.)	
% of JV		**% of JV**	
Ethnicity		**Ethnicity**	
Gender		**Gender**	
Certified (Y or N)		**Certified (Y or N)**	
Agency		**Agency**	
Date Certified		**Date Certified**	

3. Lists all Sub-Contractor/suppliers participating on the project. **(COMPLETE Exhibit B2 FORM)**

Total Dollar Value of Certified Subcontractors: ($) 758,219.00

Total Percentage of Certified Subcontractors: (%) 32.07%

BASE BID

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

EXHIBIT B1 - SCHEDULE OF INTENDED SUBCONTRACTOR UTILIZATION

This form **must be** completed and **submitted with the bid/proposal.** All prime bidders/proposers **must** submit this form which lists all intended subcontractors/suppliers who will be utilized under the scope of work/services.

Prime Bidder/Proposer Company Name C. W. MATTHEWS CONTRACTING CO., INC.

ITB/RFP Name & Number: 25ITB124532K-JAJ, Runway 8-26 Pavement Rehabilitation

1. My firm, as **Prime** Bidder/Proposer on this scope of work/service(s) **is NOT☒, is☐** a minority or female owned and controlled business enterprise. **☐African American (AABE); ☐Asian American (ABE); ☐ Hispanic American (HBE); ☐Native American (NABE); ☐ White Female American (WFBE); ☐Small Business (SBE); ☐Service Disable Veteran (SDVBE) ☐Disadvantage Business (DBE) **If yes, Prime must submit a copy of recent certification.**
☐ Male or ☐ Female (Check the appropriate boxes).

Indicate below the portion of work, including, percentage of bid/proposal amount that your firm will carry out directly as the Prime Contractor:
$ 1,667,161.00 Or 67.15 %

2. This information below must be completed and submitted with the bid/proposal if a **joint venture (JV)** approach is to be undertaken. Please provide JV breakdown information below and attach a copy of the executed Joint Venture Agreement.

JV Partner(s) information:

Business Name (a.)		**Business Name** (b.)	
% of JV		**% of JV**	
Ethnicity		**Ethnicity**	
Gender		**Gender**	
Certified (Y or N)		**Certified (Y or N)**	
Agency		**Agency**	
Date Certified		**Date Certified**	

3. Lists all Sub-Contractor/suppliers participating on the project. **(COMPLETE Exhibit B2 FORM)**

Total Dollar Value of Certified Subcontractors: ($) 815,739.00

Total Percentage of Certified Subcontractors: (%) 32.85%

ALTERNATE BID

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

CERTIFICATION: The undersigned certifies that he/she has read, understands and agrees to be bound by the Bid/Proposer provisions, including the accompanying Exhibits and other terms and conditions regarding sub-contractor utilization. The undersigned further certifies that he/she is legally authorized by the Bidder/Proposer to make the statement and representation in this Exhibit and that said statements and representations are true and correct to the best of his/her knowledge and belief. The undersigned understands and agrees that if any of the statements and representations are made by the Bidder/Proposer knowing them to be false, or if there is a failure of the intentions, objectives and commitments set forth herein, then in any such event the Contractor's acts or failure to act, as the case may be, shall constitute a material breach of the contract, entitling the County to terminate the Contract for default. The right to so terminate shall be in addition to, and in lieu of, any other rights and remedies the County may have for other defaults under the contract.

By submitting this form, it is understood that every firm listed as a subcontractor has been properly notified and will participate.

Signature: _____ **Title:** Vice President

Michael Kleuckling

Business or Corporate Name: C. W. MATTHEWS CONTRACTING CO., INC.

Address: 1600 Kenview Drive

Marietta, Georgia 30060

Telephone: (770) 422-7520 Ext. 1254

Fax Number: (770) 422-9361

Email Address: mikek@cwmatthews.com

C.W. MATTHEWS CONTRACTING CO. MARIETTA GA CORPORATE SEAL

UTILIZATION REPORT – Post Award

The awarded vendor(s) are required to report <u>all</u> payments to the prime contractor, subcontractors and sub-consultants (if applicable) during the project using the B2GNow software program. This requirement will be further explained by the Office of Contract Compliance upon determination of all awarded contracts.

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

EXHIBIT B2 FORM
SUB-CONTRACTORS (INCLUDING SUPPLIERS) TO BE UTILIZED IN THE PERFORMANCE OF THE SCOPE OF WORK/SERVICES(S), IF AWARDED ARE LISTED BELOW

Certification Designation: AABE – African American Business Enterprise, HBE – Hispanic American Business Enterprise, NABE – Native American Business Enterprise, ABE – Asian American Business Enterprise, FBE – Female Business Enterprise, MBE – Minority Business Enterprise, SDVBE – Service Disabled Veteran Business Enterprise, SBE – Small Business Enterprise, DBE – Disadvantage Business Enterprise

Subcontractor Name	Email Address	City, State, Phone	Ethnic Group	Certification Agency	Certification Designation	Scope of Work	Dollar Amount	Percentage
Cardinal Internationational Grooving & Grinding	Philip.Zuzelo@cardinalgrooving.com	Cronshohocken, PA (610) 825-2200	White - Male		non-DBE	Grooving	$ 195,890.00	8.29%
Hasco, Inc.	contact@hascousa.com	Greensborp, NC (336) 643-5557	White Female		non-Certified FBE	Pavement marking	$ 562,329.00	23.79%
		BASE BID						

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

EXHIBIT B2 FORM
SUB-CONTRACTORS (INCLUDING SUPPLIERS) TO BE UTILIZED IN THE PERFORMANCE OF THE SCOPE OF WORK/SERVICES(S), IF AWARDED ARE LISTED BELOW

Certification Designation: AABE – African American Business Enterprise, HBE – Hispanic American Business Enterprise, NABE – Native American Business Enterprise, ABE – Asian American Business Enterprise, FBE – Female Business Enterprise, MBE – Minority Business Enterprise, SDVBE – Service Disabled Veteran Business Enterprise, SBE – Small Business Enterprise, DBE – Disadvantage Business Enterprise

Subcontractor Name	Email Address	City, State, Phone	Ethnic Group	Certification Agency	Certification Designation	Scope of Work	Dollar Amount	Percentage
Cardinal International Grooving & Grinding	Philip.Zuzelo@cardinalgrooving.com	Cronshohocken, PA (610) 825-2200	White - Male		non-DBE	Grooving	$ 195,890.00	7.89%
Hasco, Inc.	contact@hascousa.com	Greensborp, NC (336) 643-5557	White Female		non-Certified FBE	Pavement marking	$ 619,849.00	24.96%
		ALTERNATE BID						

EXHIBIT C FORM
SUBCONTRACTOR CONTACT FORM

Certification Designation: AABE - African American Business Enterprise, HBE - Hispanic Business Enterprise, NABE - Native American Bisoness Enterprise, ABE-Asian American Business Enterprise, FBE - Female Business
MBE - Minority Business Enterprise, SBE-Small Business Enterprise, DBE - Disadvantage Business Enterprise

SubContractor/Supplier	Business Address	Contact Name	Contact Email Address	Contact Phone	Scope of Work Solicited for Project	Certification Designation	Result of Contact
A & J Worldwide Enterprise Corporation	P O Box 883 Acworth, GA 30101	Alfreda Stukes	ajworldwideEnterprise@gmail.com	(678) 933-4606	hauling	Requested this Information	Sent Email/Fax with Invitation To Bid,
A.M.S.I (American Material Services	P.O. Box 4786 Macon, GA 31208	Susan Haney	americanmaterial@earthlink.net	(478)955-8530	hauling	GDOT DBE AABE	Sent Email/Fax with Invitation To Bid,
AC Sweepers and Maintenance, Inc.	1923 Brackendale Rd NW Kennesaw. GA	Latasha Crenshaw	serviceteam@acsweepers.com	678-807-9337	vacuum truck	GDOT DBE AABE/FBE	Sent Email/Fax with Invitation To Bid,
A-Dumpster, Inc.	1041 Fairburn Rd Atlanta, GA 30331	Estimating	bob@a-dumpster.com	(404) 537-9195	hauling	Requested this Information	Sent Email/Fax with Invitation To Bid,
A Team Trucking LLC	3130 Locke Drive Atlanta, GA	Cyril Nwanjoku	ateamtruckingllc@yahoo.com	678-705-3360	hauling	Requested This Information	Sent Email/Fax with Invitation To Bid,
Airside Solutions Inc.	2222 West Valley Hwy N. Auburn, WA 98001	Jake Nelson - Sales	jnelson@wsminc.biz	253-833-6434	barricades	Requested this Information	Sent Email/Fax with Invitation To Bid,
Alif Trucking Inc.	P.O. Box 999 Lilburn, GA 30047	Omar Sharif	alif7office@yahoo.com	(404) 447-7303	Hauling	GDOT DBE AABE	Sent Email/Fax with Invitation To Bid,
Allstate Sealcoating & Striping LLC	4190 Plaudit Road Ilzella, GA 31052	Michelle Creamer	dwyatt@allstatesealcoatingandstriping.com	478-714-9932	Pavement Marking	Requested this Information	Sent Email/Fax with Invitation To Bid,
American Clearing and Hauling	143 Telfair Road Savannah, GA 31401	Rose Dempsey	americanhauling@msn.com	(912) 920-6323	Hauling	Requested this Information	Sent Email/Fax with Invitation To Bid,
A.M.S.I (American Material Services Inc.)	P.O. Box 4786 Macon, GA 31208	E J Agnew	americanmaterial@earthlink.net	478-314-5995	hauling	Requested this Information	Sent Email/Fax with Invitation To Bid,
ATC Associates Inc.	1841 West Oak Pkwy Suite F Marietta, GA 30062	Martin Maldonado	mmaldonado@pgci.com	770-427-9456	Quality Control	Requested this Information	Sent Email/Fax with Invitation To Bid,
Atlanta Paving & Concrete Construction	P.O. Box 1547 Norcross, GA 30071	Mandy Alston	malston@atlantapaving.com	(770) 710-9990	Asphalt Paving	GDOT DBE HABE	Sent Email/Fax with Invitation To Bid,
Axtells, Inc	261 Carey Rd Jermyn, PA 18433	Jason Corby	jason.corby@gmail.com	570-983-4290	Pavement Marking	Requested this Information	Sent Email/Fax with Invitation To Bid, Received Quote
Buffington & Smith Contracting	955 Interstate Ridge Dr Ste K-1 Gainesville, GA 30501	Beth Buffington Weikel	missbeth64@aol.com	(770) 536-4795	Hauling, GDOT DBE	GDOT WBE	Sent Email/Fax with Invitation To Bid,
Butler Brothers Trucking LLC	3261 Canyon Glen Way Dacula, GA 30019	Tashena Butler	butlerbrotherstrucking0107@gmail.com	(678) 360-7471	Hauling, GDOT DBE	GDOT WBE & AABE	Sent Email/Fax with Invitation To Bid, Intend to submit a quote
Cadenhead Enterprises Inc.	P.O. Box 343 Zebulon, GA 30295	Stephanie Cadenhead	sdcaccounting@bellsouth.net	(770) 567-0044	Hauling	Requested this Information	Sent Email/Fax with Invitation To Bid,
Capital Pavement Markings LLC		Billy Wallace	billywallace@earthlink.net	803-600-8110	Pavement Marking	Requested this Information	Sent Email/Fax with Invitation To Bid,

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Cardinal Internationational Grooving & Grinding	P.O. Box 450 Cronshohocken, PA 19428	Phillip Zuzelo	Philip.Zuzelo@cardinalgrooving.com	610-825-2200	sawcut grooving	White Male	Sent Email/Fax with Invitation To Bid, Intend to submit a quote; Quote Received
Carolyn's Hauling	P.O. Box 383 Redan, GA 30074	Derek Lewis	carolynshauling@gmail.com	(770) 318-3085	Hauling	GDOT DBE AABE FBE	Sent Email/Fax with Invitation To Bid,
Circle B Hauling LLC	675 Parham Rd. Griffin, GA 30223	Bart Smith	CircleB24@att.net	(678) 414-6029	Hauling	GDOT DBE HABE	Sent Email/Fax with Invitation To Bid,
Corey Williams Hauling LLC	2016 Wagner Dr. Columbus, GA 31907	Corey Williams	BOYMANWILLIAMS@YAHOO.COM	(706) 315-8347	Hauling	GDOT DBE AABE	Sent Email/Fax with Invitation To Bid,
C.E.R.M. -Corporate Environmental Risk Management	1990 Lakeside Pkwy. Tucker, GA 30084	Kenneth Fluker	kfluker.cerm.com	(678) 999-0173	Environmental Testing	GDOT DBE AABE	Sent Email/Fax with Invitation To Bid,
D.A.T. Trucking Inc.	74 Lee Rd. #888 Smiths, AL 36877	David Hardge	hardgelm@aol.com	(334) 298-7528	Hauling	GDOT DBE AABE	Sent Email/Fax with Invitation To Bid,
Diamond Coring Co., Inc.	11800 S. Ewing Ave. Chicago, IL 60617	Anthony Capello	Accounting@diamondcoring.com	773-978-5000	sawcut grooving	Requested this Information	Sent Email/Fax with Invitation To Bid, Received Quote
Dills Trucking, LLC	P.O. Box 426 Jefferson, GA	Edna Dills	dillsedna@yahoo.com	(706) 367-9040	Hauling, GDOT DBE	GDOT DBE FBE	Sent Email/Fax with Invitation To Bid,
DTS Transport Inc.	55 Magnolia Dr. Oxford, GA 30054	Janet Thompson	dtstransportinc@yahoo.com	(404) 787-7337	hauling, GDOT DBE	GDOT DBE AABE/FBE	Sent Email/Fax with Invitation To Bid,
Dubose Trucking Services LLC	4492 Bridle Ridge Way Lithonia, GA 30038	Estimating	dubosetruckingservices@gmail.com	(404)642-2209	hauling, GDOT DBE	GDOT DBE	Sent Email/Fax with Invitation To Bid, Quote received
Edward A. Scott Trucking Company	P. O. Box 786 Kennesaw, GA 30156	Linda Scott	lindascott@bellsouth.net	770-422-8026	hauling	GDOT DBE FBE	Sent Email/Fax with Invitation To Bid,
Ellis Grading & Paving Inc.	P.O. Box 373 Phoenix City, AL 36868	Tim Allen	tallen@allenasphalt.com	(334) 297-5725	Erosion Control, Pavement Marking	Requested this Information	Sent Email/Fax with Invitation To Bid,
Erosion Solutions, Inc.	1026 County Rd 4391593 Athens, TN 37303	Mandy Robertson	erosionsolution@hotmail.com	(423) 745-0028	Erosion Control, Grassing	Requested this Information	Sent Email/Fax with Invitation To Bid,
Evans Trucking Co., Inc.	467 Cabin River Rd. Lilburn, GA 30047	Donterrel Evans	evanstruco@gmail.com	(678)727-6801	hauling, GDOT DBE	GDOT DBE AABE	Sent Email/Fax with Invitation To Bid, Quote received
Faithful & Discreet Logistics LLC	819 White Dove Drive McDonough, GA 30253	Sandel Lumbart	salumbart@gmail.com	954-549-3824	hauling	GDOT DBE AABE	Sent Email/Fax with Invitation To Bid, Intend to submit a quote
Four Seasons Trucking	P.O. Box 360118 Decatur, GA 30036	Audley Atkinson	4season@bellsouth.net	(770) 482-7765	Hauling	GDOT DBE FBE	Sent Email/Fax with Invitation To Bid, Quote received
G & R Trucking Co	5721 Crest Hey. Thomaston, GA 30286	Geana Ellington	gsellington@hotmail.com	(706) 646-2671	Hauling	Requested this Information	Sent Email/Fax with Invitation To Bid,
G&J Trucking LLC	7192 Center St. Lithonia, GA 30058	Gilbert Atkinson	gilbrado29@yahoo.com	(770) 480-8804	Hauling	GDOT DBE AABE	Sent Email/Fax with Invitation To Bid, Quote received

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GAP Trucking	1384 Austin Road Ellenwood, GA 30294	Phillip Gwinn	tophat1966@yahoo.com	(770) 266-8184	Hauling	Requested this Information	Sent Email/Fax with Invitation To Bid,
Gator Hauling, LLC	P.O. Box 767 Stockbridge, GA 30281	Robert Aviles	fhp1993@bellsouth.net	(678) 480-4689	hauling, GDOT DBE	GDOT DBE HAPE	Sent Email/Fax with Invitation To Bid,
Glory Trucking	2714 Field Spring Drive Lithonia, GA 30058	Ricky Humphries	glorytruckingcompany@yahoo.com	(404) 957-6927	Hauling	Requested this Information	Sent Email/Fax with Invitation To Bid,
Graham Hauling, Inc.	2730 Thornbury Way College Park, GA 30349	Leon Graham	leongraham01@yahoo.com	(404) 787-2657	Hauling	GDOT DBE AABE	Sent Email/Fax with Invitation To Bid,
Grier Brothers Enterprises	3370 Welcome All Road Atlanta, GA 30331	Richard Hanson	richardhanson625@yahoo.com	(404) 349-4200	Hauling	GDOT DBE AABE	Sent Email/Fax with Invitation To Bid,
Grimes Trucking, Inc.	P.O. Box 80625 Conyers, GA 30013	Tonya Grimes	grimestruckinginc@gmail.com	(678) 480-9255	Hauling	GDOT DBE AABE	Sent Email/Fax with Invitation To Bid,
Hardy Transportation Services Inc.	7465 Spoleto Loop Fairburn, GA	Detareyo Hardy	dhardyinc@yahoo.com	(678) 849-2950	Hauling	GDOT DBE AABE	Sent Email/Fax with Invitation To Bid,
Harrell Hauling, Inc.	912 Mt. Zion Rd. Oxford, GA 30054	Joandra Harrell	harrellhauling@att.net	(770) 294-1806	Hauling	GDOT DBE AABE FBE	Sent Email/Fax with Invitation To Bid,
Hasco, Inc.	3909 Riverdalle Rd. Greensboro, NC 27406	Estimating	contact@hascousa.com	336-643-5557	joint sealing; pavement marking	Requested this Information	Sent Email/Fax with Invitation To Bid, Received Quote
Hi-Lite Airfield Service LLC	20128 NYS Rt. 12F Watertown, NY 13601	Angela Holliday	angela.holliday@hi-lite.com	770-676-4538	Pavement Marking	Caucasion/Male	Sent Email/Fax with Invitation To Bid, Received Quote
Highway Markings LLC	805 Progress Court Suite C Laawrenceville, GA 30043	Adam Cummings	Bids@highwaymarkingsllc.com	770-540-6673	Pavement Marking	Requested this Information	Sent Email/Fax with Invitation To Bid,
Highway Services Inc	P.O. Box 926 Douglasville, GA 30133	Chandra Ramey Graham	chandra@highwayservices.net	678-838-9920	Pavement Marking	Requested this Information	Sent Email/Fax with Invitation To Bid,
Janie Lynn Trucking, LLC	42 Lumpkin Road Cedartown, GA	Ricky Adams	rickyadams1962@gmail.com	(770) 883-5982	Hauling, GDOT DBE	GDOT DBE FBE	Sent Email/Fax with Invitation To Bid,
Jeffery Harris Trucking Inc	P.O. Box 14311 Augusta, GA	Jeffery Harris	jharristrucking@yahoo.com	(706) 667-9903	Hauling	GDOT DBE AABE	Sent Email/Fax with Invitation To Bid,
Joe Dirt Hauling	P.O. Box 1315 Commerce, GA	Stephanie Eubanks	joedirthauling@aol.com	(706) 870-2487	Hauling, GDOT DBE	GDOT DBE FBE	Sent Email/Fax with Invitation To Bid,
K & K Trucking	4411 John Wesley Drive Decatur, GA 30035	Ken Kellogg	kk73@bellsouth.net	(404) 246-0458	Hauling	Requested this Information	Sent Email/Fax with Invitation To Bid,
K C Trucking	6915 Dalehollow Dr. Lithonia, GA 30058	Keith Chung	keithchung@bellsouth.net	(770) 330-2715	Hauling	GDOT DBE AABE	Sent Email/Fax with Invitation To Bid,
K. E. Wheeler Construction LLC	22143 Green Pine Drive West Blocton, AL 35184	Kenda E. Wheeler	hmgbrd64@gmail.com	205-286-4037	sawcut grooving	Requested this Information	Sent Email/Fax with Invitation To Bid,
K Reliable Trucking LLC	181 Kimmeridge Dr. Macon, GA 31220	John Seldon	info@kreliabletrucking.com	478-219-9131	hauling	GDOT DBE	Sent Email/Fax with Invitation To Bid,

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SubContractor/Supplier	Business Address	Contact Name	Contact Email Address	Contact Phone	Scope of Work Solicited for Project	Certification Designation	Result of Contact
Kelly Construction Company, Inc.	350 Old Floyd Rd. Mableton, GA 30126	Robert Kelly	robert.kelly@kcciconstruction.com	(770) 948-6934	Hauling/Demo/Grading/ Misc scope	GDOT DBE AABE FBE	Sent Email/Fax with Invitation To Bid,
L & G - Lennox Clough DBA L&G Enterprises, LLC	2320 Crissey Drive Macon, GA 31211	Gloria C Clough	lennox300@hotmail.com	(678) 637-6285	Hauling, GDOT DBE	GDOT DBE AABE	Sent Email/Fax with Invitation To Bid,
Lincoln Trucking	3215-A Industrial Way Snellville, GA 30039	Garth Barnett	info@lincolntruckinginc.com	(404) 840-7576	Hauling	GDOT DBE AABE	Sent Email/Fax with Invitation To Bid, Intend to submit a quote; Quote received
M.A.R. Trucking Inc.	1944 A Rogers Lake Rd. Lithonia, GA 30058	Marchia Hammond	hammond.marchia@gmail.com	(678) 323-8300	Hauling	GDOT DBE AABE FBE	Sent Email/Fax with Invitation To Bid, Quote received
Marking Impressions Corp.	7445 John Bragg Hwy Suite 101 Murfreesboro, TN 37127	Robert Stansifer	Robert@markingimpressions.com	615-410-3242	Pavement Marking	Requested this Information	Sent Email/Fax with Invitation To Bid,
MBK Trucking Company	151 Parkstone Way Marietta, GA 30066	Alemayehu (Alex) Woldyesus	mbktruckingcompany@gmail.com	(404) 317-3371	Hauling	GDOT DBE AABE	Sent Email/Fax with Invitation To Bid, Intend to submit a quote
MC Trucking Co. Inc	6998 Rogers Lake Rd. Lithonia,Ga 30058	Maurice Heron	mctruckingcoinc@comcast.net	(770) 482-0470	Hauling	GDOT DBE AABE FBE	Sent Email/Fax with Invitation To Bid,
MC2 Engineers	1275 Shiloh Rd NW #2620 Kennesaw, GA 30144	Nima Latifi	nlatifi@mc2engineers.com	770-650-0873	testing	Requested this Information	Sent Email/Fax with Invitation To Bid,
Middlebrooks Paving & Hauling Inc.	290 Blackberry Lane Douglasville, GA 30134	Donald Middlebrooks	msandgravel@aol.com	(404) 556-2571	Hauling	GDOT DBE AABE	Sent Email/Fax with Invitation To Bid,
Mid State Const. & Striping	130 Mack Thompson Rd Perry, GA 31069	Mark Massey	mmassey@midstatecs.com	478-987-2125	Pavement Marking	Requested this Information	Sent Email/Fax with Invitation To Bid,
Mid-State Striping, Inc.	113 Wilson Rd SE Eatonton, GA 31024	David Steed	dsteed90@aol.com	478-960-4725	Pavement Marking	Requested this Information	Sent Email/Fax with Invitation To Bid,
MKS Trucking, Inc.	P.O. Box 473 Lithonioa, GA 30058	Mark Palmer	nerminus2003@yahoo.com	(678)472-0977	Hauling, GDOT DBE	GDOT DBE AABE	Sent Email/Fax with Invitation To Bid, Quote received
Mystic Trucking LLC	P.O. Box 391025 Snellville, GA 30039	Vernal Bailey	mystictrucking50@gmail.com	(470)881-0202	Hauling, GDOT DBE	GDOT DBE AABE	Sent Email/Fax with Invitation To Bid, Quote received
Nova Engineering	3640 Kennesaw North Industrial Kennesaw, GA 30144	Tony Taylor	ttaylor@usanova.com	(770) 425-0777	Quality Control	Requested this Information	Sent Email/Fax with Invitation To Bid,
Oasis Const. Services DBA Oasis Consulting Svcs	45 Woodstock St Roswell, GA 30075	Claudia Lynn Zibanejadrad	lrad@oasis-cs.com	(678) 739-2400	Geotechnical Testing	FBE not GDOT	Sent Email/Fax with Invitation To Bid,
Oasis Consulting Services	45 Woodstock St Roswell, GA 30075	Sandy Taylor	csiji@mindspring.com	(912) 635-2333	Quality Control	Requested this Information	Sent Email/Fax with Invitation To Bid,
OT Hauling Inc.	17304 Wesley Providence Pkwy Lithonia, GA 30038	Chuck Otaluka	voyager005@yahoo.com	(404) 536-6114	Hauling, GDOT DBE	GDOT DBE AABE	Sent Email/Fax with Invitation To Bid,
Outlaw Trucking & Grading LLC	46 Dill Rd Lyerly, GA 30730	Eugenia Kay Patty	eugenia60patty@gmail.com	706-857-8066	hauling	Requested this Information	Sent Email/Fax with Invitation To Bid,
Ozark Safety Services LLC	552 Oliver Road Montogemery, AL 36117	Jeff Webb	jeff@ozarksafety.net	334-277-6577	Pavement Marking	Requested this Information	Sent Email/Fax with Invitation To Bid,
Palmer, Inc.	6127 Lula Rd Lula, GA 30554	Ellen Palmer	palmerinc@att.net	(770) 869-1112	Hauling	GDOT DBE FBE	Sent Email/Fax with Invitation To Bid,

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SubContractor/Supplier	Business Address	Contact Name	Contact Email Address	Contact Phone	Scope of Work Solicited for Project	Certification Designation	Result of Contact
Pan Trucking		Harold Smith	pantrucking@bellsouth.net	(404) 849-5623	Hauling	Requested this Information	Sent Email/Fax with Invitation To Bid,
Parker Traffic Marking Inc.	P.O. Box 3376 Cleveland, GA 30528	Estimating	hwydouglas@yahoo.com	706-219-1974	Pavement Marking	Requested this Information	Sent Email/Fax with Invitation To Bid,
Pavement Restorations of Georgia, Inc.	1104 Spring Hill Rd NE Knoxville, TN 37914	Jon	jon@gotpotholes.net	770-713-3715	joint seal	Requested this Information	Sent Email/Fax with Invitation To Bid,
Peek Pavement Marking LLC	P.O. Box 7337 Columbus, GA 31908	Tammy Harbuck	tharbuck@peeksafety.com	800-343-7335	Pavement Marking	Requested this Information	Sent Email/Fax with Invitation To Bid,
Peek Trucking Company		Amy Washington	bamwash@bellsouth.net	(770) 775-5446	Hauling	Requested this Information	Sent Email/Fax with Invitation To Bid,
Penhall Company	6940 Oak Ridge Pkwy SW Austell, GA 30168	Casey Holloway	choliloway@penhall.com	510-357-8810	sawcut grooving	Requested this Information	Sent Email/Fax with Invitation To Bid,
Platinum Paving and Concrete	11 Gateway Blvd S. Suite 45 Savannah, GA 31419	Carla Hodges	chodges@platinumpavingga.com	912-714-7283	Pavement Marking	Requested this Information	Sent Email/Fax with Invitation To Bid,
R & M Grading & Hauling	2300 Burnt Wood Rd Kennesaw, GA	Jeff Marlow	jsmarlow3461@aol.com	(770) 218-3055	Hauling	Requested this Information	Sent Email/Fax with Invitation To Bid,
Rejuvaseal - Pavement Rejuvenation Int	17132 Bobinger Rd Kiln, MS 39556	Jason Kellar	jason.kellar@rejuvaseal.com	512-295-1175	Pavement Marking	Requested this Information	Sent Email/Fax with Invitation To Bid,
Remac, Inc	P O Box 9 Freeman, VA 23856	Austin Blackwell	ablackwell@remacus.com	434-634-2111	joint seal	Requested this Information	Sent Email/Fax with Invitation To Bid,
Reynolds Trucking and Transport	address 5452 Old Dalton Road Calhoun, GA 30701	William Reynolds	mlreynolds4219@bellsouth.net	(706) 295-4550	Hauling,	Requested this Information	Sent Email/Fax with Invitation To Bid,
Rhino Freight LLC	1887 Duluth Hwy Apt 602 Lawrenceville, GA 30043	Irene Collado	icollado135@gmail.com	(786)599-3953	hauling, GDOT DBE	GDOT DBE HAPE/ FBE	Sent Email/Fax with Invitation To Bid, Quote received
Roadsafe Traffic	2105 Sigman Rd NW Conyers, GA 30012	Sandie Stafford	sstafford@roadsafetraffic.com	770-760-8300	Pavement Marking	Requested this Information	Sent Email/Fax with Invitation To Bid,
Rosebud Hauling Co. LLC		Kathy Ware	rosebudhaulingcompany@comcast.net	(404) 391-2450	Hauling	AABE FBE not GDOT	Sent Email/Fax with Invitation To Bid,
SAWA Transportation, Inc.	P.O. Box 2085 Lilburn, GA 30048	Estimating	sawatransport@bellsouth.net	(770) 925-2441	Hauling	GDOT DBE AABE	Sent Email/Fax with Invitation To Bid,
S&ME	4350 River Green Parkway Suite 200 Duluth, GA 30096	Nima Latifi	nlatifi@smeinc.com	770-476-3555	Quality Control	Requested this Information	Sent Email/Fax with Invitation To Bid,
Safety Signal Co. Inc	P.O. Box 488 Union City, GA 30291	Estimating	lisa@safetysignal.net	770-964-3181	Pavement Marking	Requested this Information	Sent Email/Fax with Invitation To Bid,
Sanders Gold Eagle Transportation LLC	1210 Magnolia St Social Circle, GA 30025	Golden Ran Sanders	oldeag'etrucking@protonmail.com	(770)596-7991	hauling, GDOT DBE	GDOT DBE	Sent Email/Fax with Invitation To Bid, Quote received
SEI Engineering, Inc. (Southeastern Engineering, Inc.)	2470 Sandy Plains Road Marietta, GA 30066	Donald Dempsey	ddempsey@sei.site	770-321-3936	Geotechnical Testing	Requested this Information	Sent Email/Fax with Invitation To Bid,
Siboney Contracting Company Inc.	P.O. Box 3426 Suwanee, GA 30024	Anthony Guerrero	aguerrero@siboneycc.com	(470) 381-4401	hauling	White Male	Sent Email/Fax with Invitation To Bid,
Six Star Trucking Inc.	3255 Church Street Suite C Scottsdale, GA 30079	Kidane Gabresallasie	sixstartrucking@bellsouth.net	(404) 499-8844	Hauling	Requested this Information	Sent Email/Fax with Invitation To Bid,
Skyline Trucking, Inc.	1907 Kevin Dr. Conyers, GA 30013	Deborah D'Andrade	deborah4756@att.net	(678) 794-1196	Hauling	GDOT DBE AABE	Sent Email/Fax with Invitation To Bid,
Solid Rock Grading, Inc.	1412 Kings Point Wy, SW Conyers, GA 30094	Mary Tolbert	mtolbert@solid-path.com	(615)584-0468	hauling, GDOT DBE	GDOT DBE FBE	Sent Email/Fax with Invitation To Bid, Quote received

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Southeast Site Services	117 Industrial Blvd. Suite G Gray, GA 31022	Matt Bragg	mbragg@southeastsiteservices.com		airport lighting/signs	Requested this Information	Sent Email/Fax with Invitation To Bid,
Summit Trucking Inc.	2550 Sandy Plains Rd Ste 225-341 Marietta, GA 30066	Kaye Cooper	summittrucking@comcast.net	(770) 900-6804	hauling	GDOT DBE FBE	Sent Email/Fax with Invitation To Bid,
Terracon	2855 Premiere Parkway Suite C-1 Duluth, GA 30097	Jay Franklin	jhfranklin@terracon.com	770-623-0755	Quality Control	Requested this Information	Sent Email/Fax with Invitation To Bid,
Terry Monk Trucking Inc.	256 Burt Road Dallas, GA 30132	Melissa Monk	johntmonk@bellsouth.net	(770) 443-6736	Hauling	Requested this Information	Sent Email/Fax with Invitation To Bid,
Tidwell Traffic Solutions	P.O. Box 191445 Atlanta, GA 31119	Mark Tidwell	mark@tidwelltrafficsolutions.com	678-251-8166	Pavement Marking	Requested this Information	Sent Email/Fax with Invitation To Bid,
Tomberlin Trucking Co., Inc.	P.O. Box 158 Rhine, GA 31077	Franklin Tomberlin	technotom62@yahoo.com	(229) 385-8111	Hauling	Requested this Information	Sent Email/Fax with Invitation To Bid,
Tony Cook Trucking LTD	360 Red Fox Hollow Road Cornelia, GA 30531	Tony Cook	cooktruck@windstream.net	(706) 778-1383	Hauling	GDOT DBE AABE	Sent Email/Fax with Invitation To Bid,
Tranquility Carriers Inc.	P.O. Box 82807 Conyers, GA 30013	Otis Wallace	tranquility.carriers@gmail.com	(404)604-6880	hauling, GDOT DBE	GDOT DBE AABE	Sent Email/Fax with Invitation To Bid, Quote received
TRP Construction Group	805 Metromont Rd. Hiram, GA 30141	Boone Massey	tboone@trpinfra.com	678-505-8906	Pavement Marking	Requested this Information	Sent Email/Fax with Invitation To Bid,
Tucker Trucking Enterprises Inc.	4851 Ga Highway 85 Unit 208 Forest Park, GA 30297	Estimating	velmafor@gmail.com	(678) 794-0529	Hauling,	Requested this Information	Sent Email/Fax with Invitation To Bid,
TXT Enterprises	8022 Providence Rd. Ste 500 Charlotte, NC 28277	Timothy Twitty	tim.twitty@icloud.com	(704) 906-4871	Hauling	Requested this Information	Sent Email/Fax with Invitation To Bid,
UES Professional Solutions 18, LLC	1955 Vaughn Road Suite 101 Kennesaw, GA 30144	Auston McLeod	AMcLeod@teamues.com	770-794-0266	Quality Control	Requested this Information	Sent Email/Fax with Invitation To Bid,
Universal Engineering Sciences	3040 Business Park Dr. Suite F3040 Business Park Dr. Norcross, GA	Tom Tye		770-242-6438	Quality Control	Requested this Information	Sent Email/Fax with Invitation To Bid,
Wagner Hauling Inc.	1630 Hines Rd Moreland, GA 30259	Megan Wagner	BENNE_LEE@YAHOO.COM	(678) 776-5665	Hauling	GDOT DBE FBE	Sent Email/Fax with Invitation To Bid,
Wall Asphalt Services	P.O. Box 963 Carrollton, GA 30112	Charlie Wall	cwwall3rd@hotmail.com	770-459-2215	joint seal	Requested this Information	Sent Email/Fax with Invitation To Bid, Received Quote
Westmoreland Trucking Co. Inc.	340 Spring Place Rd Cartersville, GA 30121	Kenneth Westmoreland	krwtrucking@yahoo.com	(770) 427-0090	Hauling	Requested this Information	Sent Email/Fax with Invitation To Bid,
Wildcat Striping & Sealing		Mike Ferguson	mwficm@comcast.net	(678) 937-9525	Pavement Marking	Requested this Information	Sent Email/Fax with Invitation To Bid,
Willmer Engineering	3772 Pleasantdale Rd Suite 165 Atlanta, GA 30340	Benjamin Barfield	bbarfield@willmerengineering.com	770-939-0089	Quality Control	Requested this Information	Sent Email/Fax with Invitation To Bid,
Vulcan Materials Company	P.O. Box 467279 Atlanta, GA 31146 770) 454-3646	Mark Blalock	Blalockm@vmcmail.com	(770) 454-3646	aggregate materials	Requested this Information	Sent Email with Invitation To Bid, Received a quote

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SubContractor/Supplier	Business Address	Contact Name	Contact Email Address	Contact Phone	Scope of Work Solicited for Project	Certification Designation	Result of Contact

Company Name: C. W. Matthews Contracting Co., Inc.

Printed Signature: Michael Kleuckling, Vice President

Project Name and Title: Runway 8-26 Pavement Rehabilitation (#25ITB124532K-JAJ)

Date: March 12, 2025

C.W. MATTHEWS CONTRACTING CO. MARIETTA GA
CORPORATE
SEAL

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

GOOD FAITH EFFORT

Fulton County – Runway 8-26 Pavement Rehabilitation

Invitation To Bid 25ITB124532K-JAJ

Bidder: C. W. Matthews Contracting Co., Inc.

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

Ads Placed in Publications

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

The Atlanta Journal-Constitution

PROOF OF PUBLICATION

STATE OF GEORGIA

PUBLIC NOTICE

Before the undersigned authority personally appeared , who on oath says that he/she is a Legal Advertising Representative of the Atlanta Journal-Constitution, a Daily newspaper published in said City and State that is a newspaper of general circulation in Barrow, Bartow, Carroll, Chattooga, Cherokee, Clarke, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Floyd, Forsyth, Fulton, Gwinnett, Hall, Heard, Henry, Jackson, Jasper, Meriweather, Morgan, Newton, Paulding, Polk, Rockdale, Walton, White, Banks, Butts, Dawson, Franklin, Gilmer, Gordon, Habersham, Haralson, Lamar, Lumpkin, Madison, Monroe, Murray, Oconee, Pickens, Pike, Spalding, and Whitfield Counties, and State of Georgia, and that the attached copy of Legal Advertising was published 1 time(s) in said newspaper on 02/24/2025 and last date of Publication 02/24/2025.

C W MATTHEWS
P O DRAWER 970
MARIETTA, GA 30061-0970

Invoice/Order Number:	0000861275
Ad Cost:	$667.00
Paid:	$0.00
Balance Due:	$667.00

Signed nova Henson
(Legal Advertising Agent)

Sworn or affirmed to, and subscribed before me, this 24th day of February, 2025 in Testimony whereof, I have hereunto set my hand and affixed my official seal, the day and year aforesaid.

Signed
(Notary)

Please see Ad on following page(s).

Tyshawn Harrison
Notary Public - State of New York
No. 01HA0005298
Qualified in Erie County
Commission Expires 04/07/2027

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

C W MATTHEWS
P O DRAWER 970
MARIETTA, GA 30061-0970

Invoice/Order Number:	0000861275
Ad Cost:	$667.00
Paid:	$0.00
Balance Due:	$667.00

C. W. Matthews Contracting Co., Inc will be accepting quotations from subcontractors, including certified DBE subcontractors for Fulton County Bid Pkg # Invitation To Bid 25ITB124532K-JAJ Runway 8-26 Pavement Rehabilitation at Brown Field (CWM#503909).
Items of work include (but are not limited to): Hauling, Milling, Joint Seal, Pavement Marking, Grooving, and Quality Control. Subcontractor quotations (including all Required County paperwork) will be accepted by C. W. Matthews' Estimating Department in person, by e-mail: mikek@cwmatthews.com or Fax: #770-422-9361 until Noon on Monday, March 10, 2025.
All bidding documentation will be available at the C. W. Matthews Contracting SharePoint site. If you have any questions regarding this project, please contact Mike Kleuckling 770-422-7520 Ext 1254.
You must register to access the CWM SharePoint site. For additional SharePoint site information, contact C. W. Matthews' Estimating Department at 770-422-7520 X1210.
2-24-25

0000861275-01

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South Fulton Neighbor

136 Pryor Street, Suite CB14
Atlanta, Ga. 30303
470-990-4415

AFFIDAVIT OF PUBLICATION

STATE OF GEORGIA
COUNTY OF FULTON

I, Douglas W. Crow, do solemnly swear that I am the Vice President of Operations, Times Journal Inc., of the South Fulton Neighbor printed and published at South Fulton in the State of Georgia and that from my own personal knowledge and reference to the files of said publication, the advertisements for: **FN8946 25ITB124532K-JAJ**
was published in the South Fulton Neighbor on the following date(s):

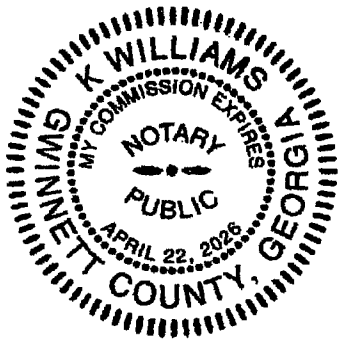
02/26/2025

Ad No.: **466762**

Subscribed and sworn to before me this 26th day of February, 2025

Douglas W. Crow, Vice President of Operations, Times Journal Inc.

K Williams



Notary Public

Docusign Envelope ID: 5E69A194-100E-4466-BF96-1C69919EAEF7

Ad text :
FN8946
gpn06
C. W. Matthews Contracting Co., Inc will be accepting quotations from subcontractors, including certified DBE subcontractors for Fulton County Bid Pkg # Invitation To Bid 25ITB124532K-JAJ Runway 8-26 Pavement Rehabilitation at Brown Field (CWM#503909).

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You must register to access the CWM SharePoint site. For additional SharePoint site information, contact C. W. Matthews
2:26ep

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EXHIBIT I

RISK MANAGEMENT INSURANCE PROVISIONS FORMS AND CERTIFICATE

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Insurance and Risk Management Provisions
Runway 8-26 Pavement Rehabilitation

The following is the minimum insurance and limits that the Contractor/Vendor must maintain. If the Contractor/Vendor maintains higher limits than the minimum shown below, Fulton County Government requires and shall be entitled to coverage for the higher limits maintained by the Contractor/Vendor.

It is Fulton County Government's practice to obtain Certificates of Insurance from our Contractors and Vendors. Insurance must be written by a licensed agent in a company licensed to write insurance in the State of Georgia, with an A.M. Best rating of at least A- VI, subject to final approval by Fulton County. Respondents shall submit with the bid/proposal evidence of insurability satisfactory to Fulton County Government as to form and content. Either of the following forms of evidence is acceptable:

- A letter from an insurance carrier stating that upon your firm/company being the successful Bidder/Respondent that a Certificate of Insurance shall be issued in compliance with the Insurance and Risk Management Provisions outlined below.
- A Certificate of Insurance complying with the Insurance and Risk Management Provisions outlined below (Request for Bid/Proposal number and Project Name, Number and Description must appear on the Certificate of Insurance).
- A combination of a specific policy written with an umbrella policy covering liabilities in excess of the required limits is acceptable to achieve the applicable insurance coverage levels.

Any and all Insurance Coverage(s) and Bonds required under the terms and conditions of the contract shall be maintained during the entire length of the contract, including any extensions or renewals thereto, and until all work has been completed to the satisfaction of Fulton County Government. Evidence of said insurance coverages shall be provided on or before the inception date of the Contract.

Accordingly the Respondent shall provide a certificate evidencing the following:

1. **WORKERS COMPENSATION/EMPLOYER'S LIABILITY INSURANCE – STATUTORY (In compliance with the Georgia Workers Compensation Acts, including but not limited to U.S. Longshoremen and Harbor Workers Act and any other State or Federal Acts or Provisions in which jurisdiction may be granted)**

Employer's Liability Insurance	BY ACCIDENT	EACH ACCIDENT	$500,000
Employer's Liability Insurance	BY DISEASE	POLICY LIMIT	$500,000
Employer's Liability Insurance	BY DISEASE	EACH EMPLOYEE	$500,000

2. **COMMERCIAL GENERAL LIABILITY INSURANCE (Including contractual Liability Insurance)**

Bodily Injury and Property Damage Liability	Each Occurrence	$2,000,000
(Other than Products/Completed Operations)General Aggregate		$2,000,000
Products\Completed Operation	Aggregate Limit	$2,000,000
Personal and Advertising Injury	Limits	$1,000,000
Damage to Rented Premises	Limits	$100,000

3. **BUSINESS AUTOMOBILE LIABILITY INSURANCE**

Bodily Injury & Property Damage	Each Occurrence	$1,000,000

(Including operation of non-owned, owned, and hired automobiles).

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4.	**UMBRELLA LIABILITY** (In excess of above noted coverage)	Per Occurrence/Aggregate	$2,000,000

Certificates of Insurance

Contractor/Vendor shall provide written notice to Fulton County Government immediately if it becomes aware of or receives notice from any insurance company that coverage afforded under such policy or policies shall expire, be cancelled or altered. Certificates of Insurance are to list Fulton County Government, Its Officials, Officers and Employees as an Additional Insured (except for Workers' Compensation), using ISO Additional Insured Endorsement form CG 2010 (11/85 version), its' equivalent or on a blanket basis.

The Contractor/Vendor insurance shall apply as Primary Insurance before any other insurance or self-insurance, including any deductible, non-contributory, and Waiver of Subrogation provided in favor of Fulton County Government.

If Fulton County Government shall so request, the Contractor/Vendor shall furnish the County for its inspection and approval such policies of insurance with all endorsements, or confirmed specimens thereof certified by the insurance company to be true and correct copies.

Additional Insured under the General Liability, Auto Liability, Umbrella Policies (with exception of Workers Compensation and Professional Liability), with no Cross Suits exclusion.

Such certificates and notices **must** identify the "Certificate Holder" as follows:

Fulton County Government – Purchasing and Contract Compliance Department
130 Peachtree Street, S.W.
Suite 1168
Atlanta, Georgia 30303-3459

Certificates **must** list Project Name (where applicable).

Important:

The obligations for the Contractor/Vendor to procure and maintain insurance shall not be constructed to waive or restrict other obligations. It is understood that neither failure to comply nor full compliance with the foregoing insurance requirements shall limit or relieve the Contractor/Vendor from any liability incurred as a result of their activities/operations in conjunction with the Contract and/or Scope of Work.

USE OF PREMISES

Contractor/Vendor shall confine its apparatus, the storage of materials and the operations of its workers to limits/requirements indicated by law, ordinance, permits and any restrictions of Fulton County Government and shall not unreasonably encumber the premises with its materials (Where applicable).

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INDEMNIFICATION AND HOLD HARMLESS AGREEMENT

Professional Services Indemnification. With respect to liability, damages, costs, expenses (including reasonable attorney's fees and expenses incurred by any of them), claims, suits and judgments that arise or are alleged to arise out of the Consultant/Contractor's acts, errors, or omissions in the performance of professional services, the Consultant/Contractor shall indemnify, release, and hold harmless Fulton County, its Commissioners and their respective officers, members, employees and agents (each, hereinafter referred to as an "Indemnified Person"), from and against liability, damages, costs, expenses (including reasonable attorney's fees and expenses incurred by any of them), claims, suits and judgments only to the extent such liability is caused by the negligence of the Consultant/Contractor in the delivery of the Work under this Agreement, but such indemnity is limited to those liabilities caused by a Negligent Professional Act, as defined below. This indemnification survives the termination of this Agreement and shall also survive the dissolution or to the extent allowed by law, the bankruptcy of Consultant/Contractor.

For the purposes of the Professional Services Indemnity above, a "Negligent Professional Act" means a negligent act, error, or omission in the performance of Professional Services (or by any person or entity, including joint ventures, for whom Consultant/Contractor is liable) that causes liability and fails to meet the applicable professional standard of care, skill and ability under similar conditions and like surrounding circumstances, as is ordinarily employed by others in their profession.

Consultant/Contractor obligation to indemnify and hold harmless, as set forth hereinabove, shall also include, but is not limited to, any matter arising out of any actual or alleged infringement of any patent, trademark, copyright, or service mark, or other actual or alleged unfair competition disparagement of product or service, or other tort or any type whatsoever, or any actual or alleged violation of trade regulations.

Consultant/Contractor further agrees to indemnify and hold harmless Fulton County, its Commissioners, officers, employees, subcontractors, successors, assigns and agents from and against any and all claims or liability for compensation under the Worker's Compensation Act, Disability Benefits Act, or any other employee benefits act arising out of injuries sustained by any employees of Consultant/Contractor. These indemnities shall not be limited by reason of the listing of any insurance coverage.

PROTECTION OF PROPERTY

Contractor/Vendor will adequately protect its own work from damage, will protect Fulton County Government's property from damage or loss and will take all necessary precautions during the progress of the work to protect all persons and the property of others from damage or loss.

Contractor/Vendor shall take all necessary precautions for the safety of employees of the work and shall comply with all applicable provisions of the Federal, State and local safety laws and building codes to prevent accidents or injury to persons on, about, or adjacent to the premises where work is being performed.

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Contractor/Vendor shall erect and properly maintain at all times as required by the conditions and progress of the work, all necessary safeguards for the protection of its employees, Fulton County Government employees and the public and shall post all applicable signage and other warning devices to protect against potential hazards for the work being performed (Where applicable).

CONTRACTOR/VENDOR ACKNOWLEDGES HAVING READ, UNDERSTANDING, AND AGREEING TO COMPLY WITH THE AFOREMENTIONED STATEMENTS, AND THE REPRESENTATIVE OF THE CONTRACTOR/VENDOR IDENTIFIED BELOW IS AUTHORIZED TO SIGN CONTRACTS ON BEHALF OF THE RESPONDING CONTRACTOR/VENDOR.

COMPANY: C. W. MATTHEWS CONTRACTING CO., INC. SIGNATURE:

NAME: Michael Kleuckling TITLE: Vice President

DATE: March 12, 2025

C.W. MATTHEWS CONTRACTING CO. MARIETTA GA CORPORATE SEAL

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ACORD®

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 03/06/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: BRET STANLEY
CERTIFICATE OF SELF INSURANCE	PHONE (A/C, No, Ext): 678-809-8119 FAX (A/C, No): 770-423-7529
	E-MAIL ADDRESS: BSTANLEY@CWMATTHEWS.COM
	INSURER(S) AFFORDING COVERAGE — NAIC #
	INSURER A : C.W. MATTHEWS CONTRACTING CO., INC.
INSURED	INSURER B :
C.W. MATTHEWS CONTRACTING CO., INC. P.O. DRAWER 970 MARIETTA, GA 30061	INSURER C :
	INSURER D :
	INSURER E :
	INSURER F :

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	[X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [ ] PRO-JECT [ ] LOC OTHER:	Y	Y	SI-2025-CGL	01/01/2025	12/31/2025	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 3,000,000 $ 100,000 $ $ 2,000,000 $ 6,000,000 $ 6,000,000
A	AUTOMOBILE LIABILITY [ ] ANY AUTO [X] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS [ ] HIRED AUTOS ONLY [X] NON-OWNED AUTOS ONLY	Y	Y	Self-Insurance Certificate No. SI-52729014	01/01/2025	12/31/2025	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 3,000,000 $ $ $
	[ ] UMBRELLA LIAB [ ] OCCUR [ ] EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $						EACH OCCURRENCE AGGREGATE	$ $
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N [N] (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N/A	Y	Qualified Self- Insurer State of Georgia	01/01/2025	12/31/2025	[X] PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

ITB: 25ITB124532K-JAJ
PROJECT: Runway 8-26 Pavement Rehabilitation

Fulton County Government, its officials, officers, and employees are listed as an additional insured for the referenced policies where required by written contract. Coverage is primary and non-contributory. Waiver of Subrogation applies in favor of Fulton County Government.

CERTIFICATE HOLDER

FULTON COUNTY GOVERNMENT
DEPARTMEN OF PURCHASING &
CONTRACT COMPLIANCE

130 Peachtree Street, S.W., Suite 1168
Atlanta, GA 30303

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Sheldon Fram

Sheldon Fram
Director of Risk Managment

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DESCRIPTIONS (Continued from Page 1)

This is to certify that C. W. Matthews Contracting Co., Inc. has qualified as required by law, as a self insurer with the appropriate agencies within the State of Georgia, and provides coverages under its program of self-insurance as noted above.

Automobile Liability: Certificate No. SI-52729014 issued by Georgia Department of Insurance.

Worker' Compensation and Employers Liability: Qualified Self-Insurer with Georgia State Board of Workers' Compensation by proof of ability to pay compensation direct.