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TRANSMITTAL COVER SHEET

DATE: April 18, 2024

TO: ALL PLAN HOLDERS

FROM: PATSY STINSON

PROJECT: TAXIWAY ALPHA REHABILITATION
TROY MUNICIPAL AIRPORT N. KENNETH CAMPBELL FIELD
TROY, ALABAMA
AIP PROJECT NO.: 3-01-0071-024-2024
GMC PROJECT NO.: TMGM220021

RE: ADDENDUM #1

PLEASE COMPLETE BELOW AND RETURN IMMEDIATELY VIA FAX or EMAIL to:

PATSY STINSON
Email: patsy.stinson@gmcnetwork.com
Fax: 334-222-3573

I, the undersigned, hereby acknowledge receipt of this Addendum #1.

_____ _____
Authorized Representative Date

_____
Company Name

ADDENDUM NUMBER 1

TAXIWAY ALPHA REHABILITATION
TROY MUNICIPAL AIRPORT at N. KENNETH CAMPBELL FIELD
TROY, ALABAMA
AIP PROJECT NO.: 3-01-0071-0024-2024
GMC PROJECT NO.: TMGM220021

I. General

1. The following clarifications, revisions, additions are hereby made a part of same, and shall be incorporated in the Project Manual, Drawings, and Work of the Contract the same as if originally included in the Bid and Construction Documents.

2. Bidders shall acknowledge receipt of this Addendum in writing, as provided on the Transmittal Cover Sheet and the Proposal Form.

3. When a revision and/or addition is called for to the Drawings or Project Manual, they shall be fully coordinated with and carried through all applicable Drawings and portions of the Project Manual, including in part, all related Civil, Landscaping, Architectural, Structural, Electrical, and other Documents.

II. Changes to Plans

1. Sheet 2A: Staging Area and haul route was properly drawn for Phase 1
2. Sheet 2A-2C: ILS Critical Boundary Area shown clearly

III. Response to Comments

1. Question: There is not a pay item for CQCP, and the specs seem to imply it will not be used. Does this mean we will not be required to make a CQCP and that any testing, survey/as-builts, profilograph, etc will be paid for by others?
   Response: Specification C-100 is updated to reflect payment. Conformity to the C-100 specification IS REQUIRED, however, there will not be a separate payment for a CQCP. All conformity to plans and specs are the Contractor's responsibility as noted throughout plans, specs and the General Provisions. Any survey, profilograpgh, etc required to complete any item correctly and to the grades, density, etc of the plans and specs, should be included with that specific pay item it relates to.

2. Question: For the chip seal/asphalt material in the alternate, the specs specify different quantities of liquid, aggregate, and different aggregate sizes for 3 different application numbers. Is the intent to do all 3 applications, and if not, which application(s) are required?

Response: Attached is an updated P-609 Specification which better clarifies item and necessary types, etc.

3. Question: Will a material transfer vehicle be required?
   Response: No

4. Question: Will the asphalt and asphalt materials be tied to the index?
   Response: No

5. Question: Will lighted X's be required for runway closures or will the standard plastic/vinyl/wood X's flat on the ground be acceptable?
   Response: No

IV. Conclusion

1. This is the end of Addendum Number 1

Item C-100 Contractor Quality Control Program (CQCP)

100-1 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 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.

100-2 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. Contractor Quality Control Program (CQCP). The Contractor shall describe the CQCP in a written document that shall be reviewed and approved by the Engineer prior to the start of any production, construction, or off-site fabrication. The written CQCP shall be submitted to the Engineer

for review and approval at least **30** calendar days before the CQCP Workshop. The Contractor's CQCP and QC testing laboratory must be approved in writing by the Engineer 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
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.

100-3 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.

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

100-4 Project progress schedule. Critical QC activities must be shown on the project schedule as required by Section 80, paragraph 80-03, *Execution and Progress*.

100-5 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

100-6 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.

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*:

- 8.1.3 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)

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.

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.

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. Payment for CQCP will not be paid for separately, as all conformity to plans and technical specifications are required by Contractor within the plans, technical specifications and the General Provisions within the contract.

100-14 Payment will be made under: No separate payment will be provided for a CQCP.

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)

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

Item P-609 Chip Seal Coat

609-1.1 This item shall consist of a chip seal coat (single surface treatment and multiple surface treatment) as a wearing course composed of a single application of asphalt material and aggregate cover placed on the prepared primed base or properly cured wearing surface, in accordance with these specifications, and shall conform to the dimensions and typical cross-section shown on the plans or as directed by the Resident Project Representative (RPR).

609-1.2 Quantities of materials per square yard (square meter). The approximate amounts of materials per square yard (square meter) for the chip seal shall be as provided in the table below for the treatment specified on the plans or in the special provision. The exact amounts to be used shall be determined by the RPR.

Quantities of Materials

Application No.	Quantity of Aggregate lb/square yard	Quantity of Asphalt gal/square yard	Type of Asphalt1
1	40-50	0.4-0.5	Emulsified asphalt

[1] See paragraph 609-2.2 for grades of asphalt and spraying temperatures.

MATERIALS

609-2.1 Aggregate materials. 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.

The crushed aggregate for the applications shall meet the requirements for gradation given in the table below when tested in accordance with ASTM C136.

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	Minimum 90% by weight of particles with at least two fractured faces[1]	ASTM D5821
Flat, Elongated, or Flat and Elongated Particles	8% maximum, by weight, of flat, elongated, or flat and elongated particles at 3:1	ASTM D4791
Bulk density of slag	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. Fractured faces shall be achieved by crushing.

Requirements for Gradation of Aggregate[1]

Sieve Designation (square openings)	Percentage by Weight Passing Sieves		
	Aggregate No. 1	Aggregate No. 2	Aggregate No. 3
1 inch (25.0 mm)	N/A	N/A	
3/4 inch (19.0 mm)			
1/2 inch (12.5 mm)			100
3/8 inch (9.5 mm)			85-100
No. 4 (4.75 mm)			10-30
No. 8 (2.36 mm)			0-10
No. 16 (1.18 mm)			0-5

[1] Locally available aggregate used for chip seals with similar gradations may be used provided the maximum aggregate size is the same; and the aggregate meets all other quality requirements in these specifications.

The gradations in the table represent the limits that shall determine suitability of aggregate for use for the specified applications from the sources of supply. The final gradations decided on, within the limits designated in the table, shall be uniformly graded from coarse to fine.

The aggregate shall show no evidence of stripping or swell. The use of anti-strip agents for the control of stripping shall be used if necessary.

609-2.2 Asphalt material. The asphalt material shall conform to the types, grades, controlling specifications, and application temperatures for the asphalt materials as recommended by the manufacturer.

Asphalt Materials Properties

Type(s) and Grade(s)	Specification(s)
PG 76-22	ASTM6373

The Contractor shall provide a copy of the manufacturer's Certificate of Analysis (COA) for the asphalt material. If the asphalt emulsion is diluted at other than the manufacturer's facility, the Contractor shall provide a supplemental COA from an independent laboratory verifying the asphalt emulsion properties.

The COA shall be provided to and approved by the RPR before the emulsified asphalt is applied. Furnishing the vendor's certified test report for the asphalt material shall not be interpreted as basis for final acceptance. The manufacturer's COA may be subject to verification by testing the material delivered for use on the project.

609-2.3 Sampling and Testing. Sampling and testing is the responsibility of the Contractor. Sampling and testing shall be performed by an approved commercial testing laboratory, or by the Contractor, subject to approval by the RPR. Sampling shall be in accordance with ASTM D75 for aggregates and ASTM D140 for asphalt material, unless otherwise directed. Perform aggregate gradation tests on each sample in accordance with ASTM C136. Perform all other aggregate tests on the initial source samples and repeat tests when there is a change of source. Perform sieve analyses daily from material samples. The tests shall include an analysis of each gradation of material. Submit copies of test results, within 24 hours after completion of each test.

CONSTRUCTION METHODS

609-3.1 Weather limitations. Asphalt material shall be applied only when the existing surface or base course is dry or contains no excess moisture in an amount that will not permit uniform distribution and adhesion. Chip seal coat shall not be applied when either the atmospheric temperature is below 60°F (16°C) or the pavement surface to be treated is below 70°F (21°C) unless otherwise directed by the RPR. No material shall be applied when rain is imminent or when dust or sand is blowing.

609-3.2 Equipment and tools. The Contractor shall furnish all equipment, tools, and machines necessary for the performance of the work.

a. Asphalt distributors. The distributors shall have pneumatic tires of such width and number that the load produced on the base and surface does not exceed 65.0 pounds per square inch (4.5 kg per sq cm) of tire width. Distributors shall be designed and equipped to distribute asphalt material uniformly at even heat on various widths of surface at readily determined and controlled rates ranging from 0.05 to 1.00 gallons/square yard (0.20 to 4.5 L/square meter), with a pressure range of 25 to 75 psi (172 to 517 kPa). The allowable variation from any specified rate shall not exceed 5%. Distributor equipment shall include a separate power unit for the bitumen pump, full-circulation spray bars, tachometer, pressure gauges, volume-measuring devices, a thermometer for reading the temperature of tank contents, and a hose attachment suitable for applying asphalt material to areas not accessible with distributor spray bar. The distributor shall be equipped for circulation and agitation of asphalt material during the heating process.

b. Aggregate spreader. The aggregate spreader shall be a self-propelled mechanical spreader or truck-attached mechanical spreader capable of uniformly distributing aggregate at the specified rates.

c. Power Rollers. Power rollers shall be steel-wheeled or pneumatic-tired type, conforming to the following requirements:

(1) Steel-wheeled rollers shall have at least one steel drum and weigh a minimum of 5 tons (4 metric tons). Steel wheels of the rollers shall be equipped with adjustable scrapers.

(2) Pneumatic-tired rollers shall be self-propelled and have wheels mounted on two axles in such manner that the rear tires will not follow in the tracks of the forward group. Tires shall be uniformly inflated to not less than 60 psi (414 kPa) nor more than 80 psi (552 kPa) pressure. The pneumatic-tired rollers shall be equipped with boxes or platforms for ballast loading and shall be loaded so that the tire print width of each wheel is not less than the clear distance between tire prints.

d. Power broom. A power broom and/or blower shall be provided for removing loose material from the surface to be treated.

e. Equipment calibration. Asphalt distributors must be calibrated within the same construction season 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.

609-3.3 Preparation of asphalt pavement surfaces. Clean pavement surface immediately prior to placing the seal coat so that it is free of dust, dirt, grease, vegetation, oil or any type of objectionable surface film. Remove oil or grease from the asphalt pavement by scrubbing with a detergent, washing thoroughly with clean water, and then treat these areas with a soil spot primer. Any additional surface preparation, such as crack repair, shall be in accordance with Item P-101, paragraph 101-3.6.

609-3.4 Control strip. Preliminary to providing a complete chip seal coat, treatthree lengths of least 100 feet each for the full width of the distributor bar. Use the appropriate typical application rates specified herein for one surface treatment trial. Make other chip seal coat trials using various amounts of materials as may be deemed necessary. A qualified manufacturer's representative shall be present in the field to assist the Contractor to determine the optimum application rate of both asphalt material and aggregate.

609-3.5 Application of asphalt material. Asphalt material shall be applied on the prepared surface at the rate and temperature specified using a pressure distributor to obtain uniform distribution over all surfaces treated. Unless the distributor is equipped to obtain a satisfactory result at the junction of previous and

subsequent applications, building paper shall be spread on the surface for a sufficient distance back from the ends of each application so that flow through the sprays may be started and stopped on the paper in order that all sprays will operate at full force on the surface treated. Immediately after application, remove

and destroy the building paper. Areas inaccessible to the distributor shall be properly treated with asphalt material using the hose attachment. Protect adjacent structures to prevent their being spattered or marred. To ensure proper drainage, the strips shall begin along the centerline of the pavement on a crowned section or on the high side of the pavement with a one-way slope.

609-3.6 Application of aggregate material. Immediately after the application of the asphalt material, the aggregates at the rate specified for each designated application shall be spread uniformly over the asphalt material. Trucks spreading aggregate shall be operated backward so that the asphalt material will be covered before the truck wheels pass over it. The aggregate shall be spread in the same width of application as the asphalt material and shall not be applied in such thickness as to cause blanketing. Spread aggregate evenly by hand on all areas missed by the mechanical spreader. When hand spreading is employed on inaccessible areas, spread aggregate directly from trucks. Additional aggregate shall be spread by hand over areas having insufficient cover, and spreading shall continue during these operations when necessary. Back-spotting or sprinkling of additional aggregate material, and pouring additional asphalt material over areas that show up having insufficient cover or bitumen, shall be done by hand whenever necessary. Additional spreading of aggregate material shall be done by means of a broom drag, a power broom, or other approved equipment as directed by the RPR.

Immediately after spreading each application, the aggregate shall be rolled. The rolling shall be continued until no more aggregate material can be worked into the surface. In the construction of the second and third application, blading with the wire-broom moldboard attachment or broom dragging shall begin as soon as possible after the rolling has started and after the surface has set sufficiently to prevent excessive marking. Further blading and rolling on the strip being placed and on adjacent strips previously placed, shall be done as often as necessary to keep the aggregate material uniformly distributed. These operations shall be continued until the surface is evenly covered and cured to the satisfaction of the RPR.

Multiple applications shall not be applied until the preceding application has set and in no case until at least 24 hours have elapsed. Remove excess aggregate prior to the second application of asphalt material. If the treated surface is excessively moistened by rain, allow the surface to dry for such time as deemed necessary. If dust, dirt, or other foreign matter accumulates on the surface between the applications, the Contractor shall be required to sweep and clean the surface as specified. The asphalt material and the aggregate shall be spread on the clean and properly cured surface and handled as required. Avoid brooming or tracking dirt or any foreign matter on any portion of the pavement surface under construction.

Minimize aggregate from being broadcast and accumulating on the untreated pavement adjacent to an application pass. Prior to the next application pass, the Contractor shall clean areas of excess or loose aggregate and remove from project site.

609-3.7 Correction of defects. Any defects, such as raveling, low centers, lack of uniformity, or other imperfections shall be corrected immediately to the satisfaction of the RPR.

All defective materials resulting from over-heating, improper handling, or application shall be removed by the Contractor and replaced with approved materials per these specifications.

609-3.8 Freight and weigh bills. 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.

609-3.9 Protection. Keep all traffic off surfaces freshly treated with asphalt material. Provide sufficient

warning signs and barricades so that traffic will not travel over freshly treated surfaces. Protect the treated areas from traffic for at least 24 hours after final application of asphalt material and aggregate, or for such time as necessary to prevent picking up. Immediately prior to opening to traffic, roll the entire treated area with a self-propelled pneumatic-tired roller.

METHOD OF MEASUREMENT

609-4.1 The asphalt material shall be measured by the gallon. Volume shall be corrected to the volume at 60°F (16°C) in accordance with ASTM D1250 for asphalt and Table IV-3 of The Asphalt Institute Manual MS-6 for emulsified asphalt. Water added to emulsified asphalt will not be measured for payment.

609-4.2 The chip seal coat application shall be measured by the square yard.

BASIS OF PAYMENT

609-5.1 Payment shall be made at the contract unit price per gallon for asphalt material for surface treatment. These prices shall be full compensation for furnishing all materials and for all preparation, hauling and application of the materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

609-5.2 Payment shall be made at the contract unit price per square yard for the chip seal coat application. These prices shall be full compensation for furnishing all materials and for all preparation, hauling and application of the materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-609-5.1	Asphalt Material - per gallon
Item P-609-5.2	Chip seal coat application - 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.

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 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 D75	Standard Practice for Sampling Aggregates
ASTM D946	Standard Specification for Penetration-Graded Asphalt Cement for Use in Pavement Construction
ASTM D977	Standard Specification for Emulsified Asphalt
ASTM D1250	Standard Guide for Use of the Petroleum Measurement Tables
ASTM D2397	Standard Specification for Cationic Emulsified Asphalt

ASTM D2995	Standard Practice for Estimating Application Rate and Residual Application Rate of Bituminous Distributors
ASTM D3381	Standard Specification for Viscosity-Graded Asphalt-Cement for Use in Pavement Construction
ASTM D4791	Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
ASTM D5821	Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate

Asphalt Institute (AI)

MS-6 Table IV-3 Asphalt Pocketbook of Useful Information (Temperature-Volume Corrections for Emulsified Asphalts)

FAA Orders

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

END OF ITEM P-609

PHASE I

DURATION: 13 DAYS

THIS PHASE SHALL CONSIST OF MILLING EXISTING ASPHALT, CRACK REPAIR, AND PAVING OF TAXIWAY A UP TO RUNWAY 14-32 (OUTSIDE OF RSA FOR BOTH RUNWAYS).

RUNWAY 7-25 AND 14-32 TO REMAIN OPEN FOR THE DURATION OF WORK. TAXIWAY A TO BE PARTIALLY CLOSED FOR THE DURATION OF WORK.

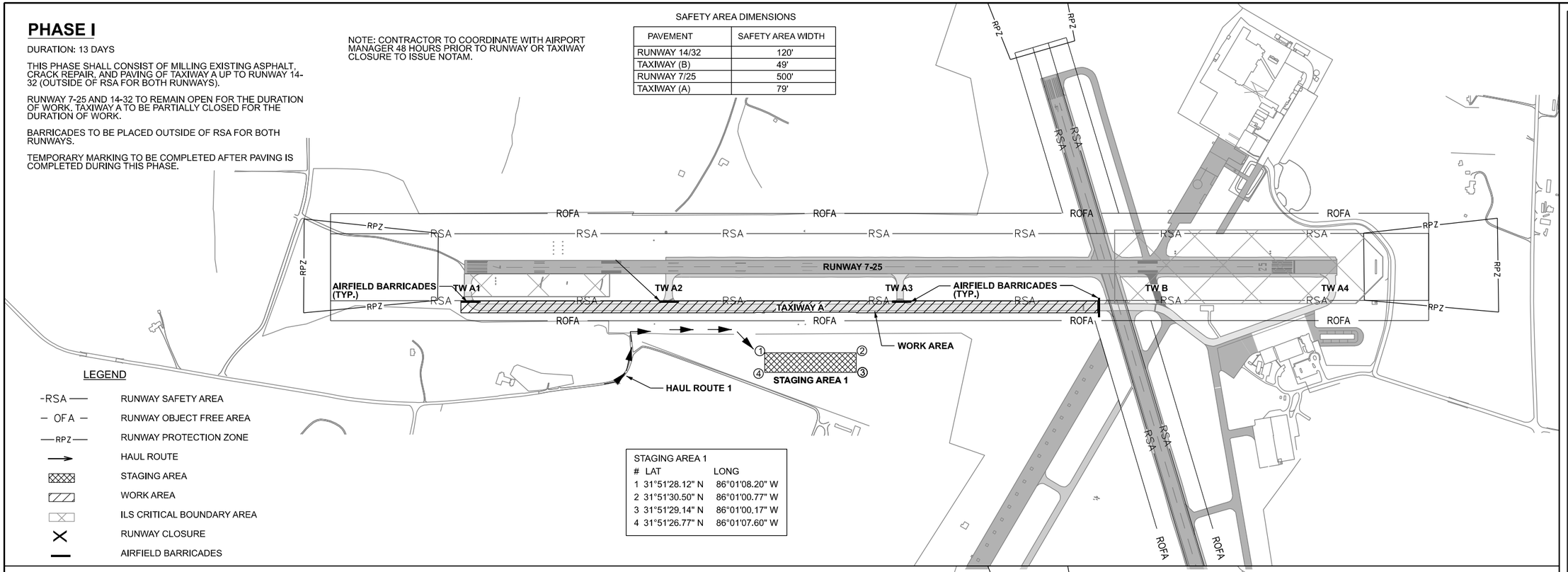
BARRICADES TO BE PLACED OUTSIDE OF RSA FOR BOTH RUNWAYS.

TEMPORARY MARKING TO BE COMPLETED AFTER PAVING IS COMPLETED DURING THIS PHASE.

NOTE: CONTRACTOR TO COORDINATE WITH AIRPORT MANAGER 48 HOURS PRIOR TO RUNWAY OR TAXIWAY CLOSURE TO ISSUE NOTAM.

SAFETY AREA DIMENSIONS

PAVEMENT	SAFETY AREA WIDTH
RUNWAY 14/32	120'
TAXIWAY (B)	49'
RUNWAY 7/25	500'
TAXIWAY (A)	79'



LEGEND

- RSA — RUNWAY SAFETY AREA
- OFA — RUNWAY OBJECT FREE AREA
- RPZ — RUNWAY PROTECTION ZONE
- HAUL ROUTE
- STAGING AREA
- WORK AREA
- ILS CRITICAL BOUNDARY AREA
- RUNWAY CLOSURE
- AIRFIELD BARRICADES

STAGING AREA 1

#	LAT	LONG
1	31°51'28.12" N	86°01'08.20" W
2	31°51'30.50" N	86°01'00.77" W
3	31°51'29.14" N	86°01'00.17" W
4	31°51'26.77" N	86°01'07.60" W

PHASE IA

DURATION: 10 DAYS

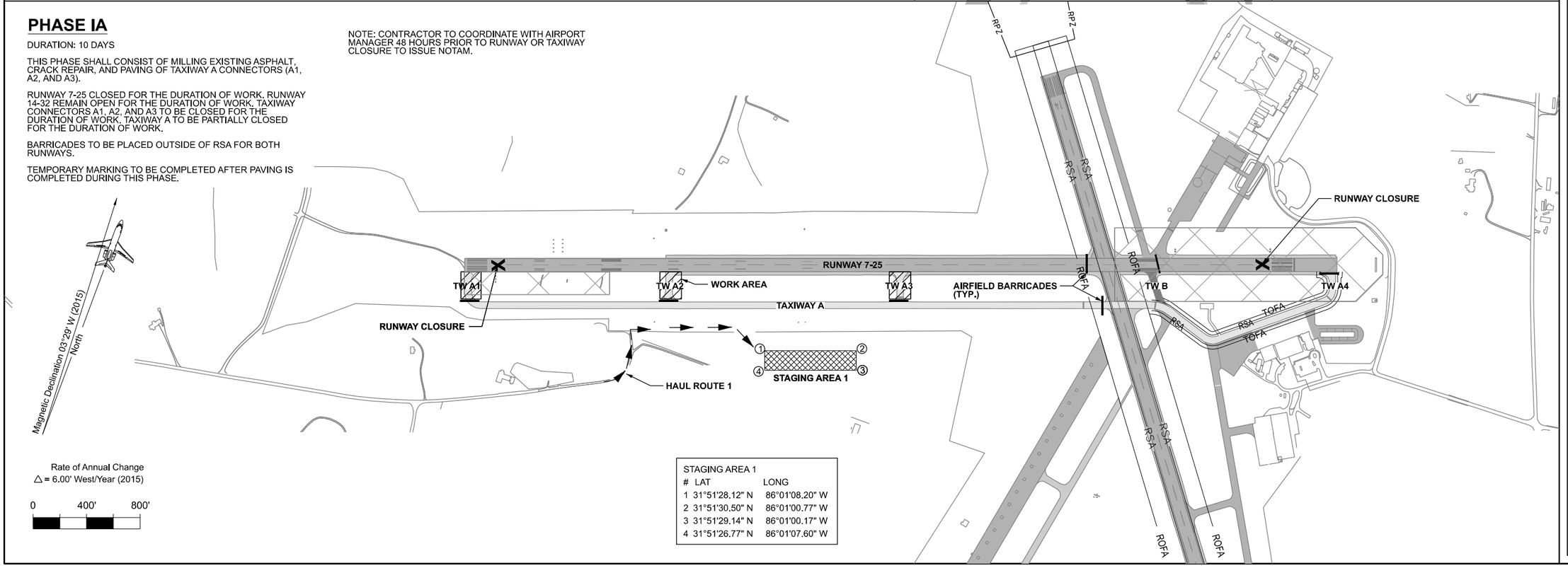
THIS PHASE SHALL CONSIST OF MILLING EXISTING ASPHALT, CRACK REPAIR, AND PAVING OF TAXIWAY A CONNECTORS (A1, A2, AND A3).

RUNWAY 7-25 CLOSED FOR THE DURATION OF WORK. RUNWAY 14-32 REMAIN OPEN FOR THE DURATION OF WORK. TAXIWAY CONNECTORS A1, A2, AND A3 TO BE CLOSED FOR THE DURATION OF WORK. TAXIWAY A TO BE PARTIALLY CLOSED FOR THE DURATION OF WORK.

BARRICADES TO BE PLACED OUTSIDE OF RSA FOR BOTH RUNWAYS.

TEMPORARY MARKING TO BE COMPLETED AFTER PAVING IS COMPLETED DURING THIS PHASE.

NOTE: CONTRACTOR TO COORDINATE WITH AIRPORT MANAGER 48 HOURS PRIOR TO RUNWAY OR TAXIWAY CLOSURE TO ISSUE NOTAM.



STAGING AREA 1

#	LAT	LONG
1	31°51'28.12" N	86°01'08.20" W
2	31°51'30.50" N	86°01'00.77" W
3	31°51'29.14" N	86°01'00.17" W
4	31°51'26.77" N	86°01'07.60" W

Rate of Annual Change
△ = 6.00' West/Year (2015)

0 400' 800'

GMC

ISSUE | DATE
APRIL 2024 FINAL
ADDENDUM #1

drawn by: ECG
checked by: AMC

CONSTRUCTION PHASING PLAN

TROY MUNICIPAL AIRPORT at
N. KENNETH CAMPBELL FIELD (TOI)
TAXIWAY ALPHA REHABILITATION
TROY, ALABAMA
AIP: 3-01-0071-024-2024
AIG: 3-01-0071-025-2024
TMGM220021
SCALE:1" = 400'

2A
sheet 2A of 29

PHASE II

DURATION: 2 DAYS

THIS PHASE SHALL CONSIST OF MILLING EXISTING ASPHALT, CRACK REPAIR, AND PAVING OF TAXIWAY CONNECTION ACROSS RUNWAY 14-32 UP TO TAXIWAY B.

RUNWAY 7-25 TO REMAIN OPEN FOR THE CONSTRUCTION AT THE TAXIWAY CONNECTION TO RUNWAY 14-32. RUNWAY 14-32 TO BE CLOSED FOR THE DURATION OF CONSTRUCTION. TAXIWAY A TO BE PARTIALLY CLOSED FOR THE DURATION OF WORK.

TEMPORARY MARKING TO BE COMPLETED AFTER PAVING IS COMPLETED DURING THIS PHASE.

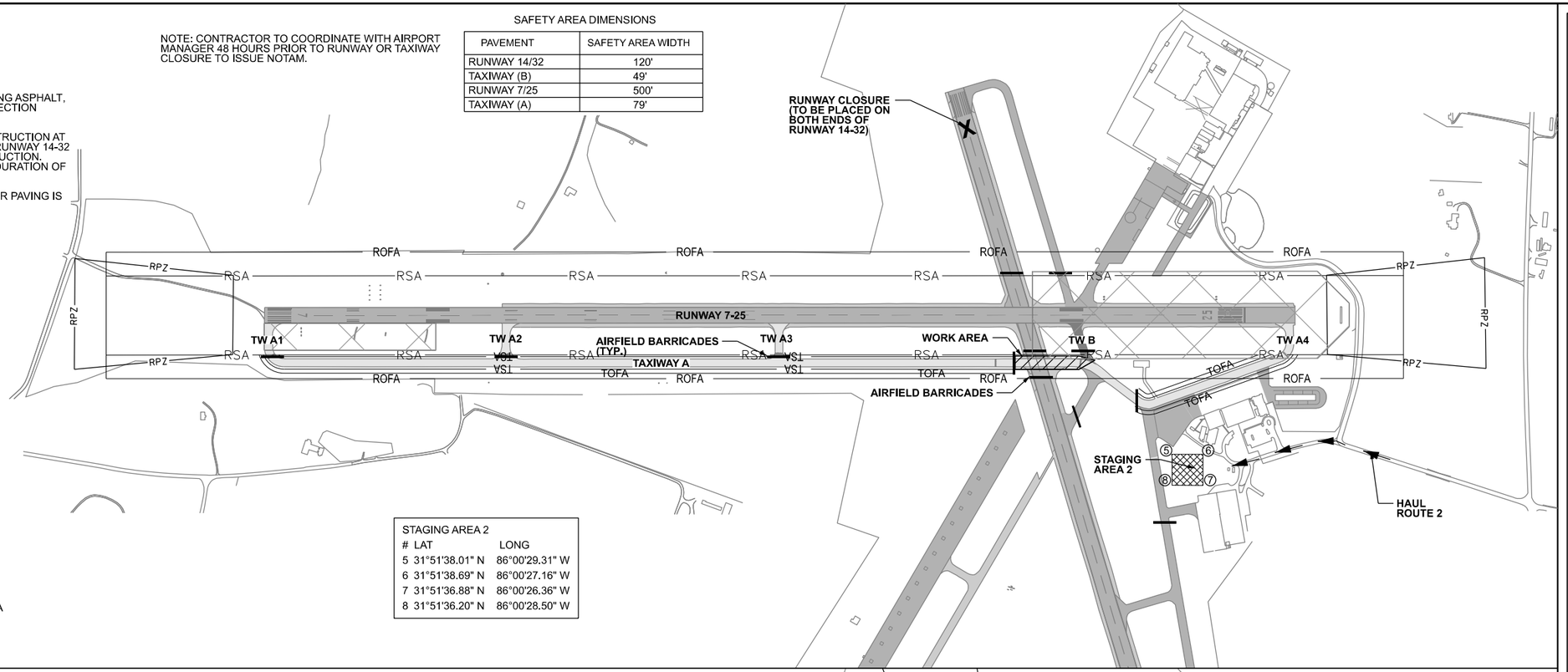
NOTE: CONTRACTOR TO COORDINATE WITH AIRPORT MANAGER 48 HOURS PRIOR TO RUNWAY OR TAXIWAY CLOSURE TO ISSUE NOTAM.

SAFETY AREA DIMENSIONS

PAVEMENT	SAFETY AREA WIDTH
RUNWAY 14/32	120'
TAXIWAY (B)	49'
RUNWAY 7/25	500'
TAXIWAY (A)	79'

LEGEND

- RSA — RUNWAY SAFETY AREA
- OFA — RUNWAY OBJECT FREE AREA
- TSA — TAXIWAY SAFETY AREA
- TOFA — TAXIWAY OBJECT FREE AREA
- RPZ — RUNWAY PROTECTION ZONE
- HAUL ROUTE
- STAGING AREA
- WORK AREA
- ILS CRITICAL BOUNDARY AREA
- RUNWAY CLOSURE
- AIRFIELD BARRICADES



STAGING AREA 2

#	LAT	LONG
5	31°51'38.01" N	86°00'29.31" W
6	31°51'38.69" N	86°00'27.16" W
7	31°51'36.88" N	86°00'26.36" W
8	31°51'36.20" N	86°00'28.50" W

PHASE IIA

DURATION: 15 DAYS

THIS PHASE SHALL CONSIST OF MILLING EXISTING ASPHALT, CRACK REPAIR, AND PAVING OF TAXIWAY A FROM RUNWAY 14-32 TO RUNWAY 7-25 RSA.

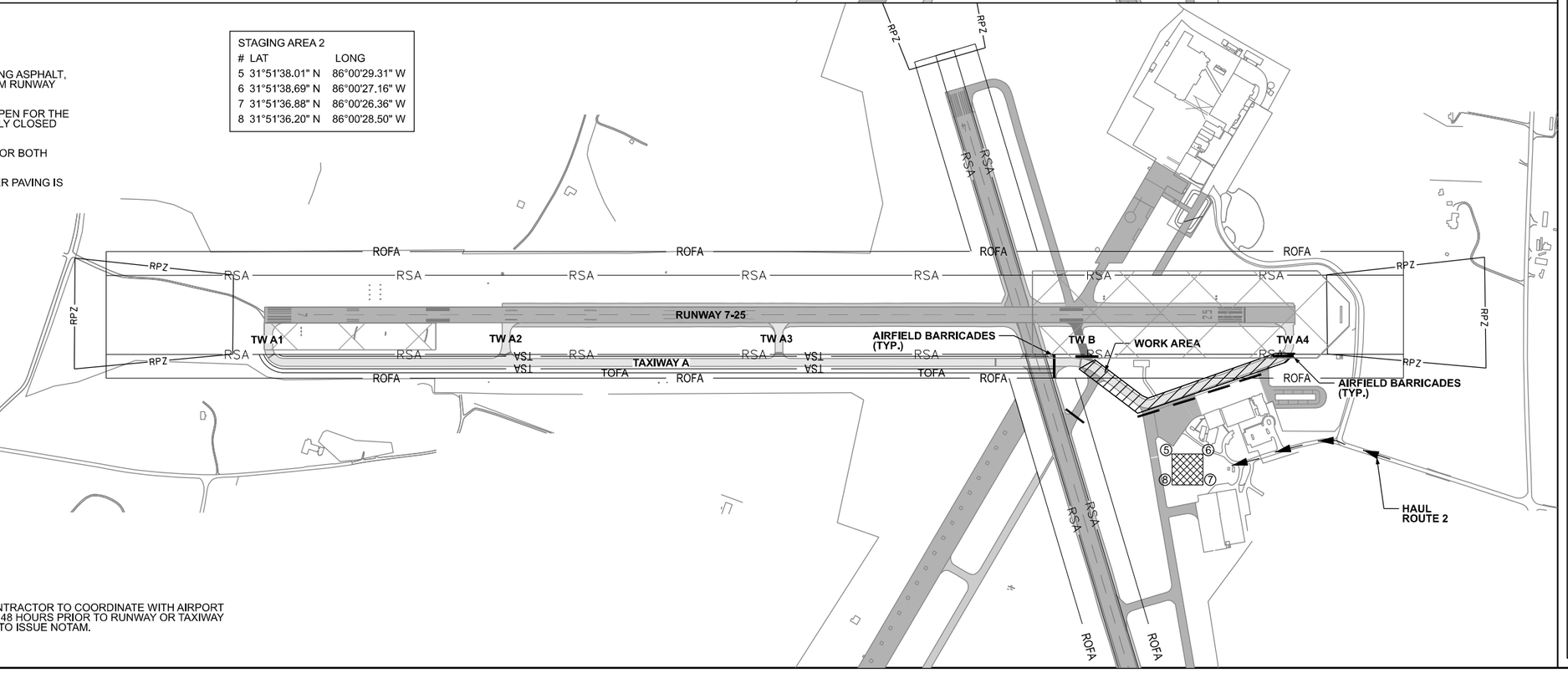
RUNWAY 7-25 AND RUNWAY 14-32 TO REMAIN OPEN FOR THE DURATION OF WORK. TAXIWAY A TO BE PARTIALLY CLOSED FOR THE DURATION OF WORK.

BARRICADES TO BE PLACED OUTSIDE OF RSA FOR BOTH RUNWAYS.

TEMPORARY MARKING TO BE COMPLETED AFTER PAVING IS COMPLETED DURING THIS PHASE.

STAGING AREA 2

#	LAT	LONG
5	31°51'38.01" N	86°00'29.31" W
6	31°51'38.69" N	86°00'27.16" W
7	31°51'36.88" N	86°00'26.36" W
8	31°51'36.20" N	86°00'28.50" W



Magnetic Declination 03°29' W (2015)
North

Rate of Annual Change
△ = 6.00' West/Year (2015)

0 400' 800'

NOTE: CONTRACTOR TO COORDINATE WITH AIRPORT MANAGER 48 HOURS PRIOR TO RUNWAY OR TAXIWAY CLOSURE TO ISSUE NOTAM.

GMC

ISSUE | DATE

APRIL 2024	FINAL	
REVISED	4/11/2024	
drawn by:	ECG	
checked by:	AMC	

CONSTRUCTION PHASING PLAN

TROY MUNICIPAL AIRPORT at
N. KENNETH CAMPBELL FIELD (TOI)
TAXIWAY ALPHA REHABILITATION
TROY, ALABAMA
AIP: 3-01-0071-024-2024
AIG: 3-01-0071-025-2024
TMGM220021
SCALE:1" = 400'

2B
sheet 2B of 29

PHASE IIB

DURATION: 7 DAYS

THIS PHASE SHALL CONSIST OF MILLING EXISTING ASPHALT, CRACK REPAIR, AND PAVING OF TAXIWAY B (ALTERNATE BID) AND TAXIWAY CONNECTOR A4.

RUNWAY 7-25 TO BE CLOSED FOR THE DURATION OF CONSTRUCTION. TAXIWAY A AND TAXIWAY B WILL BE CLOSED FOR THE DURATION OF WORK.

IF ALTERNATE B IS AWARDED, ADD 10 ADDITIONAL CALENDAR DAYS TO CONTRACT TIME.

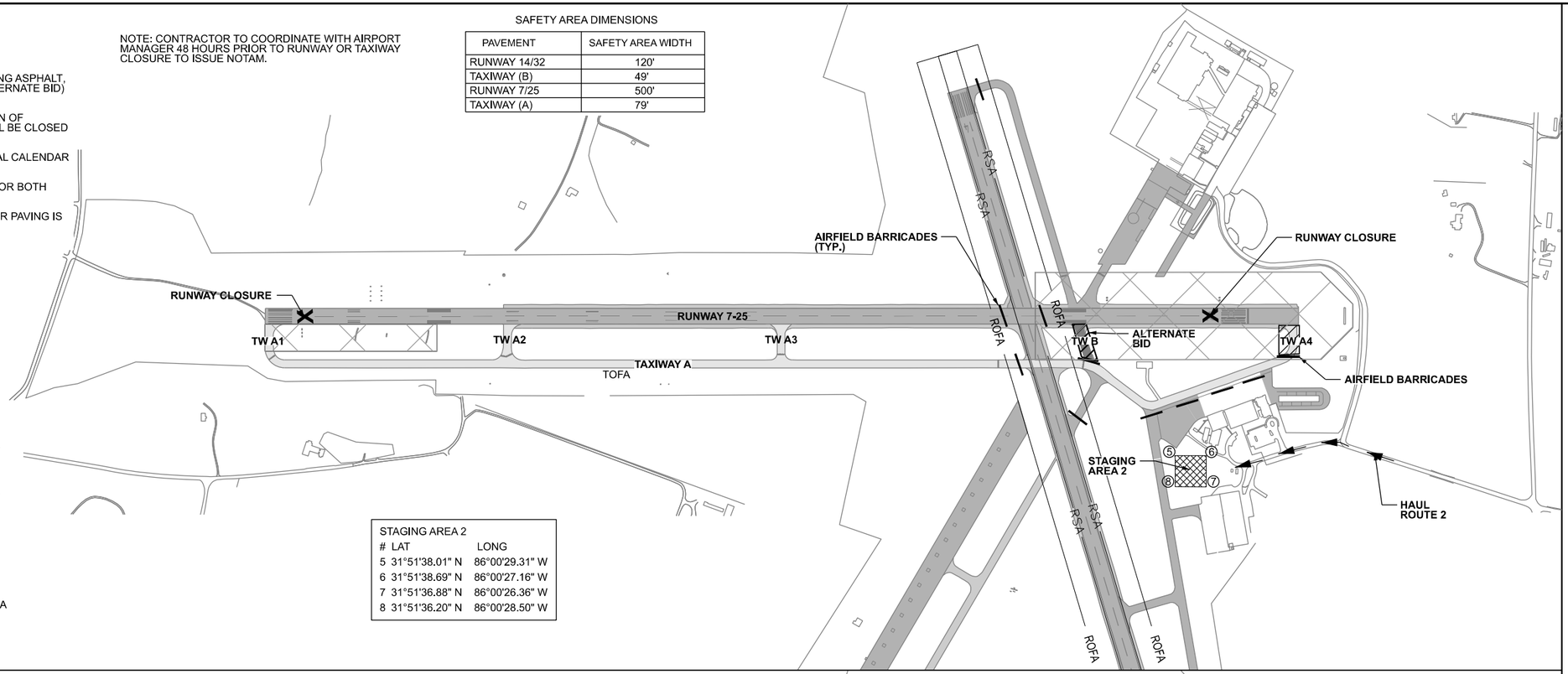
BARRICADES TO BE PLACED OUTSIDE OF RSA FOR BOTH RUNWAYS.

TEMPORARY MARKING TO BE COMPLETED AFTER PAVING IS COMPLETED DURING THIS PHASE.

NOTE: CONTRACTOR TO COORDINATE WITH AIRPORT MANAGER 48 HOURS PRIOR TO RUNWAY OR TAXIWAY CLOSURE TO ISSUE NOTAM.

SAFETY AREA DIMENSIONS

PAVEMENT	SAFETY AREA WIDTH
RUNWAY 14/32	120'
TAXIWAY (B)	49'
RUNWAY 7/25	500'
TAXIWAY (A)	79'



STAGING AREA 2

#	LAT	LONG
5	31°51'38.01" N	86°00'29.31" W
6	31°51'38.69" N	86°00'27.16" W
7	31°51'36.88" N	86°00'26.36" W
8	31°51'36.20" N	86°00'28.50" W

LEGEND

- RSA — RUNWAY SAFETY AREA
- OFA — RUNWAY OBJECT FREE AREA
- TSA — TAXIWAY SAFETY AREA
- TOFA — TAXIWAY OBJECT FREE AREA
- RPZ — RUNWAY PROTECTION ZONE
- HAUL ROUTE
- STAGING AREA
- WORK AREA
- ILS CRITICAL BOUNDARY AREA
- RUNWAY CLOSURE
- AIRFIELD BARRICADES

PHASE III

DURATION: 1 DAY

THIS PHASE SHALL CONSIST OF PERMANENT STRIPING FOR TAXIWAY A.

RUNWAY 14-32 TO BE CLOSED FOR THE DURATION OF WORK.

NOTE: BARRICADES TO BE PLACED OUTSIDE OF RSA FOR BOTH RUNWAYS.

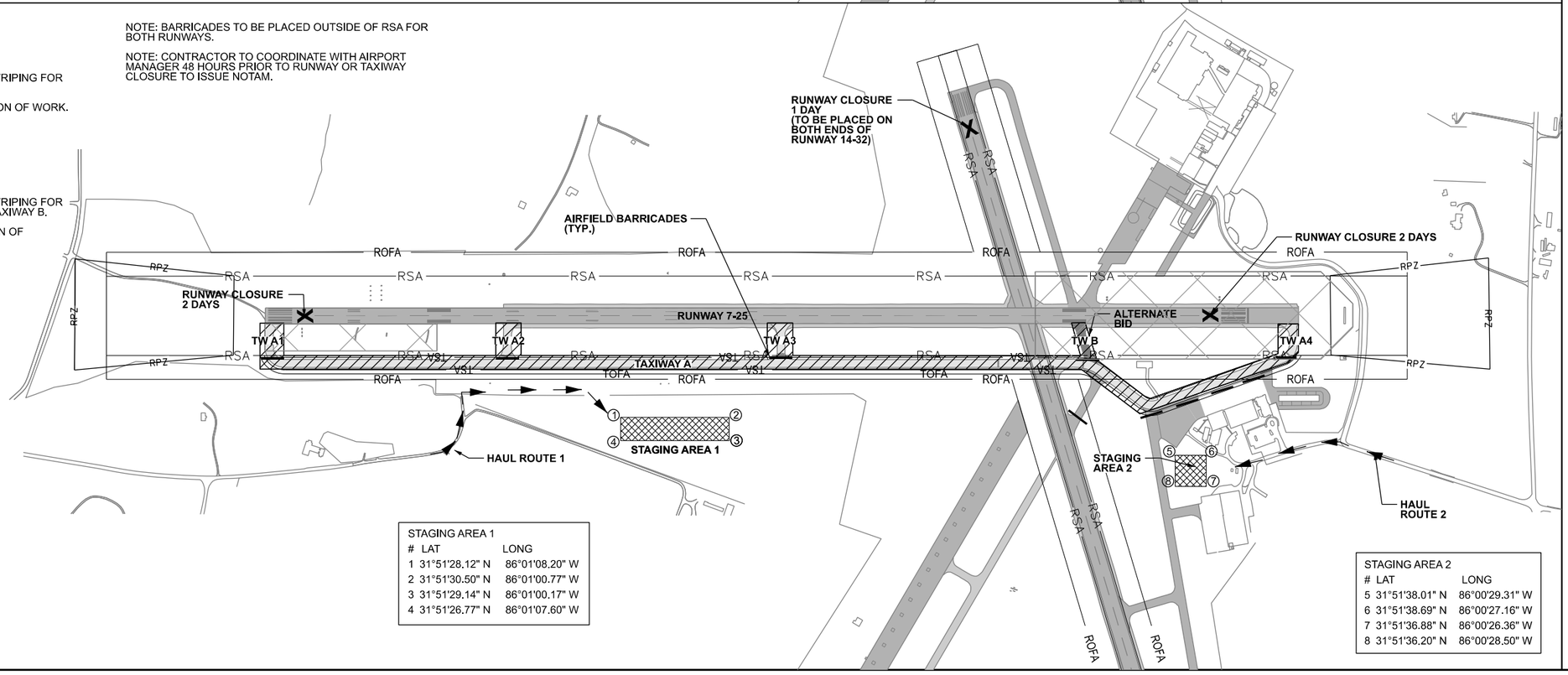
NOTE: CONTRACTOR TO COORDINATE WITH AIRPORT MANAGER 48 HOURS PRIOR TO RUNWAY OR TAXIWAY CLOSURE TO ISSUE NOTAM.

PHASE IIIA

DURATION: 2 DAYS

THIS PHASE SHALL CONSIST OF PERMANENT STRIPING FOR TAXIWAY CONNECTOR A1, A2, A3, AND A4 AND TAXIWAY B.

RUNWAY 7-25 TO BE CLOSED FOR THE DURATION OF WORK.RUNWAY 14-32 TO REMAIN OPEN.



STAGING AREA 1

#	LAT	LONG
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4	31°51'26.77" N	86°01'07.60" W

STAGING AREA 2

#	LAT	LONG
5	31°51'38.01" N	86°00'29.31" W
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