



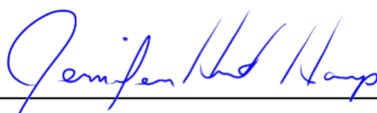
ADDENDUM NO. 2

Date: May 3, 2022
Project Name: Pavement Maintenance – Shelby County Airport
Owner: Shelby County Commission
ALDOT Project No.: EET-01-0921-PM
Garver Project No. 22A01180

This addendum shall be a part of the Plans, Contract Documents and Specifications to the same extent as though it were originally included therein, and it shall supersede anything contained in the Plans, Contract Documents, and Specifications with which it might conflict. This addendum, including all attachments, shall become part of the Contract and all provisions of the Contract shall apply thereto. The time provided for completion of the Contract has not been changed as noted in this addendum. Acknowledgement of receipt of this addendum must be noted in the appropriate section of the Proposal and included with the Contract Documents.

A. SPECIFICATIONS

1. Remove the following specifications sections in their entirety, and replace with the same, attached hereto:
 - a. 010400 PROPOSAL
 - b. P-620 RUNWAY AND TAXIWAY MARKING

By: 

Jennifer Harp, P.E.
Project Manager

Attachments:

- A. Specifications
 1. 010400 PROPOSAL – ADDENDUM #2 **Revised Proposal must be used for bidding.**
 2. P-620-REV RUNWAY AND TAXIWAY MARKING – ADDENDUM #2

END OF ADDENDUM NO. 2

010400 – PROPOSAL - ADDENDUM #2

Place _____

Date _____

Proposal of _____,

a corporation organized and existing under the laws of the State of _____,

or

Proposal of _____,

a partnership consisting of _____,

or

Proposal of _____,

an individual doing business as _____,

To: Shelby County, Alabama

This bid results from your advertisement for bids for the construction of the **Pavement Maintenance**.

The undersigned Bidder, having visited the site of the work, having examined the Plans, Specifications, and other Contract Documents including all Addenda, and being familiar with all of the conditions relating to the construction of the proposed project, hereby agrees to comply with all other conditions or requirements set forth in the Plans, Specifications, and other Contract Documents, and further proposes to; furnish all material, supplies, equipment, and appliances; to furnish all labor, tools, equipment and incidentals to complete the work in accordance with the Plans, Specifications, and other Contract Documents at and for the lump sum and unit prices proposed in the attached Unit Price Schedule(s).

The undersigned Bidder agrees to begin work within ten (10) calendar days after the issuance by, or on behalf of, the Owner of a "Work Order" or "Notice to Proceed" and to complete the work within the following:

- Seventeen (17) consecutive calendar days for the Base Bid
- Five (5) additional consecutive calendar days for Add Alternate 1

Total contract time will be the sum of the consecutive calendar days for the combination of base bid and alternates awarded (except as modified in accordance with the GENERAL PROVISIONS of these Contract Documents). Should the work fail to be completed within the time herein stated, the Contractor shall pay to the Owner, as fixed and agreed liquidated damages, and not as a penalty, the sum, for each day of delay until the work is completed and accepted, as stipulated in GENERAL PROVISIONS of these Contract Documents. It is understood that additional time for the completion of the project is to be allowed only for delays as stipulated in GENERAL PROVISIONS of these Contract Documents.

****Revised Proposal must be used for bidding.****

BASE BID						
ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	BID AMOUNT
1	SS-120-3.1	CONSTRUCTION SAFETY AND SECURITY	LS	1		
2	C-105-6.1	MOBILIZATION	LS	1		
3	P-101-5.1	CRACK CLEAN, STERILIZE AND FILL	LF	28,500		
4	P-101-5.2	PAINT AND RUBBER REMOVAL	SF	3,400		
5	P-620-5.1	TEMPORARY STAIN AND ALGAE RESISTANT MARKING, TYPE I, YELLOW NON-REFLECTORIZED	SF	3,890		
6	P-620-5.2	PERMANENT STAIN AND ALGAE RESISTANT MARKING, TYPE I, YELLOW REFLECTORIZED (TYPE I BEADS)	SF	3,890		
7	P-629-8.1	THERMOPLASTIC COAL TAR EMULSION SAND SLURRY SEAL	SY	33,060		

Total Base Bid: _____

ADD ALTERNATE 1						
ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	BID AMOUNT
1	P-101-5.1	CRACK CLEAN, STERILIZE AND FILL	LF	4,500		
2	P-101-5.2	PAINT AND RUBBER REMOVAL	SF	4,100		
3	P-620-5.1	TEMPORARY STAIN AND ALGAE RESISTANT MARKING, TYPE I, YELLOW NON-REFLECTORIZED	SF	410		
4	P-620-5.2	PERMANENT STAIN AND ALGAE RESISTANT MARKING, TYPE I, YELLOW REFLECTORIZED (TYPE I BEADS)	SF	410		
5	P-629-8.1	THERMOPLASTIC COAL TAR EMULSION SAND SLURRY SEAL	SY	5,620		

Total Add Alternate 1: _____

Bidder acknowledges receipt of the following addendum (addenda):

Addendum #	Date
01	04-27-2022
02	05-03-2022

The undersigned Bidder agrees that this bid shall be good and shall not be withdrawn for a period of sixty (60) calendar days after the opening thereof. If written notice of the acceptance of this Proposal is mailed, telegraphed, or delivered to the undersigned within sixty (60) days after the opening thereof, or at any time thereafter before this Proposal is withdrawn, the undersigned agrees to execute and deliver an Agreement (Contract) in the prescribed form, and furnish the required Performance and Payment Bond, within ten (10) days after the Agreement is presented to him for signature.

It is understood by the undersigned Bidder that the Owner reserves the right to reject any or all bids.

Accompanying this Proposal as bid security is a certified check/bid bond (*strike one*)

in the amount of _____ Dollars
(\$_____), being not less than five percent (5%) of the total amount of the bid. If the undersigned Bidder is the successful Bidder, but fails or refuses to execute the contract and furnish the required bond within the prescribed ten (10) days of the notification of award, then this bid security is to become the property of the Owner as liquidated damages for the delay and additional expense to the Owner caused by such failure or refusal.

BIDDER: *[Indicate correct name of bidding entity]*

By:

[Signature] _____

[Printed name] _____

(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:

[Signature] _____

[Printed name] _____

Title: _____

Submittal Date: _____

Address for giving notices:

Telephone Number: _____

Contact Name and e-mail address: _____

Bidder's License No.: _____

(where applicable)

NOTES: Sign in ink. Do not detach.
 Items must be bid upon as specified
 in the Unit Price Schedule.

ITEM P-620 RUNWAY AND TAXIWAY MARKING – ADDENDUM #2

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
II	Temporary Yellow	33538 or 33655	230 ft ² /gal	No beads	No beads
II	Permanent Yellow	33538 or 33655	115 ft ² /gal	Type III	10 lb/gal
I	Temporary Yellow	33538 or 33655	230 ft ² /gal	No beads	No beads
I	Permanent Yellow	33538 or 33655	115 ft ² /gal	Type I, Gradation A	7 lb/gal

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. Waterborne Paint shall meet the requirements of Federal Specification TT-P-1952F, ~~Type II~~ **Type I**. 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.

b. Reflective media. Glass beads for white and yellow paint shall meet the requirements for Federal Specification TT-B-1325D ~~Type III~~ **Type I, Gradation A**.

Glass beads for red and pink paint shall meet the requirements for Type I, Gradation A.

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.

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 contaminants 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.

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 manufacturer's 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 in 50 feet, and marking dimensions and spacing shall be within the following tolerances:

Marking Dimensions and Spacing Tolerance

Dimension and Spacing	Tolerance
36 inch or less	±1/2 inch
greater than 36 inch to 6 feet	±1 inch
greater than 6 feet to 60 feet	±2 inch
greater than 60 feet	±3 inch

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 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. Not Used.

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 stain and algae resistant pavement markings shall be paid for shall be measured by the number of square feet of painting with reflective media performed in accordance with the specifications and accepted by the RPR. Reflective media shall be applied in accordance with the specifications and accepted by the Engineer. ~~No separate payment shall be made for temporary marking. Temporary markings shall be considered incidental to the final marking application and shall be applied 24 hours after the surface treatment has cured.~~ Temporary Markings shall be applied 24 hours after the surface treatment has cured.

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.

Payment for temporary stain and algae markings shall be made at the contract price for the number of square feet of temporary marking. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools and incidentals necessary to complete the item.

Payment for permanent stain and algae markings shall be made at the contract price for the number of square feet of permanent marking with reflective media. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools and incidentals necessary to complete the item, including the requirement for temporary marking.

Payment will be made under:

Item P-620-5.1	Temporary Stain and Algae Resistant Marking, Type I, Yellow Non-Reflectorized – per square foot
Item P-620-5.2	Permanent Stain and Algae Resistant Marking, Type I, Yellow Reflectorized (Type I Beads) – per square foot

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 Retroreflectometer
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)

FED SPEC TT-B-1325DBeads (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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