BIRMINGHAM WATER WORKS

April 25, 2024

Bid: 24-12-03

Subject: Invitation to Bid

Prospective Bidders:

Sealed bids for furnishing items and services on ***Standard Patch Paving/Longitudinal Transverse Paving/Subsurface Exploration*** attached forms will be received in the Purchasing Department of the Birmingham Water Works Board, located at 3600 First Avenue North, Birmingham, Alabama 35222 until **10:00 a.m., Thursday, May 9, 2024.** at which time and place they will be publicly opened and read. ***A Mandatory Pre-Bid is scheduled for Thursday, May 2, 2024 @ 10:00 a.m.***

The Mandatory Pre-bid and bid opening will be via Teams meeting. The link is listed in the email for the Invitation to bid. We advise you to check your connection a day before the Pre-Bid and Bid Opening to make sure you can join. Please join or call 5 minutes before the Pre-Bid and Bid Opening.

"Specifications and Conditions" and "Bid Forms" are attached, and all bids shall be F.O.B. destination, freight prepaid, and at no charge. One copy of the bid form should be returned, and the bidder should retain a copy.

The right is reserved to reject any or all bids submitted, waive any informalities and technicalities, and award to the bidder it is deemed to serve the "Board's" interests best and most economically. The Board reserves the right to award the bid on an individual or total cost of bid basis. The Board reserves the right to extend the contract, upon mutual consent of both parties, up to two (2) additional years. The Board reserves the right to cancel this bid within thirty (30) days with written notice. The Board reserves the right to cancel the contract due to non-satisfactory performance or if the vendor is found to violate the terms and conditions or does not correct any violations of specifications within two days after giving notice. The Board reserves the right to RE-BID. The Board reserves the right to enter into a month-to-month contract once the contract has ended, at the current prices, until the next bid has been awarded with the mutual consent of both parties.

Any bids mailed must be sent to 3600 First Avenue North, Birmingham, Alabama 35222, directed to the attention of the Purchasing Manager, and marked in the lower left-hand corner of the envelope as follows: "Bids on "***Standard Patch Paving/Longitudinal Transverse Paving/ Subsurface Exploration*** **are due on May 9, 2024 Thursday, @ 10:00 a.m."** at which time and place they will be publicly opened and read.

Yours truly,

Jonathan Jett

Jonathan Jett/Purchasing Superintendent

SPECIFICATIONS AND CONDITIONS
STANDARD PATCH PAVING / LONGITUDINAL TRANSVERSE PAVING /
SUBSURFACE EXPLORATION

GENERAL

Purpose: The intent of this Invitation to Bid and the resulting pricing agreement is to obtain the services of a qualified Paving Contractor (Contractor) to be readily available to provide services to Birmingham Water Works (BWW) for paving maintenance and construction. This bid will include the maintenance patch repair, construction trench line repair, and construction of final pavement of highway paving, bonded paving, asphalt streets, and driveway paving, as directed by the BWW throughout the service area of the Birmingham Water Works (BWW) distribution system. ***All materials including the hot mix asphalt to be used in the replacement of permanent paving shall be furnished and installed by and at the expense of the successful Contractor and shall be placed following the enclosed Summary of Work.***

The BWW will determine the amount of asphalt deemed necessary to complete the job based on field measurements made by BWW personnel. ***The Contractor shall purchase, transport, place, and compact the asphalt required to complete the project (work).*** The Contractor shall be required to pick up and deliver to the site the amount of asphalt necessary to complete the roadway repair. *This will not be an "all or nothing" bid award. Individual items will be awarded to the Vendor deemed "the lowest responsible and responsive bidder" per item.*

The Contractor must comply with the most current edition of the local jurisdiction's regulations and requirements for pavement replacement. The Contractor shall also be required to furnish all supervision, labor, machinery, tools, and other equipment necessary for the replacement of permanent paving. The BWW at its discretion will assign jobs to the Contractor. Factors in determining job assignments are, but are not limited to, the size of the job, location of the job, contractor workload, and the contractor's ability to perform. The Contractor must work expeditiously to complete jobs promptly and without delay. The contractor shall complete all assigned jobs within fifteen (15) calendar days unless otherwise approved by Board personnel from written notification of job assignment by the BWW. In instances where jobs must be completed in less than 24 hours, the Contractor must do so.

Contract Period: The contract shall cover a period of one year, beginning on or about an equivalent period depending upon the date the Board approves the bid award. The right is reserved to reject any or all bids submitted, to waive any informalities and technicalities, and to award to the bidder it is deemed will best and most economically serve the "Board's" interests. The Board reserves the right to award the bid on an individual or total cost of bid basis. The Board reserves the right to exercise its option to extend the contract up to two (2) additional years with mutual consent of both parties. The Board reserves the right to cancel this bid within thirty (30) days with written notice. The Board reserves the right to enter a month-to-month contract once the contracts end, at the current prices, until the next bid is awarded with the mutual consent of both parties. The Board reserves the right to RE-BID.

Mandatory Pre-Bid Conference: A MANDATORY Pre-Bid Conference will be held via "Teams Meeting", on Thurssday, May 2, 2024, @ 10:00 a.m. Each vendor will have the opportunity to call in using a link that will be provided in the email. Vendors will have an opportunity to ask questions about the bid. This is a mandatory Teams meeting and any vendor interested in bidding will need to call in. You may allow a representative to call into this meeting if you cannot attend. If you are not in attendance and do not have a representative, you will be deemed *"non-responsive"* and *WILL NOT BE ALLOWED* to bid.

Termination of Contract: Without prejudicing any other rights or remedies, the Board may terminate this Agreement, with or without cause, upon written notice to the Contractor. Upon receipt of the Board's written notification of termination, the Contractor shall immediately cease all work and activities as instructed by the Board. The Contractor shall be entitled to be paid for services and performance rendered, subject to the Board's claims for any damages, losses, or expenses resulting from the Contractor's performance hereunder.

Hold Harmless: Contractor further agrees to indemnify, hold harmless, and defend the Water Works Board and its officers, agents, servants and employees from and against all claims, lawsuits, damages, losses, and expenses including reasonable attorneys' fees, arising out of or resulting from the performance of 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 any property, including the loss of use resulting therefrom, and (B) is caused in whole or in part by a negligent act or omission of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

References: Bidder's should include with their bid, a list of three references, including contact name and phone number.

Insurance: Contractor shall *not* commence any work until all the insurance as provided herein is obtained nor until the Board has approved such insurance. Certificates issued by the Contractor's Insurance Company must be filed with the Board before any work is commenced as evidence of the insurance as provided herein. Such certificates must contain a clause stating that the Insurance Company will notify the Board ten (10) calendar days prior to any change, cancellation, or renewal of the Contractor's insurance.

Workmen's Compensation Insurance: The Contractor shall carry Workmen's Compensation Insurance during the life of the Contract to insure statutory liability to their employees.

Comprehensive General Liability and Property Damage: The Contractor shall carry Comprehensive General Liability and Property Damage Insurance during the life of the contract covering all of the Contractor's own operations. The limits shall not be less than $1,000,000 for bodily injury and $500,000 for property damage.

Comprehensive Automobile Liability and Property Damage: The Contractor shall carry Comprehensive Automobile Liability and Property Damage Insurance during the life of the contract covering (a) Contractor's own automobile equipment and (b) hired and non-owned vehicles. The limits shall be not less than $100,000 for each person, $300,000 for each accident for bodily injury, and $100,000 for property damage.

Inquiries: General inquires pertaining to Invitation to Bid should be directed in writing Jonathan Jett, Purchasing Superintendent @jonathan.jett@bwwb.orgQuestions about the paving (maintenance patch, construction trench line, and construction final pavement) should be directed in writing to Matthew Pritchett, Manager of the Distribution Department at matthew.pritchett@bwwb.org or by phone at 205-244-4085. Submission of a bid will be accepted by the Board as evidence that the Contractor is familiar with the nature of work to be performed and the limits of the Board's distribution system and will accept and comply with all specifications, invitation to bid and contract documents.

Qualifications: The Bidder, at the time of bid submittal, shall possess the correct occupational licenses, all professional licenses, or other authorizations necessary to carry out and perform the work required. It is to be specifically understood that the successful contractor shall comply with all the conditions imposed by ordinances or rules and regulations of the governing political districts. The Contractor shall secure, at his own expense, any and all licenses and work permits, as required by the governing political districts. All such licenses and work permits shall be obtained before any work is performed after the contact has been awarded.

General Contractor's State Licensing Requirements: When the amount bid for a contract exceeds *$50,000.00*, the bidder must be licensed by the Alabama State Licensing Board for General Contractors and must show the Board evidence of licensure before bidding by putting the General Contractor's License number outside the submitted envelope in the lower left-hand corner and submit a copy of the General Contractor's License with your bid. If these requests are not met the bidder will be deemed non-responsive and your bid will not be received or considered by the Board. A bid exceeding the bid limit stipulated in the bidder's General Contractors License, or which is for work outside of the type or types of work stipulated in the bidder's General Contractors License, at the sole discretion of the Board may not be considered, but if accepted, a bid award will be limited to the type of work and/or bid limit stipulated on the bidder's General Contractors License. In case of a joint venture of two or more contractors, the amount of the bid shall be within the maximum bid limitations as set by the State Licensing Board for General Contractors of the combined limitations of the partners to the joint venture. In the space provided on the "Bid Form" the bidder must insert their "current" general contractors state license number, current bid limit, and type(s) of work for which bidder is licensed.

Business License Per Municipality: ***The Contractor shall be required to obtain their own Business License per Municipality. For example: If you are working within the city limits of Mountain Brook, the Contractor will need to have a Business License for this Municipality. Therefore, the Contractor must obtain a Business License per the Municipality city limits that they will be working in.***

Bonds
Title 39 Public Works Bid Law – Ala. Code §§ 39-1-1 thru 39-5-6

All bids involving an amount over $50,000.00 for public works projects for construction, repair, renovation, or maintenance of public buildings, structures, sewers, waterworks, roads, or other improvements constructed installed maintained, renovated, or repaired on public property must be accompanied with a form of a bid bond. The bidder shall be required to file with his or her bid either a cashier's check drawn on an Alabama bank or a bid bond executed by a surety company duly authorized and qualified to make such bonds in the State of Alabama, using the enclosed "FORM OF BID BOND", payable to the Water Works Board of the City of Birmingham for an amount not less than five percent (5%) of the Water Works Board's estimated cost or of the contractor's bid, but in no event, more than ten thousand dollars ($10,000).

Public Works Bids – Performance Bond and Labor and Material Payment Bond Requirements:
A Performance Bond is required with a penalty equal to 100% of the amount of the contract price.
A Labor and Material Payment Bond is required in an amount not less than 50% of the contract price.
A Performance Bond and Labor and Material Bond will need to be submitted by the successful bidder after the bid has been awarded.

Award: It is the intent of the Board to award this bid and enter a contract with the lowest responsive and responsible bidder. The lowest responsive and responsible bidder shall be considered as the primary contractor for all work. All work shall be issued on a job-by-job basis to the primary. If the primary is unable to perform the work on any job in a timely manner the Board shall, at its discretion, award the specific job to the second responsive and responsible bidder. This will be done throughout the contract on a job-by-job basis.

Price List: Each bidder is to provide firm pricing for each item listed. The attached "Bid Form" will serve as a pricing agreement between the Contractor and the Board. The enclosed "Bid Form" contains estimated quantities for bidding purposes only. Actual quantities vary from month to month. Also, the Board reserves the right to perform work normally covered under this bid with Board personnel and equipment.

Typical patch paving sizes (Maintenance) are listed below, but not limited to:

- 4' x 4', 4' x 6', 6' x 6' on average.
  Any one patch job over $10,000.00 will be bid separately.

Typical trench width paving sizes (Construction) are listed below, but not limited to:

- 3' to 4' Pipeline Trench
- 2' to 3' Service Line Trench

Invoicing: Invoices should be submitted to the Board for payment within thirty (30) days of completion of work. Any invoices submitted sixty (60) days or later are subject to, at the Board's discretion, a deduction in payment of 5% of the total invoice for every thirty (30) days past due. Each invoice must be submitted with a P.O. number included given to you by BWWB personnel. Contractor is required with each invoice to provide the hot asphalt mix ticket(s) for the work performed and include at minimum the (1) date asphalt was batched; (2) "specific" work location; (3) tonnage; (4) mix design designation (based upon review); (5) plant name; (6) project number (P#); and (7) company name on each ticket. The Board will not pay for any work performed without the asphalt ticket(s) and corresponding invoice unless otherwise approved the Board's Distribution Department.

Materials: All materials must meet "current" Alabama Department of Transportation (ALDOT) Standard Specifications of Highway Construction, latest edition. Contractor shall submit the proposed ALDOT asphalt mix design for review by the BWW prior to use. The proposed ALDOT asphalt mix design shall be supplied from an ALDOT "approved" batch plant and not be older than 24 months.

Safety: The Contractor is required to comply with all OSHA, State and Local Occupational Health Standards and any other applicable rules and regulations. The Contractor shall be held responsible for the safety of their employees and any unsafe acts or conditions that may cause injury or damage to any persons or property within or around the work site area under this contract.

Use of Minority Businesses and Subcontractors:
The use of Historically Underutilized Businesses (HUB) is ***highly encouraged*** by the Board, to that end you will find attached a series of forms, the BWW HUB Program document. The appropriate forms are to be filled out and submitted with the bid. If you deem any of the forms do not apply to you, please write N/A and signed each form. ALL forms need to be filled out and returned with bid submittal.

The BWW has adopted a voluntary Historically Underutilize Business ("HUB") Program designed to encourage the participation of HUB firms. *To that end, the BWW will never exclude any firm from participation in, deny any person benefits of, or otherwise discriminate in connection with the award and performance of BWW contracts based on racial, gender, social, or economic status.*

It is the intent of BWW to foster competition among suppliers, contractors, and vendors that will result in better quality and more economical services for the BWW. Under this program, the BWW has established a goal of 30% participation of HUB firm for services/ commodities required for BWW operation.

The BWW's stated goal will not be the determining factor in contract awards: *rather bidders must demonstrate compliance with the Good Faith Efforts, more particularly outlined in the HUB Program, toward meeting said goal. Failure on the part of a bidder to fully submit the information required herein may be considered by the BWW in evaluating whether the bidder is responsive to bid requirements.*

SUMMARY OF WORK

PART 1 - GENERAL

1.1 PROJECT AWARD

After completion of pipe installation or repair, the BOARD shall backfill the excavated area with suitable backfill and place temporary paving in the excavated trench as necessary. ***Compaction shall be to the satisfaction of the Department Superintendent.*** The BOARD shall be responsible for any settlement due to backfill material and will maintain the temporary paving prior to the replacement of the permanent paving by the CONTRACTOR. The BOARD shall give the CONTRACTOR written notice to replace the pavement, with an accurate location, upon completion of the work and **after a minimum of thirty (30) calendar days wait period**.

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1.2 SCOPE OF WORK TO BE PERFORMED BY THE CONTRACTOR

The CONTRACTOR shall replace the temporary pavement within fifteen (15) calendar days of written notice by the BOARD. Upon receipt of the written notice, the CONTRACTOR shall provide a **minimum twenty-four (24) hour notice to the appropriate governing body,** completely remove ALL temporary pavement along with the appropriate amount of crushed stone backfill required to install the permanent patch pavement or permanent longitudinal / transverse pavement (asphalt binder). ***CONTRACTOR will be responsible for the re-compaction of the exposed backfill surface and new paving by means of a mechanical roller or vibratory compacting device, to the local authority's requirements***. ***Compaction with a backhoe bucket or any other heavy apparatus not designed specifically for soil compaction is not allowed. CONTRACTOR is to place all necessary material in layers not exceeding three inches (3") loose depth and to uniformly tamp and compact each layer necessary by means of a mechanical roller or vibratory compacting device.***

The ***permanent patch paving*** is to be installed by the **Point Patch Asphalt Repair** method as defined in this section and as shown on the attached typical detail drawing. "Tack" shall be placed in the surrounding areas, both vertically and horizontally within the excavated trench. ALL paving shall be in accordance with these Specifications and shall cover the various roadways in the different governing political districts within the BOARD'S service area. In addition, all required materials must meet the Standard Specifications for Highway Construction of the Alabama Department of Transportation (ALDOT), latest edition.

The ***temporary longitudinal / transverse paving (asphalt binder)*** is to be installed by the **Trench Line Asphalt Repair** method as defined in this section and as shown on the attached typical detail drawing. ALL paving shall be in accordance with these Specifications and shall cover the various roadways in the different governing political districts within the BOARD'S service area. In addition, all required materials must meet the Standard Specifications for Highway Construction of the Alabama Department of Transportation (ALDOT), latest edition.

CONTRACTOR shall be responsible for the removal and disposal of spoil dirt, stone, sand, and temporary paving. ALL materials including the hot asphalt mix used for permanent paving shall be furnished and installed by and at the expense of the CONTRACTOR. CONTRACTOR shall purchase, transport, place and compact the asphalt required to complete the project (work). The hot asphalt mix shall be purchased from an "approved" ALDOT asphalt batch plant. CONTRACTOR shall submit the proposed ALDOT hot asphalt mix design for review by BOARD prior to use. The proposed ALDOT asphalt mix design shall not be any older than 24 months. In addition, the CONTRACTOR shall furnish all necessary labor, equipment, traffic control; saw cutting (if required) and supervision to perform the work in a suitable and reasonable manner at **NO** additional cost to the contract. CONTRACTOR shall read and understand the invoicing requirements previously mentioned in the Bidding Documents.

When replacing paving around a valve box, the CONTRACTOR shall adjust the top section of the valve box to be flush with the pavement surface. The operating nut of the valve must be centered in the box. If necessary, the valve box shall be realigned by the CONTRACTOR at no expense to the BOARD; the BOARD shall assist in this procedure if needed.

CONTRACTOR shall replace all traffic striping, markings, and legends in-kind. CONTRACTOR must also adhere to the current Manual of Uniform Traffic Control Devices (MUTCD) and the current Standard Specification for Highway Construction of the Alabama Department of Transportation (ALDOT) Section 700 for **ALL** traffic control devices, temporary and permanent, including but not limited to lane closures, signs, and pavement markers.

CONTRACTOR shall be obligated to protect all existing facilities and structures and to repair or have repaired at his expense any damage to the same.

ANY INDIVIDUAL PATCH WHICH EXCEEDS $10,000.00 WILL BE BID SEPARATELY.

1.3 SPECIAL NOTE TO CONTRACTOR

CONTRACTOR shall be responsible for any failure or defect in the work performed by him due to faulty workmanship or materials for a period of not less than nor more than one (1) calendar year after acceptance by the BOARD and the governing body having jurisdiction and will be corrected at his expense. The CONTRACTOR shall also be responsible for the pickup and delivery of all materials needed per job site.

1.4 INSPECTION OF WORK

All work done in conjunction with the "Point Patch Asphalt Repair" will be subject to inspection by the Department Superintendent of the BOARD and/or the Engineer of the governing political district or other authorized representatives of the same. **The BOARD shall at their discretion randomly sample the patches in place. This testing will be done by coring of the new patch and the adjacent roadways to ensure compliance with the minimum asphalt depth as specified in Section 2.1.A below**.

All work done in conjunction with the "Trench Line Asphalt Repair" will be inspected by the BOARD'S hired geotechnical engineering firm [WSP USA, Inc.] and/or the BOARD'S Engineer. **The BOARD'S geotechnical engineering firm will randomly sample the trench lines. This testing will be done by coring of the new trench line and the adjacent roadways to ensure compliance with the minimum asphalt depth as specified in Section 2.1.A below**.

1.5 METHOD OF PAYMENT

The payment of temporary and permanent pavement quantities shall be expressed as indicated on the attached Bid Form and as computed from the horizontal measurements of the reconstructed area, which is the edge of the cut section or size of the excavation as determined by BOARD personnel. Payment shall be made for the quantity determined in this manner at the applicable unit price with a minimum of one (1) square yard or square foot (depending on the work performed) at any location of repair where one or more excavations were made that require permanent paving.

Upon the completion of pavement replacement (temporary or permanent) in all reported cuts and resurfacing and upon acceptance by the BOARD'S Department Superintendent, the BOARD'S Engineer and the governing political district or their authorized representatives of the same, each point patch repair and trench line repair shall be submitted on an individual invoice basis for payment. Any payment shall be made in full to the CONTRACTOR within ten (10) calendar days of receipt of invoice. CONTRACTOR must submit HUB Form 8 monthly, even if there is none, to show compliance with BOARD'S HUB Program.

PART 2 - SPECIFICATIONS

2.1 ASPHALT PAVEMENT

2.1.A REPLACEMENT OF ASPHALT PAVEMENT ON ROADWAYS AND HIGHWAYS IN THE STATE

Patch Paving (Permanent)

CONTRACTOR shall remove all temporary pavement and stone to a minimum depth of six (6) inches or to match the existing build-up, whichever is greater, as measured from the top surface of existing pavement. Approximately six (6) inches **minimum or to match existing buildup** of Superpave Bituminous Concrete Wearing Layer, ¾" maximum aggregate size mix, ESAL Range C/D shall be placed on the "tacked" backfill material and compacted to the satisfaction of the Distribution Superintendent. The wearing surface shall be relatively consistent in composition to the existing pavement surface (i.e., siliceous mix removed is replaced with siliceous mix). As stated, ALL layers of asphalt including backfill material must be compacted thoroughly and must be to the satisfaction of the Department Superintendent. This patch shall be used in all areas serviced by the BOARD. This is a patch repair only. *See Typical Point Patch Repair Detail attached at the end of this document.*

Longitudinal / Transverse Paving (Temporary)

CONTRACTOR shall install temporary asphalt binder to a minimum depth of six (6) inches as measured from the top surface of existing pavement. Approximately six (6) inches **minimum** of Superpave Bituminous Concrete Upper Binder Layer, 1" maximum aggregate size mix, ESAL Range C/D shall be placed (3" lifts) and compacted to the satisfaction of the BOARD'S geotechnical engineering firm and/or BOARD'S Engineer. As stated, the binder layer of asphalt including backfill material must be compacted thoroughly and must be to the satisfaction of the BOARD'S geotechnical engineering firm. The binder material shall be installed in trench line to match existing pavement. All longitudinal and transverse repairs (trench line repairs) shall adhere to the requirements in all areas serviced by the BOARD. This is a longitudinal / transverse repair (trench line) only. *See Typical Trench Line Repair Detail attached at the end of this document.*

2.1.B REPLACEMENT OF ASPHALT DRIVEWAY IN ROADWAY RIGHT-OF-WAY

CONTRACTOR shall replace asphalt driveways in roadway right-of-way in accordance with the specifications for replacement of roadway pavement in the governing political district in which the work is to be performed.

NOTE TO CONTRACTOR: The above specifications for replacement of bonded asphalt pavement also apply to the replacement of all other asphalt roadways except double surface treatment.

2.2 TRAFFIC CONTROL

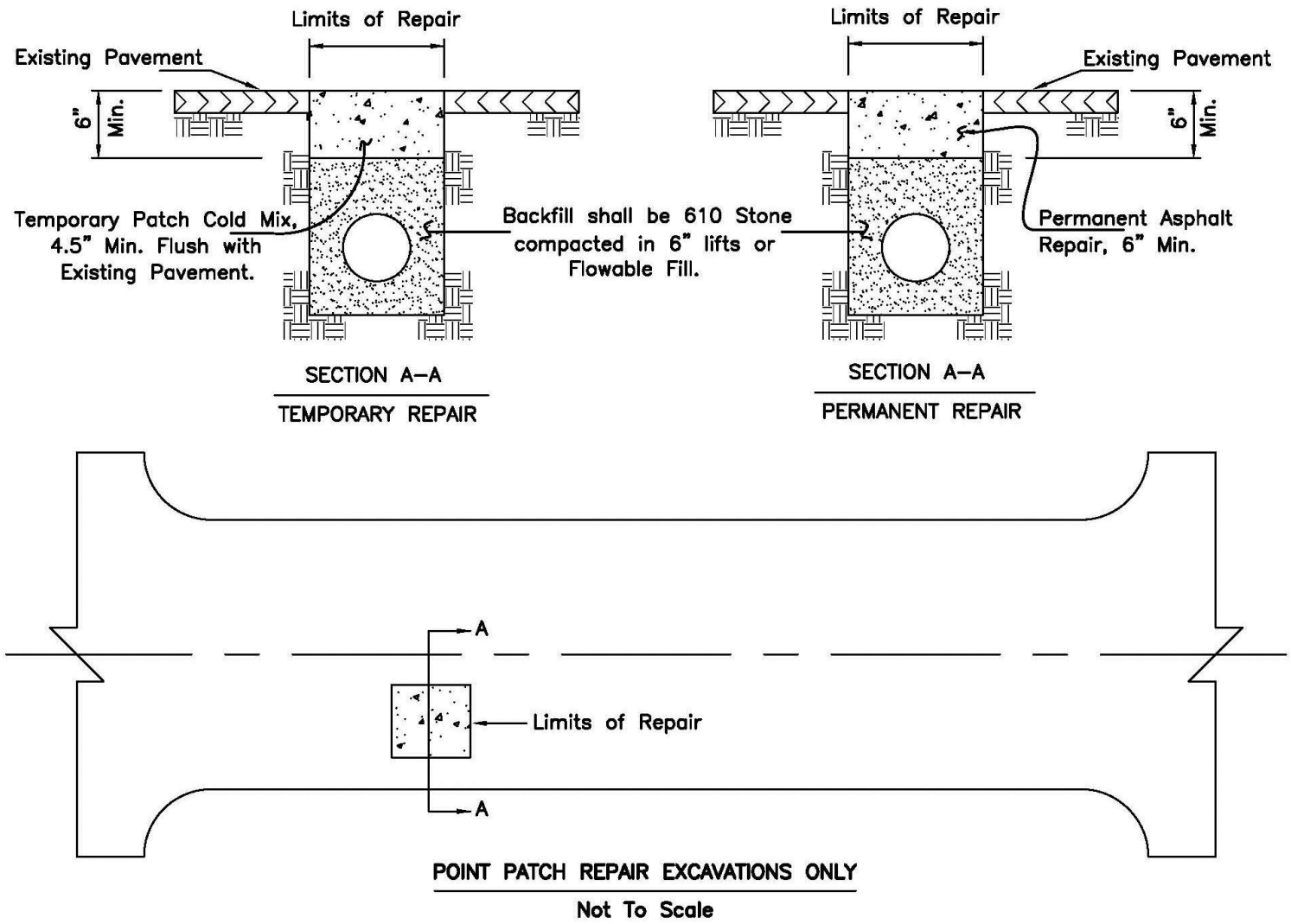
All necessary traffic control devices shall conform to the current edition of the MUTCD and the local governing agencies specifications. All signage, cones, barricades, flagmen, etc. required per these rules and regulations *MUST* be in place during all paving operations and shall be considered an incidental cost of the paving work (all types). For Jefferson County roadways, see the attached minimum requirements for traffic control operations. See Appendix I for some Typical Traffic Control activities as shown in the MUTCD.

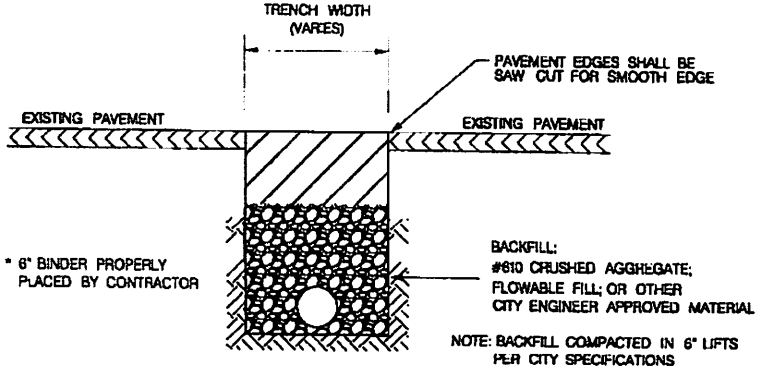
2.3 ADDITIONAL PROJECT SPECIFICATION

Listed below are some of the appropriate sections from the Alabama Department of Transportation's (ALDOT'S) Standard Specification for Highway Construction Manual. As noted, the CONTRACTOR shall be required to refer to the "Spec Book" for further reference per project:

- Section 230 Roadbed Procession
- Section 305 Soil and Aggregate for Miscellaneous Use
- Section 306 Density Requirements for Compaction
- Section 327 Plant Mix Bituminous Base and PATB
- Section 405 Tack Coat
- Section 407 Joint Sealant for HMA Pavement
- Section 408 Planning (Milling) of Existing Pavement
- Section 410 Asphalt Pavement
- Section 424 Superpave Bituminous Concrete Base, Binder, and Wearing Surface Layers
- Section 450 Portland Cement Concrete Pavement
- Section 600 Mobilization
- Section 601 Field Laboratories
- Section 622 Resetting Gratings and Covers for Catch Basins, Inlets and Manholes
- Section 700 Traffic Control Devices and Highway Lighting
- Section 821 Granular Soil Materials
- Section 823 Soil Aggregate Materials
- Section 825 Crushed Aggregate Base Materials
- Section 863 Water Pipe, Fire Hydrants, Valves and Appurtenances

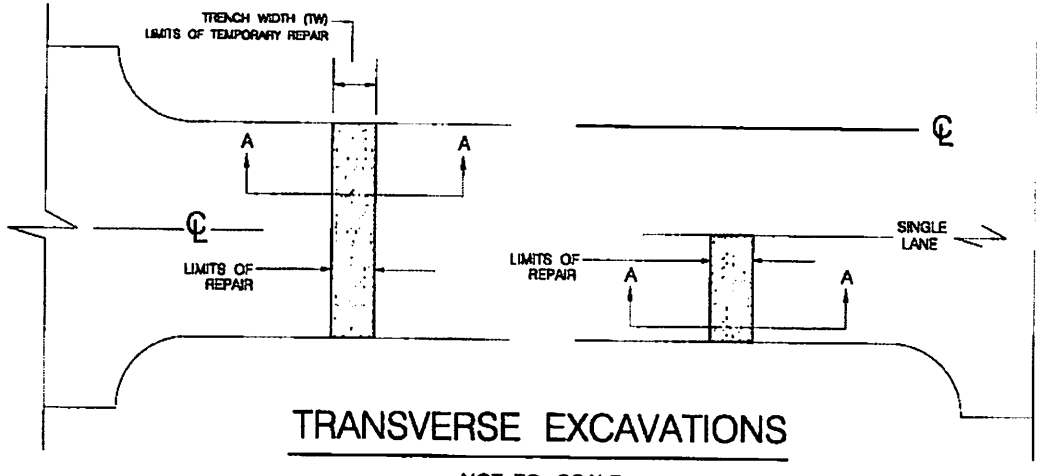
End of Specifications


Limits of Repair
Existing Pavement
6" Min.
Temporary Patch Cold Mix, 4.5" Min. Flush with Existing Pavement.
Backfill shall be 610 Stone compacted in 6" lifts or Flowable Fill.
SECTION A–A
TEMPORARY REPAIR
Limits of Repair
Existing Pavement
6" Min.
Permanent Asphalt Repair, 6" Min.
SECTION A–A
PERMANENT REPAIR
A
Limits of Repair
A
POINT PATCH REPAIR EXCAVATIONS ONLY
Not To Scale



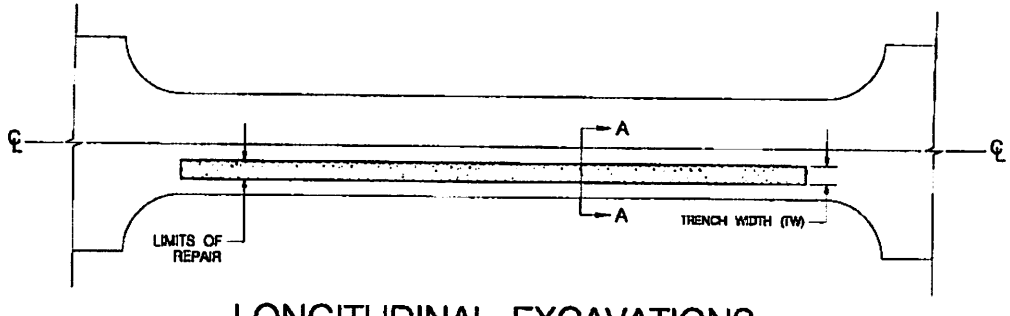
SECTION A–A

TEMPORARY PAVING REPAIR



TRANSVERSE EXCAVATIONS

NOT TO SCALE



LONGITUDINAL EXCAVATIONS

NOT TO SCALE

TRENCHLINE REPAIR EXCAVATIONS ONLY

NOT TO SCALE

Birmingham Pavement Repair - General Notes

1. The Permittee shall notify the Engineer and the governing agency at least 24 hours in advance of commencing work.
2. The Permittee shall perform all work in accordance with the governing agencies standard specifications and details.
3. Existing pavements, bases, curbs & gutters, etc. shall be cut to form neat and straight lines making squares or rectangular shapes as directed by the Engineer.
4. The Engineer shall determine the limits *or* extent of the permanent repair.
5. Backfill material shall be either ALDOT 610 stone placed in approximate 12 inch lifts or flowable fill with a maximum compressive strength of 100 psi.
6. No excavated material shall be used as backfill.
7. The Engineer may approve the use of alternative crushed stone materials as backfill subject to the Permittee complying with the following:

   Backfill material shall be compacted in lifts not exceeding 6 inches to 100% of the Standard Proctor maximum dry density.

   The Permittee shall provide Proctor values for the backfill material to be used, compaction test reports and a certification from licensed geotechnical engineer, approved by the Engineer, stating that the backfill material has been compacted to the required densityfor the full depth of the excavation.

   The Permittee shall bear all costs associated with testing.
8. No excavated material shall be used as backfill.
9. The repaired area shall be allowed to stabilize for 30 days before the permanent repair is made.
10. The cold mix asphalt temporary repair shall be removed prior to making the permanent repair.
11. The Permittee shall be responsible for repairing any defects, including settlement, in the completed repair for a period of one year from the date of completion of the permanent repair.
12. The Permittee shall restore, as directed by the Engineer, any pavement markings, lane striping or traffic loops damaged as a result of the Permittee's work.

Jefferson County
Pavement Repair –Traffic Control Notes

1. Temporary traffic control on a public roadway is the responsibility of the authority of the government agency having jurisdiction for guiding road users. The Contractor shall be responsible for implementing and maintaining all necessary temporary traffic control measures to comply with the requirements provided herewith, the standards set forth in the Manual on Uniform Traffic Control Devices, Latest Edition (MUTCD), and other reasonable safety precautions needed to provide a safe environment for the traveling public, construction personnel and others who have access to and responsibilities in the project site.

2. The Contractor shall be responsible for providing the proper equipment, apparel and training necessary for all construction personnel to render safe construction operations and traffic conditions.

3. All traffic control devices shall be installed and maintained in accordance with these notes, the MUTCD, and as otherwise required by County or Municipal personnel responsible for roadway inspection or traffic operations.

4. Traffic control devices shall meet the standard material and installation requirements specified in the latest edition of the ALDOT Standard Specifications for Highway Construction. Signs shall be minimum 36”x36” with Type III High Intensity retro-reflective sheeting in good condition.

5. The Contractor shall keep a log of the type and location of traffic control measures used and devices installed at each construction site. The log should include photographs, dimensioned sketches, date and time of work, equipment and personnel used, and any problems or unusual conditions encountered.

6. Flaggers shall communicate with each other using two-way radios and shall be properly equipped with stop/slow paddles, attired with high visibility safety apparel meeting ANSI 107-2004 Class 2 requirements, and trained to meet all requirements and follow all procedures of the MUTCD.

7. For construction or repair operations within a roadway travel lane, it will be necessary to close the lane in accordance with the appropriate lane closure requirement provided herewith and the standards set forth in the MUTCD and maintain two-way traffic operations on the roadway. Otherwise, the Contractor is not authorized to temporarily close a public road.

8. The Contractor shall keep open roadways clean and free of construction debris, dirt, loose gravel, or other objectionable material that may cause hazardous driving conditions.

9. The Contractor shall coordinate construction operations and accommodate traffic operations and driveway ingress and egress within the work zone.

10. Pavement repair operations within public roadways are not allowed on weekends, holidays, and after 4:00 pm or before 8:00 am Monday through Friday unless specifically permitted by the jurisdictional authority.

11. MUTCD Figure 6H-10 Lane Closure on a Two-Lane Road Using Flaggers (TA-10) shall be applied in the establishment of temporary traffic control on two lane roads if there is center line striping; or if the posted speed limit is 30 mph or greater; or if the work zone is in or near an intersection; or if traffic speed or volume otherwise dictate the need. When the construction operations will not exceed one workday between 8:00 am and 4:00 pm, the distance plaque, Road Work XXXX Ft, and End Road Work signs are not required; 36” orange cones may be used for channelizing traffic; and portable supports may be used for sign installation.

12. If there is no center line stripe, the posted speed limit is 25 mph or less, the traffic volume and speed is low, and there is adequate sight distance from each approach through the work zone, a single flagger located on the opposite side of the road from the lane closure may be used to direct traffic with the temporary traffic control measures described in Note 11 in place.

13. A white, yellow, or orange colored construction vehicle or truck outfitted with multiple high intensity amber strobe, rotating, or flashing beacons shall be placed in the closed traffic lane behind the work zone to attract the attention of approaching drivers.

14. If the work zone is in or near an intersection such that traffic operations through the intersection is interrupted by the lane closure, Flagger signs and flaggers shall be posted on each intersecting leg to direct traffic through the intersection and work zone.

APPENDIX I

Guidance:

17 *Particular attention should be given to maintaining the channelizing devices to keep them clean, visible, and properly positioned at all times.*

Standard:

18 Devices that are damaged or have lost a significant amount of their retroreflectivity and effectiveness shall be replaced.

Section 6F.64 Cones

Standard:

01 Cones (see Figure 6F-7) shall be predominantly orange and shall be made of a material that can be struck without causing damage to the impacting vehicle. For daytime and low-speed roadways, cones shall be not less than 18 inches in height. When cones are used on freeways and other high-speed highways or at night on all highways, or when more conspicuous guidance is needed, cones shall be a minimum of 28 inches in height.

02 For nighttime use, cones shall be retroreflectorized or equipped with lighting devices for maximum visibility. Retroreflectorization of cones that are 28 to 36 inches in height shall be provided by a 6-inch wide white band located 3 to 4 inches from the top of the cone and an additional 4-inch wide white band located approximately 2 inches below the 6-inch band.

03 Retroreflectorization of cones that are more than 36 inches in height shall be provided by horizontal, circumferential, alternating orange and white retroreflective stripes that are 4 to 6 inches wide. Each cone shall have a minimum of two orange and two white stripes with the top stripe being orange. Any non-retroreflective spaces between the orange and white stripes shall not exceed 3 inches in width.

Option:

04 Traffic cones may be used to channelize road users, divide opposing vehicular traffic lanes, divide lanes when two or more lanes are kept open in the same direction, and delineate short duration maintenance and utility work.

Guidance:

05 *Steps should be taken to minimize the possibility of cones being blown over or displaced by wind or moving vehicular traffic.*

Option:

06 Cones may be doubled up to increase their weight.

Support:

07 Some cones are constructed with bases that can be filled with ballast. Others have specially weighted bases, or weight such as sandbag rings that can be dropped over the cones and onto the base to provide added stability.

Guidance:

08 *Ballast should be kept to the minimum amount needed.*

Section 6F.65 Tubular Markers

Standard:

01 Tubular markers (see Figure 6F-7) shall be predominantly orange and shall be not less than 18 inches high and 2 inches wide facing road users. They shall be made of a material that can be struck without causing damage to the impacting vehicle.

02 Tubular markers shall be a minimum of 28 inches in height when they are used on freeways and other high-speed highways, on all highways during nighttime, or whenever more conspicuous guidance is needed.

03 For nighttime use, tubular markers shall be retroreflectorized. Retroreflectorization of tubular markers that have a height of less than 42 inches shall be provided by two 3-inch wide white bands placed a maximum of 2 inches from the top with a maximum of 6 inches between the bands. Retroreflectorization of tubular markers that have a height of 42 inches or more shall be provided by four 4- to 6-inch wide alternating orange and white stripes with the top stripe being orange.

Guidance:

04 *Tubular markers have less visible area than other devices and should be used only where space restrictions do not allow for the use of other more visible devices.*

05 *Tubular markers should be stabilized by affixing them to the pavement, by using weighted bases, or weights such as sandbag rings that can be dropped over the tubular markers and onto the base to provide added stability. Ballast should be kept to the minimum amount needed.*

Option:

06 Tubular markers may be used effectively to divide opposing lanes of road users, divide vehicular traffic lanes when two or more lanes of moving vehicular traffic are kept open in the same direction, and to delineate the edge of a pavement drop off where space limitations do not allow the use of larger devices.

Standard:

07 A tubular marker shall be attached to the pavement to display the minimum 2-inch width to the approaching road users.

Section 6F.66 Vertical Panels

Standard:

01 Vertical panels (see Figure 6F-7) shall have retroreflective striped material that is 8 to 12 inches in width and at least 24 inches in height. They shall have alternating diagonal orange and white retroreflective stripes sloping downward at an angle of 45 degrees in the direction vehicular traffic is to pass.

02 Where the height of the retroreflective material on the vertical panel is 36 inches or more, a stripe width of 6 inches shall be used.

Option:

03 Where the height of the retroreflective material on the vertical panel is less than 36 inches, a stripe width of 4 inches may be used.

04 Where space is limited, vertical panels may be used to channelize vehicular traffic, divide opposing lanes, or replace barricades.

Section 6F.67 Drums

Standard:

01 Drums (see Figure 6F-7) used for road user warning or channelization shall be constructed of lightweight, deformable materials. They shall be a minimum of 36 inches in height and have at least an inch minimum width regardless of orientation. Metal drums shall not be used. The markings on drums shall be horizontal, circumferential, alternating orange and white retroreflective stripes 4 to 6 inches wide. Each drum shall have a minimum of two orange and two white stripes with the top stripe being orange.
Any non-retroreflectorized spaces between the horizontal orange and white stripes shall not exceed 3 inches wide. Drums shall have closed tops that will not allow collection of construction debris or other debris.

Support:

02 Drums are highly visible, have good target value, give the appearance of being formidable obstacles and, therefore, command the respect of road users. They are portable enough to be shifted from place to place within a TTC zone in order to accommodate changing conditions, but are generally used in situations where they will remain in place for a prolonged period of time.

Option:

03 Although drums are most commonly used to channelize or delineate road user flow, they may also be used alone or in groups to mark specific locations.

Guidance:

04 *Drums should not be weighted with sand, water, or any material to the extent that would make them hazardous to road users or workers when struck. Drums used in regions susceptible to freezing should have drain holes in the bottom so that water will not accumulate and freeze causing a hazard if struck by a road user.*

Standard:

05 Ballast shall not be placed on the top of a drum.

Section 6F.68 Type 1, 2, or 3 Barricades

Support:

01 A barricade is a portable or fixed device having from one to three rails with appropriate markings and is used to control road users by closing, restricting, or delineating all or a portion of the right-of-way.

02 As shown in Figure 6F-7, barricades are classified as Type 1, Type 2, or Type 3.

Standard:

03 Stripes on barricade rails shall be alternating orange and white retroreflective stripes sloping downward at an angle of 45 degrees in the direction road users are to pass. Except as provided in Paragraph 4, the stripes shall be 6 inches wide.

CHAPTER 6G. TYPE OF TEMPORARY TRAFFIC CONTROL ZONE ACTIVITIES

Section 6G.01 Typical Applications

Support:

01 Each TTC zone is different. Many variables, such as location of work, highway type, geometrics, vertical and horizontal alignment, intersections, interchanges, road user volumes, road vehicle mix (buses, trucks, and cars), and road user speeds affect the needs of each zone. The goal of TTC in work zones is safety with minimum disruption to road users. The key factor in promoting TTC zone safety is proper judgment.

02 Typical applications (TAs) of TTC zones are organized according to duration, location, type of work, and highway type. Table 6H-1 is an index of these typical applications. These typical applications include the use of various TTC methods, but do not include a layout for every conceivable work situation.

03 Well-designed TTC plans for planned special events will likely be developed from a combination of treatments from several of the typical applications.

Guidance:

04 *For any planned special event that will have an impact on the traffic on any street or highway, a TTC plan should be developed in conjunction with and be approved by the agency or agencies that have jurisdiction over the affected roadways.*

05 *Typical applications should be altered, when necessary, to fit the conditions of a particular TTC zone.*

Option:

06 Other devices may be added to supplement the devices shown in the typical applications, while others may be deleted. The sign spacing and taper lengths may be increased to provide additional time or space for driver response.

Support:

07 Decisions regarding the selection of the most appropriate typical application to use as a guide for a specific TTC zone require an understanding of each situation. Although there are many ways of categorizing TTC zone applications, the four factors mentioned earlier (work duration, work location, work type, and highway type) are used to characterize the typical applications illustrated in Chapter 6H.

Section 6G.02 Work Duration

Support:

01 Work duration is a major factor in determining the number and types of devices used in TTC zones. The duration of a TTC zone is defined relative to the length of time a work operation occupies a spot location.

Standard:

02 The five categories of work duration and their time at a location shall be:

A. Long-term stationary is work that occupies a location more than 3 days.

B. Intermediate-term stationary is work that occupies a location more than one daylight period up to 3 days, or nighttime work lasting more than 1 hour.

C. Short-term stationary is daytime work that occupies a location for more than 1 hour within a single daylight period.

D. Short duration is work that occupies a location up to 1 hour.

E. Mobile is work that moves intermittently or continuously.

Support:

03 At long-term stationary TTC zones, there is ample time to install and realize benefits from the full range of TTC procedures and devices that are available for use. Generally, larger channelizing devices, temporary roadways, and temporary traffic barriers are used.

Standard:

04 Since long-term operations extend into nighttime, retroreflective and/or illuminated devices shall be used in long-term stationary TTC zones.

Guidance:

05 *Inappropriate markings in long-term stationary TTC zones should be removed and replaced with temporary markings.*

Support:

06 In intermediate-term stationary TTC zones, it might not be feasible or practical to use procedures or devices that would be desirable for long-term stationary TTC zones, such as altered pavement markings, temporary traffic barriers, and temporary roadways. The increased time to place and remove these devices in some cases could significantly lengthen the project, thus increasing exposure time.

Standard:

07 Since intermediate-term operations extend into nighttime, retroreflective and/or illuminated devices shall be used in intermediate-term stationary TTC zones.

Support:

08 Most maintenance and utility operations are short-term stationary work.

09 As compared to stationary operations, mobile and short-duration operations are activities that might involve different treatments. Devices having greater mobility might be necessary such as signs mounted on trucks. Devices that are larger, more imposing, or more visible can be used effectively and economically. The mobility of the TTC zone is important.

Guidance:

10 *Safety in short-duration or mobile operations should not be compromised by using fewer devices simply because the operation will frequently change its location.*

Option:

11 Appropriately colored or marked vehicles with high-intensity rotating, flashing, oscillating, or strobe lights may be used in place of signs and channelizing devices for short-duration or mobile operations. These vehicles may be augmented with signs or arrow boards.

Support:

12 During short-duration work, it often takes longer to set up and remove the TTC zone than to perform the work. Workers face hazards in setting up and taking down the TTC zone. Also, since the work time is short, delays affecting road users are significantly increased when additional devices are installed and removed.

Option:

13 Considering these factors, simplified control procedures may be warranted for short-duration work. A reduction in the number of devices may be offset by the use of other more dominant devices such as high-intensity rotating, flashing, oscillating, or strobe lights on work vehicles.

Support:

14 Mobile operations often involve frequent short stops for activities such as litter cleanup, pothole patching, or utility operations, and are similar to short-duration operations.

Guidance:

15 *Warning signs and high-intensity rotating, flashing, oscillating, or strobe lights should be used on the vehicles that are participating in the mobile work.*

Option:

16 Flags and/or channelizing devices may additionally be used and moved periodically to keep them near the mobile work area.

17 Flaggers may be used for mobile operations that often involve frequent short stops.

Support:

18 Mobile operations also include work activities where workers and equipment move along the road without stopping, usually at slow speeds. The advance warning area moves with the work area.

Guidance:

19 *When mobile operations are being performed, a shadow vehicle equipped with an arrow board or a sign should follow the work vehicle, especially when vehicular traffic speeds or volumes are high. Where feasible, warning signs should be placed along the roadway and moved periodically as work progresses.*

20 *Under high-volume conditions, consideration should be given to scheduling mobile operations work during off-peak hours.*

21 *If there are mobile operations on a high-speed travel lane of a multi-lane divided highway, arrow boards should be used.*

Standard:

22 Mobile operations shall have appropriate devices on the equipment (that is, high-intensity rotating, flashing, oscillating, or strobe lights, signs, or special lighting), or shall use a separate vehicle with appropriate warning devices.

Option:

23 For mobile operations that move at speeds of less than 3 mph, mobile signs or stationary signing that is periodically retrieved and repositioned in the advance warning area may be used.

Section 6G.03 Location of Work

Support:

01 Chapter 6D and Sections 6F.74 and 6G.05 contain additional information regarding the steps to follow when pedestrian or bicycle facilities are affected by the worksite.

02 The choice of TTC needed for a TTC zone depends upon where the work is located. As a general rule, the closer the work is to road users (including bicyclists and pedestrians), the greater the number of TTC devices that are needed. Procedures are described later in this Chapter for establishing TTC zones in the following locations:

A. Outside the shoulder,
B. On the shoulder with no encroachment,
C. On the shoulder with minor encroachment,
D. Within the median, and
E. Within the traveled way.

Standard:

03 When the work space is within the traveled way, except for short-duration and mobile operations, advance warning shall provide a general message that work is taking place and shall supply information about highway conditions. TTC devices shall indicate how vehicular traffic can move through the TTC zone.

Section 6G.04 Modifications To Fulfill Special Needs

Support:

01 The typical applications in Chapter 6H illustrate commonly encountered situations in which TTC devices are employed.

Option:

02 Other devices may be added to supplement the devices provided in the typical applications, and device spacing may be adjusted to provide additional reaction time. When conditions are less complex than those depicted in the typical applications, fewer devices may be needed.

Guidance:

03 *When conditions are more complex, typical applications should be modified by giving particular attention to the provisions set forth in Chapter 6B and by incorporating appropriate devices and practices from the following list:*

A. Additional devices:

1. Signs
2. Arrow boards
3. More channelizing devices at closer spacing (see Section 6F.74 for information regarding detectable edging for pedestrians)
4. Temporary raised pavement markers
5. High-level warning devices
6. Portable changeable message signs
7. Temporary traffic control signals (including pedestrian signals and accessible pedestrian signals)
8. Temporary traffic barriers
9. Crash cushions
10. Screens
11. Rumble strips
12. More delineation

Section 6G.08 Work on the Shoulder with Minor Encroachment

Support:

01 Chapter 6D and Sections 6F.74 and 6G.05 contain additional information regarding the steps to follow when pedestrian or bicycle facilities are affected by the worksite.

Guidance:

02 *When work takes up part of a lane, vehicular traffic volumes, vehicle mix (buses, trucks, cars, and bicycles), speed, and capacity should be analyzed to determine whether the affected lane should be closed. Unless the lane encroachment permits a remaining lane width of 10 feet, the lane should be closed.*

03 *Truck off-tracking should be considered when determining whether the minimum lane width of 10 feet is adequate.*

Option:

04 A lane width of 9 feet may be used for short-term stationary work on low-volume, low-speed roadways when vehicular traffic does not include longer and wider heavy commercial vehicles.

Support:

05 Figure 6H-6 illustrates a method for handling vehicular traffic where the stationary or short duration work space encroaches slightly into the traveled way.

Section 6G.09 Work Within the Median

Support:

01 Chapter 6D and Sections 6F.74 and 6G.05 contain additional information regarding the steps to follow when pedestrian or bicycle facilities are affected by the worksite.

Guidance:

02 *If work in the median of a divided highway is within 15 feet from the edge of the traveled way for either direction of travel, TTC should be used through the use of advance warning signs and channelizing devices.*

Section 6G.10 Work Within the Traveled Way of a Two-Lane Highway

Support:

01 Chapter 6D and Sections 6F.74 and 6G.05 contain additional information regarding the steps to follow when pedestrian or bicycle facilities are affected by the worksite.

02 Detour signs are used to direct road users onto another roadway. At diversions, road users are directed onto a temporary roadway or alignment placed within or adjacent to the right-of-way. Typical applications for detouring or diverting road users on two-lane highways are shown in Figures 6H-7, 6H-8, and 6H-9. Figure 6H-7 illustrates the controls around an area where a section of roadway has been closed and a diversion has been constructed. Channelizing devices and pavement markings are used to indicate the transition to the temporary roadway.

Guidance:

03 *When a detour is long, Detour (M4-8, M4-9) signs should be installed to remind and reassure road users periodically that they are still successfully following the detour.*

04 *When an entire roadway is closed, as illustrated in Figure 6H-8, a detour should be provided and road users should be warned in advance of the closure, which in this example is a closure 10 miles from the intersection. If local road users are allowed to use the roadway up to the closure, the ROAD CLOSED AHEAD, LOCAL TRAFFIC ONLY (R11-3a) sign should be used. The portion of the road open to local road users should have adequate signing, marking, and delineation.*

05 *Detours should be signed so that road users will be able to traverse the entire detour route and back to the original roadway as shown in Figure 6H-9.*

Support:

06 Techniques for controlling vehicular traffic under one-lane, two-way conditions are described in Section 6C.10.

Option:

07 Flaggers may be used as shown in Figure 6H-10.

08 STOP/YIELD sign control may be used on roads with low traffic volumes as shown in Figure 6H-11.

09 A temporary traffic control signal may be used as shown in Figure 6H-12.

Notes for Figure 6H-18—Typical Application 18 Lane Closure on a Minor Street

Standard:

1. This TTC shall be used only for low-speed facilities having low traffic volumes.

Option:

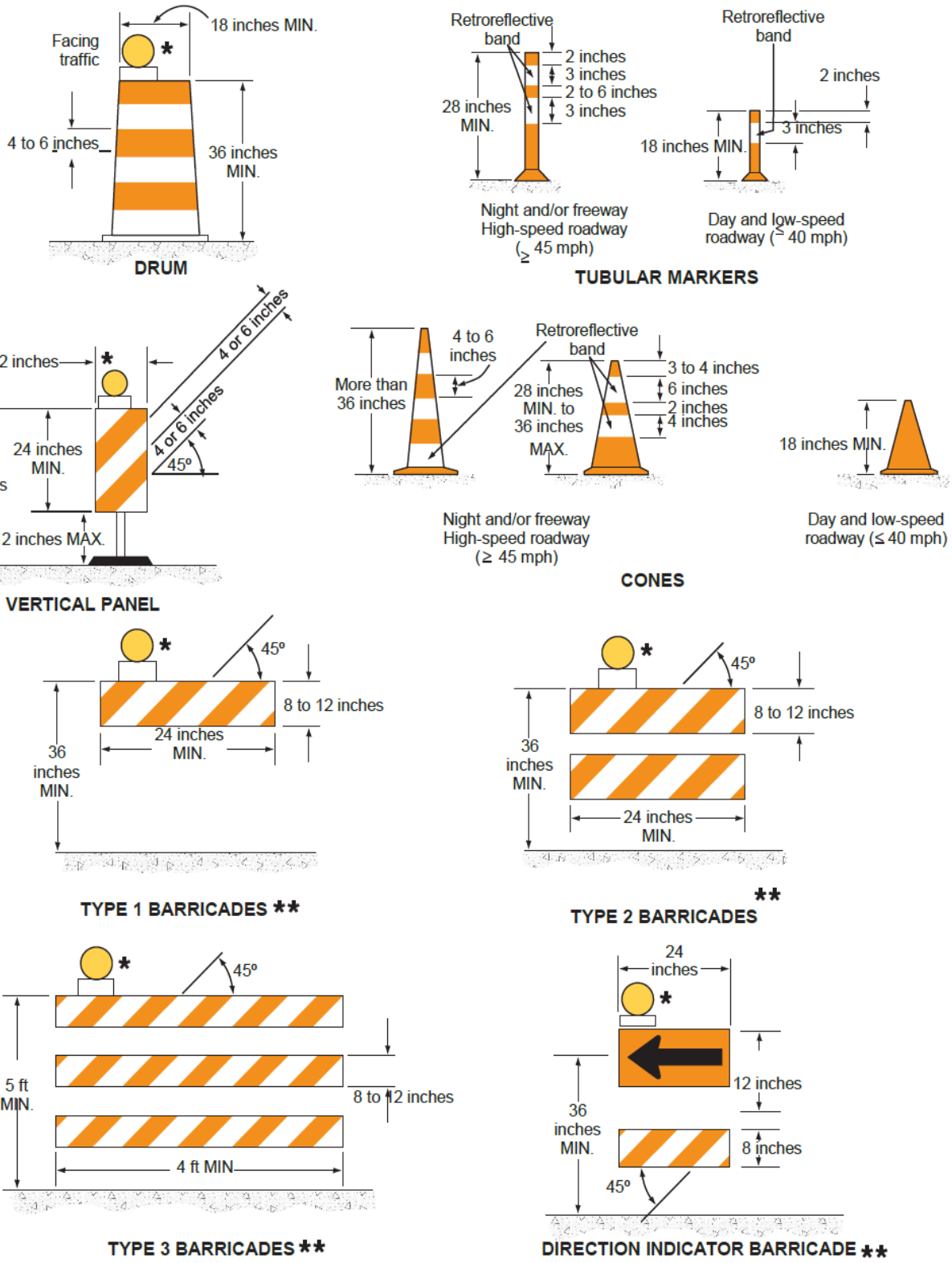
2. Where the work space is short, where road users can see the roadway beyond, and where volume is low, vehicular traffic may be self-regulating.

Standard:

3. Where vehicular traffic cannot effectively self-regulate, one or two flaggers shall be used as illustrated in Figure 6H-10.

Option:

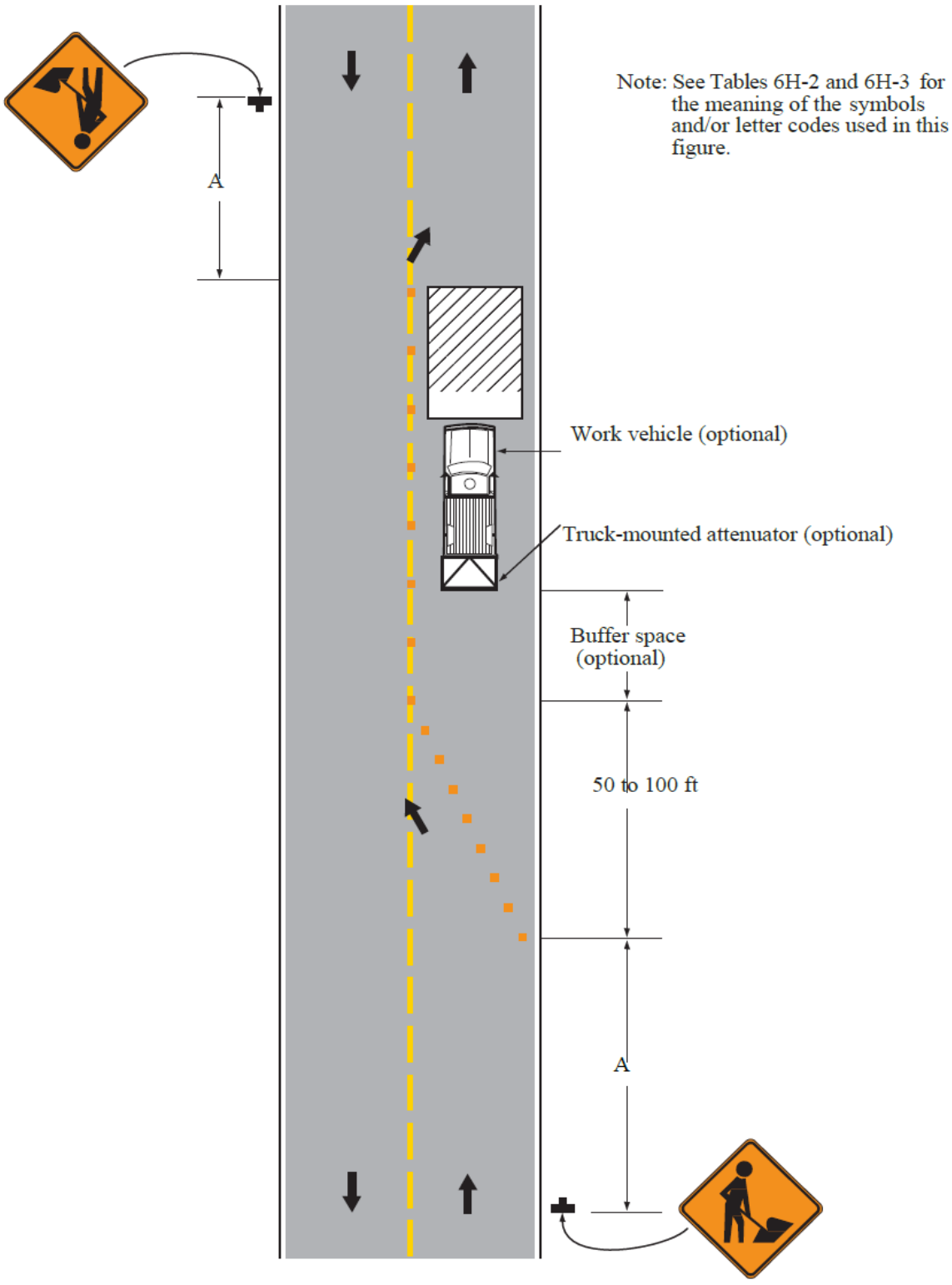
4. Flashing warning lights and/or flags may be used to call attention to the advance warning signs.
5. A truck-mounted attenuator may be used on the work vehicle and the shadow vehicle.



* Warning lights (optional)

** Rail stripe widths shall be 6 inches, except that 4-inch wide stripes may be used if rail lengths are less than 36 inches. The sides of barricades facing traffic shall have retroreflective rail faces

Figure 6H-18. Lane Closure on a Minor Street (TA-18)



Typical Application 18

APPENDIX II

APPENDIX NO. II

THE WATER WORKS BOARD OF THE CITY OF BIRMINGHAM

STANDARD PATCH PAVING
LONGITUDINAL / TRANSVERSE-/SUBSURFACE EXPLORATION
BID NO: BID 24-12-03

DUE: Thursday, May 9, 2024 @10:00 a.m.

The following appendix is included to provide clarification wherever specific articles are used or mentioned:

General Conditions Requirements:

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

OWNER May Suspend Work

A. At any time and without cause, OWNER may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to CONTRACTOR and ENGINEER which will fix the date on which Work will be resumed. CONTRACTOR shall resume the Work on the date so fixed. CONTRACTOR shall be allowed an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if CONTRACTOR makes a Claim therefor as provided in paragraph 10.05.

OWNER May Terminate for Cause

The occurrence of any one or more of the following events will justify termination for cause:

CONTRACTOR'S persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 2.07 as adjusted from time to time pursuant to paragraph 6.04);

CONTRACTOR'S disregard of Laws or Regulations of any public body having jurisdiction;

CONTRACTOR'S disregard of the authority of ENGINEER; or

CONTRACTOR'S violation in any substantial way of any provisions of the Contract Documents.

If one or more of the events identified in paragraph 15.02.A occur, OWNER may, after giving CONTRACTOR (and the surety, if any) seven days written notice, terminate the services of CONTRACTOR, exclude CONTRACTOR from the Site, and take possession of the Work and of all CONTRACTOR'S tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by CONTRACTOR (without liability to CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the Site or for which OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER may deem expedient. In such case, CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by OWNER arising out of or relating to completing the Work, such excess will be paid to CONTRACTOR. If such claims, costs, losses, and damages

exceed such unpaid balance, CONTRACTOR shall pay the difference to OWNER. Such claims, costs, losses, and damages incurred by OWNER will be reviewed by ENGINEER as to their reasonableness and, when so approved by ENGINEER, incorporated in a Change Order. When exercising any rights or remedies under this paragraph OWNER shall not be required to obtain the lowest price for the Work performed.

Where CONTRACTOR'S services have been so terminated by OWNER, the termination will not affect any rights or remedies of OWNER against CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys due CONTRACTOR by OWNER will not release CONTRACTOR from liability.

OWNER May Terminate for Convenience

Upon seven days, written notice to CONTRACTOR and ENGINEER, OWNER may, without cause and without prejudice to any other right or remedy of OWNER, elect to terminate the Contract. In such case, CONTRACTOR shall be paid (without duplication of any items):

for completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

for expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

for all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

for reasonable expenses, directly attributable to termination.

CONTRACTOR shall not be paid because loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

CONTRACTOR May Stop Work or Terminate

A. If, through no act or fault of CONTRACTOR, the Work is suspended for more than 90 consecutive days by OWNER or under an order of court or other public authority, or ENGINEER fails to act on any Application for Payment within 30 days after it is submitted, or OWNER fails for 30 days to pay CONTRACTOR any sum finally determined to be due, then CONTRACTOR may, upon seven days written notice to OWNER and ENGINEER, and provided OWNER or ENGINEER do not remedy such suspension or failure within that time, terminate the Contract and recover from OWNER payment on the same terms as provided in paragraph 15.03. In lieu of terminating the Contract and without prejudice to any other right or remedy, if ENGINEER has failed to act on an Application for Payment within 30 days after it is submitted, or OWNER has failed for 30 days to pay CONTRACTOR any sum finally determined to be due, CONTRACTOR may, seven days after written notice to OWNER and ENGINEER, stop the Work until payment is made of all such amounts due CONTRACTOR, including interest thereon. The provisions of this paragraph 15.04 are not intended to preclude CONTRACTOR from making a Claim under paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to CONTRACTOR'S stopping the Work as permitted by this paragraph.

Page 38 Part 5.01 reference to:

ARTICLE 11 –
COST OF THE WORK; CASH ALLOWANCES; UNIT PRICE WORK

11.02 *Cash Allowances*

A. It is understood that CONTRACTOR has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums as may be acceptable to OWNER and ENGINEER. CONTRACTOR agrees that:

1. the allowances include the cost to CONTRACTOR (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

2. CONTRACTOR'S costs for unloading and handling on the Site, labor, installation costs, overhead, profit, and other expenses contemplated for the allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

B. Prior to final payment, an appropriate Change Order will be issued as recommended by ENGINEER to reflect actual amounts due CONTRACTOR on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 Unit Price Work

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by CONTRACTOR will be made by ENGINEER subject to the provisions of paragraph 9.08.

B. Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR'S overhead and profit for each separately identified item.

C. For provisions for an adjustment of a unit price for an increase or decrease in the quantity of Unit Price Work, if any, see General Requirements Section 01271, Measurement and Payment.

Page 38 Part 6.01 reference to:

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.07 Final Payment

B. *Review of Application and Acceptance*

1. If, on the basis of ENGINEER'S observation of the Work during construction and final inspection, and ENGINEER'S review of the final Application for Payment and accompanying documentation as required by the Contract Documents, ENGINEER is satisfied that the Work has been completed and CONTRACTOR'S other obligations under the Contract Documents have been fulfilled, ENGINEER will, within 10 days after receipt of the final Application for Payment, indicate in writing ENGINEER'S recommendation of payment and present the Application for Payment to OWNER for payment. At the same time ENGINEER, will also give written notice to OWNER and CONTRACTOR that the Work is acceptable subject to the provisions of paragraph 14.09. Otherwise, ENGINEER will return the Application for Payment to CONTRACTOR, indicating in writing the reasons for refusing to recommend final payment, in which case CONTRACTOR shall make the necessary corrections and resubmit the Application for Payment.

Agreement Requirements:

ARTICLE 4 LIQUIDATED AND SPECIAL DAMAGES

4.01 Liquidated Damages:

A. OWNER and CONTRACTOR recognize that time is of the essence of this Agreement and OWNER will suffer financial loss, apart from the costs described in paragraph 4.02.A, if the Work is not substantially completed within the time specified in Article 3 for Substantial Completion, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. OWNER and CONTRACTOR also recognize the delays, expense and difficulties involved in proving in a legal proceeding the actual loss suffered by OWNER if the Work is not substantially completed within the Contract Times. Accordingly, if the CONTRACTOR fails, neglects or refuses to complete all or any designated part of the Work within the corresponding Contract Times, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) CONTRACTOR agrees to pay the OWNER, which may include, at OWNER's option, to deduct from progress payments and retainage $_____ value tbd by Manager of Engineering for each day that expires after the Contract Times specified in Article 3 for Substantial Completion (adjusted for any changes thereof made in accordance with Article 12 of the General Conditions) until the Work is substantially complete Liquidated damages are cumulative and represent a reasonable estimate of the OWNER'S extra expenses, which expenses are difficult to estimate with accuracy. Liquidated damages are not intended to compensate the OWNER for any other breach of the Contract Documents.

4.02 Special Damages:

A. In addition to the amount provided for liquidated damages, CONTRACTOR shall pay OWNER the actual costs reasonably incurred by OWNER for engineering and inspection forces employed for the Work for each day that expires after the days specified in Article 3 for Substantial Completion (adjusted for any changes thereof made in accordance with Article 12 of the General Conditions) until the Work is substantially complete.

B. After Substantial Completion, if CONTRACTOR shall neglect, refuse or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by OWNER, CONTRACTOR shall pay OWNER the actual costs reasonably incurred by OWNER for engineering and inspection forces employed for the Work for each day that expires after the time specified in Article 3 for Work to be completed and ready for final payment (adjusted for any extensions thereof made in accordance with Article 12 of the General Conditions) until the Work is completed and ready for final payment.

C. CONTRACTOR further agrees to allow the OWNER to deduct special damages as determined by the provisions of this Article 4 from progress payments and retainage due CONTRACTOR under this Agreement.

Determination of Bid:

For determination of the apparent low Bidder, Bids will be compared based on the aggregate amount of the Base Bid, plus the alternative Bid prices providing the most features of the Work within the funds determined by the Owner to be available before Bids are opened. If the addition of another alternative Bid price in the listed order of priority would make the aggregate amount exceed such available funds for all Bidders, it will be skipped and the next subsequent alternative Bid price in a lower amount will be added if award thereon can be made within such funds.

BITUMINOUS PAVEMENT
(CITY OF BIRMINGHAM)

PART 1 – GENERAL

1.1 DESCRIPTION

A. SCOPE:

1. CONTRACTOR shall provide all labor, equipment, supervision and incidentals to plan/mill existing asphalt pavement and install/place and properly compact the asphaltic concrete material to perform the asphaltic concrete pavement work as shown and specified. The leveling course will be installed as directed by the Geotechnical Engineer (WSP USA). CONTRACTOR shall supply all material (i.e., asphaltic concrete, tack, etc.). Asphaltic concrete supplied by the CONTRACTOR shall meet and comply with Alabama Department of Transportation (ALDOT) Standard specifications For Highway Construction (2022 Edition).

2. OWNER and/or ENGINEER have provided a construction drawing titled Asphalt Paving Details outlining the scope of the paving work and specific requirements by the City of Birmingham's: Engineering Department along various roadways in the City of Birmingham.

3. CONTRACTOR shall install and maintain erosion control measures and devices per the Alabama Department of Environmental Management's (ADEM's) "Handbook". The CONTRACTOR shall also adhere to any additional requirements of the City of Birmingham's Engineering Department.

4. CONTRACTOR shall develop and submit for approval, if required by the City of Birmingham's Traffic Department, a Traffic Control Plan (TCP) for the project in the City of Birmingham. CONTRACTOR shall install and maintain all traffic control measures along roadway's in which paving work is being performed and outside the paving work area for safe passage of local traffic. A copy o the traffic control plan shall be provided/supplied via email to the OWNER and/or ENGINEER for recording purposed only prior to the commencement of the paving work. CONTRACTOR must reasonably maintain access to each residence or commercial property at all times.

5. CONTRACTOR shall keep work area(s) free from accumulation of waste material, rubbish, and other miscellaneous debris.

6. CONTRACTOR shall clean work area(s) daily unless otherwise approved by OWNER and/or ENGINEER prior to leaving the site for the day.

1.2 QUALITY ASSURANCE

A. CONTRACTOR shall be licensed In the State of Alabama, Jefferson County, and the City of Birmingham. CONTRACTOR shall provide documentation relative to being licensed by each governing body aforementioned. Other counties, and cities may require similar documentation, and the OWNER and/or ENGINEER will notify the CONTRACTOR of such requirements.

B. CONTRACTOR shall make sure any Subcontractors utilized during the paving work are licensed based upon the State of Alabama's requirements.

C. CONTRACTOR shall obtain all permits required by the City of Birmingham. A copy of any permits required shall be supplied to the OWNER and/or ENGINEER for record purposes prior to the commencement of the paving work.

D. CONTRACTOR shall verify and document all existing conditions including but not limited to the concrete curbs, and residences driveway that may be impacted by the paving activities in the project area. Verification documents (i.e. photographs) shall be provided/supplied via email to the OWNER and/or ENGINEER for record purposes prior to commencement of the pipe installation.

E. CONTRACTOR shall check the Longitudinal Smoothness by utilizing a straight edge. The pavement surface shall be measured with a 10-foot straightedge. The straightedge path in the longitudinal direction for driving lanes will be located 3' from the outside edge. Additional paths with suspect roughness may be selected at the ENGINEER'S discretion. The ENGINEER also has discretion to use a straightedge for spot checking pavement that had been measured with a profiler. Any variations in the longitudinal direction exceeding ¼-inch in 10' on all pavements shall be marked for correction in a manner approved by the OWNER and/or ENGINEER.

F. Reference Standards: Comply with the latest edition of the applicable provisions and recommendations of the following, except as otherwise shown or specified.
   1. Alabama Department of Transportation, ALDOT.
      a. Alabama Department of Transportation "Standard Specifications for Highway Construction" – Latest Edition.
   2. American Society of Testing and Materials, ASTM.
   3. American Association of State Highway Transportation Officials, AASHTO.
   4. Alabama Department of Environmental Management, ADEM.
      a. "Alabama Handbook for Erosion Control, Sediment Control, and Stormwater Management on Construction Sites and Urban Areas", from here forward referred to as the "Handbook".
   5. Manual on Uniform Traffic Control Devices (MUTCD).

1.3 COORDINATION AND PROTECTION

A. General:
   1. CONTRACTOR shall keep roadway(s) within the project area in at least "partial operation" during the paving work.

B. Coordination:
   1. CONTRACTOR shall review the scope of paving work and determine any other utilities to be notified for minimal conflicts during construction.
   2. CONTRACTOR shall notify residents of paving work to make sure obstructions are removed from the roadway in front of each residence or commercial property. **The OWNER and/or ENGINEER will provide door hangers to the CONTRACTOR for distribution in the project area.**

C. Protection:
   1. CONTRACTOR shall take all necessary precautions to avoid damage to existing items to remain in place.

   2. CONTRACTOR is solely responsible for locating and protecting all underground utilities at all project locations during the pipe and service installations and the paving works.
      .
   3. CONTRACTOR is solely responsible for the safety and protection of the workers and shall comply with all applicable Local, State, and Federal laws regarding worker safety.
      .

1.4 SUBMITTALS AND DELIVERABLES

A. CONTRACTOR shall furnish the submittals listed below prior to starting construction to the OWNER and/or ENGINEER.
   1. Product data sheets for all paving materials not supplied by the OWNER to be utilized on the project.
   2. All permits obtained for the project.

B. CONTRACTOR shall furnish the deliverables listed below prior to submitting final payment to the OWNER and/or ENGINEER.
   1. CONTRACTOR'S 1-year warranty covering all work performed under this Contract.

   2. Documentation of "actual" quantities of paving work performed.

C. CONTRATCOR shall submit, within 10-days after being awarded the project, the actual mix designs (Binder Course and Wearing Surface Course) for the proposed asphaltic concrete mixes to the ENGINEER for review and approval. Mix Designs meeting Alabama Department of Transportation (ALDOT) Standard Specifications for Highway Construction (2022 Edition) will be accepted if within the stated expiration date. All other Mix Designs older than 12-months will not be accepted. Each design mix submittal shall include the following:

1. Type/name of mix.
2. Gradation analysis and materials properties for all aggregates.
3. Plot (0.45 power graph) of the final aggregate blend.
4. Bulk specific gravity of all aggregates and final aggregate blend.
5. Grade and manufacturer of asphalt binder.
6. Percent optimum asphalt binder content (OAC).
7. Mix air voids at OAC.
8. Bulk specific gravity of mix at OAC.
9. Theoretical maximum specific gravity of mix at OAC.
10. Voids in the Mineral Aggregate (VMA) and Voids Filled with Asphalt (VFA) at OAC.
11. Dust proportion (dust to binder ratio) at OAC.
12. All design data and associated design curves.
13. References to ALDOT Specifications for each material, when applicable.

1.5 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Delivery of Materials:
   1. Materials shall be delivered to the site(s) to ensure uninterrupted progress of the paving works.

B. Storage of Materials:
   1. Materials shall be stored per the batch plant's recommendations.
   2. Materials shall be stored as not to cause any disruption in the community.

C. Handling of Materials:
   1. Materials shall be handled per batch plant's recommendations.

D. Acceptance at Site:
   1. Materials shall NOT be accepted by the CONTRACTOR at the batch plant if the CONTRACTOR believes the materials do not meet the required specifications.

1.6 GENERAL PHASING

A. CONTRACTOR shall obtain approval for project phasing from OWNER and/or ENGINEER prior to commencing the paving work.

B. CONTRACTOR shall provide protection to paving work completed until local traffic can utilize the roadway or roadways.

1.7 WARRANTY

A. CONTRACTOR shall warrant the paving work to be free of defects in material and workmanship for 1 year after acceptance by the OWNER and/or ENGINEER and the City of Birmingham. **The warranty will start from the date "approved" by the City of Birmingham and the OWNER.**

B. CONTRACTOR shall repair and/or replace any defective paving work within the time of the warranty to the satisfaction of the OWNER and/or ENGINEER.

C. CONTRACTOR shall guarantee, in writing, that the materials installed will perform the service for which it is designed, and if it should fail to do so, the materials shall be modified or replaced at no additional cost.

PART 2 - PRODUCTS

2.1 CRUSHED AGGREGATE BASE

A. Crushed Aggregate base material shall conform to the requirements of ALDOT Specification Section 825 (ALDOT 825B).

2.2 ASPHALTIC CONCRETE

Asphalt Concrete Binder Course (Binder) [Pipe Trenches/Service Line Trenches] shall conform to the requirements in ALDOT Specification Section 424 (Item No. 424B-651) – Superpave Bituminous Concrete Upper Binder Layer, 1" maximum aggregate size mix, ESAL Range C/D.

A. *Asphalt Concrete Surface Course* (**Wearing**) shall conform to the requirements in ALDOT Specification Section 424 (Item No. 424A-360) – Superpave Bituminous Concrete Wearing Surface Layer, ½" maximum aggregate size mix, ESAL Range C/D.

B. *Asphalt Concrete Binder Course* **(Leveling)** shall conform to the requirements in ALDOT Specification Section 424 (Item No. 424B-657) – Superpave Bituminous Concrete Upper Binder Layer, ½" maximum aggregate size mix, ESAL Range C/D.

C. Leveling Course pavement shall be installed over the existing pavement or Binder Course pavement surface to restore grades and cross sections over existing ruts, distortions, depressions or other irregularities prior to the placement of the Wearing Course pavement. Leveling Course pavement shall consist of plant mixed asphalt concrete, as approved by the OWNER and/or ENGINEER. Leveling Course, if necessary, shall be included in the unit cost for mill & resurfacing.

2.3 TACK COAT

A. Bituminous material for tack coat shall be Emulsified Asphalt or one of the Performance Graded Asphalt Binders shown in Article 804.07 of ALDOT Specifications (Latest Edition). The cationic grades CRS-2, CRS-2h, CSS-1, CSS-1h, CQS-1h, CQS-1hp, CRS-2p, CRS-2l or the anionic grade NTSS-1HM shall be used. If Emulsified Asphalt is used, the emulsion shall not be diluted prior to application.

B. The paving work shall include the cleaning of the existing surface prior to application of the tack coat.

C. Tack material shall conform to the requirements of ALDOT Specification Section 405A000 Tack Coat - Gallons.

2.4 PAVEMENT MARKING PAINT

A. Pavement Marking Paint (Striping): Alkyd-resin type, ready-mixed, complying with FSTT-P-115, Type I or AASHTO M248, Type N.

B. Color: To match existing.

C. CONTRACTOR shall verify, in writing, with the City of Birmingham, if striping is required within project area.

PART 3 – EXECUTION

3.1 PREPARATION (STANDARD 1.5-INCHES) – ASPHALTIC CONCRETE PAVEMENTS

A. CONTRACTOR shall saw cut existing pavement to a depth no less than 1.5 inches (1.5") at the boundaries of the repair areas as specified and orient all saw cuts shall be either parallel or perpendicular to the obvious traffic flow.

B. CONTRACTOR shall plan / mill existing pavement (approximately 1.5" thick) [ALDOT Specifications Section 408 (Item No. 408A-052].

C. Some roadways are concrete pavement overlaid with asphaltic concrete, and some roadways are asphaltic concrete.

D. CONTRACTOR shall not "over plan/mill" without written approval from the OWNER and/or ENGINEER.

E. CONTRACTOR shall clean the milled surface and remove and dispose of existing pavement from within the confines of the saw cut.

F. CONTRACTOR shall apply tack coat in accordance with these specifications.

G. CONTRACTOR shall place Asphalt Concrete Binder Course (Leveling) over the existing asphalt pavement to restore grades and cross sections over existing ruts, distortions, depressions or other irregularities. Leveling Course shall conform to the requirements in ALDOT Specification Section 424 (Item No. 424B-657) – Superpave Bituminous Concrete Upper

Binder Layer, ½" maximum aggregate size mix, ESAL Range C/D. *Leveling course will be installed as directed by the Geotechnical Engineer (WSP USA).*

H. CONTRACTOR shall place 1.5" of Asphalt Concrete Surface Course (Wearing) per the requirements in ALDOT Specification Section 424 (Item No. 424A-360) – Superpave Bituminous Concrete Wearing Surface Layer, ½" maximum aggregate size mix, ESAL Range C/D.

I. CONTRACTOR shall take all necessary precautions to avoid damage to storm inlets, sewer manholes, water/gas valve boxes, underground drains, concrete curbs/gutters and underground utilities. If damages are caused by the CONTRACTOR during the paving operations, the CONTRACTOR shall replace the damaged items to the satisfaction of OWNER / ENGINEER at no additional expense / cost to the OWNER.

3.24 TACK COAT

A. Tack coat shall not be applied on a wet surface or when in the ENGINEER'S opinion weather conditions are not suitable. NTSS-1HM may become slippery when wet.

B. Loose material, dust, dirt and all foreign matter shall be removed from the surface to be treated. Approval of the surface before application of the tack material is required.

C. Tack coat materials shall be applied in an amount from 0.05 gallons per square yard (gallon/yd^2) up to a maximum of 0.10 gallons per square yard (gallons/yd^2) for emulsified asphalt and from 0.03 gallons per square yard (gallons/yd^2) up to a maximum of 0.07 gallons per square yard (gallons/yd^2) for asphalt binder. When tacking new, freshly laid pavement, the OWNER and/or ENGINEER may approve reducing the above minimum requirements.

D. A distributor shall be used for applying an emulsified asphalt tack coat. The distributor shall be capable of applying the tack coat uniformly on variable widths of surface up to 15 feet, with uniform pressure, and with an allowable variation from the specified tack coat application rates specified herein. Distributor equipment shall include a quantity measuring system and a thermometer for measuring the temperature of tank contents. This equipment shall be calibrated within the last 12 months in accordance with ASTM D2995 Standard Practice for Estimating Application Rate of Bituminous Distributors. *A copy of the signed and dated calibration certification detailing the equipment by its serial number or other unique identifier shall be provided to the engineer via email a minimum of Seven (7) working days prior to use.*

Distributors shall be equipped with a power unit for the pump and full circulation spray bars shall be adjustable both laterally and vertically. An attached bristle broom designed such that it drags on the pavement behind the spray bars may be attached to the distributor. If the broom is used, it shall be adjustable laterally and vertically so that the full width of the applied tack coat is bristled uniformly into the pavement surface.

A sampling valve shall be attached to the distributor. When samples are taken through such valves, they shall be considered representative of all material in the distributor tank. The distributor tank will be equipped with an agitator that is capable of ensuring the emulsion is homogenous. It is preferred that the asphalt emulsion stored in the distributor tank be heated and maintained at a temperature range between 85ºF and 160ºF.

Smaller hand-operated power spray units will be permitted only in areas where the use of a distributor is impractical, but in general, smaller hand operated power spray units will NOT be allowed to be used/utilized as "primary" distributor equipment.

E. Tack coat, when applied, shall be applied to all contact surfaces of curbs, gutters and manholes. Tack material shall also be applied to all adjacent pavement edges.

F. Tack coat material shall be spread only far enough in advance to permit the construction to progress consistently, uniformly and continuously after curing period and shall not be applied so far in advance that the viscous quality will be reduced by traffic prior to construction thereon. Tack coat that loses its viscous quality before being covered shall be renewed and any which has been damaged shall be replaced without extra compensation.

3.3 ASPHALTIC CONCRETE PAVEMENT

A. CONTRACTOR shall, prior to placing the asphaltic concrete, clean the vertical face of foreign material and apply a tack coat in a manner aforementioned under Section 3.24 "Tack Coat".

B. Various Roadways (Standard 1.5-Inches):
   1. 1.5" of Asphalt Concrete Surface Course (Wearing) shall be installed per ALDOT Specification Section 424 (Item No. 424A-360) – Superpave Bituminous Concrete Wearing Surface Layer, ½" maximum aggregate size mix, ESAL Range C/D.

C. CONTRACTOR shall place asphalt concrete in lift thickness of not less than 1 inch (1") and no greater than 3 inches (3").

D. CONTRACTOR shall thoroughly compact each lift with an appropriate and acceptable pavement roller.

E. CONTRACTOR shall install surface lift to match the surface elevation of adjacent pavement, ensuring sufficient slope for adequate drainage away from structures where applicable.

F. Adjust manhole covers to match existing asphalt.

G. Installation Tolerances:
   1. Thickness: Compact each asphalt course to produce the thickness indicated within the following tolerances:
      a. Binder Course: Plus, or minus ¼-inch.
      b. Wearing Course: Plus, or minus ¼-inch.
   2. Smoothness: Compact each course to produce a surface smoothness within the following tolerances as determined by using a 10-foot straightedge applied transversely or longitudinally to paved areas:
      a. Binder Course: ¼-inch.
      b. Wearing Course: ¼-inch.

3.4 ROLLERS

A. Rollers can either be vibratory, static steel wheel type, or pneumatic tire rollers. A minimum of two rollers, one for breakdown and one for finish rolling are required unless the asphalt concrete placement is on a bridge deck, bridge approaches, or other areas where a single steel wheel vibratory roller may be sufficient to achieve the required density. Rollers must be in good mechanical condition, and capable of operating at speeds slow enough to avoid displacement of the mixture. The use of equipment that results in excessive crushing of aggregate will not be permitted. All rollers for asphalt concrete placement must be approved by the Engineer.

Vibratory Rollers: Rollers shall be specifically designed for the compaction of asphalt concrete mixtures. Vibratory roller models satisfying the specification requirements contained herein will be evaluated by the Engineer to determine compaction capabilities. Alternate types of rollers may be approved by the Engineer, upon reviewing the specification of the rollers and demonstrating that satisfactory results can be achieved.

Vibratory rollers shall be provided that meet the requirements listed below.

- Nominal Amplitude 0.05 inches, maximum.
- Vibration Frequency 1500 vpm, minimum.
- Drum Width (dual vibrating drums) 54 inches, minimum / (single vibrating drum) 84 inches, minimum.

All vibratory rollers shall be equipped with a speedometer that accurately indicates roller speed in either ½ mph or 50 ft. per minute increments (maximum) throughout the specified operating range. Vibratory rollers must also be equipped with a speed control device that can be set to prevent the roller from traveling in excess of 2½ mph or 220 ft. per minute when the roller is in vibratory mode. The type of speed control device will be subject to the approval of the Engineer. When rollers have pneumatic drive wheels, release agents approved by the Engineer may be used on the tires to prevent material pickup.

Static Steel Wheel Rollers: These rollers shall be self-propelled and be 10 to 12-ton, three axle types of 8 to 10-ton, two axle types.

Pneumatic Rubber-Tired Rollers: These rollers shall be self-propelled and consist of two axles on which multiple pneumatic-tired wheels are mounted in such a manner that the rear wheels shall not follow in the tracks of the forward wheels and will be spaced to give essentially uniform coverage with each pass. The axles will be mounted in a rigid frame provided with means for adding ballast. The wheels shall be mounted so as to oscillate individually or in pairs. The tires must be smooth and show no tread pattern, be of equal size and diameter, and be uniformly inflated.

Pneumatic rollers shall meet the requirements listed below unless otherwise approved.

- Maximum Wheel Load 5,600 lbs.
- Tire Compression on Pavement 80±5 psi
- Maximum Axle Load 22,400 lbs.

3.5 PAVEMENT MARKING (IF REQUIRED)

A. CONTRACTOR shall NOT apply pavement marking paint until layout, colors and placement have been verified with the City of Birmingham and authorized by the OWNER and/or ENGINEER.

B. CONTRACTOR shall clean all surfaces to be painted by sweeping, blowing with compressed air, rinsing with water or as otherwise recommended by the paint manufacturer.

C. CONTRACTOR shall "broadcast" glass spheres uniformly into wet pavement markings at a rate of 6 pounds per gallon (6 lbs./gallon).

D. CONTRACTOR shall apply paint with mechanical equipment to produce pavement markings of dimensions indicated with uniform, straight edges. The manufacturer's recommended rates shall be applied to provide a minimum dry film thickness of 1.5 mils.

E. CONTRACTOR shall apply paint only when the air and pavement temperatures are above 40°F and below 95°F. Paint temperatures must be maintained within these same limits.

F. CONTRACTOR shall provide guidelines and templates to control paint application. All edges of markings shall be sharply outlined.

G. CONTRACTOR shall use the maximum drying time requirements of the paint manufacturer to prevent pickup, displacement, or discoloration by tires. Painting operations shall be "discontinued" if there is a deficiency in drying until the cause of the slow drying is determined and corrected.

H. CONTRACTOR shall place suitable signs and markers along newly painted lines to control traffic and prevent damage to newly painted surfaces.

3.6 FIELD TESTS

A. OWNER and/or ENGINEER have obtained the services of WSP USA Environmental and Infrastructure, Inc. (WSP USA) to test the asphaltic concrete pavement in various locations within the project area.

B. CONTRACTOR shall assist the WSP USA Environmental and Infrastructure, Inc. (WSP USA) personnel in obtaining the samples in the project area.

C. OWNER and/or ENGINEER shall provide the results of the pavement tests to the City of Birmingham for permanent record.

3.7 SITE RESTORATION

A. CONTRACTOR shall restore the project area to at least the same condition or better condition than before the paving work was performed.

B. CONTRACTOR shall make certain all yards, driveways, sidewalks, etc. within the project area and near the project area are cleaned and repaired if damaged during the paving work.

3.8 PAYMENTS AND MEASUREMENTS

A. Payment for Asphaltic Concrete will be made under the conditions stated in Supplement Document Dated June 20, 2022 (Asphaltic Concrete Price Index Calculations). This document is included immediately after this specification section.

B. CONTRACTOR shall submit the approved asphaltic concrete mix design at the time the project was bid, ALDOT Asphalt Index for the month the project was bid by the CONTRACTOR, and ALDOT Asphalt Index for the month or months the asphalt material (binder course or wearing surface course) is utilized at the project site(s) for pipe trenches, service line trenches and/or final resurfacing of roadways. All asphaltic concrete delivery tickets showing the type of mix and tonnage and the date the asphalt was delivered to the project site(s) must be provided by the CONTRACTOR.

C. CONTRACTOR shall make certain all documents stated above are provided to OWNER / ENGINEER at the time of the payment application and the payment application is signed and notarized.

++ END OF SECTION ++

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BIDDER QUALIFICATIONS STATEMENT

(Completion of this statement is required to be submitted with the Bid.)

SUBMITTED TO:

The Water Works Board of the City of Birmingham
3600 First Avenue North
Birmingham, Alabama 35222

SUBMITTED FOR:

Standard Patch Paving/Longitudinal Transverse Replacment
Project Number: BID 22-05-04

SUBMITTED BY:

Name of Organization: _____
(Print or Type Name of Bidder)

Name of Individual: _____

Title: _____

Business Address: _____

_____

Telephone No.: _____

Fax No.: _____

Gentlemen:

The undersigned certifies under oath the truth and correctness of all statements and of all answers to questions made hereinafter.

(Note: Attach additional sheets as required.)

1.0 Bidder's General Business Information

1.1 Check if:

☐ Corporation ☐ Partnership ☐ Joint Venture ☐ Sole Proprietorship

If Corporation:

A. Date and State of Incorporation:

_____

_____

B. List of Executive Officers:

Name Title

_____

_____

_____

_____

If Partnership:

A. Date and State of Organization:

_____

_____

B. Names of Current General Partners:

_____

_____

C. Type of Partnership

☐ General ☐ Publicly Traded

☐ Limited ☐ Other (describe): _____

If Joint Venture:

A. Date and State of Organization:

_____

_____

B. Name, Address and Form of Organization of Joint Venture Partners: (Indicate managing partner by an asterisk *):

_____

_____

_____

_____

_____

If Sole Proprietorship:

A. Date and State of Organization:

_____

_____

B. Name and Address of Owner or Owners:

_____

_____

_____

_____

2.0 How many years has your organization been in business as a general Contractor? _____

3.0 If your organizational structure has changed within the past five years, provide data as listed above in Item 1.0 for your previous organization.

4.0 Do you plan to subcontract any part of this project? _____ If so, give details.

5.0 Has any construction contract to which you have been a party been terminated by the owner; have you ever terminated work on a project prior to its completion for any reason; has any surety which issued a performance bond on your behalf ever completed the work in its own name or financed such completion on your behalf; has any surety expended any monies in connection with a contract for which they furnished a bond on your behalf? If the answer to any portion of this question is "yes", furnish details of all such occurrences including name of owner, architect or engineer, and surety, and name and date of project.

6.0 Has any officer or partner of your organization ever been an officer or partner of another organization that had any construction contract terminated by the owner; terminated work on a project prior to its completion for any reason; had any surety which issued a performance bond complete the work in its own name or financed such completion; or had any surety expend any monies in connection with a contract for which they furnished a bond? If the answer to any portion of this question is "yes", furnish details of all such occurrences including name of owner, architect or engineer, and surety, and name and date of project.

7.0 In the last five years, has your organization, or any predecessor organization, failed to substantially complete a project in a timely manner? If the answer to this question is “yes”, furnish details of all such occurrences including name of owner, architect or engineer, and surety, and name and date of project.

8.0 On Schedule A, attached, list name, location and description of project, owner, architect or engineer, contract price, percent complete and scheduled completion of the major construction projects your organization has in progress on this date. Provide name, address and telephone number of a reference for each project listed.

9.0 On Schedule B, attached, list name, location and description of project, owner, architect or engineer, contract price, date of completion and percent of work with your own forces of major projects of the same general nature as this project which your organization has completed in the past five years. Provide name, address and telephone number of a reference for each project listed.

10.0 On Schedule C, attached, list name and construction experience of the principal individuals of your organization directly involved in construction operations.

11.0 List the states and categories of construction in which your organization is legally qualified to do business.

_____

_____

_____

12.0 Provide the following for your surety:

12.1 Surety Company: _____

12.2 Agent: _____

A. Address: _____

B. Telephone No.: _____

13.0 Provide the following with respect to an accredited banking institution familiar with your organization.

13.1 Name of Bank: _____

13.2 Address: _____

13.3 Account Manager: _____

13.4 Telephone No.: _____

14.0 Provide the name, address and telephone number of an individual who represents a major equipment/material supplier whom the Owner may contact for a financial reference:

Bidder: _____
(Print or Type Name of Bidder)

By: _____

_____

(CORPORATE SEAL)

Title: _____

Attachments A, B and C

----------(Acknowledgment)----------

_____ being duly sworn, deposes and says that he/she is _____ of _____;
(Name of Bidder)

that he/she is duly authorized to make the foregoing affidavit and that he/she makes it on behalf of

( ) himself/herself; ( ) said partnership; ( ) said corporation.

Sworn to before me this _____ day of _____, 20__, in the County of _____, State of _____.

_____
(Notary Public)

My commission expires _____

(Seal)

++END OF BIDDER QUALIFICATIONS STATEMENT++

ATTACHMENT A

SCHEDULE A
PROJECTS IN PROGRESS

Name, Location and Description of Project	Owner	Architect or Engineer	Contract Price	Percent Complete	Scheduled Completion	Reference/Contract Include Address and Phone

ATTACHMENT B

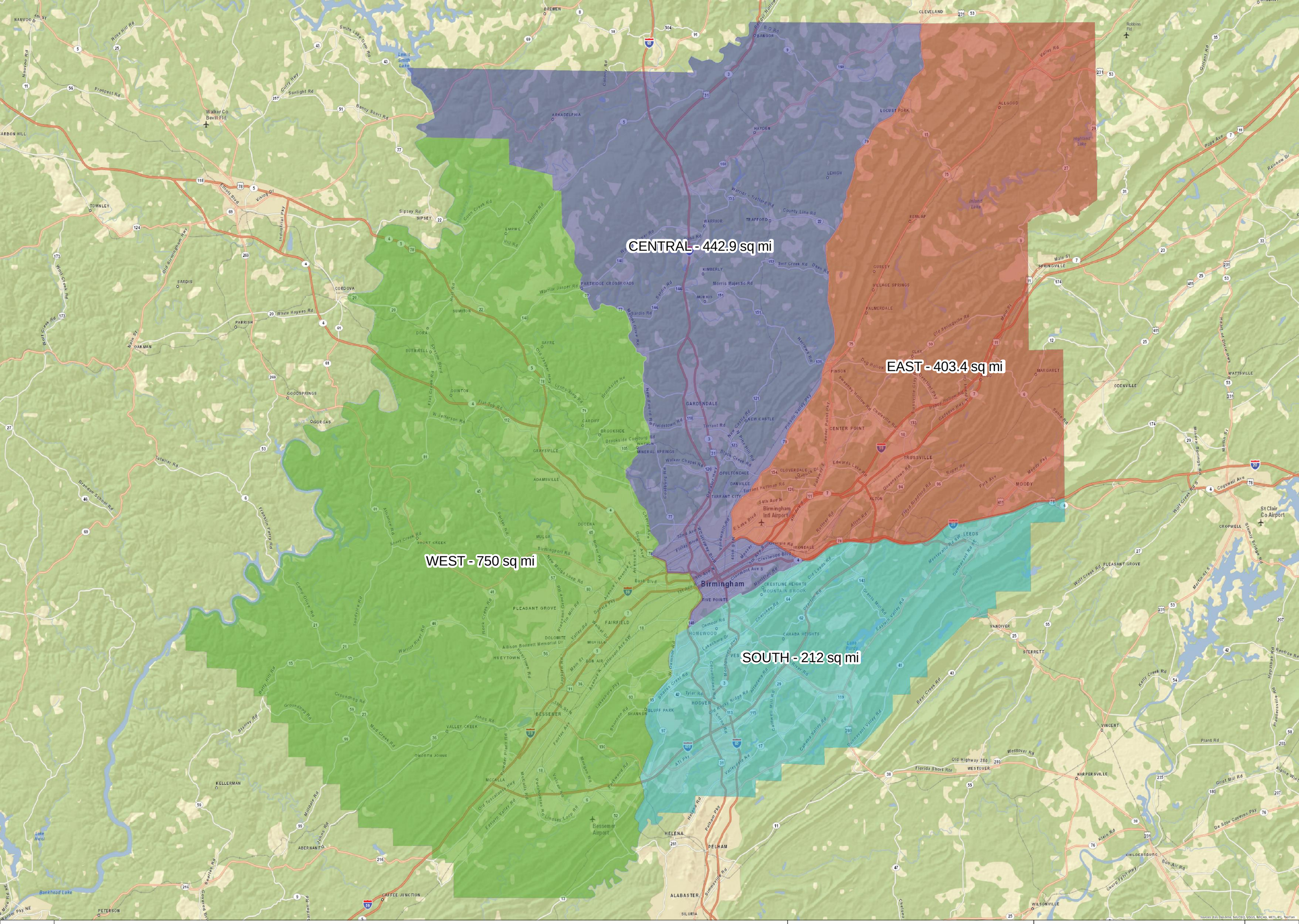
SCHEDULE B
PROJECTS COMPLETED

Name, Location and Description of Project	Owner	Architect or Engineer	Date Completed	Contract Price	Percent with Own Forces	Reference/Contract Include Address and Phone

ATTACHMENT C

SCHEDULE C
PERSONNEL

Name	Position	Date Started with This Organization	Date Started in Construction	Prior Positions and Experience in Construction



Leak District Map

Legend

Leak District

- CENTRAL
- EAST
- SOUTH
- WEST

GIS Project # 1682

0 1 2 3 4 5 10 Miles

BID#:____

NOBID

If you are not bidding on this service/commodity, please complete and return this form to: **Birmingham Water Works, Attn: Purchasing Manager, 3600 First Avenue North, Birmingham, Alabama 35222.** All Statement ofNo Bid forms must be received prior to the bid opening.

Failure to respond may result in deletion of vendor's name from the Vendor/Contractor's list for the Birmingham Water Works Board.

Company Name:._____

Address:_____

Telephone:._____

Date:_____

We, the undersigned have declined to respond to your Bid No. _____for _____because of the following reasons.
(Service/Commodity)

__ Specifications too "tight", i.e., geared toward one supplier or manufacturer only. (explain below)

__ Insufficient time to respond to the Bid.

__ Wedo not offer this product/service.

__ Specifications unclear. (explain below)

__ Unable to meet bond requirements.

__ Other (specify below)

REMARKS:_____
_____
_____
_____

BY:._____ Signed:._____
(Print or Type)

BID24-12-03

BID FORM

Jonathan Jett, Purchasing Superintendent
The Water Works Board of the City of Birmingham
3600 First Avenue North
Birmingham, Alabama 35222

Submitted below is our firm bid for items and services, which are in accordance with your "Invitation to Bid" and "Specifications and Conditions" for **Standard Patch Paving/Longitudinal Transverse Paving/Subsurface Exploration due on Thursday, May 9, 2024, @ 10:00 a.m. Mandatory Pre-Bid via zoom will be held on Thursday, May 2, 2024, @ 10:00 a.m.** The undersigned has read and understands said "Invitation to Bid" and "Specifications and Conditions" and expressly agrees to be bound by the terms. ***This will not be an "all or nothing" bid award. Individual awarded to the Vendor deemed "the lowest responsible and responsive bidder" per item. All Bidders are required to submit a Resource Plan with a bid package.***

LABOR AND INSTALLATION ONLY
(Except as Noted)

Description	Estimated Quantity	Unit Price	Total Price

1. WEST DISTRICT (See Attached Leak District Map)

A. Point Patch Repair (Maintenance Department)

8,000 sq. yd. $_____ $_____

B. Replacement of asphalt driveways within the roadway right-of-way.

200 sq. yd. $_____ $_____

C. Longitudinal / Transverse Repair (Trenchline Repair) (Construction Department)

100,000 sq. yd. $_____ $_____

1. GRAND TOTAL $_____

Description	Estimated Quantity	Unit Price	Total Price

2. CENTRAL DISTRICT (See Attached Leak District Map)

A. **Point Patch Repair (Maintenance Department)**

8,000 sq. yd. $_____ $_____

B. **Replacement of asphalt driveways within the roadway right-of-way.**

200 sq. yd. $_____ $_____

C. **Longitudinal / Transverse Repair (Trench Line Repair) (Construction Department)**

70,000 sq. yd. $_____ $_____

2. GRAND TOTAL $_____

Description	Estimated Quantity	Unit Price	Total Price

3. EAST/SOUTH DISTRICT (See Attached Leak District Map)

A. Point Patch Repair (Maintenance Department)

12,500 sq. yd. $_____ $_____

B. Replacement of asphalt driveways within the roadway right-of-way.

400 sq. yd. $_____ $_____

C. Longitudinal / Transverse Repair (Trench Line Repair) (Construction Department)

140,000 sq. yd. $_____ $_____

3. GRAND TOTAL $_____

Description	Estimated Quantity	Unit Price	Total Price

4. SUBSURFACE EXPLORATION REMEDIATION (TO INCLUDE ALL DISTRICT)

A. Superpave Bituminous Concrete Wearing Surface Layer, 1/2" Maximum Aggregate Size Mix (Asphalt) [Leveling]

Description

The contractor shall be responsible for the transportation/hauling of the hot mix asphalt from the BWWB asphalt supplier. The contractor shall furnish all necessary labor, equipment, paving machine, smooth drum rollers for compaction of hot mix asphalt, traffic control equipment/signs, hauling trucks and experienced paving supervision to pave the BWWB designated roadways in a safe, and reasonable manner at NO additional cost to BWWB. The asphalt to be placed/installed per Section 02975 Bituminous Pavement specifications. BWWB engineers will provide the contractor with a set of drawings showing the limits of the paving area.

2,500 ton $_____ $_____

4. Grand Total $_____

5. SUBSURFACE EXPLORATION REMEDIATION (TO INCLUDE ALL DISTRICT)

A. Unclassified Excavation up to 4 feet deep

Description

The contractor shall be responsible for the excavation, removal and disposal of the excavated soil, crushed stone, sand, and pavement material. In addition, the contractor shall furnish all necessary labor, equipment, traffic control, saw cutting equipment and supervision to perform the work in a safe, and reasonable manner at NO additional cost to BWWB.

5,000 cu. yd **$_____** **$_____**

B. Geosynthetic Reinforcement Fabric for Soft Soil Stabilization

Description

The contractor shall be responsible for the purchasing, delivering, and installing the said Fabric as directed by BWWB. In addition, the contractor shall furnish all necessary labor, equipment, and supervision to install the Fabric in a safe, and reasonable manner at NO additional cost to BWWB. (Fabric to be approved by BWWB engineer).

13,5000 sq. ft **$_____** **$_____**

C. Crushed Aggregate Base Course, ALDOT 825B, 6" Compacted Thickness

Description

The contractor shall be responsible for the transportation/hauling of the crushed aggregate from the supplier designated by BWWB, spreading, moisture condition, compacting the crushed aggregate as directed by BWWB. The crushed aggregate will be placed in thin lifts not to exceed 6 inch thick. In addition, the contractor shall furnish all necessary labor, equipment, trucks, and supervision to install the crushed aggregate in a safe, and reasonable manner at NO additional cost to BWWB. BWWB will purchase and pay for the raw material of the crushed aggregate.

100,000 sq. ft **$_____** **$_____**

D. Crushed Aggregate – ALDOT No. 410 – 8” Compacted Thickness

Description

The contractor shall be responsible for the transportation/hauling of the crushed aggregate from the supplier designated by BWWB, spreading, moisture condition, compacting the crushed aggregate as directed by BWWB. The crushed aggregate will be placed in thin lifts not to exceed 6 inch thick. In addition, the contractor shall furnish all necessary labor, equipment, trucks, and supervision to install the crushed aggregate in a safe, and reasonable manner at NO additional cost to BWWB. BWWB will purchase and pay for the raw material of the crushed aggregate.

100,000 sq. ft **$_____** **$_____**

E. Crushed Aggregate – ALDOT No. 1 – 8" Compacted Thickness

Description
The contractor shall be responsible for the transportation/hauling of the crushed aggregate from the supplier designated by BWWB, spreading, moisture condition, compacting the crushed aggregate as directed by BWWB. The crushed aggregate will be placed in thin lifts not to exceed 6 inch thick. In addition, the contractor shall furnish all necessary labor, equipment, trucks, and supervision to install the crushed aggregate in a safe, and reasonable manner at NO additional cost to BWWB. BWWB will purchase and pay for the raw material of the crushed aggregate.

100,000 sq. ft **$_____** **$_____**

F. Planing/Milling Existing Pavement (Asphalt, base material, and existing subgrade) (Approximately 0" Thru 2.0" Thick)

Description
The contractor shall be responsible for the milling, removal, and disposal of the milled surfaces/areas. The contractor shall furnish all necessary labor, equipment, adequate size milling machine, hauling trucks and supervision to Plan/Mill Existing Pavement in a safe, and reasonable manner at NO additional cost to BWWB.

50,000 sq. ft **$_____** **$_____**

G. Planing/Milling Existing Pavement (Asphalt, base material, and existing subgrade) (Approximately 2.0" Thru 6.0" Thick)

Description
The contractor shall be responsible for the milling, removal, and disposal of the milled surfaces/areas. The contractor shall furnish all necessary labor, equipment, adequate size milling machine, hauling trucks and supervision to Plan/Mill Existing Pavement in a safe, and reasonable manner at NO additional cost to BWWB.

50,000 sq. ft **$_____** **$_____**

H. Superpave Bituminous Concrete Upper Binder Layer, 1" Maximum Aggregate Size Mix (Asphalt)

Description
The contractor shall be responsible for the transportation/hauling of the hot mix asphalt from the BWWB asphalt supplier. The contractor shall furnish all necessary labor, equipment, paving machine, smooth drum rollers for compaction of hot mix asphalt, traffic control equipment/signs, hauling trucks and experienced paving supervision to pave the BWWB designated roadways in a safe, and reasonable manner at NO additional cost to BWWB. The asphalt to be placed/installed per Section 02975 Bituminous Pavement (City of Birmingham) specifications. BWWB engineers will provide the contractor with a set of drawings showing the limits of the paving area.

2,500 sq. ft **$_____** **$_____**

5. GRAND TOTAL $_____

April 25, 2024 **BID 24-12-03**

Current General Contractors State License Number: _____

(This should also be placed on the outside envelope of your bid submittal in the lower left-hand corner. Failure to place your General Contractors License Number on the outside envelope of your bid package may deem you non-responsive and you bid can be rejected.

Current bid limit: _____

Type of work for which Bidder is licensed: _____

Bid must be submitted in a sealed Envelope, directed to the attention of the Purchasing Manager, and marked in the Lower left-hand corner as follows:
Bid on Standard Patch Paving/ Longitudinal Transverse Paving/ Subsurface Exploration Due Thursday, May 9, 2024 @ 10:00 a.m."

BY_____
(Signature)
(Attach evidence of authority to sign.)

NAME_____

TITLE_____

DATE_____

COMPANY_____

ADDRESS_____
_____
_____

CITY_____

STATE_____ZIP_____

TELEPHONE_____

FAX_____

TERMS_____

EMAIL_____