STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
CONSTRUCTION DIVISION
SUITE 700, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-1402
(615) 741-2414

CLAY BRIGHT
COMMISSIONER

BILL LEE
GOVERNOR

January 10, 2020

Re: ADDENDUM #1
Contract No.: DB1901
County: Carroll, Fayette, Haywood, Lauderdale, and Madison

To Whom It May Concern:

This addendum revises the RFP Contract Books 1, 2, 3. Attached are the revised sheets.

You must acknowledge this addendum by completing the "Addendum Letter Acknowledgement form C and the Technical Proposal Signature Page (Form TPSP) within your Technical Proposal. It is the bidder's responsibility to notify all affected manufacturers, suppliers and subcontractors of this change.

Sincerely,

Lia Obaid

Lia Obaid, P.E.
Assistant Director of Construction
Construction Division

DESIGN-BUILD
RFP CONTRACT BOOK 1
INSTRUCTIONS TO
DESIGN-BUILDERS (ITDB)

TENNESSEE DEPARTMENT OF TRANSPORTATION

Region 4 Bridge Bundle

Carroll, Fayette, Haywood, Lauderdale, and Madison Counties - Tennessee

CONTRACT NUMBER: DB1901

November 15, 2019

Addendum #1 January 10, 2020

Prohibited communications do not include contact with regulatory/county/city officials for the limited purpose of obtaining information regarding available detour routes and conditions associated with such use or regulatory/county/city guidelines.

5. *PROCUREMENT SCHEDULE/SUBMITTAL DEADLINES*

The Procurement Schedule and submittal deadlines are set out below. The Department will not consider requests on any submittal received by the Department after the deadline for its submittal date stated below. The Department will not consider requests on any submittals pertaining to an Addendum after the deadline established in the Addendum.

Deadline for Submittal of Alternate Technical Concepts	***On or before February 3~~January 27~~, 2020 4:00 p.m., CT.***
Deadline for Response to Alternate Technical Concepts	***February 14,2020 4:00 p.m., CT.***
Deadline for Submittal of Initial Right-Of-Way Acquisition(Exhibit)	***February 21, 2020***
Deadline for Response to Initial Right-Of-Way Acquisition	***February 28, 2020***
Deadline for Submittal of Question Requests, and Requests for QPL Determination	***February 21, 2020 4:00 p.m., CT.***
Anticipated Deadline for Issuance of Last Addendum	***March 6, 2020 4:00 p.m., CT.***
Technical Proposal and Price Proposal Due Date and Time	***March 20, 2020 4:00 p.m., CT.***
Price Proposal Opening	***April 3, 2020 9:00a.m., CT.***
Anticipated Award of Design-Build contract, or rejection of all proposal	***On or before April 17, 2020***
Anticipated Issuance of Initial Notice to Proceed	***April 30, 2020***

The Department will not consider any late Proposals. Proposals received after the Proposal Due Date will be returned to the unopened. The Department will not consider any Proposal modifications submitted after the Proposal Due Date. Nor will the Department acknowledge Proposal withdrawals submitted after the Proposal Due Date. Any such attempted withdrawal will be ineffective.

If the Design-Builder does not submit a Proposal by the Due Date and the Department chooses to issue a new, revised, or modified RFP, the Proposal will be considered non-responsive to the requirements set forth herein. As a result, the Design-Builder will not be eligible to respond to any additional RFP requests from the Department on this project.

ATC in no way relieves the of its obligation to satisfy (1) other Contract requirements not specifically identified in the ATC submittal; (2) any obligation that may arise under applicable laws and regulations; and (3) any obligation mandated by the regulatory agencies as a permit condition.

A proposed ATC is not acceptable if it merely seeks to reduce quantities, performance, or reliability, or seeks a relaxation of the contract requirements. ATCs shall be submitted by the Design-Builder and pre-approved in writing by the Department. All Technical Proposals must include the Department's pre-approval letters for consideration of the ATCs.

b. SUBMITTAL REQUIREMENTS

Each ATC submittal shall include one (1) electronic copy in Adobe .pdf format by email (lia.obaid@tn.gov) ~~or USB flash drive~~ and shall use Form ATC located in **Appendix A - Contract Book 1 (ITDB - Instruction to Design-Builders)**. Each ATC shall include the following information:

1) Description. A detailed description and schematic drawings of the configuration of the ATC or other appropriate descriptive information (including, if appropriate, product details [i.e., specifications, construction tolerances, and special provisions] and a traffic operational analysis, if appropriate).
2) Usage. Where and how the ATC would be used on the Project.
3) Deviations. References to all requirements of the RFP that are inconsistent with the proposed ATC, an explanation of the nature of the deviations from said requirements, and a request for approval of such variance(s).
4) Analysis. An analysis justifying use of the ATC and why the variance to the requirements of the RFP should be allowed.
5) Impacts. Discussion of potential impacts on vehicular traffic, environmental impacts identified, community impact, safety and life-cycle Project impacts, and infrastructure costs (including impacts on the cost of repair and maintenance).
6) History. A detailed description of other projects where the ATC has been used, the success of such usage, and names and telephone numbers of project owners that can confirm such statements.
7) Risks. A description of added risks to the Department and other entities associated with implementing the ATC; and
8) Costs. A description of the ATC implementation costs to the Department, the Design-Builder, and other entities (right-of-way, utilities, mitigation, long term maintenance, etc.).

The ATC, if approved, shall be included in the Price Proposal if the Design-Builder elects to include it in their Technical Proposal. The Design-Builder shall not request more than six ATCs.

In addition to outlining each implemented ATC, and providing assurances to meet all attached conditions, the Technical Proposal shall also include a copy of the ATC approval letter with approved form from the Department in the Technical Proposal within the Appendix and these will not count towards the page limit maximum; however the ATC must be discussed within the Technical Proposal Response Category for scoring.

Approval of an ATC in no way implies that the ATC will receive a favorable review from the Design-Build Review Committee. The Technical Proposals will be evaluated in regards to the evaluation criteria found in this **Contract Book 1 (ITDB - Instructions to Design-Builders)**, regardless of whether or not ATCs are included.

The Price Proposal shall reflect all incorporated ATCs. Except for incorporating approved ATCs, the Technical Proposal may not otherwise contain exceptions to, or deviations from, the requirements of the RFP.

3. *SELECTION PROCEDURE*

The Department will utilize a ***Meets Technical Criteria (A+B)*** selection process in this procurement to award a Contract to the responsible Design-Builder that demonstrates it meets the technical criteria and can deliver the best combination of price and time (A+B) in the design and construction of the Project.

Price Proposals will be calculated in accordance with the following method:

Total Contract (A+B) = A+ (B x TIME)
Where, A = Contract Amount
B = the number of Calendar Days (from the Initial Notice to Proceed) indicated by the time needed to complete the Project in their Price Proposal and will become the contract completion time to be shown in the contract book.

TIME VALUE = Value associated with time of completion on this Project.

B: Calendar Days
Amount of one Calendar Day is **$2,000** as stated in Special Provision 108B.

It is intended that all construction be completed by the earliest feasible date to minimize public inconvenience and enhance public safety. Should the total number of calendar days that the Design-Builder placed in the Proposal under the "B" portion of the Proposal to be deemed excessive, then the Proposal will be rejected. To this end the Design-Builder shall pursue the work rigorously utilizing the necessary work week, work hours and/or work shift schedules to expedite the work. The total Contract (A+B) cost will be used by the Department to determine the Apparent Design-Builder, but reimbursement

- Technical Proposal Package labeled as such (including required forms) and all other required Contract Documents.

Text for all documents can be single spaced, Times New Roman, 12-point font shown in English units. Font size on tables and figures may be of any size so long as it is easily readable. Pricing shall be in US currency, in current dollars and cents. In each case in which a form is required to be submitted, it will be found in the **Contract Book 2 (Design-Build Contract)** or in **Contract Book 3 (Project Specific Information)** and its use is mandatory. Technical Proposals shall be organized and formatted as specified herein. Each Technical Proposal Response Category shall be preceded by a simple tab divider identifying the Response Category (e.g., "Response Category I," "Response Category II Design-Builder's Organization and Expertise," etc.) with each appropriate Response Category Form.

Technical Proposal pages shall be 8-½ inch x 11-inch white paper. Drawings or sketches shall be submitted on 11-inch x 17-inch and/or 8 ½-inch x 11-inch white paper. Schedule plots shall be on 8-½-inch x 11-inch or 11-inch x 17-inch paper. Double-sided pages shall be used except for pre-printed information, such as corporate brochures, and the original copy of all signed forms, which shall be single-sided.

The Technical Proposal should present information clearly and concisely. Text or other information that is difficult to read may be disregarded, potentially resulting in either a lowered score or rejection of the Proposal as non-responsive.

All Technical Proposal responses shall be easily reproducible by normal black and white photocopying machines. Color photographs, renderings and brochures shall be adequately bound and suitably protected for handling and circulation during review.

Three (3) originals and ~~eight (8) copies of the Technical Proposal~~one (1) electronically signed original (Adobe PDF) on electronic media (flash drive) shall be provided. ~~Label the original Technical Proposals "ORIGINAL" and label each copy "COPY ___ of 8".~~

Price Proposals shall be submitted using Internet bidding with electronic bid bond. The Design-Builder shall not submit a hardcopy Price Proposal to the Department. The Internet bid and electronic bid bond executed by the Design-Builder and their Surety will be considered as a complete Price Proposal and will be printed at the time of the public opening. Letters recognizing the addenda to the RFP and amendments to the electronic bidding file will be posted on the Bid Express website. Design-Builder must acknowledge addenda by completing the Technical Proposal Signature Page (Form TPSP) found in RFP **Contract Book 2 (Design-Build Contract)** and placed within your Technical Proposal. Also, by submitting the EBS bid file within your Price Proposal you are also acknowledging all addenda associated with the Price Proposal. It is the bidder's responsibility to notify all affected manufacturers, suppliers and subcontractors of any change. Failure to acknowledge receipt of

2. *PROPOSAL OPENING*

a. TECHNICAL PROPOSALS

The Department Alternative Contracting Assistant Director and the Design-Build Review Committee will open the Technical Proposal Package from each Design-Builder. They will determine responsiveness and the Pass/Fail rating for RC I to RC IV. Responsive and Passing Technical Proposals that meet all minimum criteria will be opened at the Proposal Due Date and time set out in this **Contract Book 1 (ITBD - Instruction to Design-Builders)** Section A.5, page 7. All technical proposals deemed non-responsive or failing to meet the minimum criteria will be notified prior to the public opening of the price proposals.

b. PRICE PROPOSALS; PUBLIC OPENING

Upon concluding its evaluation and scoring of the Technical Proposals, the Department will conduct a public opening of the Price Proposals for each responsive bid at the following location:

505 Deaderick Street, J.K. Polk Bldg.

Suite 700, Nashville, TN 37243, 7th floor Large Conference Room.

on the date and time set out in above in Section A.5, page 7.

Totals read at the opening of the Price Proposals are not guaranteed to be correct and no final award of the Contract will be made until Proposals have been checked and re-checked.

On all projects which are financed in whole or in part by funds received through Federal agencies and other third parties, the awarding of Contracts by the Department will be subject to approval or concurrence by the party or parties through which funds are received. The Department reserves the right to reject any Proposal which is not acceptable to any such third party set out above, although such bid proposal would otherwise qualify as the best Proposal in accordance with the Contract. It shall be the responsibility of the Department to determine which projects are so financed in part by third parties, such information being available upon request from the Department.

3. *PROPOSAL STIPEND*

A stipulated fee of **$65,000** will be awarded to each eligible Design-Builder on the short-list that provides a responsive bid, but unsuccessful, Proposal. If a contract award is not made, all Design-Builder's on the short-list that submits a responsive Proposal shall receive the stipulated fee. If the Department chooses to continue the process by revising, modifying, or issuing a new RFP, or issuing a Best and Final Offer, the stipend will only be paid to each eligible responding to the additional request and/or requirement. The

K. CHANGES IN DESIGN-BUILDER'S ORGANIZATION AFTER SUBMITTAL OF SOQ

Key Personnel identified in the SOQ shall not be modified in the Technical Proposal without written approval of the Department. Any request for modification shall be sent to the Department Alternative Contracting Assistant Director. The written approval to modify the Key Personnel shall be included in Technical Proposal Response Category I. Failure to comply with this requirement may be justification for removing the Design-Builder from further consideration for this Project.

The must submit with any request the same information about the proposed Principal Participant or team member that was originally required to be submitted in the SOQ, including legal and financial information (pass/fail) and Technical evaluation information. If a Major Participant is being added, deleted, or substituted, the must submit such additional information as may be required by the Department to demonstrate that the changed organization still meets the RFQ criteria upon which short-list selection was based.

L. MODIFYING A PROPOSAL PRIOR TO PROPOSAL DUE DATE

1. ERASURES, INTERLINEATIONS, STRIKEOUTS

If the initial Proposal has been modified by hand-written interlineations, strikeouts, or erasures, **EACH** such alteration must be initialed in blue ink by the signatory to the Technical Proposal and submitted to the Department Alternative Contracting Assistant Director.

2. SUBSEQUENT TO THE INITIAL SUBMITTAL

Subsequent to Proposal submittal, a Design-Builder may submit written modifications identified either by redlined text or on Design-Builder's letterhead indicating the revisions with reference to the Proposal or form section, subsection, paragraph (if applicable) and page number. The Design-Builder must submit with its Proposal modifications an affirmation signed by each of the original signatories that the modifications amend the terms of the Proposal previously submitted and submitted to the Department Alternative Contracting Assistant Director.

M. WITHDRAWING A PROPOSAL

1. BY WRITTEN NOTICE

A Design-Builder may withdraw its Proposal prior to the Proposal due date by submitting written notice to the Department Alternative Contracting Assistant Director on the Design-Builder's letterhead signed by an authorized representative. The notice must

DESIGN-BUILD
RFP CONTRACT BOOK 2
CONTRACT

TENNESSEE DEPARTMENT OF TRANSPORTATION

Region 4 Bridge Bundle

Carroll, Fayette, Haywood, Lauderdale, and Madison Counties – Tennessee

CONTRACT NUMBER: DB1901

November 15, 2019

Addendum #1 January 10, 2020

505 DEADERICK STREET, SUITE 700

NASHVILLE, TN 37243

E-mail: lia.obaid@tn.gov

Telephone Number: 615-532-7522 **Fax Number:** 615-741-0782

3. *DESIGN-BUILDER REPRESENTATIVE*

The Design-Builder's representative for this Project is

_____
Design-Builder's Project Manager

Address: _____

_____

_____

E-mail: _____

Telephone Number: _____

Fax Number: _____

4. *KEY PERSONNEL AND DESIGN PROFESSIONALS*

The Design-Builder's Key Personnel, Design Professionals, shall perform the functions established under the Contract for the duration of the Contract and are listed below.

a. KEY PERSONNEL

Design-Builder's Project Management Personnel (Level "1" Personnel) shall consist of the following:

- Project Manager: _____
- Design Manager: _____
- Construction Manager/Superintendent: _____
- ~~Traffic Engineering Manager:~~ _____
- Traffic Control Supervisor: _____
- Environmental Compliance Manager: _____

b. DESIGN PROFESSIONALS

The Design-Builder's design professionals (Level "2" Personnel) shall consist of the following:

- Prequalified R.O.W. Acquisition/Appraisals~~Utilities Design Engineering/Coordination Supervisor~~: _____
- Design Lead Engineer - Structures: _____
- Design Lead Engineer - Roadway: _____
- Design Lead Engineer – Geotechnical:
- Erosion Prevention/Sediment Control Inspector: _____

5. SUBSTITUTION OF KEY PERSONNEL AND/OR DESIGN PROFESSIONALS

The Parties agree that each Key Personnel, Design Professional and Subcontractor is unique, and that the Department has relied upon their qualifications in selecting the Design-Builder to perform the Contract. Therefore, the Design-Builder shall not replace any Key Personnel or Design Professional during the term of the Contract. Notwithstanding the foregoing, in those limited circumstances in which the Department elects to consider substitutions, the process shall be governed by the provisions of **Design-Build Standard Guidance**. In the event the Department approves a substitution request, the Department retains the right to strictly enforce this Section C.5 in the event of future requests for substitution. No individual substitution approval or pattern of substitution approvals shall constitute a waiver of this requirement. Should the Department, in its sole discretion, elect to authorize a substitution, such authorization shall not relieve the Design-Builder of its sole responsibility under the Contract to complete all work and deliver the Project in accordance with all Contract requirements.

D. DATE OF COMMENCEMENT AND COMPLETION OF SERVICES

1. TIME FOR PERFORMANCE

The Contract shall take effect on the Effective Date and shall be performed by the Parties according to its terms, unless earlier terminated, until Final Acceptance by the Department in accordance with **Design-Build Standard Guidance.**

2. COMMENCEMENT OF SERVICES

The Design-Builder is authorized to commence the work within the Contract for post award submittals pursuant to **Design-Build Standard Guidance**. The Design-Builder shall not perform any services beyond post award submittal until the issuance

DESIGN-BUILD

RFP CONTRACT BOOK 3

PROJECT SPECIFIC INFORMATION

TENNESSEE DEPARTMENT OF TRANSPORTATION

Region 4 Bridge Bundle

Carroll, Fayette, Haywood, Lauderdale, and Madison Counties - Tennessee

CONTRACT NUMBER: DB1901

TN TDOT Department of Transportation

November 15, 2019

Addendum #1 January 10, 2020

The Design-Builder shall include all Design Reviews submittals and any resubmittals in the CPM Schedule in order for the Department to appropriately allocate resources for performing the reviews and to track and document any possible schedule impacts. Ten (10) business days shall be allocated in the CPM Schedule for activities requiring the Department's Review and Acceptance, or Review and Comment.

2.2.2 Schedule and Cost Controls

The Design-Builder shall develop procedures for schedule and cost control on the Project, including the management system to be used to control and coordinate the cost and schedule of the work.

The cost control approach shall include a description of the proposed approach for calculating progress performance for preparing the monthly payment requests using the Pay Item activities, Schedule of Items and CPM Schedule.

The Design-Builder shall include a procedure for re-scheduling of its work to achieve schedule recovery objectives and how these objectives will be enforced with its work force and subcontractors.

2.2.3 Liquidated Damages for Failure to Meet Completion Deadline

The Design-Builder shall complete the Project within the time limitations set forth in **Contract Book 2 (Design-Build Contract)** and Special Provision 108B.

If the Design-Builder fails to complete the Project within the time limitations set forth in the Contract, then the Department will suffer substantial losses and damages. The Contract therefore provides that a sum shall be deducted from monies due the Design-Builder, not as a penalty, but as Liquidated Damages, if such completion is delayed.

The Design-Builder shall complete the work in each County within two hundred (**200**) Calendar Days after the construction start date in each County. If the Design-Builder fails to complete all work within that period for a County, a sum of money equal to two thousand (**$2,000**) per Calendar Day shall be deducted from monies due to the Design-Builder, not as penalty, but as Liquidated Damages for that County.

If Design-Builder fails to complete all work specified in the contract on or before the Design- Builder's completion date, set forth in RFP Book 2 Section D.3, a sum of money equal to two thousand (**$2,000**) per Calendar Day ~~for the first thirty (30) calendar days~~ after the Design-Builder's completion date shall be deducted from monies due to the Design-Builder, not as penalty, but as Liquidated Damages.

The Time Value (B) used for calculation of selection is two thousand (**$2,000**) with a minimum value of five hundred (**500**) Calendar Days applied.

2.3 QUALITY MANAGEMENT PLAN

The Design-Builder shall prepare a Quality Management Plan (QMP) in accordance with Section of the **DB Standard Guidance** and the requirements herein. The QMP shall consist of a:

- Design Quality Management Plan
- Construction Quality Management Plan

3. Haywood County - Traffic lanes shall be 12 foot wide with 6 foot minimum width shoulders at a minimum 55 MPH horizontal and vertical design speed on State Route 1 (US 70/79) over Branch at L.M. 2.89

4. Haywood County - Traffic lanes shall be 12 foot wide with 6 foot minimum width shoulders at a minimum 55 MPH horizontal and vertical design speed on State Route 1 (US 70/79) over Muddy Creek at L.M. 2.13

5. Lauderdale County - Traffic lanes shall be 11 foot wide with 4 foot minimum width shoulders at a minimum 55 MPH horizontal and vertical design speed on State Route 87 over Overflow at L.M. 3.88

6. Madison County - Traffic lanes shall be 11 foot wide with 4 foot minimum width shoulders at a minimum 45 MPH horizontal and vertical design speed on State Route 223 (Shady Grove Road) over Branch at L.M. 2.28

The Design-Builder shall submit plans as outlined in the TDOT Design Guidelines to the TDOT Structures Division for Grade Approval.

The Design-Builder shall be responsible for preparation of final signed and sealed construction plans used to construct the proposed improvements. They shall be prepared in accordance with TDOT's Roadway Design Guidelines and the previous design standards referenced in this section.

If the Design-Builder wishes to change the horizontal or vertical alignment or deems that additional ROW, Permanent or Temporary Easement is needed outside of the limits shown on the Functional (30%) Roadway Plans (See Appendix B), they shall be responsible for any and all additional environmental technical studies and completion of the re-evaluation(s) of the NEPA document, modification and approvals to the ROW appraisals and acquisitions, utilities coordination/relocation and any environmental permits necessary.

If the Design-Builder wishes to shift the horizontal alignment by greater than 5 feet from what is shown in the Functional (30%) Plans, the Design-Builder shall submit an ATC.

Roadway construction and closures shall be phased in accordance with Section 9.3 Maintenance of Traffic, Special Provision 108B and the Design Criteria (See Appendix A). Access to all side roads and private drives shall be maintained throughout the duration of construction.

The Design-Builder shall identify the need for any special roadway design details (i.e. any special drainage structures, rock embankment, special guardrail, retaining walls, concrete barrier designs, etc.) and shall provide special design drawings to the Department for Review and Acceptance.

The Design-Builder shall ensure that all applicable "General and Special Notes" found in Section VI of the current edition of the TDOT Roadway Design Guidelines are adhered to during construction.

The geometric configurations of all roadway components shall be designed to provide adequate drainage and prevent hydroplaning (during construction and when complete). Cross slopes shall be in accordance with the requirements of the design criteria included in the Appendix A. Design-Builder is to provide hydraulic calculations (including spread calculations) to the Department.

All proposed slopes associated with the roadway shall be sodded.

All permanent and temporary safety appurtenances (sign supports, guardrail, barrier rail, impact

4. STRUCTURES

The Design-Builder shall be responsible for the design and construction of all structures within the Project limits including retaining walls (if required) as further described below.

The Design-Builder shall be responsible for the removal and disposal of all existing bridges. All material shall be disposed of excluding precast concrete channel beams at Bridge ID 09S821330001 (Carroll County), Bridge ID 24015420001 (Fayette County), and Bridge ID 57S81960003 (Madison County) shall be salvaged and stockpiled per TDOT Standard Specifications for Road and Bridge Construction Section 202. Contact Stan Reynolds at (731)935-0247 for coordination of precast concrete channel beam salvage and storage.

Upon completion of the Project, the Design-Builder shall provide TDOT Structures Division a final revised set of plans for all structures (bridges, walls, etc.). The plans shall be delivered electronically (each sheet an individual PDF file).

The Design-Builder shall be responsible for the design and construction of six (6) structure sites listed previously in Carroll, Fayette, Haywood, Lauderdale, and Madison Counties in Region 4.

The Design-Builder shall be responsible for the design and construction of all structures necessary to complete the Project.

The Design-Builder shall also be responsible for evaluation of existing bridges and for any strengthening or shoring required during construction phasing.

New bridge elements shall be designed using the AASHTO Load and Resistance Factor Design (LRFD) Bridge Design Specifications, Eighth Edition (2017), and the AASHTO Guide Specifications for LRFD Seismic Bridge Design, Second Edition (2011) with all interims.

The Design-Builder shall adhere to the Department's Standard Specifications for Road and Bridge Construction (2015 Edition) for construction materials and methods.

Design Requirements

~~Accelerated Bridge Construction (ABC) methods may be used, but must be approved in writing by the Department.~~

Girders shall be continuous for live loads for pre-stressed girders, and continuous for all loads for structural steel girders. Structural steel shall be A709 (50 kilo pound per square inch [ksi] minimum yield strength) weathering steel I- girders. The minimum final concrete beam strength shall be 5,000 pounds per square inch (psi). Any deviation from allowable superstructure types shown in the Design Criteria (see Appendix A), will require an ATC.

The new bridges shall be designed for HL-93 live loading. The bridge design shall include 35 pounds per square foot (psf) for a future wearing surface.

For all bridges, the Design-Builder shall perform a hydraulic analysis for bridge deck drainage and shall meet the criteria in the TDOT Design Procedures for Hydraulic Structures.

Approach slabs will be required at all bridge sites.

The reuse of existing substructures for retaining walls, abutments or other structural elements for use in a temporary condition or final design condition shall be submitted by the Design-Builder as an ATC.

Structures designed as Box Culverts or Box Bridges by the Design-Builder will be allowed to be precast. Box Culverts or Box Bridges shall be designed hydraulically with the fewest number of cells as possible that will satisfy the Design Criteria (see Appendix A),

Existing utility conduits attached to existing bridges are to be removed and replaced. Relocated utilities shall not be placed on the cantilevers of new structures. They shall be placed between the beams so they are out of view from the traveling public. The utilities shall be relocated as indicated by other sections in this RFP.

The Design-Builder shall submit shop drawings for bridge components, erection plans and calculations for concurrence by the Department. For demolition of the existing bridges, the Design-Builder shall submit demolition plans and calculations for concurrence by the Department. The shop drawings, erection plans, and demolition plans shall be submitted in a timely manner allowing ten (10) calendar days for the Department's review.

The Design-Builder shall conduct and submit a load rating analysis for each of the new bridges that are to be constructed. The load ratings are to be completed and approved before completion of the project. They shall be submitted in a format to be concurred with by the Department.

All exposed surfaces of the parapets, slab cantilevers, concrete beams surfaces, abutment beams, end walls, wing walls, bent caps, and columns of the bridges shall receive a texture finish, mountain grey, AMS STD-595 Color No. 36440 except the top and traffic face of the parapets which shall be white, AMS STD 595 Color No. 37886.

Drilled shafts shall be constructed according to Special Provision 625 Drilled Shaft Specifications.

The bridges shall be constructed while maintaining the minimum number of lanes open to traffic or detouring traffic during construction in accordance with Section 9.3 Maintenance of Traffic. The minimum vertical and horizontal clearances shall be maintained during construction as specified in this RFP and TDOT's Standard Specifications for Road and Bridge Construction.

Temporary lane closures and detours will be permitted during the setting of beams for the bridges. See Section 9.3 Maintenance of Traffic for details and submittal requirements for temporary traffic disruptions.

Bridges shall be designed and detailed according to current TDOT Structures Policies.

Any required retaining walls shall be built in accordance with Special Provision 624, Retaining Walls.

All retaining wall finish requirements for retaining walls visible to the public and traffic shall receive an ashlar stone finish. Retaining walls not visible to the public or traffic shall receive a Class II, Rubbed Finish as specified in the TDOT specifications.

Retaining walls being constructed in sensitive environmental areas or areas close to existing streams shall adhere to the environmental requirements set forth in the RFP.

Hazardous Materials

An Asbestos Containing Material (ACM) survey was conducted on each bridge identified for replacement in the Project Description. No ACM was detected at any of the bridge sites. No special accommodations for demolition and waste disposal are anticipated for these structures and the material can be deposited in a C&D landfill. Prior to the demolition or rehabilitation of any structure (bridge or building), the contractor is required to submit the National Emission Standards for Hazardous Air Pollutants standard 10-day notice of demolition to the TDEC Division of Air Pollution Control (per TDOT Standard Specifications for Road and Bridge Construction (January 1, 2015) Sections 107.08 D and 202.03).

Lead/Chromate Paint

TDOT maintenance records indicate the existing bridges at sites LM 2.13 SR-1 Haywood County, LM 2.89 SR-1 Haywood County, and LM 3.88 SR-87 Lauderdale County were originally painted with materials containing lead and/or chromates. The contractor is required to proceed accordingly to take all mandatory safeguards prescribed by state and federal law for both worker protection and hazardous materials disposal.

Cutting steel with lead/chromate paint: when structural steel coated with lead and/or chromate-based paints are to be severed using thermal cutting methods, the areas to be cut shall first be cleaned to bare metal by abrasion.

8.3 PERMITS

The Department has not, nor will the Department, procure environmental permits for the Design-Builder. The Design-Builder shall determine all of the environmental permits required in order to perform the work.

The Design-Builder shall be solely responsible for and obtain any necessary building, demolition, grading, and environmental permits or approvals, including but not limited to archaeology, ecology, historical, hazardous materials, air and noise, TDEC ARAP Section 401, USACE Section 404, and TDEC National Pollution Discharge Elimination System (NPDES) permits, from federal, state and/or local agencies required for the construction of the project and regarding any material and staging areas and the operation of any project- dedicated asphalt and/or concrete plants, and any waste or borrow areas that will be used. Any such permits shall be supplied to the Department's Region 4 ETO prior to the commencement of activities in the permitted area(s).

The Design-Builder is responsible, under the laws and regulations listed above, to avoid and minimize, to the maximum extent practicable, impacts to Waters of the State and/or Waters of the U.S. when designing and constructing the project. Avoidance and minimization of impacts are beneficial to the Design-Builder because such actions avoid or reduce the amount of compensatory mitigation that may be required to obtain water quality permits prior to construction.

The Department's Region 4 ETO and Environmental Division Permits Section shall be included in all correspondence and/or negotiations with agencies.

The Design-Builder shall obtain and pay for all regulatory permits as required by applicable laws, the plans, or contract specifications. This includes all permits required for the construction of the project and for stormwater discharges associated with construction support activities including, but not limited to: equipment staging yards, material storage areas, excess excavated materials disposal, demolition disposal (waste) areas, and borrow areas. These areas are to be addressed in accordance with the TDOT Waste and Borrow Manual (May 15, 2017 Version). The Design-Builder shall be cognizant of and adhere to the requirements of the various permits that will be necessary for construction and operation of the Project

- Description of how the ROW and adjacent properties will be maintained and protected, including the intended measures to be used to mitigate and minimize noise, vibration, light, dust, erosion/run-off and local road damage.

Temporary Lane/Road Closure

The Design-Builder shall maintain traffic via staged construction maintaining one (1) traffic lane ~~in each direction~~ or by two-lane and two-way diversion at all project sites except LM 2.28 SR 223, Madison County, where road closure and a detour is allowed. For project sites LM 0.68 SR-436, Carroll County and LM 3.88 SR-87, Lauderdale County, a minimum lane width of sixteen (16) feet shall be maintained at all times during construction. A temporary road closure may be allowed for project sites LM 11.48 SR-193, Fayette County and LM 0.68 SR-436, Carroll County with prior approval by the Department. Closures at these sites shall be limited to nights and weekends only. Weekend closures will limited to three weekends for the duration of the project site construction. Note, detours in excess of twenty-five (25) miles in length require approval through re-evaluation of the NEPA document (see Section 8.0 Environmental for more information). Where two-lane and two-way diversions are utilized, minimum lane widths shall be ten (10) feet and minimum shoulder widths shall be two (2) feet unless otherwise required by the Design Criteria (see Appendix A).

All temporary road closures and detours must be approved by the Department in advance. For temporary road closures and detours, request for approval must be sent to the Department fourteen (14) calendar days in advance of the temporary road closure and detour.

No less than fourteen (14) calendar days prior to the temporary closure of the road, the Design-Builder shall notify the following individuals or agencies completely describing the affected roads and the approximate duration of the construction: these parties include, but are not limited to: i) local law enforcement office, ii) local fire department, iii) ambulance service, iv) U.S. Postal Service and other local delivery services, v) local road superintendent, vi) railroad company (if applicable), vii) local county hospitals, viii) local school superintendent, and ix) TDOT's Region 4 Traffic Management Center (TMC).

Temporary Marking, Detours, Lane Shifts and Median Cross-overs

Temporary marking shall adhere to guidance outlined in Section IV of current edition of the Department's Roadway Design Guidelines for pavement markings except as noted below. The minimum temporary pavement marking width shall be four (4) inches. Temporary pavement markings to be utilized for less than seven (7) business days may be painted. Temporary pavement markings to be utilized for seven (7) business days or more shall be spray thermoplastic or tape.

Temporary pavement line markings on intermediate layers of pavement shall be reflective tape or reflectorized paint installed to permanent standards at the end of each day's work. Short, unmarked sections will not be allowed.

The temporary pavement marking on diversions and lane shifts shall be installed and maintained to the same standards as for permanent markings on the main roadway. These markings shall be in place prior to allowing traffic onto the pavement.

Before opening diversions and lane shifts to traffic, the transitional markings on the existing roadway must be in place. All existing markings in the area of these transitional markings shall be obliterated and all existing raised pavement markers shall be removed to eliminate conflicting markings.

All temporary lane shifts and diversions shall be paved, striped, signed and flexible drums and/or vertical panels are to be in place before it is opened to traffic.

Region 4 Bridge Bundle
Bridge Replacement Projects

Appendix A

STRUCTURE DESIGN CRITERIA

January 10, 2020

GENERAL INFORMATION	
Design Specification	AASHTO LRFD Bridge Design Specification
TDOT Design Requirements	TDOT Design Guidelines, TDOT Structural Design Memoranda
Method of Design	Load and Resistance Factor Design
Live Load	HL-93
LL Deflection	Span/800 (w/o sidewalks) Span/1000 (w/ sidewalks)
Deck Design f'c	4000psi (SMO 49)
Required Concrete Deck Thickness	8.25 in
Allowable Bridge Superstructure Types	Prestressed I-Girder, Spread Box Girder, and Steel Girder
Supplemental DL	
Future Wearing Surface	35 psf (std. note A-2)
Stay-in-place Forms	19psf (Std. Spec. 604.05(j))
Seismic	
Seismic Design Category	"C"
Operational Classification	Essential
HYDRAULIC DESIGN	Design Procedures for Hydraulic Structures
Design Flood	The design flood event is the equivalent event which would overtop the roadway. The proposed design event should be equal to or higher than the existing design event as determined by hydraulic modeling. The minimum design flood event for crossings on State Routes is the 10 year frequency. The requirement for a minimum design flood event of a 10 year frequency will not apply to the LM 2.28 SR-223, Madison County site. ~~10 Year (<1' rise from Natural Conditions)~~
Low Girder Clearance	Proposed structure should be sized such that flood elevations for the design event will be equal to or lower than existing conditions. Proposed backwater elevations shall not be higher than existing backwater elevations. For LM 11.48 SR-193 Fayette County, LM 2.89 SR-1 Haywood County, and LM 3.38 SR-87 Lauderdale County sites, a minimum freeboard of 1' at the design event shall be provided. Proposed scour depths should be determined and the foundation design should accommodate proposed scour as per the AASHTO Bridge Design Specifications. ~~Min. 1' from 10-Year Flood~~
Bridge Hyd. Modeling	HEC-RAS (Version 4.1 or more recent)
~~Design Flood Exceptions~~	~~THM-03-5/5 (ADDENDUM)~~
Scour	500-Year event
FEMA (Sites - LM 0.68 SR-436, Carroll County and LM 2.13 SR-1, Haywood County Only)	Designs must meet conditions of CFR Part 60.3 and 65.12 as outlined in the RFP. It was determined that the proposed structure in the functional plans could be constructed with no increases to Base Flood Elevation (BFEs), as defined in the Existing Conditions model performed during the preliminary hydraulic analysis. Minor increases in the BFEs may be allowed of up to 0.05 feet if criteria is met as outlined in the RFP.
Railroad Considerations (LM 2.13 SR-1, and LM 2.89 SR-1, Haywood County)	Design shall meet requirements of the CSXT Public Projects Manual and have no adverse effects to the existing Railroad Hydraulic Structures. Design-Builder shall coordinate with the Railroad during the design phase for the proposed design and hydraulic analysis.