

### STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

Construction division
SUITE 700, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TN 37243
(615) 741-2414

JOHN C. SCHROER COMMISSIONER BILL HASLAM GOVERNOR

August 24, 2018

**ADDENDUM #1** 

Re: I- 75 Interchange @I-24 Hamilton County Contract No. DB1801

#### To Whom It May Concern:

This addendum revises the RFP Contract Book 1 and Book 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,

Assistant Director of Construction

Construction Division

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

TENNESSEE DEPARTMENT OF TRANSPORTATION

Interstate I-75 at Interstate I-24 Interchange Modification

**Hamilton County- TENNESSEE** 

**CONTRACT NUMBER: DB1801** 



July 27, 2018

Addendum #1 August 24, 2018

Deadline for Submittal of Alternate Technical Concepts (Dependent on Completion the NEPA Document)	On or before  September 21October  5, 2018  4:00 p.m., CT.
Deadline for Response to Alternate Technical Concepts,	October 5-October 19, 2018 4:00 p.m., CT.
Deadline for Submittal of Question Requests, and Requests for QPL Determination	September 28October 12,2018 4:00 p.m., CT.
Anticipated Deadline for Issuance of Last Addendum	October12 November 2, 2018 4:00 p.m., CT.
Technical Proposal and Price Proposal  Due Date and Time	October 26-November 9, 2018 4:00 p.m., CT.
Public Price Proposal Opening	November 16November 30, 2018 10:00a.m., CT.
Anticipated Award of Design-Build contract, or rejection of all proposal	On or before December 14, 2018
Anticipated Issuance of Initial Notice to Proceed	January 7, 2019

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.

#### 6. CONTRACT DOCUMENTS

- Contract Book 1 (ITDB Instructions to Design-Builders);
- Contract Book 2 (Design-Build Contract);
- Contract Book 3 (Project Specific Information);
- Design-Build Standard Guidance and Addendum;
- The Department Standard Specifications;
- The Department Supplemental Specifications;



## DESIGN-BUILD RFP CONTRACT BOOK 3 PROJECT SPECIFIC INFORMATION

#### TENNESSEE DEPARTMENT OF TRANSPORTATION

Interstate 75 at Interstate 24 Interchange Modification Hamilton County- TENNESSEE

**CONTRACT NUMBER: DB1801** 



**July 27, 2018** 

Addendum #1 August 24, 2018

- An existing 24-in. reinforced concrete pipe at STA. 328+45.91 +/-, 104.94-ft. RT +/-, which collects runoff from the I-75 southbound off-ramp at Ringgold Road and ultimately drains into the drainage system surrounding Bass Pro Shops. The drainage area at the outfall of the 24-inch pipe is 3.99 Acres.
- An existing 60-in. storm sewer system at STA. 2306+29.11 +/-, 353.02-ft. RT +/-, which collects runoff from west of the I-75 southbound on-ramp at Ringgold Road and the eastern cloverleaf for Ringgold Road and drains into the drainage system surrounding Bass Pro Shops, ultimately draining to West Chickamauga Creek. The drainage area at the outfall of the 60-inch pipe is 27.85 Acres.
- An existing 18-in. reinforced concrete pipe at STA. 2357+46.25 +/-, 24.01-ft. RT +/-, which collects runoff from the I-24/I-75 interchange and drains southeast into a low wetland area, ultimately draining into West Chickamauga Creek. The drainage area at the outfall of the 18-inch pipe is 5.22 Acres.
- An existing 54-in. reinforced concrete pipe at STA. 929+97.62 +/-, 90.48-ft. RT +/-, which collects runoff from the I-24/I-75 interchange, as well as, receives outflow from another 54-in. reinforced concrete pipe draining the Eastgate Towncenter area and is metered by an existing storm water pump station operated by City of Chattanooga (identified as Pump Station #1 in original TVA construction plans). Combined flows drain southeast into a low wetland area, ultimately draining into West Chickamauga Creek. The drainage area at the outfall of the 54-in. pipe is 159.10 Acres.
- An existing 8-foot x 8-foot reinforced concrete box at STA.442+27.59 +/-, 122.93-ft. RT +/- which collects runoff from a portion of Brainerd Subdivision as well as the CSX Railroad ROW and drains southeast, ultimately flowing into South Chickamauga Creek. The drainage area at the outfall of the 8-ft. x 8-ft. box is 72.87 Acres.

The re-use of existing drainage structures, pipes, etc. (except underdrains) within the Project limits is encouraged by the Department provided the facilities meet the requirements of the Contract and are not impacted by construction activities.

The use of blind junctions and/or non-accessible structures shall not be allowed unless otherwise approved in writing by the Department. The Design-Builder shall not install and/or utilize longitudinal storm sewer pipes under travel lanes unless otherwise approved in writing by the Department. If no modification or upgrading of the existing stormwater management system is required, the Design-Builder shall, at a minimum, maintain the existing system. This maintenance includes, but is not limited to, silt removal from any pipe, ditch, or structure, and removal of any debris prior to the use of any existing stormwater system. This maintenance shall be at the Design-Builder's expense.

Damage to existing infrastructure due to the Design-Builder's operation shall be immediately repaired to maintain existing system capacity at all times. This permanent repair shall be at the Design-Builder's expense.

The Design-Builder shall video inspect and verify existing drainage systems that are to remain, are clean, operable and structurally adequate. Any repairs, replacements, debris removal and/or deficiencies shall be corrected by the Design-Builder. The most current information available to the Department for the existing drainage systems for the Project include a field-run topographic survey of the existing horizontal and vertical alignments, storm pipe inverts, and pipe material type.

The Design-Builder shall analyze existing storm drainage systems, culverts (boxes and cross pipes), and open channels impacted or affected by the Project design.

The Design-Builder shall replace or supplement any pipes or culverts that are deemed hydraulically or structurally deficient in the existing condition or as a result of this Project.

Only pipes within the defined Project limits are subject to be replaced or supplemented.

The Design-Builder shall replace damaged, destroyed, missing, or permanently attached castings on existing drainage structures. This shall include, but is not limited, to any structure located within the proposed roadway that is not already being modified or addressed within the proposed drainage work or a structure which is within the resurfacing limits, which is not being affected by any proposed drainage work.

The design of new, or modifications to existing (where feasible), hydraulic structures shall conform to HEC 26, Culvert Design for Aquatic Organism Passage.

#### Floodplain Requirements

The Project will impact multiple FEMA-regulated special flood hazard areas (SFHAs) situated within two separate participating FEMA Communities: East Ridge and Chattanooga. The Design-Builder shall make every effort to design the Project to follow FEMA regulations in FEMA-regulated floodplains, according to requirements listed in Code of Federal Regulations (CFR) Parts 59, 60, 65, and 70. This design may include but is not limited to: bridge structures over streams, culverts over streams, increasing the tie slope, and/or utilizing retaining walls to reduce fill in the floodplain.

The Design-Builder shall make every effort to design the project to meet conditions of CFR Part 60.3 and 65.12, which state that encroachments to regulatory floodways must not cause increases to Base Flood Elevations (BFEs), floodway elevations, or floodway widths greater than 0.00 feet. A preliminary hydraulic modeling analysis was performed based on the design shown in the Functional Plans. It was determined that minimal increases to Base Flood Elevations (BFEs) can be achieved compared to Updated Existing Conditions and Proposed Conditions BFEs are lower than Effective Conditions. If, during the design process, it becomes apparent that due to environmental or other design constraints, the requirements listed in of CFR Part 60.3 and 65.12 cannot be met by the Design-Builder, then minor increases in BFEs up to 0.05 feet may be allowed if it can be demonstrated by the Design-Builder that flood damages to adjacent properties or structures will not be caused by the increases. All floodplain hydraulic analyses and Hydraulic Reports shall be reviewed by the Department and courtesy copies shall be provided to the local communities. If determined by the Department and/or local Floodplain Administrators that a Conditional Letter of Map Revision (CLOMR) is required, local community approval and the subsequent submission to FEMA shall occur as early in the Project timeline as possible, and the Design-Builder shall be responsible for engineering fees and application fees. The Design-Builder shall allow up to one year in the schedule for FEMA approval of any required CLOMR review. Regardless of whether a CLOMR is required, the Design-Builder will be required to submit an application for a Letter of Map Revision (LOMR) to FEMA within six (6) months of completion of construction in order to document final changes to BFEs and floodways. The LOMR submittal shall be based on certified as-built survey data of the completed project, and the Design-Builder shall be responsible for engineering fees and application fees.

All existing sign footings shall be removed 12 inches below ground line or 12 inches below top of subgrade if located within the proposed roadway or shoulder.

The Design-Builder shall verify all support lengths at the site prior to erection.

All guide signing shall be mounted on new Overhead Sign Structures. The Design-Builder shall design the structure to support signs across the entire length of the travel way.

All sign sheeting shall be Type 3 Prismatic or better. All existing signs that do not meet the retroreflectivity requirements shall be replaced. All yellow reflective warning signs on I-75, interstateto-interstate ramps, and ramps shall be fluorescent yellow.

The Design-Builder shall furnish layout drawings of all extruded panel signs with spacing of all letters, numerals, shields, and arrows. The layout drawings shall be reviewed by TDOT Traffic Operations Division prior to construction/installation.

All permanent signing plans; Signing Layouts, Sign Schedules, Overhead Structures Drawings & Miscellaneous Detail Sheets shall be reviewed by the Department prior to ordering and construction/installation.

Emergency Reference Markers shall be installed on Project per details provided by the Department.

All existing post-mounted signing shall be removed and replaced with new sign faces and new breakaway supports (refer to Signing and Marking Roll Plot for guidance).

Emergency Reference Markers shall be installed on Project per details provided by the Department.

See Phase 1 and Ultimate Signing and Marking Roll Plots as provided on the Project Website for guidance.

#### **Overhead Sign Structures**

All overhead sign structures shall be constructed to meet the ultimate design configuration. See Phase 1 and Ultimate Signing and Marking Roll Plots.

All guide signing shall be mounted on new Overhead Sign Structures. The Design-Builder shall design the structure to support signs across the entire length of the travel way.

All Cantilever Sign Structures shall be removed and shall be replaced with new Overhead Sign Structures.

All Overhead Sign Structures shall be designed per LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals and reviewed and concurred with by TDOT Structures Division prior to construction.

All existing Overhead Sign Structures shall be replaced with new Overhead Sign Structures.

See Phase 1 and Ultimate Signing and Marking Roll Plots as provided on the Project Website for guidance.

#### O TRAFFIC SIGNALS

No new traffic signals or signal modifications are proposed under this scope of work. In the event that the Design-Builder impacts any existing traffic signals during project construction or for

#### **APPENDIX A - PAVEMENT DESIGN**

DATE: 06/07/18 **FULL DEPTH DESIGN FOR I-75** ROUTE: I-75/I-24

COUNTY: HAMILTON PROJ NO: 33005-0176-44 FED PROJ IM/NH-75-1(131)

DESCRIPTION: 1-75 INTERCHANGE MODIFICATION @ I-24

TOTALS

#### **PAVEMENT DESIGN SECTION A**

ROADWAY & INSIDE SHOULDER DESIGN

DESCRIPTION THICKNESS

411-03.10	ACS (PG76-22) GR "D"	1.25
307-03.08	AC MIX(PG76-22) GR "B-M2"	2.00
307-03.01	AC MIX(PG76-22) GR "A"	7.00
		0.05
307-01.22	PERF AC (PG76-22) GR"A-5	3.25
303-01	MINERAL AGG BASE GRADING "D"	12.00

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OUTSIDE SHOULDER DESIGN

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	DESCRIPTION	THICKNESS
411-01.07	ACS (PG64-22) GR "E"	1.25
307-01.08	AC MIX (PG64-22)GR "B-M2"	2.00
303-01	MINERAL AGG BASE GRA "D"	22.25
	TOTALS	25.50

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REMARKS: 1) 7" OF PERF."A-MIX" TO BE APPLIED AT TWO EQUAL LIFTS

- 2) SUBSURFACE DRAINAGE AGGREGATE UNDERDRAIN W/PIPE
- 3) MILL 1.25 FROM THE EXISTING PAVEMENT AND OVERLAY WITH 1.25' OF "D" MIX AND 2.0" OF "B-M2" MIX WHERE NEEDED.

25.50

DATE: 06/07/18 CONCRETE DESIGN FOR 1-75 ROUTE: I-75/I-24

COUNTY: HAMILTON PROJ NO: 33005-0176-44 FED PROJ IM/NH-75-1(131)

DESCRIPTION: I-75 INTERCHANGE MODIFICATION @ I-24

#### **PAVEMENT DESIGN SECTION B**

#### ROADWAY DESIGN

	DESCRIPTION	THICKNESS
501-01	PORTLAND CEM CONC (PLAIN)	13.00
313-03	TREATED PERMEABLE BASE	4.00
303-01	MINERAL AGG BASE GRADING "D"	6.00
=========		
	TOTALS	23.00

#### SHOULDER DESIGN

	DESCRIPTION	COEFFICIENT	THICKNESS
=========	==========		========
501-01	PORTLAND CEM CONC (PLAIN	)	13.00
313-03	TREATED PERMEABLE BASE		4.00
303-01	MINERAL AGG BASE GRADING	"D"	6.00
		========	

REMARKS: 1) SUBSURFACE DRAINAGE - AGGREGATE UNDERDRAIN W/PIPE

DATE: 06/07/18 RAMPS ROUTE: 1-75 /I-

24COUNTY: HAMILTON PROJ NO: 33005-0176-44 FED PROJ IM/NH-75-1(131)

DESCRIPTION: I-75 INTERCHANGE MODIFICATION @ I-24

#### PAVEMENT DESIGN SECTION C (Ramps D,F,G, and H)

#### ROADWAY DESIGN

	DESCRIPTION	THICKNESS
501-01	PORTLAND CEM CONC (PLAIN)	10.00
313-03	TREATED PERMEABLE BASE	4.00
303-01	MINERAL AGG BASE GRADING "D"	6.00
	TOTALS	20.00

#### SHOULDER DESIGN

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	DESCRIPTION	COEFFICIENT	THICKNESS
501-01	PORTLAND CEM CONC (PLAIN)		10.00
313-03	TREATED PERMEABLE BASE		4.00
303-01	MINERAL AGG BASE GRADING	"D"	6.00
	TOTALS		20.00

REMARKS: 1) SUBSURFACE DRAINAGE = AGGREGATE UNDERDRAIN W/ PIPE

PAVEMENT DESIGN MAINLINE AND INTERSTATE TO INTERSTATE RAMPS										
Alignment Location	Location	Roadway					Inside Shoulder	Outside Shoulder	C	
	Locaton	New Alignment	Overla	iy .	Widening	Concrete Repair	I maine augurder	Outside Shoulder	Comments	
I-75 (Segment 1)	Mainline	N/A	A	(2)	A	N/A	A	(1)	A	(3)
I-75 (Seament 2)	Mainline	N/A	A	(2)	A	N/A	A	(1)	A	(3)
I-75 (Segment 3)	Mainline	A	A	(2)	A	N/A	A	(1)	A	(3)
1-75 (Segment 4)	Mainline	N/A	A	(2)	В	В	В	-1-6-	В	(3)
I-24 (Segment 3)	Mainline	N/A	Α	(2)	A	N/A	A	(1)	Ä	(3)
NB I-75 to WB I-24	Interstate to interstate Ramp	A	Α	(2)	A	N/A	A	(1)	A	(3)
SB I-75 to WB I-24	Interstate to Interstate Ramo	N/A	Α	(2)	A	N/A	A	(1)	A	(3)
EB I-24 to SB- I-75	Interstate to interstate Ramp	A	A	(2)	A	N/A	A	(1)	A	(3)
EB (-24 to NB- 1-75	Interstate to Interstate Ramp	A	A	(2)	A	N/A	A	(1)	A	(3)

- (1) Inside shoulder pavement same as full depth roadway (2) See remarks on pavement design for overlay minimum thickness (3) Aggregate underdrain w/pipe

PAVEMENT DESIGN RAMPS								
Alignment	Alignment Location Roadway Inside Shoulder Outside Shoulder							
Ramp 'A'	Ringgold Rd. Interchange	A	A (1)	A.	(2)			
Ramp 'B'	Ringgold Rd, Interchange	A	A (1)	A	(2)			
Ramp 'C'	Ringgold Rd. Interchange	A	A (1)	A	(2)			
Ramp 'D'	Ringgold Rd /Rest Area to NB I-75	С	С	С				
Ramp 'E'	Ringgold Rd. Interchange	A	A (1)	A	(2)			
Ramp 'F'	Rest Area	С	С	С				
Ramp 'G'	Rest Area	С	С	C				
Ramp 'H'	Slip Ramp	С	C	C				

- (1) Inside shoulder pavement same as full depth roadway (2) Aggregate underdrain w/pipe

#### APPENDIX B – REFERENCE DOCUMENTS

All documents have been published on the Department's project website:

https://www.tn.gov/tdot/tdot-construction-division/transportation-construction-alternative-contracting/transportation-construction-division-alternative-contracting-design-build-i.html

#### **DOCUMENT**

- > Functional Design
  - Functional Plans
    - o Functional Plans
    - o Functional X-Sections
    - o Signing and Marking Layout (Phase 1)
    - o Signing and Marking Layout (Ultimate Build-out)
    - o Lighting Layout
    - o ITS Layout
    - o Utilities Roll Plot
  - Walls and Bridges
    - o I-75 NB over Spring Creek
    - o I-75 SB over Spring Creek
    - o I-75 NB over I-75 NB to I-24 WB
    - o I-75 SB over I-75 NB to I-24 WB
    - o I-75 NB over I-24 EB to I-75 NB
    - o I-75 SB over I-24 EB to I-75 NB
    - Widening I-75 over South Chickamauga Creek
    - o Spring Creek Road over I-24 EB
    - o Spring Creek Road over I-24 WB
- > Environmental Documents
  - NEPA Document
  - Environmental Commitments
  - TDOT Waste and Borrow Manual (2017)
- > Technical Support
  - Preliminary Drainage Analysis
  - Geotechnical Reports
  - TDOT Bridge Inspection Reports
  - TDOT Bridge Deck Surveys
  - Traffic Count Data
  - Survey Files
  - Existing ITS Inventory