

Concept Report Form

The Concept Report Form develops an initial project vision, basis of design and report (e.g., the Concept Report) to transition into the subsequent design stages (Stages 1 through 4 in the Project Delivery Network [PDN]). This form summarizes all project components using information to complete the Concept Report.

General Project Information

Project Name	Interstate 24 Westbound - Bridge over Shellmound Rd									
PIN	130900.00									
Route Information	Route	NHS (Y/N)	Functional Class		City			County		
	I-24 WB	Yes	Rural Interstate					Marion		
Project Information	Begin Log Mile	End Log Mile	AADT¹	Design Hour Vol. (DHV)¹	Truck %¹	Design Speed (MPH)	Posted Speed (MPH)	Base Year	Design Year	
	1.29	1.40	1,930	232	2.00	40	30	2026	2046	
Project Description & Standard Drawings Used	A field review was held for the above-mentioned project on August 3, 2021. The proposed bridge is to be a 120' long concrete beam bridge with 3 spans and a maximum span of 60'. The typical section on the proposed structure will consist of 2-12' lanes with a 24' inside shoulder, which can accommodate a future travel lane, a 12' outside shoulder, and concrete parapets for an out-to-out width of 61' 3". The proposed finished grade of the bridge will need to be raised approximately 3' to increase the clearance to 16' 6". The roadway centerline will be shifted 18' and the structure centerline will be shifted 24', both to the south. Standard RD11-TS-5A								Project Details	
Important Project History or Related Projects	The replacement of the Shellmound Rd Bridge over I-24 EB (Pin# 130902.00) located 0.25 miles south of the proposed I-24 WB Bridge over Shellmound Rd will need to be considered when scheduling construction. Existing bridge specifications: 3 span, 106' long, 40' 4" out-to-out, 15' 6" clearance, 32 tons load limit. Marion County Highway Department is planning to resurface Shellmound Rd in 2023.									
Project Purpose/Need	The need to replace this bridge is due to the present condition of the existing bridge: - Built in 1965. - Sufficiency rating is 74.9 (FAIR) – July 14, 2020 - Typical section does not meet current TDOT standards.									
Major Environmental Considerations	There are no major environmental considerations.									

Multi-Modal Considerations	- Shellmound Road under the proposed bridge will feature a 60’ span which is wider than the existing 42’ span and will better accommodate pedestrian and bicycle traffic traveling along the shoulder. TDOT Multimodal Project Scoping Manual, Roadway Design Guidelines, MM-TS-1, MM-BPR-1			
Major Project Risks	Utilities: Distribution lines, communications cable			
Concept Estimate and Timeline	Total Current Project Cost		Construction Year Estimate	Preliminary Estimates
	\$ 20,200,000		\$ 25,800,000	
	Proposed Construction Year		Estimated Construction Duration	
	2027		TBD	

¹ Traffic numbers reflect identified design year

Approvals

Executed for approval of this Concept Report


 Steve Allen (Nov 18, 2022 05:19 CST)

Nov 18, 2022

STID Director

Date

The following individuals to execute if a bridge concept report:

APPROVED
 By Ted A. Kniazewycz at 6:04 pm, Nov 19, 2022

11/19/2022

Structures Director

Date


 Regional Project Development Director

12/12/2022

Date


 Bureau Chief of Engineering

Feb 7, 2023

Date

PRESTON J ELLIOTT Digitally signed by PRESTON J ELLIOTT
 Date: 2022.12.12 12:46:04 -06'00'

Bureau Chief of Environment and Planning

Date

Action Checklist			
0SD1 Initiate Concept Report and Request Funding			
Complete	NA		Date Completed
	✓	Request and Finalize Safety Data	
✓		Request Project Number, PIN, and Task Profile Numbers	10/02/2020
	✓	Coordinate with Long Range Planning	
✓		Request and Finalize Traffic Data	04/26/2021
	✓	Request Preliminary Survey Data	
✓		Initiate Division Reviews	11/29/2021
✓		Schedule Site Review (with appropriate Divisions)	07/09/2021
0EN1 Conduct Environmental Desktop Review			
Complete	NA		Date Completed
✓		Confirm Environmental Desktop Review is Complete	01/06/2022
0MM1 Conduct Multimodal Review			
Complete	NA		Date Completed
✓		Confirm Multimodal Review is Complete	09/27/2022
✓		Review Multimodal Considerations & Recommendations	09/27/2022
0TO1 Conduct Initial Traffic Ops/TSMO Review <i>(include HQ Traffic Ops and Regional Traffic Office)</i>			
Complete	NA		Date Completed
✓		Confirm Transportation Systems Management & Operations (TSMO) Alignment & Operations Review is Complete	09/27/2022
	✓	Request Concept Report Review	
0ST1 Develop Structures Recommendations			
Complete	NA		Date Completed
✓		Confirm Recommended Structure Type for Concept Report is Complete	03/31/2022
✓		Confirm Hydraulic Recommendations for Concept Report is Complete	04/06/2021
0SY1 Provide Preliminary Survey Data			
Complete	NA		Date Completed
	✓	Confirm Control Ground Survey Set	
	✓	Review Preliminary Survey Data	
	✓	Determine Time to Complete the Aerial Survey	
0GT1 Conduct Preliminary Geotechnical Assessment			
Complete	NA		Date Completed
	✓	Confirm Geotechnical Division Review is Complete	
0RD1 Provide Roadway Desktop Review			
Complete	NA		Date Completed
	✓	Confirm Roadway Division Review is Complete	

Action Checklist			
0SD2 Develop Draft Concept Report			
Complete	NA		Date Completed
	✓	Conduct Intersection and Interchange Evaluation (IIE)	
	✓	Complete Conceptual Signal Warrants	
✓		Develop Draft Conceptual Layouts/Crash Figures for Site Visit	07/06/2021
	✓	Compile Initial Divisional Reviews for Site Visit	
✓		Prepare & Send Site Visit Packet	07/09/2021
✓		Lead Site Visit	08/03/2021
	✓	Initiate Interstate Access Requests (IAR) Concept Coordination with FHWA (if applicable)	
✓		Develop, Compile, and Distribute the Draft Concept Report	11/03/2021
0TO2 Develop TSMO Scope Items <i>(include HQ Traffic Ops and Regional Traffic Office)</i>			
Complete	NA		Date Completed
	✓	Confirm Signal Warrants Analysis is Complete	
	✓	Confirm Lighting Warrants Analysis is Complete	
	✓	Review and Confirm TSMO & ITS Scope and Budget	
0RW1 Complete Preliminary Right-of-Way Estimates			
Complete	NA		Date Completed
✓		Review and Confirm Preliminary Right-of-Way Cost Estimates	11/03/2021
0UT1 Complete Utility Preliminary Estimates			
Complete	NA		Date Completed
✓		Review and Confirm Preliminary Utility Estimate	11/03/2021
	✓	Review and Confirm Preliminary Railroad Cost Estimate	
0SD3 Finalize Concept Report			
Complete	NA		Date Completed
	✓	Compile and Review Initial Risk Assessment	
✓		Finalize Conceptual Layouts	09/27/2022
✓		Develop Environmental Technical Study Area (ETSA)	09/27/2022
✓		Address Comments and Finalize Concept Report	09/29/2022
	✓	Address Comments and Finalize Interstate Access Requests (IAR) Document and Memo (if applicable)	
	✓	Develop Roadway Safety Audit (RSA) No Plans Document	
✓		Submit the final Concept Report for Review and Signatures (as needed; see 0SD3 for additional information)	09/29/2022
	✓	Finalize Document and Upload All Needed Electronic Files	
	✓	Notify the Project Management Director or Assigned Project Manager to Set Up Project (1PM1)	

NA Justification

- Conduct Intersection and Interchange Evaluation (IIE) – No interchange within the limits of the project
- Complete Conceptual Signal Warrants – Signal warrants not needed for the low AADT
- Initiate Interstate Access Requests (IAR) Concept Coordination with FHWA (if applicable) – Not applicable
- Confirm Signal Warrants Analysis is Complete - AADT too low for signal warrant
- Review and Confirm TSMO & ITS Scope and Budget – No ITS within project limits
- Review and Confirm Preliminary Railroad Cost Estimate – No railway within project limits
- Address Comments and Finalize Interstate Access Requests (IAR) Document and Memo (if applicable) – Not applicable
- Develop Roadway Safety Audit (RSA) No Plans Document – RSA outside the scope of this BTIR

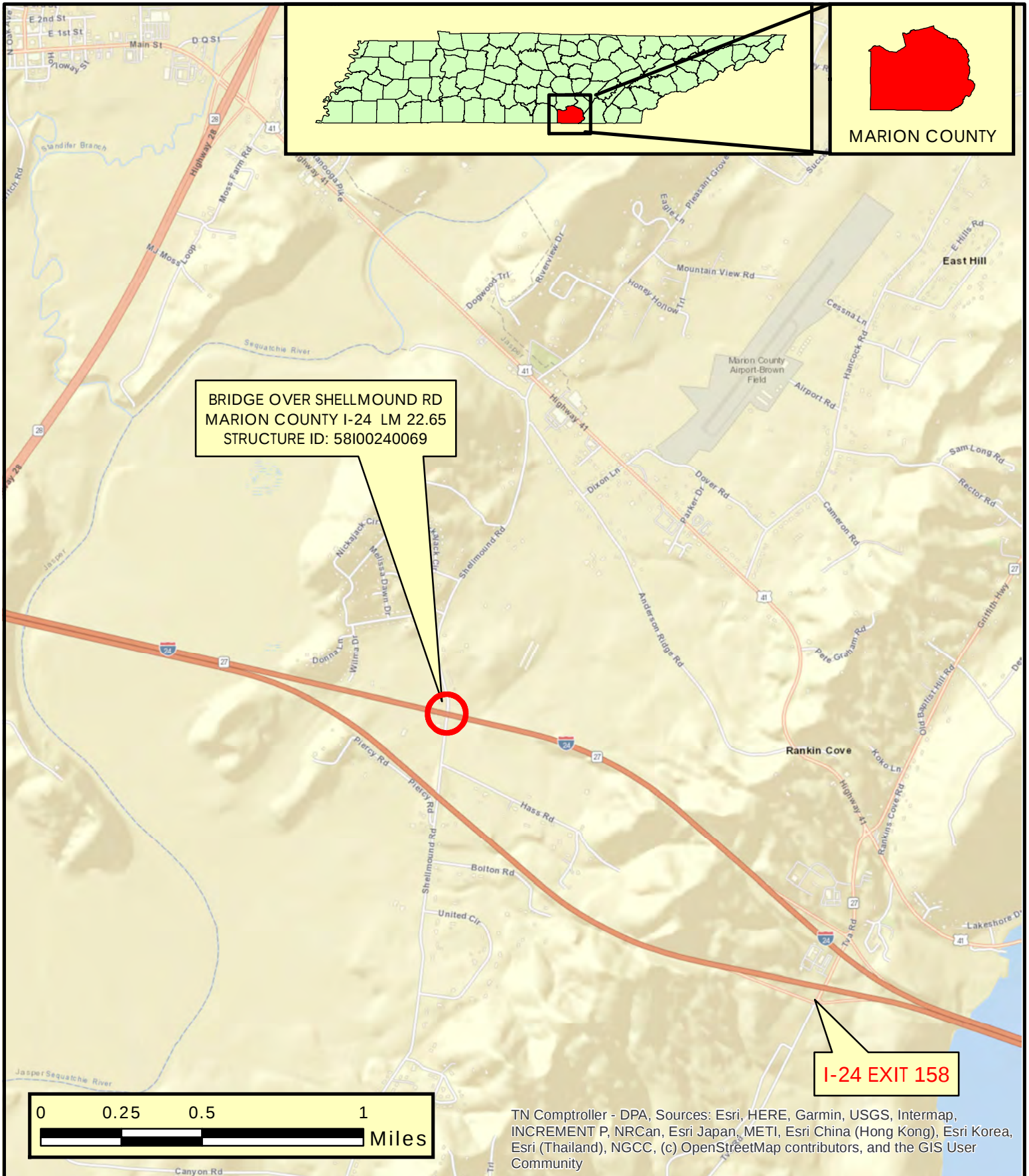
Concept Report Table of Contents/Attachments

	Included	NA
One-Page Summary (with project location map)	✓	
Conceptual Layout(s) and Cross Section	✓	
Environmental Technical Study Area (ETSA) Layout	✓	
Concept Cost Estimate (Construction Year Estimate)	✓	
TSMO & ITS Scope and Budget ¹		✓
ROW Form 44-A ¹		✓
Crash Packet ¹		✓
Crash Prediction Analysis ¹		✓
Site Visit Attendee List	✓	
Environmental Desktop Review Form ¹	✓	
Multimodal Considerations & Recommendations ¹	✓	
Existing Structure Summary ¹	✓	
Email or memo containing Structure Type Recommendations ¹		✓
Email or memo containing Hydraulic Recommendations ¹		✓
Hydraulic Data		✓
Intersection and Interchange Evaluation (IIE) Analysis and Summary Form		✓
Traffic Analysis Summary/Tables	✓	
Forecasted Traffic Sheets ¹	✓	
Traffic Modeling (e.g., Synchro, VISSIM, Highway Capacity Software (HCS) Output) ¹		✓
Signal Warrant ¹		✓
Lighting Warrant ¹		✓
Initial Risk Assessment using the Risk Assessment Form		✓
Final Interstate Access Request (IAR) Document and Memo with Letter from STID Director		✓
Road Safety Audit (RSA) No Plans ¹		✓

NA Justification

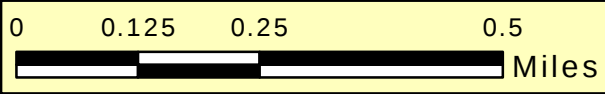
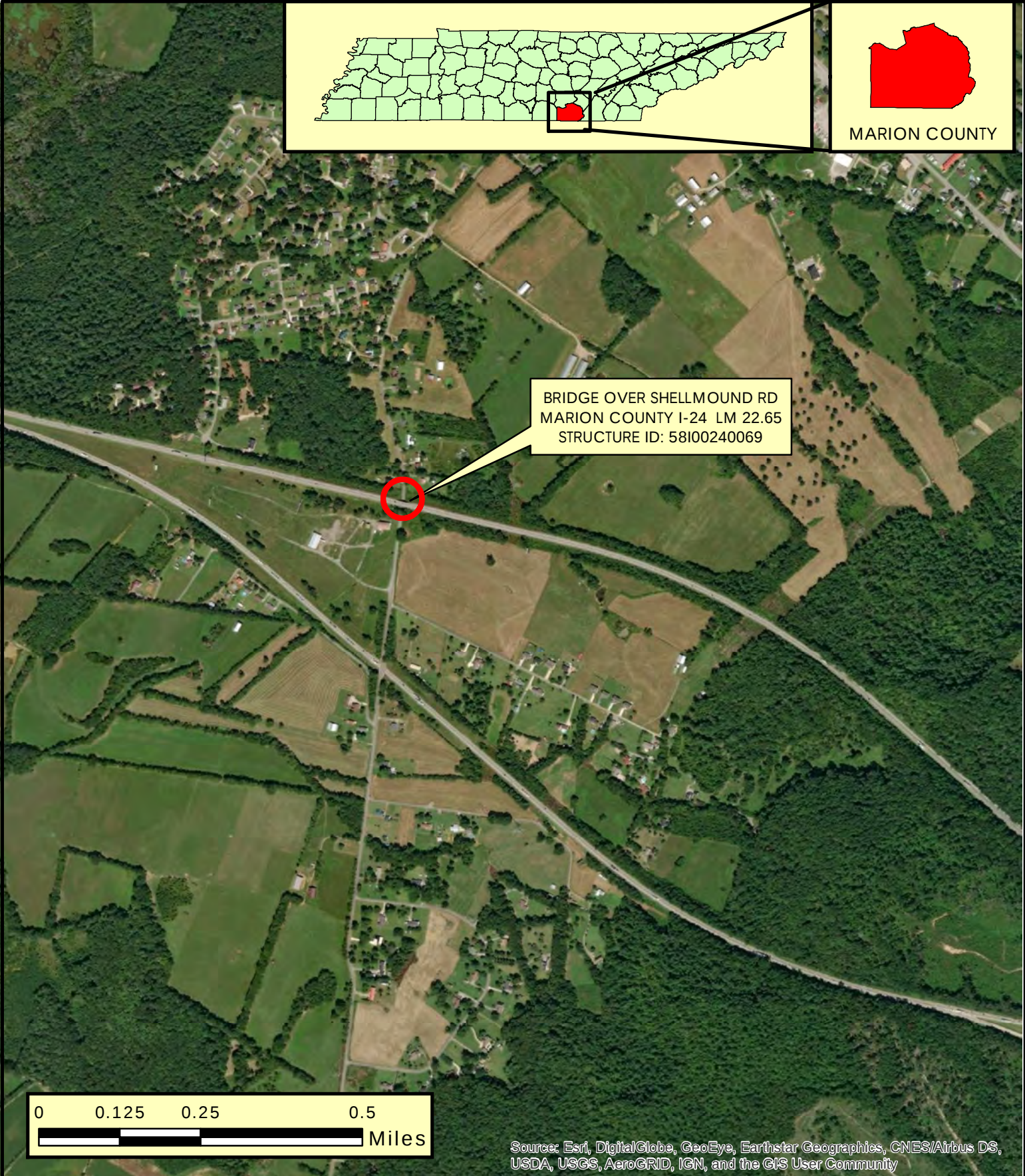
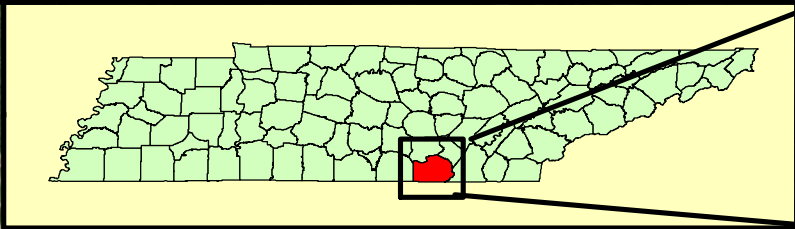
- TSMO & ITS Scope and Budget* - No ITS at site
- Crash Packet* - Crash packets are not typically provided for Bridge replacements
- Intersection and Interchange Evaluation (IIE) Analysis and Summary Form - No intersection or interchange
- Traffic Modeling (e.g., Synchro, VISSIM, Highway Capacity Software (HCS) Output)* - AADT too low to model
- Signal Warrant* - No intersection to signal warrant
- Road Safety Audit (RSA) No Plans* - RSA outside the scope of this BTIR

* External document to STID



AREA MAP
BRIDGE OVER SHELLMOUND RD
INTERSTATE 24
L.M. 22.65
PIN: 130900.00
MARION COUNTY



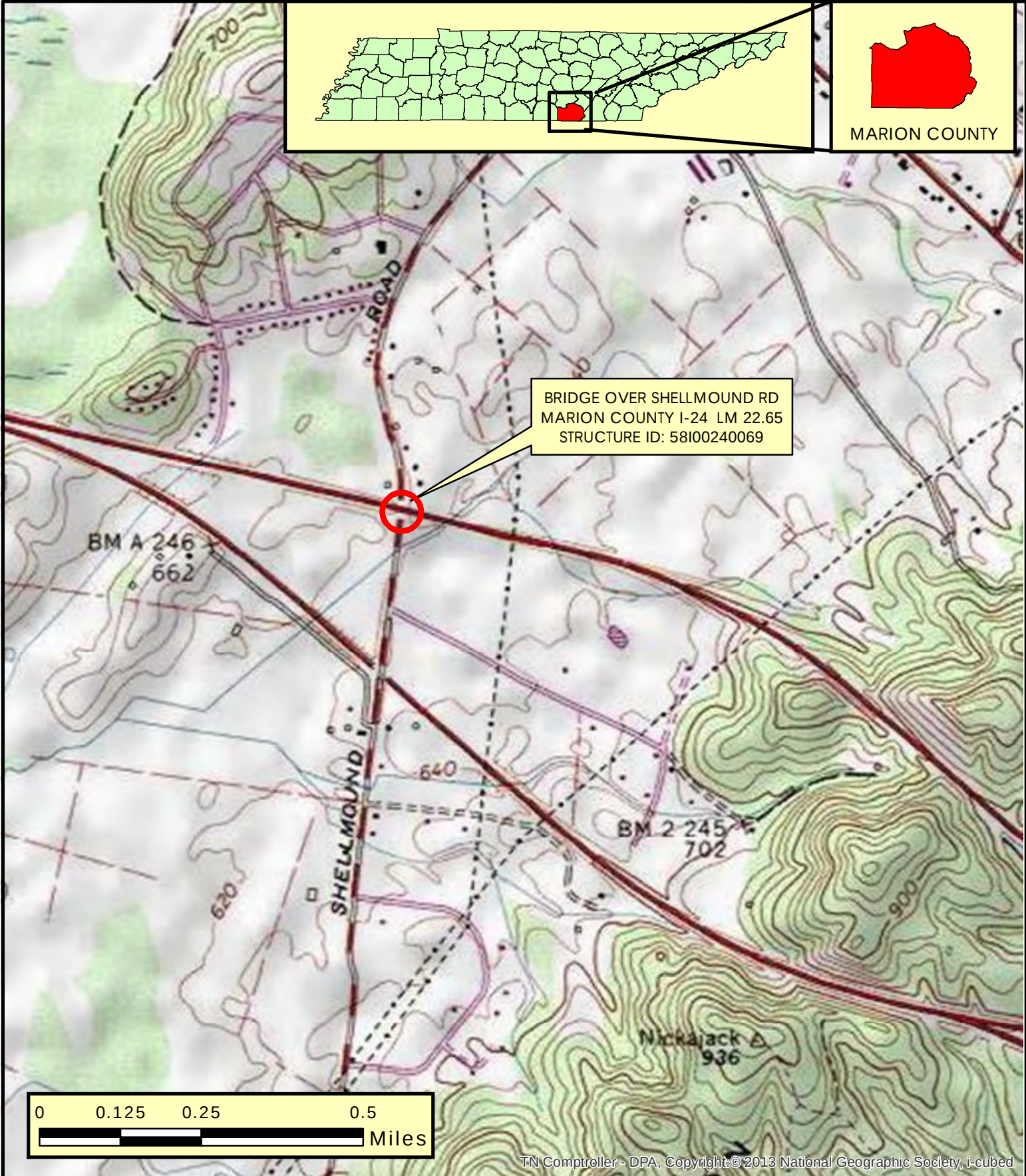
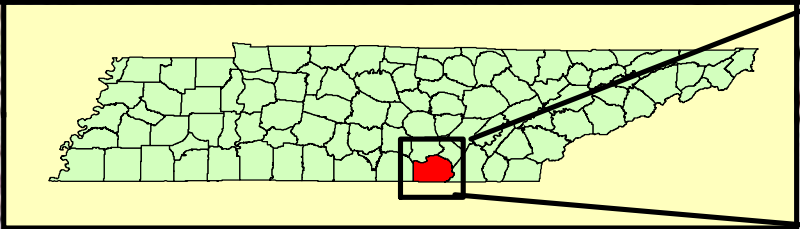


Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



LOCATION MAP
BRIDGE OVER SHELLMOUND RD
INTERSTATE 24
L.M. 22.65
PIN: 130900.00
MARION COUNTY





TN Comptroller - DPA, Copyright © 2013 National Geographic Society, i-cubed



TOPOGRAPHIC MAP
BRIDGE OVER SHELLMOUND RD
INTERSTATE 24
L.M. 22.65
PIN: 130900.00
MARION COUNTY



TYPE	YEAR	COUNTY	FIGURE NO.
BTIR	2022	MARION	1



BRIDGE TRANSPORTATION INVESTMENT REPORT

INTERSTATE 24 WESTBOUND
L.M. 22.23 TO L.M. 23.11
MARION COUNTY

2' LANE / 10' SHOULDER PROJECT
MILE 23.11

I-24 WB

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
S.T.I.D.

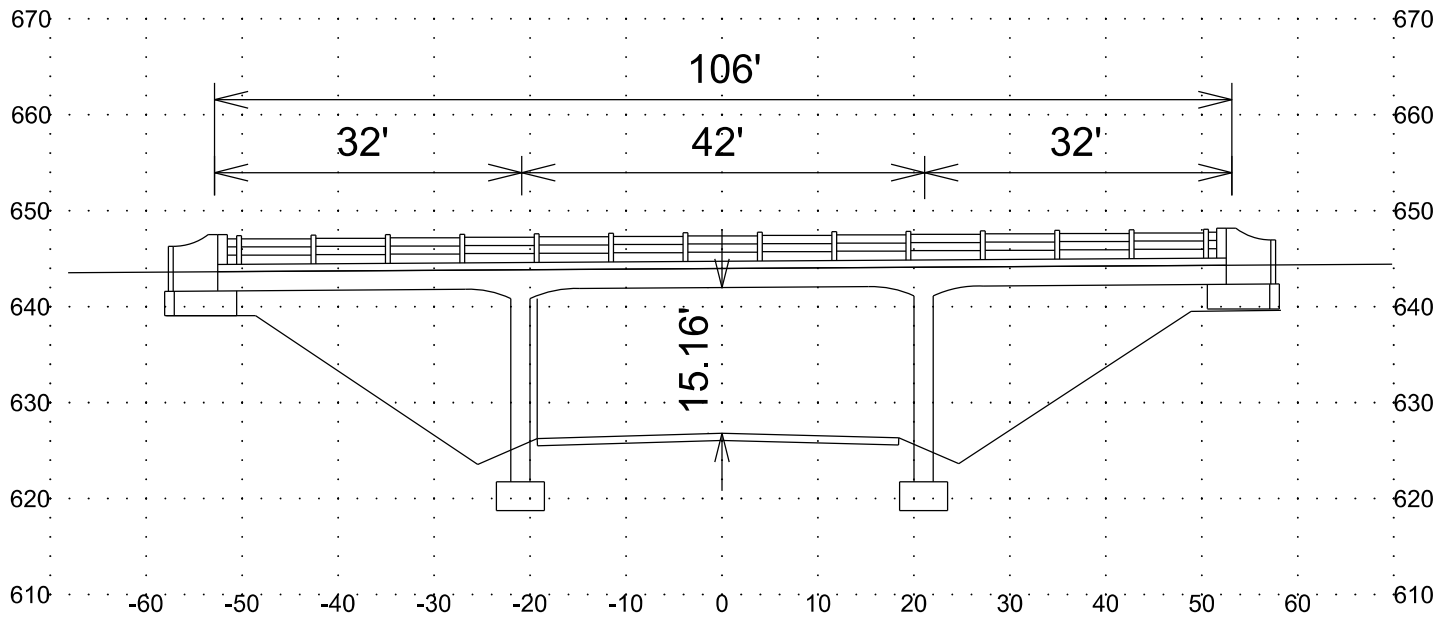
FIGURE 2
I-24 WB
L.M. 22.23 to
L.M. 23.11



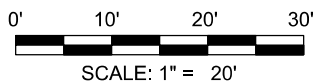
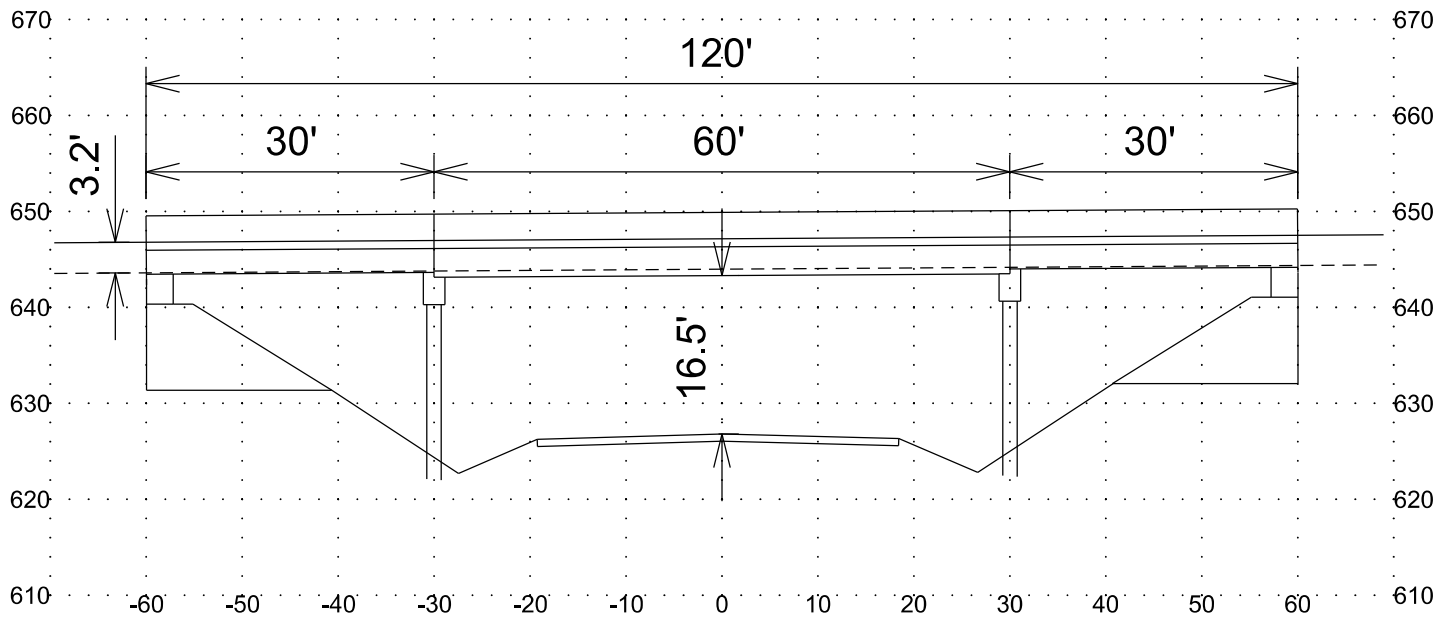
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
S.T.I.D.

FIGURE 2
I-24 WB
L.M. 22.23 to
L.M. 23.11

EXISTING STRUCTURE

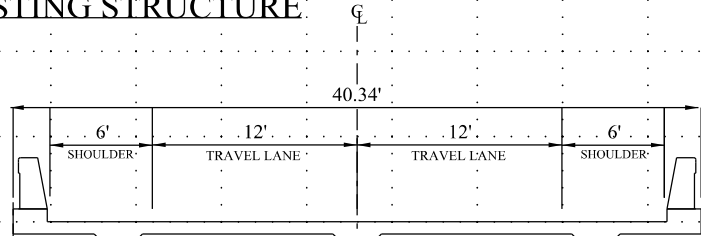


PROPOSED STRUCTURE

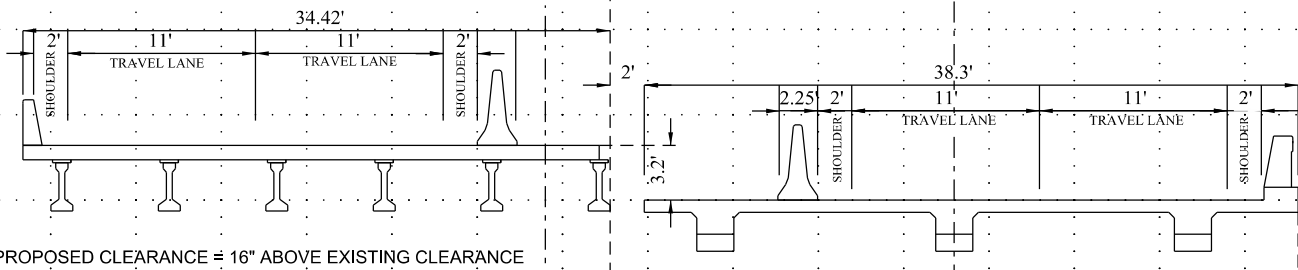


BRIDGE PROFILE
I-24 WESTBOUND
BRIDGE OVER SHELLMOUND RD - L.M. 22.65
BRIDGE ID: 58I00240069
MARION COUNTY, TN

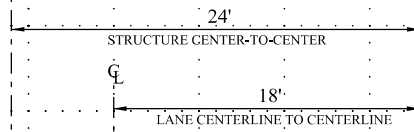
FACING WEST IN DIRECTION OF TRAVEL ALONG WESTBOUND I-24
EXISTING STRUCTURE



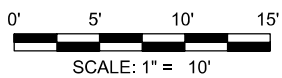
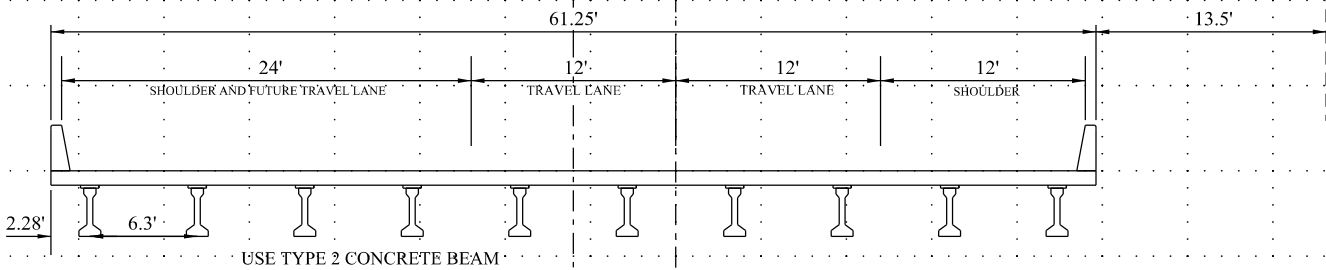
CONSTRUCTION



PROPOSED CLEARANCE = 16" ABOVE EXISTING CLEARANCE
PROPOSED GRADE = 3.2' ABOVE EXISTING GRADE



PROPOSED COMPLETED



STAGE CONSTRUCTION DETAIL

I-24 WESTBOUND - L.M. 22.65
BRIDGE OVER SHELLMOUND RD
BRIDGE ID: 58I00240069
MARION COUNTY, TN

BRIDGE TRANSPORTATION INVESTMENT REPORT (TIR)

MARION COUNTY

I-24 WB

LM 22.65

LOCATION			
Bridge #:	58I00240069	Feature Crossed:	Shellmound Rd
Road Name:	I-24 WB	Log mile:	22.65
Route ID:	0A966	System:	State Highway Agency
City:	Jasper	Functional Class:	Rural Interstate
County:	Marion		
PIN:	130900.00		

ROADWAY		
	Existing	Proposed (Preliminary Design Estimate)
Design Standard		RD11-TS-5A
Route Characteristics		
AADT:	27,400	32,880
AADT Year:	2026	2046
Terrain:	Flat	Flat
No. Lanes:	2	2
Speed(Posted):	75	70
Speed (Design):		80
Approach Character.		
Lane Width (ft):	12	12
Shoulder Width (ft):	4' outside / 10' inside (6' over structure)	10' (12' over structure)
ROW Width (ft):	200'	250'
ROW Tracts Affected		2
ROW Required (acre)		3.0
Cross Section Width (ft):	24/36/200	24/60/250
Western Approach Length (ft)		2370
Eastern Approach Length (ft):		2160
Alignment:	Centerline	Offset Bridge Centerline 24' (Offset Lane 18')
Grade:	N/A	raise 3.2'
Surface Material:	Asphalt Concrete	Asphalt Concrete
App. Lower Than Structure	NO	NO
Utilities (list)	above ground communication utilities run under bridge	
Comments		

BRIDGE TRANSPORTATION INVESTMENT REPORT (TIR)

MARION COUNTY

I-24 WB

LM 22.65

STRUCTURE		
	Existing	Proposed (Preliminary Design Estimate)
Bridge Characteristics		
Year Built	1965	
Load Limit	32 tons	
Sufficiency Rating	74.9 (FAIR)	
Skew	84	84
Structure Type	Concrete Deck Girder	Type 2 Concrete Beam
Structures in Channel	YES	YES
Length (ft)	106'	120'
No. Spans (App./Main)	3 Main (42' max span)	3 Main (60' max span)
Width (curb to curb) (ft)	36.25'	60'
Width (o to o) (ft)	40.3'	61.25'
Sidewalks on Structure	NO	NO
Superstructure Depth (in)	81"/69"	73" / 79"
Girder Depth (in)	36"/24"	30" / 36"
Finish Grade-Low Girder (in)	45"/33"	40" / 46"
Bridge Rail Type	Concrete parapet	Concrete barrier
Bridge Rail Height (ft)	36"	33"
Indication Overtopping	NO	
Local Scour	NO	
Obstructions	NO	
Other Structures	Existing Bridge clearance is 15' 2". TDOT Std Minimum clearance is 16' 6". Clearance under the proposed bridge will be increased 16", which will raise the proposed roadway 3' 2".	
Comments		

BRIDGE TRANSPORTATION INVESTMENT REPORT (TIR)

MARION COUNTY

I-24 WB

LM 22.65

MAINTENANCE OF TRAFFIC	
Method of Maintaining Traffic	stage construct
Description	Phase One: Build 34.42' of new structure south of existing. Phase 2: Shift both lanes of traffic onto new bridge. Demolish remaining existing stucture and complete proposed bridge.
Comments	

COST ESTIMATE SUMMARY

Route:	I-24 WB			
Termini:	Replace Bridge over Shellmound Rd			
Scope of Work:	Widen bridge to accommodate future travel lane			
Project Type of Work:	Bridge Replacement			
County:	Marion			
Length:	0.92 Miles			
Date:	March 22, 2022			
Estimate Type:	Concept			
DESCRIPTION	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Construction Items				
Removal Items	\$0	\$0	\$0	\$212,000
Asphalt Paving	\$0	\$0	\$0	\$5,250,000
Concrete Pavement	\$0	\$0	\$0	\$0
Drainage	\$0	\$0	\$0	\$157,000
Appurtenances	\$0	\$0	\$0	\$0
Structures	\$0	\$0	\$0	\$1,410,000
Fencing	\$0	\$0	\$0	\$0
Signalization & Lighting	\$0	\$0	\$0	\$0
Railroad Crossing	\$0	\$0	\$0	\$0
Earthwork	\$0	\$0	\$0	\$3,660,000
Clearing and Grubbing	\$0	\$0	\$0	\$0
Seeding & Sodding	\$0	\$0	\$0	\$28,700
Rip-Rap or Slope Protection	\$0	\$0	\$0	\$31,900
Guardrail	\$0	\$0	\$0	\$44,800
Signing	\$0	\$0	\$0	\$10,800
Pavement Markings	\$0	\$0	\$0	\$15,300
Maintenance of Traffic	\$0	\$0	\$0	\$649,000
Mobilization 5%	\$0	\$0	\$0	\$573,000
Other Items and Annual Inflation 10%	\$0	\$0	\$0	\$1,200,000
Const. Contingency (Structures Not Included) 30%	\$0	\$0	\$0	\$3,550,000
Const. Eng. & Inspec. 10%	\$0	\$0	\$0	\$1,680,000
Construction Estimate	\$0	\$0	\$0	\$18,500,000
Interchanges & Unique Intersections				
Roundabouts	\$0	\$0	\$0	\$0
Interchanges	\$0	\$0	\$0	\$0
Right-of-Way & Utilities				
	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Right-of-Way	\$0	\$0	\$0	\$61,400
Utilities	\$0	\$0	\$0	\$19,000
Preliminary Engineering				
	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Prelim. Eng. 8.7%	\$0	\$0	\$0	\$1,610,000
Total Project Cost (2022)	\$ -	\$ -	\$ -	\$ 20,200,000

PAY ITEM SUMMARY

TDOT PAY ITEM	TDOT DESCRIPTION	UNIT	TOOL QUANTITIES	ADDITIONAL QUANTITIES	TOOL QUANTITIES + ADDITIONAL QUANTITIES	Statewide UNIT COST	TOTAL COST
							<-- Unit Cost Trends with Quantities
Pavment Removal							
202-03.01	REMOVAL OF ASPHALT PAVEMENT	SY	18163		18163	\$ 11.50	\$ 208,878.84
415-01.02	COLD PLANING BITUMINOUS PAVEMENT	SY	1126		1126	\$ 2.57	\$ 2,898.18
						PAVEMENT REMOVAL TOTAL (ROUNDED)	\$ 211,800
Asphalt Roads							
303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	78794		78794	\$ 26.00	\$ 2,048,776.79
307-[01, 02, 03].01	ASPHALT CONCRETE MIX (All Grades) (BPMB-HM) GRADING A	TON	13925		13925	\$ 96.50	\$ 1,343,723.78
307-01.[20 & 21 & 22]	AGGREGATE (BPMB-HM) GRADING A-S MIX	TON	5108		5108	\$ 86.50	\$ 441,872.98
307-[01 & 02 & 03].08	ASPHALT CONCRETE MIX (ALL GRADES) (BPMB-HM) GRADING B-M2	TON	7526		7526	\$ 96.50	\$ 726,195.07
402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	92		92	\$ 807.84	\$ 74,529.55
402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	333		333	\$ 57.22	\$ 19,053.44
403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	39		39	\$ 747.73	\$ 29,063.89
411-01.07	ACS MIX (PG64-22) GRADING F SHOULDER	TON	2929		2929	\$ 99.87	\$ 292,491.61
411-[01 & 02 & 03].10	ACS MIX(ALL GRADES) GRADING D	TON	2257		2257	\$ 119.74	\$ 270,215.06
						PAVING TOTAL (ROUNDED)	\$ 5,246,000
Concrete Roads							
						CONCRETE RAMPS AND ROADWAYS TOTAL (ROUNDED)	\$ -
Drainage							
607-05.02	24" CONCRETE PIPE CULVERT (CLASS III)	LF	890		890	\$ 86.55	\$ 77,032.62
611-07.01	CLASS A CONCRETE (PIPE ENDWALLS)	CY	28		28	\$ 1,425.66	\$ 39,479.48
611-07.02	STEEL BAR REINFORCEMENT (PIPE ENDWALLS)	LB	2632		2632	\$ 3.12	\$ 8,206.81
710-02	Aggregate Underdrains (with pipe)	LF	4541		4541	\$ 7.10	\$ 32,226.61
						DRAINAGE TOTAL (ROUNDED)	\$ 157,000
Appurtenances							
						ROADWAY AND PAVEMENT APPURTENANCES TOTAL (ROUNDED)	\$ -
Earthwork & Mineral							
105-01	CONSTRUCTION STAKES, LINES AND GRADES	LS	1		1	\$ 109,915.84	\$ 109,915.84
203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	CY	239270		239270	\$ 8.88	\$ 2,125,360.78
203-02.01	BORROW EXCAVATION (GRADED SOLID ROCK)	TON	29909		29909	\$ 32.33	\$ 966,949.43
203-03	BORROW EXCAVATION (UNCLASSIFIED)	CY	44863		44863	\$ 10.31	\$ 462,463.09
						EARTHWORK & MINERAL TOTAL (ROUNDED)	\$ 3,664,700
Structures							
N/A	Removal of Bridge	SF	4272		4272	\$ 20.00	\$ 85,436.00
N/A	New Bridge (Concrete Girder)	SF	7350		7350	\$ 180.00	\$ 1,323,000.00
						STRUCTURES TOTAL (ROUNDED)	\$ 1,408,500
Interchanges and Unique Intersections							
						INTERCHANGES AND UNIQUE INTERSECTIONS TOTAL (ROUNDED)	\$ -
Lighting & Signalization							
						LIGHTING & SIGNALIZATION TOTAL (ROUNDED)	\$ -
Guardrail							
705-01.01	GUARDRAIL AT BRIDGE ENDS	LF	100		100	\$ 66.52	\$ 6,651.84
705-06.01	W Beam GR (Type 2) Mash TL3	LF	1362	12.76	1375	\$ 20.07	\$ 27,596.25
705-06.20	Tangent Energy Absorbing Term Mash TL-3	EA	13	-9	4	\$ 2,626.00	\$ 10,504.00
						GUARDRAIL TOTAL (ROUNDED)	\$ 44,800
Seeding and Sodding							
801-01	SEEDING (WITH MULCH)	UNIT	500		500	\$ 27.26	\$ 13,622.77
801-01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT	375		375	\$ 22.31	\$ 8,361.81
801-02	SEEDING (WITHOUT MULCH)	UNIT	375		375	\$ 17.70	\$ 6,633.98
						SODDING TOTAL (ROUNDED)	\$ 28,700
Maintenance of Traffic							
N/A	Traffic Control	LS	1		1	\$	\$ 144,399.90
712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	LF	243	16464	16707	\$ 30.18	\$ 504,213.64
						MAINTENANCE OF TRAFFIC TOTAL (ROUNDED)	\$ 648,700
Signs							
Not Listed	Signs (Construction)	LS	1		1	\$ -	\$ 10,800
						SIGNING TOTAL (ROUNDED)	\$ 10,800
Pavement Markings							
716-13.07	Spray Thermo P.M. (40 mil 6")	LM		12.3	12.3	\$ 1,237.50	\$ 15,221.25
						PAVEMENT MARKINGS TOTAL (ROUNDED)	\$ 15,300
Fencing							
						FENCE TOTAL (ROUNDED)	\$ -
Rip-Rap							
709-05.05	Machined Rip-Rap (Class A-3)	TON	800		800	\$ 39.85	\$ 31,880.00
						RIP-RAP & SLOPE PROTECTION TOTAL (ROUNDED)	\$ 31,900.00
Clearing and Grubbing							
						CLEAR AND GRUBBING TOTAL (ROUNDED)	\$ -
Railroad At-Grade Crossing							
						RAILROAD CROSSING OR SEPARATION TOTAL (ROUNDED)	\$ -

SITE VISIT ATTENDEES			DATE:	8/3/2021
Name	Organization	Phone	Email	
Michael Cloud	TDOT - STID	615-532-7696	michael.cloud@tn.gov	
Michael Gilbert	TDOT - STID	615-741-0772	michael.gilbert@tn.gov	
David Duncan	TDOT - STID	615-532-6131	david.duncan@tn.gov	
Alan Wolfe	R2 - Traffic	423-510-1139	Alan.Wolfe@tn.gov	
Chester Sutherland	R2 - ETO	423-510-1229	Chester.Sutherland@tn.gov	
Marykate Collins	R2 - Traffic	423-510-1139	marykate.collins@tn.gov	
Ann Casseus	R2- Survey	423-510-1233	Ann.Casseus@tn.gov	
Jackson Collette	R2- Traffic	423-510-1139	Jackson.Collette@tn.gov	
Tami Johnson-Praino	R2 - Survey	423-510-1233	Tami.Johnson-Praino@tn.gov	



North of Bridge Facing south from Shellmound Rd



Northern Edge of Bridge



Closeup of damage under bridge



Closeup of damage under bridge



Underside of bridge looking east



Underside of bridge looking west (featuring utilities)



South edge of bridge from Shellmound Rd



Drainage feature on Shellmound Rd



Eastern Approach Looking West



On Bridge Looking North



On Bridge Looking South



Western Approach Looking East

CHECK LIST OF DETERMINANTS FOR LOCATION STUDY

If any of the following facilities or ESE categories are located within the project area or corridor, place an "x" in the blank opposite the item. Where more than one alternate is to be considered, place its letter designation in the blank.

1. Agricultural land usage	☒
2. Airport (existing or proposed)	☐
3. Commercial area, shopping center	☐
4. Floodplains	☐
5. Forested land	☐
6. Historical, cultural, or natural landmark	☒
7. Industrial park, factory	☐
8. Institutional usages	
a. School or other educational institution	☐
b. Church or other religious institution (Cemetery)	☐
c. Hospital or other medical facility	☐
d. Public building, e.g., fire station	☐
e. Defense installation	☐
9. Recreation usages	
a. Park or recreational area	☐
b. Game preserve or wildlife area	☐
10. Residential establishment	☒
11. Urban area, town, city, or community	☐
12. Waterway, lake, pond, river, stream, spring	☐
Permit required:	
Coast Guard	☐
Section 404	☐
TVA Section 26a review	☐
NPDES	☐
Aquatic Resource Alteration	☐
13. Other	☒
14. Location coordinated with local officials	☐
15. Railroad crossings	☐
16. Hazardous materials site	☐

PIN 130900.00

I-24

Marion County

Region 2

NEPA Comments

If they're taking 2.5 acres of ROW, this project will be a D-List and will require an additional 4-weeks for preparation (18-weeks in total).

On the southwest corner of the bridge, it looks like there may be one relocation of a business, CCR Heavy Equipment. The proposed ROW gets close to a large building of CCR.

**TENNESSEE DEPARTMENT OF TRANSPORTATION
STRATEGIC TRANSPORTATION INVESTMENTS DIVISION**

PROJECT NO.: 58100-0186-44 ROUTE: I-24 WESTBOUND
COUNTY: MARION CITY: _____
PROJECT PIN NUMBER: 130900.00
PROJECT DESCRIPTION: BRIDGE OVER SHELLMOUND ROAD @ L.M. 22.65.

DIVISION REQUESTING:

MAINTENANCE ☐	PAVEMENT DESIGN ☐
S.T.I.D. ☒	STRUCTURES ☐
PROG. DEVELOPMENT & ADM. ☐	SURVEY & ROADWAY DESIGN ☐
PUBLIC TRANS. & AERO. ☐	TRAFFIC SIGNAL DESIGN ☐
	OTHER ☐

YEAR PROJECT PROGRAMMED FOR CONSTRUCTION: 2026
PROJECTED LETTING DATE: _____

TRAFFIC ASSIGNMENT:

BASE YEAR		DESIGN YEAR					DESIGN ROADWAY % TRUCKS		DESIGN AVERAGE DAILY LOADS	
AADT	YEAR	AADT	DHV	%	YEAR	DIR.DIST.	DHV	AADT	FLEX	RIGID
27,400	2026	32,880	2,630	8	2046	60-40	20	30		

REQUESTED BY: NAME MICHAEL CLOUD DATE 4/26/21
DIVISION S.T.I.D.
ADDRESS 1000 J. K. POLK BUILDING
NASHVILLER TN 37243

REVIEWED BY: _____ DATE _____
TRANSPORTATION MANAGER 1
SUITE 1000, JAMES K. POLK BUILDING

APPROVED BY: TONY ARMSTRONG *Tony Armstrong* DATE 4/26/2021
TRANSPORTATION MANAGER 2
SUITE 1000, JAMES K. POLK BUILDING

COMMENTS:

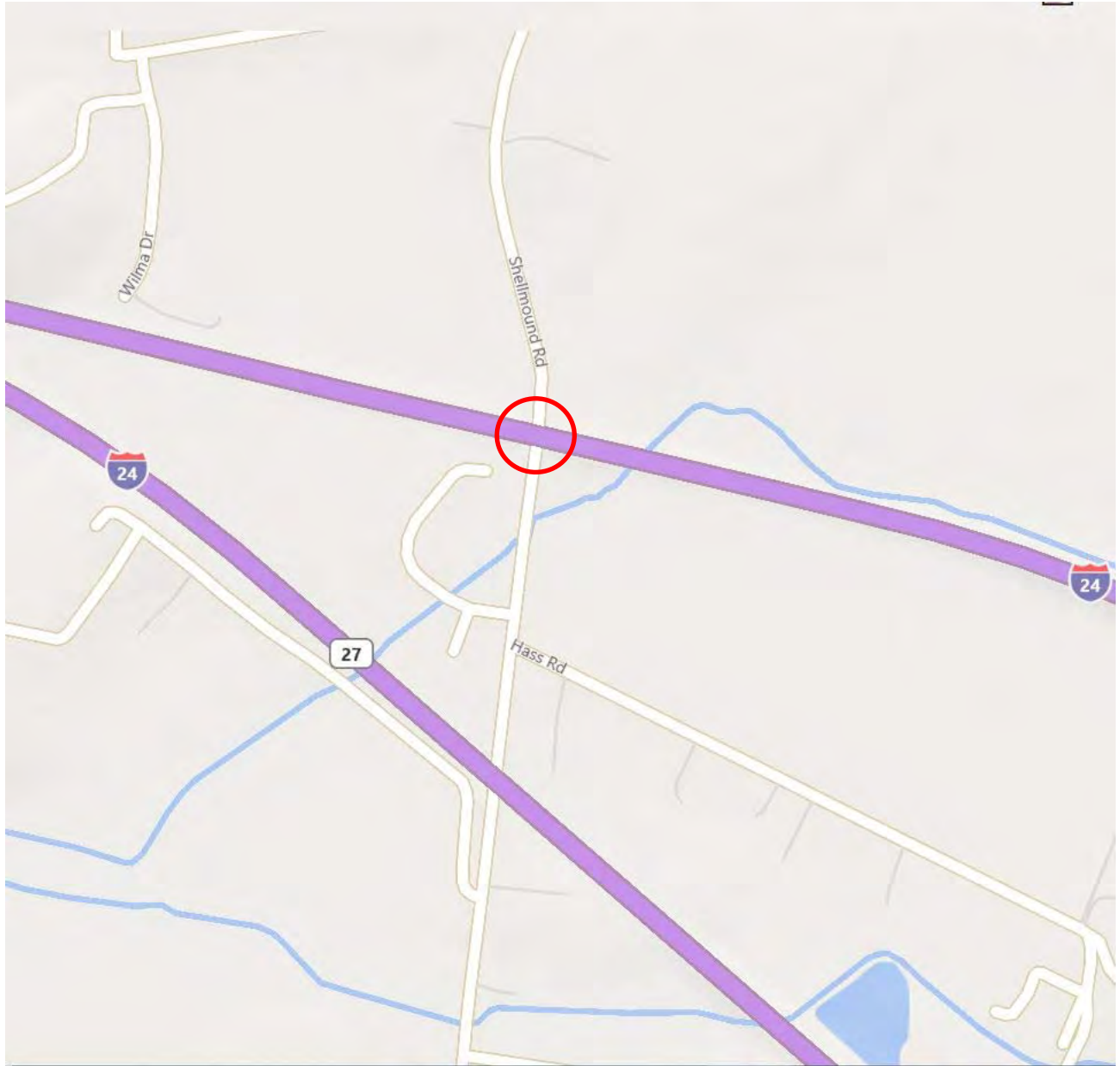
THIS TRAFFIC IS BASED ON A 2019 CYCLE COUNT. THE DESIGN YEAR TRAFFIC IS
BASED ON GROWTH RATE FROM THE ADAM COMPUTER PROGRAM.

DHV'S ARE NOT REQUIRED FOR SIDE ROADS LESS THAN 1000 AADT.

NOTE: FOR BRIDGE REPLACEMENT PROJECTS, ADLs ARE NOT REQUIRED FOR ADTs OF 1000 OR LESS AND
PERCENTAGE OF TRUCKS OF 7% OR LESS.

SEE ATTACHMENTS FOR TURNING MOVEMENTS AND/OR OTHER DETAILS.

(REV. 3/1/21)



Marion County

**I-24 Westbound Bridge over
Shellmound Road @ L.M. 22.65**