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	SR - 1 Bridge over North Fork (N.F.) Holston River								
PIN	124387.00								
Route Information	**Route**	**NHS (Y/N)**	**Functional Class**			**City**		**County**	
	SR 1	Yes	Principle Arterial			Kingsport		Hawkins/Sullivan	
Project Information	**Begin Log Mile**	**End Log Mile**	**AADT[1]**	**Design Hour Vol. (DHV)[1]**	**Truck %[1]**	**Design Speed (MPH)**	**Posted Speed (MPH)**	**Base Year**	**Design Year**
	41.24	0.24	48,750	4,875	3.00	60	50	2026	2046
Project Description & Standard Drawings Used	See page 3 for information on Project History. Standard Drawing: RD11-TS-3A								
Important Project History or Related Projects	See page 3 for information on Project History. This project is expected to utilize federal funding.								
Project Purpose/Need	The need to replace these bridges is due to the present condition of the existing bridges: -Built in 1962 -Sufficiency rating - Bridge ID 37SR0010037: 33.1 - August 18, 2021 -Sufficiency rating - Bridge ID 37SR0010038: 49.8 - August 18, 2021 -Existing structures do not provide appropriate multimodal access								
Major Environmental Considerations	A search of the TEC database of rare species by watershed show a record for eight (8) state listed mollusc, three (3) state listed fish and one (1) state listed mammal within the N.F. Holston River watershed. Seven (7) of the state listed mollusc species are also federally listed and the one (1) fish species is federally listed. The project is within Zone AE, a regulatory floodway. Depening on actual impacts once plans are developed, a No Rise Certification or CLOMR/LOMR may be required. Asbestos was detected through an Asbestos Containing Material (ACM) survey.								

Project Details

Multi-Modal Considerations	-Six (6) foot sidewalk to accommodate multimodal traffic across the bridges - Four (4) foot buffered bike lane to accommodate multimodal traffic across the bridges -Five (5) to five (5) feet six (6) inch sidewalk to accommodate multimodal traffic on either side of the bridges and under the CSX Railroad bridge -MM-TS-1 and MM-TS-2 were utilized for this project			
Major Project Risks	See page 4 for information on Major Project Risks. This document is covered by 23 § 407 and its production pursuant to fulfilling public planning requirements does not waive the provisions of § 407.			
Concept Estimate and Timeline	**Total Current Project Cost**		**Construction Year Estimate**	Preliminary Estimates
	$ 58,700,000		$ 72,000,000	
	Proposed Construction Year		**Estimated Construction Duration**	
	2027		3 Years	

[1] Traffic numbers reflect identified design year

Approvals

Executed for approval of this Concept Report

James D. Keeley

Project Management Division Director — Aug 20, 2024 — Date

The following individuals to execute if a bridge concept report:

Jed A. Kniazewycz

Structures Director — Aug 25, 2024 — Date

Dexter Justis (Aug 23, 2024 15:50 EDT)

Regional Project Management Division Director — Aug 23, 2024 — Date

S.R. 1 – Supplemental Information

Project Description:

A field review was held on April 28th 2021.

The existing bridges consist of two structures that are separated by approximately six (6) inches. The proposed bridges will be separated by thirteen (13) feet.

- Bridge ID #37SR0010037: The proposed northbound structure is 592 feet long, composed of three (3) spans of 183 feet, 226 feet and 183 feet with steel I-beams. The proposed typical section will consist of two twelve (12) foot travel lanes, a six (6) foot inside shoulder, a twelve (12) foot outside shoulder with a four (4) foot bike path included in shoulder and a six and a half (6.5) foot sidewalk and concrete parapets with structural tubing. The structure has an out-to-out width of 50 feet six (6) inches. The roadway centerline and grade will remain the same.
    - Superstructure depth (Based on steel I-beams) = 95.0” = 78.9” (beam depth) + 10” (deck) + ((50.5’ (bridge width) * (0.02/2)) * 12”)
- Bridge ID #37SR0010038: The proposed southbound structure is 592 feet long, composed of three (3) spans of 183 feet, 226 feet and 183 feet with steel I-beams. The proposed typical section will consist of two twelve (12) foot travel lanes, a six (6) foot inside shoulder, a twelve (12) foot outside shoulder and a six and a half (6.5) foot sidewalk and concrete parapets with structural tubing. The structure has an out-to-out width of 50 feet six (6) inches. The roadway centerline and grade will remain the same.
    - Superstructure depth (Based on steel I-beams) = 95.0” = 78.9” (beam depth) + 10” (deck) + ((50.5’ (bridge width) * (0.02/2)) * 12”)

Construction for this project will be completed by phased construction. Before construction on the proposed bridges begins, widening improvements to the existing CSX railroad bridge must first be completed in order to allow for lane shifts during the construction phasing.

Phase one (1) consists of shifting all four (4) lanes of traffic to the south side of the existing structures. Demolish approximately 21.67’ of the existing southbound structure and construct approximately 35.75’ of the new southbound structure.

Phase two (2) consists of shifting southbound traffic to the far north side of the newly constructed southbound structure. Northbound traffic will remain on the existing northbound structure. Demolish approximately 21.84’ of the existing northbound and southbound structure. Construct the remaining portion of the proposed southbound structure. Design speed for phase two (2) of traffic control is 45 miles per hour. It is recommended to lower the posted speed to 35 miles per hour during construction of this phase and phase three (3).

Phase three (3) consists of shifting all four lanes of traffic to the newly constructed southbound structure. Demolish the remaining 34.49’ of the existing northbound structure and construct the entirety of the proposed northbound structure.

Phase four (4) consist of shifting traffic to the proposed alignments. The sidewalk on each portion of the bridges shall be completed.

Important Project History or Related Projects:

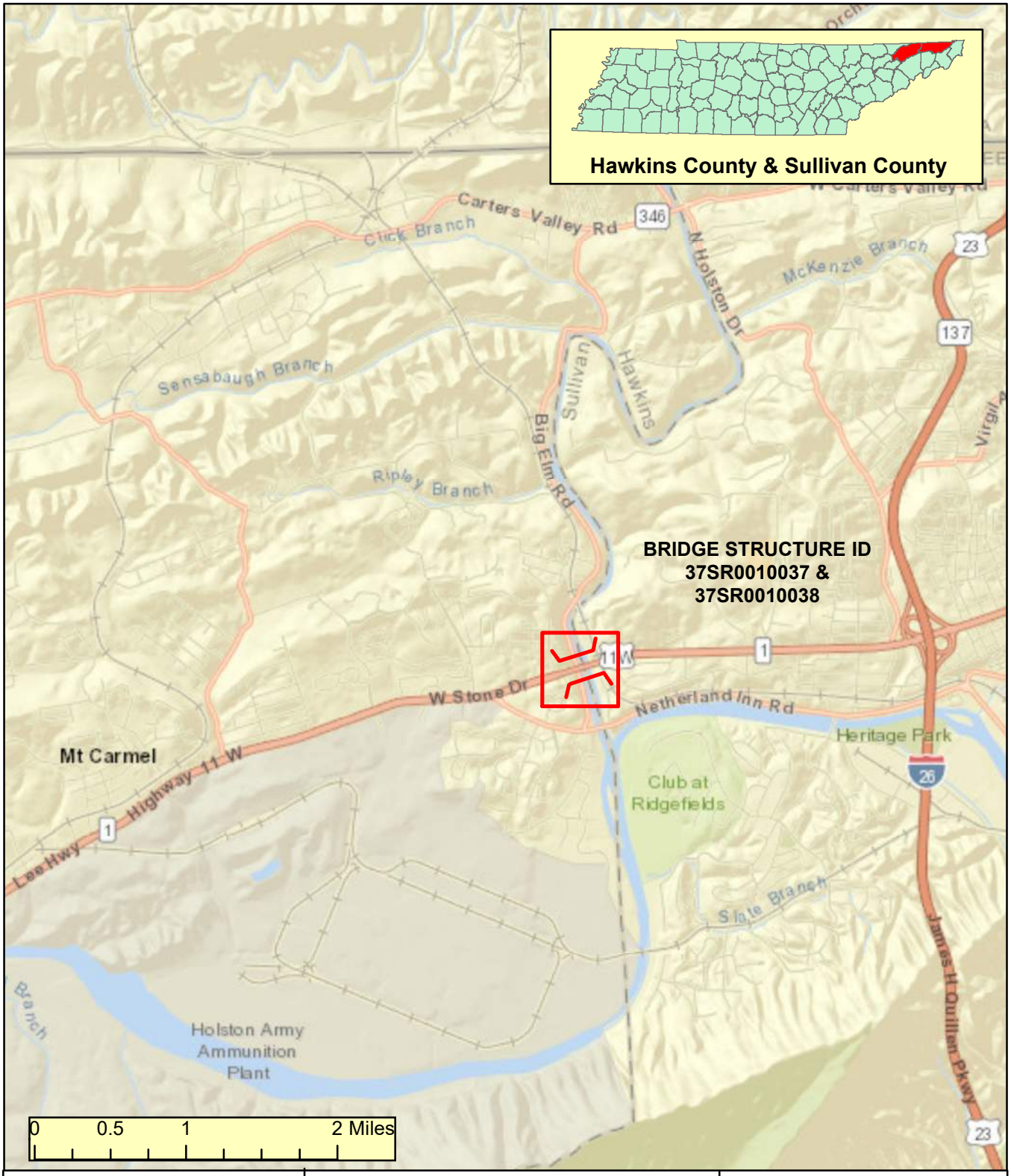
Existing northbound structure (#37SR0010037): twelve (12) span, 592 feet long, thirty-eight (38) feet eight (8) inch out-to-out, twenty-eight (28) feet curb-to-curb, concrete T-beams, 40 ton weight limit.

Existing southbound structure (#S37SR0010038): twelve (12) span, 592 feet long, thirty-nine (39) feet out-to-out, twenty-seven (27) feet ten (10) inch curb-to-curb, concrete T-beams, 40 ton weight limit.

The discharges for the drainage basin (StreamStats Version 4.5.3) for drainage area of 725.97 square miles: Q10 is 25,100 cfs, Q50 is 36,700 cfs and Q100 is 42,200 cfs.

Major Project Risks:

- Utilities: Distribution lines, water lines will need to be relocated
- A retaining wall will need to be constructed under each abutment of the CSX Railroad bridge
    - This will allow for the full typical section of the bridges to be carried through the roadway section. The addition of the retaining walls also provide the necessary space for lane shifts during construction.



TN TDOT Department of Transportation

LOCATION MAP

BRIDGE TIR
SR-1 BRIDGE OVER N.F. HOLSON RIVER
SR-1 (US-11), L.M. 41.40 & L.M. 0.00
HAWKINS COUNTY & SULLIVAN COUNTY

TN TDOT Department of Transportation

TOPOGRAPHIC MAP

BRIDGE TIR
SR-1 BRIDGE OVER N.F. HOLSON RIVER
SR-1 (US-11), L.M. 41.40 & L.M. 0.00
HAWKINS COUNTY & SULLIVAN COUNTY

N

TN TDOT Department of Transportation

AREA MAP

BRIDGE TIR
SR-1 BRIDGE OVER N.F. HOLSON RIVER
SR-1 (US-11), L.M. 41.40 & L.M. 0.00
HAWKINS COUNTY & SULLIVAN COUNTY

N

TENNESSEE D.O.T.

STRATEGIC TRANSPORTATION INVESTMENTS DIVISION

FILE NO.

TYPE	YEAR	COUNTY	FIGURE NO.
TIR	2024	HAWKINS/SULLIVAN	1

PROP. RET. WALL
PROP. RET. WALL
MEDIAN BARRIER
6' SHOULDER
2 TRAVEL LANES @ 12'
HAWKINS COUNTY L.M. 41.40
SULLIVAN COUNTY L.M. 0.00
12' SHOULDER
BUFFERED BIKE LANE
MEDIAN BARRIER
6' SHOULDER
8,650' CURVE
5' SIDEWALK
12' SHOULDER
8,650' CURVE
EAST AVE.
TACO BELL
BEGIN PROJECT
HAWKINS COUNTY
L.M. 41.24
TIE INTO EXISTING
SR 1
NETHERLAND LN
BIG ELM RD
N.F. HOLSTON RIVER
8,650' CURVE
9.50'
SHOULDER
5,950' CURVE
5' SIDEWALK
PROP. RET. WALL
PROPOSED STRUCTURES:
592' LENGTH WITH SPANS
OF 183', 226' & 183'
@ 90 DEGREE SKEW
EXISTING BRIDGE
END PROJECT
SULLIVAN COUNTY
L.M. 0.24
S.R. 1 (U.S. 11W)
TIE INTO
EXISTING
SR 1
2,290' CURVE
8,650' CURVE
6' SHOULDER
CSX RAILROAD
EXISTING CSX BRIDGE.
BRIDGE ID 82SR0010001
ROUTE SR001

0' 200' 400' 600'

N

BRIDGE TIR

SR 1 (US 11W)

BRIDGE OVER NORTH FORK HOLSTON RIVER @ LM 41.40 & L.M. 0.00

HAWKINS COUNTY & SULLIVAN COUNTY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
STRATEGIC TRANSPORTATION
INVESTMENTS DIVISION

FIGURE 1
SR 1
L.M. 41.40
&
L.M. 0.00

6/11/2024 9:28:44 AM
\\global.gsp\data\nf\na_nf06\448104\0IWork\03Tech\TR\Traffic\DGN\Hawkins Sheet Layout.sht

TENNESSEE D.O.T.

STRATEGIC TRANSPORTATION INVESTMENTS DIVISION

FILE NO.

TYPE	YEAR	COUNTY	FIGURE NO.
ETSA	2024	HAWKINS/SULLIVAN	2

STUDY AREA BOUNDARY IS 150.0 FEET PAST CONSTRUCTION LIMIT.

STUDY AREA ENDS 300 FEET AFTER END PROJECT

BEGIN PROJECT SULLIVAN COUNTY L.M. 0.24

TIE INTO EXISTING SR 1

STUDY AREA BOUNDARY IS APPROX. 150.0 FEET FROM PROPOSED CENTERLINE. BOUNDARY LINE FOLLOWS EXISTING R.O.W.

HAWKINS COUNTY L.M. 41.40
SULLIVAN COUNTY L.M. 0.00

STUDY AREA BOUNDARY IS 150.0 FEET PAST CONSTRUCTION LIMIT.

S.R. 1 (U.S. 11W)

EAST AVE.

TACO BELL

CSX RAILROAD

PROPOSED STRUCTURES:
592' LENGTH WITH SPANS OF 183', 226' & 183'
@ 90 DEGREE SKEW

EXISTING BRIDGE

BIG ELM RD

N.F. HOLSTON RIVER

NETHERLAND LN

BEGIN PROJECT HAWKINS COUNTY L.M. 41.24

TIE INTO EXISTING SR 1

STUDY AREA BOUNDARY IS 150.0 FEET PAST CONSTRUCTION LIMIT.

STUDY AREA BEGINS 300 FEET BEFORE BEGIN PROJECT

ENVIRONMENTAL TECHNICAL STUDY AREA

0' 200' 400' 600'

N

ENVIRONMENTAL TECHNICAL STUDY AREA

SR 1 (US 11W)
BRIDGE OVER NORTH FORK HOLSTON RIVER @ LM 41.40 & L.M. 0.00
HAWKINS COUNTY & SULLIVAN COUNTY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
STRATEGIC TRANSPORTATION INVESTMENTS DIVISION

FIGURE 2
SR 1
L.M. 41.40
&
L.M. 0.00

6/10/2024 2:59:21 PM
\\global.gsp.data\nf\na_nf06\448004\01Work\03Tech\TR\Traffic\DGN\Hawkins Env Boundaries.sht

TENNESSEE D.O.T.

STRATEGIC TRANSPORTATION INVESTMENTS DIVISION

FILE NO.

TRAFFIC CONTROL
PHASE 1 NOTES:

- WIDENING IMPROVEMENTS TO THE EXISTING CSX RAILROAD BRIDGE SHOULD BE COMPLETED BEFORE ANY TRAFFIC SHIFTS ARE IMPLEMENTED FOR PHASED CONSTRUCTION OF NEW BRIDGE

- PHASE 1 CONSISTS OF SHIFTING ALL FOUR LANES OF TRAFFIC TO THE SOUTH SIDE OF THE EXISTING STRUCTURES. DEMOLISH APPROXIMATELY 21.67' OF THE EXISTING SOUTHBOUND STRUCTURE AND CONSTRUCT APPROXIMATELY 35.75' OF THE NEW SOUTHBOUND STRUCTURE.

TYPE	YEAR	COUNTY	FIGURE NO.
TIR	2024	HAWKINS/SULLIVAN	3

TRAFFIC CONTROL PLAN PHASE 1

0' 200' 400' 600'

N

BRIDGE TIR

SR 1 (US 11W)
BRIDGE OVER NORTH FORK HOLSTON RIVER @ LM 41.40 & L.M. 0.00
HAWKINS COUNTY & SULLIVAN COUNTY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
STRATEGIC TRANSPORTATION
INVESTMENTS DIVISION

FIGURE 3
SR 1
L.M. 41.40
&
L.M. 0.00

6/10/2024 11:39:46 AM
\\global.gsp\data\nf\na.nf06\448104\0Work\03Tech\TR\Traffic\DGN\Hawkins_TC Ph1.sht

TENNESSEE D.O.T.

STRATEGIC TRANSPORTATION INVESTMENTS DIVISION

FILE NO.

TRAFFIC CONTROL
PHASE 2 NOTES:

- PHASE 2 CONSISTS OF SHIFTING SOUTHBOUND TRAFFIC TO THE FAR NORTH SIDE OF THE NEWLY CONSTRUCTED SOUTHBOUND STRUCTURE. NORTHBOUND TRAFFIC WILL REMAIN ON THE EXISTING NORTHBOUND STRUCTURE. DEMOLISH APPROXIMATELY 21.84' OF THE EXISTING NORTHBOUND AND SOUTHBOUND STRUCTURE. COMPLETE THE REMAINING PORTION OF THE PROPOSED SOUTHBOUND STRUCTURE.

- DESIGN SPEED FOR PHASE TWO OF TRAFFIC CONTROL IS 45 MPH. IT IS RECOMMENDED TO LOWER THE POSTED SPEED TO 35 MPH DURING CONSTRUCTION OF THIS PHASE.

TYPE	YEAR	COUNTY	FIGURE NO.
TIR	2024	HAWKINS/SULLIVAN	4

TRAFFIC CONTROL PLAN PHASE 2

0' 200' 400' 600'

N

BRIDGE TIR

SR 1 (US 11W)
BRIDGE OVER NORTH FORK HOLSTON RIVER @ LM 41.40 & L.M. 0.00
HAWKINS COUNTY & SULLIVAN COUNTY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
STRATEGIC TRANSPORTATION INVESTMENTS DIVISION

FIGURE 4
SR 1
L.M. 41.40
&
L.M. 0.00

6/10/2024 11:42:13 AM
\\globalgsp\data\vnf\na_nf06\4480104\01Work\03Tech\TR\Traffic\DGN\Hawkins_TC Ph2.sht

TENNESSEE D.O.T.

STRATEGIC TRANSPORTATION INVESTMENTS DIVISION

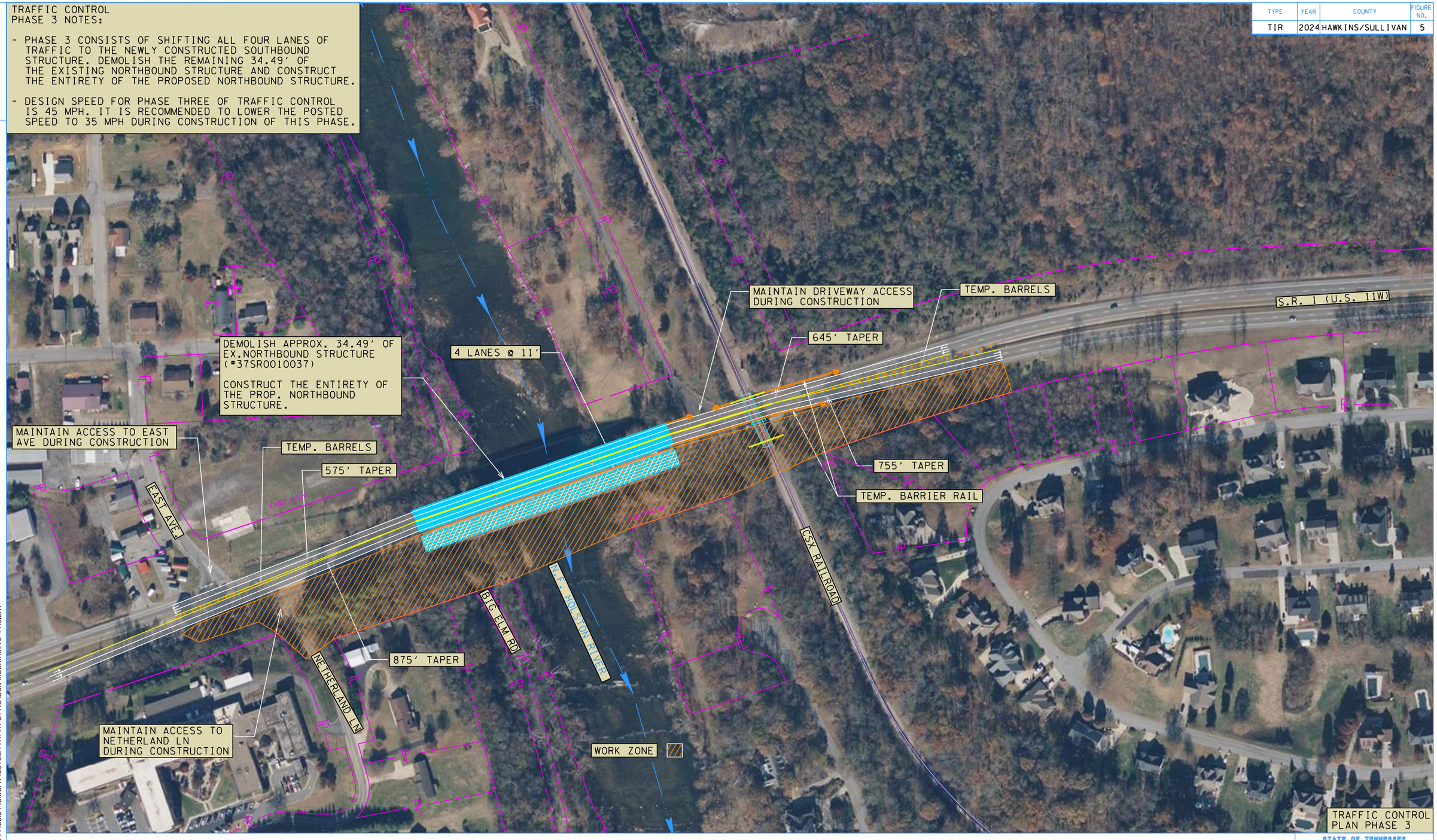
FILE NO.

TRAFFIC CONTROL
PHASE 3 NOTES:

- PHASE 3 CONSISTS OF SHIFTING ALL FOUR LANES OF TRAFFIC TO THE NEWLY CONSTRUCTED SOUTHBOUND STRUCTURE. DEMOLISH THE REMAINING 34.49' OF THE EXISTING NORTHBOUND STRUCTURE AND CONSTRUCT THE ENTIRETY OF THE PROPOSED NORTHBOUND STRUCTURE.

- DESIGN SPEED FOR PHASE THREE OF TRAFFIC CONTROL IS 45 MPH. IT IS RECOMMENDED TO LOWER THE POSTED SPEED TO 35 MPH DURING CONSTRUCTION OF THIS PHASE.

TYPE	YEAR	COUNTY	FIGURE NO.
TIR	2024	HAWKINS/SULLIVAN	5



0' 200' 400' 600'

N

BRIDGE TIR

SR 1 (US 11W)
BRIDGE OVER NORTH FORK HOLSTON RIVER @ LM 41.40 & L.M. 0.00
HAWKINS COUNTY & SULLIVAN COUNTY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
STRATEGIC TRANSPORTATION INVESTMENTS DIVISION

FIGURE 5
SR 1
L.M. 41.40
&
L.M. 0.00

6/10/2024 11:48:10 AM
\\global.gsp\data\vnf\na_nf06\448104\0Work\03Tech\TR\Traffic\DGN\Hawkins_TC Ph3.sht

TENNESSEE D.O.T.

STRATEGIC TRANSPORTATION INVESTMENTS DIVISION

FILE NO.

TRAFFIC CONTROL
PHASE 4 NOTES:

- PHASE 4 CONSISTS OF SHIFTING TRAFFIC TO THE PROPOSED ALIGNMENTS. THE SIDEWALK ON EACH PORTION OF THE BRIDGES SHALL BE COMPLETED.

TYPE	YEAR	COUNTY	FIGURE NO.
TIR	2024	HAWKINS/SULLIVAN	6

TRAFFIC CONTROL
PLAN PHASE 4

0' 200' 400' 600'

N

BRIDGE TIR

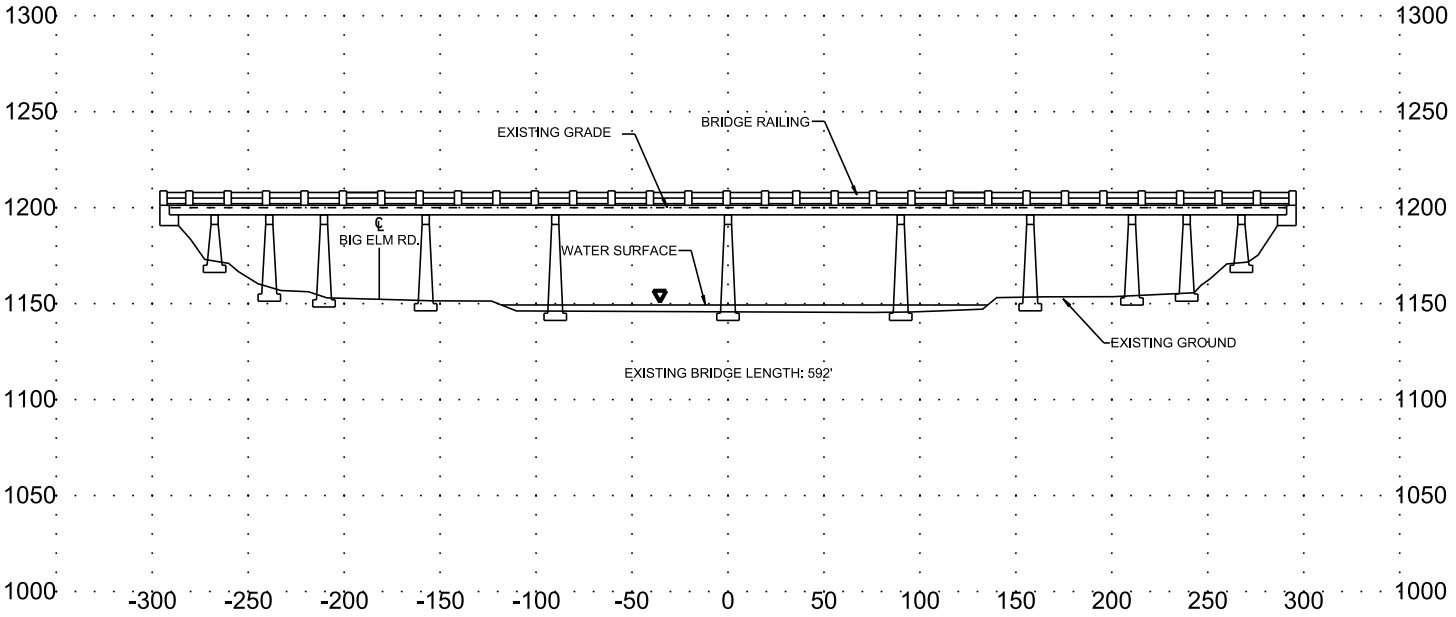
SR 1 (US 11W)
BRIDGE OVER NORTH FORK HOLSTON RIVER @ LM 41.40 & L.M. 0.00
HAWKINS COUNTY & SULLIVAN COUNTY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
STRATEGIC TRANSPORTATION
INVESTMENTS DIVISION

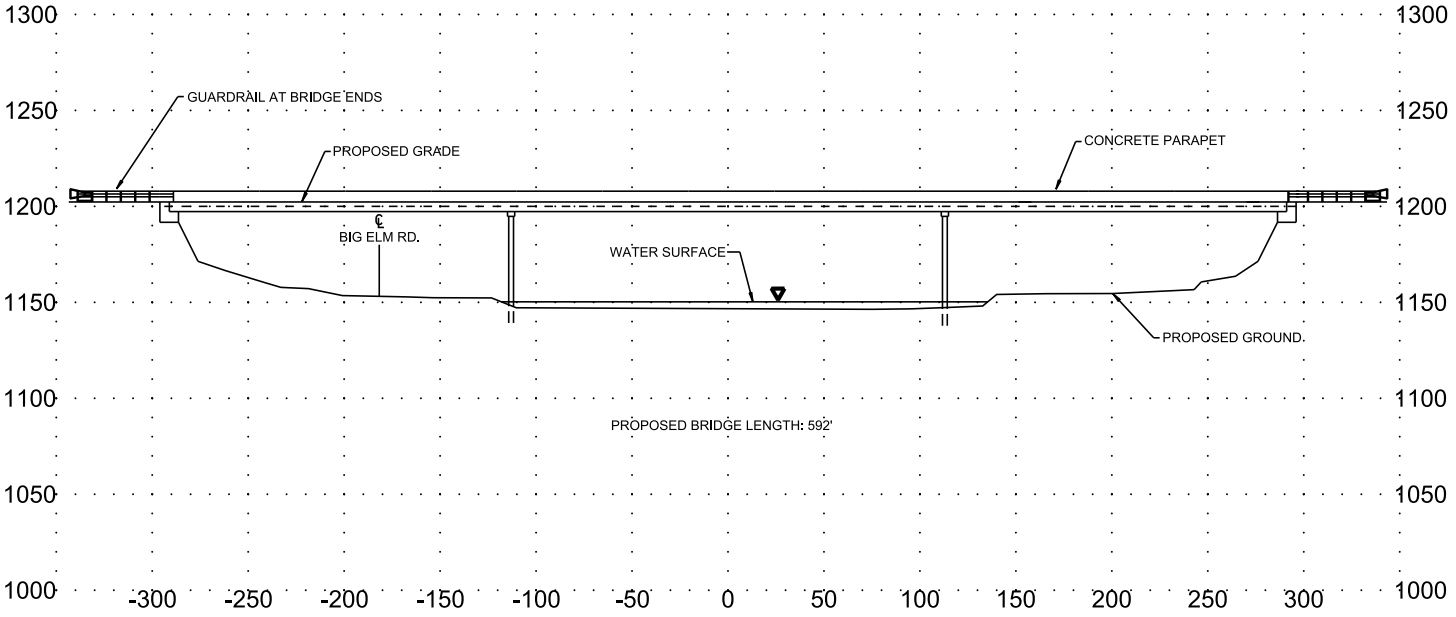
FIGURE 6
SR 1
L.M. 41.40
&
L.M. 0.00

6/10/2024 12:14:20 PM
\\global.gsp\data\vnf\na_nf06\448104\01Work\03Tech\TR\Traffic\DGN\Hawkins_TC Ph4.sht

EXISTING STRUCTURE (INLET)



PROPOSED STRUCTURE (INLET)



0' 50' 100' 150'

SCALE: 1" = 100'

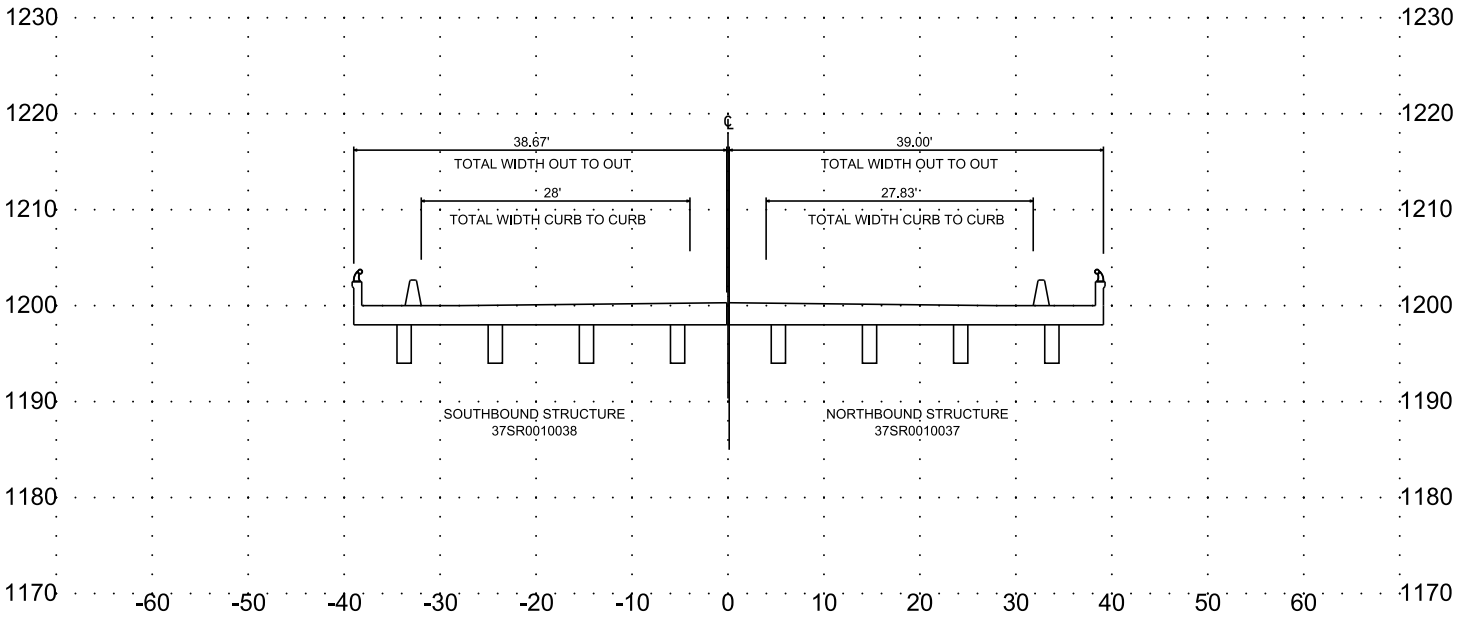
BRIDGE SECTIONS

SR 1 (US 11W) HAWKINS COUNTY & SULLIVAN COUNTY

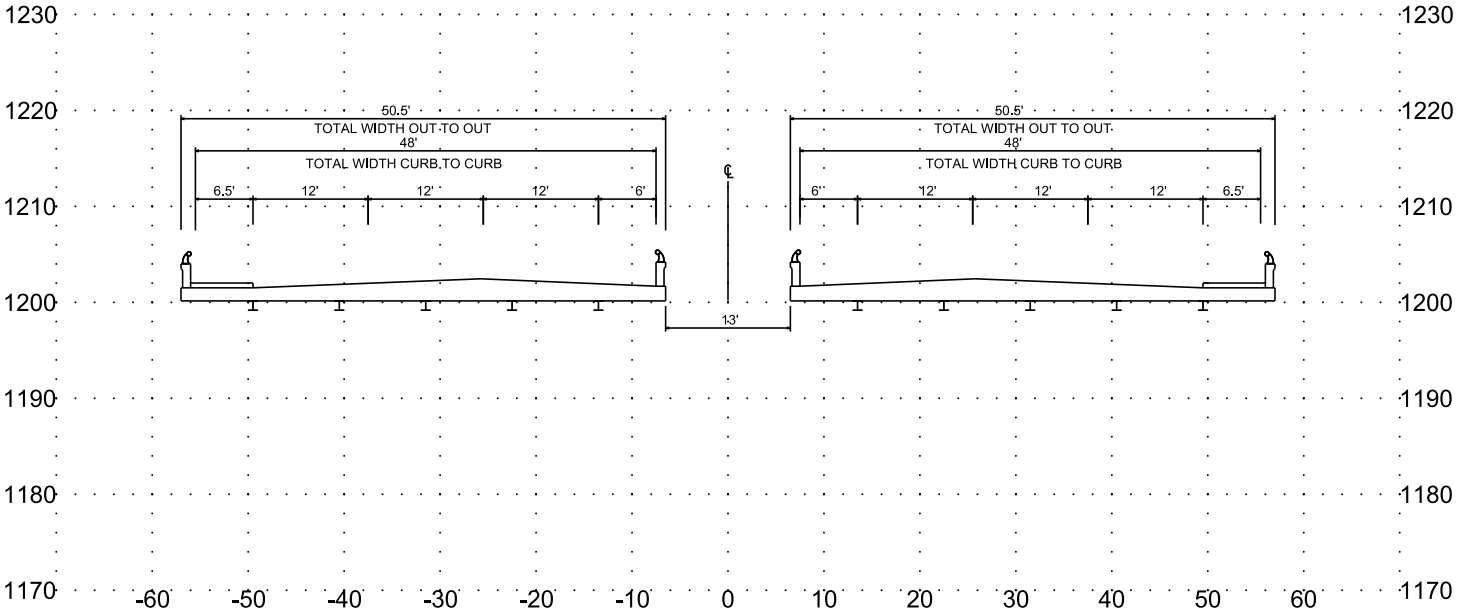
BRIDGE OVER N.F. HOLSTON @ L.M. 41.40 & L.M. 0.00

BRIDGE ID: 37SR0010037 & 37SR001038

EXISTING STRUCTURE



PROPOSED STRUCTURE



0' 10' 20' 30'

SCALE: 1" = 20'

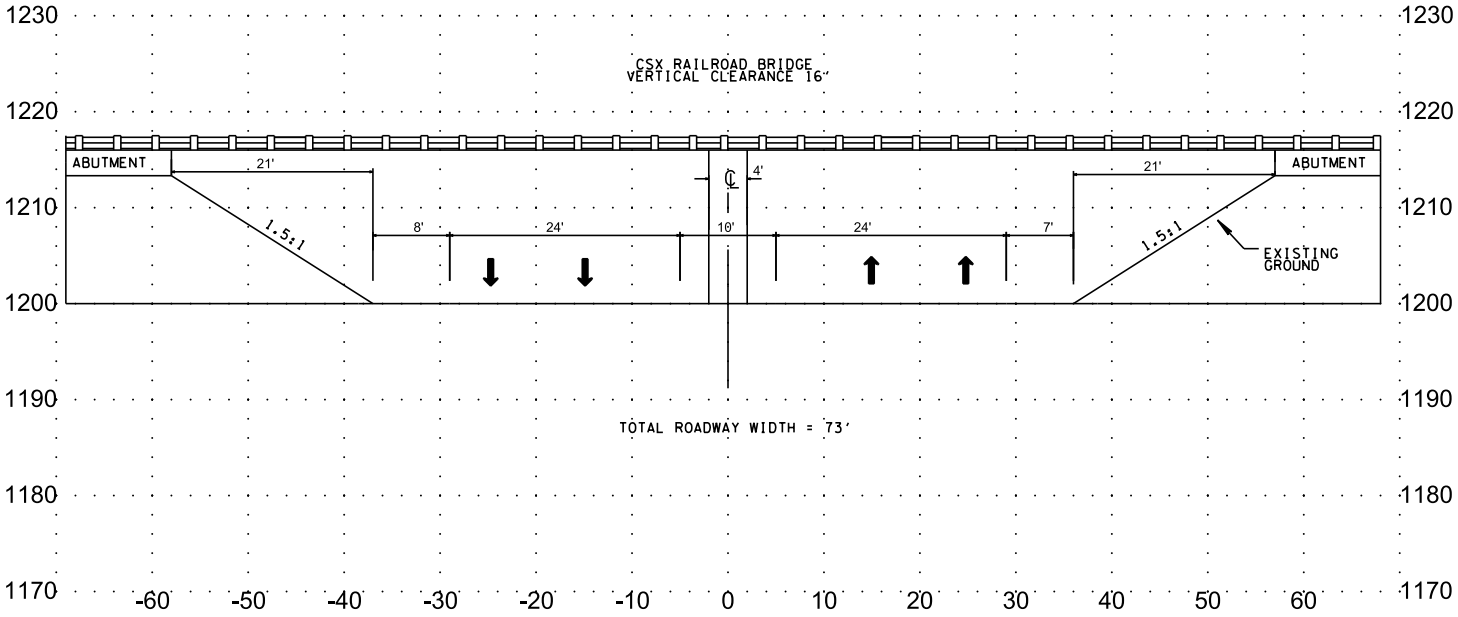
PROPOSED TYPICAL SECTION

SR 1 (US 11W) HAWKINS COUNTY & SULLIVAN COUNTY

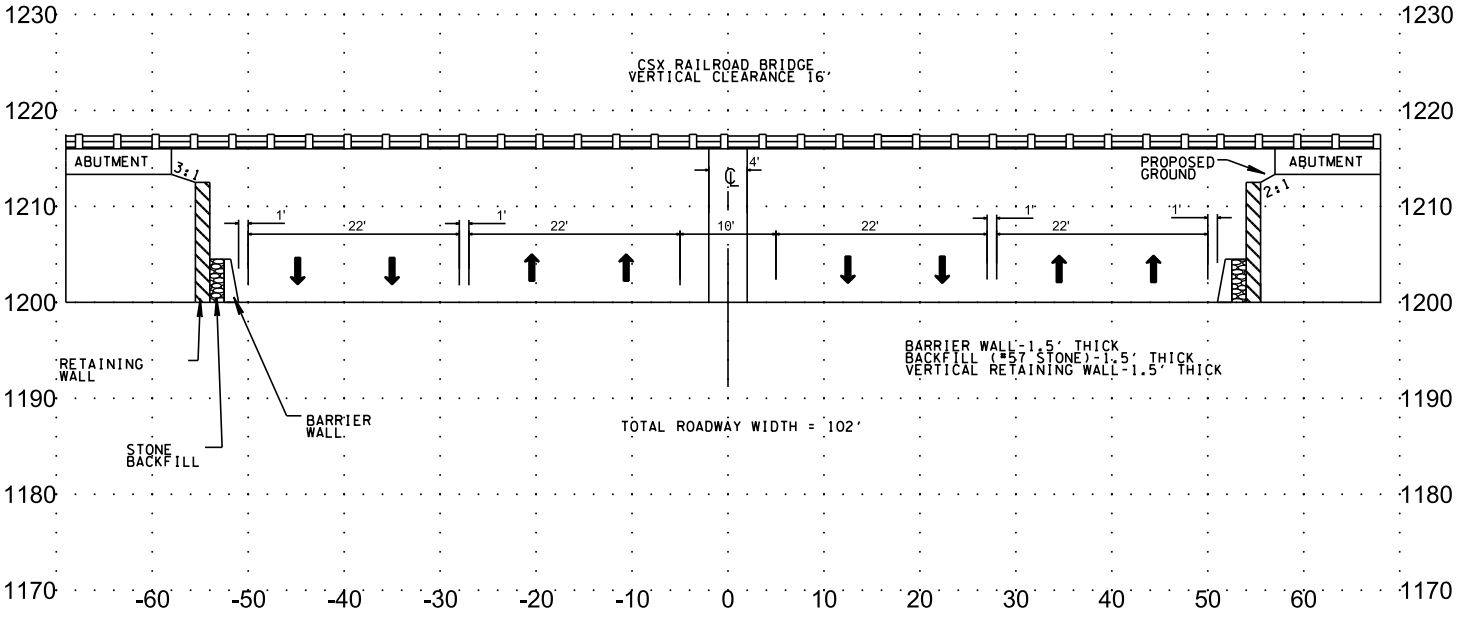
BRIDGE OVER N.F. HOLSTON @ L.M. 41.40 & L.M. 0.00

BRIDGE ID: 37SR0010037 & 37SR001038

EXISTING TYPICAL



PROPOSED CONSTRUCTION TYPICAL

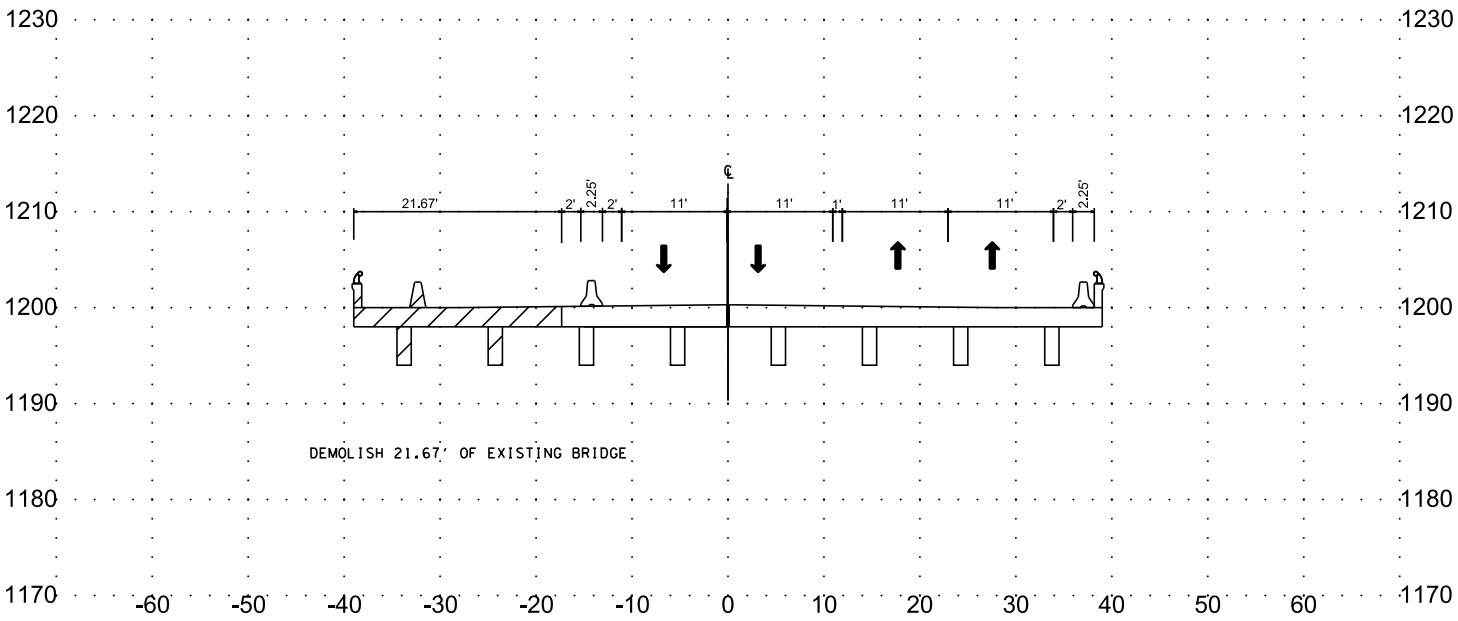


0' 10' 20' 30'

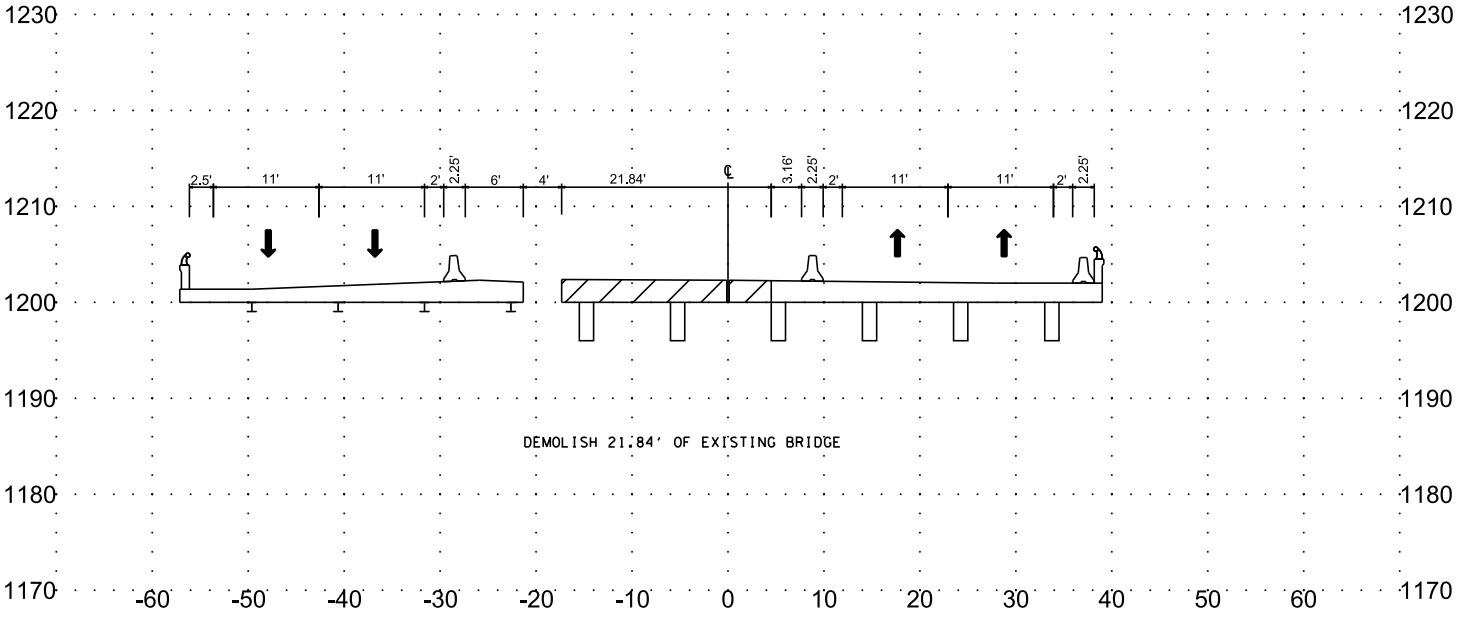
SCALE: 1" = 20'

PROPOSED TYPICAL SECTION @ CSX RAILROAD
SR 1 HAWKINS COUNTY & SULLIVAN COUNTY

TYPICAL SECTION PHASE 1



TYPICAL SECTION PHASE 2



0' 10' 20' 30'

SCALE: 1" = 20'

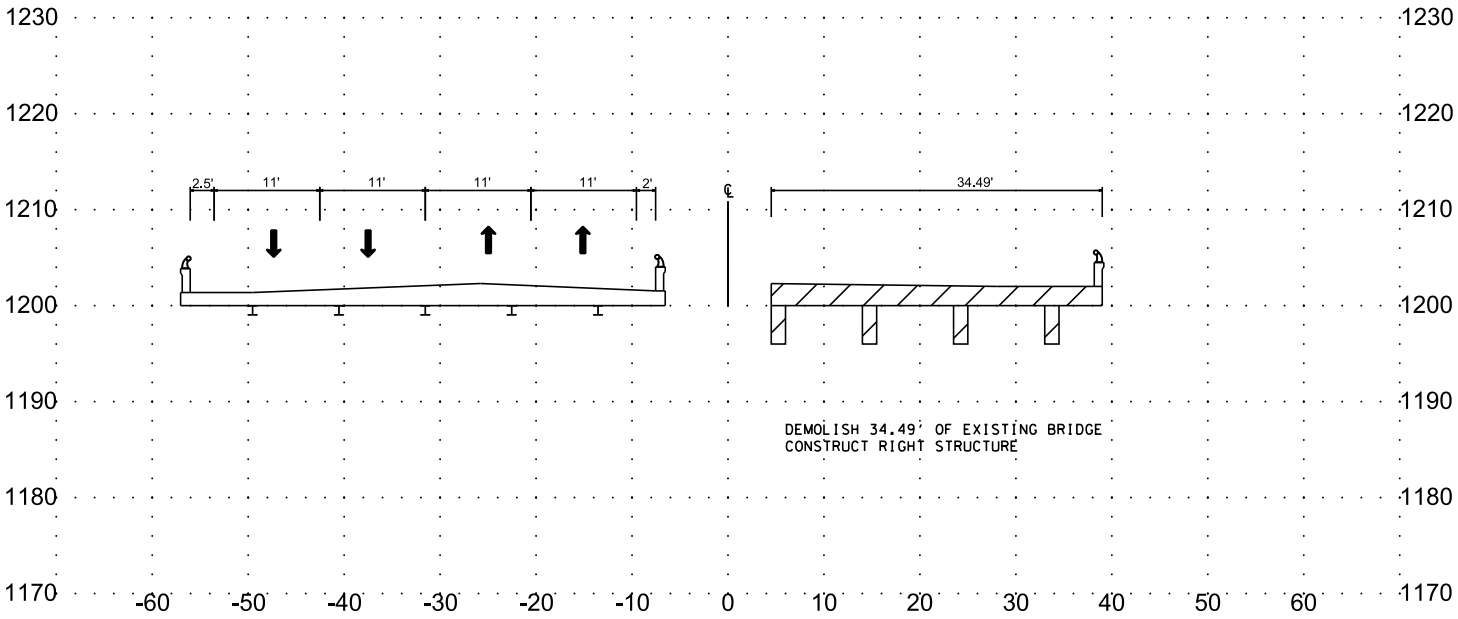
TRAFFIC CONTROL TYPICAL SECTION PHASES 1 & 2

SR 1 (US 11W) HAWKINS COUNTY & SULLIVAN COUNTY

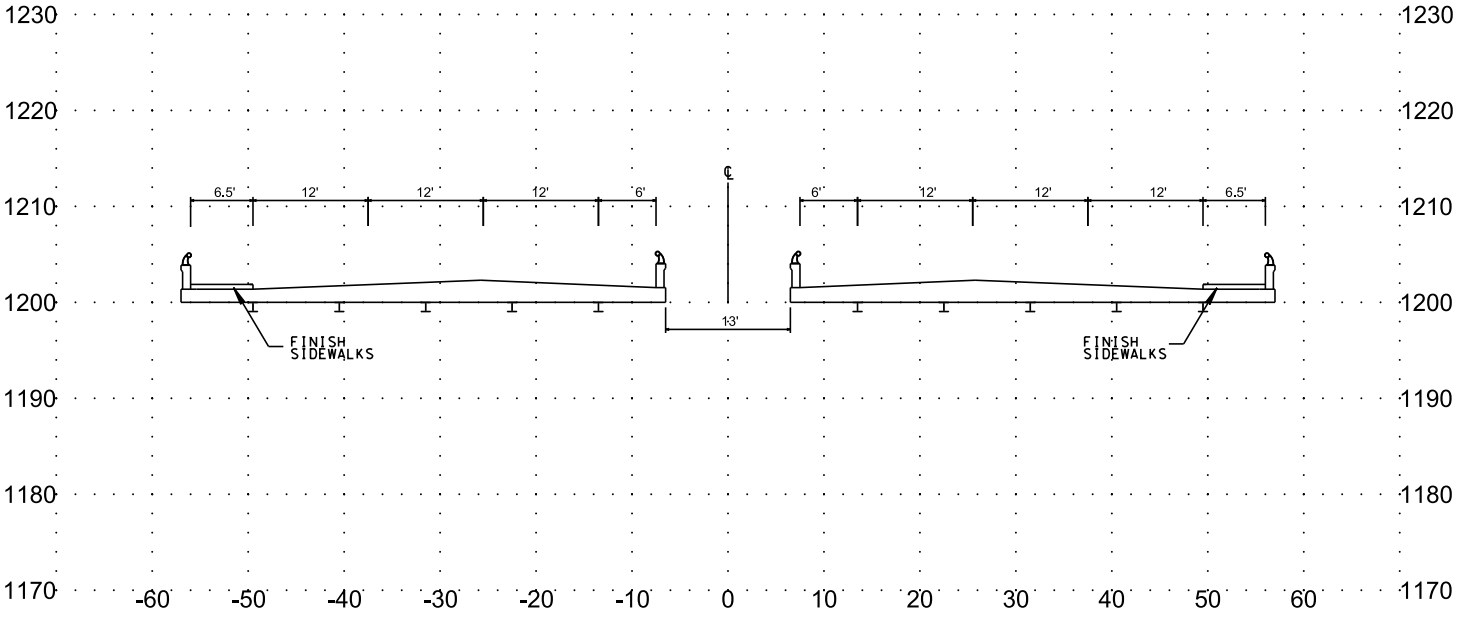
BRIDGE OVER N.F. HOLSTON @ L.M. 41.40 & L.M. 0.00

BRIDGE ID: 37SR0010037 & 37SR001038

TYPICAL SECTION PHASE 3



TYPICAL SECTION PHASE 4



0' 10' 20' 30'

SCALE: 1" = 20'

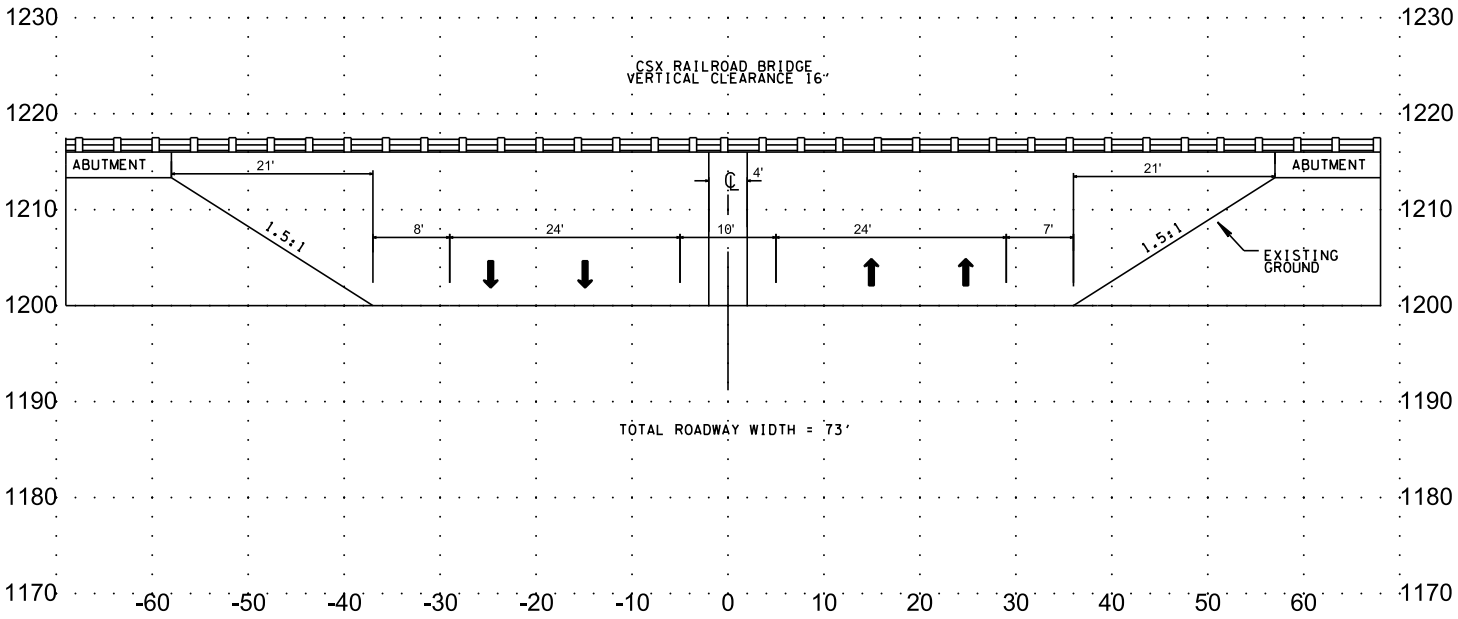
TRAFFIC CONTROL TYPICAL SECTION PHASES 3 & 4

SR 1 (US 11W) HAWKINS COUNTY & SULLIVAN COUNTY

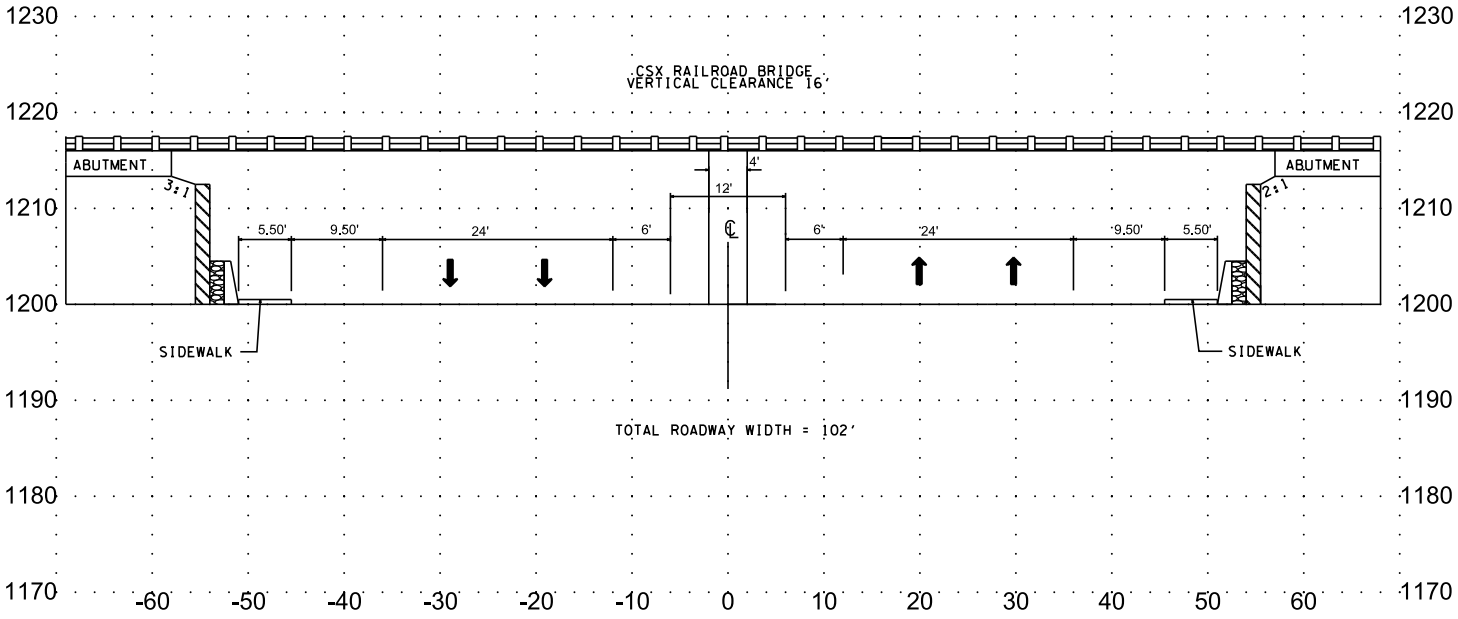
BRIDGE OVER N.F. HOLSTON @ L.M. 41.40 & L.M. 0.00

BRIDGE ID: 37SR0010037 & 37SR001038

EXISTING TYPICAL



PROPOSED TYPICAL AFTER COMPLETION



0' 10' 20' 30'

SCALE: 1" = 20'

PROPOSED TYPICAL SECTION @ CSX RAILROAD

SR 1 HAWKINS & SULLIVAN COUNTY

SIDEWALKS WITH ADDED TAPER IN ALIGNMENT

STD. DWG RD11-TS-3A

COST ESTIMATE SUMMARY

COST ESTIMATE SUMMARY

Route:	SR 1
Termini:	Bridge over N.F. Holston River
Scope of Work:	L.M. 41.40 & L.M. 0.00
Project Type of Work:	Bridge Replacement
County:	Hawkins/Sullivan
Length:	0.40 Miles
Date:	December 4, 2023
Years Inflated:	

TN TDOT Department of Transportation

Estimate Developed By
Initial/Organization
MG/Gresham Smith

DESCRIPTION		LOCAL	STATE	FEDERAL	TOTAL
		0%	0%	0%	
Construction Items					
Removal Items		$0	$0	$0	$127,000
Asphalt Paving		$0	$0	$0	$840,000
Concrete Pavement		$0	$0	$0	$0
Drainage		$0	$0	$0	$72,300
Appurtenances		$0	$0	$0	$206,000
Structures & Contingency		$0	$0	$0	$27,600,000
Fencing		$0	$0	$0	$0
Signalization & Lighting		$0	$0	$0	$0
Railroad Crossing		$0	$0	$0	$0
Earthwork		$0	$0	$0	$632,000
Clearing and Grubbing		$0	$0	$0	$80,000
Seeding & Sodding		$0	$0	$0	$20,200
Rip-Rap or Slope Protection		$0	$0	$0	$88,300
Guardrail		$0	$0	$0	$60,000
Signing		$0	$0	$0	$29,700
Pavement Markings		$0	$0	$0	$29,200
Maintenance of Traffic		$0	$0	$0	$343,000
Construction Lines and Stakes		$0	$0	$0	$529,000
DESIGN-BID-BUILD & DESIGN-BUILD PERCENTAGES					
Mobilization	10%	$0	$0	$0	$3,010,000
Additional Items	20%	$0	$0	$0	$6,030,000
Const. Contingency (Structures Not Included)	50%	$0	$0	$0	$5,780,000
Const. Eng. & Inspec.	15%	$0	$0	$0	$6,740,000
Construction Estimate		$0	$0	$0	$52,200,000
Right-of-Way & Utilties		LOCAL	STATE	FEDERAL	TOTAL
		0%	0%	0%	
Right-of-Way		$0	$0	$0	$0
Utilities		$0	$0	$0	$660,000
Preliminary Engineering		LOCAL	STATE	FEDERAL	TOTAL
		0%	0%	0%	
Prelim. Eng.	10.0%	$0	$0	$0	$5,220,000
Project Cost		$0	$0	$0	$ 58,100,000

ESTIMATE REVIEW TEAM

Review Process Applies to Bridge, Legislative, and Economic Development Projects

ROLE	NAME/ORGANIZATION	DATE COMPLETED
Primary Cost Estimate (Before Draft Report):	Matthew Giles/Gresham Smith	12/4/2023
Independent Cost Estimate:	Amy Rauch/TDOT	12/5/2023
Manager Review:	Amy Rauch/TDOT	12/5/2023

PAY ITEM SUMMARY

TDOT PAY ITEM	TDOT DESCRIPTION	UNIT	TOOL QUANTITIES	ADDITIONAL QUANTITIES	TOOL QUANTITIES + ADDITIONAL	Unit Price	TOTAL COST
Pavment Removal							
415-01.02	COLD PLANING BITUMINOUS PAVEMENT	SY	12813		12813	$ 9.94	$ 127,359.23
						PAVEMENT REMOVAL TOTAL (ROUNDED)	$ 127,400
Asphalt Roads							
303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	11314		11314	$ 37.18	$ 420,640.70
307-(01, 02, 03).01	ASPHALT CONCRETE MIX (All Grades) (BPMB-HM) GRADING A	TON	567		567	$ 112.37	$ 63,683.78
307-01.(20 & 21 & 22)	AGGREGATE (BPMB-HM) GRADING A-S MIX	TON	380		380	$ 122.73	$ 46,656.33
307-(01 & 02 & 03).08	ASPHALT CONCRETE MIX (ALL GRADES) (BPMB-HM) GRADING B-M2	TON	849		849	$ 105.33	$ 89,379.93
402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	10		10	$ 1,064.94	$ 11,078.10
402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	38		38	$ 89.00	$ 3,341.65
403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	8		8	$ 924.09	$ 7,267.87
411-01.07	ACS MIX (PG64-22) GRADING E SHOULDER	TON	378		378	$ 124.81	$ 47,228.10
411-(01 & 02 & 03).10	ACS MIX(ALL GRADES) GRADING D	TON	1123		1123	$ 133.70	$ 150,187.65
						PAVING TOTAL (ROUNDED)	$ 839,500
Concrete Roads							
						CONCRETE RAMPS AND ROADWAYS TOTAL (ROUNDED)	$ -
Drainage							
209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	LF		1000	1000	$ 4.56	$ 4,560.00
209-08.08	ENHANCED ROCK CHECK DAM	EACH		10	10	$ 492.59	$ 4,925.90
607-05.02	24" CONCRETE PIPE CULVERT (CLASS III)	LF	2510	-2360	150	$ 172.02	$ 25,871.81
611-07.01	CLASS A CONCRETE (PIPE ENDWALLS)	CY	13		13	$ 1,888.61	$ 24,325.33
611-07.02	STEEL BAR REINFORCEMENT (PIPE ENDWALLS)	LB	1224		1224	$ 3.96	$ 4,847.04
611-12.02	CATCH BASINS, TYPE 12, > 4' - 8' DEPTH	EA	7	-7	0	$ 11,799.31	$ 471.97
740-10.03	GEOTEXTILE (TYPE III)(EROSION CONTROL)	SY		1000	1000	$ 2.91	$ 2,910.00
740-11.03	TEMPORARY SEDIMENT TUBE 18IN (18 IN)	LF		1000	1000	$ 4.33	$ 4,330.00
						DRAINAGE TOTAL (ROUNDED)	$ 72,300
Appurtenances							
701-01.01	CONCRETE SIDEWALK (4 ")	SF	0	9000	9000	$ 10.53	$ 94,770.00
711-05.71	51IN SINGLE SLOPE CONCRETE BARRIER WALL	LF	2112	-1600	512	$ 217.47	$ 111,344.64
						ROADWAY AND PAVEMENT APPURTENANCES TOTAL (ROUNDED)	$ 206,200
Earthwork & Mineral							
203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	CY	12203		12203	$ 14.81	$ 180,721.49
203-02.01	BORROW EXCAVATION (GRADED SOLID ROCK)	TON	6725		6725	$ 32.33	$ 217,425.54
203-03	BORROW EXCAVATION (UNCLASSIFIED)	CY	3813	7500	11313	$ 13.27	$ 150,178.49
204-09.01	COFFERDAM	LS		1	1	$ 83,375.60	$ 83,375.60
						EARTHWORK & MINERAL TOTAL (ROUNDED)	$ 631,800
Construction Lines and Stakes							
105-01	Construction Lines and Stakes	LS	1		1		$ 529,000.00
							$ 529,000
Structures							
N/A	Removal of Bridge	SF	45939		45939	$ 30.00	$ 1,378,176.00
N/A	New Bridge (Steel Girder):	SF	59200		59200	$ 350.00	$ 20,720,000.00
N/A	Contingency - New Bridge (Steel Girder):	%	25.0%		25.0%	25.0%	$ 5,180,000.00
604-07.01	RETAINING WALL	SF	3185		3185	$ 110.00	$ 350,350.00
						STRUCTURES TOTAL (ROUNDED)	$ 27,628,600
Interchanges and Unique Intersections							
						INTERCHANGES AND UNIQUE INTERSECTIONS TOTAL (ROUNDED)	$ -

PAY ITEM SUMMARY

Lighting & Signalization

						LIGHTING & SIGNALIZATION TOTAL (ROUNDED)	$ -

Guardrail

705-01.01	GUARDRAIL AT BRIDGE ENDS	LF	200		200	$ 99.88	$ 19,976.23
705-06.01	W Beam GR (Type 2) Mash TL3	LF	0	700	700	$ 34.98	$ 24,486.00
705-04.05	GUARDRAIL TERMINAL (TYPE-IN-LINE)	EA		3	3	$ 590.37	$ 1,771.11
705-06.20	Tangent Energy Absorbing Term Mash TL-3	EA	8	-5	3	$ 3,457.56	$ 10,372.68
705-04.09	EARTH PAD FOR TYPE 38 GR END TREATMENT	EA		3	3	$ 1,122.29	$ 3,366.87
						GUARDRAIL TOTAL (ROUNDED)	$ 60,000

Seeding and Sodding

801-01	SEEDING (WITH MULCH)	UNIT	158		158	$ 54.58	$ 8,645.47
801-01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT	119		119	$ 35.33	$ 4,197.20
801-02	SEEDING (WITHOUT MULCH)	UNIT	119		119	$ 42.37	$ 5,033.56
803-01	SODDING (NEW SOD)	SY		500	500	$ 2.45	$ 1,225.00
805-12.02	EROSION CONTROL BLANKET (TYPE II)	SY		1000	1000	$ 1.08	$ 1,080.00
						SODDING TOTAL (ROUNDED)	$ 20,200

Maintenace of Traffic

N/A	Traffic Control	LS	1		1		$ 292,320.66
712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	LF	106	1000	1106	$ 46.05	$ 50,912.88
						MAINTENANCE OF TRAFFIC TOTAL (ROUNDED)	$ 343,300

Signs

Not Listed	Signs (Construction)	LS	1		1	$ -	$ 29,700
						SIGNING TOTAL (ROUNDED)	$ 29,700

Pavement Markings

716-05.02	Painted Pavement Marking (8" Barrier Line)	LF		5280	5280	$ 0.46	$ 2,428.80
716-05.20	Painted Pavement Marking (6" Line)	LM		3	3	$ 1,176.29	$ 3,528.87
716-12.02	ENHANCED FLAT THERMO P.M. (6IN)	LM	6.128	-3	3.128	$ 7,419.17	$ 23,207.16
						PAVEMENT MARKINGS TOTAL (ROUNDED)	$ 29,200

Fencing

						FENCE TOTAL (ROUNDED)	$ -

Rip-Rap

709-05.05	Machined Rip-Rap (Class A-3)	TON	0	1500	1500	$ 58.81	$ 88,215.00
						RIP-RAP & SLOPE PROTECTION TOTAL (ROUNDED)	$ 88,300.00

Clearing and Grubing

201-01	Clearing and Grubbing	LS			1	$ 80,000.00	$ 80,000.00
						CLEAR AND GRUBBING TOTAL (ROUNDED)	$ 80,000.00

Railroad At-Grade Crossing

720-03-01	Railroad Crossing Signal System	LS			0		$ -
						RAILROAD CROSSING OR SEPARATION TOTAL (ROUNDED)	$ -

Utilties

N/A	Overhead Distribution	LM	0.25		0.25	$ 900,000	$ 225,000
N/A	Underground Power	LM	0.25		0.25	$ 900,000	$ 225,000
N/A	Underground Water	LM	0.25		0.25	$ 840,000	$ 210,000
						UTILITIES TOTAL (ROUNDED)	$ 660,000.00

Right-of-Way

N/A	Right-of-Way	LS	1		1	$0	$ -
						RIGHT-OF-WAY TOTAL (ROUNDED)	$ -

COST ESTIMATE SUMMARY (2024)						
PIN	**Project Type of Work**	**Preliminary Engineering:**	**Right-of-Way:**	**Utilities:**	**Construction:**	**Total Project Cost (2023):**
124387.00	L.M. 41.40 & L.M. 0.00	$ 5,280,000	$ -	$ 660,000	$ 52,800,000	$ 58,800,000

INFLATED COST						
No. of Years	**Year**	**Preliminary Engineering:**	**Right-of-Way:**	**Utilities:**	**Construction:**	**Total Inflated Project Cost**
0	2024	$ 5,280,000	$ -	$ 660,000	$ 52,800,000	$ 58,800,000
1	2025	$ 5,650,000	$ -	$ 706,000	$ 56,500,000	$ 62,900,000
2	2026	$ 6,050,000	$ -	$ 756,000	$ 60,500,000	$ 67,300,000
3	2027	$ 6,470,000	$ -	$ 809,000	$ 64,700,000	$ 72,000,000
4	2028	$ 6,920,000	$ -	$ 865,000	$ 69,200,000	$ 77,100,000
5	2029	$ 7,410,000	$ -	$ 926,000	$ 74,100,000	$ 82,500,000

INFLATION INPUTS	
Inflation Rate:	7.00%

Site Visit Attendee List

Date of site visit: April 28th, 2021

Name	Agency Division	Phone	Email
Amy Rauch	TDOT STID	615-741-0969	Amy.rauch@tn.gov
Shaun Armstrong	TDOT STID	615-253-5327	Shaun.armstrong@tn.gov
Konner Spradlin	TDOT STID	615-253-2432	Konner.spradlin@tn.gov
Ty Tucker	TDOT STID	615-532-7459	Ty.tucker@tn.gov
Nicholas Barnard	TDOT Traffic (Region 1)	865-594-2456	Nicholas.barnard@tn.gov
Keven Brown	TDOT Envir. (Region 1)	865-594-2437	Keven.brown@tn.gov
Dave Jordan	TDOT Design (Region 1)	865-594-0713	Dave.jordan@tn.gov
J. Eric Pickering	TDOT Survey (Region 1)	423-854-5128	James.pickering@tn.gov
David Harris	City of Kingsport	423-224-2416	Davidharris@kingsporttn.gov
Jason Brooks	City of Kingsport	423-229-9400	jasonbrooks@kingsporttn.gov
Tim Elsea	City of Kingsport	423-229-9400	timelsea@kingsporttn.gov
Shap Stiles	Gresham Smith	865-299-6138	Shap.stiles@greshamsmith.com
Matthew Giles	Gresham Smith	865-299-6151	Matthew.giles@greshamsmith.com

NATIONAL BRIDGE INVENTORY
TENNESSEE INVENTORY AND APPRAISAL REPORT

TN TDOT Department of Transportation

BRIDGE ID NUMBER: **37SR0010037**
BRIDGE OWNER: **STATE OF TENNESSEE**
FIPS CODE: **39560**
ROAD NAME: **W. STONE DR.**
CROSSING: **NORTH FORK HOLSTON RIVER**
LOCATION: **ON CO LN**

COUNTY: **HAWKINS**
ROUTE: **SR001**
SPECIAL CASE: **0**
COUNTY SEQUENCE: **1**
LOG MILE: **41.30**
SUFFICIENCY RATING: **33.1**

IDENTIFICATION

(16a,b) LATITUDE:	N	36.55403	DEGREES
(17a,b) LONGITUDE:	W	82.61585	DEGREES
(98a) BORDER BRIDGE STATE CODE:			N/A
(98b) PERCENT SHARE:			N/A
(99) BORDER BRIDGE NUMBER:			NOT APPLICABLE

BRIDGE TYPE AND MATERIAL

(43a) MAIN SPAN MATERIAL: **CONCRETE CONTINUOUS**
(44a) APPR SPAN MATERIAL: **CONCRETE**

(45) NUMBER OF MAIN SPANS: **4**
(46) NUMBER OF APPROACH SPANS: **8**
(107) TYPE OF DECK: **CONCRETE CAST-IN-PLACE**
(108) TYPE OF WEARING SURFACE AND DECK PROTECTION:
A) TYPE OF SURFACE: **ASPHALT**
B) TYPE MEMBRANE: **NONE**
C) TYPE PROTECTION: **EPOXY COATED REINFORCING**

AGE AND SERVICE

(27) YEAR THE BRIDGE WAS BUILT: **1962**
(106) YEAR THE BRIDGE WAS REHABILITATED: **1989**
(42a) SERVICE ON BRIDGE: **HIGHWAY**
(42b) UNDER BRIDGE: **HIGHWAY-WATERWAY**
(28a) NUMBER OF LANES CARRIED BY BRIDGE: **2**
(28b) NUMBER OF LANES UNDER THE BRIDGE: **2**

GEOMETRIC DATA

(48) MAXIMUM SPAN LENGTH: **89.9 FT**
(49) TOTAL BRIDGE LENGTH: **591.9 FT**
(50a) LEFT SIDEWALK WIDTH: **4.9 FT**
(50b) RIGHT SIDEWALK WIDTH: **4.9 FT**
(51) BRIDGE CURB TO CURB WIDTH: **27.9 FT**
(52) BRIDGE OUT TO OUT WIDTH: **39 FT**
(32) APPROACH ROADWAY (W/ SHLDS) WIDTH: **45.9 FT**

(33) BRIDGE MEDIAN: **CLOSED MEDIAN - NO BARRIER**
(34) BRIDGE SKEW: **0 DEGREES**
(35) BRIDGE FLARE: **NO FLARE**
(520) MIN VERTICAL CLEARANCE OVER RD: **NO RESTRICTION**
(47) MIN HORIZONTAL CLEARANCE ON ROADWAY: **27.9 FT**
(54a) VERT UNDERCLR: **HIGHWAY BENEATH BRIDGE**
(54b) MIN VERTICAL UNDERCLEARANCE: **39.99 FT**
(55a) HORZ UNDERCLR: **HIGHWAY BENEATH BRIDGE**
(55b) MIN HORZ UNDERCLR ON RIGHT: **7.22 FT**
(56) MIN HORZ UNDERCLR ON LEFT: **NOT APPLICABLE**

NAVIGATION DATA

(38) NAV CONTROL: **NO NAVIGATION CONTROL**
(39) NAVIGATION VERTICAL CLEARANCE: **N/A**
(116) LIFT BRIDGE VERT CLEARANCE: **N/A**
(40) NAVIGATION HORZ CLEARANCE: **N/A**

PUBLICATION DATE
08-Mar-22

CLASSIFICATION

(112) MEETS NBIS BRIDGE LENGTH: **YES**
(104) NATIONAL HIGHWAY SYSTEM: **NHS ROUTE**
(26) FUNCTIONAL CLASS: **URBAN PRINCIPAL ARTERIAL**
(101) PARALLEL BRIDGE: **RIGHT LANE BRIDGE**
(102) TRAFFIC DIR: **1-WAY TRAFFIC**
(103) TEMPORARY BRIDGE: **NOT APPLICABLE**
(110) NATIONAL TRUCK ROUTE: **NOT ON TRUCK NETWORK**
(37) HISTORICAL CLASS: **HISTORICAL SIGNIFICANCE HAS NOT BEEN DETERMINED**

CONDITION RATINGS

(58) DECK: **5**
(59) SUPERSTRUCTURE: **5**
(60) SUBSTRUCTURE: **4**
(61) STREAM CHANNEL AND CHANNEL PROTECTION: **6**
(62) CULVERT CONDITION (IF APPLICABLE): **N**

DESIGN LOAD AND WEIGHT POSTING

(31) DESIGN LOADING: **HS-20-44**
WEIGHT POSTING (2 AXLE VEHICLES): **ALL LEGAL LOADS**
WEIGHT POSTING (3 OR MORE AXLES): **ALL LEGAL LOADS**
(70) BRIDGE POSTING CODE: **5**
(41) WT POSTING STATUS: **WEIGHT POSTED**

APPRAISAL

(67) STRUCTURAL EVALUATION: **4**
(68) DECK GEOMETRY: **3**
(69) UNDERCLEARANCE RATING: **4**
(71) WATERWAY ADEQUACY: **7**
(72) APPROACH ROADWAY ALIGNMENT: **8**
(36) TRAFFIC SAFETY FEATURES: **1000**
(113) SCOUR CONDITION RATING: **8**

RECOMMENDED IMPROVEMENTS

(75) TYPE OF WORK: **BRIDGE WIDENING (NO DECK REPAIRS NEEDED)**
(76) LENGTH OF BRIDGE IMPROVEMENT: **591.9 FT**
(94) BRIDGE IMPROVEMENT COST: **$1,964,000.00**
(95) ROADWAY IMPROVEMENT COST: **$197,000.00**
(96) TOTAL PROJECT COST: **$2,947,000.00**
(97) YEAR OF IMPROVEMENT COST ESTIMATE: **2021**

INSPECTION DATES

(90) DATE OF LAST REGULAR INSPECTION: **8/18/2021**
(91) REGULAR INSPECTION FREQUENCY (MONTHS): **24**
(93b) DATE OF LAST UNDERWATER INSP (MO/YR): **N/A**
(92b) UNDERWATER INSP FREQUENCY (MONTHS): **N**
(93c) DATE OF SPECIAL INSPECTION (MO/YR): **08/2021**
(92c) SPECIAL INSP FREQUENCY (MONTHS): **Y12**

NATIONAL BRIDGE INVENTORY
TENNESSEE INVENTORY AND APPRAISAL REPORT

TN TDOT Department of Transportation

BRIDGE ID NUMBER: **37SR0010038**
BRIDGE OWNER: **STATE OF TENNESSEE**
FIPS CODE: **39560**
ROAD NAME: **W. STONE DR.**
CROSSING: **NORTH FORK HOLSTON RIVER**
LOCATION: **ON CO. LINE**

COUNTY: **HAWKINS**
ROUTE: **SR001**
SPECIAL CASE: **0**
COUNTY SEQUENCE: **1**
LOG MILE: **41.30**
SUFFICIENCY RATING: **49.8**

IDENTIFICATION

(16a,b) LATITUDE:	N	36.55398	DEGREES
(17a,b) LONGITUDE:	W	82.61597	DEGREES
(98a) BORDER BRIDGE STATE CODE:			N/A
(98b) PERCENT SHARE:			N/A
(99) BORDER BRIDGE NUMBER:			NOT APPLICABLE

BRIDGE TYPE AND MATERIAL

(43a) MAIN SPAN MATERIAL: **CONCRETE CONTINUOUS**
(44a) APPR SPAN MATERIAL: **CONCRETE**

(45) NUMBER OF MAIN SPANS: **4**
(46) NUMBER OF APPROACH SPANS: **8**
(107) TYPE OF DECK: **CONCRETE CAST-IN-PLACE**
(108) TYPE OF WEARING SURFACE AND DECK PROTECTION:
A) TYPE OF SURFACE: **ASPHALT**
B) TYPE MEMBRANE: **NONE**
C) TYPE PROTECTION: **EPOXY COATED REINFORCING**

AGE AND SERVICE

(27) YEAR THE BRIDGE WAS BUILT: **1962**
(106) YEAR THE BRIDGE WAS REHABILITATED: **N/A**
(42a) SERVICE ON BRIDGE: **HIGHWAY**
(42b) UNDER BRIDGE: **HIGHWAY-WATERWAY**
(28a) NUMBER OF LANES CARRIED BY BRIDGE: **2**
(28b) NUMBER OF LANES UNDER THE BRIDGE: **2**

GEOMETRIC DATA

(48) MAXIMUM SPAN LENGTH:	89.9 FT
(49) TOTAL BRIDGE LENGTH:	591.9 FT
(50a) LEFT SIDEWALK WIDTH:	0.0 FT
(50b) RIGHT SIDEWALK WIDTH:	0.0 FT
(51) BRIDGE CURB TO CURB WIDTH:	27.9 FT
(52) BRIDGE OUT TO OUT WIDTH:	38.7 FT
(32) APPROACH ROADWAY (W/ SHLDS) WIDTH:	42.0 FT

(33) BRIDGE MEDIAN: **OPEN MEDIAN**
(34) BRIDGE SKEW: **0 DEGREES**
(35) BRIDGE FLARE: **NO FLARE**
(520) MIN VERTICAL CLEARANCE OVER RD: **NO RESTRICTION**
(47) MIN HORIZONTAL CLEARANCE ON ROADWAY: **27.9 FT**
(54a) VERT UNDERCLR: **HIGHWAY BENEATH BRIDGE**
(54b) MIN VERTICAL UNDERCLEARANCE: **39.99 FT**
(55a) HORZ UNDERCLR: **HIGHWAY BENEATH BRIDGE**
(55b) MIN HORZ UNDERCLR ON RIGHT: **6.23 FT**
(56) MIN HORZ UNDERCLR ON LEFT: **NOT APPLICABLE**

NAVIGATION DATA

(38) NAV CONTROL: **NO NAVIGATION CONTROL**
(39) NAVIGATION VERTICAL CLEARANCE: **N/A**
(116) LIFT BRIDGE VERT CLEARANCE: **N/A**
(40) NAVIGATION HORZ CLEARANCE: **N/A**

PUBLICATION DATE
08-Mar-22

CLASSIFICATION

(112) MEETS NBIS BRIDGE LENGTH: **YES**
(104) NATIONAL HIGHWAY SYSTEM: **NHS ROUTE**
(26) FUNCTIONAL CLASS: **URBAN PRINCIPAL ARTERIAL**
(101) PARALLEL BRIDGE: **LEFT LANE BRIDGE**
(102) TRAFFIC DIR: **1-WAY TRAFFIC**
(103) TEMPORARY BRIDGE: **NOT APPLICABLE**
(110) NATIONAL TRUCK ROUTE: **NOT ON TRUCK NETWORK**
(37) HISTORICAL CLASS: **HISTORICAL SIGNIFICANCE HAS NOT BEEN DETERMINED**

CONDITION RATINGS

(58) DECK: **4**
(59) SUPERSTRUCTURE: **5**
(60) SUBSTRUCTURE: **5**
(61) STREAM CHANNEL AND CHANNEL PROTECTION: **6**
(62) CULVERT CONDITION (IF APPLICABLE): **N**

DESIGN LOAD AND WEIGHT POSTING

(31) DESIGN LOADING: **HS-20-44**
WEIGHT POSTING (2 AXLE VEHICLES): **ALL LEGAL LOADS**
WEIGHT POSTING (3 OR MORE AXLES): **ALL LEGAL LOADS**
(70) BRIDGE POSTING CODE: **5**
(41) WT POSTING STATUS: **WEIGHT POSTED**

APPRAISAL

(67) STRUCTURAL EVALUATION:	5
(68) DECK GEOMETRY:	3
(69) UNDERCLEARANCE RATING:	4
(71) WATERWAY ADEQUACY:	7
(72) APPROACH ROADWAY ALIGNMENT:	8
(36) TRAFFIC SAFETY FEATURES:	1000
(113) SCOUR CONDITION RATING:	8

RECOMMENDED IMPROVEMENTS

(75) TYPE OF WORK: **BRIDGE WIDENING WITH DECK REPAIR OR REPLACEMENT**

(76) LENGTH OF BRIDGE IMPROVEMENT:	591.9 FT
(94) BRIDGE IMPROVEMENT COST:	$1,163,000.00
(95) ROADWAY IMPROVEMENT COST:	$117,000.00
(96) TOTAL PROJECT COST:	$1,745,000.00
(97) YEAR OF IMPROVEMENT COST ESTIMATE:	2021

INSPECTION DATES

(90) DATE OF LAST REGULAR INSPECTION:	8/18/2021
(91) REGULAR INSPECTION FREQUENCY (MONTHS):	24
(93b) DATE OF LAST UNDERWATER INSP (MO/YR):	N/A
(92b) UNDERWATER INSP FREQUENCY (MONTHS):	N
(93c) DATE OF SPECIAL INSPECTION (MO/YR):	08/2021
(92c) SPECIAL INSP FREQUENCY (MONTHS):	Y12

Transportation Investment Report for Bridge ID: 37SR0010037
State Route 1 (US 11W), Hawkins County & Sullivan County

From bridge looking downstream

From bridge looking upstream

Transportation Investment Report for Bridge ID: 37SR0010037
State Route 1 (US 11W), Hawkins County & Sullivan County

Looking southeast at bridge inlet

Looking northwest at bridge outlet

Transportation Investment Report for Bridge ID: 37SR0010037
State Route 1 (US 11W), Hawkins County & Sullivan County

Looking east along west bridge approach

Looking west along east bridge approach

Transportation Investment Report for Bridge ID: 37SR0010037
State Route 1 (US 11W), Hawkins County & Sullivan County

From bridge looking west along roadway

From bridge looking east along roadway

Transportation Investment Report for Bridge ID: 37SR0010037
State Route 1 (US 11W), Hawkins County & Sullivan County

West bridge abutment (inlet side) wall, piers and beams

East bridge abutment (inlet side) wall, piers and beams

Transportation Investment Report for Bridge ID: 37SR0010037
State Route 1 (US 11W), Hawkins County & Sullivan County

Bridge ID stamped on beam near west abutment wall

Concrete and steel rail system on bridge

Transportation Investment Report for Bridge ID: 37SR0010037
State Route 1 (US 11W), Hawkins County & Sullivan County

Gap between the two bridges

Utility lines north of bridge

Transportation Investment Report for Bridge ID: 37SR0010037
State Route 1 (US 11W), Hawkins County & Sullivan County

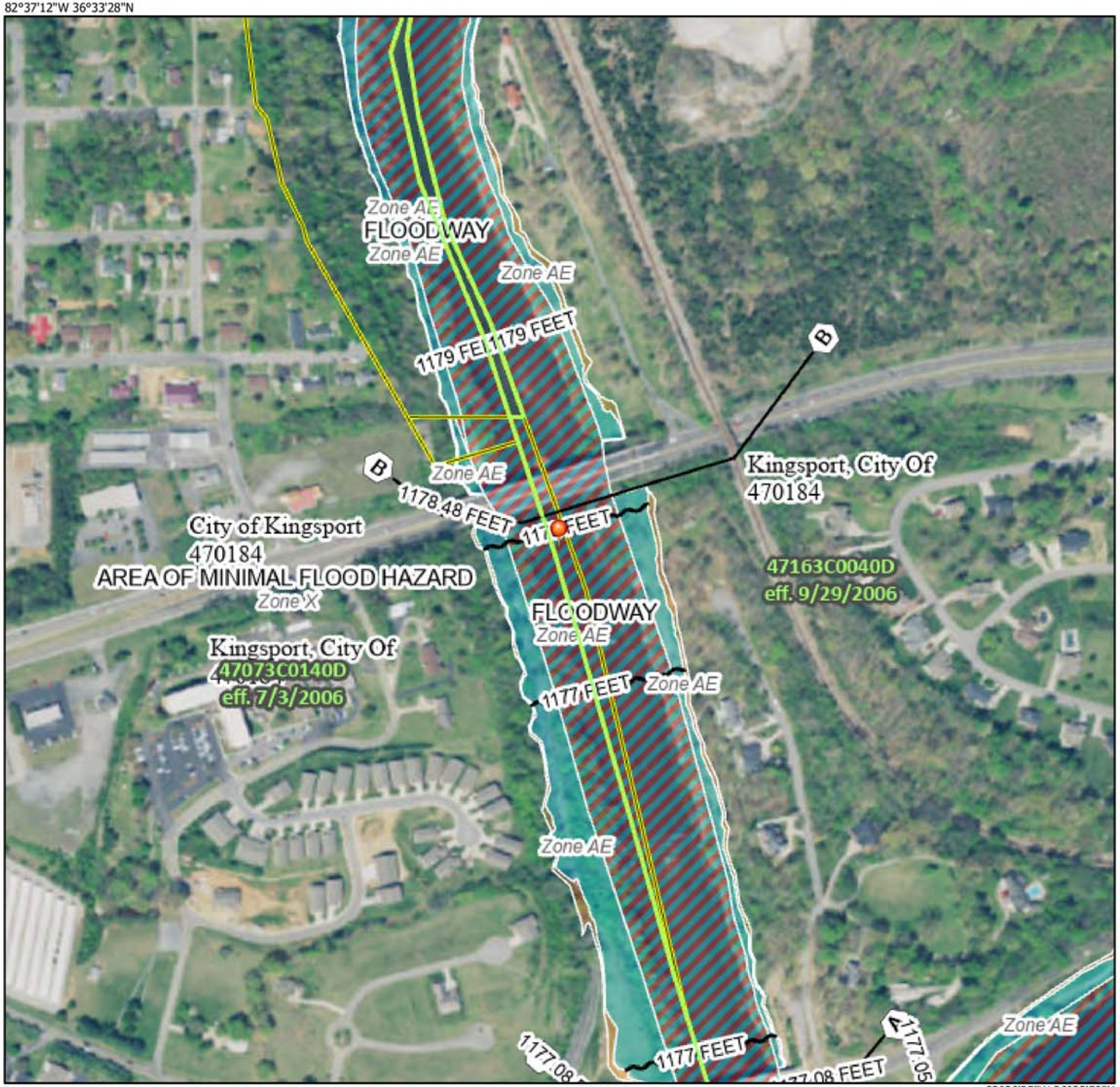
Weight limit sign before beginning of bridge on east approach

Railroad bridge (owned by CSX) on east bridge approach

National Flood Hazard Layer FIRMette

FEMA

82°37'12"W 36°33'28"N



82°36'35"W 36°32'59"N

Feet 1:6,000

0 250 500 1,000 1,500 2,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

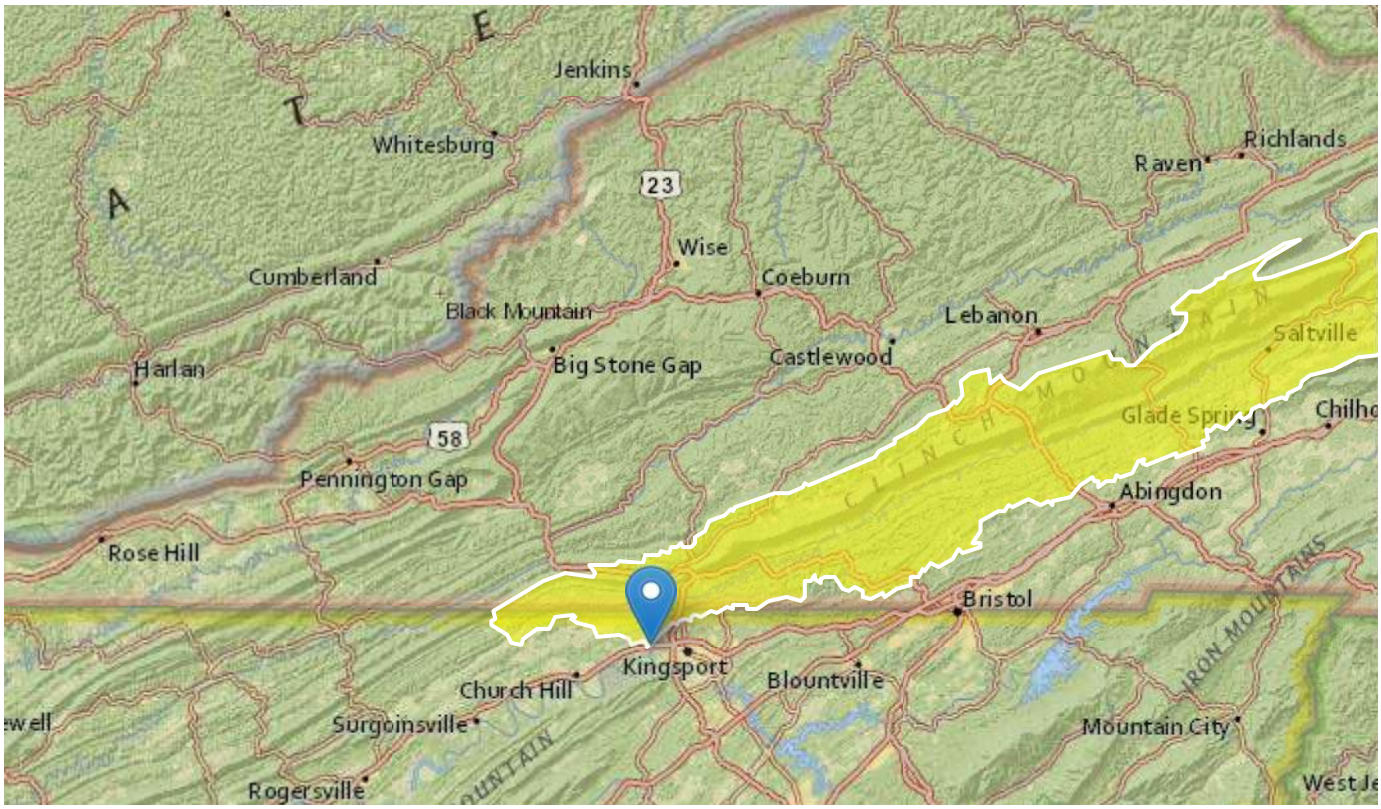
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/2/2021 at 3:17 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

StreamStats Report

Region ID: TN
Workspace ID: TN20210602190337153000
Clicked Point (Latitude, Longitude): 36.55429, -82.61500
Time: 2021-06-02 14:03:58 -0500



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CONTDA	Area that contributes flow to a point on a stream	725.97	square miles
CSL10_85	Change in elevation divided by length between points 10 and 85 percent of distance along main channel to basin divide - main channel method not known	8.5	feet per mi
CLIMFAC2YR	Two-year climate factor from Lichy and Karlinger (1990)	2.137	dimensionless
DRNAREA	Area that drains to a point on a stream	725.97	square miles

Parameter Code	Parameter Description	Value	Unit
RECESS	Number of days required for streamflow to recede one order of magnitude when hydrograph is plotted on logarithmic scale	72	days per log cycle
SOILPERM	Average Soil Permeability	2.853	inches per hour
PERMGTE2IN	Percent of area underlain by soils with permeability greater than or equal to 2 inches per hour	64.243	percent
HA1PCT	Percent of area within Hydrologic Area 1	100	percent
HA2PCT	Percent of area within Hydrologic Area 2	0	percent
HA3PCT	Percent of area within Hydrologic Area 3	0	percent
HA4PCT	Percent of area within Hydrologic Area 4	0	percent
TNCLFACT2	Tennessee climate factor, 2-year interval	2.137	dimensionless
TNSOILFAC	Tennessee soil factor, percentage of area underlain by a soil permeability greater than or equal to 2 inches per hour	64	percent

Peak-Flow Statistics Parameters [100.0 Percent (725 square miles) MultiVariable Area 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CONTDA	Contributing Drainage Area	725.97	square miles	0.2	9000
CSL10_85	Stream Slope 10 and 85 Method	8.5	feet per mi	3.29	950
CLIMFAC2YR	Tennessee Climate Factor 2 Year	2.137	dimensionless	2.06	2.32

Peak-Flow Statistics Flow Report [100.0 Percent (725 square miles) MultiVariable Area 1]

PIl: Prediction Interval-Lower, PIu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PIl	PIu	SEp	Equiv. Yrs.
50-percent AEP flood	13600	ft^3/s	7300	25300	39.2	1.7
20-percent AEP flood	20300	ft^3/s	10900	37700	38.2	2.6
10-percent AEP flood	25100	ft^3/s	13300	47400	40.1	3.4

Statistic	Value	Unit	PIl	PIu	SEp	Equiv. Yrs.
4-percent AEP flood	31700	ft^3/s	16200	62200	42.7	4.3
2-percent AEP flood	36700	ft^3/s	18000	74600	45.2	4.9
1-percent AEP flood	42200	ft^3/s	20000	89300	47.9	5.3
0.2-percent AEP flood	55500	ft^3/s	23700	130000	55.2	5.8

Peak-Flow Statistics Citations

Law, G.S., and Tasker G.D.,2003, Flood-Frequency Prediction Methods for Unregulated Streams of Tennessee, 2000: U.S. Geological Survey Water-Resources Investigations Report 03-4176, 79p. (http://pubs.usgs.gov/wri/wri034176/)

Low-Flow Statistics Parameters [100.0 Percent (725 square miles) Low Flow Central and East Regions 2009 5159]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	725.97	square miles	1.3	14441
RECESS	Recession Index	72	days per log cycle	32	175
CLIMFAC2YR	Tennessee Climate Factor 2 Year	2.137	dimensionless	2.056	2.46
SOILPERM	Average Soil Permeability	2.853	inches per hour	0.45	9.72
PERMGTE2IN	Percent permeability gte 2 in per hr	64.243	percent	2	100

Low-Flow Statistics Flow Report [100.0 Percent (725 square miles) Low Flow Central and East Regions 2009 5159]

PIl: Prediction Interval-Lower, PIu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SEp
7 Day 10 Year Low Flow	86.2	ft^3/s	89
30 Day 5 Year Low Flow	129	ft^3/s	70.2

Low-Flow Statistics Citations

Law, G.S., Tasker, G.D., and Ladd, D.E.,2009, Streamflow-characteristic estimation methods for unregulated streams of Tennessee: U.S. Geological Survey Scientific Investigations

Report 2009–5159, 212 p., 1 pl. (http://pubs.usgs.gov/sir/2009/5159/)

Flow-Duration Statistics Parameters [100.0 Percent (725 square miles) Low Flow Central and East Regions 2009 5159]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	725.97	square miles	1.3	14441
RECESS	Recession Index	72	days per log cycle	32	175
CLIMFAC2YR	Tennessee Climate Factor 2 Year	2.137	dimensionless	2.056	2.46
SOILPERM	Average Soil Permeability	2.853	inches per hour	0.45	9.72
PERMGTE2IN	Percent permeability gte 2 in per hr	64.243	percent	2	100

Flow-Duration Statistics Flow Report [100.0 Percent (725 square miles) Low Flow Central and East Regions 2009 5159]

PIl: Prediction Interval-Lower, PIu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SEp
99.5 Percent Duration	81.1	ft^3/s	86.4
99 Percent Duration	93.2	ft^3/s	78
98 Percent Duration	110	ft^3/s	72.2
95 Percent Duration	142	ft^3/s	66.3
90 Percent Duration	188	ft^3/s	60.2
80 Percent Duration	275	ft^3/s	54
70 Percent Duration	387	ft^3/s	50.7
60 Percent Duration	525	ft^3/s	48.7
50 Percent Duration	707	ft^3/s	42.9
40 Percent Duration	918	ft^3/s	36.1
30 Percent Duration	1170	ft^3/s	28.3
20 Percent Duration	1570	ft^3/s	23.3
10 Percent Duration	2380	ft^3/s	20.8

Flow-Duration Statistics Citations

Law, G.S., Tasker, G.D., and Ladd, D.E.,2009, Streamflow-characteristic estimation methods for unregulated streams of Tennessee: U.S. Geological Survey Scientific Investigations Report 2009–5159, 212 p., 1 pl. (http://pubs.usgs.gov/sir/2009/5159/)

Annual Flow Statistics Parameters [100.0 Percent (725 square miles) Low Flow Central and East Regions 2009 5159]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	725.97	square miles	1.3	14441
CLIMFAC2YR	Tennessee Climate Factor 2 Year	2.137	dimensionless	2.056	2.46
SOILPERM	Average Soil Permeability	2.853	inches per hour	0.45	9.72

Annual Flow Statistics Flow Report [100.0 Percent (725 square miles) Low Flow Central and East Regions 2009 5159]

PIl: Prediction Interval-Lower, PIu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SEp
Mean Annual Flow	1100	ft^3/s	25.6

Annual Flow Statistics Citations

Law, G.S., Tasker, G.D., and Ladd, D.E.,2009, Streamflow-characteristic estimation methods for unregulated streams of Tennessee: U.S. Geological Survey Scientific Investigations Report 2009–5159, 212 p., 1 pl. (http://pubs.usgs.gov/sir/2009/5159/)

Seasonal Flow Statistics Parameters [100.0 Percent (725 square miles) Low Flow Central and East Regions 2009 5159]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	725.97	square miles	1.3	14441
RECESS	Recession Index	72	days per log cycle	32	175

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CLIMFAC2YR	Tennessee Climate Factor 2 Year	2.137	dimensionless	2.056	2.46
SOILPERM	Average Soil Permeability	2.853	inches per hour	0.45	9.72

Seasonal Flow Statistics Flow Report [100.0 Percent (725 square miles) Low Flow Central and East Regions 2009 5159]

PIl: Prediction Interval-Lower, PIu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SEp
Summer Mean Flow	750	ft^3/s	43.1

Seasonal Flow Statistics Citations

Law, G.S., Tasker, G.D., and Ladd, D.E.,2009, Streamflow-characteristic estimation methods for unregulated streams of Tennessee: U.S. Geological Survey Scientific Investigations Report 2009–5159, 212 p., 1 pl. (http://pubs.usgs.gov/sir/2009/5159/)

Application Version: 4.5.3
StreamStats Services Version: 1.2.22
NSS Services Version: 2.1.2

TENNESSEE DEPARTMENT OF TRANSPORTATION
STRATEGIC TRANSPORTATION INVESTMENTS DIVISION

PROJECT NO.: 37070-0237-04 ROUTE: S.R. 1
COUNTY: HAWKINS CITY: KINGSPORT
PROJECT PIN NUMBER: 134387.00
PROJECT DESCRIPTION: BRIDGE AND APPROACHES OVER NORTH FORK HOLSTON RIVER @ L.M. 41.30.

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: _____
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
34,820	2026	48,750	4,875	10	2046	55-45	2	3		

REQUESTED BY: NAME ETHAN MESSIMORE DATE 1/21/21
DIVISION S.T.I.D.
ADDRESS 1000 J. K. POLK BUILDING
NASHVILLE TN 37243

REVIEWED BY: DEBBI HOWARD Debbi Howard DATE 1/21/2021
TRANSPORTATION MANAGER 1
SUITE 1000, JAMES K. POLK BUILDING

APPROVED BY: TONY ARMSTRONG Tony Armstrong DATE 1/21/2021
TRANSPORTATION MANAGER 2
SUITE 1000, JAMES K. POLK BUILDING

COMMENTS:

FURNISH THE 2026-2046 TRAFFIC DATA.

THIS TRAFFIC IS BASED ON A SULLIVAN COUNTY CYCLE COUNT. THE DESIGN YEAR TRAFFIC IS BASED ON GROWTH RATE FROM THE KINGSPORT MPO COMPUTER ASSIGNMENT MODEL.

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. 4/1/18)