

ROW Reevaluation: State Route 320 (SR-320) (East Brainerd Road) from
321' East of Graysville Road to 1125' East of SR-321 (Ooltewah-Ringgold Road)
Hamilton County, Tennessee
TDOT PIN: 124077.00
Date: November 5, 2020

Environmental Commitments

Commitments are involved on the project.

List of Environmental Commitments

Ecology

1. Due to concerns for the Chickamauga Crayfish (*Cambarus extraneus*), the Tennessee Wildlife Resources Agency (TWRA) requests a sweep and relocation in Stream (STR) 3, STR-4 and STR-5 immediately prior to any in-stream work for this project. TDOT Ecology and TWRA should be notified at least ten (10) days prior to any in-stream work for STR-3, STR-4 and STR 5 will occur.



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL DIVISION
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November 5, 2020

Mr. Gary Fottrell
Environmental Program Engineer
Federal Highway Administration
404 BNA Drive, Suite 508
Nashville, TN 37217

Subject: Right-of-way Reevaluation of State Route 320 (SR-320) (East Brainerd Road) From 321' East of Graysville Road to 1125' East of SR-321 (Ooltewah-Ringgold Road), Chattanooga, Hamilton County, Tennessee
Right-of-way Project Numbers: STP-320(9), 33057-2226-14, PIN 124077.00

Dear Mr. Fottrell:

This Right-of-way (ROW) reevaluation of the environmental, social and economic effects has been conducted in accordance with Title 23 of the U.S. Code of Federal Regulations (CFR), Section 771.129. While the entire project as presented in the FONSI was reevaluated, the segment from east of Bel-Air Road to near SR-321 (Ooltewah-Ringgold Road) is now being advanced to the Right-of-way phase.

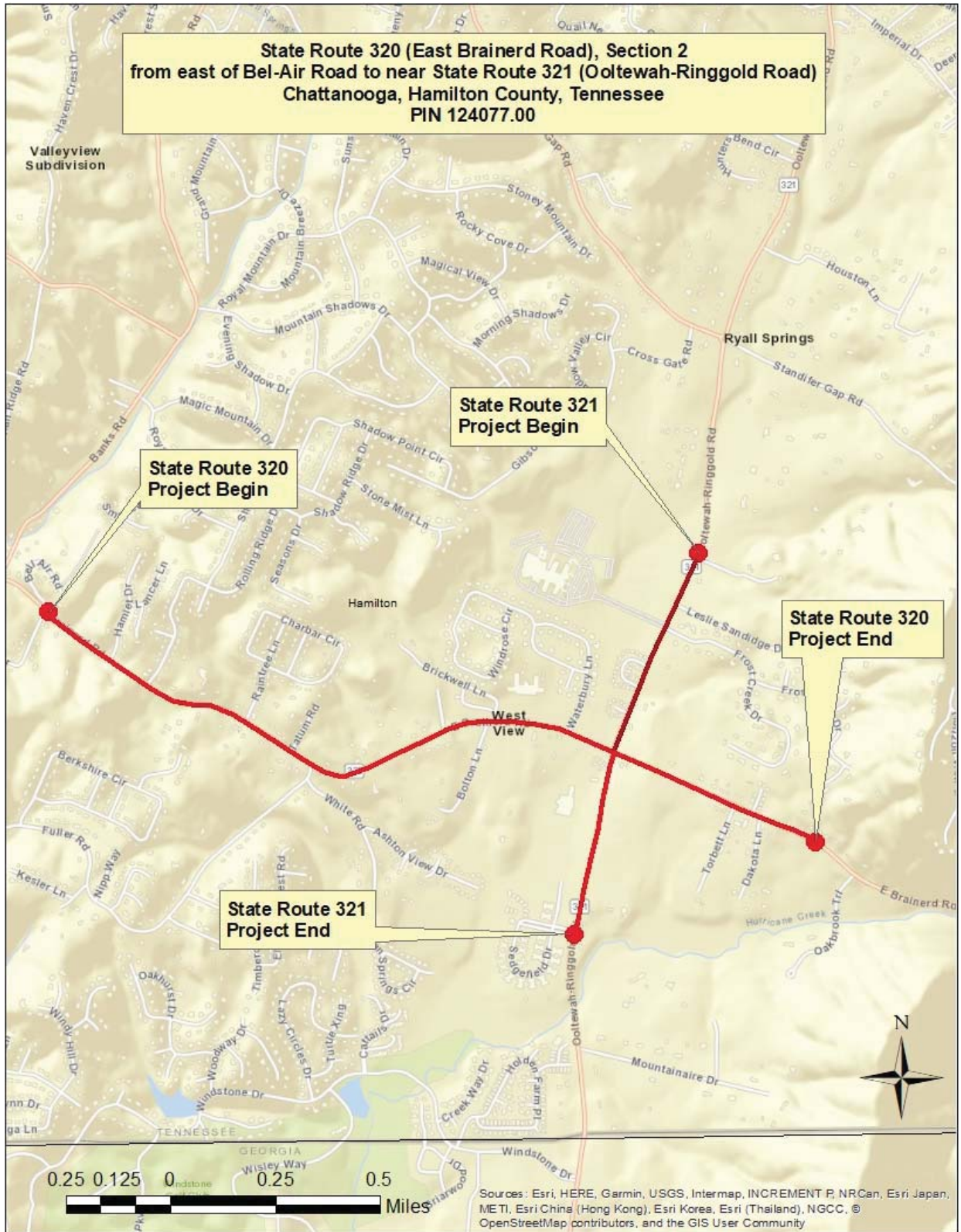
The proposed project is listed in the Chattanooga-Hamilton County Transportation Planning Organization (TPO) Transportation Improvement Program (TIP) for Fiscal Years 2020 - 2023 as TIP #2033080. The relevant TIP pages are included in Appendix A. The proposed SR-320 improvement project location map is shown on page 2 of this document.

Federal and state project numbers for various stages of project development are listed in Table 1 below.

Project Development Phases and Corresponding Project Numbers

Phase	Federal Aid	State Project Number
Preliminary Engineering	STP-320(9)	33057-0227-04 (PE-N) 33057-0226-14 (PE-N) 33057-1226-14 (PE-D)
Right-of-way	STP-320(9)	33057-2226-14
Construction	STP-320(9)	33057-3226-14

Table 1: Project Development Phases and Corresponding Project Numbers



Project Location Map

Introduction

The Tennessee Department of Transportation (TDOT), in cooperation with the Federal Highway Administration (FHWA), proposes to upgrade and improve the existing SR-320 in Chattanooga, Hamilton County, Tennessee. The proposed project would widen the existing two-lane highway to a five-lane highway. As proposed, the project would include intersection improvements at the intersection of SR-320 and SR-321 and would incorporate pedestrian enhancements.

Project History

An Environmental Assessment (EA) approved 03/01/2002 and a Finding of No Significant Impact (FONSI) approved 10/14/2003 were prepared for the initial project based on an Advance Planning Report dated 09/30/1999. The EA, FONSI and APR documents are included in Appendix B. The FONSI included two segments totaling approximately 3.62 miles. The segment referred to as Section 1 in the FONSI stretches from east of Graysville Road to east of Bel-Air Road and is approximately 2.10 miles in length. Section 1 (TDOT PIN 101431.00) was let in December 2014 and construction of this section is complete. The segment of focus for this reevaluation (referred to as Section 2 in the FONSI) begins east of Bel Air Road and extends east of SR-321 (Ooltewah-Ringgold Road) for approximately 1.52 miles. Section 2 of the proposed project is being carried out under TDOT PIN 124077.00. It should be noted that the FONSI presents the end of Section 1 and the beginning of Section 2 as the intersection of Bel-Air Road instead of east of the intersection.

More than three years have passed since approval of the EA/FONSI, and a formal reevaluation focusing on Section 2 is needed to consider changes in project design and scope as well as the needs for ROW acquisition and easement. As proposed in the EA/FONSI, the eastern terminus of the proposed project to upgrade and improve SR-320 would end approximately 1,125 feet east of the intersection of SR-320 with SR-321. Since approval of the EA/FONSI, Right-of-Way Field Review Plans dated 05/12/2020 indicate that the eastern terminus of the proposed project on SR-320 would be extended approximately 1,285 feet further east to provide for the transition back to a two-lane roadway. To summarize, improvements are proposed from east of Bel-Air Road to SR-321 (Ooltewah-Ringgold Road) for a distance of 1.47 miles, then from SR-321 (Ooltewah-Ringgold Road) to east of Dakota Lane for a distance of 0.46 miles, for a total length along SR-320 of 1.93 miles. In addition, the northern and southern termini on SR-321 near the intersection would be extended to include approximately 0.91 miles of roadway, from Hamilton East Middle/High School on the north to Cobble Creek Way on the south. This reevaluation includes the extended areas along SR-320 and SR-321.

It should be noted also that the portion of SR-321 north of the intersection at SR-320 previously had been included in a separate proposed project to widen and improve SR-321 (TDOT PIN 124078.00). Both projects (PIN 124077.00 and 124078.00) have been amended to incorporate this revision. Because some technical studies prepared for PIN 124078.00 apply to this portion of SR-321 north of the intersection with SR-320, the relevant TIP page for PIN 124078.00 is also included in Appendix A.

Need and Purpose

The need and purpose of the proposed project have not changed since the approval of the FONSI. As noted in the FONSI, the need for the project is based on the inability of the existing roadways to handle the existing and future traffic demands adequately because of substandard operating conditions. The subject project lies just outside of the southeastern edge of the Chattanooga city limits in an unincorporated part of Hamilton County. As one of the few east-west arterial

connections through this area, the corridor provides a direct and essential connection between Interstate 75 (I-75) to the west and SR-321 to the east for people living and working in the eastern Chattanooga and southeastern Hamilton County area. The level of development and continued growth within the study area underscores the need to address inadequate traffic capacity, roadway deficiencies and the overall safety and operation of the highway.

According to the TDOT Electronic Tennessee Roadway Information Management System (E-TRIMS), SR-320 from east of Bel-Air Road to east of SR-321 consists of two 11- to 12-foot travel lanes (one in each direction) with outside shoulders that vary from two to 10 feet in width. The recently improved Section 1 of SR-320 transitions from four 12-foot travel lanes (two in each direction) with a center left-turn lane at Bel-Air Road to an existing two-lane roadway beginning at Hamlet Drive. The two-lane roadway continues until the intersection of SR-320 with SR-321. At this intersection, SR-320 widens to accommodate left- and right-turn lanes but only provides a single through lane in each direction. The existing layout lacks sidewalks or usable shoulders for pedestrian or bicycle traffic. Further, TDOT traffic projections estimate that the average annual daily traffic (AADT) for the SR-320 section between Bel-Air Road and SR-321 will increase from 14,810 vehicles in base year 2021 to 21,020 vehicles in design year 2041. The proposed improvements to Section 2 would result in a continuous five-lane highway from Graysville Road to the eastern project terminus and would provide traffic capacity for the anticipated increased traffic. The improvements would also address roadway design deficiencies and the lack of pedestrian and bicycle facilities along this section of SR-320 and the intersection of SR-320 with SR-321. (Traffic data are appended to the Air Quality and Noise coordination in Appendix I.)

This ROW reevaluation for Section 2 of the proposed project includes a review of the information presented in the Advanced Planning Report (APR), the 2002 EA, the 2003 FONSI and the 05/12/2020 ROW Field Review Plans. The APR, EA, FONSI and the Construction Reevaluation for Section 1 are included in Appendix B. The 05/12/2020 ROW Field Review Plans are included in Appendix C.

Project Description

Since the 2003 FONSI was approved, there have been changes in the typical sections for Section 2. The layout noted in the EA/FONSI included four 12-foot travel lanes (two in each direction) and a 12-foot continuous center turn lane, a four-foot bicycle lane, a 2.5-foot curb and gutter, a 5.5-foot sidewalk and a four-foot utility strip on both sides of the roadway within a minimum 92-foot right-of-way (ROW).

Section 2 would now be designed within a minimum 110-foot ROW instead of the original 92-foot ROW. According to the 05/12/2020 ROW Field Review Plans, the SR-320 roadway would be widened to accommodate four 12-foot travel lanes (two in each direction) and a 12-foot continuous center turn lane, as well as 12-foot right-turn lanes as needed. The typical section would also include six-foot bicycle lanes (four-foot usable width plus two-foot gutter), an adjacent two-foot buffer area, a five-foot sidewalk, a one-foot utility buffer and a 4.5- to 10.5-foot grassed area on each side of the roadway. Near the intersection with SR-321, the five-foot sidewalk would transition into a 10-foot shared use path on the north side of SR-320. The shared use path would continue north on SR-321 to near the end of the project limits.

Additionally, the proposed project would replace four existing culverts:

- Under SR-320, a 110-foot proposed 10-foot by six-foot box culvert would be installed just west of Brickwell Lane. A 147-foot proposed 14-foot by nine-foot (two barrel) box culvert would be installed just west of the intersection with SR-321.

- On SR-321, a 124-foot proposed 10-foot by six-foot box culvert would be installed to convey a stream underneath SR-321.
- A 95-foot proposed eight-foot by six-foot box culvert would be installed on Fuller Road (south of SR-320).

Typical Sections

The typical sections from the 05/12/2020 ROW Field Review Plans are described below:

Typical Section 1, SR-320 from the beginning project limits to the intersection with SR-321

As shown in Figure 1 below, the typical section of SR-320 from the beginning project limits to the intersection with SR-321 would consist of four 12-foot travel lanes (two lanes in each direction) and a 12-foot continuous center turn lane. The roadway for SR-320 eastbound widens to accommodate a 12-foot right-turn lane into SR-321 southbound at the intersection with SR-321. The typical section includes six-foot bicycle lanes (four-foot usable width plus two-foot gutter) on each side of the roadway. The typical section also includes an adjacent two-foot buffer area, a five-foot sidewalk, a one-foot utility buffer and a 4.5- to 10.5-foot grassed area that would also accommodate guardrail as needed. The proposed roadway would transition from 72 feet to 76 feet near the intersection.

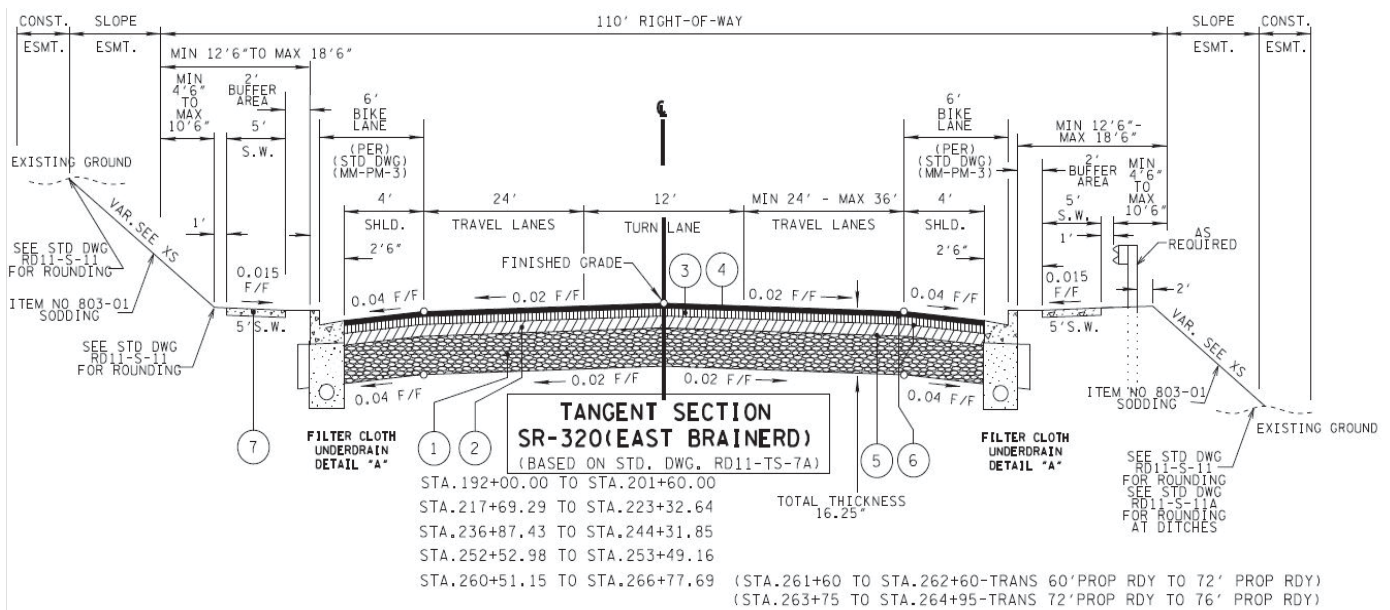


Figure 1: Typical Section of SR-320 to near the intersection with SR-321
(05/12/2020 ROW Field Review Plans, Sheet 2B)

Typical Section 2, SR-320 to the east of the intersection with SR-321

According to the 05/12/2020 ROW Field Review Plans as shown in Figure 2 (page 6), SR-320 to the east of the intersection with SR-321 would consist of four 12-foot travel lanes (two lanes in each direction) and a 12-foot continuous center turn lane. The roadway for SR-320 westbound widens to accommodate a 12-foot right-turn lane into SR-321 northbound at the intersection with SR-321. The typical section would also include six-foot bicycle lanes (four-foot usable width plus two-foot gutter) on each side of the roadway. In addition, the typical section would include an

adjacent two-foot buffer area, a five-foot sidewalk, a one-foot utility buffer and a 4.5-foot outside grassed area on each side of the roadway. The proposed roadway would transition from an 84-foot roadway to a 60-foot roadway east of the intersection to match the existing roadway layout.

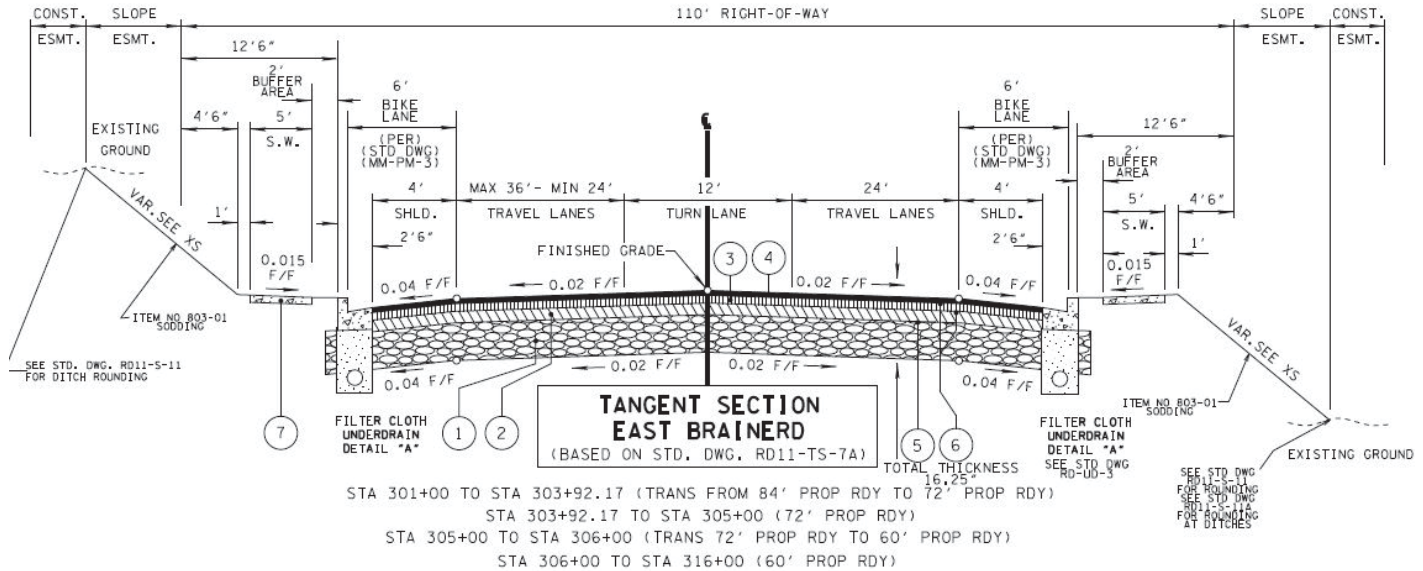


Figure 2: Typical Section of SR-320 east of the intersection with SR-321 (05/12/2020 ROW Field Review Plans, Sheet 2B1)

Typical Section 3, SR-320 roadway east of the intersection to the project terminus

The typical section illustrated in Figure 3 (below) represents the SR-320 roadway east of the intersection to the project terminus. The roadway would consist of four travel lanes (two lanes in each direction) with variable two- to four-foot shoulders. The roadway would transition from a 60-foot roadway with four-foot shoulders nearer the intersection to a 24-foot roadway with two-foot shoulders at the project terminus.

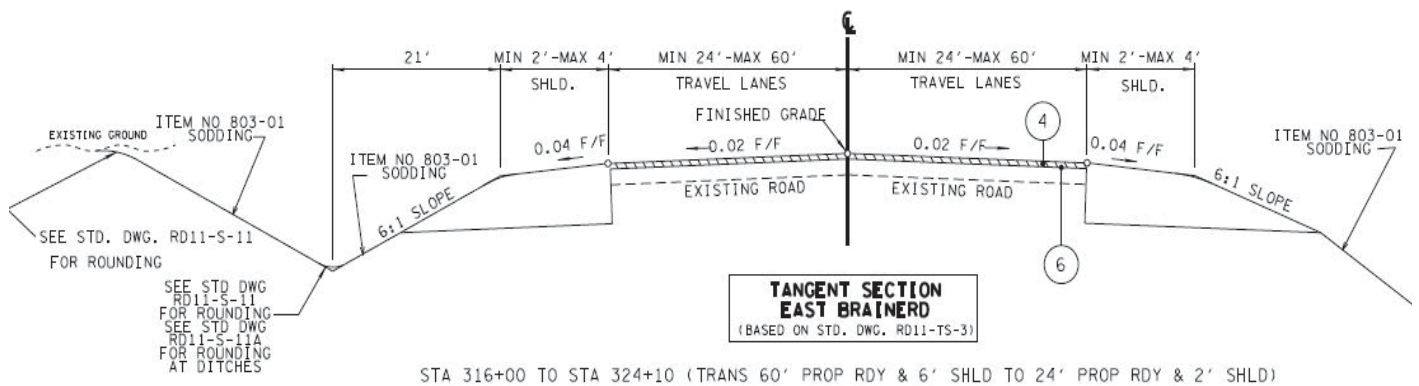


Figure 3: Typical Section of SR-320 east of the intersection with SR-321 to the end of the project limits (05/12/2020 ROW Field Review Plans, Sheet 2B1)

Typical Section 4, SR-321 north and south of the intersection with SR-320

The 05/12/2020 ROW Field Review Plans include typical sections for SR-321 to the north and to the south of the intersection with SR-320. Figure 4 below illustrates the SR-321 typical section north of the intersection near the beginning project limits. The typical section indicates the transition of the proposed roadway at the end of the construction limits to match the existing two-lane roadway at the northern project limits.

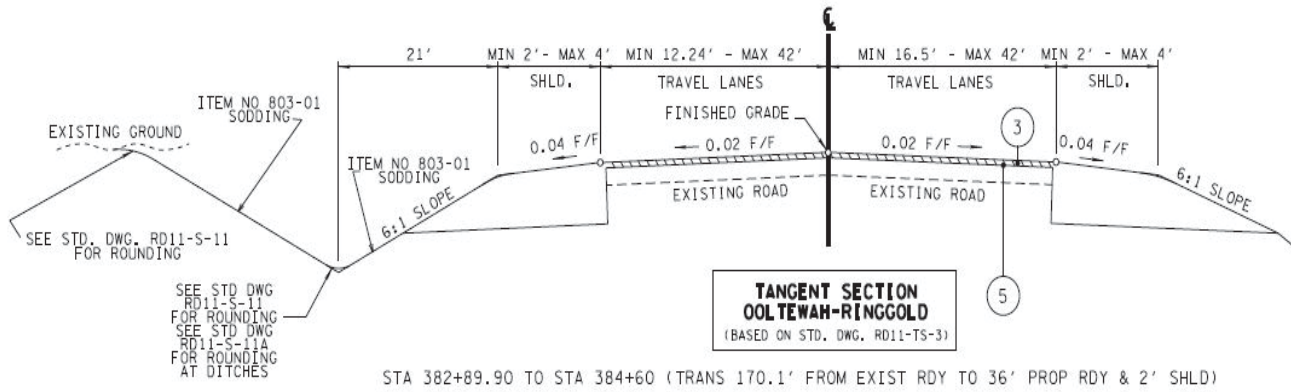


Figure 4: Typical Section of SR-321 north of the intersection with SR-320 near the beginning project limits (05/12/2020 ROW Field Review Plans, Sheet 2B2) (looking from north to south)

Typical Section 5, SR-321 to the intersection with SR-320

As shown in Figure 5 (page 8), the SR-321 typical section north of the intersection from near the ending project limits looking south to the intersection with SR-320 would consist of two 11-foot northbound travel lanes, an 11-foot center turn lane, two 11-foot southbound travel lanes and an 11-foot right-turn lane within a 117-foot ROW. The proposed roadway would transition from 33 feet in width on the north end to approximately 70 feet in width near the intersection.

The typical section would include curb and gutter on both sides of the roadway. SR-321 northbound would include a 2.5-foot buffer, a five-foot sidewalk, a one-foot buffer and six feet for slope development within the proposed right-of way. SR-321 southbound would include a 2.5-foot buffer, a 10-foot shared use path, a one-foot buffer and four feet for slope development within the proposed right-of way.

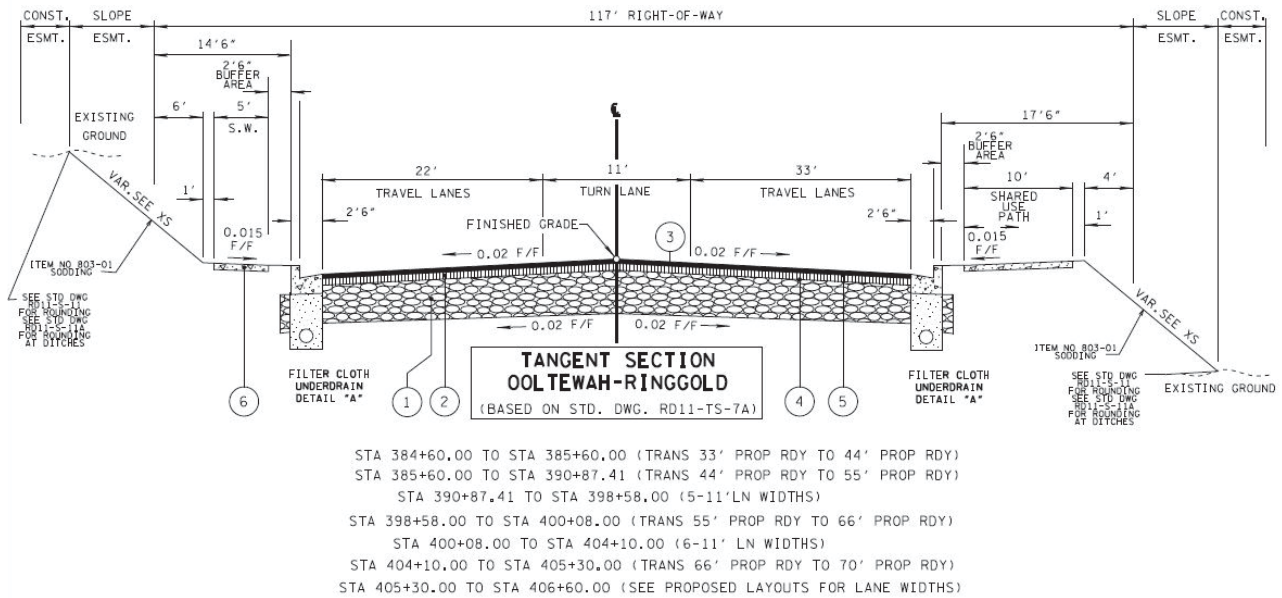


Figure 5: Typical Section of SR-321 north of the intersection with SR-320
(05/12/2020 ROW Field Review Plans, Sheet 2B2) (looking from north to south)

Typical Section 6, SR-321 south of the intersection

As shown in Figure 6 below, the SR-321 typical section to the south of the intersection would consist of four 11-foot travel lanes (two lanes in each direction) with an 11-foot center left-turn lane into SR-320 westbound within a 110-foot ROW. The typical section also includes curb and gutter, a 2.5-foot buffer area, a five-foot sidewalk, a one-foot buffer and four-foot feet for slope development on each side of the roadway within the proposed right-of-way.

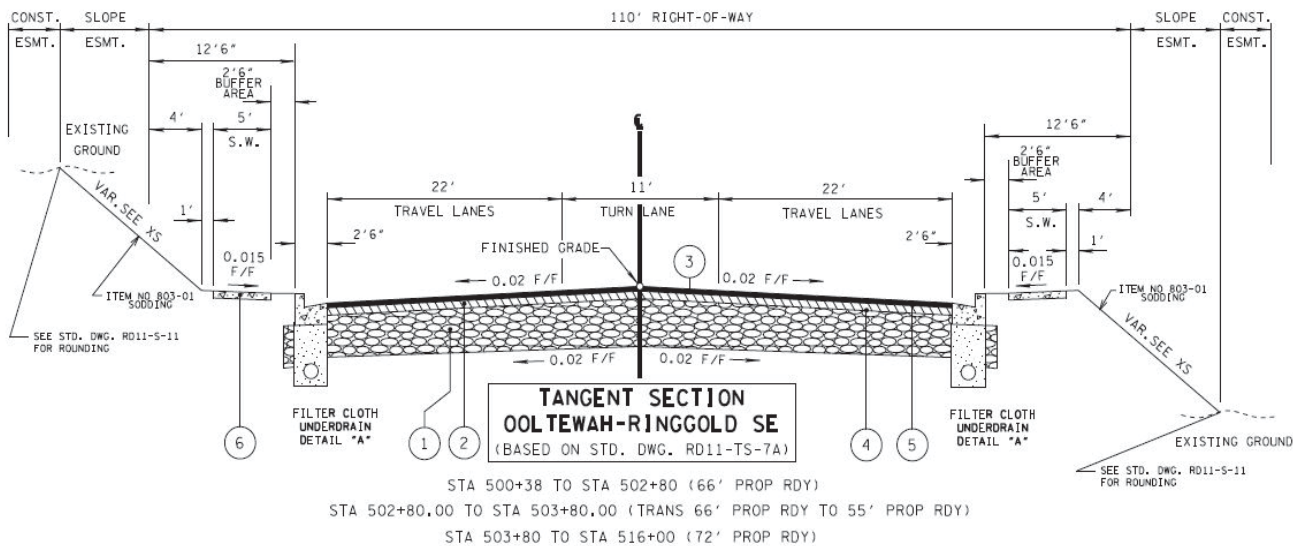


Figure 6: Typical Section of SR-321 south of the intersection with SR-320
(05/12/2020 ROW Field Review Plans, Sheet 2B3) (looking from north to south)

Typical Section 7, SR-321 south of the intersection to the project end limits

The typical section shown in Figure 7 below illustrates the SR-321 typical section south of the intersection with SR-320 to the end of the project limits. The typical section represents the taper from the proposed five-lane section back to the existing two-lane section on SR-321.

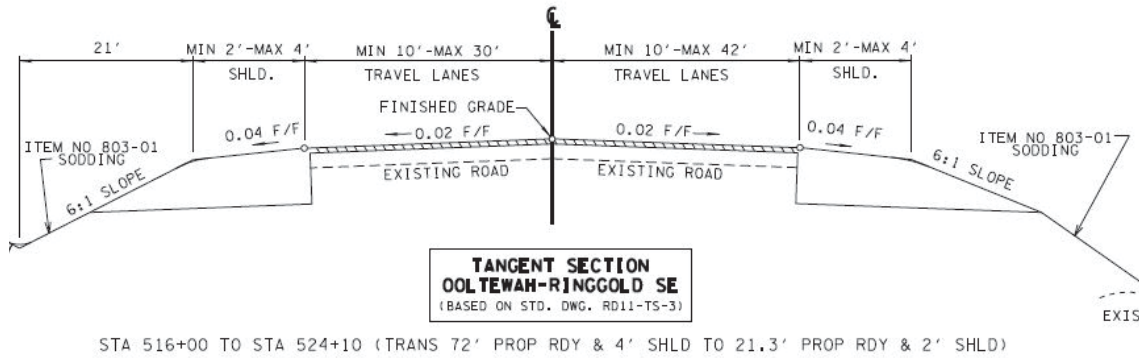


Figure 7: Typical Section of SR-321 south of the intersection with SR-320, widened section near the intersection (05/12/2020 ROW Field Review Plans, Sheet 2B3) (looking from north to south)

Typical Section 8, Rolling Ridge Drive, Raintree Lane and Fuller Road

Figure 8 below illustrates the superelevated section for Rolling Ridge Drive, Raintree Lane and Fuller Road at their intersections with SR-320. The typical section for these local roads would consist of two 12-foot travel lanes (one lane in each direction) with a variable zero- to 12-foot center left-turn lane. Each side of the roadway would include curb and gutter, a five-foot sidewalk, a one-foot buffer and 3.5 feet for slope development on each side of the roadway within the proposed right-of-way.

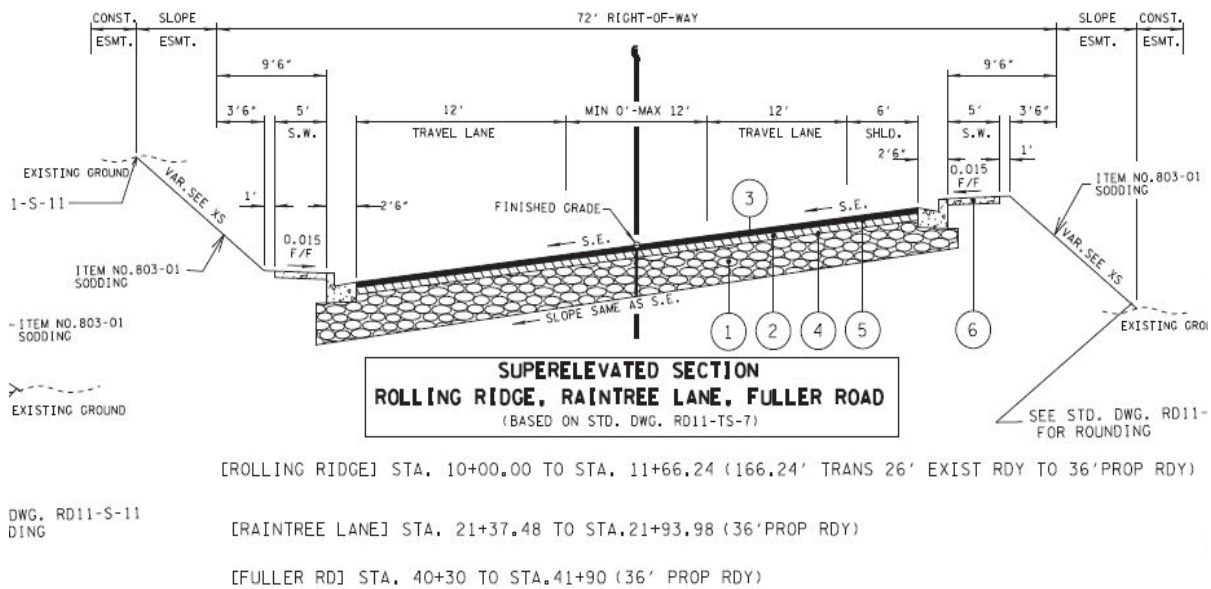


Figure 8: Typical Section of Rolling Ridge Drive, Raintree Lane and Fuller Road near SR-320 (05/12/2020 ROW Field Review Plans, Sheet 2B4)

Right-of-Way Impacts

According to the 05/12/2020 ROW Field Review Plans and depicted in the ROW Acquisition Table (Table 2) below, the proposed project would require the acquisition of 14.636 acres of ROW from 110 tracts; 1.896 acres of permanent drainage easement from 21 tracts; and 4.51 acres of permanent slope easement from 72 tracts, for a total of 21.042 acres. Additionally, 6.038 acres of construction easement from 98 tracts would be required. The amount of ROW acquisition and easement is necessary for the increased minimum ROW required for the changes in the typical sections described above and for the additional proposed project area near the intersection of SR-320 and SR-321.

Right-of-Way Acquisition					
Permanent				Temporary	
ROW Acquisition	Drainage Easement	Slope Easement	Total	Construction Easement	Total
14.636	1.896	4.51	21.042	6.038	6.038

Table 2: ROW Acquisition Table (05/12/2020 ROW Field Review Plans)

Relocation Impacts

A Conceptual Stage Relocation Plan (CSRP) approved 05/22/2020 was prepared based upon Preliminary Plans posted 03/18/2019. The CSRP was updated using the 05/12/2020 ROW Field Review Plans (see TDOT ROW email dated 10/02/2020 included in Appendix D).

As shown in Table 3 below, the proposed project would displace 22 single-family residences, four multi-family residences and one business. It should be noted that the original 05/22/2020 CSRP identified one business on Tract 92 for relocation. The relocation on Tract 92 was avoided in the ROW Field Review Plans. The business identified for relocation in the 05/12/2020 ROW Field Review Plans is located on Tract 95. No mobile homes, non-profit or farming operations are expected to be displaced.

The potentially affected properties are shown on the CSRP marked plans in Appendix D. The following relocation analysis has been updated to reflect the changes in the 05/12/2020 ROW Field Review Plans.

Anticipated Relocations			
Residential	Business and Commercial	Non-Profit	Total
26	1	0	27

Table 3: Relocations and Displacements (05/12/2020 ROW Field Review Plans)

Displacement Effects and Analysis:

Residences: Construction of this project is expected to displace 22 single-family residences. Ten of the 22 single-family residences were identified based on anticipated conflict of the proposed right-of-way with septic lines. All the residences appear to be typical for the area in term of size and style.

Multi-Family: This project is predicted to displace four multi-family residences located in one building (Tract 143). The multi-family building was identified based on anticipated conflict of the proposed right-of-way with septic lines.

Businesses: According to the ROW Field Review plans, this project is expected to displace one business, an equipment rental and supply business located on Tract 95. ROW and easement requirements would affect this business from both SR-320 and SR-321.

Other: No mobile homes, non-profit organizations or farms are expected to be displaced by this project.

Availability of Replacement Housing

An examination of the Hamilton County housing market in the project area shows a sufficient amount of homes for sale and apartments for rent to accommodate the 26 anticipated residential relocations.

Based on a survey of the commercial real estate market, the supply of available commercial property in the immediate area appears to be adequate to satisfy the relocation requirements of the one displaced business.

Environmental

Although the proposed improvement potentially will displace 26 families and one business, the immediate area should experience only minor impact due to the acquisition. When completed, no neighborhoods will be disrupted nor will access from areas north or south of the project experience a disproportionate impact.

Assurances:

The Tennessee Department of Transportation will make relocation assistance available to all eligible persons impacted by this project, including residences, businesses, farm operations, non-profit organizations, and those requiring special services or assistance. The Regional Relocation Staff will administer the relocation program under the rules, policies, and procedures set forth in the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended, the Uniform Relocation Assistance Act of 1972, implementing federal regulations, TCA 13-11-101 through 119, The State of Tennessee Relocation Assistance Brochure and Chapter IX of the State of Tennessee Department of Transportation Right-of-Way Manual. TDOT's relocation program is practical and will allow for the efficient relocation of all eligible displaced persons in accordance with State and Federal Guidelines.

The CSRP with marked plans and the updated relocation information are included in Appendix D.

Public Involvement

A Design Public Meeting for Section 2 of the proposed project was held at the East Hamilton Middle/High School in Chattanooga, Tennessee, on 11/07/2019. A total of 137 citizens signed the attendance sheets and nine persons asked questions during the opening question and answer session. Eight verbal comments were made to the court reporter, and 15 comment cards were received by TDOT. No comments against the project were received during the meeting or in the comment cards.

In response to comments, changes were made to the slopes near the Stonebrook Community to reduce the proposed ROW on one tract and allow an existing berm to remain in place. The Stonebrook Community will be able to review changes to the plans when the ROW process begins. Requests were made for signals at the SR-320/Fuller Road intersection and the SR-320/Rolling Ridge Road intersection. These intersections will be evaluated, and a signal will be added if warranted.

There were several comments from individual homeowners regarding relocations and the location of driveways and signs. These will be addressed individually with property owners. Other comments included questions about the crosswalk in front of the high school and requests to extend the north and south project limits on SR-321. Crosswalks will follow set standards from the Americans with Disabilities Act (ADA). The section of SR-321 north of SR-320 will be addressed in a separate project. There are no plans to extend the project on the southern limits of SR-321. The meeting transcript review, the notice of public meeting and the public meeting presentation are included in Appendix E.

Traffic Control Measures

Traffic control plans for the proposed project would consist of four phases, described below. Two-way traffic will be maintained throughout construction. Excerpts from the traffic control plans are shown below in Figure 9 through Figure 15. The complete traffic control plans are included in the 05/12/2020 ROW Field Review Plans in Appendix C.

Phase 1

1. Construct the right side of the proposed project (south side) from the project beginning on SR-320 to Fuller Road and construct the left side of the proposed project (north side) from Fuller Road to the project end.
2. Construct the proposed project on the north side of SR-321 (Ooltewah-Ringgold Road).

Figure 9 below provides an image of the SR-320 roadway near Fuller Road which illustrates the construction zone on the eastbound side of the roadway, switching over to the westbound side of the roadway at Fuller Road.

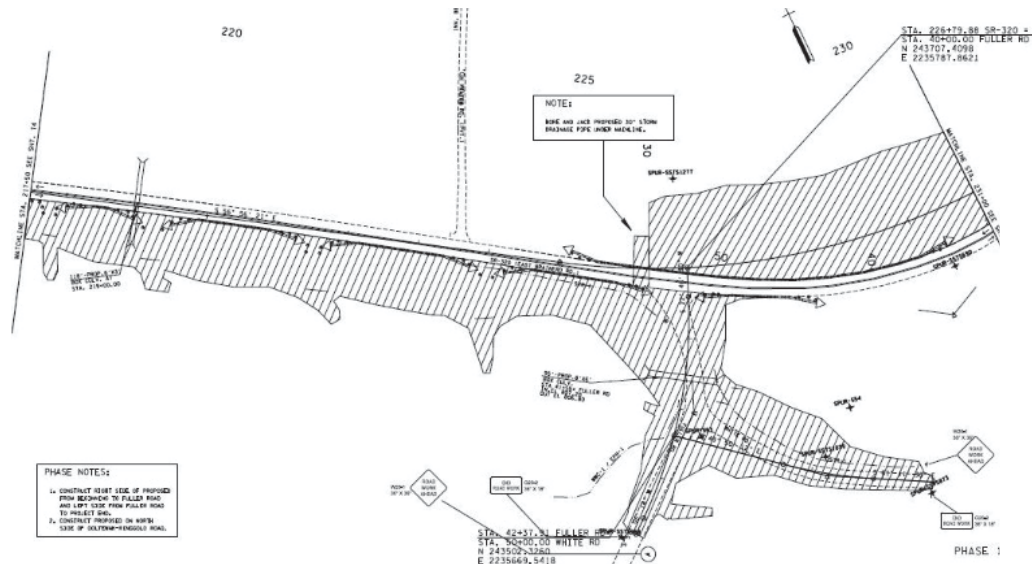


Figure 9: Traffic control diagram of SR-320 at Fuller Road during Phase 1 (05/12/2020 ROW Field Review Plans, Sheet T5)

Figure 10 below provides an illustration of the SR-320 roadway at the intersection with SR-321 showing the construction zone on the north side of the roadway.

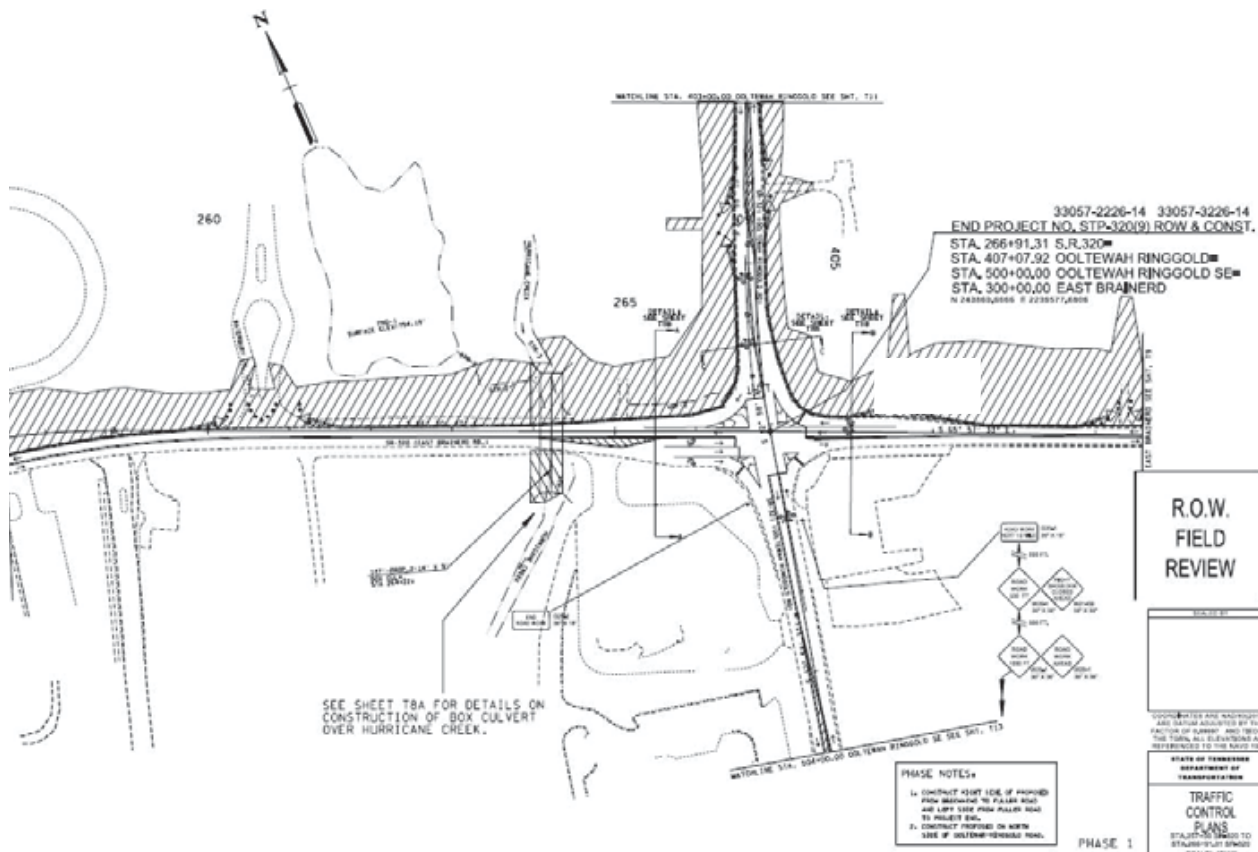


Figure 10: Traffic control diagram of SR-320 at SR-321 during Phase 1 (05/12/2020 ROW Field Review Plans, Sheet T8)

Phase 2

1. Construct the left side of the proposed project (north side) from the project beginning on SR-320 to Fuller Road and construct the right side of the proposed project (south side) from Fuller Road to the project end.
2. Divert traffic onto the north side from near Brickwell Lane to the intersection.
3. Construct the proposed project on the south side of SR-321 (Ooltewah-Ringgold Road).

Figure 11 (page 14) provides an illustration of the traffic diversion to the north side of SR-320 west of Brickwell Lane.

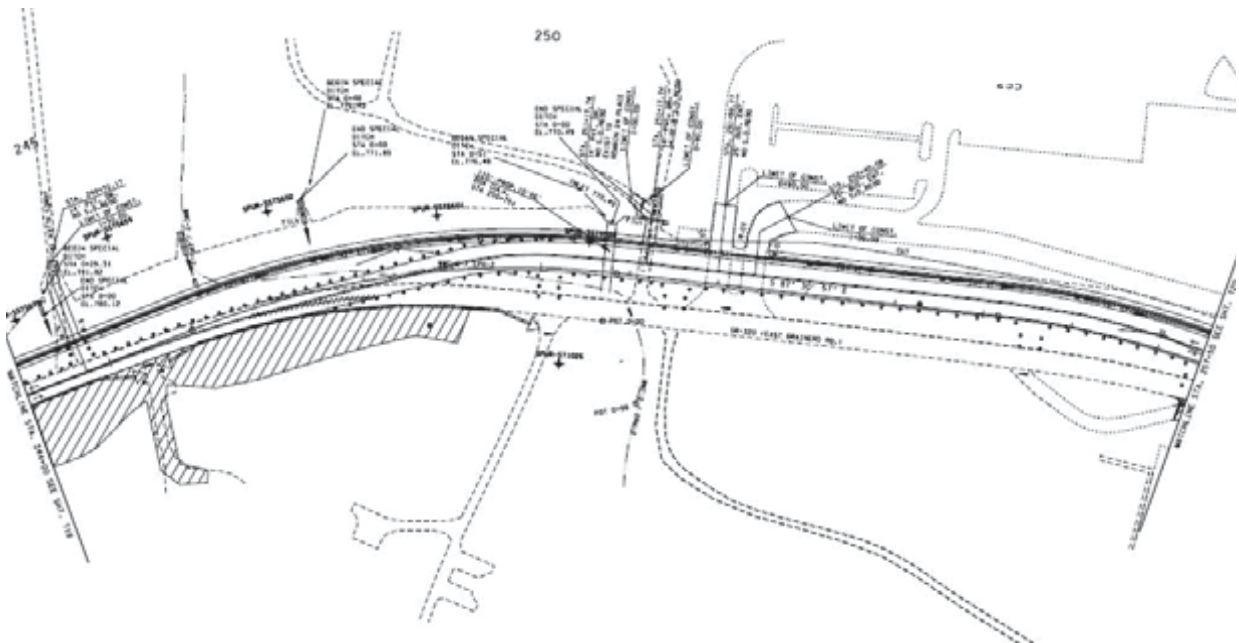


Figure 11: Traffic control diagram of SR-320 near Brickwell Lane during Phase 2 (05/12/2020 ROW Field Review Plans, Sheet T19)

Figure 12 below illustrates the construction of the proposed project on the south side of SR-321 (Ooltawah-Ringgold Road).

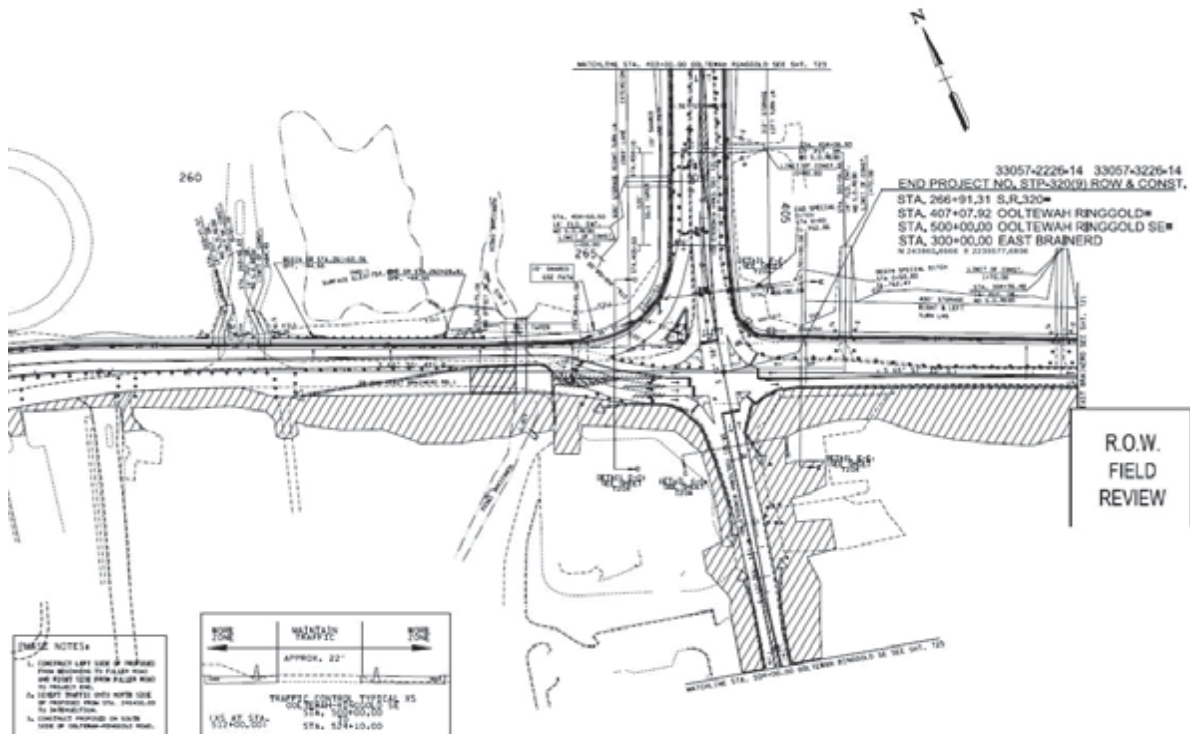


Figure 12: Traffic control diagram of construction zone on the south side of SR-321 during Phase 2 (05/12/2020 ROW Field Review Plans, Sheet T20)

Phase 3

1. Divert traffic onto the right side of the mainline alignment to Fuller Road.
2. Maintain traffic on the right side of the existing alignment to Fuller Road and construct the left side of the existing alignment.
3. After Fuller Road, maintain traffic on the left side of the existing alignment and construct the right side of the existing alignment.
4. On SR-321 (Ooltewah-Ringgold Road) north, divert traffic to the right side and construct the left side of the existing alignment.
5. On SR-321 (Ooltewah-Ringgold Road) south, divert traffic to the left side and construct the right side of the existing alignment.

Figure 13 below illustrates the Phase 3 traffic diversion from the right side of the existing alignment to the left side of the existing alignment during construction of the proposed project on the right side (south side) of SR-320.

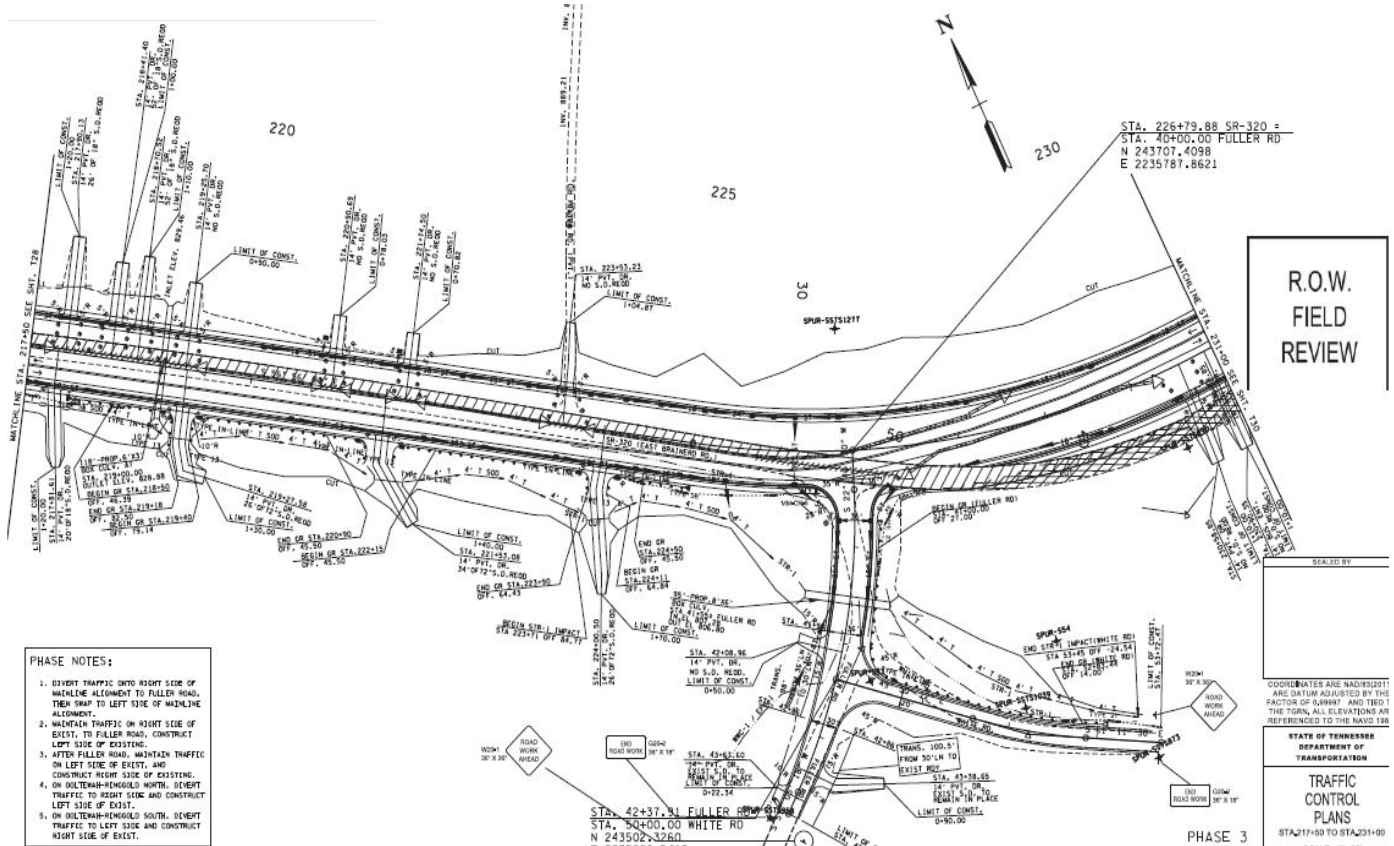


Figure 13: Traffic control diagram of construction zone on SR-320 during Phase 3 (05/12/2020 ROW Field Review Plans, Sheet T29)

Figure 14 below illustrates the Phase 3 traffic control for the proposed project at the intersection of SR-320 and SR-321.

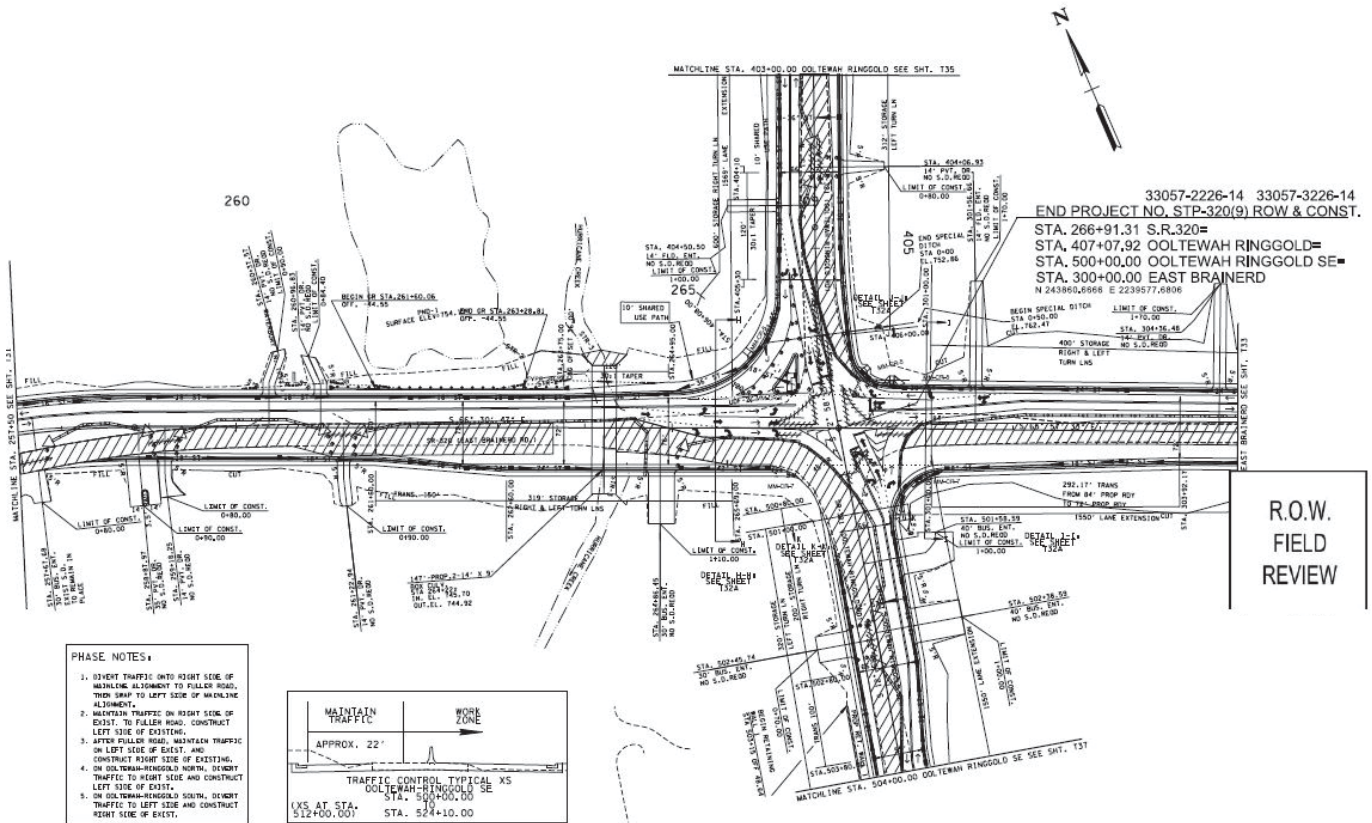


Figure 14: Traffic control diagram of the construction zone at the intersection of SR-320 and SR-321 during Phase 3 (05/12/2020 ROW Field Review Plans, Sheet T32)

Phase 4

1. Divert traffic onto the left side of the mainline alignment.
2. Construct the right side of the existing alignment to Fuller Road.
3. Construct the left side of the existing alignment after Fuller Road.
4. Divert traffic to the left side and construct the right side of the existing alignment on SR-321 north.
5. Divert traffic to the right side and construct the left side of the existing alignment on SR-321 south.

Figure 15 (page 17) illustrates the Phase 4 construction of the proposed project on SR-321 north of the intersection with SR-320.

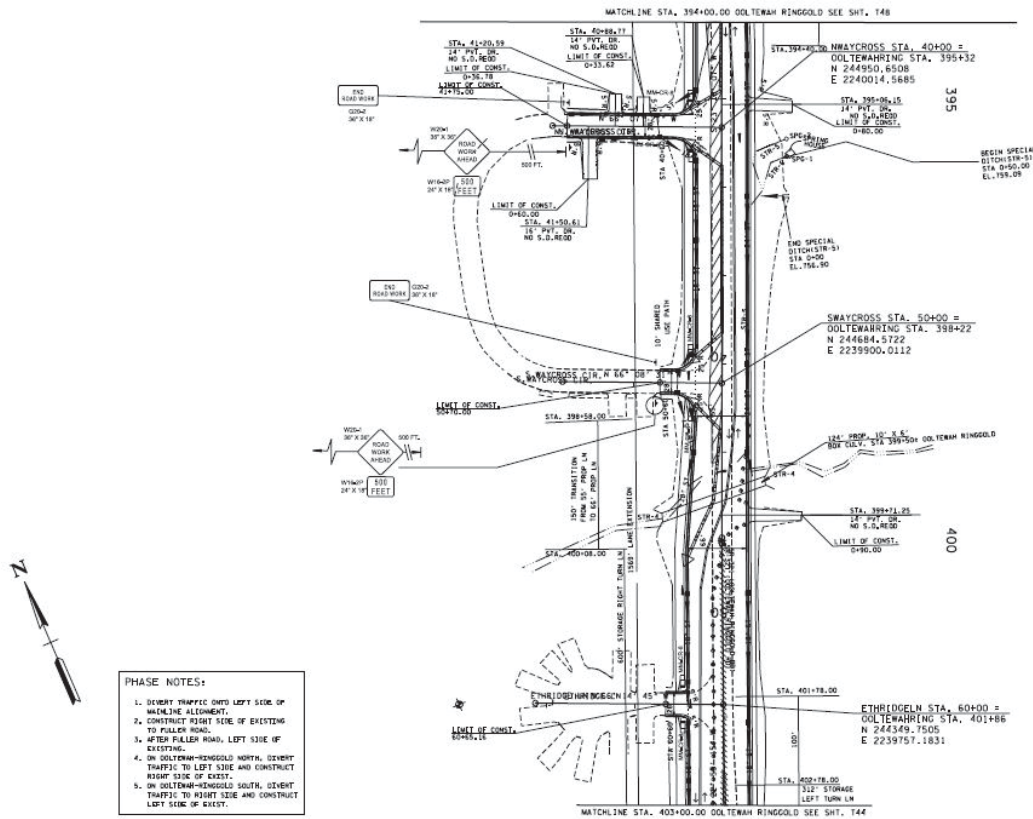


Figure 15: Traffic control diagram of construction zone on SR-321 north of the intersection with SR-320 during Phase 4 (05/12/2020 ROW Field Review Plans, Sheet T47)

Water Resources

On 07/02/2020, the TDOT Region 2 Environmental Technical Studies staff stated, “The 8 August 2019 Environmental Boundaries Report remains valid. If the project scope is revised or the project limits are extended, an additional review will be required.”

The 08/08/2019 Environmental Boundaries Report (EBR) provided an updated assessment of the water resources and protected species identified within the project limits of the proposed project. The EBR and the coordination correspondence with the affected regulatory agencies are included in Appendix G.

As noted in the EBR, one wetland area was identified within the project limits, shown as WTL-1 in the Water Resources Impact Table in Table 4A (page 18). No permanent impact to WTL-1 is anticipated.

Mitigation of impacts to wetland resources or natural habitat will be accomplished through avoidance and minimization of potential impacts during project design such as realignment and special design, construction features or other measures. Permanent impacts will be mitigated through compensatory mitigation alternatives, improvements to existing water resources and natural habitat, or mitigation banking.

The EBR identified six streams (STR), three wet weather conveyances (WWC)/ephemeral (EPH) streams and two upland drainage features (UDF) within the proposed project limits. These water

resources are shown in Table 4A (below) and Table 4B (page 19) as STR-1 through STR-6, WWC-1/EPH-1 through WWC-3/EPH-3, UDF-1 and UDF-2.

As noted in the Water Resources Impact Tables, STR-1 and STR-2 are intermittent streams, while STR-3 (Hurricane Creek), STR-4, STR-5 and STR-6 are perennial streams. In addition, one pond (PND) is shown on Table 4A and two springs (SPG-1 and SPG-2) are shown on Table 4B. As noted in the Ecology Field Data sheets, SPG-2 is the source of hydrology for STR-2. The water quality of these water resources streams has not been assessed by the Tennessee Department of Environment and Conservation (TDEC).

Impact Table: PIN 124077.00 - Hamilton County, SR-320 From East of Bel-Air Road to Near SR-321

Site Number (Label)	Station Number from Plans	Latitude	Longitude	Estimated amount of aquatic resource in review area	Type	Receiving Water	Function	Quality
Wetlands								
WTL-1	Near STA 206+00 RT to 207+20 RT	35.0015	-85.11395	0.0 ac. *	PFO1A	Hurricane Creek	stormwater runoff	Moderate Resource Value **
Streams								
UDF-1	STA 20+40 LT Raintree Lane	35.00145°	-85.10994°	0.0 ft.	Upland Drainage Feature	Hurricane Creek		N/A
STR-1	STA 223+55 RT East Brainerd Road to Beyond 53+45 LT White road	34.99995°	-85.10833°	650 ft *	Intermittent	Hurricane Creek		Not Assessed
WWC-1 / EPH-1	STA 43+50 RT Fuller Road to 42+90 RT White Road	34.99896°	-85.10783°	80 ft *	Ephemeral	Hurricane Creek		N/A
WWC-2 / EPH-2	STA 245+90 LT to 251+20 RT	35.00086°	-85.09973°	500 ft *	Ephemeral	Hurricane Creek		N/A
PND-1	STA 262+00 LT	35.00050°	-85.09637°	0 sq ft*	Pond	Hurricane Creek		N/A
STR-2	STA 263+00 LT to 264+15 LT	35.00034°	-85.09565°	90 ft*	Intermittent	Hurricane Creek		Not Assessed
STR-3 (Hurricane Creek)	STA 264+30	34.99995°	-85.09551°	150 ft*	Perennial	South Chickamauga Creek		Not Assessed

Table 4A: Water Resources Impact Table (Ecology EBR, 08/08/2019)

Streams								
UDF-2	STA 265+12 LT to 266+20 LT	35.000028°	-85.095064°	108 ft*	Upland Drainage Feature	Hurricane Creek		N/A
STR-4	STA 399+20 (Ooltewah Ringgold Road)	35.0018°	-85.0939°	150 ft*	Perennial	Hurricane Creek		Not Assessed
STR-5	STA 395+40 LT to 399+15 LT (Ooltewah Ringgold Road)	35.0019°	-85.0937°	400 ft*	Perennial	Hurricane Creek		Not Assessed
STR-6	STA 395+65 LT (Ooltewah Ringgold Road)	35.0025°	-85.0930°	30 ft*	Perennial	Hurricane Creek		Not Assessed
SPG-1	STA 395+65 LT (Ooltewah Ringgold Road)	35.0025°	-85.0930°	0 ft*	Spring	Hurricane Creek		N/A
SPG-2	STA 395+50 LT (Ooltewah Ringgold Road)	35.002653°	-85.092994°	0 ft*	Spring	Hurricane Creek		N/A
WWC-3 / EPH-3	STA 392+10 LT to 393+80 RT (Ooltewah Ringgold Road)	35.003188°	-85.093062°	210 ft*	Ephemeral	Hurricane Creek		N/A

* Estimates based on Hydraulic Grade Approval plans

** Quality dependant on concurrence from TDEC

Table 4B: Water Resources Impact Table (Ecology EBR, 08/08/2019)

According to the Ecology Field Data Sheets, the following are potential impacts to these water resources:

- STR-1 Stream crossing, runoff pollution and relocation
- STR-2 Stream crossing
- STR-3 Stream crossing
- STR-4 Stream crossing, runoff pollution
- STR-5 Relocation, runoff pollution
- SPG-1/STR-6 Runoff pollution, encapsulation
- SPG-2 Runoff pollution, encapsulation
- WWC-1/EPH-1 Stream crossing
- WWC-2/EPH-2 Runoff pollution
- WWC-3/EPH-3 Stream crossing
- UDF-1 Stream crossing, runoff pollution
- UDF-2 Runoff pollution

Mitigation of impacts to streams or any other fluvial systems will be accomplished through the avoidance and minimization of potential impacts during the design process. Permanent stream alterations such as relocations, impoundments or channel modification will be mitigated on-site to the extent possible in order to return the channel to its most probable natural state. Impacts that cannot be mitigated on-site will be subject to a compensatory mitigation plan that may include restoration of a comparable resource or application of an in-lieu fee program.

Protected Species

According to the EBR, the Region 2 Environmental Technical Studies staff searched the TDEC Rare Species Dataviewer database on 11/16/2018. The Rare Species Dataviewer database indicated that two protected species have been reported within the one-mile radius of the proposed project limits, as listed in Table 5 below.

Rare Species List			
Species Name	Status	Species Potential within Right-of-Way	Accommodations
Chickamauga Crayfish	State	Potential: Habitat is present	Special notes
Large-flowered Skullcap	Fed/State	Low Potential: Present habitat unsuitable	BMPs

Table 5: Rare Species List in One-Mile Radius, (Ecology EBR, 08/08/2019)

The Chickamauga Crayfish (*Cambarus extraneus*) is state listed as threatened. It is considered potentially present in the ROW because the habitat is present. Special notes for this species will be included on the project plans (see the following responses from TDEC and the Tennessee Wildlife Resources Agency below). A commitment for this project has been noted on this ROW reevaluation document Green Sheet.

The Large-flowered Skullcap (*Scutellaria montana*) is federally and state listed as threatened. This species is further addressed in the following coordination correspondence.

One- to four-mile Radius

The Rare Species Dataviewer database indicates there have been three protected animal species reported within the one- to four-mile radius of the proposed project: the state listed threatened Chickamauga Crayfish (*Cambarus extraneus*) and the Ashy Darter (*Etheostoma cinereum*), as well as the federal and state listed threatened Snail Darter (*Percina tanasi*). These species are considered potentially present in the ROW because the habitat is present. As noted previously, special notes for the Chickamauga Crayfish will be included on the project plans. BMPs are considered to be sufficient to protect the Ashy Darter and the Snail Darter.

Additionally, the Rare Species Dataviewer database indicates that two protected plant species have been reported in the one- to four-mile radius of the proposed project: the Narrow-leaved Trillium (*Trillium lancifolium*) and the Southern Nodding Trillium (*Trillium rugelii*). These plants, which are state listed as endangered, are considered likely not present in the ROW because habitat is unsuitable. BMPs are considered to be sufficient to protect these species.

TDEC Coordination

TDOT initiated coordination with the TDEC Division of Natural Heritage on 03/28/2019. The TDEC Division of Natural Heritage responded on 04/12/2019, stating, "Based on the habitat within the project area and the type of project, we do not anticipate any impacts to rare, threatened, or endangered plant species from this project, provided that best management practices to address erosion and sediment are implemented and maintained during project activities. We defer to the Tennessee Wildlife Resources Agency (TWRA) for comments related to potential impacts to the state endangered Chickamauga Crayfish which is known to occur within Hurricane Creek in the project area."

U.S. Fish and Wildlife Service Coordination

SR-320

Coordination with the U.S. Fish and Wildlife Service (USFWS) for the proposed project on SR-320 was initiated in correspondence dated 03/28/2019. This correspondence also conveyed the results of the presence/absence mist-net bat survey, stating:

"There is suitable habitat for protected bat species in the project area. A presence/absence mist-netting survey was performed by (the ecological consultant) during the 11th – 14th of July 2018. (The ecological consultant) reports no captures for the Indiana bat (*Myotis sodalis*) or the northern long-eared bat (*Myotis septentrionalis*). (The ecological consultant) also reports no captures for the federally endangered gray bat (*Myotis grisescens*) during the survey."

The TDOT correspondence further stated:

"Based on the negative survey results, TDOT concludes the proposed project 'may affect, not likely to adversely affect' the federally endangered Indiana bat (*M. sodalis*)."

"Based on the negative survey results, TDOT concludes the proposed project 'may affect, not likely to adversely affect' the federally threatened northern long-eared bat (*M. septentrionalis*)."

"Based on the negative survey results, surrounding land use and the absence of caves within the project area, TDOT concludes the proposed project 'may affect, not likely to adversely affect' the federally endangered gray bat (*M. grisescens*)."

In a letter dated 04/09/2019, the USFWS concurred with TDOT's conclusions regarding the SR-320 bat mist-net survey, stating, "Due to negative survey results for the Indiana bat and the NLEB, we concur with TDOT's determinations of 'not likely to adversely affect' for these species. This survey will be valid until April 1, 2024."

The USFWS also stated, "Our database indicates that the federally threatened large-flowered skullcap (*Scutellaria montana*) occurs in this area. A qualified individual should assess potential impacts to this species. As a designated representative for the Federal Highway Administration (FHWA), TDOT may submit its assessment and findings directly to this office for review and concurrence. A finding of 'may affect' could be addressed through formal consultation by the FHWA."

Regarding concerns for the Large-flowered Skullcap, the Region 2 Environmental Technical staff provided the TDEC Natural Heritage Division correspondence to the USFWS. In correspondence to the USFWS dated 04/18/2019, TDOT stated, "To address the concerns for the Large-flowered skullcap (*Scutellaria montana*) in the project area, I have attached the coordination response letter from TDEC's Department of Natural Areas as well as the USFWS original response. TDOT feels that the habitat is not suitable in the study area due to impacts from residential housing and

maintained lawns. Based on the habitat within the project limits, TDOT has concluded that the project 'may affect, not likely to adversely affect' the Large-flowered skullcap (*Scutellaria montana*). TDOT requests your concurrence with our determination."

USFWS Section 7 Concurrence, SR-320

The USFWS responded on 05/02/2019, stating, "Upon review of the information provided, we concur with TDOT's determination of not likely to adversely affect for the large-flowered skullcap. A mist netting survey was performed during the period of July 11 and July 14, 2018, which resulted in no bat captures. Due to negative results for the federally endangered Indiana bat (*Myotis sodalis*) and threatened northern long-eared bat (*Myotis septentrionalis*), we concurred with TDOT's determinations of not likely to adversely affect for these species in a letter dated April 9, 2019. This survey is valid until April 1, 2024."

The USFWS further stated, "We are not aware of any federally listed or proposed species that would be impacted by the project. Therefore, based on the best information available at this time, we believe that the requirements of section 7 of the Endangered Species Act (Act) of 1973, as amended, are fulfilled for all species that currently receive protection under the Act."

SR-321

As noted in the Project History section of this document, the proposed project now includes a section of SR-321 north and south of the intersection with SR-320. Separate USFWS coordination correspondence and a bat study for SR-321 (TDOT PIN 124078.00) apply to the section of SR-321 which is now part of the proposed project Section 2.

Coordination with the U.S. Fish and Wildlife Service (USFWS) for the proposed project on SR-321 was initiated in correspondence dated 09/07/2018. This correspondence also conveyed the results of the presence/absence mist-net bat survey, stating:

"There is suitable habitat for protected bat species in the project area. A presence/absence mist-netting survey was performed by (the ecological consultant) between the dates of the 16th and the 21st of July 2018. (The ecological consultant) reports no captures for the Indiana bat (*Myotis sodalis*) or the northern long-eared bat (*Myotis septentrionalis*). (The ecological consultant) did capture one (1) federally endangered gray bat (*Myotis grisescens*) during the survey. Also, one (1) Eastern red bat (*Lasiurus borealis*) was captured."

The TDOT correspondence further stated:

"Based on the negative survey results, TDOT concludes the proposed project 'may affect, not likely to adversely affect' the federally endangered Indiana bat (*M. sodalis*)."

"Based on the negative survey results, TDOT concludes the proposed project 'may affect, not likely to adversely affect' the federally threatened northern long-eared bat (*M. septentrionalis*)."

"Based on the negative survey results, surrounding land use and the absence of caves within the project area, TDOT concludes the proposed project 'may affect, not likely to adversely affect' the federally endangered gray bat (*M. grisescens*)."

USFWS Concurrence, SR-321

On 10/01/2018, the USFWS stated, "A mist netting survey was performed during the period of July 16 through July 21, 2018, at seven sites along the project corridor. Efforts resulted in the capture of two bats, including one gray bat. Due to negative survey results for the Indiana bat and the NLEB, we concur with TDOT's determinations of 'not likely to adversely affect' for these

species. We additionally concur with the finding of 'not likely to adversely affect' for the gray bat for the reasons provided and TDOT's commitment to implementation of water quality measures. This survey will be valid until April 1, 2024."

The USFWS also stated, "We are unaware of any federally listed or proposed species that would be impacted by the project. Therefore, based on the best information available at this time, we believe that the requirements of section 7 of the Endangered Species Act (Act) of 1973, as amended, are fulfilled for all species that currently receive protection under the Act."

TWRA Coordination

TDOT initiated coordination with the TWRA for the proposed project on 03/28/2019. In correspondence dated 04/18/2019, the TWRA stated:

"My data concur with information you have provided. The state Threatened and Endangered Chickamauga Crayfish *Cambarus extraneus* is documented within one mile of the project location and suitable habitat exist within the project limits. Surveys will need to be conducted for this species where suitable habitat exist that will be impacted by the project. If an occurrence is documented, then we will re-coordinate to plan for sweeps prior to construction. Please contact me in the future and we can discuss options and dates to get these surveys completed."

In correspondence dated 07/09/2019, TDOT provided TWRA with the results of the surveys for the Chickamauga Crayfish conducted by TWRA and TDOT on 05/16/2019. The Chickamauga Crayfish was found in STR-3, STR-4 and STR-5. The correspondence with detailed results of the survey is included in Appendix G.

On 07/15/2019, the TWRA stated, "For the streams where an occurrence was documented for the Chickamauga Crayfish (*Cambarus extraneus*), in-stream sweeps and relocation will be needed immediately prior to any in-stream work for this project." A commitment to complete a sweep and relocation of the Chickamauga Crayfish has been added to this project Green Sheet and has been noted in the 05/12/2020 ROW Field Review Plans.

The TDEC, USFWS and TWRA coordination correspondence and the Bat Mist-net Survey reports are included in Appendix G.

Floodplain Management

Multiple Flood Zones:

Zone AE (Cross Hatched) – Floodway Area in Zone AE

Zone AE – Base Flood Elevations Determined

Zone X (White) – Area Determined to be Outside the 500-year Floodplain

- SR-320 near the intersection with SR-321 includes STR-3 (Hurricane Creek). This area lies within Zone AE (Cross Hatched) – Floodway Area in Zone AE, which is a designated Federal Emergency Management Agency (FEMA) floodplain and floodway. Steps will be taken to minimize encroachments in the floodplain.
- SR-320 near Waterbury Lane lies within Zone AE - Base Flood Elevations Determined.
- The remaining project area lies within Zone X (White) – Area Determined to be Outside the 500-year Floodplain.

Portions of this project impact a FEMA defined floodplain where a floodway is defined. A No-Rise Certification or a CLOMR/LOMR will be submitted for the project, and it will be consistent with the Memorandum of Understanding (MOU) between FHWA and FEMA. The design of the roadway system will be consistent with the Memorandum of Understanding (MOU) between FHWA and

FEMA and with the floodplain management criteria set forth in the National Flood Insurance Regulations of Title 44 of the Code of Federal Regulations (CFR). It will be consistent with the requirements of floodplain management guidelines for implementing Executive Order 11988 and FHWA guidelines 23 CFR 650A.

The project is located on the following FEMA Flood Insurance Rate Maps (FIRMs) in Hamilton County:

- Panel 388 of 530, Map #47065C0388G
- Panel 505 of 530, Map #47065C0505G
- Panel 389 of 530, Map #47065C0389G

Portions of the FEMA FIRMs are included in Appendix H.

Air Quality Impacts

The TDOT Air Quality and Noise Section provided the following comments on 08/06/2020 for the proposed project.

Transportation Conformity

The project is in Hamilton County which is in attainment for all regulated criteria pollutants. Therefore, conformity does not apply to this project.

Construction Activities

Construction activities will generate intermittent and temporary construction-related pollutant emissions and dust. The contractor should follow the procedures in TDOT's Standard Specifications for Road and Bridge Construction as amended by the most recent applicable supplements to minimize these effects.

Noise Impacts

The SR-320 widening project is a Type I project in accordance with the Federal Highway Administration (FHWA) noise regulation, Procedures for Abatement of Highway Traffic and Construction Noise, 23 CFR 772. The project requires a noise study to identify noise impacts and to evaluate noise abatement for those impacts. The attached noise study was conducted in accordance with the Tennessee Department of Transportation's Policy on Highway Traffic Noise Abatement (TDOT's noise policy) and Section 5.3.4 (Noise) of the Tennessee Environmental Procedures Manual.

A review of the current ROW plans indicates that the noise abatement conclusions remain valid from the 2020 Preliminary Field reevaluation.

The noise-sensitive land uses in the project area include Activity Category B (residences) and Activity Category C (soccer field). The study concluded that the project will impact 24 residences along SR-320 and SR-321. Noise abatement in the form of noise barriers was evaluated to mitigate the predicted noise impacts in accordance with TDOT's noise policy. Noise barriers were determined to be not feasible for the majority of the impacted residences as barriers would restrict vehicular access to cross streets and residential driveways along SR-320 and SR-321. Additionally, noise barriers were determined to not be feasible to some impacted residences due to the presence of a major power transmission line. The only impacted Activity Category C is the East Hamilton Middle High School, but it is isolated. Per TDOT's noise procedures, noise abatement generally is not considered reasonable for isolated residences due to the required

barrier area versus the benefits provided. Therefore, noise barriers are not currently feasible or reasonable for this project.

Construction Activities

Construction activities may generate intermittent and temporary noise above existing noise levels. The noise levels resulting from construction activities will depend on the types of equipment utilized, the duration of the activities, and the distances between construction activities and nearby land uses. However, the noise increases will be temporary and will not constitute a noise impact as defined by TDOT's noise policy. The procedures in TDOT's Standard Specifications for Road and Bridge Construction will help minimize construction noise effects.

Undeveloped Lands

Some tracts of undeveloped land exist in the project area. TDOT encourages the local governments with jurisdiction over these lands, as well as potential developers, to practice noise compatibility planning to avoid future noise impacts. The *Information for Local Officials* section of the noise study report provides additional information on noise levels for undeveloped lands and noise compatibility planning.

Statement of Likelihood

Noise barriers were determined to be not feasible or reasonable for this project based on the current project plans and are not likely to be included in the project plans. However, changes to the plans could affect noise impact and abatement conclusions. TDOT will make final determinations regarding the construction of noise barriers using the design plans for the project.

The Air Quality and Noise correspondence and the Noise Technical Report are included in Appendix I.

Section 4(f)

The portion of the proposed project located on SR-321 runs adjacent to East Hamilton Middle/High School, a public school operated by Hamilton County. According to the 05/12/2020 ROW Field Review Plans, some ROW and easement would be required from the school property near the roadway. The TDOT Region 2 Design Office confirmed in an email dated 06/08/2020 that no negative impacts to the playing fields are anticipated from the proposed project.

In an email dated 06/18/2020, the principal of East Hamilton Middle/High School confirmed that the ball fields adjacent to the roadway are used only for school activities.

The provisions of Section 4(f) of the U.S. Department of Transportation Act of 1966 require that special effort should be made to preserve the natural beauty of protected properties. FHWA regulations also govern the use of land from publicly owned parks, recreation areas, wildlife and waterfowl refuges, and public or private historic sites for federal highway projects. The East Hamilton Middle/High School public school recreational fields serve only school activities and functions and are not open to the public or do not serve either organized or substantial walk-on recreational purposes that are determined to be significant; therefore, the property is not subject to Section 4(f). The Section 4(f) coordination correspondence is included in Appendix J.

Cultural Resources/Section 106 Coordination

Historic Preservation

On November 27, 2019, the TDOT Historic Preservation Section submitted an updated Historic/Architectural Assessment for the proposed project (Section 2) to the Tennessee State Historic Preservation Officer (TN-SHPO) with the opinion that there are no historic properties within the proposed project corridor. In a letter dated 12/05/2019, the TN-SHPO stated, "Considering the information provided, we concur that no architectural resources eligible for listing in the National Register of Historic Places will be affected by this undertaking."

On 08/01/2020, the TDOT Historic Preservation Section stated that the "Previous study remains valid. In a letter dated December 5, 2019, the TN-SHPO concurred there are no architectural properties eligible for, or listed in, the National Register of Historic Places that will be affected by the project as currently proposed."

The Historic Preservation correspondence, the updated Historic/Architectural Assessment and the TN-SHPO concurrence letter are included in Appendix K.

Archaeology

In a letter to the Tennessee State Historic Preservation Officer dated 10/27/2020, the TDOT Environmental Division submitted an Addendum Phase I Archaeological Assessment for the proposed project based on the 05/12/2020 ROW Field Review Plans. In this correspondence, the Division stated:

"Your office concurred with TDOT in a letter dated May 24, 2001, that no archaeological resources eligible for the National Register of Historic Places (NRHP) would be affected by the undertaking. Since that time, the project has been revised to include an additional approximately 1285 feet to the eastern portion of State Route (SR) 320 slated for improvements, and an additional approximately 1400 feet to the southern portion of SR 321, for a total increase in the area of potential effects (APE) of approximately 1.29 acres. The APE along SR 321 was partially covered by a different TDOT project in 2019 but is presented here for clarity."

The TDOT letter further stated, "It is the opinion of TDOT that there is little to no potential for intact archaeological deposits within the addendum APE and that no further archaeological work is warranted."

On 10/27/2020, the TN-SHPO concurred with TDOT's comments, stating, "Considering the information provided, we find that no archaeological resources eligible for listing in the National Register of Historic Places will be affected by this undertaking."

The Archaeology correspondence, the 10/27/2020 and 05/24/2001 TN-SHPO concurrence letters, along with the Addendum Phase I and the Final Phase I Archaeological Reports are included in Appendix L.

Native American Consultation

Section 106 coordination was sent to the interested Native American tribes on 09/24/2019, including Eastern Shawnee Tribe of Oklahoma, The Cherokee Nation, Eastern Band of Cherokee Indians, Muscogee (Creek) Nation, Shawnee Tribe, United Keetoowah Band of Cherokee Indians, Thlopthlocco Tribal Town, Poarch Band of Creek Indians, Kialegee Tribal Town and Absentee Shawnee Tribe.

The Cherokee Nation responded on 10/25/2019, stating “Please allow this letter to serve as the Nation’s interest in acting as a consulting party to this proposed project.”

The Cherokee Nation added, “The Nation maintains databases and records of cultural, historic, and pre-historic resources in this area. Our Historic Preservation Office reviewed this project, cross referenced the project’s legal description against our information, and found no instances where this project intersects or adjoins such resources. Thus, the Nation does not foresee this project imparting impacts to Cherokee cultural resources at this time.”

In correspondence dated 10/27/2020, the TDOT Archaeology Section stated, “A notice of findings, consisting of cultural resources documentation and correspondence between the TDOT and TN-SHPO, was sent to Cherokee Nation on March 9, 2020. TDOT provided updated archaeological documentation and SHPO consultation on October 27, 2020.”

The Archaeology Section further noted:

“Following guidance issued on April 8, 2020, by the Advisory Council on Historic Preservation (ACHP) in response to the COVID-19 outbreak, federal agencies are to remain flexible regarding federally recognized Native American tribes’ Section 106 review responsibilities. The ACHP’s guidance furthermore indicates that federal agencies may not foreclose on the statutory rights afforded to federally recognized Native American tribes under the National Historic Preservation Act and regulations implementing Section 106 of the Act. As several federally recognized Native American tribes with interests in Tennessee have indicated that their ability to carry out their Section 106 review responsibilities is diminished or otherwise limited, it should be expected that tribal responses for the subject project may be received subsequent to the date of this ESR and that any such response may require additional information, fieldwork, or coordination with any or all tribes and, perhaps, the SHPO and/or ACHP. An updated ESR will be provided in the event that any additional responses are received, along with updated Section 106 documentation, if any.”

The Native American consultation correspondence is included in Appendix M.

Environmental Justice

Since the previously approved environmental documents were completed, updated demographic data have been collected as part of the U.S. Census Bureau’s American Community Survey. The environmental justice (EJ) analysis utilizes annual U.S. Census data from the 2018 American Community Survey (ACS), 5-year Estimates database. The project area encompasses five census block groups within Hamilton County, Tennessee: Census Tract (CT) 112.03, Block Group (BG) 1 and BG 3; CT 113.24, BG 2; and CT 113.25, BG 3 and BG4.

Table 6 (below) displays the population data for these block groups comparing their respective minority population and low-income population percentages to that of the entire county. According to Executive Order (EO) 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, EJ analyses serve to ensure that each Federal agency “shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, any disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations.”

Environmental Justice Analysis Tables

Minority Populations						
Census Tract (CT)/ Block Group (BG)	CT 112.03 BG 1	CT 112.03 BG 3	CT 113.24 BG 2	CT 113.25 BG 3	CT 113.25 BG 4	Hamilton County
% Minority/Non-White	28.0%	15.9%	13.0%	28.8%	18.8%	28.8%
>10% above County Avg.	No	No	No	No	No	
Is BG Population Avg. >50%	No	No	No	No	No	
Meet EJ Criteria?	No	No	No	No	No	
Low-Income Populations						
Census Tract (CT)/ Block Group (BG)	CT 112.03 BG 1	CT 112.03 BG 3	CT 113.24 BG 2	CT 113.25 BG 3	CT 113.25 BG 4	Hamilton County
% Low-Income/Below Poverty Line	8.3%	1.7%	0.7%	12.4%	4.0%	13.7%
>10% above County Avg.	No	No	No	No	No	
Is BG Population Avg. >50%	No	No	No	No	No	
Meet EJ Criteria?	No	No	No	No	No	

Source: U.S. Census Bureau, 2018 American Community Survey (ACS), 5-Year Estimates. ACS data was accessed and reviewed on 10/1/2020 via the U.S. Census Bureau website.

Table 6: Environmental Justice Analysis

Minority Populations

Based on the EJ Analysis, the minority population percentages for CT 112.03, BG 1 (28.0 percent), CT 112.03, BG 3 (15.9 percent), CT 113.24, BG 2 (13.0 percent), CT 113.25, BG 3 (28.8 percent) and CT 113.25, BG 4 (18.8 percent) do not exceed the county average (28.8 percent) by 10 percentage points or more, nor are they greater than 50 percent of the respective block groups' total populations. Block groups that satisfy either of these criteria area considered to be EJ populations.

Low-income Populations

Based on the EJ Analysis, the low-income population percentages for CT 112.03, BG 1 (8.3 percent), CT 112.03, BG 3 (1.7 percent), CT 113.24, BG 2 (0.7 percent), CT 113.25, BG 3 (12.4 percent) and CT 113.25, BG 4 (4.0 percent) do not exceed the county average (13.7 percent) by 10 percentage points or more, nor are they greater than 50 percent of the respective block groups' total populations. Block groups that satisfy either of these criteria area considered to be EJ populations.

Summary

Based on the EJ analysis of the demographic data provided by the U.S. Census Bureau 2018 ACS 5-year Estimates, the study census tract/block groups do not satisfy any of the EJ criteria reviewed for this analysis; therefore, these block groups do not contain high enough percentages of minority or low-income populations that would qualify as EJ concerns for the proposed project. Based on the scope of work and nature of the proposed project, all populations included within the proposed project area are expected to benefit equally from the proposed improvements. The EJ analysis is included in Appendix N.

Hazardous Materials

The TDOT Hazardous Materials Section stated on 06/24/2020, "Based on the Right-of-Way Plans dated 12 May 2020 no known hazardous materials sites appear to affect this project as it is currently planned. Previously Tract 93 (TDEC UST [underground storage tank] Facility #3331257, Pantry # 3588 Dba Golden Gallon, 9652 East Brainerd Road) was identified as a suspect tract to avoid or minimize ROW. The proposed ROW shown in these plans is minimal and the project does not appear to impact this facility. Bridges 33CULV17009 and 33S43070007 are to be removed so asbestos surveys are required. This office will have these surveys completed and reported by the end of September 2020."

"In the event hazardous substances/wastes are encountered within the right-of-way, their disposition shall be subject to all applicable regulations, including the applicable sections of the Federal Resource Conservation and Recovery Act, as amended; the Comprehensive Environmental Response, Compensation, and Liability Act, as amended; and the Tennessee Hazardous Waste Management Act of 1983, as amended. Databases reviewed include: Google Earth imagery, EPA National Priorities List, EPA EnviroMapper, TDEC Registered Underground Storage Tanks Data and Reports, TDEC Division of Water Resources Public Data Viewer and Oil and Gas Wells database, TDEC Division of Remediation Sites Public Data Viewer, TDOT Integrated Bridge Information System, and others, as necessary."

The Asbestos Inspection Reports for Bridge Number 33CULV17009 and 33S43070007, dated 09/14/2020, state that asbestos was not identified in the samples collected from the bridges.

The Hazardous Materials coordination and the Asbestos Inspection Reports are included in Appendix O.

Bicycle and Pedestrian Coordination

On 07/20/2020, the TDOT Multimodal Transportation Resources Division stated, "This project accommodates bicyclists and pedestrians with either 1) 5' sidewalks and 6' bicycle lanes [4-foot bicycle lanes with a 2-foot gutter], or 2) a shared use path."

In an email dated 10/29/2020, the Multimodal Transportation Resources Division confirmed that their earlier response remains valid. The 07/20/2020 Multimodal Transportation Resources Division correspondence, the 10/29/2020 email and TDOT's Multimodal Access Policy dated 07/31/2015 are included in Appendix P.

Environmental Commitments

One Ecology commitment is attached to the proposed project. This commitment requires the sweep and relocation of the Chickamauga crayfish in STR-3, STR-4 and STR-5 immediately prior to any in-stream work for the proposed project. The commitment has been added to the plans as required. The commitment is shown on the document Green Sheet and is also included in Appendix Q.

Conclusion

The entire proposed improvement has been reevaluated for document validity. Although some design features of the proposed project have changed, it has been determined, based on this

reevaluation, that the project is of essentially the same character as previously studied with no substantial modifications of land use or new development. The anticipated impacts have not changed substantially and the examination of the 05/12/2020 ROW Field Review Plans indicate that there have been no new environmental consequences or effects not presented and/or discussed in the FONSI that would invalidate earlier approvals or significantly affect the quality of the environment.

In consideration of these conclusions, TDOT believes the "Finding of No Significant Impact" remains valid for the requested administrative action. A space is provided below for your concurrence.

Sincerely yours,

Kimberly

Vasut-Shelby

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Vasut-Shelby

Date: 2020.11.05 08:57:11
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Kimberly Vasut-Shelby
Environmental Supervisor

Concurrence:

THERESA E CLAXTON

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Date: 2020.11.10 10:52:59 -06'00'

Date: 11.10.2020

Federal Highway Administration

lpt

cc: Sharon Sanders, Transportation Manager 1