

TRANSPORTATION PLANNING REPORT

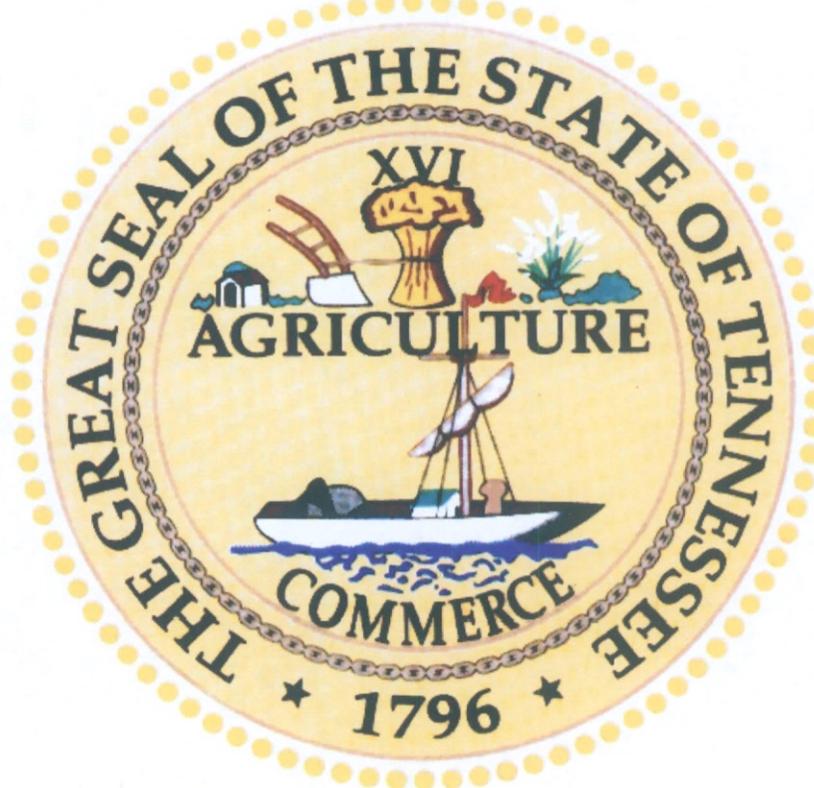
State Route 22

From State Route 69 in Milledgeville

To State Route 100

Chester, Henderson, and McNairy Counties

PIN #112893.00



PREPARED BY

CLINARD ENGINEERING ASSOCIATES, LLC

For the

TENNESSEE DEPARTMENT OF TRANSPORTATION
PROJECT PLANNING DIVISION

Approved by:	Signature	DATE
CHIEF OF ENVIRONMENT AND PLANNING		9-8-10
TRANSPORTATION DIRECTOR PROJECT PLANNING DIVISION		9-3-10
TRANSPORTATION MANAGER 2 PROJECT PLANNING DIVISION		9/3/10

This document is covered by 23 USC § 409 and its production pursuant to fulfilling public planning requirements does not waive the provisions of § 409.

TABLE OF CONTENTS

1.0 STUDY HISTORY AND BACKGROUND INFORMATION	4
1.1 Study History	4
1.2 Study Area.....	4
1.3 Community Profile	4
1.4 Existing Transportation Conditions	11
1.5 Review of Existing Corridor Conditions.....	14
1.6 Safety (Crash and Geometrics)	14
1.7 Utility Infrastructure.....	15
1.8 Structures / Bridges	15
1.9 Early Environmental Screening (EES).....	18
Preliminary Archeological/Historic Architecture.....	18
Preliminary Community Impact	18
Preliminary Ecology	18
Preliminary Hazardous Substances/Geology.....	19
Preliminary Parks, Public Lands, and Railroads.....	19
2.0 PRELIMINARY PURPOSE AND NEED	20
3.0 OPTIONS ANALYZED.....	21
3.1 Route Option Discussion	21
3.2 Cross-Section Discussion.....	21
3.3 Measures of Effectiveness (MOE) Discussion.....	23
3.4 Modal Inter-relationships	24
3.5 Option 2: Localized Improvements	25
3.5.1 Option 2: Location A – S.R. 22 at North Road and Pugh Loop	25
3.5.2 Option 2: Location B –Wake Forrest Rd. at Milledgeville Rd.....	27
3.5.3 Option 2: Location C – S.R. 22 at Benson Road.....	29
3.5.4 Option 2: Location D – S.R. 22 Northbound Passing Lane (L.M. 5.11 - L.M. 5.47).....	31
3.5.5 Option 2: Location E – S.R. 22 Southbound Passing Lane (L.M. 5.86 - L.M. 5.36).....	33
3.5.6 Option 2: Location F – S.R. 22 at S.R. 201	35
3.5.7 Option 2: Location G – S.R. 22 at S.R. 100.....	37
3.6 Cost Estimates.....	39
3.7 Recommended Priority of Improvements.....	40

4.0 ASSESSMENT OF OPTIONS.....	42
5.0 SUMMARY.....	45
CHECKLIST OF DETERMINANTS FOR LOCATION STUDY	46
DATA TABLE	47
DESIGN CRITERIA FOR LOCATION AND DESIGN PHASE.....	48
COST DATA SHEETS	49

EXHIBITS

Exhibit 1.1 – Vicinity Map.....	5
Exhibit 1.2 - S.R. 22 Study Corridor Location Map	6
Exhibit 1.3 – Corridor Geographic Features	7
Exhibit 1.4 – TDOT Traffic Count Locations	13
Exhibit 1.5 – Area of Significant Vertical Grade	14
Exhibit 1.6 – Natural Gas Distribution Pipelines.....	15
Exhibit 1.7 – Bridge at Log Mile 2.87	16
Exhibit 1.8 – Bridge at Log Mile 3.70	16
Exhibit 1.9 – Bridge at Log Mile 3.91	17
Exhibit 1.10 – Bridge at Log Mile 7.78	17
Exhibit 3.1 – Passing Lane Typical Section (Options 2 and 3)	22
Exhibit 3.2 – Improved Two-Lane Typical Section (Option 3)	22
Exhibit 3.3 –S.R. 22 at North Road and Pugh Loop.....	25
Exhibit 3.4 – Concept Plan Option 2: Location A	26
Exhibit 3.5 – S.R. 22 at Wake Forrest Rd. and Milledgeville Rd.	27
Exhibit 3.6 – Concept Plan Option 2: Location B	28
Exhibit 3.7 – S.R. 22 at Benson Road	29
Exhibit 3.8 – Concept Plan Option 2: Location C.....	30
Exhibit 3.9 – S.R. 22 View Northbound at L.M. 5.13.....	31
Exhibit 3.10 – Concept Plan Option 2: Location D.....	32
Exhibit 3.11 – S.R. 22 View Northbound at L.M. 5.49.....	33
Exhibit 3.12 – Concept Plan Option 2: Location E	34
Exhibit 3.13 – S.R. 22 at S.R. 201	35
Exhibit 3.14 – Concept Plan Option 2: Location F	36
Exhibit 3.15 – S.R. 22 at S.R. 100	37
Exhibit 3.16 – Concept Plan Option 2: Location G.....	38

TABLES

Table 1.1 – Geographic Data.....	4
Table 1.2 – Population Trends.....	11
Table 1.3 – Historic Traffic Data	12
Table 1.4 – Bridge Details	15
Table 3.1 – Level of Service (LOS) Description for Two-Lane Highways	23
Table 3.2 – Level of Service (LOS) Criteria for Two-Lane Highways.....	24
Table 3.3 – Two-Lane Highway Analysis Summary (Existing).....	24
Table 3.4 – Two-Lane Highway Analysis Summary (Proposed).....	24
Table 3.5 – Cost Summary Table	39

APPENDIX

A – Early Environmental Screening Data

B – TPR Concept Plans

1.0 STUDY HISTORY AND BACKGROUND INFORMATION

1.1 Study History

The Southwest Rural Planning Organization (RPO) requested a review of a 42 mile segment of State Route 22 from U.S. 64 to I-40 as a significant corridor. TDOT Long Range Planning identified five segments of independent utility. A section of S.R. 22 was identified as deficient in the City of Lexington from State Route 20 to Hamlett Road. TDOT Short Range Planning completed a Transportation Planning Report (TPR) for that segment in December 2007. The recommended proposed improvements for that section of S.R. 22 within Lexington included a roadway widening to a five (5) lane section.

This TPR is a further review of a separate segment along the corridor of State Route 22 south of Lexington.

1.2 Study Area

The limits of this study extend from State Route 100 in Henderson County to State Route 69 in Milledgeville, a distance of approximately 8.5 miles. Exhibit 1.1 presents a regional map, Exhibit 1.2 presents the study corridor location map, and Exhibit 1.3 further details the corridors geographic features on a United States Geological Survey (USGS) map.

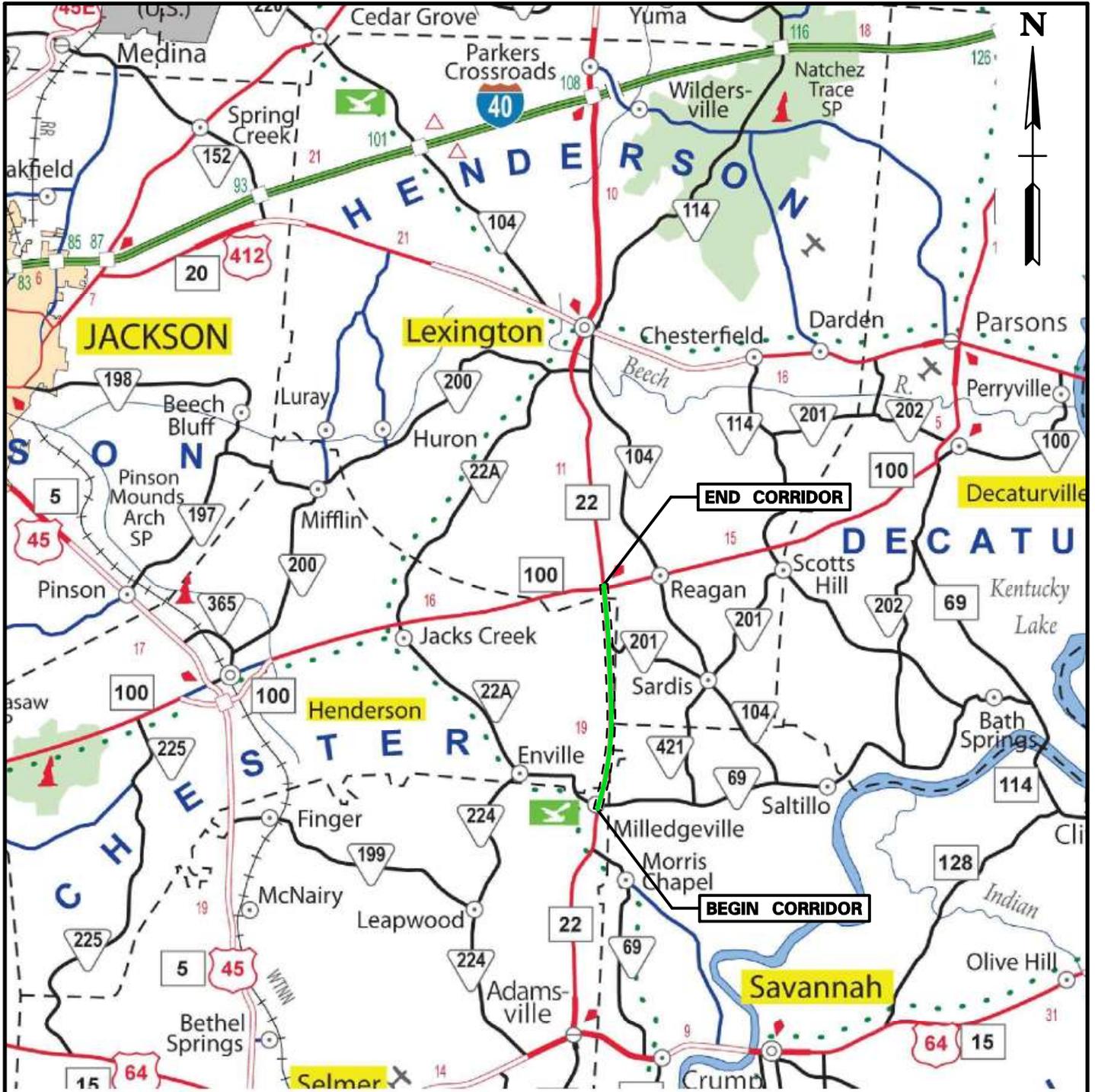
1.3 Community Profile

The corridor study limits reside primarily within Chester County with 0.2 miles in Henderson County where the corridor intersects State Route 100 and 0.5 miles in McNairy County where the corridor intersects State Route 69. Table 1.1 presents geographic data for the area and indicates that the counties have similar population densities. Table 1.2 presents the historic population trends for the counties and offers a comparison to the averages seen statewide.

Table 1.1 – Geographic Data

Category	Chester County	Henderson County
Land Area excluding water covered (Square Miles)	288.52	520.02
Persons / Square Mile (2000)	53.8	49.1
Housing Units / Square Mile (2007)	23.39	23.22
Category	McNairy County	Statewide
Land Area excluding water covered (Square Miles)	560.04	41,217.12
Persons / Square Mile (2000)	44.0	138.0
Housing Units / Square Mile (2007)	20.98	66.11

Data Source: U.S. Census Bureau State and County Quickfacts



MCNAIRY, CHESTER & HENDERSON COUNTIES



VICINITY MAP
EXHIBIT 1.1

DRAWN BY:

CMB

CHECKED BY:

TMC

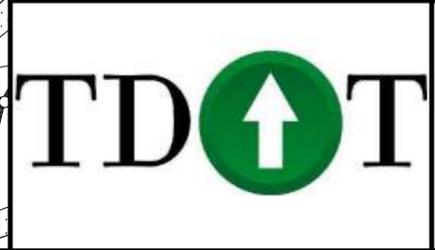
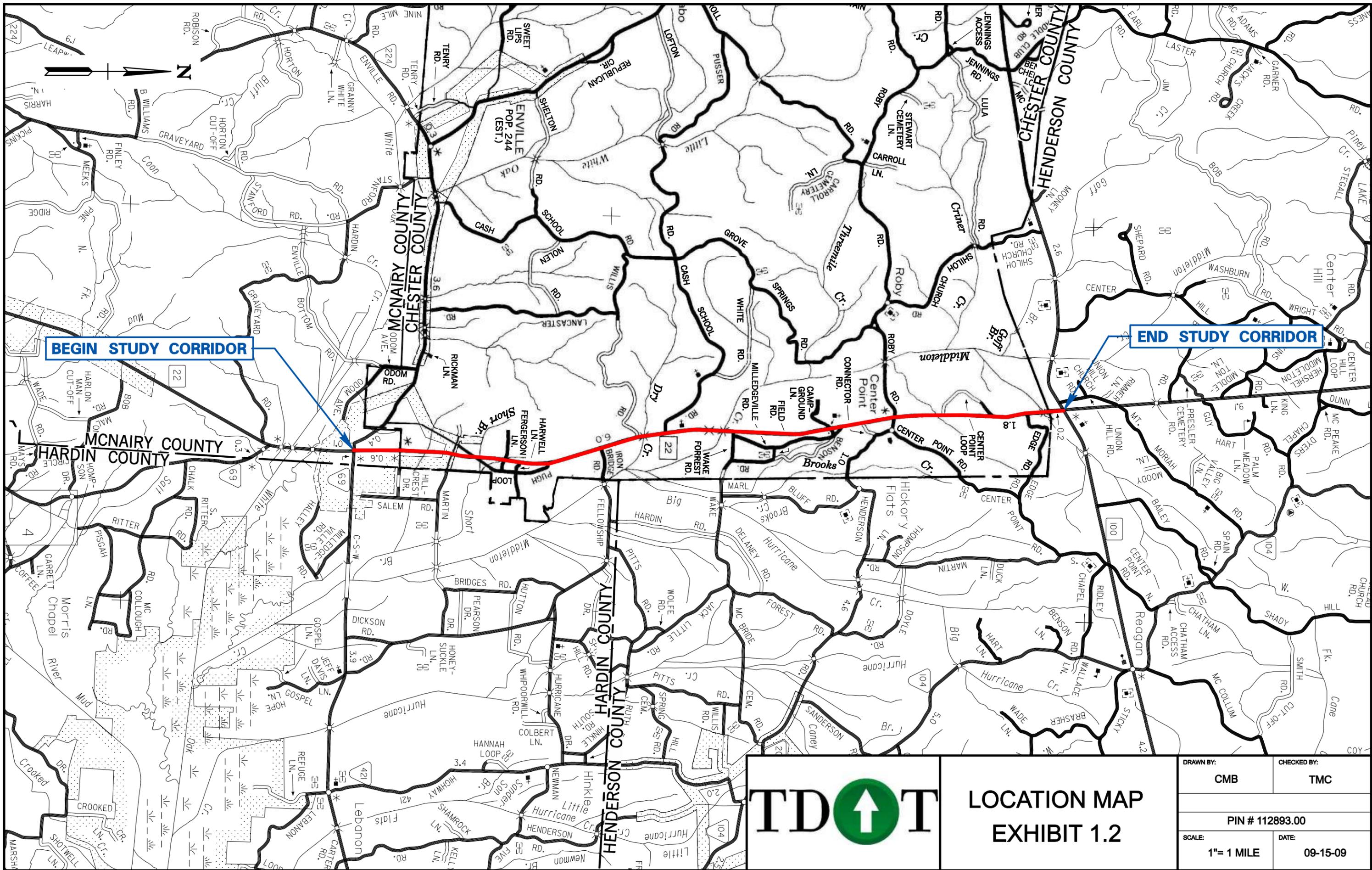
PIN #112893.00

SCALE:

1" = 10 MILES

DATE:

09-15-09

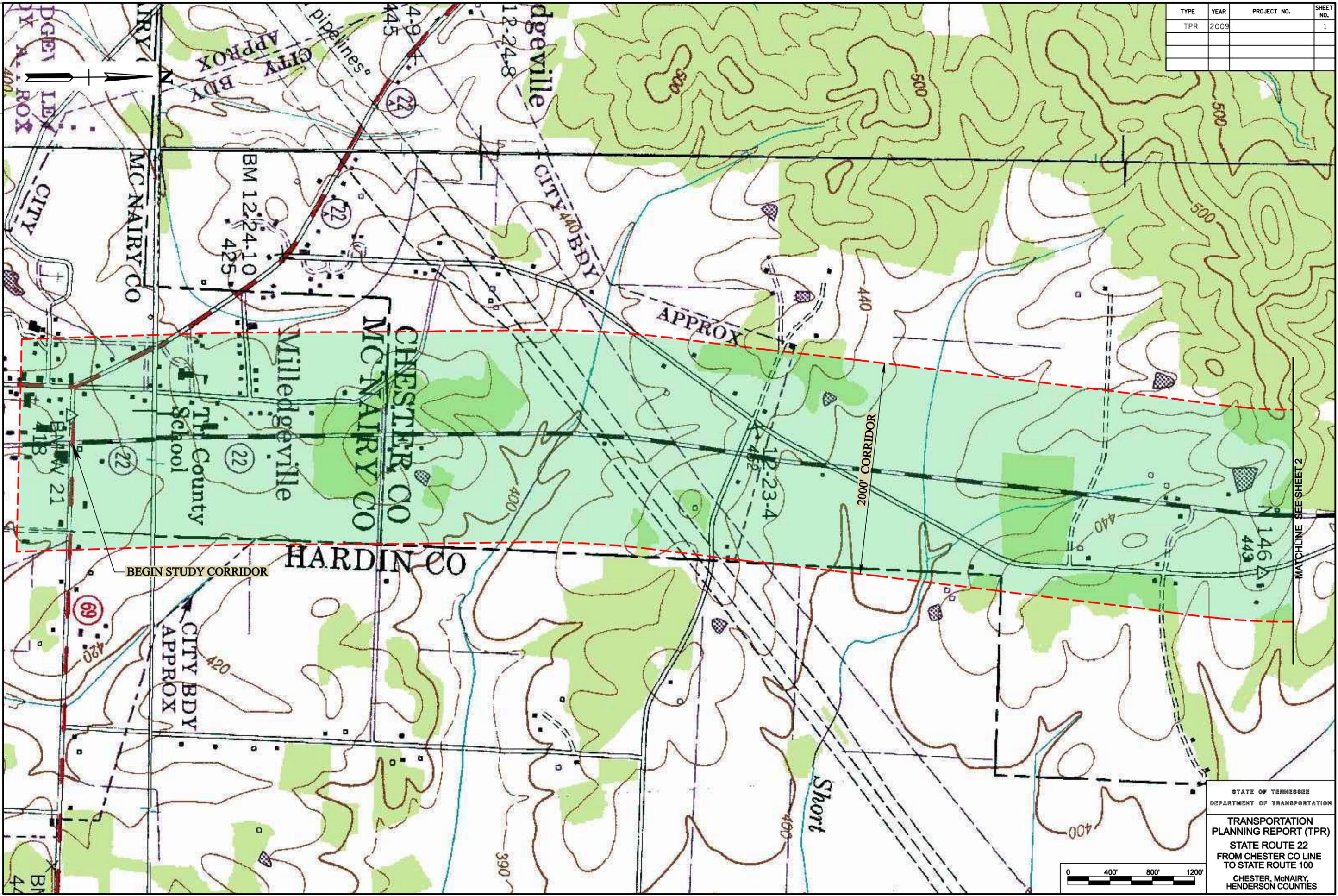


**LOCATION MAP
EXHIBIT 1.2**

DRAWN BY: CMB	CHECKED BY: TMC
PIN # 112893.00	
SCALE: 1" = 1 MILE	DATE: 09-15-09

TYPE	YEAR	PROJECT NO.	SHEET NO.
TPR	2009		1

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



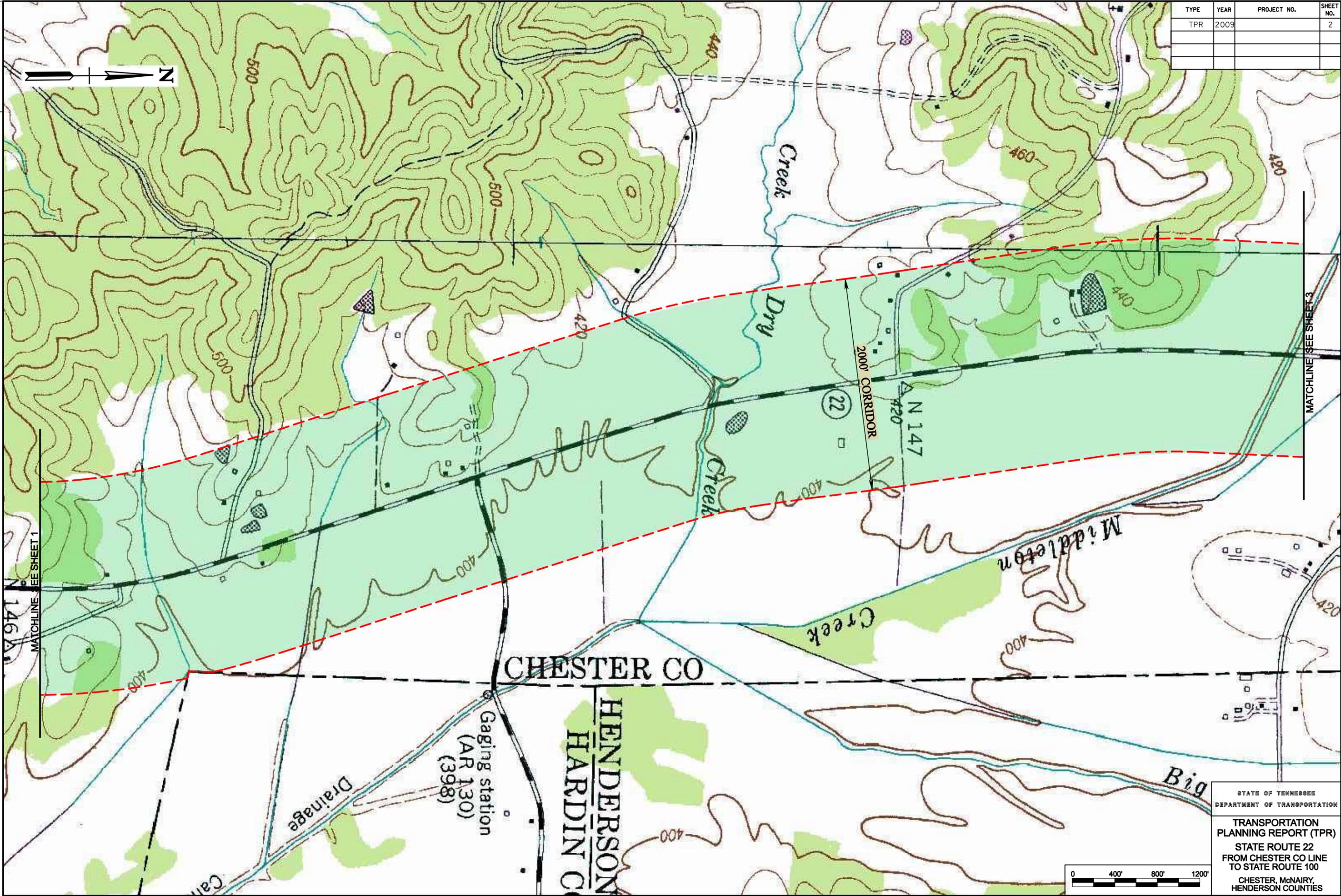
5/20/2010 10:29 PM \\s02\08050\DOT\PLANNING\Contr\08050_08_SR-22_TPR\DCN\0805008_QuadCorr\1dr\Shr101.sht

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
TRANSPORTATION
PLANNING REPORT (TPR)
STATE ROUTE 22
FROM CHESTER CO LINE
TO STATE ROUTE 100
CHESTER, MCNAIRY,
HENDERSON COUNTIES



MATCHLINE SEE SHEET 2

TYPE	YEAR	PROJECT NO.	SHEET NO.
TPR	2009		2

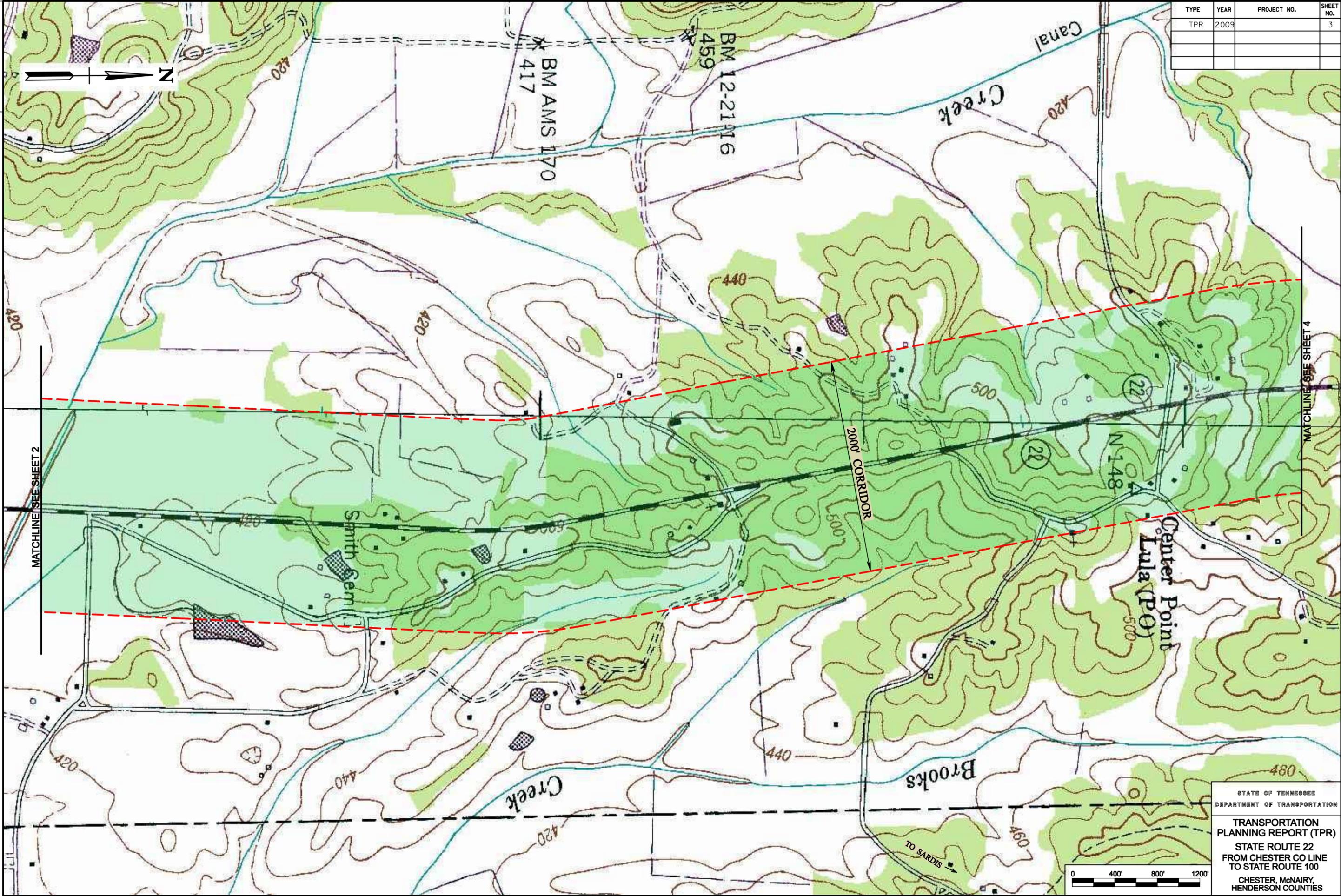


3/8/2010 11:37 PM
 P:\2008\08050_TDOT_PLANNING_Contract\08050_08_SR-22_TPR\DCN\0805008_QuadrCorr\1dcr-Sht102.SHT

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION
 PLANNING REPORT (TPR)
 STATE ROUTE 22
 FROM CHESTER CO LINE
 TO STATE ROUTE 100
 CHESTER, McNAIRY,
 HENDERSON COUNTIES



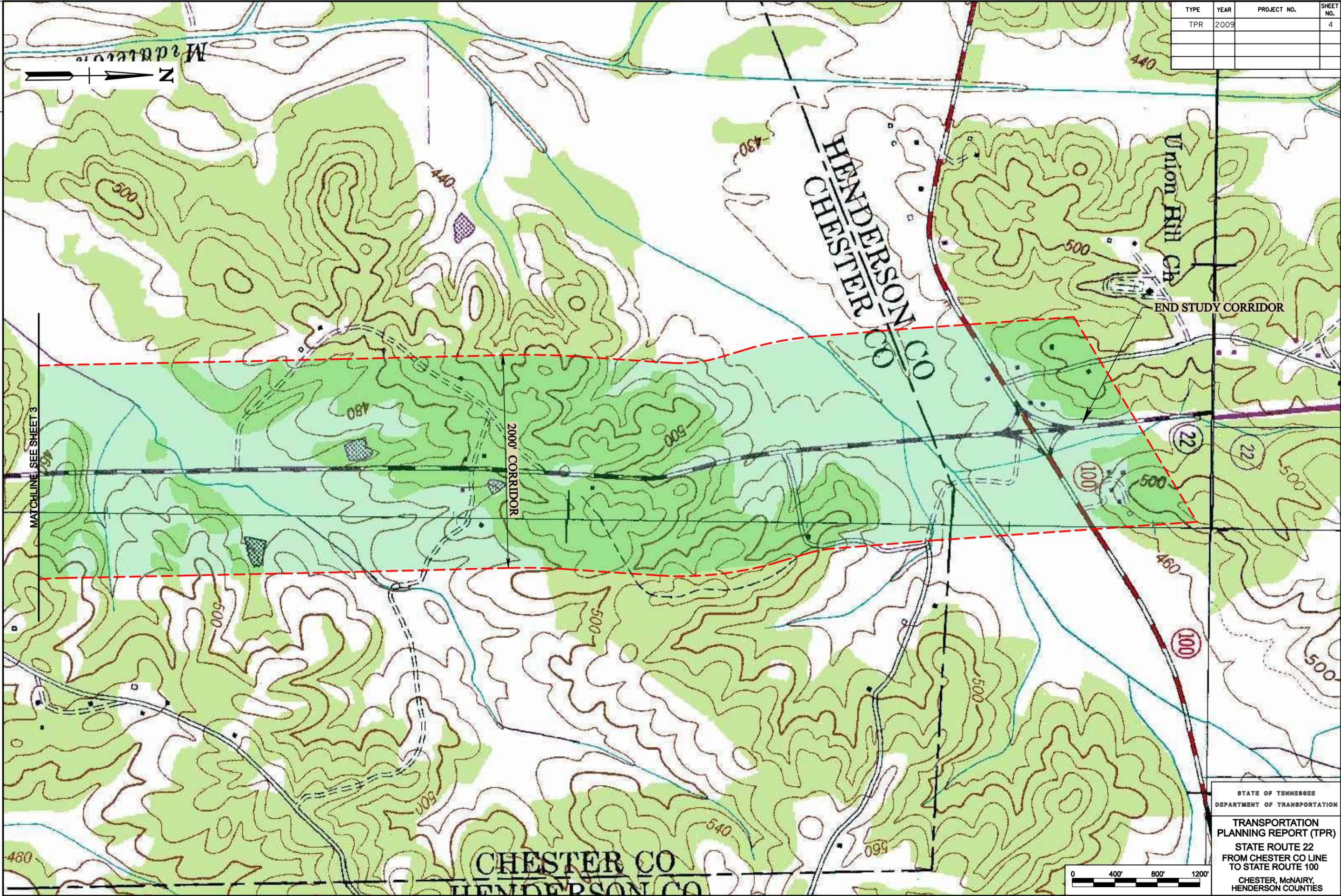
TYPE	YEAR	PROJECT NO.	SHEET NO.
TPR	2009		3



3/8/2010 10:54:40 PM
 P:\2008\08050_TDOT_PLANNING_Contract\08050_08_SR-22_TPR.DGN 0805008_QuadCorr\1dr-Shr103.SHT

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
**TRANSPORTATION
 PLANNING REPORT (TPR)**
 STATE ROUTE 22
 FROM CHESTER CO LINE
 TO STATE ROUTE 100
 CHESTER, McNAIRY,
 HENDERSON COUNTIES

TYPE	YEAR	PROJECT NO.	SHEET NO.
TPR	2009		4



3/8/2010 12:04:23 PM
 P:\2008\08050 TDOT PLANNING Contr\08050_08 SR-22 TPR\DCN\0805008_Quad\Corr\1dor\Shr04.SHT

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION
 PLANNING REPORT (TPR)
 STATE ROUTE 22
 FROM CHESTER CO LINE
 TO STATE ROUTE 100
 CHESTER, McNAIRY,
 HENDERSON COUNTIES

Table 1.2 – Population Trends

Year	Chester County			Henderson County		
	Pop.	Percent Change	Avg. Growth Rate	Pop.	Percent Change	Avg. Growth Rate
2000	15,540	--	--	25,522	--	--
2008	16,309	4.95%	0.61%	26,916	5.46%	0.67%
Year	McNairy County			State of Tennessee		
	Pop.	Percent Change	Avg. Growth Rate	Pop.	Percent Change	Avg. Growth Rate
2000	24,653	--	--	5,689,283	--	--
2008	25,724	4.34%	0.53%	6,214,888	9.24%	1.11%

Data Source: U.S. Census Bureau

During the 2000 Census, Chester County employment estimates were 7,615 available for employment with a 6.8% unemployment rate. Current estimates are not available for Chester County. During the 2000 census, Henderson County employment estimates were 12,264 available for employment with a 4.5% unemployment rate. The 2005-2007 American Community Survey shows Henderson County's unemployment rate to be approximately 11.8%. During the 2000 census, McNairy County employment estimates were 11,396 available for employment with a 5.2% unemployment rate. The 2005-2007 American Community Survey shows McNairy County's unemployment rate to be approximately 9.7%. The existing major industries within the area include Aqua Glass which is a bathtub and shower manufacturer.

1.4 Existing Transportation Conditions

Historic Traffic

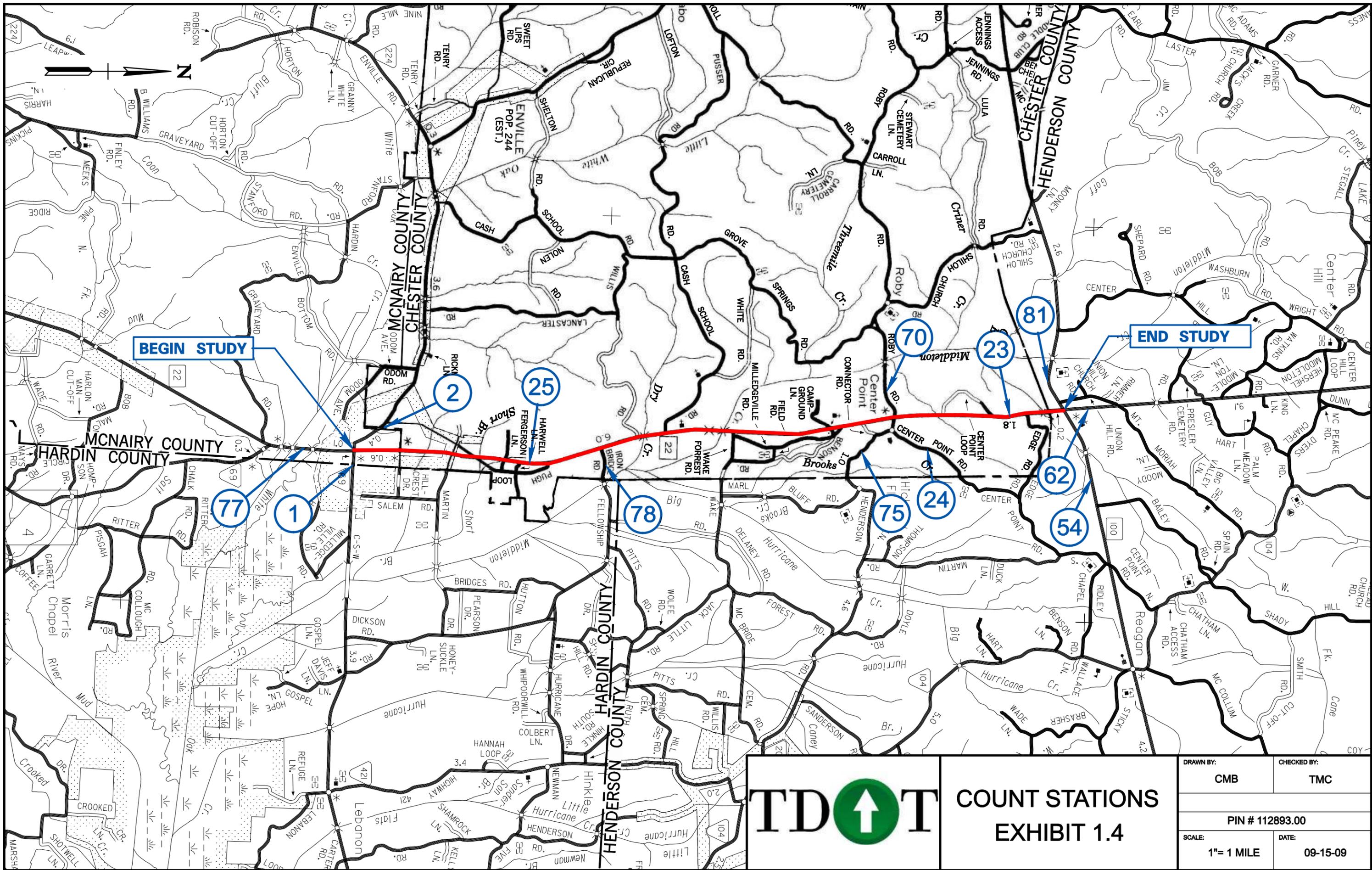
TDOT collects traffic data at numerous locations along the corridor on a continuing basis. Table 1.3 presents data for twelve (12) count stations located in the area of the corridor. A moderate growth rate can be seen for this area. The existing traffic volumes are relatively low and within an acceptable volume range for a two (2) lane facility, although the traffic volumes include up to 32% truck traffic. Figure 1.4 depicts the TDOT count stations maintained along the corridor.

Adjacent Corridor Sections

In order to provide consistency along State Route 22, it is necessary to evaluate the current roadway conditions on the adjacent segments of the route. The adjacent segment of S.R. 22 to the north of S.R. 100 has eleven (11) foot travel lanes and two (2) foot or less shoulders. The section of S.R. 22 to the south has twelve (12) foot travel lanes and ten (10) foot shoulders; as well as occasional passing lanes.

Table 1.3 – Historic Traffic Data

TDOT Sta.	County	Route	Location	2008 AADT	Annual Growth Rate
62	Henderson	S.R. 22	North of S.R. 100	4,233	2.81%
23	Chester	S.R. 22	South of S.R. 100	3,504	2.00%
25	Chester	S.R. 22	North of Milledgeville	2,797	2.83%
77	McNairy	S.R. 22	South of Milledgeville	4,944	2.61%
81	Henderson	S.R. 100	West of S.R. 22	1,829	2.76%
54	Henderson	S.R. 100	East of S.R. 22	3,717	1.72%
24	Chester	Center Point Rd.	East of S.R. 22	84	2.33%
75	Chester	S.R. 201	East of S.R. 22	169	8.00%
70	Chester	Roby Rd.	West of S.R. 22	148	2.27%
78	Chester	Iron Bridge Rd.	East of S.R. 22	142	-2.52%
1	McNairy	S.R. 69	East of Milledgeville	1,220	2.14%
2	McNairy	S.R. 22A	West of Milledgeville	1,234	-0.31%



BEGIN STUDY

END STUDY



**COUNT STATIONS
EXHIBIT 1.4**

DRAWN BY: CMB	CHECKED BY: TMC
PIN # 112893.00	
SCALE: 1" = 1 MILE	DATE: 09-15-09

1.5 Review of Existing Corridor Conditions

The study corridor primarily consists of a relatively flat, straight roadway with the exception of one significant crest hill from L.M. 5.2 to L.M. 6.0 which is shown in Exhibit 1.5. The roadway section of S.R. 22 is consistent throughout the study limits with two (2) eleven (11) foot travel lanes and two (2) foot or less shoulders. Both of the terminal intersections of the study corridor are all-way stop-controlled, although the intersection of S.R. 100 and S.R. 22 has a non-typical geometric layout that requires left-turning traffic to cross left prior to the intersection which could cause confusion to unfamiliar drivers. Pugh Loop and Milledgeville Road both intersect S.R. 22 at acute angles. The majority of the side roads intersecting S.R. 22 are tar-and-chip or gravel roadway bases. The study segment of S.R. 22 was last paved in 2004 according to information provided by the TDOT Region 4 office.

Exhibit 1.5 – Area of Significant Vertical Grade



1.6 Safety (Crash and Geometrics)

A total of seventeen (17) crashes have occurred within the study corridor limits from 2005 through 2007, with no groupings of more than three (3) crashes at any one location. One (1) of the crashes had multiple fatalities involved. Ten (10) of the crashes occurred during daylight hours, while the remaining seven (7) occurred at dusk or nighttime. Four (4) of the crashes involved wet or snow covered pavement conditions. The crash rate along the study segment of S.R. 22 was 0.670 compared to the statewide average crash rate of 2.607. The critical rate along the segment was 3.373.

1.7 Utility Infrastructure

Overhead utilities parallel the length of S.R. 22 as well as underground fiber-optic cable and natural gas lines. Additionally, there are significant natural gas distribution pipelines that cross S.R. 22 at approximately L.M. 0.4. The distribution pipelines are shown in Exhibit 1.6.

Exhibit 1.6 – Natural Gas Distribution Pipelines



1.8 Structures / Bridges

There are four (4) drainage structures classified as bridges and an additional six (6) culverts. Three of the four bridges have a length of 86 feet. The fourth bridge at L.M. 7.78 crosses Middleton Creek with a total bridge length of 213.9 feet. All of the bridges within the corridor study were constructed in 1958. Table 1.4 details each of the bridges while Figures 1.5 through 1.8 shows photos of the existing bridges.

Table 1.4 – Bridge Details

Bridge ID Number	Route	Log Mile	Number of Spans	Bridge Length	Sufficiency Rating
12SR0220001	SR-22	2.87	3	86'	58.4
12SR0220003	SR-22	3.70	3	86'	57.2
12SR0220005	SR-22	3.91	7	214'	58.4
12SR0220007	SR-22	7.78	3	86'	56.3

Exhibit 1.7 – Bridge at Log Mile 2.87



Exhibit 1.8 – Bridge at Log Mile 3.70



Exhibit 1.9 – Bridge at Log Mile 3.91



Exhibit 1.10 – Bridge at Log Mile 7.78



1.9 Early Environmental Screening (EES)

In preparation of Transportation Planning Reports (TPR), the Tennessee Department of Transportation (TDOT) has introduced an early environmental screening (EES) process for the project study area. By screening the latest available environmental data during the early stages of project planning, TDOT and the resource and permitting agencies will be better prepared to anticipate potential environmental issues and mitigation requirements. The environmental data reviewed in this TPR include the following layers:

- Archaeological/Historic Architecture – Historic properties and cemetery sites;
- Community Impacts – Sensitive community populations
- Ecology – Scenic waterways, natural areas, large wetlands, protected species;
- Hazardous Substances/Geology – Hazardous substance sites, pyritic rock/geotechnical, caves; and,
- Parks & Public Land – parks (federal/state/local), public lands/buildings, railroads, wildlife management areas.

Preliminary Archeological/Historic Architecture

Historic Properties & Structures – No project impact is anticipated as there are no National Register listed properties abutting or within the project study area or corridor.

Cemetery-Archaeological Sites – No impact on the project as there are no known cemetery sites within or abutting the project study area or corridor. It is anticipated that a ‘normal’ effort to complete this environmental review will occur during the NEPA process.

Preliminary Community Impact

Sensitive Populations – Impacts to sensitive community populations have been identified within the study area. Preliminary maps reveal a population that is approximately 13% below the state poverty level as well as linguistically isolated populations. Consideration of these factors should be taken during the NEPA process.

Preliminary Ecology

Scenic Waterways – No project impact is expected as there are no scenic waterways or TDEC conservation sites within the project study area or corridor.

Large Wetlands Impacts – A substantial impact to the project is probable as there is greater than five (5) acres of wetlands within the project study area or corridor. Compensatory mitigation will be required. Design effort will be needed to avoid and minimize impacts to wetlands to the maximum extent practicable. If a floodplain is crossed by the project, floodplain culverts may be necessary.

Bats, Rare, and Federally Protected Species – No project impact is anticipated. There is no occurrence of Indiana or gray bats within four (4) miles of the proposed project study area or corridor. There is no known occurrence of a rare, state, or federally-protected terrestrial species within the proposed transportation study area or corridor.

Aquatic Species, Rare and Federally Protected Species – No impact to the project is anticipated. There is no known occurrence of a rare, state, or federally-protected aquatic species within the project study area or corridor.

Preliminary Hazardous Substances/Geology

Pyritic Rock/Geotechnical – No project impact is anticipated. Pyritic rock is not known to occur in the study area/corridor or project does not involve excavation. Limestone and dolomite are present.

Caves – No project impact is anticipated as there are no caves in the project study area or corridor.

Preliminary Hazardous Materials and Hazardous Substance Sites – No project impact is anticipated as there are no known contaminated land tracts abutting or within the project study area or corridor.

Preliminary Parks, Public Lands, and Railroads

Tennessee Natural Areas Programs – No impact on the project is anticipated as the project study area or corridor does not include a Natural Area.

Tennessee Wildlife Management Area (WMA) – No project impact is anticipated as a WMA does not abut nor is located within the project study area or corridor.

Parks – No impact on the project is anticipated as there are no parks located within or abutting the project study area or corridor.

Railroads – No impact on the project is anticipated. There are no railroads located within the project study area or corridor.

A complete listing of EES data is contained in Appendix A of this study.

2.0 PRELIMINARY PURPOSE AND NEED

The purpose of the proposed improvements for the study corridor is to provide a transportation facility that enhances mobility within the region, supports economic development, improves safety, better provides for alternative modes of travel, and relieves potential traffic congestion that may emerge from increasing development.

The State Route 22 corridor, including this segment, is a primary north-south route for McNairy, Chester, and Henderson Counties. This route accesses employment opportunities and serves as a connector to the I-40 corridor to the north in Henderson County and connects into Mississippi to the south.

A review of the corridor indicates that along the entirety of the study segment the shoulder width does not meet current design standards. Additionally, the high percentage of trucks makes passing difficult along the existing two (2) lane highway.

Although projected traffic volumes within the design year planning horizon do not support additional through travel lanes to increase capacity; an improved two (2) lane roadway section with full width shoulders and/or spot improvements such as the addition of passing lanes would improve localized operations as well as safety.

Based on the findings of this study in conjunction with the field review with local stakeholders, the goals and objectives of an improved State Route 22 facility include:

- Improved side road intersection geometric deficiencies
- Promote safer operations
- Support economic development within the region
- Improved facility for alternative modes of transportation

3.0 OPTIONS ANALYZED

3.1 Route Option Discussion

This report examines the consideration for a no-build option, a localized transportation safety and spot improvement option, as well as a cross-sectional improvement throughout the length of the study corridor. These options are introduced below and discussed throughout the remainder of this report.

Option 1: No-Build

This option assumes no modifications or improvements will be made over the planning horizon to add capacity. Routine maintenance related activities as well as scheduled resurfacing, signing, and possible safety projects may occur. This option does not support the project's stated purpose and need for providing a transportation facility to enhance mobility, support economic development, and improve safety.

Option 2: Localized Improvements

Seven (7) potential location improvements can be implemented independently or in combination as an overall improvement strategy along the corridor as discussed further under Section 3.5 Option 2: Localized Improvements portion of this document and detailed at the end of this report under Optional Location Plans. Each of the localized improvements contributes to collectively meet the purpose and need objectives for an improved State Route 22 facility.

Option 3: Improved Two (2) Lane Facility

The existing two (2) lane facility has eleven (11) foot travel lanes and two (2) or less shoulders. With the significant truck traffic traveling along the route as well as recurring side road intersections, improving the two (2) lane facility to provide ten (10) foot shoulders and passing lane locations would improve safety and mobility along the route. Additionally, the improved roadway section would provide a safer means of travel for bicyclists.

3.2 Cross-Section Discussion

Capacity analysis for the design years indicated that suitable capacity exists for a two (2) lane facility and additional through lanes are not required to accommodate future forecasted traffic conditions. An improved two (2) lane facility could significantly improve operations and safety along the route.

A typical passing lane cross-section proposed for use in some locations of the proposed localized improvements of Option 2 as well as for Option 3 is shown in Exhibit 3.1. An improved two (2) lane typical section as proposed for Option 3 is shown in Exhibit 3.2. The addition of curb and gutter and/or sidewalks is not necessary due to the rural nature of the route, sparse building density, and lack of walkable destinations along the route.

Exhibit 3.1 – Passing Lane Typical Section (Options 2 and 3)

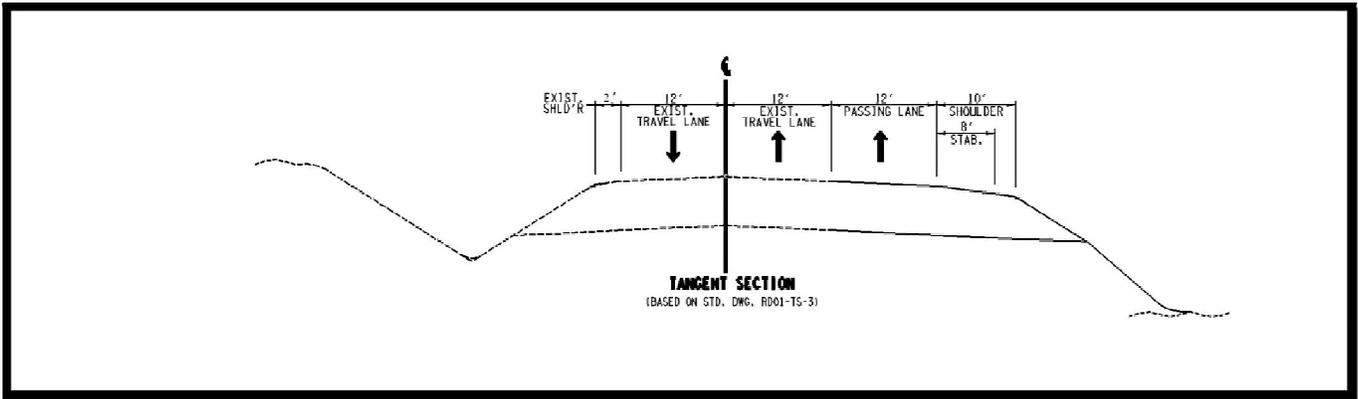
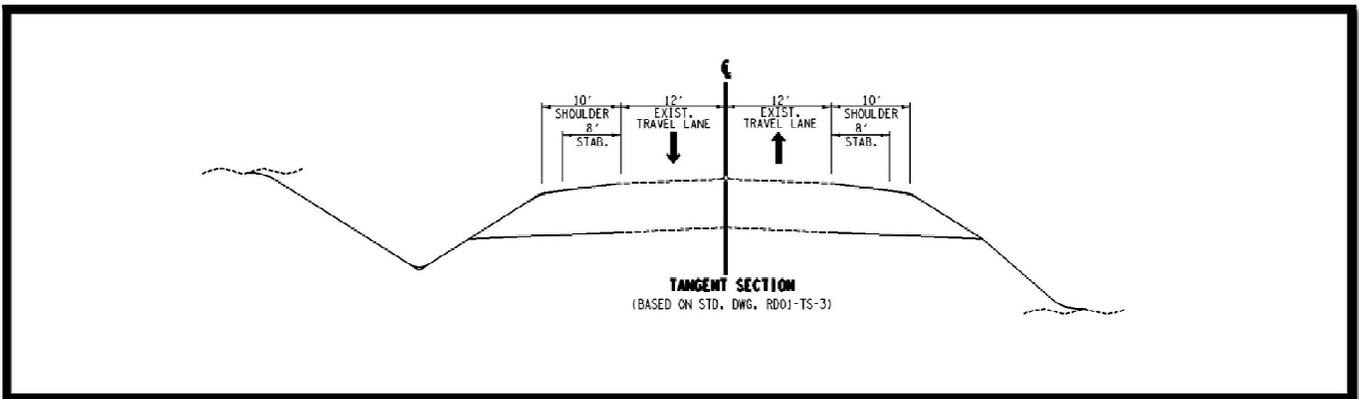


Exhibit 3.2 – Improved Two-Lane Typical Section (Option 3)



3.3 Measures of Effectiveness (MOE) Discussion

Congestion Reduction

Currently, congestion is minimal along the corridor. Travel speeds generally approach free flow speeds and are typically only reduced when traveling behind slower moving vehicles.

Level of Service

The concept of Level of Service (LOS) uses quantitative values such as speed, travel time, density, delay, and percent time spent following another vehicle to reflect the quality of service along a particular facility. Based on the two (2) lane highways section of the Highway Capacity Manual (HCM); both the average travel speed and the percent time spent following another vehicle affect the LOS experience by travelers along the facility. The section of S.R. 22 within this study would be classified as a Class I two (2) lane highway, due to the motorist expectations to travel at relatively high speeds and the facility's use in serving long distance trips. Table 3.1 describes the quality of service experienced for each LOS based on the two (2) lane highways section of the HCM. Table 3.2 shows the quantitative values for determining the LOS.

Table 3.1 – Level of Service (LOS) Description for Two-Lane Highways

LOS	Level of Service Description - Two Lane Highways
A	Highest quality of service. Motorists are able to travel at their desired speed. Without strict enforcement, this highest quality would result in averages speeds of 55 mph or more on two-lane Class I highways. The passing frequency required to maintain these speeds has not reached a demanding level, so that passing demand is well below passing capacity, and platoons of three or more vehicles are rare. Drivers are delayed no more than 35% of their travel time by slow-moving vehicles.
B	Characterized by traffic flows with speeds of 50 mph or higher on level-terrain Class I highways. The demand for passing becomes significant and approximates the passing capacity at the lower boundary of LOS B. Drivers are delayed in platoons up to 50% of the time. Conditions below a LOS of B result in dramatically increased numbers of platoons.
C	Results in noticeable increases in platoon formation, platoon size, and frequency of passing impediments. The average speed still exceeds 45 mph on level-terrain Class I highways, even the demand for passing exceeds the passing capacity. Although traffic flow is stable, it is susceptible to congestion due to turning traffic and slow-moving vehicles. Percent time spend following may reach 65%.
D	Unstable traffic flow. The two opposing traffic streams begin to operate separately, as passing becomes extremely difficult. Passing demand is high, but passing capacity approaches zero. Average platoon sizes of 5 to 10 vehicles are common, although speeds of 40 mph can still be maintained. The proportion of no-passing zones along the roadway has little influence on passing. Turning vehicles and roadside distractions cause major shock waves in the traffic stream. Motorist are delayed in platoons for nearly 80% of their travel time.
E	Even under base conditions, speeds may drop below 40 mph with speeds as low as 25 mph on sustained upgrades. Passing is virtually impossible and platooning becomes intense as slower vehicles or other interruptions are encountered.
F	Heavily congested flow with traffic demand exceeding capacity and highly variable speeds.

Information Source: Highway Capacity Manual (2000), Transportation Research Board

Table 3.2 – Level of Service (LOS) Criteria for Two-Lane Highways

LOS	Percent Time Spent Following	Average Travel Speed (mph)
A	≤35	>55
B	>35-50	>50-55
C	>50-65	>45-50
D	>65-80	>40-45
E	>80	≤40

Information Source: Highway Capacity Manual (2000), Transportation Research Board

TDOT AADT count data, TRIMS geometric data, and TRIMS design hour volume percentages were used in analyzing the various segments along State Route 22 within the corridor study boundaries. Table 3.3 presents the analysis results of the existing two (2) lane highway facility.

Table 3.3 – Two-Lane Highway Analysis Summary (Existing)

Two-Lane Highway (Class I) Analysis Summary					
Segment ID	Analysis Year	Average Travel Speed (mph)	Percent Time Spent Following	Volume / Capacity	LOS
SR 22 - SR 100 to Roby Rd.	2014	43.7	55.0%	0.18	D
	2034	42.2	62.0%	0.27	D
SR 22 - Roby Rd. to SR 69	2014	44.8	54.8%	0.16	D
	2034	42.5	59.7%	0.28	D

NOTE: THIS TABLE SUMMARIZES A TWO-WAY ANALYSIS OF THE CORRIDOR

Table 3.4 – Two-Lane Highway Analysis Summary (Proposed)

Two-Lane Highway (Class I) Analysis Summary					
Segment ID	Analysis Year	Average Travel Speed (mph)	Percent Time Spent Following	Volume / Capacity	LOS
SR 22 - SR 100 to Roby Rd.	2014	47.0	53.7%	0.17	C
	2034	45.7	61.3%	0.25	C
SR 22 - Roby Rd. to SR 69	2014	48.2	52.1%	0.14	C
	2034	46.1	58.6%	0.25	C

NOTE: THIS TABLE SUMMARIZES A TWO-WAY ANALYSIS OF THE CORRIDOR

3.4 Modal Inter-relationships

Public transportation is available in some areas of Chester and Henderson Counties via the Southwest Human Resource Agency. Improvements to the State Route 22 corridor would improve transit operations by providing a safer facility with reduced congestion at spot locations. State Route 22 is not currently listed as an existing or proposed state bicycle route on the Tennessee Long-Range Transportation Plan. Option 3 would provide shoulders which would improve conditions for bicyclist and pedestrians.

3.5 Option 2: Localized Improvements

The following options are presented and can be completed independently or in combination to provide an improved facility. With most of the study corridor being relatively straight with rolling terrain, vertical and horizontal sight distances along the route are adequate, with no grades meeting the criteria for the addition of truck climbing lanes. However, after field inspection and discussion with the various stakeholders, the incorporation of passing lanes at various locations was included as optional enhancements due to the inability for vehicles to safely pass slow moving traffic on the existing two (2) lane facility. Two passing lane location options are presented in subsequent sections of this study.

In addition, the modification of multiple intersections along State Route 22 is presented. The following options are presented from the south to the north.

3.5.1 Option 2: Location A – S.R. 22 at North Road and Pugh Loop

The intersection of North Road and Pugh Loop with State Route 22 at L.M. 0.79 has two side road approaches intersecting State Route 22 at extreme acute angles. Exhibit 3.3 is a photo showing the intersection location and residences located at the intersection. The angle of intersection is the primary need for a localized improvement strategy at this location. The need for an additional drive is anticipated to provide access to the residence on the left in photo. The proposed localized improvements at this location consist of realigning the intersecting side roads in order to provide a ninety (90) degree angle of intersection to facilitate turning movements and improve side road sight distance as shown in Exhibit 3.4. The improvements will also include scarification of the existing side road pavement, construction of a cul-de-sac for property access, and 0.3 acres of right-of-way acquisition. The estimated cost of improvements at location A is \$96,000.

Exhibit 3.3 –S.R. 22 at North Road and Pugh Loop



Exhibit 3.4 – Concept Plan Option 2: Location A



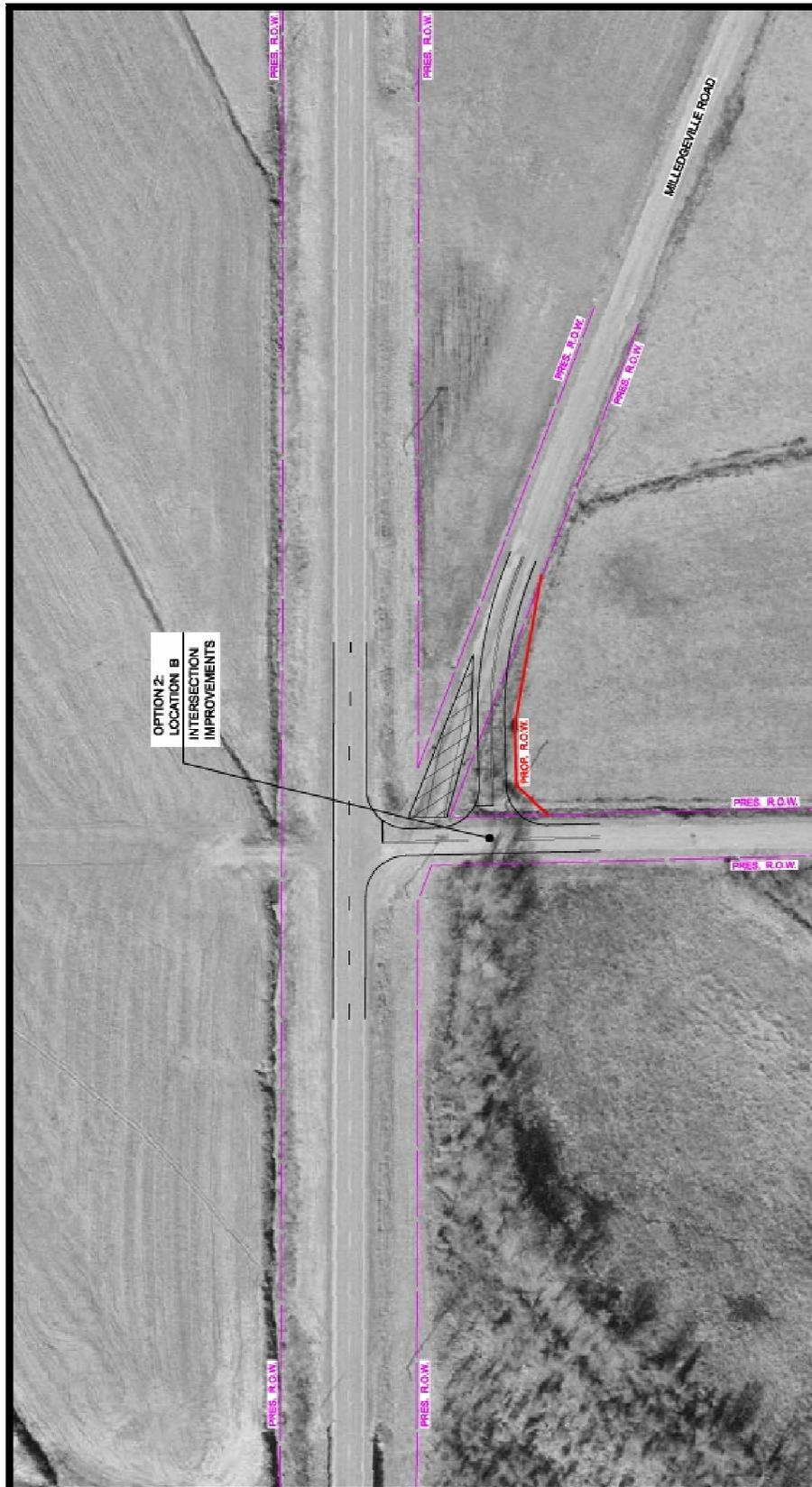
3.5.2 Option 2: Location B –Wake Forrest Rd. at Milledgeville Rd.

The intersection location of Wake Forrest Road and Milledgeville Road at L.M. 4.02 is of concern due to the geometric layout of the existing intersection. As shown in Exhibit 3.5, the intersection of Milledgeville Road into Wake Forrest Road could be mistaken as a direct intersection with State Route 22. One (1) injury crash during the years of 2005 through 2007 occurred at this location. The proximity of the side road intersection to State Route 22 is the primary concern at this location resulting in the realignment of the intersection as shown in Exhibit 3.6. The improvements will include the realignment of the Milledgeville Rd., scarification of the existing pavement, and acquisition of 0.09 acres of right-of-way. The estimated cost of improvements at location B is \$39,000.

Exhibit 3.5 – S.R. 22 at Wake Forrest Rd. and Milledgeville Rd.



Exhibit 3.6 – Concept Plan Option 2: Location B



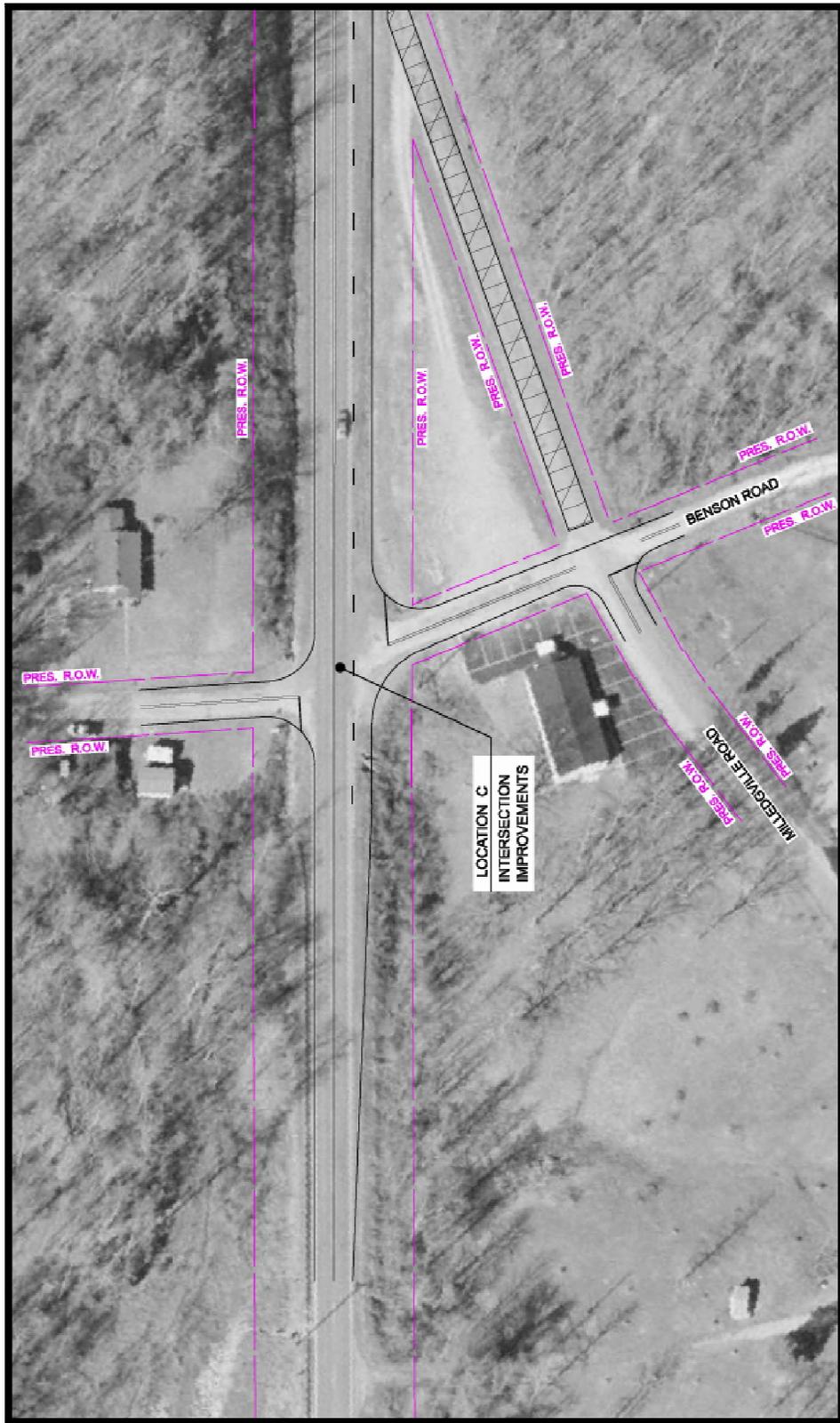
3.5.3 Option 2: Location C – S.R. 22 at Benson Road

The area associated with the intersection of Benson Road and State Route 22 at L.M. 5.15 has two existing side road intersection locations within a few hundred feet of each other. Located adjacent to the intersection is the Jesus Name Centerpoint Holiness Church as well as a Pentecostal Youth Center located west of State Route 22 on Campground Lane. The existing intersection configuration is not well defined and has narrow roadway intersection widths as well as minimal turning radii. Both the near and far side road accesses of Benson Road are shown in Exhibit 3.7. The proposed localized improvements are shown in Exhibit 3.8. The improvements include the widening of the Benson Rd approaches and scarification of the Milledgeville Rd. acute angle approach. No right-of-way is anticipated for these improvements. The estimated cost of improvements at location C is \$33,000.

Exhibit 3.7 – S.R. 22 at Benson Road



Exhibit 3.8 – Concept Plan Option 2: Location C



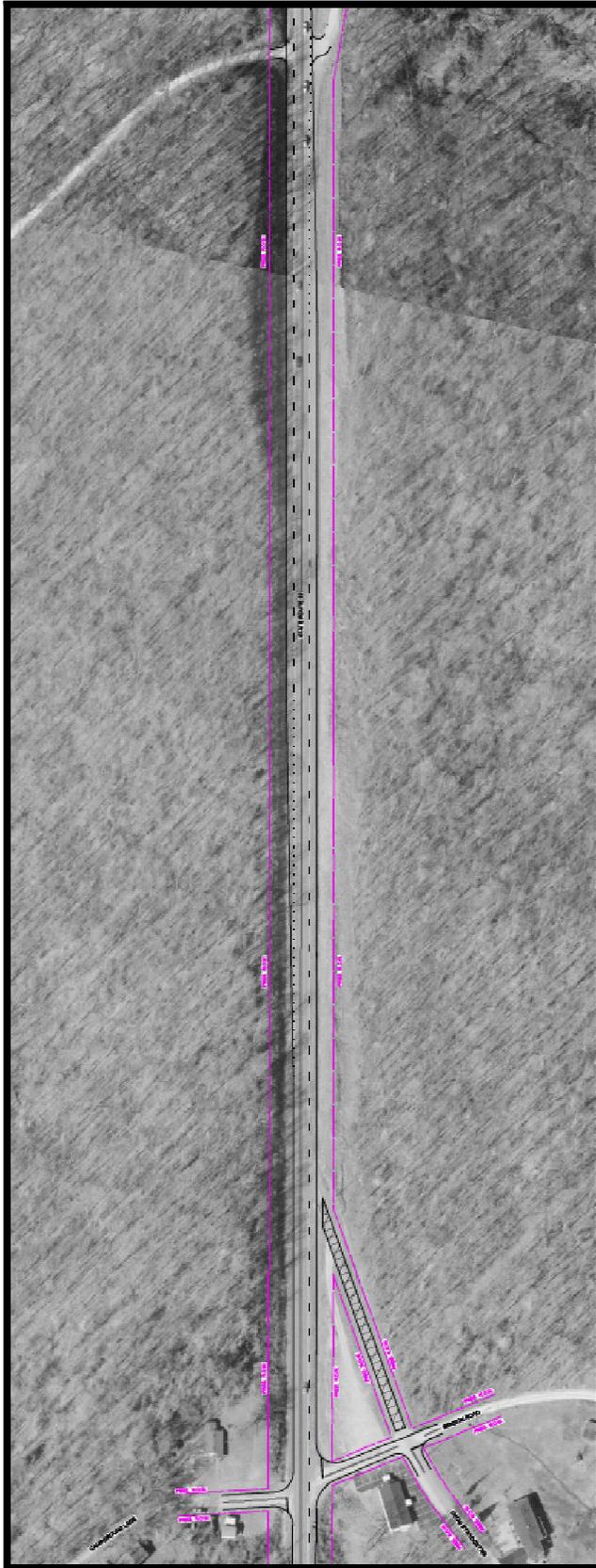
3.5.4 Option 2: Location D – S.R. 22 Northbound Passing Lane (L.M. 5.11 - L.M. 5.47)

Although the projected traffic volumes along State Route 22 are well below the capacity of the roadway, an undesirable level-of-service is experienced because the daily traffic volumes consist of up to 32% truck traffic. Vehicles spend a large percentage of their travel time following a slower vehicle. This results in drivers performing unsafe passing maneuvers along the two (2) lane roadway. The implementation of a passing lane on State Route 22 may provide significant safety benefits. The proposed local improvement passing lane as shown in Exhibit 3.10 would provide a safe location for the passing of slower moving vehicles. Exhibit 3.9 shows an existing photo of the proposed passing lane location. No right-of-way is anticipated for these improvements. The estimated cost of improvements at location D is \$466,000.

Exhibit 3.9 – S.R. 22 View Northbound at L.M. 5.13



Exhibit 3.10 – Concept Plan Option 2: Location D



3.5.5 Option 2: Location E – S.R. 22 Southbound Passing Lane (L.M. 5.86 - L.M. 5.36)

Similarly to the proposed local improvements at location D, a passing lane in the southbound direction would provide a safe location for overtaking slower moving vehicles. According to the Policy on Geometric Design of Highways and Streets, a passing lane of 0.3 miles or greater can significantly improve traffic operations along a two (2) lane facility. Exhibit 3.11 shows an existing photo of the proposed southbound passing lane location. The proposed passing lane improvement is shown in Exhibit 3.12. No right-of-way is anticipated for these improvements. The estimated cost of improvements at location E is \$612,000.

Exhibit 3.11 – S.R. 22 View Northbound at L.M. 5.49



Exhibit 3.12 – Concept Plan Option 2: Location E



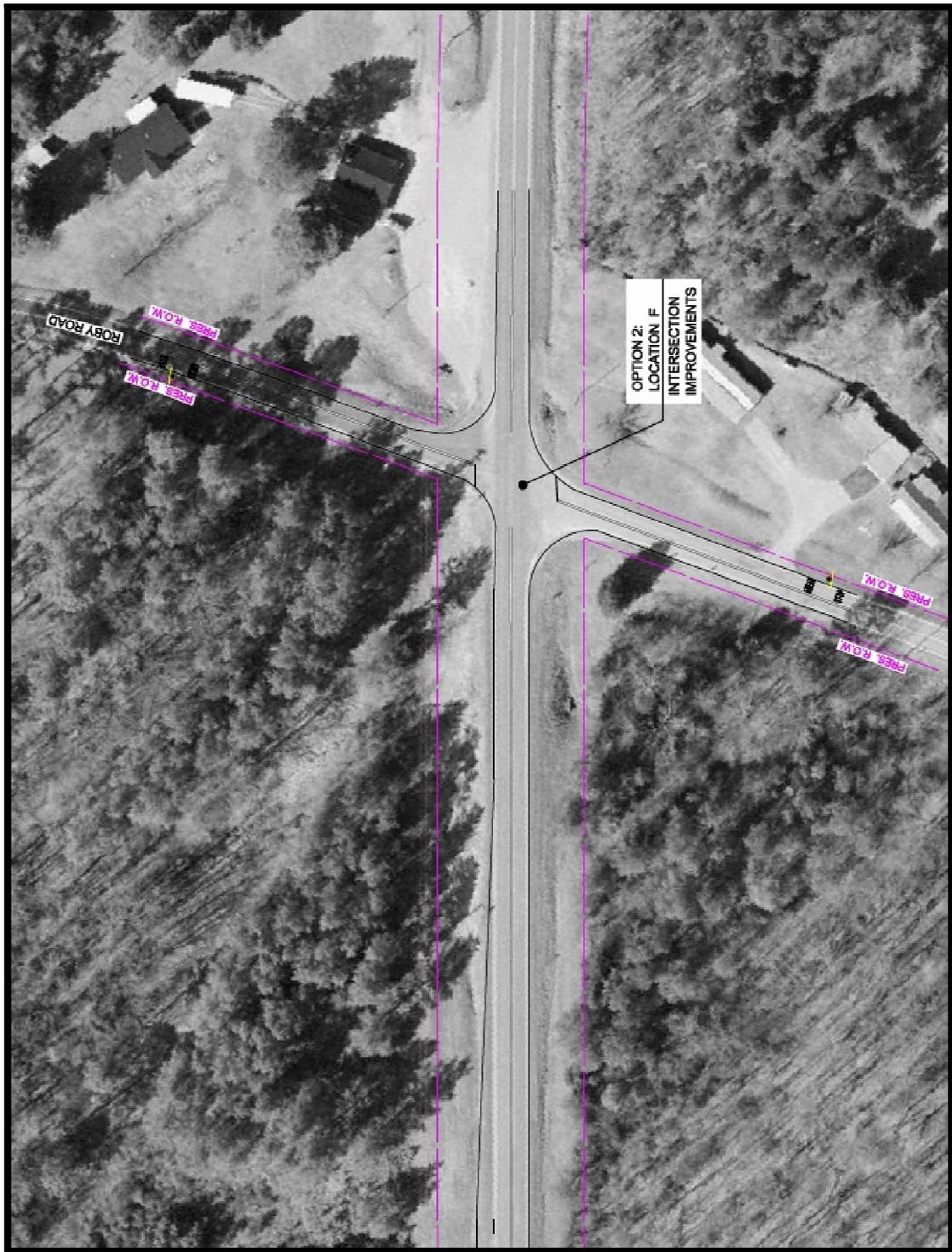
3.5.6 Option 2: Location F – S.R. 22 at S.R. 201

The intersection of State Route 22 and State Route 201 at L.M. 5.96 is recommended as a proposed localized improvement due to a crash resulting in multiple fatalities at this location. The intersection has acceptable sight distances and design standards as seen in Exhibit 3.13. The proposed localized improvements include the addition of advanced warning signs and pavement markings to ensure drivers along State Route 201 are aware of the upcoming stop condition as shown in Exhibit 3.14. The estimated cost of improvements at location F is \$12,000.

Exhibit 3.13 – S.R. 22 at S.R. 201



Exhibit 3.14 – Concept Plan Option 2: Location F



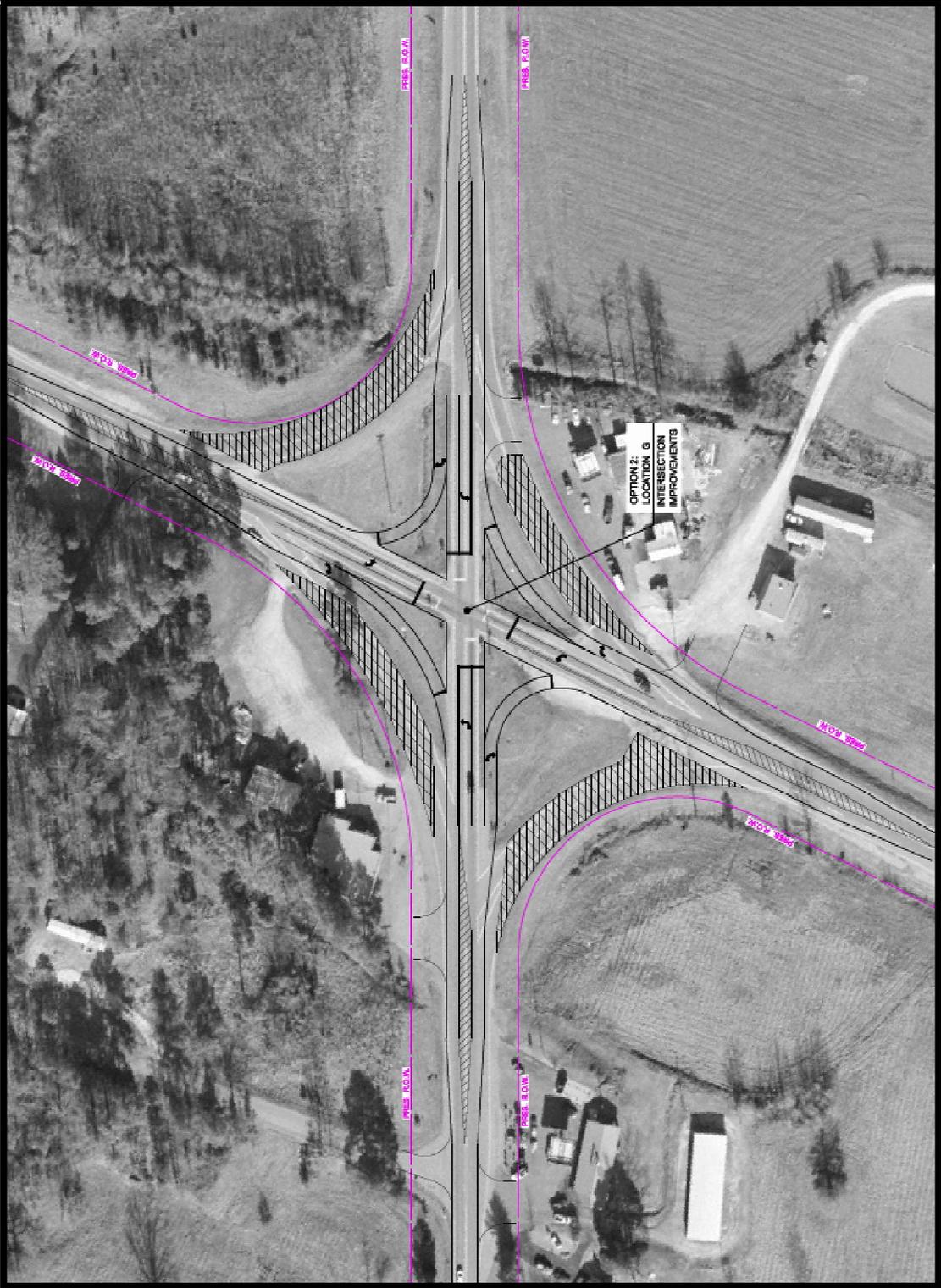
3.5.7 Option 2: Location G – S.R. 22 at S.R. 100

The intersection of State Route 22 at State Route 100 is located at the end of the study corridor and has the highest traffic volumes of any location within the study area. The intersection operates at an acceptable level-of-service for the projected volumes, but the operation and layout of the intersection is unconventional. Unfamiliar drivers may have difficulty navigating through the complex intersection. Currently the intersection has eight (8) stop-controlled approach locations and four (4) yield-controlled right-turn approaches. In the 2005 through 2007 crash data, three (3) crashes occurred at the intersection with one (1) involving a school bus. The school bus crash was a direct result of incorrect navigation of the confusing intersection. Additionally, two commercial properties on the southeast quadrant of the intersection do not have direct access from all traffic stream approaches. Exhibit 3.15 shows a photo of the existing intersection. The proposed localized improvement is shown in Exhibit 3.16. The improvements include the reconfiguration of the intersection into a four (4) way stop each with one (1) left turn bay, one (1) thru lane, and one (1) channelized right turn with yield control. Additionally, the improvement will include the scarification of the existing pavement. No right-of-way is anticipated for these improvements. The estimated cost of improvements at location F is \$602,000.

Exhibit 3.15 – S.R. 22 at S.R. 100



Exhibit 3.16 – Concept Plan Option 2: Location G



3.6 Cost Estimates

Cost estimates are provided for the corridor across a range of options. The costs are summarized in the Summary Data Tables and Itemized Cost Estimates are provided in this report. The estimated cost of each of the options discussed in presented in Table 3.5.

Table 3.5 – Cost Summary Table

OPTION	ROW	UTILITY	CONSTRUCTION	PE / INFLATION	TOTAL
Option 1: No-Build	\$0	\$0	\$0	\$0	\$0
Option 2: Location A	\$11,000	\$10,000	\$66,000	\$9,000	\$96,000
Option 2: Location B	\$5,000	\$5,000	\$26,000	\$3,000	\$39,000
Option 2: Location C	\$0	\$0	\$29,000	\$4,000	\$33,000
Option 2: Location D	\$0	\$94,000	\$328,000	\$44,000	\$466,000
Option 2: Location E	\$0	\$110,000	\$444,000	\$58,000	\$612,000
Option 2: Location F	\$0	\$0	\$11,000	\$1,000	\$12,000
Option 2: Location G	\$0	\$0	\$535,000	\$67,000	\$602,000
Option 2 Totals	\$16,000	\$219,000	\$1,439,000	\$186,000	\$1,860,000
Option 3: Improved 2-Lane Roadway	\$0	\$1,455,000	\$10,911,000	\$4,683,000	\$17,049,000

3.7 Recommended Priority of Improvements

The following highlights the recommended prioritization of recommended localized improvements (Option 2) as well as the recommendation for an improved two (2) lane roadway section based on the study findings.

HIGHER
PRIORITY

- **Option 2: Location F – S.R. 22 at S.R. 201:**
Due to the low cost, ease of implementation, and the time required, the proposed localized improvements at location F are of high priority taking into account the multiple fatalities at this location. The option estimate is \$12,000.
- **Option 2: Location E – S.R. 22 Southbound Passing Lane:**
These improvements will improve traffic operations and the experienced level-of-service by travelers along the route. By providing a safe location for the passing of slower vehicles, a decrease in head-on collisions during passing maneuvers would be expected. The option estimate is \$612,000.
- **Option 2: Location D – S.R. 22 Northbound Passing Lane:**
These improvements will improve traffic operations and the experienced level-of-service by travelers along the route. By providing a safe location for the passing of slower vehicles, a decrease in head-on collisions during passing maneuvers would be expected. The option estimate is \$466,000.
- **Option 2: Location A – S.R. 22 at North Road and Pugh Loop:**
This side road intersection has the most severe of intersection angles of all side roads along the study segment. The realignment of the side roads is seen as a necessary safety improvement. The option estimate is \$96,000.
- **Option 2: Location B –Wake Forrest Rd. at Milledgeville Rd.:**
Although the intersection is not directly on S.R. 22, the close proximity of the parallel side road has resulted in a rollover crash. The existing configuration may mislead drivers to maneuver through the intersection at travel speeds much too high. The option estimate is \$39,000.
- **Option 2: Location G – S.R. 22 at S.R. 100:**
Although this primary intersection has an unusual layout which may lead to driver confusion, the operations of the intersection appear to be sufficient through the planning horizon. Because of the existing stop-controlled conditions, none of the crashes at this location were of a serious nature due to the low travel speeds at the intersection. This improvement is needed, but not immediately urgent for public safety. The option estimate is \$602,000.
- **Option 2: Location C – S.R. 22 at Benson Road:**
This intersection location, although not well defined, has sufficient sight distances and was not one of the crash incident locations. However, due to the close involvement with the proposed improvements of location D, coordinated implementation may be beneficial. The option estimate is \$33,000.
- **Option 3: Improved Two-Lane Facility**
The improvement of the roadway section throughout the length of the study corridor would provide increased safety along the route as well as provide a safe travel way for bicyclists. Due to the extensive costs of roadway and bridge widening, this option is viewed as important, but at a lesser value than the localized spot improvements. The option estimate is \$16,958,000.

LESSER
PRIORITY

Other Options Considered

The No-Build Option does not support the project's stated purpose and need for providing a transportation facility to enhance mobility, support economic development, and improve safety. This option was reviewed, but is not recommended.

- **Option 1: No-Build Option:**

The No-Build option provides no improvements and serves as a baseline option against which all other options are compared. For the No-Build option, the LOS is projected to reside within an acceptable range (LOS D or Better) for future forecasted traffic for the entire corridor. Regardless of the LOS, there are safety concerns that would not be addressed under the no-build option. The option does not promote or provide the necessary infrastructure that could attract economic opportunities to the area.

4.0 ASSESSMENT OF OPTIONS

TDOT's Seven Guiding Principles

The Tennessee Department of Transportation has adopted seven (7) guiding principles against which all transportation projects are to be evaluated. These guiding principles address concerns for system management, mobility, economic growth, safety, community, environmental stewardship, and fiscal responsibility. These guiding principles are discussed in the following paragraphs as they relate to the options discussed in this report.

Guiding Principle 1: Preserve and Manage the Existing Transportation System

Addressing the safety and operational needs of State Route 22 will improve the overall transportation system in the region by providing the infrastructure to adequately address the movement of people and goods. This improved north-south connection to both the I-40 corridor and the State of Mississippi will enhance the overall transportation system in the region and provide a more efficient and safer route for roadway users.

According to the analysis of forecasted traffic volumes, the capacity of the existing roadway is adequate within the study limits. Therefore it is important to preserve this existing system while considering improvements to benefit both the safety and operations of the corridor. The proposed localized improvements as well as the proposed improved two (2) lane roadway section make efforts to maximize the existing capacity while also making modifications to improve safety and operations.

Guiding Principle 2: Move a Growing, Diverse, and Active Population

The improvement options discussed in this report will improve operations and safety, as well as benefitting north-south mobility in McNairy, Chester, and Henderson Counties. An improved State Route 22 will benefit the large percentages of freight movements as well as improving the ability of emergency vehicles and passenger cars to pass slower moving vehicles along the route.

The corridor is important to the surrounding communities and provides regional mobility and economic opportunities for both residents and industry. Various enhancements are needed to ensure that the mobility needs of the region are served safely. A system of localized or corridor improvements can help achieve this goal.

At this time, the rural characteristics of the corridor and area do not easily accommodate pedestrian and bicycle movements. An improved two (2) lane roadway section with shoulders will provide an additional level of safety above the existing conditions for alternative transportation uses.

Guiding Principle 3: Support the State's Economy

The land use surrounding the study corridor is mostly agricultural in nature with significant industrial traffic passing through the corridor. With the proposed

improvements presented, improved infrastructure and operations along the corridor may be used as a tool to attract industries which have not considered the region in the past.

Guiding Principle 4: Maximize Safety and Security

As indicated earlier in this report, the acute angle of several side road intersections as well as the absence of adequate shoulder widths pose a safety risk. During the three (3) year period from 2005-2007, multiple individuals were involved in a fatal crash. Additionally, local officials in the region attest to historically severe crashes caused by vehicles performing passing maneuvers unsafely, resulting in head-on crashes. Each of the Option 2: Localized Improvements may improve the level of safety on the roadway system and will help reduce the crash frequency along the corridor.

Guiding Principle 5: Build Partnerships for Livable Communities

TDOT's Long Range Transportation Plan promotes and encourages projects that have public and community support. This project study, originated by the Southwest RPO was identified as a need for the region and is supported by local public officials. As this project advances, the public involvement process will continue as mandated by the provisions of the National Environmental Policy Act (NEPA).

Guiding Principle 6: Promote Stewardship of the Environment

In preparation of Transportation Planning Reports (TPR), the Tennessee Department of Transportation (TDOT) has introduced an early environmental screening (EES) process for the project study area. By screening the latest available environmental data during the early stages of project planning, TDOT and the resource and permitting agencies will be better prepared to anticipate potential environmental issues and mitigation requirements. The environmental data reviewed within the EES include:

- Archaeological/Historic Architecture – Historic properties and cemetery sites;
- Community Impacts – Sensitive community populations
- Ecology – Scenic waterways, natural areas, large wetlands, protected species;
- Hazardous Substances/Geology – Hazardous substance sites, pyritic rock/geotechnical, caves; and,
- Parks & Public Land – parks (federal/state/local), public lands/buildings, railroads, wildlife management areas.

Further environmental studies will be required if state and/or federal funds are planned for the proposed project. If such funds are involved, a document consistent with the National Environmental Policy Act (NEPA) will be required.

Several areas within the study corridor should be considered for avoidance or minimized impacts. These areas include cemeteries, churches, and major pipeline crossings. The study area contains several blue line streams. All of the recommended improvement options are along the existing roadway alignment, which generally has less impact than constructing on a new location.

Guiding Principle 7: Promote Financial Responsibility

It is important to improve the existing infrastructure within the State of Tennessee as necessary while minimizing costs to the taxpayers. Construction cost estimates were prepared for each option considered. The recommended localized improvement options offer reduced cost solutions to the existing operational and safety issues. Some savings associated with a potential reduction in safety and travel time as well as revenue generated by potential economic development may offset many of the improvement costs.

5.0 SUMMARY

Future improvements to the existing State Route 22 corridor are necessary to address the local and regional needs of the area by enhancing operational characteristics and providing for a safer route. An incremental improvement strategy initially focused on the seven (7) locations identified in this report will provide an enhanced facility for users that best fits within TDOT's guiding principles, promotes financial responsiveness, improves safety, preserves the existing transportation system, and provides infrastructure improvements that will support potential economic development.

The following summarizes the options considered in this report:

Option 2: Localized Improvements

Combinations of route improvements are recommended to provide safer operations and enhance mobility for roadway users. Although it may not be practical at this time to construct all of the recommended improvements, they could be implemented in phases to yield the desired benefits.

The recommended order of improvements is as follows:

- | | |
|--|--------------|
| 1. Option 2: Location F – S.R. 22 at S.R. 201 | \$12,000 |
| 2. Option 2: Location E – S.R. 22 Southbound Passing Lane | \$612,000 |
| 3. Option 2: Location D – S.R. 22 Northbound Passing Lane | \$466,000 |
| 4. Option 2: Location A – S.R. 22 at North Road and Pugh Loop | \$96,000 |
| 5. Option 2: Location B –Wake Forrest Rd. at Milledgeville Rd. | \$39,000 |
| 6. Option 2: Location G – S.R. 22 at S.R. 100 | \$602,000 |
| 7. Option 2: Location C – S.R. 22 at Benson Road | \$33,000 |
| 8. Option 3: Improved Two (2) Lane Facility | \$17,049,000 |

The following options were considered, but are not recommended at this time.

Option 1: No-Build Option:

The No-Build Option does not support the project's stated purpose and need for providing a transportation facility to enhance mobility, support economic development, and improve safety. This option was reviewed, but is not recommended.

CHECKLIST OF DETERMINANTS FOR LOCATION STUDY

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

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

DATA TABLE

DATA TABLE								
Item	Option 2: Location A	Option 2: Location B	Option 2: Location C	Option 2: Location D	Option 2: Location E	Option 2: Location F	Option 2: Location G	Option 3: Improved Two-Lane
Functional Class	Rural							
System Class	STP							
Length (Miles)	0.20	0.10	0.10	0.38	0.51	0.10	0.40	8.5
Cross Section (Feet)	26	26	26	47	47	26	64	44
Base Year ADT (2014)	3,215	3,869	3,869	3,869	3,869	3,869	7,437	3,869
Design Year ADT (2034)	5,616	5,751	5,751	5,751	5,751	5,751	11,755	5,751
Design Year DHV (2034)	562	575	575	575	575	575	1,236	575
Percent Trucks (DHV)	22	18	18	18	18	18	19	22
Estimated Right of Way Cost	\$11,000	\$5,000	\$0	\$0	\$0	\$0	\$0	\$0
Estimated Utility Cost	\$10,000	\$5,000	\$0	\$94,000	\$110,000	\$0	\$0	\$1,455,000
Estimated Construction Cost	\$66,000	\$26,000	\$29,000	\$328,000	\$444,000	\$11,000	\$535,000	\$10,911,000
Estimated PE / Inflation	\$9,000	\$3,000	\$4,000	\$44,000	\$58,000	\$1,000	\$67,000	\$4,683,000
Total Estimated Cost	\$96,000	\$39,000	\$33,000	\$466,000	\$612,000	\$12,000	\$602,000	\$17,049,000
Estimated Per Mile Cost	\$480,000	\$390,000	\$330,000	\$1,227,000	\$1,200,000	\$120,000	\$1,505,000	\$2,006,000

DESIGN CRITERIA FOR LOCATION AND DESIGN PHASE

ROUTE: State Route 22 SECTION: _____
 REGION: IV COUNTY: Chester/McNairy/Henderson PROJECT NO.: _____
 LOCATION: State Route 22 from State Route 69 in Milledgeville to State Route 100

PRESENT ADT (2014)	3,215 - 3,869
FUTURE ADT (2034)	5,616 - 5,751
PERCENT TRUCKS	26 - 32
DHV (2034)	562 - 575
FUNCTIONAL CLASSIFICATION	Rural Arterial
MINIMUM DESIGN SPEED	60 MPH (POSTED 55 MPH)
ACCESS CONTROL	N/A
MINIMUM RADIUS	1,146' (0.06 Max S.E.)
MAXIMUM GRADE	3.8%
MINIMUM STOPPING SIGHT DISTANCE	570'
SURFACE WIDTH	26'
NUMBER OF LANES	2 @ 12'
USABLE SHOULDER WIDTH	2 @ 10' (8' stabilized)
MEDIAN WIDTH	N/A
MINIMUM RIGHT OF WAY	100'
SIGNALIZATION	N/A

REMARKS: _____

COST DATA SHEETS

COST DATA SHEET

PROJECT: SR-22
 LOCATION: McNairy, Chester, Henderson Counties
 SECTION LENGTH: 0.2 Miles
 DESCRIPTION: Option 2: Location A

RIGHT-OF-WAY

Land, Improvements & Damages	(# Acres	0.30)	\$5,000
Incidentals	(# Tracts	2)	\$6,000
Relocation Payments	(Residences	0)	\$0
	(Businesses	0)	\$0
	(Non-Profits	0)	\$0

Total Right-Of-Way Cost **\$11,000**

UTILITY RELOCATION

Reimbursable	\$0
--------------	-----

Total Utility Adjustment Cost **\$10,000**

CONSTRUCTION

Clear and Grubbing	\$0
Earthwork	\$1,000
Pavement Removal	\$4,000
Drainage	\$3,000
Structures	\$0
Railroad Crossing	\$0
Paving	\$37,000
Retaining Walls	\$0
Maintenance of Traffic	\$2,000
Topsoil	\$1,000
Seeding	\$0
Sodding	\$0
Signing & Striping	\$2,000
Lighting	\$0
Signalization	\$0
Fence	\$0
Guardrail	\$0
Rip-rap or Slope Protection	\$0
Other Construction Items (10%)	\$5,000
Erosion Control (3.5%)	\$2,000
Mobilization	\$3,000
10% Engineering and Contingencies	\$6,000

Total Construction Cost **\$66,000**

Preliminary Engineering (10% of Constr.) **\$6,000**

Inflation (3% per year for 1 years) **\$3,000**

ESTIMATED COST **\$96,000**

COST DATA SHEET

PROJECT: SR-22
 LOCATION: McNairy, Chester, Henderson Counties
 SECTION LENGTH: 0.1 Miles
 DESCRIPTION: Option 2: Location B

RIGHT-OF-WAY

Land, Improvements & Damages	(# Acres	0.09)	\$2,000
Incidentals	(# Tracts	1)	\$3,000
Relocation Payments	(Residences	0)	\$0
	(Businesses	0)	\$0
	(Non-Profits	0)	\$0

Total Right-Of-Way Cost **\$5,000**

UTILITY RELOCATION

Reimbursable	\$0
--------------	-----

Total Utility Adjustment Cost **\$5,000**

CONSTRUCTION

Clear and Grubbing	\$0
Earthwork	\$0
Pavement Removal	\$2,000
Drainage	\$1,000
Structures	\$0
Railroad Crossing	\$0
Paving	\$12,000
Retaining Walls	\$0
Maintenance of Traffic	\$2,000
Topsoil	\$500
Seeding	\$100
Sodding	\$0
Signing & Striping	\$2,000
Lighting	\$0
Signalization	\$0
Fence	\$0
Guardrail	\$0
Rip-rap or Slope Protection	\$0
Other Construction Items (10%)	\$2,000
Erosion Control (3.5%)	\$1,000
Mobilization	\$1,000
10% Engineering and Contingencies	\$2,000

Total Construction Cost **\$26,000**

Preliminary Engineering (10% of Constr.) **\$2,000**

Inflation (3% per year for 1 years) **\$1,000**

ESTIMATED COST **\$39,000**

COST DATA SHEET

PROJECT: SR-22
 LOCATION: McNairy, Chester, Henderson Counties
 SECTION LENGTH: 0.1 Miles
 DESCRIPTION: Option 2: Location C

RIGHT-OF-WAY

Land, Improvements & Damages	(# Acres	0.00)	\$0
Incidentals	(# Tracts	0)	\$0
Relocation Payments	(Residences	0)	\$0
	(Businesses	0)	\$0
	(Non-Profits	0)	\$0

Total Right-Of-Way Cost **\$0**

UTILITY RELOCATION

Reimbursable	\$0
--------------	-----

Total Utility Adjustment Cost **\$0**

CONSTRUCTION

Clear and Grubbing	\$0
Earthwork	\$0
Pavement Removal	\$4,000
Drainage	\$1,000
Structures	\$0
Railroad Crossing	\$0
Paving	\$12,000
Retaining Walls	\$0
Maintenance of Traffic	\$2,000
Topsoil	\$600
Seeding	\$100
Sodding	\$0
Signing & Striping	\$2,000
Lighting	\$0
Signalization	\$0
Fence	\$0
Guardrail	\$0
Rip-rap or Slope Protection	\$0
Other Construction Items (10%)	\$2,000
Erosion Control (3.5%)	\$1,000
Mobilization	\$1,000
10% Engineering and Contingencies	\$3,000

Total Construction Cost **\$29,000**

Preliminary Engineering (10% of Constr.) **\$3,000**

Inflation (3% per year for 1 years) **\$1,000**

ESTIMATED COST

\$33,000

COST DATA SHEET

PROJECT: SR-22
 LOCATION: McNairy, Chester, Henderson Counties
 SECTION LENGTH: 0.4 Miles
 DESCRIPTION: Option 2: Location D

RIGHT-OF-WAY

Land, Improvements & Damages	(# Acres	0.00)	\$0
Incidentals	(# Tracts	0)	\$0
Relocation Payments	(Residences	0)	\$0
	(Businesses	0)	\$0
	(Non-Profits	0)	\$0

Total Right-Of-Way Cost **\$0**

UTILITY RELOCATION

Reimbursable	\$94,000
--------------	----------

Total Utility Adjustment Cost **\$94,000**

CONSTRUCTION

Clear and Grubbing	\$0
Earthwork	\$44,000
Pavement Removal	\$0
Drainage	\$1,000
Structures	\$0
Railroad Crossing	\$0
Paving	\$190,000
Retaining Walls	\$0
Maintenance of Traffic	\$3,000
Topsoil	\$3,500
Seeding	\$800
Sodding	\$0
Signing & Striping	\$6,000
Lighting	\$0
Signalization	\$0
Fence	\$0
Guardrail	\$0
Rip-rap or Slope Protection	\$0
Other Construction Items (10%)	\$25,000
Erosion Control (3.5%)	\$10,000
Mobilization	\$14,000
10% Engineering and Contingencies	\$30,000

Total Construction Cost **\$328,000**

Preliminary Engineering (10% of Constr.) **\$30,000**

Inflation (3% per year for 1 years) **\$14,000**

ESTIMATED COST **\$466,000**

COST DATA SHEET

PROJECT: SR-22
 LOCATION: McNairy, Chester, Henderson Counties
 SECTION LENGTH: 0.5 Miles
 DESCRIPTION: Option 2: Location E

RIGHT-OF-WAY

Land, Improvements & Damages	(# Acres	0.00)	\$0
Incidentals	(# Tracts	0)	\$0
Relocation Payments	(Residences	0)	\$0
	(Businesses	0)	\$0
	(Non-Profits	0)	\$0

Total Right-Of-Way Cost **\$0**

UTILITY RELOCATION

Reimbursable	\$110,000
--------------	-----------

Total Utility Adjustment Cost **\$110,000**

CONSTRUCTION

Clear and Grubbing	\$0
Earthwork	\$62,000
2600	\$0
Drainage	\$0
Structures	\$0
Railroad Crossing	\$0
Paving	\$260,000
Retaining Walls	\$0
Maintenance of Traffic	\$3,000
Topsoil	\$4,800
Seeding	\$1,100
Sodding	\$0
Signing & Striping	\$7,000
Lighting	\$0
Signalization	\$0
2600	\$0
Guardrail	\$0
Rip-rap or Slope Protection	\$0
Other Construction Items (10%)	\$34,000
Erosion Control (3.5%)	\$13,000
Mobilization	\$19,000
10% Engineering and Contingencies	\$40,000

Total Construction Cost **\$444,000**

Preliminary Engineering (10% of Constr.) **\$40,000**

Inflation (3% per year for 1 years) **\$18,000**

ESTIMATED COST **\$612,000**

COST DATA SHEET

PROJECT: SR-22
 LOCATION: McNairy, Chester, Henderson Counties
 SECTION LENGTH: 0.1 Miles
 DESCRIPTION: Option 2: Location F

RIGHT-OF-WAY

Land, Improvements & Damages	(# Acres	0.00)	\$0
Incidentals	(# Tracts	0)	\$0
Relocation Payments	(Residences	0)	\$0
	(Businesses	0)	\$0
	(Non-Profits	0)	\$0

Total Right-Of-Way Cost **\$0**

UTILITY RELOCATION

Reimbursable	\$0
--------------	-----

Total Utility Adjustment Cost **\$0**

CONSTRUCTION

Clear and Grubbing	\$0
Earthwork	\$0
Pavement Removal	\$0
Drainage	\$1,000
Structures	\$0
Railroad Crossing	\$0
Paving	\$0
Retaining Walls	\$0
Maintenance of Traffic	\$1,000
Topsoil	\$0
Seeding	\$0
Sodding	\$0
Signing & Striping	\$6,000
Lighting	\$0
Signalization	\$0
Fence	\$0
Guardrail	\$0
Rip-rap or Slope Protection	\$0
Other Construction Items (10%)	\$1,000
Erosion Control (3.5%)	\$300
Mobilization	\$500
10% Engineering and Contingencies	\$1,000

Total Construction Cost **\$11,000**

Preliminary Engineering (10% of Constr.) **\$1,000**

Inflation (3% per year for 1 years) **\$0**

ESTIMATED COST **\$12,000**

COST DATA SHEET

PROJECT: SR-22
 LOCATION: McNairy, Chester, Henderson Counties
 SECTION LENGTH: 0.2 Miles
 DESCRIPTION: Option 2: Location G

RIGHT-OF-WAY

Land, Improvements & Damages	(# Acres	0.00)	\$0
Incidentals	(# Tracts	0)	\$0
Relocation Payments	(Residences	0)	\$0
	(Businesses	0)	\$0
	(Non-Profits	0)	\$0

Total Right-Of-Way Cost **\$0**

UTILITY RELOCATION

Reimbursable	\$0
--------------	-----

Total Utility Adjustment Cost **\$0**

CONSTRUCTION

Clear and Grubbing	\$0
Earthwork	\$0
Pavement Removal	\$19,000
Drainage	\$3,000
Structures	\$0
Railroad Crossing	\$0
Paving	\$368,000
Retaining Walls	\$0
Maintenance of Traffic	\$3,000
Topsoil	\$3,000
Seeding	\$1,000
Sodding	\$0
Signing & Striping	\$10,000
Lighting	\$0
Signalization	\$0
Fence	\$0
Guardrail	\$0
Rip-rap or Slope Protection	\$0
Other Construction Items (10%)	\$41,000
Erosion Control (3.5%)	\$16,000
Mobilization	\$22,000
10% Engineering and Contingencies	\$49,000

Total Construction Cost **\$535,000**

Preliminary Engineering (10% of Constr.) **\$49,000**

Inflation (3% per year for 1 years) **\$18,000**

ESTIMATED COST **\$602,000**

COST DATA SHEET

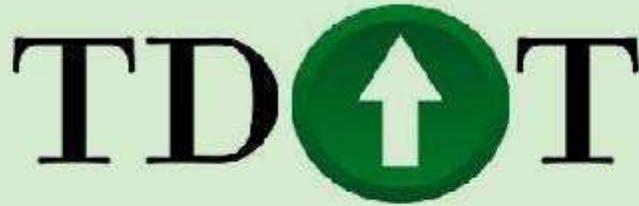
PROJECT: SR-22
 LOCATION: McNairy, Chester, Henderson Counties
 SECTION LENGTH: 8.5 Miles
 DESCRIPTION: Option 3: Improved Two-Lane Section

	Unit	Quantity	Estimated Unit Cost	Estimated Total Cost
Right of Way				
Land	Acre	0	\$0	\$0
Commercial	Each	0	\$0	\$0
Residential	Each	0	\$0	\$0
Incidentals	Each	0	\$0	\$0
Total				\$0
Construction Items				
8' Shoulders to Cross-Section	Linear Mile	8.5	\$810,000	\$6,885,000
Bridge Widening	S.F.	7,550	\$175	\$1,321,000
Drainage	Lump Sum			\$170,000
Total				\$8,376,000
Utilities				
Underground Fiber	Linear Mile	4.3	\$211,200	\$898,000
Underground Gas Line	Linear Mile	0.9	\$290,400	\$247,000
Gas Distribution Pipeline	Lump Sum			\$250,000
Utility Pole Relocation	Each	20	\$3,000	\$60,000
Total				\$1,455,000
Other Construction Items (10%)				\$838,000
Erosion Control (3.5%)				\$294,000
Mobilization				\$411,000
Engineering and Contingencies (10%)				\$992,000
TOTAL CONSTRUCTION COST				\$12,366,000
Preliminary Engineering (10% of Total Construction Cost)				\$992,000
Inflation (5% per year over 5 years)				\$3,691,000
TOTAL COSTS				\$17,049,000

APPENDIX

APPENDIX A

EARLY ENVIRONMENTAL SCREENING DATA



Tennessee Department of Transportation
 EARLY ENVIRONMENTAL SCREENING PROCESS (EES)
 PROJECT SCORING

Project Score Factors

	Total Impacts Evaluated	Total Impacts to Evaluate	EES Evaluation
Project Impact Areas:	15	15	Complete
Date of Evaluation:	October 22, 2009		
Evaluation done by:	Greg Horton		
	Planner 3		
County:	McNairy		
Route:	SR 22		
PIN:	112893.00		
Termini:	From SR22 to SR 100		

Impact Ranking of Features Evaluated:	Total by Rank
--	----------------------

Features with No Impact	13
--------------------------------	-----------

- Cemetery Sites & Cemetery Properties
- National Register Sites
- Bat
- Terrestrial Species
- Aquatic Species
- TDEC Conservation Sites & TDEC Scenic Waterways
- Superfund Sites
- Caves
- Pyritic Rock
- Railroads
- Tennessee Natural Areas Program
- Wildlife Management Areas
- TWRA Lakes & Other Public Lands

Features with Low Impact	0
---------------------------------	----------

Features with Moderate Impact	0
--------------------------------------	----------

Features with Substantial Impact	1
---	----------

Large Wetland Impacts

Community Impacts Present:

Institutions:

Populations:

No population present

Linguistically isolated populations

Populations below poverty - State average- 13%

EES Project Impact:	Complete
----------------------------	-----------------

Impacts Evaluated Within 1,000 Ft of Study Area

CEMETERY SITES & CEMETERY PROPERTIES

Impact

Project Impact (Environmental, Time, Cost, Design, and Maintenance)	<input checked="" type="checkbox"/> None - No impact on the project as there are no known cemetery sites within or abutting the project study area or corridor. It is anticipated that a 'normal' effort to complete this environmental review as part of NEPA.
--	--

INSTITUTIONS & SENSITIVE COMMUNITY POPULATIONS

Sensitive Populations Project Impact: Present Not Present

	Present	Not Present
Institutions:		
Hospital	<input type="checkbox"/>	<input checked="" type="checkbox"/>
School	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Church	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Public Building	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Populations:		
No population present	<input checked="" type="checkbox"/>	<input type="checkbox"/>
65 and older populations	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Disability populations	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Households without a vehicle	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Minority populations 24%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Linguistically isolated populations	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Populations below poverty - State average - 13%	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Populations below poverty - State average - 27%	<input type="checkbox"/>	<input checked="" type="checkbox"/>

BAT

Impact

Project Impact (Environment, Time, Cost, Design, and Maintenance)	<input checked="" type="checkbox"/> None – No project impact is anticipated. There is no occurrence of Indiana or gray bats within 4 miles of the proposed project study area or corridor.
--	---

RAILROADS

Impact

Project Impact (Environment, Time, Cost, Design, and Maintenance)	<input checked="" type="checkbox"/> None – No impact on the project is anticipated. There are no railroads located within the project study area or corridor.
--	--

Impacts Evaluated Within 2,000 Ft of Study Area

NATIONAL REGISTER SITES

Impact

Project Impact (Environmental, Time, Cost, Design, and Maintenance)	<input checked="" type="checkbox"/> None – No project impact is anticipated as there are no National Register listed properties abutting or within the project study area or corridor.
--	---

SUPERFUND SITES

Impact

Project Impact (Environment, Time, Cost, Design, and Maintenance)	<input checked="" type="checkbox"/> None – No project impact is anticipated as there are no known contaminated land tracts abutting or within the project study area or corridor.
--	--

PYRITIC ROCK

Impact

Project Impact (Environment, Time, Cost, Design, and Maintenance)	<input checked="" type="checkbox"/> None – No project impact is anticipated. Pyritic rock is not known to occur in the study area/corridor or project does not involve excavation. Limestone (symbolized as dark green) and dolomite (symbolized as light green) are present.
--	--

TWRA LAKES & OTHER PUBLIC LANDS

Impact

--	--

**Project Impact
(Environment, Time,
Cost, Design, and
Maintenance)**

None – No impact on the project is anticipated as there are no parks located within or abutting the project study area or corridor.

Impacts Evaluated Within 4,000 Ft of Study Area

TERRESTRIAL SPECIES

Impact

**Project Impact
(Environment, Time,
Cost, Design, and
Maintenance)**

None - No impact to the project is anticipated. There is no known occurrence of a rare, state, or federally-protected terrestrial species within the proposed transportation study area or corridor.

TDEC CONSERVATION SITES & TDEC SCENIC WATERWAYS

Impact

**Project Impact
(Environment, Time,
Cost, Design,
Maintenance)**

None – No project impact is expected as there are no scenic waterways or TDEC Conservation Sites within project study area or corridor.

LARGE WETLAND IMPACTS

Impact

**Project Impact
(Environment, Time,
Cost, Design,
Maintenance)**

Substantial – Region 4: A substantial impact to the project is probable as there is greater than 5 acres of wetlands within the project study area or corridor. Compensatory mitigation will be required. Design effort will be needed to avoid and minimize impacts to wetlands to the maximum extent practicable. If a floodplain is crossed by the project, floodplain culverts may be necessary.

TENNESSEE NATURAL AREAS PROGRAM

Impact

**Project Impact
(Environment, Time,
Cost, Design, and
Maintenance)**

None – No impact on the project is anticipated as the project study area or corridor does not include a Natural Area.

WILDLIFE MANAGEMENT AREAS

Impact

**Project Impact
(Environment, Time,
Cost, Design, and
Maintenance)**

None – No project impact is anticipated as a WMA does not abut nor is located within the project study area or corridor.

Impacts Evaluated Within 10,000 Ft of Study Area

AQUATIC SPECIES

Impact

**Project Impact
(Environment, Time,
Cost, Design, and
Maintenance)**

None - No impact to the project is anticipated. There is no known occurrence of a rare, state, or federally-protected aquatic species within the project study area or corridor.

CAVES

Impact

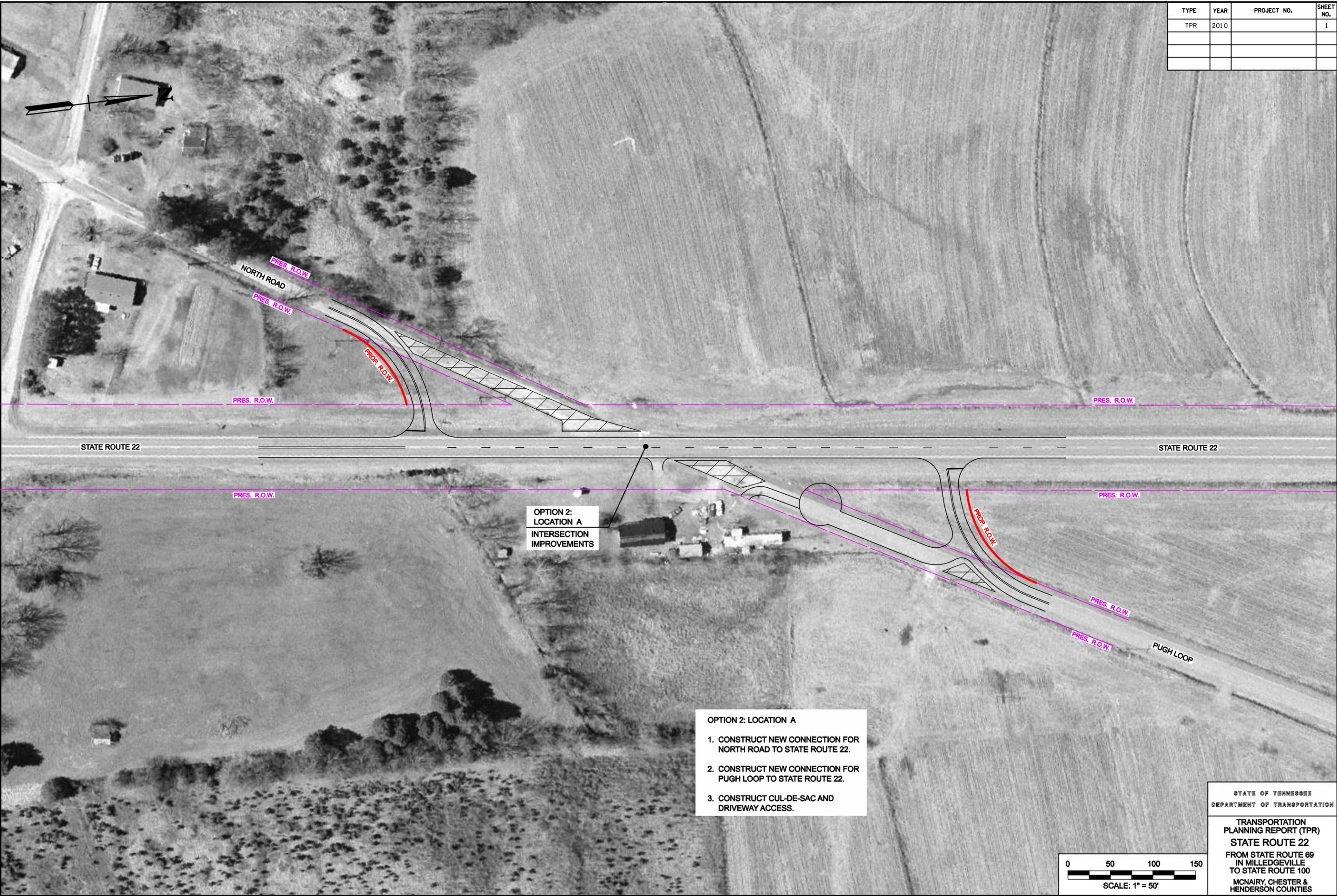
**Project Impact
(Environment, Time,
Cost, Design, and
Maintenance)**

None – No project impact is anticipated as there are no caves in the project study area or corridor.

APPENDIX B

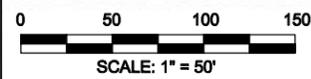
TPR CONCEPT PLANS

TYPE	YEAR	PROJECT NO.	SHEET NO.
TPR	2010		1



OPTION 2:
 LOCATION A
 INTERSECTION
 IMPROVEMENTS

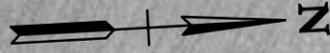
- OPTION 2: LOCATION A**
1. CONSTRUCT NEW CONNECTION FOR NORTH ROAD TO STATE ROUTE 22.
 2. CONSTRUCT NEW CONNECTION FOR PUGH LOOP TO STATE ROUTE 22.
 3. CONSTRUCT CUL-DE-SAC AND DRIVEWAY ACCESS.



STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

TRANSPORTATION
 PLANNING REPORT (TPR)
 STATE ROUTE 22
 FROM STATE ROUTE 69
 IN MILLEDGEVILLE
 TO STATE ROUTE 100
 MCNAIRY, CHESTER &
 HENDERSON COUNTIES

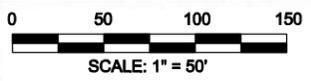
TYPE	YEAR	PROJECT NO.	SHEET NO.
TPR	2010		2



OPTION 2:
 LOCATION B
 INTERSECTION
 IMPROVEMENTS

OPTION 2: LOCATION B

1. REALIGN INTERSECTION OF MILLEDGEVILLE ROAD AT WAKE FORREST ROAD.
2. THE NEW INTERSECTION IS APPROXIMATELY 100' FROM THE S.R. 22 EDGE OF TRAVELED WAY.



STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

TRANSPORTATION
 PLANNING REPORT (TPR)
 STATE ROUTE 22
 FROM STATE ROUTE 69
 IN MILLEDGEVILLE
 TO STATE ROUTE 100
 MCNAIRY, CHESTER &
 HENDERSON COUNTIES

TYPE	YEAR	PROJECT NO.	SHEET NO.
TPR	2010		3



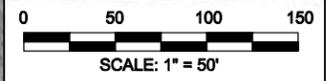
SEE SHEET NO. 4
 MATCH LINE

OPTION 2: LOCATION C

1. WIDEN AND RESTRIPE EXISTING CONNECTION AT LOCATION C TO 22'.
2. SCARIFY, SEED, AND TOPSOIL AREA SHOWN.

OPTION 2: LOCATION D

1. WIDEN STATE ROUTE 22 TO THE EAST SIDE.
2. CONSTRUCT AN ADDITIONAL LANE FOR PASSING IN THE NORTHBOUND DIRECTION.
3. PASSING LANE IS APPROXIMATELY 1900' LONG.



STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

TRANSPORTATION
 PLANNING REPORT (TPR)
 STATE ROUTE 22
 FROM STATE ROUTE 69
 IN MILLEDGEVILLE
 TO STATE ROUTE 100
 MCNAIRY, CHESTER &
 HENDERSON COUNTIES

TYPE	YEAR	PROJECT NO.	SHEET NO.
TPR	2010		4



SEE SHEET NO. 3

MATCH LINE

PRES. R.O.W.

PRES. R.O.W.

STATE ROUTE 22

OPTION 2:
 LOCATION D (CONT)
 NORTHBOUND
 PASSING LANE

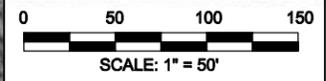
OPTION 2:
 LOCATION E (CONT)
 SOUTHBOUND
 PASSING LANE

PRES. R.O.W.

PRES. R.O.W.

SEE SHEET NO. 5

MATCH LINE



TYPE	YEAR	PROJECT NO.	SHEET NO.
TPR	2010		5



SEE SHEET NO. 4

MATCH LINE

SEE SHEET NO. 6

MATCH LINE

PRES. R.O.W.

PRES. R.O.W.

STATE ROUTE 22

PRES. R.O.W.

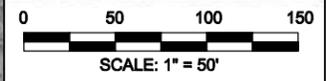
PRES. R.O.W.

CENTER POINT LOOP

PRES. R.O.W.

PRES. R.O.W.

OPTION 2:
 LOCATION E (CONT)
 SOUTHBOUND
 PASSING LANE



TYPE	YEAR	PROJECT NO.	SHEET NO.
TPR	2010		6



SEE SHEET NO. 5
 MATCH LINE

OPTION 2:
 LOCATION E
 SOUTHBOUND
 PASSING LANE

PRES. R.O.W.

PRES. R.O.W.

ROBY ROAD

PRES. R.O.W.

PRES. R.O.W.

STATE ROUTE 22

PRES. R.O.W.

PRES. R.O.W.

OPTION 2:
 LOCATION F
 INTERSECTION
 IMPROVEMENTS

CENTER POINT LOOP

PRES. R.O.W.

PRES. R.O.W.

OPTION 2: LOCATION E

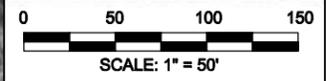
1. WIDEN STATE ROUTE 22 TO THE WEST SIDE.
2. CONSTRUCT AN ADDITIONAL LANE FOR PASSING IN THE SOUTHBOUND DIRECTION.
3. PASSING LANE IS APPROXIMATELY 2600' LONG.

OPTION 2: LOCATION F

1. RESTRIPE EXISTING INTERSECTION OF STATE ROUTE 22 WITH STATE ROUTE 201 AND ROBY ROAD.
2. ADD 'STOP AHEAD' ADVANCE PAVEMENT MARKINGS.
3. ADD W3-1 'STOP AHEAD' SIGNS.

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

TRANSPORTATION
 PLANNING REPORT (TPR)
 STATE ROUTE 22
 FROM STATE ROUTE 69
 IN MILLEDGEVILLE
 TO STATE ROUTE 100
 MCNAIRY, CHESTER &
 HENDERSON COUNTIES

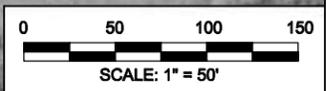


TYPE	YEAR	PROJECT NO.	SHEET NO.
TPR	2010		7



**OPTION 2:
 LOCATION G
 INTERSECTION
 IMPROVEMENTS**

- OPTION 2: LOCATION G**
1. CONSTRUCT NEW INTERSECTION GEOMETRY FOR INTERSECTION OF S.R. 100 AND S.R. 22.
 2. CONSTRUCT 40' MAX DRIVEWAY ENTRANCES ADJACENT TO INTERSECTION.
 3. ADD/REPLACE STOP AND YIELD SIGNS AS REQUIRED.
 4. SCARIFY, SEED, AND TOPSOIL AREAS SHOWN.



STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

TRANSPORTATION
 PLANNING REPORT (TPR)
 STATE ROUTE 22
 FROM STATE ROUTE 69
 IN MILLEDGEVILLE
 TO STATE ROUTE 100
 MCNAIRY, CHESTER &
 HENDERSON COUNTIES