Executive Summary<br>UT Martin - Selmer Campus<br>State Route 5 (US 45), McNairy County<br>PIN \#109927.01

## Purpose

In 2006, legislation was passed for access improvement to the University of Tennessee Martin Selmer campus on State Route 5 (US 45) in McNairy County, Tennessee. In response to the legislation, the Tennessee Department of Transportation (TDOT) has commissioned this study to define the purpose and need for access improvements and to develop options to satisfy the purpose and need.

This report documents the analyses conducted to evaluate the opportunities for improving access to the UTM Selmer campus at two locations along State Route 5 in Selmer, McNairy County, Tennessee. Consideration has been given by the Town of Selmer, McNairy County, and TDOT to relocating the southernmost access along State Route 5 at Glover Drive to an improved access to serve both the Selmer campus and industrial site.

## Improvement Options

Option 1 - No-Build: The intersection of State Route 5 and Lakeview Road/Glover Drive would remain under current operations and roadway geometry. A new access would not be extended to State Route 5 and all access to the UTM Selmer campus would remain the same. No construction costs.

Option 2 - Build: This build option includes extending a new access from the UTM Selmer campus directly to State Route 5. The existing Glover Drive connection to State Route 5, as well as the northbound left turn lane on State Route 5 into Glover Drive, would be scarified and the existing opening in the controlled access fence would be relocated. This new connection would require the crossing of a blue line stream and cutting of the existing controlled access fence. Cost: \$1,331,200.

Option 3 - Build: This improvement option includes relocating the Glover Drive connection to State Route 5 and extending Three Star Drive to State Route 5. The existing Glover Drive connection to State Route 5, as well as the northbound left turn lane on State Route 5 into Glover Drive, would be scarified and the existing opening in the controlled access fence would be relocated to Three Star Drive. This new connection would require the crossing of a blue line stream and cutting of the existing controlled access fence. Cost: $\$ 1,027,700$.

## TRANSPORTATION PLANNING REPORT

UT-Martin Selmer Campus Access Improvement State Route 5 (US Highway 45)

MCNAIRY COUNTY PIN \#109927.01


PREPARED BY
Neel-Schaffer, Inc.
For the
TENNESSEE DEPARTMENT OF TRANSPORTATION
PROJECT PLANNING DIVISION

| Approved by: | Signature | DATE |
| :---: | :---: | :---: |
| CHIEF OF <br> ENVIRONMENT <br> and planning | Elcose | $517109$ |
| TRANSPORTATION DIRECTOR PROJECT PLANNING DIVISION |  | 5.7 .09 |
| TRANSPORTATION MANAGER 2 PROJECT PLANNING DIVISION |  | $5 / 7 / 09$ |

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## 1. STUDY HISTORY \& BACKGROUND INFORMATION

### 1.1 Purpose of Report

In 2006, legislation was passed for access improvement to the University of Tennessee Martin Selmer campus on State Route 5 in McNairy County, Tennessee. In response to the legislation, the Tennessee Department of Transportation (TDOT) has commissioned this study to define the purpose and need for access improvements and to develop options to satisfy the purpose and need.

### 1.2 Study History

Improvements to the access to the UTM Selmer campus have been considered for several years by the Town of Selmer. Specifically, in 2006, Mayor Robinson requested a new ramp for the UTM Selmer campus. This original request would provide a new access from the UTM Selmer Campus directly to State Route 5. Correspondence with State Representative Randy Rinks and State Senator John Wilder resulted in legislation for the new access. Documentation of the legislation is included in Appendix A.

This report documents the analyses conducted to evaluate the opportunities for improving access to the UTM Selmer campus and the industrial site located along the west side of State Route 5 in Selmer, McNairy County, Tennessee. Consideration has been given by the Town of Selmer, McNairy County, and TDOT to relocating the southernmost access along State Route 5 at Glover Drive to a new access location to the campus and industrial site.

### 1.3 Study Area

The area under investigation is located in northwestern McNairy County, in a primarily suburban residential area with industrial, residential, and institutional uses. The UTM Selmer campus is located west of State Route 5. The study area is located between two locations - the intersection of State Route 5 and Lakeview Road/Glover Drive (log mile 16.42) and the proposed location of the extension of Three Star Drive to State Route 5 (log mile 16.93). An area location map is shown in Figure 1. Figure 2 shows the locations under study and an overview of the study area is shown in Figure 3.

### 1.4 Existing Transportation Conditions

State Route 5 is a four-lane median-divided roadway that provides a connection between Interstate 40 north of Jackson, Tennessee and south to the Mississippi state line. State Route 5 is functionally classified as a rural principal arterial.

The Tennessee Roadway Information Management System (TRIMS) shows that from 2005 through 2007, the intersection of State Route 5 and Lakeview Road/Glover Drive experienced one crash that was not severe. State Route 5 at Dowty Road, which provides indirect access to the campus and industrial site, experienced four crashes in the three-year period from 2005 through 2007. The crash rate for this period at this intersection was 0.372 , which is slightly higher than the statewide average for similar intersections of 0.180.




State Route 5 is a four-lane median divided rural principal arterial in the study area. The intersection of State Route 5 and Lakeview Road/Glover Drive is a four-legged intersection with a median opening and northbound and southbound left turn lanes on State Route 5. There is currently no median openings at the proposed locations at the UTM Selmer campus or where Three Star Drive would be extended to State Route 5. Photos of the study area are shown below.


Existing Access - Eastbound view of Glover Drive at State Route 5 (to be scarified)


Option 2 - Southbound view of State Route 5 near possible extension from UTM Selmer campus


Option 2 - Westbound view from State Route 5 near possible extension from UTM Selmer campus


Option 3 - Northbound view of State Route 5 near possible Three Star Drive extension


Option 3 - Westbound view from State Route 5 at Three Star Drive


Option 3 - Eastbound view of State Route 5 from end of Three Star Drive

## 2. PURPOSE \& NEED OF PROJECT

The purpose of this study is to develop the options for the improvement of access to UTM Selmer campus along State Route 5. As a result of the analysis performed in this study, it has been found that a relocated location will provide improved access to the campus and the industrial site. It will also provide acceptable sight distance to State Route 5 from the UTM Selmer access extension and the extension of Three Star Drive. Field reviews, stakeholder meetings and review and analysis of existing data substantiate the desire and need for access changes to the UTM Selmer campus.

A field review, stake holder discussions and review and analysis of existing data substantiate the history and legislative issues being experienced in the study area. It has been determined that an improved access to serve the campus and industrial site is valid for the following:

Legislation - In 2006, Mayor Robinson requested a new ramp for the UTM Selmer campus. This original request would provide a new access from the UTM Selmer Campus directly to State Route 5. Correspondence with State Representative Randy Rinks and State Senator John Wilder resulted in legislation for the new access. Documentation of the legislation is included in Appendix A.

## 3. PROPOSED IMPROVEMENTS

The existing intersection of State Route 5 and Lakeview Road/Glover Drive is a fourlegged intersection. A median opening with northbound and southbound left turn lanes is provided. There are currently no safety issues at this intersection; however, a new access would be a T-intersection with fewer conflict points. Four-legged intersections have 32 conflict points, while T-intersections have only nine conflict points. Also, the location of each of the proposed unsignalized accesses provides increased sight distance compared to the Lakeview Road/Glover Drive access.

Turning movement counts were conducted along State Route 5 at Lakeview Road/Glover Drive and at Dowty Road. The turning movement counts are included as Appendix B. From the counts obtained, it was determined that along State Route 5 , there are minimal northbound and southbound left turning vehicles at either of the proposed intersections. The counts also indicate that the eastbound traffic on Glover Drive turning onto State Route 5 is minimal. Of the eastbound traffic on Glover Drive, the majority of traffic is turning right onto State Route 5. The current residential Glover Drive traffic will be able to easily access State Route 5 via Higginbottom Road located to the south.

The current turning movements at the two existing intersections operate at LOS C or better during both AM and PM peak hours, with most operating at LOS A or B. The turning movements currently experience minimal delay. The existing traffic volumes
were reassigned to account for the relocation of the access to the UTM Selmer campus and the industrial site. Capacity analyses of the reassigned traffic volumes indicate that the intersection will operate at improved levels of service - LOS A at either of the proposed T-intersections. These traffic patterns and volumes and the capacity analyses indicate that the relocation of the State Route 5 access will have minimal impact on the motoring public. More detailed traffic analysis and volumes that support this conclusion are shown in Appendix B. The existing turning movement counts and capacity analyses worksheets are also included in Appendix B.

Three proposed options have been developed for the study area: No-Build and two Build Options.

Option 1 - No-Build
The intersection of State Route 5 and Lakeview Road/Glover Drive would remain under current operations and roadway geometry. All access to the UTM Selmer campus and the industrial site would remain the same.

No construction costs would be incurred for the No-Build option.

## Option 2

As previously mentioned, the Town of Selmer has been considering improving the access to the UTM Selmer campus for several years. Improving the access to the campus will require the relocation of the existing Glover Drive access to State Route 5 and providing improved access from the UTM Selmer campus to State Route 5. In keeping with current TDOT access control policy, the existing Glover Drive connection to State Route 5, as well as the northbound left turn lane on State Route 5 into Glover Drive, would be scarified. The existing drainage system will remain. The controlled access fence along the west side of State Route 5 would be extended across the scarified portion of Glover Drive.

This build option also includes extending a new access from the UTM Selmer campus directly to State Route 5. This new connection would require the crossing of a blue line stream and cutting of the existing controlled access fence. Also, a new median opening and northbound left lane would be provided along State Route 5 at this location. A southbound right turn lane would also be provided along State Route 5 at this location. Based on the expected traffic volumes at the new intersection, as shown in Appendix B, a traffic signal would not be warranted.

The conceptual layout of Option 2 is included in Appendix C. The estimated project cost of this option is $\$ 1,331,200$. It should be noted that the cost for Option 2 includes incidentals for right-of-way, but no land costs since, according to the Town of Selmer, the Town and Industrial Board own the affected land (see letter in Appendix A). The cost estimate worksheets for Option 2 are included as Appendix D.

## Option 3

This build option includes eliminating the Glover Drive connection to State Route 5 and extending Three Star Drive to State Route 5. As with the Option 2, the existing Glover Drive connection to State Route 5, as well as the northbound left turn lane on State Route 5 into Glover Drive, would be scarified, with existing drainage system to remain. The controlled access fence along the west side of State Route 5 would be extended across the scarified Glover Drive.

This build option also includes extending Three Star Drive to State Route 5. This new connection would require the crossing of a blue line stream and cutting of the existing controlled access fence. Also, a new median opening and northbound left lane would be provided along State Route 5 at this location. A southbound right turn lane would also be provided along State Route 5 at this location. Based on the expected traffic volumes at the new intersection, as shown in Appendix B, a traffic signal would not be warranted.

The conceptual layout of Option 3 is included in Appendix C. The estimated project cost of this option is $\$ 1,027,700$. As with Option 2, Option 3 includes incidentals for right-of-way, but no land costs since, according to the Town of Selmer, the Town and Industrial Board own the affected land (see Appendix A for copy of letter). The cost estimate worksheets for Option 3 are included as Appendix D.

It should be noted that the difference in cost between Option 2 and Option 3 is due to the terrain at Option 2 made it necessary to have approximately five feet of fill over the boxes to achieve the necessary grade. The extra height of the fill necessitated an increase in the length of the boxes compared with Option 3. The extra length of the boxes accounts for the increase in cost for the structure and in large part to the increase in cost.

## 4. FIELD INVESTIGATION

As part of this study, a field investigation was made on Tuesday, November 18, 2008 at 10:00 AM by:
Liz Smith, TDOT Conceptual and NEPA
Roger Lewis, TDOT Project Management
Jane Jones, TDOT Design
David Robinson, Mayor of Selmer
Rudy Moore, McNairy County EMA
Whitney Sullivan, Southwest TN Development District
Layne Moffett, Pickwick Electric Co-op
Barry Alexander, Neel-Schaffer (N-S)
Dyan Damron, N-S
At the field review, the history of the study area, previous correspondence and findings were discussed. Discussion was also held regarding the scarification of the access across from Lakeview Road. The team was informed that the Glover Drive
approach would be scarified, leaving the existing drainage system in place. The history of the project was discussed by Mayor Robinson. Conceptual sketches of a new access were provided by Mr. Lewis.

Mayor Robinson asked if the designation of a blue line stream that the new access will cross can be checked to ensure its classification. A public meeting will be held once the details of the project are developed. The Town of Selmer will manage these public meetings.

The field review notes are included as Appendix E .

## 5. ADDITIONAL CONDITIONS AND ISSUES

### 5.1 Environmental Protection Agency Results

A search of occurrences of Environmental Protection Agency (EPA) items within the study area resulted in no locations found. The EPA results indicate that there are no Superfund National Priorities List (NPL) sites located within the study area. Also, there were no Toxics Release Inventory (TRI) locations within the study area.

### 5.2 FEMA Flood Zone Results

A review of the Federal Emergency Management Agency (FEMA) flood maps indicates that the study intersection is located within a published flood plain, according to Map Number 4701320004D effective December 2, 2008. Also, there is a blue line stream that runs parallel to State Route 5 just west of the road. The new access will cross this stream.

### 5.3 Early Environmental Screening (EES)

In preparation of Transportation Planning Reports (TPR), TDOT has introduced an environmental screening process for the project study area. By screening the latest available Geographic Information Systems (GIS) environmental data during the early stages of project planning, TDOT and the public will be better prepared to anticipate potential environmental issues and mitigation requirements. This screening process involves using GIS to assess environmental data as it spatially relates to the project's Area of Potential Effect (APE). In broad terms, the GIS environmental data reviewed in this TPR include the following layers:

* 1,000 ft EES Corridor
> Community Impact--Cemetery Sites: Cemetery \& Cemetery Property
$>$ Institutions-Churches, Schools, Hospitals
$>$ Sensitive Community Populations
$>$ Ecology—Rare \& Protected Species: Bats
> Railroads \& Public Lands-Railroads
* 2,000 ft EES Corridor
> Historic Architecture—National Register
> Hazardous Substances \& Geology
- Superfund Sites
- Geology—Superfund Sites
> Railroads \& Public Lands-TWRA Lakes \& Other Public Lands
* 4,000 ft EES Corridor
$>$ Ecology-Terrestrial Species
$>$ TDEC Conservation Sites
> TDEC Scenic Waterways
> Large Wetland Impacts
> Railroads \& Public Lands
- Tennessee Natural Areas Programs \& Wildlife Management Areas


## * 10,000 ft EES Corridor

$>$ Ecology—Rare \& Protected Species: Aquatic Species
> Hazardous Substances \& Geology-Geology: Caves
As of the publication of this document, the GIS data within each layer was up to date relevant to date of its publication. This data will be updated as part of the ongoing project development process.

All of the previously referenced GIS data is shown on the study area location maps included in Appendix F. Also more detailed EES Scoring Sheets are included in Appendix F.

## APPENDIX

A. Approved Legislation
B. Turning Movement Counts
C. Conceptual Layouts
D. Cost Estimate Worksheets
E. Field Review Notes
F. EES Material

Appendix A

## Approved Legislation

(c) From the funds appropriated to the Department of Transportation for construction, there is earmarked the sum of $\$ 650,000$ for the sole purpose of improvements of an access road to the University of Tennessee at Martin Center in McNairy County.
(d) From the funds appropriated to the Department of Transportation for construction, there is earmarked the sum of $\$ 700,000$ for the sole purpose of constructing an entrance at the University of Tennessee at Martin McNairy County/Selmer campus.

Item 30. From the funds appropriated to the Department of Military, there is earmarked a sum sufficient for the sole purpose of implementing Senate Bill No. 2487/House Bill No. 2468 and Senate Joint Resolution No. 667, if such bill and resolution become law.

Item 31. From the funds appropriated to the Comptroller of the Treasury for property tax relief, there is earmarked a sum sufficient for the sole purpose of implementing Senate Bill No. 1555/House Bill No. 1350 and Senate Bill No. 2764/House Bill No. 2777, if such bills become law.

Item 32. From the funds appropriated by the provisions of this act for classification compensation and compression, there is earmarked a sum sufficient to be allocated to the Secretary of State, Office of the Comptroller and the Treasury Department, for the sole purpose of addressing compensation adjustments. Any sulch sum allocated to the Secretary of State, Office of the Comptroller or the Treasury Department shall be subject to approval by both Speakers.

Item 33. From the funds appropriated by the provisions of this act for classification compensation, there is earmarked a sum sufficient to be allocated to the General Assembly for the sole purpose of addressing compensation adjustments.

Item 34. From the funds appropriated to the Department of Environment and Conservation, there is earmarked a sum of $\$ 50,000$ for the sole purpose of making a grant in such amount to the Tennessee Parks and Greenways Foundation for the sole purpose of preserving public presentations of Tennessee State Naturalist, Mack Prichard.

Item 35. From the funds appropriated to the unemployment compensation trust fund, there is earmarked a sum sufficient for the sole purpose of implementing Senate Bill No. 3036/House Bill No. 2883, relative to unemployment benefits, if such bill becomes law.

Item 36. From the funds appropriatted to the Alcohol and Drug Addiction Treatment Fund (ADAT) established by $\S 40-33-211(\mathrm{c})(2)$, there is earmarked a sum sufficient not to exceed $\$ 1,591,000$ for the sole purpose of implementing the provisions of Senate Bill No. 3212/House Bill No. 3235, relative to drug and alcohol assessments and treatment, if such bill becomes law.

Item 37. From the funds appropriated to the Department of Commerce and Insurance, there is earmarked a sum sufficient for the sole purpose of implementing the provisions of Senate Bill No. 3718/House Bill No. 3792, relative to firefighters' training, if such bill becomes a law.

Item 38. From the funds appropriated to the Department of Personnel, there is earmarked a sum sufficient for the sole purpose of developing a proposed comprehensive

# Town of Sefmer, Tennessee 

Aldermen John Smith John Finlayson Paul Simpson Lloyd Tennyson Edward Smith

DAVID ROBINSON, Mayor ANN HENDERSON, Recorder

March 3, 2009

Mr. Paul Degges, P.E.
Chief Engineer
Tennessee Department of Transportation
505 Deaderick Street, Suite 700
Nashville, TN 37243

## Dear Paul,

Per your request, please consider this letter as confirmation that the Town of Selmer and the Selmer - McNairy County Industrial Development Board will provide the land at no cost to TDOT for the exit ramp off the Hwy 45 bypass into the North Industrial Park at Three Star Drive.
Should you need additional information or documentation, please let me know.

cc: Mr. Maurice Frank Hamm
Mr. Jim Rickman
Mayor Jai Templeton
Ms. Dyan Damron

Appendix B
Turning Movement Counts

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

|  |  |  |  |  | at | Lakeview Road |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Date: 11/6/2008$\qquad$ |  |  |  |  |  |  |  | N-S Project Number: |  |  | 7287-003 |  |
| Recorder: C. Rogers |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Northbound |  |  | Southbound |  |  | Eastbound |  |  | Westbound |  |  |
|  | SR 45 |  |  | SR 45 |  |  | Lakeview Rd |  |  | Lakeview Rd |  |  |
| Start Time | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 6:00 |  |  |  |  |  |  |  |  |  |  |  |  |
| 6:15 |  |  |  |  |  |  |  |  |  |  |  |  |
| 6:30 |  |  |  |  |  |  |  |  |  |  |  |  |
| 6:45 |  |  |  |  |  |  |  |  |  |  |  |  |
| 7:00 | 1 | 49 | 1 | 0 | 55 | 0 | 1 | 0 | 1 | 7 | 0 | 3 |
| 7:15 | 4 | 79 | 3 | 1 | 85 | 1 | 2 | 0 | 3 | 7 | 1 | 0 |
| 7:30 | 3 | 72 | 1 | 2 | 81 | 1 | 0 | 0 | 3 | 8 | 1 | 3 |
| 7:45 | 7 | 61 | 3 | 3 | 65 | 0 | 0 | 1 | 1 | 2 | 1 | 0 |
| 8:00 | 4 | 78 | 0 | 0 | 62 | 3 | 2 | 3 | 4 | 2 | 3 | 0 |
| 8:15 | 7 | 58 | 1 | 1 | 68 | 0 | 0 | 0 | 3 | 6 | 1 | 0 |
| 8:30 | 4 | 60 | 5 | 1 | 75 | 2 | 0 | 0 | 3 | 1 | 0 | 2 |
| 8:45 | 4 | 51 | 2 | 0 | 66 | 0 | 2 | 2 | 4 | 0 | 2 | 0 |
| 9:00 |  |  |  |  |  |  |  |  |  |  |  |  |
| 9:15 |  |  |  |  |  |  |  |  |  |  |  |  |
| 9:30 |  |  |  |  |  |  |  |  |  |  |  |  |
| 9:45 |  |  |  |  |  |  |  |  |  |  |  |  |
| 10:00 |  |  |  |  |  |  |  |  |  |  |  |  |
| 10:15 |  |  |  |  |  |  |  |  |  |  |  |  |
| 10:30 |  |  |  |  |  |  |  |  |  |  |  |  |
| 10:45 |  |  |  |  |  |  |  |  |  |  |  |  |
| 11:00 | 6 | 72 | 5 | 1 | 52 | 2 | 0 | 0 | 6 | 3 | 1 | 1 |
| 11:15 | 4 | 60 | 6 | 0 | 61 | 0 | 1 | 0 | 4 | 3 | 0 | 1 |
| $11: 30$ | 8 | 54 | 1 | 1 | 53 | 1 | 1 | 3 | 13 | 5 | 3 | 0 |
| 11:45 | 4 | 69 | 1 | 0 | 65 | 1 | 0 | 0 | 6 | 3 | 4 | 0 |
| 12:00 | 4 | 65 | 1 | 0 | 51 | 0 | 1 | 1 | 9 | 4 | 0 | 0 |
| 12 :15 | 14 | 66 | 4 | 1 | 64 | 1 | 0 | 0 | 3 | 0 | 2 | 1 |
| $12: 30$ | 8 | 74 | 3 | 0 | 59 | 1 | 0 | 1 | 9 | 3 | 0 | 0 |
| 12:45 | 10 | 74 | 3 | 1 | 61 | 2 | 0 | 0 | 1 | 3 | 2 | 0 |
| 1:00 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1:15 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1:30 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1:45 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2:00 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2:15 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2:30 | 6 | 65 | 6 | 1 | 66 | 1 | 2 | 0 | 12 | 2 | 0 | 0 |
| 2:45 | 10 | 62 | 5 | 1 | 74 | 0 | 0 | 0 | 3 | 5 | 0 | 2 |
| 3:00 | 6 | 99 | 4 | 0 | 79 | 3 | 1 | 0 | 7 | 10 | 3 | 1 |
| 3:15 | 3 | 77 | 2 | 1 | 57 | 0 | 0 | 1 | 6 | 6 | 2 | 0 |
| 3:30 | 5 | 85 | 4 | 0 | 79 | 0 | 0 | 0 | 9 | 5 | 0 | 2 |
| 3:45 | 13 | 84 | 1 | 2 | 103 | 3 | 1 | 0 | 6 | 5 | 0 | 0 |
| 4:00 | 3 | 96 | 3 | 2 | 81 | 0 | 0 | 0 | 2 | 2 | 1 | 3 |
| 4:15 | 4 | 81 | 3 | 2 | 69 | 1 | 1 | 1 | 11 | 3 | 1 | 0 |
| 4:30 | 3 | 90 | 5 | 2 | 83 | 0 | 0 | 1 | 16 | 8 | 0 | 1 |
| 4:45 | 3 | 88 | 1 | 1 | 62 | 1 | 1 | 0 | 13 | 5 | 0 | 0 |
| 5:00 | 4 | 100 | 8 | 1 | 79 | 1 | 0 | 0 | 9 | 1 | 0 | 2 |
| 5:15 | 7 | 78 | 2 | 0 | 64 | 0 | 0 | 0 | 5 | 3 | 7 | 3 |
| 5:30 | 15 | 71 | 0 | 0 | 70 | 0 | 2 | 3 | 2 | 1 | 0 | 0 |
| 5:45 | 15 | 55 | 1 | 3 | 78 | 3 | 0 | 0 | 1 | 1 | 0 | 1 |
| 6:00 |  |  |  |  |  |  |  |  |  |  |  |  |
| 6:15 |  |  |  |  |  |  |  |  |  |  |  |  |
| 6:30 |  |  |  |  |  |  |  |  |  |  |  |  |
| 6:45 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| AM Peak | 18 | 290 | 7 | 6 | 293 | 5 | 4 | 4 | 11 | 19 | 6 | 3 |
| Mid Peak | 30 | 274 | 9 | 1 | 239 | 3 | 1 | 2 | 27 | 10 | 6 | 1 |
| PM Peak | 23 | 351 | 12 | 8 | 336 | 4 | 2 | 2 | 35 | 18 | 2 | 4 |

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

| Intersection: State Route 45 |  |  |  |  | at | Dowty Road |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Date: 11/6/2008 |  |  |  |  |  |  |  | N-S Project Number: |  |  | 7287-003 |  |
| Recorder: D. Owen |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Northbound |  |  | Southbound |  |  | Eastbound |  |  | Westbound |  |  |
|  | SR 45 |  |  | SR 45 |  |  | Dowty Rd |  |  | Dowty Rd |  |  |
| Start Time | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 6:00 |  |  |  |  |  |  |  |  |  |  |  |  |
| 6:15 |  |  |  |  |  |  |  |  |  |  |  |  |
| 6:30 |  |  |  |  |  |  |  |  |  |  |  |  |
| 6:45 |  |  |  |  |  |  |  |  |  |  |  |  |
| 7:00 | 0 | 55 | 1 | 5 | 52 | 1 | 0 | 2 | 3 | 1 | 2 | 1 |
| 7:15 | 1 | 74 | 3 | 4 | 76 | 2 | 0 | 0 | 2 | 5 | 1 | 0 |
| 7:30 | 1 | 68 | 0 | 2 | 73 | 3 | 0 | 2 | 1 | 5 | 2 | 6 |
| 7:45 | 0 | 56 | 4 | 4 | 70 | 2 | 0 | 3 | 2 | 2 | 2 | 4 |
| 8:00 | 2 | 73 | 1 | 2 | 51 | 1 | 0 | 4 | 4 | 2 | 3 | 6 |
| 8:15 | 1 | 64 | 0 | 5 | 73 | 2 | 0 | 0 | 1 | 0 | 2 | 1 |
| 8:30 | 1 | 55 | 1 | 1 | 78 | 0 | 1 | 1 | 2 | 2 | 1 | 2 |
| 8:45 | 1 | 42 | 10 | 1 | 63 | 0 | 0 | 1 | 2 | 1 | 2 | 2 |
| 9:00 |  |  |  |  |  |  |  |  |  |  |  |  |
| 9:15 |  |  |  |  |  |  |  |  |  |  |  |  |
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| 9:45 |  |  |  |  |  |  |  |  |  |  |  |  |
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| 10:15 |  |  |  |  |  |  |  |  |  |  |  |  |
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| 10:45 |  |  |  |  |  |  |  |  |  |  |  |  |
| 11:00 | 2 | 72 | 0 | 3 | 50 | 2 | 0 | 1 | 0 | 1 | 1 | 4 |
| $11: 15$ | 2 | 59 | 3 | 3 | 55 | 3 | 1 | 1 | 2 | 4 | 2 | 2 |
| 11:30 | 0 | 50 | 2 | 2 | 51 | 0 | 3 | 4 | 3 | 0 | 3 | 3 |
| $11: 45$ | 5 | 62 | 0 | 2 | 62 | 3 | 2 | 1 | 0 | 1 | 0 | 1 |
| 12:00 | 2 | 64 | 2 | 4 | 52 | 2 | 4 | 2 | 1 | 1 | 1 | 2 |
| 12:15 | 4 | 63 | 0 | 0 | 61 | 2 | 0 | 1 | 0 | 1 | 2 | 1 |
| 12:30 | 1 | 70 | 0 | 4 | 61 | 2 | 1 | 3 | 2 | 0 | 0 | 3 |
| 12:45 | 3 | 71 | 0 | 2 | 55 | 2 | 0 | 0 | 0 | 0 | 3 | 1 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1:15 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1:30 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1:45 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2:00 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2:15 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2:30 | 0 | 64 | 2 | 3 | 68 | 1 | 5 | 2 | 2 | 2 | 1 | 2 |
| 2:45 | 0 | 64 | 1 | 5 | 76 | 3 | 1 | 1 | 2 | 0 | 2 | 2 |
| 3:00 | 2 | 85 | 8 | 4 | 72 | 1 | 2 | 4 | 0 | 3 | 1 | 2 |
| 3:15 | 6 | 70 | 0 | 2 | 62 | 0 | 2 | 1 | 1 | 1 | 2 | 5 |
| 3:30 | 2 | 74 | 5 | 2 | 74 | 1 | 4 | 0 | 3 | 0 | 2 | 11 |
| 3:45 | 2 | 76 | 3 | 5 | 91 | 1 | 0 | 1 | 2 | 2 | 1 | 6 |
| 4:00 | 2 | 87 | 2 | 3 | 78 | 1 | 3 | 3 | 1 | 3 | 1 | 6 |
| 4:15 | 0 | 73 | 2 | 6 | 74 | 5 | 2 | 5 | 1 | 2 | 3 | 5 |
| 4:30 | 5 | 80 | 1 | 3 | 76 | 0 | 6 | 3 | 3 | 1 | 3 | 4 |
| 4:45 | 3 | 73 | 1 | 4 | 60 | 2 | 4 | 0 | 1 | 2 | 1 | 5 |
| 5:00 | 3 | 92 | 3 | 2 | 77 | 4 | 1 | 0 | 0 | 1 | 4 | 7 |
| 5:15 | 0 | 79 | 0 | 5 | 62 | 1 | 1 | 2 | 1 | 3 | 4 | 4 |
| 5:30 | 2 | 65 | 4 | 4 | 70 | 5 | 5 | 6 | 0 | 2 | 1 | 4 |
| 5:45 | 0 | 53 | 0 | 2 | 79 | 3 | 2 | 0 | 0 | 1 | 1 | 0 |
| 6:00 |  |  |  |  |  |  |  |  |  |  |  |  |
| 6:15 |  |  |  |  |  |  |  |  |  |  |  |  |
| 6:30 |  |  |  |  |  |  |  |  |  |  |  |  |
| 6:45 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| AM Peak | 4 | 271 | 8 | 12 | 270 | 8 | 0 | 9 | 9 | 14 | 8 | 16 |
| Mid Peak | 12 | 259 | 2 | 10 | 236 | 9 | 7 | 7 | 3 | 3 | 3 | 7 |
| PM Peak | 9 | 316 | 8 | 17 | 319 | 7 | 11 | 12 | 7 | 8 | 8 | 21 |

PROJECT NO.:
ROUTE:
COUNTY:
McNAIRY CITY:
S.R. 5

PROJECT PIN NUMBER: PROJECT DESCRIPTION: ENTRANCE TO U.T. MARTIN AT SELMER

## DIVISION REQUESTING:

MAINTENANCE
PLANNING
PROG. DEVELOPMENT \& ADM. PUBLIC TRANS. \& AERO.
YEAR PROJECT PROGRAMMED FOR CONSTRUCTION:
PROJECTED LETTING DATE:
STRUCTURES SURVEY \& DESIGN TRAFFIC SIGNAL DESIGN OTHER $\qquad$

TRAFFIC ASSIGNMENT:

|  | SEE ATTACHMENTS |  |  |  |  | $\begin{array}{c}\text { DESIGN } \\ \text { ROADWAY } \\ \text { \% TRUCKS }\end{array}$ |  | $\begin{array}{c}\text { DESIGN } \\ \text { AVERAGE }\end{array}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DAILY LOADS |  |  |  |  |  |  |  |  |  |$]$

REQUESTED BY: NAME BILL HART DATE 3/25/09

REVIEWED BY
,
BILL HART
DATE 3/25/09
DIVISION
ADDRESS
PROJECT PLANNING
SUITE 1000 JAMES K. POLK BLDG
NASHVILLE, TN 37243
TONY ARMSTRONG
 DATE 4.1.09 TRANSPORTATION MANAGER 1 SUITE 1000, JAMES K. POLK BUILDING

## APPROVED BY:

BILL HART
 DATE 4/1/09 TRANSPORTATION MANAGER 2
 SUITE 1000, JAMES K. POLK BUILDING

## COMMENTS:

THIS TRAFFIC IS BASED ON 2008 CYCLE COUNTS, 2-8 HOUR TURNING MOVEMENT COUNTS DONE BY NEEL-SCHAFFER [NOV. 2008] \& 4-24 HOUR SPECIAL MACHINE COUNTS [MARCH 2009]. THE FUTURE TRAFFIC IS BASED ON GROWTH RATE FROM THE ADAM COMPUTER PROGRAM.









Alternative "A"
McNAIRY COUNTY
SElmer
S.R. 5 C LAKEVIEW DR 2014 DHV

| $P M$ |
| :--- |
| $A M$ |

DATE: MARCH 26.2009



$\frac{\text { Alternative " } A \text { " }}{\text { MeNairy County }}$
SElmer
S.R. 5 e

2014 DHV
$P M$
$A M$
DATE: MARCH 26,2009 /,K.D.


Alternative "A" MNAIRY County 5.R. 5 C LAKEVIEW DR

$$
\frac{2034 D H V}{P M}
$$




Alternative "A"
Mc Nairy County
SELMER
S.R. 5 @ Proposed Ent.

$$
\frac{2034 \text { DHV }}{\frac{P M}{A M}}
$$





Alternative "B"
MeNAiry County
SELMER
S.R. 5 C LAKEVIEW DR. $\frac{2014 \text { DHV }}{P M}$
G.K.D. DATE: MARCH 30,2009





Alternative "B"
MeNAiry County SELMER
S.R. 5 C LAKEVIEW DR

$$
\frac{2034 \text { DHV }}{P M}
$$




$\qquad$
Analyst: DCD
Agency/Co.: Neel-Schaffer, Inc.
Date Performed: 2/6/2009
Analysis Time Period: Existing AM Peak Hour
Intersection: SR 5 \& Dowty
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2008
Project ID: UTM Selmer Campus - State Route 5 TPR
East/West Street: Dowty Road
North/South Street: State Route 5
Intersection Orientation: NS Study period (hrs): 0.25


| Approach | NB | SB | Westbound |  |  | Eastbound |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Config | L | L \| |  | LTR |  |  | LTR |  |
| $v$ (vph) | 4 | 13 |  | 40 |  |  | 20 |  |
| $\mathrm{C}(\mathrm{m})$ (vph) | 1249 | 1248 |  | 535 |  |  | 531 |  |
| v/c | 0.00 | 0.01 |  | 0.07 |  |  | 0.04 |  |
| 95\% queue length | 0.01 | 0.03 |  | 0.24 |  |  | 0.12 |  |
| Control Delay | 7.9 | 7.9 |  | 12.3 |  |  | 12.0 |  |
| LOS | A | A |  | B |  |  | B |  |
| Approach Delay |  |  |  | 12.3 |  |  | 12.0 |  |
| Approach LOS |  |  |  | B |  |  | B |  |

$\qquad$
Analyst: DCD
Agency/Co.: Neel-Schaffer, Inc.
Date Performed: 2/6/2009
Analysis Time Period: Existing PM Peak Hour
Intersection: SR 5 \& Dowty
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2008
Project ID: UTM Selmer Campus - State Route 5 TPR
East/West Street: Dowty Road
North/South Street: State Route 5
Intersection Orientation: NS Study period (hrs): 0.25

| Major Street: Approach | 1 Northbound 3 |  |  | Southbound |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 4 | 5 | 6 |  |
|  | L | T | R | L | T | R |  |
| Volume | 9 | 316 | 8 | 17 | 319 | 7 |  |
| Peak-Hour Factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |  |
| Hourly Flow Rate, HFR | 10 | 351 | 8 | 18 | 354 | 7 |  |
| Percent Heavy Vehicles | 2 | -- | -- | 2 | - - | -- |  |
| Median Type/Storage | Undiv |  |  | 1 |  |  |  |
| RT Channelized? |  |  |  |  |  |  |  |
| Lanes | 1 | 2 |  | 1 | 2 |  |  |
| Configuration | L | T |  | L | T |  |  |
| Upstream Signal? |  | No |  |  | No |  |  |
| Minor Street: Approach Movement | Westbound |  |  | Eastbound |  |  |  |
|  | 7 | 8 | 9 | \| 10 | 11 | 12 |  |
|  | L | T | R | \| L | T | R |  |
| Volume | 8 | 8 | 21 | 11 | 12 |  |  |
| Peak Hour Factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |  |
| Hourly Flow Rate, HFR | 8 | 8 | 23 | 12 | 13 | 7 |  |
| Percent Heavy Vehicles | 2 | 2 | 2 | 2 | 2 | 2 |  |
| Percent Grade (\%) |  | 0 |  |  | 0 |  |  |
| Flared Approach: Exists?/Storage |  |  | No | 1 |  | No | / |
| Configuration |  | LTR |  |  | LTR |  |  |


| Approach | NB | SB |  | Westbound |  | Eastbound |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Movement | 1 | 4 | 7 |  | 9 | 10 | 11 | 12 |
| Lane Config | L | L |  | LTR |  |  | LTR |  |
| $v$ (vph) | 10 | 18 |  | 39 |  |  | 32 |  |
| $\mathrm{C}(\mathrm{m})$ (vph) | 1194 | 1196 |  | 524 |  |  | 390 |  |
| v/c | 0.01 | 0.02 |  | 0.07 |  |  | 0.08 |  |
| 95\% queue length | 0.03 | 0.05 |  | 0.24 |  |  | 0.27 |  |
| Control Delay | 8.0 | 8.1 |  | 12.4 |  |  | 15.1 |  |
| LOS | A | A |  | B |  |  | C |  |
| Approach Delay |  |  |  | 12.4 |  |  | 15.1 |  |
| Approach LOS |  |  |  | B |  |  | C |  |

$\qquad$
Analyst: DCD
Agency/Co.: Neel-Schaffer, Inc.
Date Performed: 2/6/2009
Analysis Time Period: Existing AM Peak Hour
Intersection: SR 5 \& Lakeview/Glover
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2008
Project ID: UTM Selmer Campus - State Route 5 TPR
East/West Street: Lakeview Road/Glover Drive
North/South Street: State Route 5
Intersection Orientation: NS Study period (hrs): 0.25

| Major Street: Approach | 1 Northbound 3 |  |  | Southbound |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 4 | 5 | 6 |  |
|  | L | T | R | L | T | R |  |
| Volume | 18 | 290 | 7 | 6 | 293 | 5 |  |
| Peak-Hour Factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |  |
| Hourly Flow Rate, HFR | 20 | 322 | 7 | 6 | 325 | 5 |  |
| Percent Heavy Vehicles | 2 | -- | -- | 2 | -- | -- |  |
| Median Type/Storage | Raised | curb |  | / 1 |  |  |  |
| RT Channelized? |  |  |  |  |  |  |  |
| Lanes | 1 | 2 |  | 1 | 2 |  |  |
| Configuration | L | T T |  | L | T |  |  |
| Upstream Signal? |  | No |  |  | No |  |  |
| Minor Street: Approach Movement | Westbound |  |  | Eastbound |  |  |  |
|  | 7 | 8 | 9 | \| 10 | 11 | 12 |  |
|  | L | T | R | \| L | T | R |  |
| Volume | 19 | 6 | 3 | 4 | 4 | 11 |  |
| Peak Hour Factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |  |
| Hourly Flow Rate, HFR | 21 | 6 | 3 | 4 | 4 | 12 |  |
| Percent Heavy Vehicles | 2 | 2 | 2 | 2 | 2 | 2 |  |
| Percent Grade (\%) |  | 0 |  |  | 0 |  |  |
| Flared Approach: Exists?/Storage |  |  | No | 1 |  | No | / |
| Configuration |  | LTR |  |  | LTR |  |  |


| Approach | NB | SB | Westbound |  |  | Eastbound |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Config | L | L \| |  | LTR |  |  | LTR |  |
| $v$ (vph) | 20 | 6 |  | 30 |  |  | 20 |  |
| $\mathrm{C}(\mathrm{m})$ (vph) | 1226 | 1227 |  | 501 |  |  | 642 |  |
| v/c | 0.02 | 0.00 |  | 0.06 |  |  | 0.03 |  |
| 95\% queue length | 0.05 | 0.01 |  | 0.19 |  |  | 0.10 |  |
| Control Delay | 8.0 | 7.9 |  | 12.6 |  |  | 10.8 |  |
| LOS | A | A |  | B |  |  | B |  |
| Approach Delay |  |  |  | 12.6 |  |  | 10.8 |  |
| Approach LOS |  |  |  | B |  |  | B |  |

$\qquad$
Analyst: DCD
Agency/Co.: Neel-Schaffer, Inc.
Date Performed: 2/6/2009
Analysis Time Period: Existing PM Peak Hour
Intersection: SR 5 \& Lakeview/Glover
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2008
Project ID: UTM Selmer Campus - State Route 5 TPR
East/West Street: Lakeview Road/Glover Drive
North/South Street: State Route 5
Intersection Orientation: NS Study period (hrs): 0.25

| Major Street: Approach | $1{ }_{2}{ }^{\text {Northbound }}$ |  |  | Southbound |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 4 | 5 | 6 |  |
|  | L | T | R | L | T | R |  |
| Volume | 23 | 351 | 12 | 8 | 336 | 4 |  |
| Peak-Hour Factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |  |
| Hourly Flow Rate, HFR | 25 | 390 | 13 | 8 | 373 | 4 |  |
| Percent Heavy Vehicles | 2 | -- | -- | 2 | - - | -- |  |
| Median Type/Storage | Undiv |  |  | 1 |  |  |  |
| RT Channelized? |  |  |  |  |  |  |  |
| Lanes | 1 | 2 |  | 1 | 2 |  |  |
| Configuration | L | T |  | L | T |  |  |
| Upstream Signal? |  | No |  |  | No |  |  |
| Minor Street: Approach Movement | Westbound |  |  | Eastbound |  |  |  |
|  | 7 | 8 | 9 | \| 10 | 11 | 12 |  |
|  | L | T | R | L | T | R |  |
| Volume | 18 | 2 | 4 | 2 | 2 | 35 |  |
| Peak Hour Factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |  |
| Hourly Flow Rate, HFR | 20 | 2 | 4 | 2 | 2 | 38 |  |
| Percent Heavy Vehicles | 2 | 2 | 2 | 2 | 2 | 2 |  |
| Percent Grade (\%) |  | 0 |  |  | 0 |  |  |
| Flared Approach: Exists?/Storage |  |  | No | 1 |  | No | / |
| Configuration |  | LTR |  |  | LTR |  |  |


| Approach | NB | SB |  | Westbound |  | Eastbound |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Config | L | L \| |  | LTR |  |  | LTR |  |
| $v$ (vph) | 25 | 8 |  | 26 |  |  | 42 |  |
| $\mathrm{C}(\mathrm{m})$ (vph) | 1178 | 1152 |  | 359 |  |  | 714 |  |
| v/c | 0.02 | 0.01 |  | 0.07 |  |  | 0.06 |  |
| 95\% queue length | 0.07 | 0.02 |  | 0.23 |  |  | 0.19 |  |
| Control Delay | 8.1 | 8.1 |  | 15.8 |  |  | 10.4 |  |
| LOS | A | A |  | C |  |  | B |  |
| Approach Delay |  |  |  | 15.8 |  |  | 10.4 |  |
| Approach LOS |  |  |  | C |  |  | B |  |

HCS2000: Unsignalized Intersections Release 4.1f
TWO-WAY STOP CONTROL SUMMARY $\qquad$

Analyst: DCD
Agency/Co.: Neel-Schaffer, Inc.
Date Performed: 2/6/2009
Analysis Time Period: Reassigned AM Peak Hour
Intersection: SR 5 \& Lakeview
Jurisdiction:
Units: U. S. Customary
Analysis Year:
2008
Project ID: UTM Selmer Campus - State Route 5 TPR
East/West Street: Lakeview Road
North/South Street: State Route 5
Intersection Orientation: NS Study period (hrs): 0.25


| Approach | NB | SB | Westbound |  |  | Eastbound |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Config |  | L |  | LR |  |  |  |  |
| v (vph) |  | 11 |  | 31 |  |  |  |  |
| $C(m)(v p h)$ |  | 1217 |  | 626 |  |  |  |  |
| v/c |  | 0.01 |  | 0.05 |  |  |  |  |
| 95\% queue length |  | 0.03 |  | 0.16 |  |  |  |  |
| Control Delay |  | 8.0 |  | 11.1 |  |  |  |  |
| LOS |  | A |  | B |  |  |  |  |
| Approach Delay |  |  |  | 11.1 |  |  |  |  |
| Approach LOS |  |  |  | B |  |  |  |  |

HCS2000: Unsignalized Intersections Release 4.1f
TWO-WAY STOP CONTROL SUMMARY $\qquad$

Analyst: DCD
Agency/Co.: Neel-Schaffer, Inc.
Date Performed: 2/6/2009
Analysis Time Period: Reassigned PM Peak Hour
Intersection: SR 5 \& Lakeview
Jurisdiction:
Units: U. S. Customary
Analysis Year:
2008
Project ID: UTM Selmer Campus - State Route 5 TPR
East/West Street: Lakeview Road
North/South Street: State Route 5
Intersection Orientation: NS Study period (hrs): 0.25


|  | $\begin{gathered} \text { Delay, } \\ \text { NB } \end{gathered}$ | Queue Length, and Level of Service |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Approach |  | SB |  | boun |  | Eastbound |  |  |
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Config |  | L |  | LR |  |  |  |  |
| $\checkmark$ (vph) |  | 11 |  | 26 |  |  |  |  |
| $C(m)(v p h)$ |  | 1140 |  | 553 |  |  |  |  |
| v/c |  | 0.01 |  | 0.05 |  |  |  |  |
| 95\% queue length |  | 0.03 |  | 0.15 |  |  |  |  |
| Control Delay |  | 8.2 |  | 11.8 |  |  |  |  |
| LOS |  | A |  | B |  |  |  |  |
| Approach Delay |  |  |  | 11.8 |  |  |  |  |
| Approach LOS |  |  |  | B |  |  |  |  |

HCS2000: Unsignalized Intersections Release 4.1f
TWO-WAY STOP CONTROL SUMMARY $\qquad$

Analyst: DCD
Agency/Co.: Neel-Schaffer, Inc.
Date Performed: 2/6/2009
Analysis Time Period: Reassigned AM Peak Hour
Intersection: SR 5 \& New Access
Jurisdiction:
Units: U. S. Customary
Analysis Year:
2008
Project ID: UTM Selmer Campus - State Route 5 TPR
East/West Street: New Access
North/South Street: State Route 5
Intersection Orientation: NS Study period (hrs): 0.25

| Major Street: Approach | Northbound |  |  | Southbound |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 | 6 |  |
|  | L | T | R | L | T | R |  |
| Volume | 18 | 290 |  |  | 299 | 5 |  |
| Peak-Hour Factor, PHF | 0.90 | 0.90 |  |  | 0.90 | 0.90 |  |
| Hourly Flow Rate, HFR | 20 | 322 |  |  | 332 | 5 |  |
| Percent Heavy Vehicles | 2 | -- | -- |  | -- | -- |  |
| Median Type/Storage | Raised | curb |  | / 1 |  |  |  |
| RT Channelized? |  |  |  |  |  |  |  |
| Lanes | 1 | 2 |  |  | 2 | 1 |  |
| Configuration | L | T |  |  | T |  |  |
| Upstream Signal? |  | No |  |  | No |  |  |
| Minor Street: App | Westbound |  |  | Eastbound |  |  |  |
|  | 7 | 8 | 9 | 10 | 11 | 12 |  |
|  | L | T | R | L | T | R |  |
| Volume |  |  |  | 4 |  | 10 |  |
| Peak Hour Factor, PHF |  |  |  | 0. |  | 0.90 |  |
| Hourly Flow Rate, HFR |  |  |  | 4 |  | 11 |  |
| Percent Heavy Vehicles |  |  |  | 2 |  | 2 |  |
| Percent Grade (\%) |  | 0 |  |  | $\bigcirc$ |  |  |
| Flared Approach: Exists?/Storage |  |  |  | / |  | No | / |
| Configuration |  |  |  | LR |  |  |  |



HCS2000: Unsignalized Intersections Release 4.1f
TWO-WAY STOP CONTROL SUMMARY $\qquad$

Analyst: DCD
Agency/Co.: Neel-Schaffer, Inc.
Date Performed: 2/6/2009
Analysis Time Period: Reassigned PM Peak Hour
Intersection: SR 5 \& New Access
Jurisdiction:
Units: U. S. Customary
Analysis Year:
2008
Project ID: UTM Selmer Campus - State Route 5 TPR
East/West Street: New Access
North/South Street: State Route 5
Intersection Orientation: NS Study period (hrs): 0.25



Appendix C

## Conceptual Layouts

Index Of Sheets SHEET NO. DESCRIPTION TYPICAL SECTION . OVERVIEW MAP

## STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION BUREAU OF ENGINEERING MCNAIRY COUNTY

## TENN.

$\qquad$ | vear |
| :---: |
| 2008 | SHET NO.

1
STATE ROUTE 5 (U.S. HWY 45) FROM LAKEVIEW/GLOVER D
TO THREE STAR DRIVE SERVING ut martin-selmer campus CONCEPT DRAWING state highway no. 5 f.a.h.s. no.

STUDY LENGTH
3855 FT.

INTERSECTION
SR-5 © LAKEVIEW/GLOVER DR
AND

U.s. oefartuent of transportation
feocral hichuar aministration








Appendix D
Cost Estimate Worksheets

## COST DATA SHEET

Project Total
PROJECT: SR 5 @ Campus Option '2'
LENGTH: 876 feet CROSS-SECTION: 4-lane, divided
Right-of-Way
Land, Improvements and Damages (0.38 $\pm$ Acres) ..... \$
Incidentals (1 Tracts) ..... \$
Relocation Payments: (0 Residences). Relocation Payments: (0 Residences). ..... \$(0 Business)(0 Non-Profits )
TOTAL RIGHT-OF-WAY COST. \$5,000.00
Utility Relocation
Reimbursable ..... \$
Non-Reimbursable. ..... \$
TOTAL ADJUSTMENT COST. \$ ..... 4,400.00
Construction
Clearing and Grubbing ..... \$
83,000.00
Earthwork ..... \$ ..... 154,000.00
Drainage (Includes Erosion Control) ..... \$
Structures. ..... \$
Paving ..... \$
Maintenance of Traffic ..... \$
Sodding ..... \$
Signing ..... \$
Signalization ..... \$
Guardrail ..... \$
28,000.00
Other Construction Items (8.5\%) ..... \$CONSTRUCTION SUB TOTALMobilization.\$
10\% Engineering and Contingencies \$ ..... 104,480.00
35,000.00
413,000.00
208,000.00
20,000.00
39,000.00
15,000.00
49,840.00
1,044,840.00
52,240.00
TOTAL CONSTRUCTION COST. \$ ..... $1,201,560.00$
Preliminary Engineering (10\%). ..... \$ ..... $120,200.00$
TOTAL PROJECT COST ..... \$ ..... $1,331,200.00$

## COST DATA SHEET <br> Project Total

PROJECT: SR 5 @ Three Star Drive ..... Option '3'
LENGTH: 868 feet CROSS-SECTION: 4-lane, divided
Right-of-Way
Land, Improvements and Damages ( $0.38 \pm$ Acres) ..... \$
Incidentals (2 Tracts) ..... \$
Relocation Payments: (0 Residences) ..... \$(0 Business)(0 Non-Profits )
TOTAL RIGHT-OF-WAY COST. \$
10,000.00
Utility Relocation
Reimbursable ..... \$
Non-Reimbursable. ..... \$
TOTAL ADJUSTMENT COST. \$ ..... 4,400.00
Construction
Clearing and Grubbing ..... 75,000.00
Earthwork. ..... 78,000.00
Drainage (Includes Erosion Control) ..... 40,000.00
Structures. ..... 256,000.00
Paving ..... 206,000.00
Maintenance of Traffic ..... 20,000.00
Sodding ..... 39,000.00
Signing. ..... 16,000.00
Signalization
28,000.00
Guardrail
43,040.00
Other Construction Items (8.5\%) ..... 801,040.00
Mobilization. ..... 40,050.00
10\% Engineering and Contingencies. ..... 80,100.00
TOTAL CONSTRUCTION COST. ..... 921,190.00
Preliminary Engineering (10\%). ..... \$ ..... 92,100.00
TOTAL PROJECT COST ..... \$
$1,027,700.00$

## Appendix E

## Field Review Notes

MEMORANDUM
TO: Christopher Armstrong, TDOT Planning landscape
FROM: Dyan Damron, Neel-Schaffer
DATE: November 21, 2008
SUBJECT: SR 5 - UT Selmer TPR Field Review
State Route 5 at UT Selmer TPR
Initial Field Review \& Stakeholder Meeting
Tuesday, November 18, 2008
10:00 a.m. (CST)
On-Site (State Route 5 between Lakeview Road and Dowty Road)
Attendees:
Liz Smith, TDOT Conceptual and NEPA
Roger Lewis, TDOT Project Management
Jane Jones, TDOT Design
David Robinson, Mayor of Selmer
Rudy Moore, McNairy County EMA
Whitney Sullivan, Southwest TN Development District
Layne Moffett, Pickwick Electric Co-op
Barry Alexander, Neel-Schaffer (N-S)
Dyan Damron, N-S
The following are highlights of the meeting/field review that was held:

1. Review of TPR Scope - N-S reviewed the general scope of work for the TPR being conducted for the new access to UT Selmer on State Route 5. Discussion was also held regarding the scarification of the access across from Lakeview Road. The history of the project was discussed by Mayor Robinson. Conceptual sketches of the new access were provided by Mr. Lewis.
2. Existing Access - There is an existing access across from Lakeview Road. This access location will be scarified. The controlled access fence will be extended across the scarified location. TDOT indicates that the median opening will remain at this location but the northbound left turn lane will be removed. Ms. Sullivan inquired why this access must be eliminated. It was answered that it would be removed to result in no net increase in the number of access points to UT Selmer and to minimize the turning movements along this segment of State Route 5.
3. New Access - A new access is proposed that will extend Three Star Road from its intersection with Tennessee Avenue to State Route 5. The controlled access fence will be cut to allow this new access. Also, a new median opening will be provided along State Route 5. It was indicated that the Town of Selmer will be responsible for acquiring right-ofway. This new access will require a blue line stream crossing.
4. Blue Line Stream - Mayor Robinson asked if the designation for the blue line stream that the new access will cross can be checked to ensure that it is properly classified.
5. Public Meeting - A public meeting will be held once the details of the project are developed. The Town of Selmer will manage these public meetings.
*If anyone has any changes, corrections, or additions, please contact Neel-Schaffer as soon as possible. Otherwise, $N$-S will proceed with the SR 5 at UT Selmer TPR assuming the above data is correct.


Eastbound view of the existing access at State Route 5 that will be scarified - across from Lakeview Road


Westbound view of the proposed location for new access - extension of Three Star Road across blue line stream

## Appendix F

## EES Material

## TD $\uparrow$ T

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

## Project Score Factors

|  | Total Impacts <br> Evaluated | Total Impacts <br> to Evaluate | EES Evaluation |
| :--- | :--- | ---: | :--- |
| Project Impact Areas: | $\mathbf{1 5}$ | $\mathbf{1 5}$ | Complete |
| Date of Evaluation: | March 03, 2009 |  |  |
| Evaluation done by: | Chris Armstrong |  |  |
| County: | Transportation Planner 4 |  |  |
| Route: | McNairy | State Route 5 (U.S. 45) |  |
| PIN: | 109927.01 |  |  |
| Termini: | Lakeview/Glover Drive to Three Star Drive |  |  |

Impact Ranking of Features Evaluated:
Features with No Impact
Total by Rank
12

Cemetery Sites \& Cemetery Properties
National Register Sites
Bat
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

Community Impacts Present:

## Institutions:

## Populations:

No population present
Minority populations 24\%
Linguistically isolated populations
Populations below poverty - State average- 13\%
Populations below poverty - State average- 27\%
EES Project Impact:

## Complete

## Impacts Evaluated Within 1,000 Ft of Study Area

## CEMETERY SITES \& CEMETERY PROPERTIES

## Impact

| Project Impact | $\nabla$None - No impact on the project as there are no known cemetery sites within or abutting <br> (Environmental, Time, <br> the project study area or corridor. It is anticipated that a 'normal' effort to complete this <br> environmental review as part of NEPA. |
| :--- | :--- |
| Cost, Design, and <br> Maintenance) |  |

## INSTITUTIONS \& SENSITIVE COMMUNITY POPULATIONS

## Sensitive Populations Project Impact:

Present
Not Present

## Institutions:

| Hospital | $\Gamma$ | $\nabla$ |
| :--- | :---: | :---: |
| School | $\Gamma$ | $\nabla$ |
| Church | $\Gamma$ | $\Gamma$ |
| Public Building | $\Gamma$ | $\nabla$ |

## Populations:

| No population present | $\Gamma$ | $\Gamma$ |
| :--- | :---: | :---: |
| 65 and older populations | $\Gamma$ | $\Gamma$ |
| Disability populations | $\Gamma$ | $\Gamma$ |
| Households without a vehicle | $\Gamma$ | $\Gamma$ |
| Minority populations $24 \%$ | $\Gamma$ | $\Gamma$ |
| Linguistically isolated populations | $\Gamma$ | $\Gamma$ |
|  |  |  |


| Populations below poverty - State average $-13 \%$ | $\Gamma$ | $\Gamma$ |
| :--- | :---: | :---: |
| Populations below poverty - State average $-27 \%$ | $\Gamma$ | $\Gamma$ |

## BAT

Impact

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

$\sqrt{ }$ 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) |

$\sqrt{ } \sqrt{ }$ None - No impact on the project is anticipated. There are no railroads located within the project study area or corridor.

Maintenance)

## Impacts Evaluated Within 2,000 Ft of Study Area

## NATIONAL REGISTER SITES

## Impact

| Project Impact <br> (Environmental, Time, <br> Cost, Design, and <br> Maintenance) |
| :--- |

$\checkmark$ 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)

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) |

$\checkmark$ 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

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

$\checkmark$ None - No impact on the project is anticipated as there area 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)

Low - Minimal impact on the project is predicted as there is a known rare or state protected terrestrial species located within the project study area or corridor. A survey for the species may be required.

## TDEC CONSERVATION SITES \& TDEC SCENIC WATERWAYS

## Impact

| Project Impact | $\boxed{ }$None - No project impact is expected as there are no scenic waterways or TDEC <br> Conservation Sites within project study area or corridor. |
| :--- | :--- |
| (Environment, Time, <br> Cost, Design, <br> Maintenance) |  |

## LARGE WETLAND IMPACTS

## Impact

Project Impact (Environment, Time, Cost, Design,<br>Maintenance)

$\sqrt{ } \sqrt{ }$ Moderate - Region 4: Moderate impact on the project is likely as there are greater than 0.5 but less 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)

$\sqrt{ } \sqrt{ }$ 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 | $\boxed{ }$None - No project impact is anticipated as a WMA does not abut nor is located within the <br> project study area or corridor. <br> (Environment, Time, <br> Cost, Design, and <br> Maintenance) |
| :--- | :--- |

## Impacts Evaluated Within 10,000 Ft of Study Area

## AQUATIC SPECIES

## Impact

| Project Impact <br> (Environment, Time, <br> Cost, Design, and <br> Maintenance) | None - No impact to the project is anticipated. There is no known occurrence of a rare, <br> state, or federally-protected aquatic species within the project study area or corridor. |
| :--- | :--- |

## CAVES

## Impact

| Project Impact <br> (Environment, Time, <br> Cost, Design, and <br> Maintenance) | $\boxed{ }$None - No project impact is anticipated as there are no caves in the project study area or <br> corridor. |
| :--- | :--- |

## EES Report

Proiect 109927.01
1,000 Foot Corridor
December 17, 2008

## Community Impact

| Cemetery Sites |  |
| :--- | :--- |
| Cemetery | There are none. |
| Cemetery Property | There are none. |
| Institutions | There are none. |
| Sensitive Community Populations |  |
| No Population Present | Present |
| Population 65 \& Over | Not Present |
| Disability | Not Present |
| Households without Vehicle | Not Present |
| Minority Populuation-24\% | Not Present |
| Linguistically Isolated | Present |
| Below Poverty-13.5\% | Not Present |
| Below Poverty-27\% | Not Present |

## Ecology

Rare \& Protected Species
Bats
Railroads \& Public Lands
Railroads

There are none.

Not Present


## Legend



- Hospital
- School

A Church
血 Public Building
No Population Present

5 | 55 | $>65$ |
| :--- | :--- | Population 65 and OverDisability

T Households without a vehicle
$\therefore \therefore$ Minority Population - 24\%
$\square$ Linguistically Isolated
P//入 Below Poverty - 13.5\%

N Below Poverty - 27\%Bat
Rivers and Waterways
Streams
Lakes and Ponds

State Route 5 (US45)

UTM Selmer
Access Road
Early
Environmental Screening

1,000 ft Corridor

## EES Report

PIN 109927.01
2,000 Foot Corridor
December 18, 2008
Historic Architecture \& Archaeology
Historic Architecture
National Register Sites
There are none.
Hazardous Substances \& Geology
Superfund Sites
There are none.
Geology
Pyritic Rock
Railroads \& Public Lands
Public Lands
TWRA Lakes
Other Public Lands

There are none.
There are none.


Limestone
Dolomite
TWRA Lakes
Recre
Federal
State
Rivers and Waterways
Streams
Lakes and Ponds

State Route 5 (US45)

UTM Selmer Access Road

Early Environmental Screening

2,000 ft Corridor

## EES Report

PIN 109927.01
4,000 Foot Corridor
December 18, 2008

## Ecology

## Rare \& Protected Species

Terrestrial Species
Drosera capillaris
Total $=2$
USESA
SPROT

Magnolia virginiana
TDEC Conservation Sites
TDEC Scenic Waterways
Large Wetland Impacts
POWHh
POWHx
POWHh
PSS1A
POWHh
POWH
POWHh
POWHh
POWHh
Railroads \& Public Lands
Public Lands
Tennessee Natural Areas Program
Wildlife Management Areas
There are none.
There are none.


## Legend

| $\square$ | Large Wetland Impacts |
| :--- | :--- |
| $\square$ | Terrestrial Species |
| $\square \square$ | TDEC Conservation Sites |
| $\square$ | TDEC Scenic Waterways |
| $\square$ | Tennessee Natural Areas Program |
| $\square$ | Wildlife Management Areas |

State Route 5 (US
45)

UTM Selmer
Access Road
Early
Environmental
Screening
4,000 ft Corridor

# EES Report 

PIN 109927.01
10,000 Foot Corridor
December 18, 2008

## Ecology

Rare \& Protected Species

Aquatic Species
Hazardous Substances \& Geology
Geology
Caves

There are none.

There are none.


## Legend

$\square$ Aquatic Species

* Caves
$\square$ Rivers and Waterways
Streams
$\square$ Lakes and Ponds

| State Route 5 (US- |
| :---: |
| 45) |
| UTM Selmer |
| Access Road |
| Early |
| Environmental |
| Screening |
| $10,000 \mathrm{ft}$ Corridor |


[^0]:    This document is covered by 23 USC § 409 and its production pursuant to fulfilling public planning requirements does not waive the provisions of $\S 409$.

