# MEBANE, NC

5-10-18

## TRAFFIC SEPARATION STUDY




NC BY TRAIN

Mebane
Positively Charming

wsp

# TRAFFIC SEPARATION STUDY
# for the
# TOWN OF MEBANE, NC

May 2018

Documentation Prepared by WSP USA

Scot Sibert, AICP: Project Manager
WSP USA

NORTH CAROLINA PROFESSIONAL SEAL 030740 8/20/18 ENGINEER STEVEN MATHEW KARNIS

Steve Karnis, PE: Rail Design Lead
WSP USA

For the North Carolina Department of Transportation

Nancy Horne, PE: Project Manager

**APPENDICES**

## EXECUTIVE SUMMARY

In a joint cooperative effort with the City of Mebane, Norfolk Southern (NS), the North Carolina Department of Transportation (NCDOT), and North Carolina Railroad (NCRR), have completed the Mebane Traffic Separation Study (TSS), which focuses on eight (8) existing at-grade roadway-railroad crossings along a 5-mile span.

A TSS is part of a comprehensive evaluation of vehicular, train, and pedestrian patterns and interactions along a defined local or regional rail corridor. The purpose of the TSS is to determine the need for improvements and/or elimination of public at-grade crossings to improve safety and mobility for motorists, pedestrians, rail passengers, and train crews. The TSS evaluated the rail line in Mebane that crosses various streets, as well as any planned or programmed railroad and roadway improvements within the study area. Figure 1 defines the study area of the project.

While the study focused only on eight crossings, it also supports the larger goals of the NCDOT Rail Division's focus on improved freight and passenger rail operations and quality of life impacts (crossing safety, noise, air quality) for rail-adjacent communities. With the projected increase in freight and passenger rail traffic, there is a need to focus attention to the safety of this corridor and the mobility of all forms of traffic.

The process involved components relating to Crash Data, Traffic Data, Capacity Analysis, Safety and Mobility Issues, and Public Involvement.

<u>Crash and Traffic Data</u>
Crash data from NCDOT and the Federal Railroad Administration (FRA) was analyzed from 1978 to 2016.

Twenty-seven crashes involving train/vehicle or train/pedestrian collisions were reported at crossings in the study area, as summarized in Table ES-1. Of these, 7 involved fatalities, and a majority of the collisions revolved around automobile drivers maneuvering around down gates at the crossings and not stopping prior to the crossing when a train was approaching. It will be important for the City of Mebane and NCRR work together in installing fencing along the rail corridor through the downtown. This would direct pedestrians to the appropriate sidewalks at at-grade crossings as a safe crossing movement.

**Table ES-1: Crash Summary**

| NS Crossings | | | | | |
|---|---|---|---|---|---|
| **Crossing No.** | **Street Name** | **Total # of Crashes** | **# of Fatalities** | **# of Injuries** | **PDO** |
| 735 464L | SR 1940 – Gibson Road | 3 | 0 | 3 | 0 |
| 735 465T | SR 1976 – Lake Latham Road | 4 | 0 | 1 | 3 |
| 735 468N | SR 1965 – Moore Road | 2 | 0 | 1 | 1 |
| 735 496V | SR 1962 – S 3rd Street | 0 | 0 | 0 | 0 |
| 735 471W | 4th Street | 2 | 0 | 1 | 1 |
| 735 472D | NC 119 - 5th Street | 8 | 2 | 1 | 5 |
| 735 474S | SR 1402 - Mattress Factory | 4 | 0 | 3 | 1 |
| 735 141R | SR 1114 - Buckhorn Road | 3 | 1 | 0 | 2 |
| Pedestrian Crossing Tracks | | 3 | 4 | 0 | 0 |

NCDOT Division 7 Highways recently conducted an intersection diagnostics analysis pertaining to the signalized intersection of NC 119 (5th Street) and Washington Street and US 70. The analysis identified short terms improvements for the signal operations and vehicle queueing along 5th Street. Recently, NCDOT Division removed the advanced stop lines And re-stripped the intersection of 5th Street and Washington Street with a "Do not block intersection" marking (along with signage). Prior to the TSS study, results showed minimal improvements due to the continuous left turn ability.

Further crash analysis was conducted at the intersections to identify the types of accidents and the locations. As shown in Figure 18, there is a high volume of accidents at the intersection of 5th Street and Washington Street, relating to left turn traffic crossing 5th Street or vehicles trying to cross 5th Street.

Capacity Analysis

The level of service (LOS) for each crossing was determined based on computed values and the Highway Capacity Manual procedures to determine the capacity of a crossing and identify the type of improvement that would be needed. A traffic analysis was performed to determine the operating characteristics of the adjacent road network at NC 119 (5th Street and US 70) due to the existing geometry.

Safety and Mobility Issues

Safety and mobility issues were considered at each crossing based on roadway geometry, existing warning devices, and behavior of users across the tracks. The following conditions were observed:

- Vehicles were observed queuing over the tracks at 5th Street
- New signage and pavement markings were installed at 5th Street to warn and deter vehicles from stopping on the tracks
- All crossings have signals and gates
- There is a need for improved pedestrian connectivity between US 70 and Washington Street

Public Involvement

Public input involved establishing a Stakeholder Committee and conducting a series of public meetings to gather information and receive public comments on existing conditions and feedback on proposed recommendations. These recommendations include safety improvements, pedestrian crossing enhancements, and possible closures at existing street/rail grade crossings in the City of Mebane.

*Stakeholder Committee*

A Stakeholder Committee was established in order to provide critical input in reaching consensus on grade crossing recommendations. The Stakeholders involved:

| | |
|---|---|
| City of Mebane | NCDOT Rail Division |
| NCDOT Division of Highway 5 & 7 | NC Railroad |
| Burlington-Graham MPO | Alamance EMS |
| Durham-Chapel Hill – Carrboro MPO | Alamance Chamber of Commerce |
| Alamance County School District | Orange County School District |
| Norfolk Southern | Orange County EMS |

The Stakeholder Committee met during the course of this study. The first meeting was held on August 4th, 2016 with various city departments, emergency response providers, and school district representatives to get their initial input for each crossing.

A second Stakeholder Committee meeting was held on February 16th, 2017 to present the various design concepts for

improving the safety at the at-grade crossings and receive feedback on preliminary concepts. The preliminary concepts would be carried forward to a second Public Information Workshop.

The third Stakeholder Committee meeting was held on June 14, 2017. The final recommendations were presented to the committee for their approval to include in the report and present to City Council. Discussions revolved around options for 735 472D (NC 119/5th St). The committee recommended moving forward the option that is found in Section G. Further studies relating to the 735 141R (Buckhorn Rd) at-grade crossing should coordinate with Orange County Planning Department and the Interchange Analysis & Corridor Study for Mattress Factory Road and any modifications to Buckhorn Road related to that study.

*Citizens Informational Workshops*
The Public Involvement program included two Citizen Informational Workshops (CIWs). These meetings are summarized below.

The first CIW was held on November 15th, 2016. Study team members were available to introduce the Mebane Traffic Separation Study, to answer questions related to the study, and to receive comments to aid in developing recommendations for improving the eight rail crossings.

Primary concerns were with increased traffic along Holt Street and reduced access to US 70 through the closing of Lake Latham Road at-grade crossing. However, the closing of the crossing is not part of the Traffic Separation Study, it is part of the NC 119 Bypass (U-3109A). Additional concern revolved around the traffic along the 5th Street at-grade crossing, as well as the lack of pedestrian connectivity between Washington Street and US 70.

*Citizens Informational Workshop #2*
The second CIW was held on April 18th, 2017 at Mebane City Hall. The workshop presented the various improvement options for each crossing, provided explanation of how/why the concepts were developed, and answered questions related to the concept recommendations for improving six of the eight rail crossings.

The study team presented improvements for six of the eight rail crossings, with two rail crossings identifying multiple options for improvements. Two crossings recommended median barriers and widening of crossing shoulders, one crossing identified three different types of grade separation options, one crossing with multiple intersection improvements, and a crossing closure option, and two pedestrian grade separated crossing options.

Comments included utilization of elevators rather than ramps at the pedestrian crossing options to reduce the footprint of the improvements.

*City Council Presentation and Public Hearing*
The TSS was presented to the City Council on September 11, 2017. The intent was to provide the council with a synopsis of the study process, findings, and recommendations.

Council members were in full support of majority of the recommendations. Though council members did convey their concern about approving the closure of 4th Street at-grade crossing and the design configuration of 5th Street at-grade crossing. Council members believed that 4th Street should remain open.

As for 5th Street, council members agreed that combining the through and right turn movements into a single lane, thus

providing opportunity for constructing a sidewalk and reducing the radius at the intersection with US 70 would be beneficial. However, council members were concerned that the mountable median barrier along 5th Street would impact travel movements across Washington Street. Council members believed that there was a significant movement across Washington Street and by requiring drives to turn right on 5th Street would impact their ability to cross through town.

Their motion was to adopt the TSS recommendations except for not closing 4th Street at-grade crossing. In addition, the motion included approving, in concept, the 5th Street recommendation but that further study and design coordination with an on-going signal improvement project at 5th Street evaluate a solution where the Washington Street/5th Street intersection remains a full access intersection.

## Final Recommendations

Table ES-2 summarizes the recommended improvements for each of the crossings evaluated. The cost estimates presented below are order-of-magnitude costs that do not include right of way acquisition (except for 735 141R), utility relocation, or construction where railroad construction is required. It is further recommended that the City of Mebane and NCRR continue to work together to install fencing along the railroad corridor through Mebane to direct pedestrians to the appropriate sidewalks at the at-grade crossings.

**Table ES-2: Recommended Improvements**

| Crossing Number | Street Name | Cost Range | |
|---|---|---|---|
| | | Low | High |
| 735 464L | SR 1940 – Gibson Road: Install median barriers and widen crossing shoulders | $43,000 | $55,000 |
| 735 465T | SR 1976 – Lake Latham Road: No improvements recommended | NA | NA |
| 735 468N | SR 1965 – Moore Road: Install median barriers and widen crossing shoulders | $49,000 | $62,000 |
| 735 496V | SR 1962 – S 3rd Street: Widen the existing at-grade crossing shoulder six (6) feet on each side to provide a safer pedestrian connection across the railroad corridor | $31,000 | $39,000 |
| 735 471W | 4th Street: Recommendations are tied to 5th Street Crossing improvements | NA | NA |
| 735 472D | NC 119 - 5th Street/4th Street: Improve the geometry at the crossing and intersection with US 70. Eliminate northbound dedicated right turn lane onto US 70 and improve the curve radii for vehicle turning movements. Install mountable median along 5th Street with a pedestrian refuge and an asphalt path to connect sidewalks on the eastern side of crossing to improve pedestrian connectivity. Install cross walks on the south and east segments of Washington St/5th Street intersection. During final design, further analysis will be conducted to determine if sidewalks could be installed on the western side of 5th Street. | $74,000 | $94,000 |
| 735 474S | SR 1402 - Mattress Factory: No improvements recommended | NA | NA |
| 735 141R* | SR 1114 - Buckhorn Road: Construct a grade separation over the railroad corridor | $5,900,000 | $7,500,000 |
| Pedestrian Crossing | Near First Street – underpass | $2,700,000 | $3,400,000 |
| Pedestrian Crossing | Near Second Street - overpass | $3,700,000 | $4,700,000 |
| Fencing | Within Downtown Mebane | $60,000 | $120,000 |


| Street Name | Crossing No. | Milepost |
|---|---|---|
| SR 1114 (Buckhorn Road) | 7350141R | H 34.11 |
| SR 1402 (Mattress Factory) | 735 474S | H 32.79 |
| NC 119 (Fifth Street) | 735 472D | H 31.64 |
| Fourth Street | 735 471W | H31.56 |
| SR 1962 (South Third Street) | 735 469V | H 31.46 |
| SR 1965 (Moore Road) | 735 468N | H 30.69 |
| SR 1976 (Lake Latham Road) | 735 465T | H 29.83 |
| SR 1940 (Gibson Road) | 735 464L | H 29.36 |

Figure 1 – Mebane TSS Project Limits

## A. INTRODUCTION

Every year more than 450 persons are killed and nearly 500 injured nationwide as a result of crashes between vehicles and trains. According to statistics from North Carolina Department of Transportation, there are 4,025 public crossings in North Carolina. The Federal Railroad Administration (FRA) reports that in 2015, over 2,000 incidents were reported at railroad crossings nationwide, and over 230 rail crossing fatalities occurred.

Traditionally, the North Carolina Department of Transportation (NCDOT) uses a Traffic Separation Study (TSS) to systematically review crossing safety. Traffic Separation Studies comprehensively evaluate traffic patterns and road usage for an entire municipality or region, determining the need for improving and/or eliminating public at-grade crossings. They have completed these types of studies in both small and large communities throughout the state. The purpose of the TSS is to determine the need for improvements and/or elimination of public at-grade crossings to improve safety and mobility for motorists, rail passengers, and train crews. These studies are one of the comprehensive programs to improve rail-crossing safety administered by NCDOT, the Federal Highway Administration (FHWA), and the Federal Railroad Administration (FRA).

NCDOT entered into a Municipal Agreement with the City of Mebane and Norfolk Southern Railway (NS) to prepare this TSS, focusing on eight existing at-grade roadway-railroad crossings along a 5-mile span: Buckhorn Road, Mattress Factory, 5th Street, 4th Street, 3rd Street, Moore Road, Lake Latham Road, and Gibson Road. The study evaluated the Norfolk Southern rail line crossing these eight streets, as well as any planned or programmed railroad and roadway improvements within the study area.

A Traffic Separation Study typically includes:

- Identifying existing safety concerns
- Enhancing railroad and vehicular safety
- Maintaining citizen mobility

This study also evaluated a pedestrian underpass within the vicinity of downtown Mebane in order to improve the pedestrian connectivity between US 70 and Washington Street.

**The Traffic Separation Study process has three phases:**

*1. Preliminary Phase*

The NCDOT, Norfolk Southern and the City of Mebane contractually agreed to make a “best” effort to approve and implement improvements identified by the study. An engineering consultant was then selected.

*2. Study Phase*

The engineering consultant evaluated the existing crossing conditions, average daily traffic (both trains and vehicles) and socio-economic impact of potential closings for all public crossings within the study area, and prepared recommendations for NCDOT and local officials to review.

Through the evaluation process, the study identified needs for improvements. Those recommendations are typically broken into three categories, Short-term, mid-term, and long-term based on order-of-magnitude costs, complexity and available

funding. The possible recommended improvements and timeframes are described below.

Short-term recommendations (within two to five years) include improvements that range from:

- Installation of flashing lights and gates
- Enhanced devices such as four-quadrant gates and longer gate arms
- Installation of concrete or rubber crossings
- Implement at-grade crossing closures
- Installation of median barriers
- Improved pavement markings
- Installation of roadway approach modifications and crossings realignments
- Relocations of existing crossings to safer locations

Mid-term recommendations (five to eight years) include improvements ranging from:

- Installation of grade separations
- Implement new connector roads
- Construct roadway realignments
- Implement at-grade crossing closures

Long-term recommendations (more than 8 years) include improvements that require longer-term planning/funding ranging from:

- Installation of grade separations
- Implement new connector roads
- Construct roadway realignments

*3. Implementation Process*

If applicable, funding sources for improvements are identified, project agreements are developed between funding partners, which identify responsibilities for project design, crossing closure coordination with railroad and state highway and local officials, and oversight of project implementation. City staff typically assists with project development, utility relocation and right of way acquisition, if needed. City staff and associated MPO's make recommendations for the projects to be included in the STI.

## B. DATA COLLECTION

The information included in Table B-1 was gathered for each grade crossing in order to evaluate the crossing conditions in terms of traffic and safety.

The data summary sheets for each crossing are located in the following pages, along with photographs for each crossing.

Average Daily Traffic data was collected in the Fall of 2016 in order to gauge the level of traffic on 3rd Street, 4th Street and 5th Street. The traffic data was broken down into the number of trips heading northbound and southbound, as well as percentage of dual axle vehicles and Truck Tractor Semi-Trailer (TTST).

For 5th Street, the Average Daily Traffic (ADT) for 2016 was just over 12,000 vehicles per day (vpd). There is a high volume of through movements on 5th Street crossing the tracks. SR 1114 (Buckhorn Road) has the second highest ADT at just over 8,000 vpd.

The following pages depict the current US DOT Crossing Inventory and photos of each crossing from all angles.

TABLE B-1

| Data Item | Source |
|---|---|
| Crossing Number | NCDOT Rail |
| Street or Route | NCDOT Rail |
| Railroad Company | NCDOT Rail |
| Railroad Milepost | NCDOT Rail |
| Existing Warning Devices | Site Inspection |
| Vehicle Traffic | WSP \| Parsons Brinckerhoff /NCDOT |
| 24 hour train volumes | FRA Inventory Forms |
| Accident History | Accident Reports (NCDOT & FRA) |
| Truck Route | NA |
| Transit Route | NA |
| School Bus Route (Yes/No) | Alamance County Schools |
| Crossing Surface and Condition | Site Inspection |
| Land Use | Site Inspection |
| Redundant Crossing (Yes/No) | Site Inspection |
| Humped Crossing | Site Inspection |
| Crossing Geometry | Site Inspection |
| Need for Enhanced Warning devices | Site Inspection and accident history |
| Feasibility of Roadway Improvements | Site Inspection and engineering judgment |

**Figure 2 – SR 1940 Gibson Road (735 464L), Crossing Inventory**

CROSSING INVENTORY 735464L

U. S. DOT CROSSING INVENTORY FORM

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For Private pathway grade crossings, complete the Header, Parts I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 20 and Part III Item 2.K. are required unless otherwise noted. An asterisk * denotes an optional field.

| A. Revision Date (MM/DD/YYYY) | B. Reporting Agency | C. Reason for Update (Select only one) | D. DOT Crossing Inventory Number |
|---|---|---|---|
| 03 / 08 / 2016 | ☐ Railroad ☐ Transit ☒ State ☐ Other | ☒ Change in Data ☐ Re-Open ☐ New Crossing ☐ Closed ☐ Date Change Only ☐ Change in Primary Operating RR ☐ No Train Traffic ☐ Admin. Correction ☐ Quiet Zone Update | 735464L |

**Part I: Location and Classification Information**

| 1. Primary Operating Railroad | 2. State | 3. County |
|---|---|---|
| Norfolk Southern Railway Company [NS] | NORTH CAROLINA | ALAMANCE |

| 4. City / Municipality | 5. Street/Road Name & Block Number | 6. Highway Type & No. |
|---|---|---|
| ☐ In ☒ Near MEBANE | GIBSON ROAD (Street/Road Name) \| * (Block Number) | SR 1940 |

| 7. Do Other Railroads Operate a Separate Track at Crossing? | 8. Do Other Railroads Operate Over Your Track at Crossing? |
|---|---|
| ☐ Yes ☒ No If Yes, Specify RR | ☒ Yes ☐ No If Yes, Specify RR ATK |

| 9. Railroad Division or Region | 10. Railroad Subdivision or District | 11. Branch or Line Name | 12. RR Milepost (prefix) \| (nnnn.nnn) \| (suffix) |
|---|---|---|---|
| ☐ None EASTERN | ☐ None NC LINE | ☐ None MAIN | H \| 0029.36 \| |

| 13. Line Segment * | 14. Nearest RR Timetable Station * | 15. Parent RR (if applicable) | 16. Crossing Owner (if applicable) |
|---|---|---|---|
| | MEBANE | ☐ N/A | ☐ N/A |

| 17. Crossing Type | 18. Crossing Purpose | 19. Crossing Position | 20. Public Access (If Private Crossing) | 21. Type of Train | 22. Average Passenger Train Count Per Day |
|---|---|---|---|---|---|
| ☒ Public ☐ Private | ☒ Highway ☐ Pathway, Ped. ☐ Station, Ped. | ☒ At Grade ☐ RR Under ☐ RR Over | ☐ Yes ☐ No | ☐ Freight ☐ Transit ☐ Intercity Passenger ☐ Shared Use Transit ☐ Commuter ☐ Tourist/Other | ☐ Less Than One Per Day ☐ Number Per Day 0 |

23. Type of Land Use
☐ Open Space ☐ Farm ☐ Residential ☒ Commercial ☐ Industrial ☐ Institutional ☐ Recreational ☐ RR Yard

| 24. Is there an Adjacent Crossing with a Separate Number? | 25. Quiet Zone (FRA provided) |
|---|---|
| ☐ Yes ☒ No If Yes, Provide Crossing Number | ☒ No ☐ 24 Hr ☐ Partial ☐ Chicago Excused Date Established |

| 26. HSR Corridor ID | 27. Latitude in decimal degrees (WGS84 std: nn.nnnnnn) | 28. Longitude in decimal degrees (WGS84 std: -nnn.nnnnnn) | 29. Lat/Long Source |
|---|---|---|---|
| ☐ N/A | 36.0965788 | -079.3063879 | ☒ Actual ☐ Estimated |

| 30.A. Railroad Use * | 31.A. State Use * |
|---|---|
| 30.B. Railroad Use * | 31.B. State Use * |
| 30.C. Railroad Use * | 31.C. State Use * |
| 30.D. Railroad Use * | 31.D. State Use * |
| 32.A. Narrative (Railroad Use) * | 32.B. Narrative (State Use) * |

| 33. Emergency Notification Telephone No. (posted) | 34. Railroad Contact (Telephone No.) | 35. State Contact (Telephone No.) |
|---|---|---|
| 800-453-2530 | 800-946-4744 | 919-715-8803 |

**Part II: Railroad Information**

1. Estimated Number of Daily Train Movements

| 1.A. Total Day Thru Trains (6 AM to 6 PM) | 1.B. Total Night Thru Trains (6 PM to 6 AM) | 1.C. Total Switching Trains | 1.D. Total Transit Trains | 1.E. Check if Less Than One Movement Per Day ☐ How many trains per week? |
|---|---|---|---|---|
| 12 | 4 | 0 | | |

2. Year of Train Count Data (YYYY)

3. Speed of Train at Crossing
3.A. Maximum Timetable Speed (mph) 60
3.B. Typical Speed Range Over Crossing (mph) From 5 to 49

4. Type and Count of Tracks
Main 1 Siding ____ Yard ____ Transit ____ Industry ____

5. Train Detection (Main Track only)
☐ Constant Warning Time ☐ Motion Detection ☐ AFO ☐ PTC ☐ DC ☐ Other ☒ None

| 6. Is Track Signaled? | 7.A. Event Recorder | 7.B. Remote Health Monitoring |
|---|---|---|
| ☐ Yes ☒ No | ☐ Yes ☐ No | ☐ Yes ☐ No |

FORM FRA F 6180.71 (Rev. 3/15) OMB approval expires 3/31/2018 Page 1 OF 2

U. S. DOT CROSSING INVENTORY FORM

| A. Revision Date (MM/DD/YYYY) 03/08/2016 | PAGE 2 | D. Crossing Inventory Number (7 char.) 735464L |
|---|---|---|

**Part III: Highway or Pathway Traffic Control Device Information**

1. Are there Signs or Signals? ☒ Yes ☐ No

2. Types of Passive Traffic Control Devices associated with the Crossing

| 2.A. Crossbuck Assemblies (count) | 2.B. STOP Signs (R1-1) (count) | 2.C. YIELD Signs (R1-2) (count) | 2.D. Advance Warning Signs (Check all that apply; include count) ☒ None |
|---|---|---|---|
| 0 | 0 | 0 | ☒ W10-1 2 ☒ W10-2 0 ☒ W10-3 0 ☒ W10-4 0 ☒ W10-11 0 ☒ W10-12 0 |

| 2.E. Low Ground Clearance Sign (W10-5) | 2.F. Pavement Markings | 2.G. Channelization Devices/Medians | 2.H. EXEMPT Sign (R15-3) | 2.I. ENS Sign (I-13) Displayed |
|---|---|---|---|---|
| ☒ Yes (count 2) ☐ No | ☒ Stop Lines ☐ Dynamic Envelope ☒ RR Xing Symbols ☐ None | ☐ All Approaches ☐ Median ☐ One Approach ☒ None | ☐ Yes ☐ No | ☒ Yes ☐ No |

| 2.J. Other MUTCD Signs | 2.K. Private Crossing Signs (if private) | 2.L. LED Enhanced Signs (List types) |
|---|---|---|
| ☒ Yes ☐ No Specify Type R8-10 Count 2 Specify Type ____ Count 2 Specify Type ____ Count 2 | ☐ Yes ☐ No | |

3. Types of Train Activated Warning Devices at the Grade Crossing (specify count of each device for all that apply)

| 3.A. Gate Arms (count) | 3.B. Gate Configuration | 3.C. Cantilevered (or Bridged) Flashing Light Structures (count) | 3.D. Mast Mounted Flashing Lights (count of masts) 2 | 3.E. Total Count of Flashing Light Pairs |
|---|---|---|---|---|
| Roadway 2 Pedestrian 0 | ☒ 2 Quad ☐ 3 Quad ☐ 4 Quad ☐ Full (Barrier) Resistance ☐ Median Gates | Over Traffic Lane 0 ☐ Incandescent Not Over Traffic Lane 0 ☐ LED | ☒ Incandescent ☐ LED ☐ Back Lights Included ☐ Side Lights Included | 5 |

| 3.F. Installation Date of Current Active Warning Devices: (MM/YYYY) | 3.G. Wayside Horn | 3.H. Highway Traffic Signals Controlling Crossing | 3.I. Bells (count) |
|---|---|---|---|
| ____/____ ☐ Not Required | ☐ Yes Installed on (MM/YYYY) ____/____ ☒ No | ☐ Yes ☒ No | 1 |

| 3.J. Non-Train Active Warning | 3.K. Other Flashing Lights or Warning Devices |
|---|---|
| ☐ Flagging/Flagman ☐ Manually Operated Signals ☐ Watchman ☐ Floodlighting ☒ None | Count 0 Specify type ____ |

| 4.A. Does nearby Hwy Intersection have Traffic Signals? | 4.B. Hwy Traffic Signal Interconnection | 4.C. Hwy Traffic Signal Preemption | 5. Highway Traffic Pre-Signals | 6. Highway Monitoring Devices (Check all that apply) |
|---|---|---|---|---|
| ☐ Yes ☒ No | ☒ Not Interconnected ☐ For Traffic Signals ☐ For Warning Signs | ☐ Simultaneous ☐ Advance | ☐ Yes ☒ No Storage Distance * ____ Stop Line Distance * ____ | ☐ Yes - Photo/Video Recording ☐ Yes – Vehicle Presence Detection ☒ None |

**Part IV: Physical Characteristics**

| 1. Traffic Lanes Crossing Railroad | 2. Is Roadway/Pathway Paved? | 3. Does Track Run Down a Street? | 4. Is Crossing Illuminated? (Street lights within approx. 50 feet from nearest rail) |
|---|---|---|---|
| ☐ One-way Traffic ☒ Two-way Traffic ☐ Divided Traffic Number of Lanes 2 | ☒ Yes ☐ No | ☐ Yes ☒ No | ☐ Yes ☒ No |

5. Crossing Surface (on Main Track, multiple types allowed) Installation Date * (MM/YYYY) ____/____ Width * ____ Length * ____
☐ 1 Timber ☐ 2 Asphalt ☒ 3 Asphalt and Timber ☐ 4 Concrete ☐ 5 Concrete and Rubber ☐ 6 Rubber ☐ 7 Metal
☐ 8 Unconsolidated ☐ 9 Composite ☐ 10 Other (specify) ____

| 6. Intersecting Roadway within 500 feet? | 7. Smallest Crossing Angle | 8. Is Commercial Power Available? * |
|---|---|---|
| ☒ Yes ☐ No If Yes, Approximate Distance (feet) 75 | ☐ 0° – 29° ☐ 30° – 59° ☒ 60° - 90° | ☒ Yes ☐ No |

**Part V: Public Highway Information**

| 1. Highway System | 2. Functional Classification of Road at Crossing | 3. Is Crossing on State Highway System? | 4. Highway Speed Limit |
|---|---|---|---|
| ☐ (01) Interstate Highway System ☐ (02) Other Nat Hwy System (NHS) ☐ (03) Federal AID, Not NHS ☒ (08) Non-Federal Aid | ☒ (0) Rural ☐ (1) Urban ☐ (1) Interstate ☐ (5) Major Collector ☐ (2) Other Freeways and Expressways ☐ (3) Other Principal Arterial ☒ (6) Minor Collector ☐ (4) Minor Arterial ☐ (7) Local | ☒ Yes ☐ No | 35 MPH ☒ Posted ☐ Statutory |

5. Linear Referencing System (LRS Route ID) *
6. LRS Milepost *

| 7. Annual Average Daily Traffic (AADT) | 8. Estimated Percent Trucks | 9. Regularly Used by School Buses? | 10. Emergency Services Route |
|---|---|---|---|
| Year 2014 AADT 2304 | 3 % | ☒ Yes ☐ No Average Number per Day 22 | ☐ Yes ☒ No |

**Submission Information** - *This information is used for administrative purposes and is not available on the public website.*

Submitted by ____ Organization ____ Phone ____ Date ____

Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.

FORM FRA F 6180.71 (Rev. 3/15) OMB approval expires 3/31/2018 Page 2 OF 2

**Figure 3 – SR 1940 Gibson Road (735 464L), Photos of Directional Views**

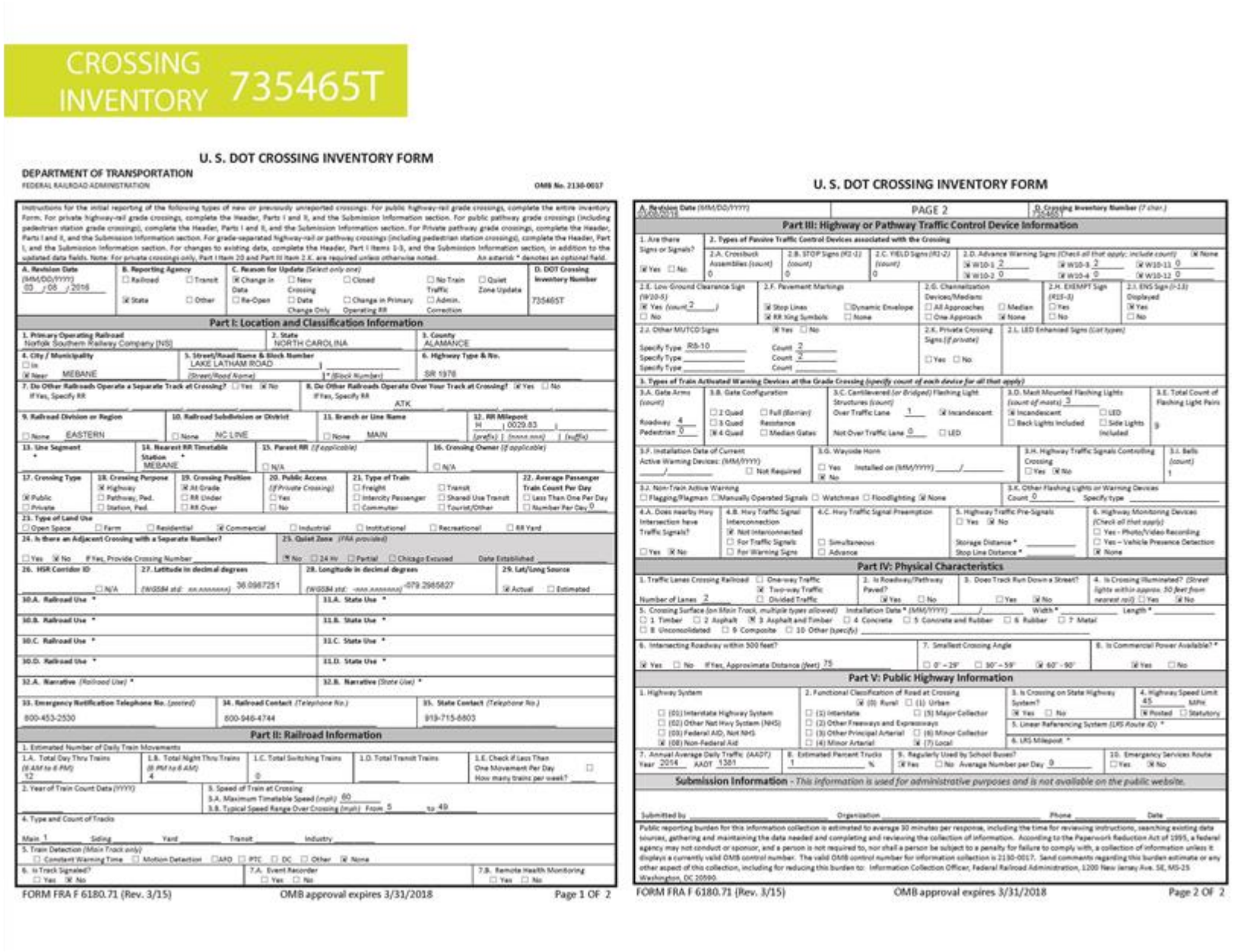
Looking North

Looking South

Looking East

Looking West

**Figure 4 – SR 1976 Lake Latham Road (735 465T), Crossing Inventory**



CROSSING INVENTORY 735465T

U. S. DOT CROSSING INVENTORY FORM

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For Private pathway grade crossings, complete the Header, Parts I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 20 and Part II Item 2.K. are required unless otherwise noted. An asterisk * denotes an optional field.

A. Revision Date (MM/DD/YYYY): 03 / 08 / 2016
B. Reporting Agency: ☐ Railroad ☐ Transit ☒ State ☐ Other
C. Reason for Update (Select only one): ☒ Change in Data Re-Open ☐ New Crossing Date Change Only ☐ Closed ☐ Change in Primary Operating RR ☐ No Train Traffic ☐ Admin. Correction ☐ Quiet Zone Update
D. DOT Crossing Inventory Number: 735465T

**Part I: Location and Classification Information**

1. Primary Operating Railroad: Norfolk Southern Railway Company (NS)
2. State: NORTH CAROLINA
3. County: ALAMANCE
4. City / Municipality: ☐ In ☒ Near MEBANE
5. Street/Road Name & Block Number: LAKE LATHAM ROAD (Street/Road Name) * (Block Number)
6. Highway Type & No.: SR 1976
7. Do Other Railroads Operate a Separate Track at Crossing? ☐ Yes ☒ No — If Yes, Specify RR
8. Do Other Railroads Operate Over Your Track at Crossing? ☒ Yes ☐ No — If Yes, Specify RR: ATK
9. Railroad Division or Region: ☐ None EASTERN
10. Railroad Subdivision or District: ☐ None NC LINE
11. Branch or Line Name: ☐ None MAIN
12. RR Milepost: Hi | 0029.83 | (prefix) | (more info) | (suffix)
13. Line Segment: *
14. Nearest RR Timetable Station: * MEBANE
15. Parent RR (If applicable): ☐ N/A
16. Crossing Owner (If applicable): ☐ N/A
17. Crossing Type: ☒ Public ☐ Private
18. Crossing Purpose: ☒ Highway ☐ Pathway, Ped. ☐ Station, Ped.
19. Crossing Position: ☒ At Grade ☐ RR Under ☐ RR Over
20. Public Access (If Private Crossing): ☐ Yes ☐ No
21. Type of Train: ☐ Freight ☐ Transit ☐ Intercity Passenger ☐ Shared Use Transit ☐ Commuter ☐ Tourist/Other
22. Average Passenger Train Count Per Day: ☐ Less Than One Per Day ☐ Number Per Day 0
23. Type of Land Use: ☐ Open Space ☐ Farm ☐ Residential ☒ Commercial ☐ Industrial ☐ Institutional ☐ Recreational ☐ RR Yard
24. Is there an Adjacent Crossing with a Separate Number? ☐ Yes ☒ No — If Yes, Provide Crossing Number
25. Quiet Zone (FRA provided): ☒ No ☐ 24 Hr ☐ Partial ☐ Chicago Excused — Date Established
26. HSR Corridor ID: ☐ N/A
27. Latitude in decimal degrees (WGS84 std: AA.AAAAAA): 36.0987251
28. Longitude in decimal degrees (WGS84 std: -AAA.AAAAAA): -079.2965827
29. Lat/Long Source: ☒ Actual ☐ Estimated
30.A. Railroad Use *
30.B. Railroad Use *
30.C. Railroad Use *
30.D. Railroad Use *
31.A. State Use *
31.B. State Use *
31.C. State Use *
31.D. State Use *
32.A. Narrative (Railroad Use) *
32.B. Narrative (State Use) *
33. Emergency Notification Telephone No. (posted): 800-453-2530
34. Railroad Contact (Telephone No.): 800-946-4744
35. State Contact (Telephone No.): 919-715-6803

**Part II: Railroad Information**

1. Estimated Number of Daily Train Movements
1.A. Total Day Thru Trains (6 AM to 6 PM): 12
1.B. Total Night Thru Trains (6 PM to 6 AM): 4
1.C. Total Switching Trains: 0
1.D. Total Transit Trains:
1.E. Check if Less Than One Movement Per Day ☐ — How many trains per week?
2. Year of Train Count Data (YYYY):
3. Speed of Train at Crossing
3.A. Maximum Timetable Speed (mph): 60
3.B. Typical Speed Range Over Crossing (mph): From 5 to 49
4. Type and Count of Tracks: Main 1 Siding Yard Transit Industry
5. Train Detection (Main Track only): ☐ Constant Warning Time ☐ Motion Detection ☐ AFO ☐ PTC ☐ DC ☐ Other ☒ None
6. Is Track Signaled? ☐ Yes ☒ No
7.A. Event Recorder ☐ Yes ☐ No
7.B. Remote Health Monitoring ☐ Yes ☐ No

FORM FRA F 6180.71 (Rev. 3/15) OMB approval expires 3/31/2018 Page 1 OF 2

U. S. DOT CROSSING INVENTORY FORM

A. Revision Date (MM/DD/YYYY) 03/08/2016 — PAGE 2 — D. Crossing Inventory Number (7 char.) 735465T

**Part III: Highway or Pathway Traffic Control Device Information**

1. Are there Signs or Signals? ☒ Yes ☐ No
2. Types of Passive Traffic Control Devices associated with the Crossing
2.A. Crossbuck Assemblies (count): 0
2.B. STOP Signs (R1-1) (count): 0
2.C. YIELD Signs (R1-2) (count): 0
2.D. Advance Warning Signs (Check all that apply; include count): ☒ None; ☒ W10-1 2; ☒ W10-3 2; ☒ W10-11 0; ☒ W10-2 0; ☒ W10-4 0; ☒ W10-12 0
2.E. Low Ground Clearance Sign (W10-5): ☒ Yes (count 2) ☐ No
2.F. Pavement Markings: ☒ Stop Lines ☐ Dynamic Envelope ☒ RR Xing Symbols ☐ None
2.G. Channelization Devices/Medians: ☐ All Approaches ☐ Median ☐ One Approach ☒ None
2.H. EXEMPT Sign (R15-1): ☐ Yes ☐ No
2.I. ENS Sign (I-13): Displayed ☒ Yes ☐ No
2.J. Other MUTCD Signs: ☒ Yes ☐ No — Specify Type R8-10 Count 2; Specify Type Count 2; Specify Type Count
2.K. Private Crossing Signs (If private): ☐ Yes ☐ No
2.L. LED Enhanced Signs (List types)
3. Types of Train Activated Warning Devices at the Grade Crossing (specify count of each device for all that apply)
3.A. Gate Arms (count): Roadway 4 Pedestrian 0
3.B. Gate Configuration: ☐ 2 Quad ☐ 3 Quad ☒ 4 Quad ☐ Full (Barrier) Resistance ☐ Median Gates
3.C. Cantilevered (or Bridged) Flashing Light Structures (count): Over Traffic Lane 1 ☒ Incandescent; Not Over Traffic Lane 0 ☐ LED
3.D. Mast Mounted Flashing Lights (count of masts) 3: ☒ Incandescent ☐ LED ☐ Back Lights Included ☐ Side Lights Included
3.E. Total Count of Flashing Light Pairs: 9
3.F. Installation Date of Current Active Warning Devices: (MM/YYYY) / ☐ Not Required
3.G. Wayside Horn: ☐ Yes Installed on (MM/YYYY) / ☒ No
3.H. Highway Traffic Signals Controlling Crossing: ☐ Yes ☒ No
3.I. Bells (count): 1
3.J. Non-Train Active Warning: ☐ Flagging/Flagman ☐ Manually Operated Signals ☐ Watchman ☐ Floodlighting ☒ None
3.K. Other Flashing Lights or Warning Devices: Count 0 Specify type
4.A. Does nearby Hwy Intersection have Traffic Signals? ☐ Yes ☒ No
4.B. Hwy Traffic Signal Interconnection: ☒ Not Interconnected ☐ For Traffic Signals ☐ For Warning Signs
4.C. Hwy Traffic Signal Preemption: ☐ Simultaneous ☐ Advance
5. Highway Traffic Pre-Signals: ☐ Yes ☒ No — Storage Distance * Stop Line Distance *
6. Highway Monitoring Devices (Check all that apply): ☐ Yes – Photo/Video Recording ☐ Yes – Vehicle Presence Detection ☒ None

**Part IV: Physical Characteristics**

1. Traffic Lanes Crossing Railroad: ☐ One-way Traffic ☒ Two-way Traffic ☐ Divided Traffic — Number of Lanes 2
2. Is Roadway/Pathway Paved? ☒ Yes ☐ No
3. Does Track Run Down a Street? ☐ Yes ☒ No
4. Is Crossing Illuminated? (Street lights within approx. 50 feet from nearest rail) ☐ Yes ☒ No
5. Crossing Surface (on Main Track, multiple types allowed) Installation Date * (MM/YYYY) / Width * Length *: ☐ 1 Timber ☐ 2 Asphalt ☒ 3 Asphalt and Timber ☐ 4 Concrete ☐ 5 Concrete and Rubber ☐ 6 Rubber ☐ 7 Metal ☐ 8 Unconsolidated ☐ 9 Composite ☐ 10 Other (specify)
6. Intersecting Roadway within 500 feet? ☒ Yes ☐ No — If Yes, Approximate Distance (feet) 75
7. Smallest Crossing Angle: ☐ 0° – 29° ☐ 30° – 59° ☒ 60° - 90°
8. Is Commercial Power Available? * ☒ Yes ☐ No

**Part V: Public Highway Information**

1. Highway System: ☐ (01) Interstate Highway System ☐ (02) Other Nat Hwy System (NHS) ☐ (03) Federal Aid, Not NHS ☒ (08) Non-Federal Aid
2. Functional Classification of Road at Crossing: ☒ (0) Rural ☐ (1) Urban — ☐ (1) Interstate ☐ (2) Other Freeways and Expressways ☐ (3) Other Principal Arterial ☐ (4) Minor Arterial ☐ (5) Major Collector ☐ (6) Minor Collector ☒ (7) Local
3. Is Crossing on State Highway System? ☒ Yes ☐ No
4. Highway Speed Limit 45 MPH: ☒ Posted ☐ Statutory
5. Linear Referencing System (LRS Route ID) *
6. LRS Milepost *
7. Annual Average Daily Traffic (AADT) Year 2014 AADT 1381
8. Estimated Percent Trucks 1 %
9. Regularly Used by School Buses? ☒ Yes ☐ No — Average Number per Day 0
10. Emergency Services Route ☐ Yes ☒ No

**Submission Information** - *This information is used for administrative purposes and is not available on the public website.*

Submitted by Organization Phone Date

Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.

FORM FRA F 6180.71 (Rev. 3/15) OMB approval expires 3/31/2018 Page 2 OF 2

**Figure 5 – SR 1976 Lake Latham Road (735 465T), Photos of Directional Views**

Looking North

Looking South

Looking East

Looking West

**Figure 6 – SR 1965 Moore Road (735 468N), Crossing Inventory**

CROSSING INVENTORY 735468N

U. S. DOT CROSSING INVENTORY FORM

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For Private pathway grade crossings, complete the Header, Parts I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 20 and Part III Item 2.K. are required unless otherwise noted. An asterisk * denotes an optional field.

| A. Revision Date (MM/DD/YYYY) | B. Reporting Agency | C. Reason for Update (Select only one) | D. DOT Crossing Inventory Number |
|---|---|---|---|
| 03 / 08 / 2016 | ☐ Railroad ☐ Transit ☒ State ☐ Other | ☒ Change in Data ☐ New Crossing ☐ Closed ☐ No Train Traffic ☐ Quiet Zone Update ☐ Re-Open ☐ Date Change Only ☐ Change in Primary Operating RR ☐ Admin. Correction | 735468N |

**Part I: Location and Classification Information**

| 1. Primary Operating Railroad | 2. State | 3. County |
|---|---|---|
| Norfolk Southern Railway Company [NS] | NORTH CAROLINA | ALAMANCE |

| 4. City / Municipality | 5. Street/Road Name & Block Number | 6. Highway Type & No. |
|---|---|---|
| ☐ In ☒ Near MEBANE | MOORE ROAD (Street/Road Name) \| (* Block Number) | SR 1965 |

| 7. Do Other Railroads Operate a Separate Track at Crossing? | 8. Do Other Railroads Operate Over Your Track at Crossing? |
|---|---|
| ☐ Yes ☒ No If Yes, Specify RR | ☒ Yes ☐ No If Yes, Specify RR ATK |

| 9. Railroad Division or Region | 10. Railroad Subdivision or District | 11. Branch or Line Name | 12. RR Milepost |
|---|---|---|---|
| ☐ None EASTERN | ☐ None NC LINE | ☐ None MAIN | H \| 0030.69 \| (prefix) \| (nnnn.nnn) \| (suffix) |

| 13. Line Segment * | 14. Nearest RR Timetable Station * | 15. Parent RR (If applicable) | 16. Crossing Owner (If applicable) |
|---|---|---|---|
| | MEBANE | ☐ N/A | ☐ N/A |

| 17. Crossing Type | 18. Crossing Purpose | 19. Crossing Position | 20. Public Access (If Private Crossing) | 21. Type of Train | 22. Average Passenger Train Count Per Day |
|---|---|---|---|---|---|
| ☒ Public ☐ Private | ☒ Highway ☐ Pathway, Ped. ☐ Station, Ped. | ☒ At Grade ☐ RR Under ☐ RR Over | ☐ Yes ☐ No | ☐ Freight ☐ Transit ☐ Intercity Passenger ☐ Shared Use Transit ☐ Commuter ☐ Tourist/Other | ☐ Less Than One Per Day ☐ Number Per Day 0 |

23. Type of Land Use
☐ Open Space ☐ Farm ☐ Residential ☒ Commercial ☐ Industrial ☐ Institutional ☐ Recreational ☐ RR Yard

| 24. Is there an Adjacent Crossing with a Separate Number? | 25. Quiet Zone (FRA provided) |
|---|---|
| ☐ Yes ☒ No If Yes, Provide Crossing Number | ☒ No ☐ 24 Hr ☐ Partial ☐ Chicago Excused Date Established |

| 26. HSR Corridor ID | 27. Latitude in decimal degrees | 28. Longitude in decimal degrees | 29. Lat/Long Source |
|---|---|---|---|
| ☐ N/A | (WGS84 std: nn.nnnnnnn) 36.0982338 | (WGS84 std: -nnn.nnnnnnn) -079.2833079 | ☒ Actual ☐ Estimated |

| 30.A. Railroad Use * | 31.A. State Use * |
|---|---|
| 30.B. Railroad Use * | 31.B. State Use * |
| 30.C. Railroad Use * | 31.C. State Use * |
| 30.D. Railroad Use * | 31.D. State Use * |
| 32.A. Narrative (Railroad Use) * | 32.B. Narrative (State Use) * |

| 33. Emergency Notification Telephone No. (posted) | 34. Railroad Contact (Telephone No.) | 35. State Contact (Telephone No.) |
|---|---|---|
| 800-453-2530 | 800-946-4744 | 919-715-8803 |

**Part II: Railroad Information**

1. Estimated Number of Daily Train Movements

| 1.A. Total Day Thru Trains (6 AM to 6 PM) | 1.B. Total Night Thru Trains (6 PM to 6 AM) | 1.C. Total Switching Trains | 1.D. Total Transit Trains | 1.E. Check if Less Than One Movement Per Day ☐ How many trains per week? |
|---|---|---|---|---|
| 12 | 4 | 0 | | |

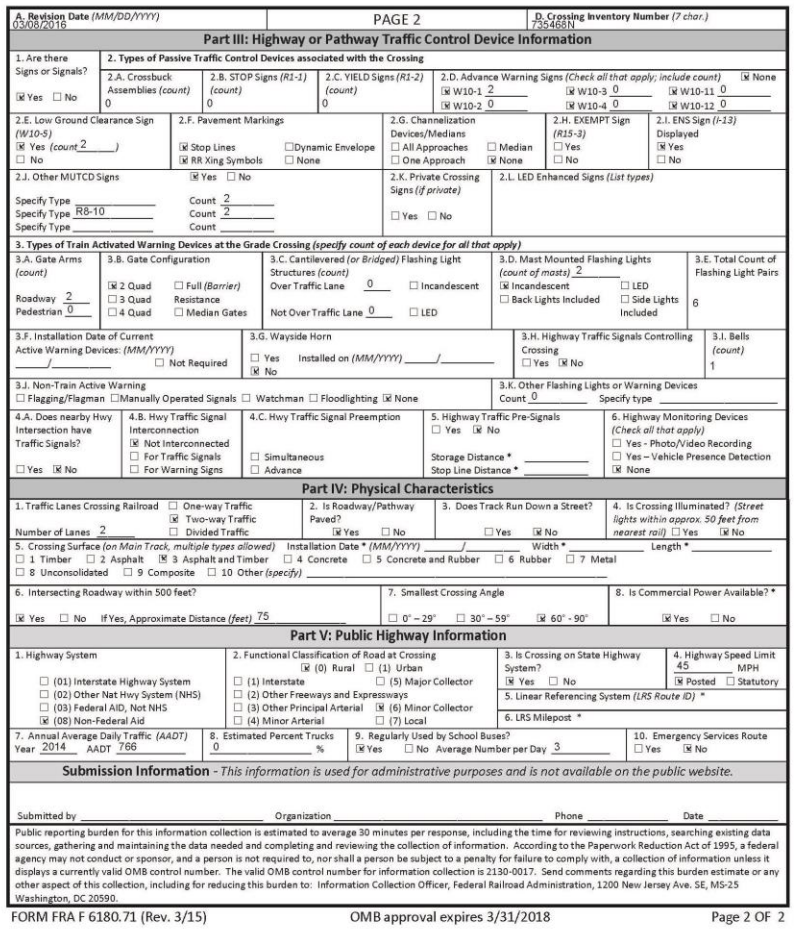
| 2. Year of Train Count Data (YYYY) | 3. Speed of Train at Crossing |
|---|---|
| | 3.A. Maximum Timetable Speed (mph) 60 |
| | 3.B. Typical Speed Range Over Crossing (mph) From 5 to 49 |

4. Type and Count of Tracks
Main 1 Siding ____ Yard ____ Transit ____ Industry ____

5. Train Detection (Main Track only)
☐ Constant Warning Time ☐ Motion Detection ☐ AFO ☐ PTC ☐ DC ☐ Other ☒ None

| 6. Is Track Signaled? | 7.A. Event Recorder | 7.B. Remote Health Monitoring |
|---|---|---|
| ☐ Yes ☒ No | ☐ Yes ☐ No | ☐ Yes ☐ No |

FORM FRA F 6180.71 (Rev. 3/15) OMB approval expires 3/31/2018 Page 1 OF 2



U. S. DOT CROSSING INVENTORY FORM

A. Revision Date (MM/DD/YYYY) 03/08/2016 | PAGE 2 | D. Crossing Inventory Number (7 char.) 735468N

**Part III: Highway or Pathway Traffic Control Device Information**

1. Are there Signs or Signals? ☒ Yes ☐ No

2. Types of Passive Traffic Control Devices associated with the Crossing

| 2.A. Crossbuck Assemblies (count) | 2.B. STOP Signs (R1-1) (count) | 2.C. YIELD Signs (R1-2) (count) | 2.D. Advance Warning Signs (Check all that apply; include count) ☒ None |
|---|---|---|---|
| 0 | 0 | 0 | ☒ W10-1 2 ☒ W10-3 0 ☒ W10-11 0 ☒ W10-2 0 ☒ W10-4 0 ☒ W10-12 0 |

| 2.E. Low Ground Clearance Sign (W10-5) | 2.F. Pavement Markings | 2.G. Channelization Devices/Medians | 2.H. EXEMPT Sign (R15-3) | 2.I. ENS Sign (I-13) Displayed |
|---|---|---|---|---|
| ☒ Yes (count 2) ☐ No | ☒ Stop Lines ☐ Dynamic Envelope ☒ RR Xing Symbols ☐ None | ☐ All Approaches ☐ Median ☐ One Approach ☒ None | ☐ Yes ☐ No | ☒ Yes ☐ No |

| 2.J. Other MUTCD Signs | 2.K. Private Crossing Signs (if private) | 2.L. LED Enhanced Signs (List types) |
|---|---|---|
| ☒ Yes ☐ No Specify Type ____ Count 2 Specify Type R8-10 Count 2 Specify Type ____ Count ____ | ☐ Yes ☐ No | |

3. Types of Train Activated Warning Devices at the Grade Crossing (specify count of each device for all that apply)

| 3.A. Gate Arms (count) | 3.B. Gate Configuration | 3.C. Cantilevered (or Bridged) Flashing Light Structures (count) | 3.D. Mast Mounted Flashing Lights (count of masts) 2 | 3.E. Total Count of Flashing Light Pairs |
|---|---|---|---|---|
| Roadway 2 Pedestrian 0 | ☒ 2 Quad ☐ 3 Quad ☐ 4 Quad ☐ Full (Barrier) Resistance ☐ Median Gates | Over Traffic Lane 0 ☐ Incandescent Not Over Traffic Lane 0 ☐ LED | ☒ Incandescent ☐ LED ☐ Back Lights Included ☐ Side Lights Included | 6 |

| 3.F. Installation Date of Current Active Warning Devices: (MM/YYYY) | 3.G. Wayside Horn | 3.H. Highway Traffic Signals Controlling Crossing | 3.I. Bells (count) |
|---|---|---|---|
| ____/____ ☐ Not Required | ☐ Yes Installed on (MM/YYYY) ____/____ ☒ No | ☐ Yes ☒ No | 1 |

| 3.J. Non-Train Active Warning | 3.K. Other Flashing Lights or Warning Devices |
|---|---|
| ☐ Flagging/Flagman ☐ Manually Operated Signals ☐ Watchman ☐ Floodlighting ☒ None | Count 0 Specify type ____ |

| 4.A. Does nearby Hwy Intersection have Traffic Signals? | 4.B. Hwy Traffic Signal Interconnection | 4.C. Hwy Traffic Signal Preemption | 5. Highway Traffic Pre-Signals | 6. Highway Monitoring Devices (Check all that apply) |
|---|---|---|---|---|
| ☐ Yes ☒ No | ☒ Not Interconnected ☐ For Traffic Signals ☐ For Warning Signs | ☐ Simultaneous ☐ Advance | ☐ Yes ☒ No Storage Distance * ____ Stop Line Distance * ____ | ☐ Yes - Photo/Video Recording ☐ Yes – Vehicle Presence Detection ☒ None |

**Part IV: Physical Characteristics**

| 1. Traffic Lanes Crossing Railroad | 2. Is Roadway/Pathway Paved? | 3. Does Track Run Down a Street? | 4. Is Crossing Illuminated? (Street lights within approx. 50 feet from nearest rail) |
|---|---|---|---|
| ☐ One-way Traffic ☒ Two-way Traffic ☐ Divided Traffic Number of Lanes 2 | ☒ Yes ☐ No | ☐ Yes ☒ No | ☐ Yes ☒ No |

5. Crossing Surface (on Main Track, multiple types allowed) Installation Date * (MM/YYYY) ____/____ Width * ____ Length * ____
☐ 1 Timber ☐ 2 Asphalt ☒ 3 Asphalt and Timber ☐ 4 Concrete ☐ 5 Concrete and Rubber ☐ 6 Rubber ☐ 7 Metal
☐ 8 Unconsolidated ☐ 9 Composite ☐ 10 Other (specify) ____

| 6. Intersecting Roadway within 500 feet? | 7. Smallest Crossing Angle | 8. Is Commercial Power Available? * |
|---|---|---|
| ☒ Yes ☐ No If Yes, Approximate Distance (feet) 75 | ☐ 0° – 29° ☐ 30° – 59° ☒ 60° - 90° | ☒ Yes ☐ No |

**Part V: Public Highway Information**

| 1. Highway System | 2. Functional Classification of Road at Crossing | 3. Is Crossing on State Highway System? | 4. Highway Speed Limit |
|---|---|---|---|
| ☐ (01) Interstate Highway System ☐ (02) Other Nat Hwy System (NHS) ☐ (03) Federal AID, Not NHS ☒ (08) Non-Federal Aid | ☒ (0) Rural ☐ (1) Urban ☐ (1) Interstate ☐ (5) Major Collector ☐ (2) Other Freeways and Expressways ☐ (3) Other Principal Arterial ☒ (6) Minor Collector ☐ (4) Minor Arterial ☐ (7) Local | ☒ Yes ☐ No | 45 MPH ☒ Posted ☐ Statutory |

5. Linear Referencing System (LRS Route ID) *
6. LRS Milepost *

| 7. Annual Average Daily Traffic (AADT) | 8. Estimated Percent Trucks | 9. Regularly Used by School Buses? | 10. Emergency Services Route |
|---|---|---|---|
| Year 2014 AADT 766 | 0 % | ☒ Yes ☐ No Average Number per Day 3 | ☐ Yes ☒ No |

**Submission Information** - *This information is used for administrative purposes and is not available on the public website.*

Submitted by ____ Organization ____ Phone ____ Date ____

Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.

FORM FRA F 6180.71 (Rev. 3/15) OMB approval expires 3/31/2018 Page 2 OF 2

**Figure 7 – SR 1965 Moore Road (735 468N), Photos of Directional Views**

Looking North

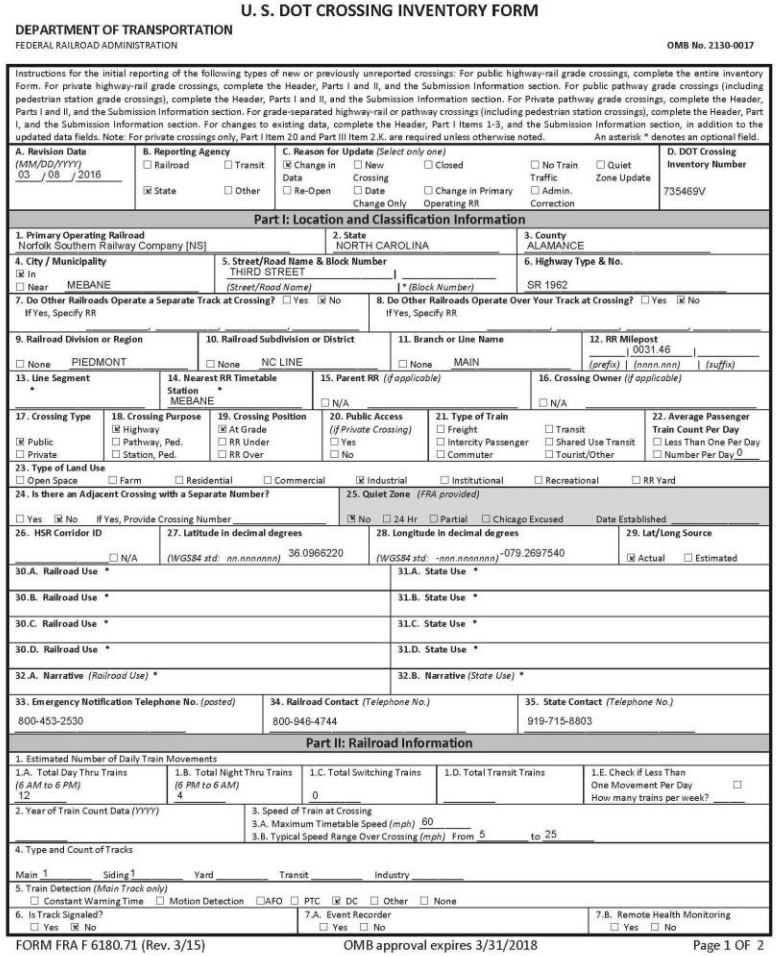
Looking South

Looking East

Looking West

**Figure 8 – SR 1962 3rd Street (735 469V), Crossing Inventory**

CROSSING INVENTORY 735469V



U. S. DOT CROSSING INVENTORY FORM

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION
OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For Private pathway grade crossings, complete the Header, Parts I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 20 and Part III Item 2.K. are required unless otherwise noted. An asterisk * denotes an optional field.

| A. Revision Date (MM/DD/YYYY) | B. Reporting Agency | C. Reason for Update (Select only one) | D. DOT Crossing Inventory Number |
|---|---|---|---|
| 03 / 08 / 2016 | ☐ Railroad ☐ Transit ☒ State ☐ Other | ☒ Change in Data ☐ New Crossing ☐ Closed ☐ No Train Traffic ☐ Quiet Zone Update ☐ Re-Open ☐ Date Change Only ☐ Change in Primary Operating RR ☐ Admin. Correction | 735469V |

**Part I: Location and Classification Information**

| 1. Primary Operating Railroad | 2. State | 3. County |
|---|---|---|
| Norfolk Southern Railway Company [NS] | NORTH CAROLINA | ALAMANCE |

| 4. City / Municipality | 5. Street/Road Name & Block Number | 6. Highway Type & No. |
|---|---|---|
| ☒ In ☐ Near MEBANE | THIRD STREET (Street/Road Name) | * (Block Number) SR 1962 |

7. Do Other Railroads Operate a Separate Track at Crossing? ☐ Yes ☒ No — If Yes, Specify RR
8. Do Other Railroads Operate Over Your Track at Crossing? ☐ Yes ☒ No — If Yes, Specify RR

| 9. Railroad Division or Region | 10. Railroad Subdivision or District | 11. Branch or Line Name | 12. RR Milepost |
|---|---|---|---|
| ☐ None PIEDMONT | ☐ None NC LINE | ☐ None MAIN | (prefix) \| 0031.46 \| (suffix) |

| 13. Line Segment * | 14. Nearest RR Timetable Station * | 15. Parent RR (If applicable) | 16. Crossing Owner (If applicable) |
|---|---|---|---|
| | MEBANE | ☐ N/A | ☐ N/A |

| 17. Crossing Type | 18. Crossing Purpose | 19. Crossing Position | 20. Public Access | 21. Type of Train | 22. Average Passenger Train Count Per Day |
|---|---|---|---|---|---|
| ☒ Public ☐ Private | ☒ Highway ☐ Pathway, Ped. ☐ Station, Ped. | ☒ At Grade ☐ RR Under ☐ RR Over | (If Private Crossing) ☐ Yes ☐ No | ☐ Freight ☐ Transit ☐ Intercity Passenger ☐ Shared Use Transit ☐ Commuter ☐ Tourist/Other | ☐ Less Than One Per Day ☐ Number Per Day 0 |

23. Type of Land Use: ☐ Open Space ☐ Farm ☐ Residential ☐ Commercial ☒ Industrial ☐ Institutional ☐ Recreational ☐ RR Yard

| 24. Is there an Adjacent Crossing with a Separate Number? | 25. Quiet Zone (FRA provided) |
|---|---|
| ☐ Yes ☒ No If Yes, Provide Crossing Number | ☒ No ☐ 24 Hr ☐ Partial ☐ Chicago Excused Date Established |

| 26. HSR Corridor ID | 27. Latitude in decimal degrees | 28. Longitude in decimal degrees | 29. Lat/Long Source |
|---|---|---|---|
| ☐ N/A | (WGS84 std: nn.nnnnnnn) 36.0966220 | (WGS84 std: -nnn.nnnnnnn) -079.2697540 | ☒ Actual ☐ Estimated |

| 30.A. Railroad Use * | 31.A. State Use * |
|---|---|
| 30.B. Railroad Use * | 31.B. State Use * |
| 30.C. Railroad Use * | 31.C. State Use * |
| 30.D. Railroad Use * | 31.D. State Use * |
| 32.A. Narrative (Railroad Use) * | 32.B. Narrative (State Use) * |

| 33. Emergency Notification Telephone No. (posted) | 34. Railroad Contact (Telephone No.) | 35. State Contact (Telephone No.) |
|---|---|---|
| 800-453-2530 | 800-948-4744 | 919-715-8803 |

**Part II: Railroad Information**

1. Estimated Number of Daily Train Movements

| 1.A. Total Day Thru Trains (6 AM to 6 PM) | 1.B. Total Night Thru Trains (6 PM to 6 AM) | 1.C. Total Switching Trains | 1.D. Total Transit Trains | 1.E. Check if Less Than One Movement Per Day ☐ How many trains per week? |
|---|---|---|---|---|
| 12 | 4 | 0 | | |

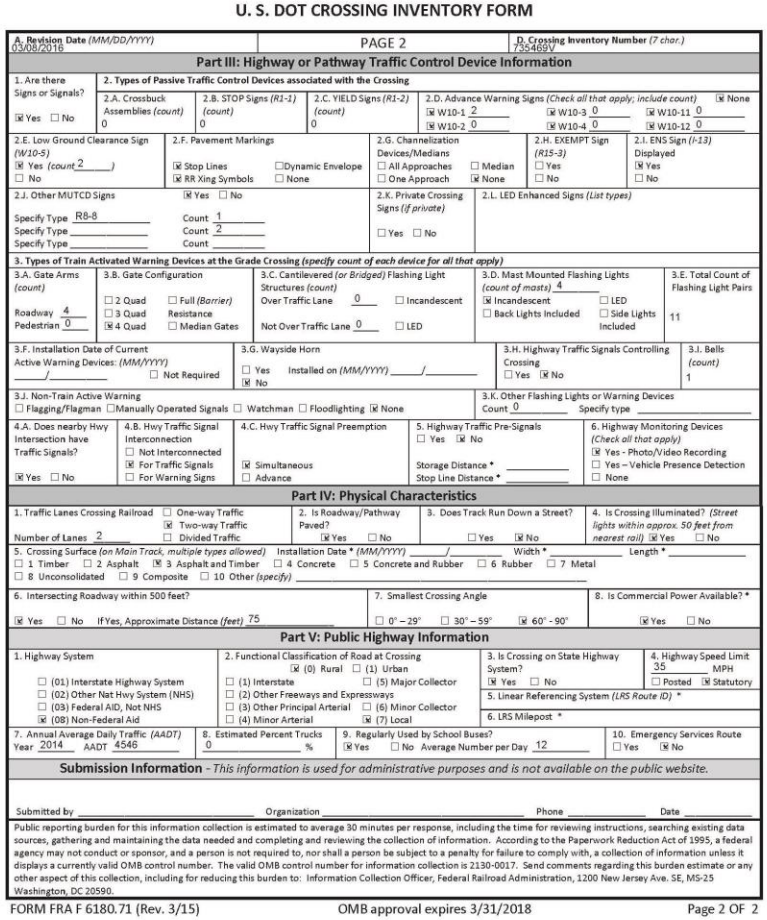
| 2. Year of Train Count Data (YYYY) | 3. Speed of Train at Crossing |
|---|---|
| | 3.A. Maximum Timetable Speed (mph) 60 |
| | 3.B. Typical Speed Range Over Crossing (mph) From 5 to 25 |

4. Type and Count of Tracks: Main 1 Siding 1 Yard Transit Industry

5. Train Detection (Main Track only): ☐ Constant Warning Time ☐ Motion Detection ☐ AFO ☐ PTC ☒ DC ☐ Other ☐ None

| 6. Is Track Signaled? | 7.A. Event Recorder | 7.B. Remote Health Monitoring |
|---|---|---|
| ☐ Yes ☒ No | ☐ Yes ☐ No | ☐ Yes ☐ No |

FORM FRA F 6180.71 (Rev. 3/15) OMB approval expires 3/31/2018 Page 1 OF 2



U. S. DOT CROSSING INVENTORY FORM

A. Revision Date (MM/DD/YYYY) 03/08/2016 — PAGE 2 — D. Crossing Inventory Number (7 char.) 735469V

**Part III: Highway or Pathway Traffic Control Device Information**

1. Are there Signs or Signals? ☒ Yes ☐ No

2. Types of Passive Traffic Control Devices associated with the Crossing

| 2.A. Crossbuck Assemblies (count) | 2.B. STOP Signs (R1-1) (count) | 2.C. YIELD Signs (R1-2) (count) | 2.D. Advance Warning Signs (Check all that apply; include count) ☒ None |
|---|---|---|---|
| 0 | 0 | 0 | ☒ W10-1 2 ☒ W10-3 0 ☒ W10-11 0 ☒ W10-2 0 ☒ W10-4 0 ☒ W10-12 0 |

| 2.E. Low Ground Clearance Sign (W10-5) | 2.F. Pavement Markings | 2.G. Channelization Devices/Medians | 2.H. EXEMPT Sign (R15-3) | 2.I. ENS Sign (I-13) Displayed |
|---|---|---|---|---|
| ☒ Yes (count 2) ☐ No | ☒ Stop Lines ☐ Dynamic Envelope ☒ RR Xing Symbols ☐ None | ☐ All Approaches ☐ Median ☐ One Approach ☒ None | ☐ Yes ☐ No | ☒ Yes ☐ No |

| 2.J. Other MUTCD Signs | 2.K. Private Crossing Signs (if private) | 2.L. LED Enhanced Signs (List types) |
|---|---|---|
| ☒ Yes ☐ No | ☐ Yes ☐ No | |
| Specify Type R8-8 Count 1 | | |
| Specify Type Count 2 | | |
| Specify Type Count | | |

3. Types of Train Activated Warning Devices at the Grade Crossing (specify count of each device for all that apply)

| 3.A. Gate Arms (count) | 3.B. Gate Configuration | 3.C. Cantilevered (or Bridged) Flashing Light Structures (count) | 3.D. Mast Mounted Flashing Lights (count of masts) 4 | 3.E. Total Count of Flashing Light Pairs |
|---|---|---|---|---|
| Roadway 4 Pedestrian 0 | ☐ 2 Quad ☐ 3 Quad ☒ 4 Quad ☐ Full (Barrier) Resistance ☐ Median Gates | Over Traffic Lane 0 ☐ Incandescent Not Over Traffic Lane 0 ☐ LED | ☒ Incandescent ☐ LED ☐ Back Lights Included ☐ Side Lights Included | 11 |

| 3.F. Installation Date of Current Active Warning Devices: (MM/YYYY) | 3.G. Wayside Horn | 3.H. Highway Traffic Signals Controlling Crossing | 3.J. Bells (count) |
|---|---|---|---|
| / ☐ Not Required | ☐ Yes Installed on (MM/YYYY) / ☒ No | ☐ Yes ☒ No | 1 |

| 3.J. Non-Train Active Warning | 3.K. Other Flashing Lights or Warning Devices |
|---|---|
| ☐ Flagging/Flagman ☐ Manually Operated Signals ☐ Watchman ☐ Floodlighting ☒ None | Count 0 Specify type |

| 4.A. Does nearby Hwy Intersection have Traffic Signals? | 4.B. Hwy Traffic Signal Interconnection | 4.C. Hwy Traffic Signal Preemption | 5. Highway Traffic Pre-Signals | 6. Highway Monitoring Devices (Check all that apply) |
|---|---|---|---|---|
| ☒ Yes ☐ No | ☐ Not Interconnected ☒ For Traffic Signals ☐ For Warning Signs | ☒ Simultaneous ☐ Advance | ☐ Yes ☒ No Storage Distance * Stop Line Distance * | ☒ Yes - Photo/Video Recording ☐ Yes – Vehicle Presence Detection ☐ None |

**Part IV: Physical Characteristics**

| 1. Traffic Lanes Crossing Railroad | 2. Is Roadway/Pathway Paved? | 3. Does Track Run Down a Street? | 4. Is Crossing Illuminated? (Street lights within approx. 50 feet from nearest rail) |
|---|---|---|---|
| ☐ One-way Traffic ☒ Two-way Traffic ☐ Divided Traffic Number of Lanes 2 | ☒ Yes ☐ No | ☐ Yes ☒ No | ☒ Yes ☐ No |

5. Crossing Surface (on Main Track, multiple types allowed) Installation Date * (MM/YYYY) / Width * Length *
☐ 1 Timber ☐ 2 Asphalt ☒ 3 Asphalt and Timber ☐ 4 Concrete ☐ 5 Concrete and Rubber ☐ 6 Rubber ☐ 7 Metal
☐ 8 Unconsolidated ☐ 9 Composite ☐ 10 Other (specify)

| 6. Intersecting Roadway within 500 feet? | 7. Smallest Crossing Angle | 8. Is Commercial Power Available? * |
|---|---|---|
| ☒ Yes ☐ No If Yes, Approximate Distance (feet) 75 | ☐ 0° – 29° ☐ 30° – 59° ☒ 60° - 90° | ☒ Yes ☐ No |

**Part V: Public Highway Information**

| 1. Highway System | 2. Functional Classification of Road at Crossing | 3. Is Crossing on State Highway System? | 4. Highway Speed Limit |
|---|---|---|---|
| ☐ (01) Interstate Highway System ☐ (02) Other Nat Hwy System (NHS) ☐ (03) Federal AID, Not NHS ☒ (08) Non-Federal Aid | ☒ (0) Rural ☐ (1) Urban ☐ (1) Interstate ☐ (5) Major Collector ☐ (2) Other Freeways and Expressways ☐ (3) Other Principal Arterial ☐ (6) Minor Collector ☐ (4) Minor Arterial ☒ (7) Local | ☒ Yes ☐ No | 35 MPH ☐ Posted ☒ Statutory |

5. Linear Referencing System (LRS Route ID) *
6. LRS Milepost *

| 7. Annual Average Daily Traffic (AADT) | 8. Estimated Percent Trucks | 9. Regularly Used by School Buses? | 10. Emergency Services Route |
|---|---|---|---|
| Year 2014 AADT 4546 | 0 % | ☒ Yes ☐ No Average Number per Day 12 | ☐ Yes ☒ No |

**Submission Information** - *This information is used for administrative purposes and is not available on the public website.*

Submitted by Organization Phone Date

Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.

FORM FRA F 6180.71 (Rev. 3/15) OMB approval expires 3/31/2018 Page 2 OF 2

**Figure 9 – SR 1962 3rd Street (735 496V), Photos of Directional Views**


Looking North

Looking South

Looking East

Looking West

## Figure 10 – 4th Street (735 471W), Crossing Inventory

CROSSING INVENTORY 735471W

**U. S. DOT CROSSING INVENTORY FORM**

**DEPARTMENT OF TRANSPORTATION**
FEDERAL RAILROAD ADMINISTRATION

OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For Private pathway grade crossings, complete the Header, Parts I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 20 and Part III Item 2.K. are required unless otherwise noted. An asterisk * denotes an optional field.

| A. Revision Date (MM/DD/YYYY) | B. Reporting Agency | C. Reason for Update (Select only one) | D. DOT Crossing Inventory Number |
|---|---|---|---|
| 03 / 08 / 2016 | ☐ Railroad ☐ Transit ☒ State ☐ Other | ☒ Change in Data ☐ Re-Open ☐ New Crossing ☐ Closed ☐ Date Change Only ☐ Change in Primary Operating RR ☐ No Train Traffic ☐ Admin. Correction ☐ Quiet Zone Update | 735471W |

**Part I: Location and Classification Information**

| | | |
|---|---|---|
| 1. Primary Operating Railroad: Norfolk Southern Railway Company [NS] | 2. State: NORTH CAROLINA | 3. County: ALAMANCE |
| 4. City / Municipality: ☒ In ☐ Near MEBANE | 5. Street/Road Name & Block Number: FOURTH STREET (Street/Road Name) / * (Block Number) | 6. Highway Type & No.: LS |
| 7. Do Other Railroads Operate a Separate Track at Crossing? ☐ Yes ☒ No If Yes, Specify RR | 8. Do Other Railroads Operate Over Your Track at Crossing? ☐ Yes ☒ No If Yes, Specify RR | |
| 9. Railroad Division or Region: ☐ None PIEDMONT | 10. Railroad Subdivision or District: ☐ None SOU | 11. Branch or Line Name: ☐ None MAIN |
| 12. RR Milepost: 0031.56 (prefix) \| (nnnn.nnn) \| (suffix) | | |

| 13. Line Segment * | 14. Nearest RR Timetable Station * | 15. Parent RR (If applicable) | 16. Crossing Owner (If applicable) |
|---|---|---|---|
| | MEBANE | ☐ N/A | ☐ N/A |

| 17. Crossing Type | 18. Crossing Purpose | 19. Crossing Position | 20. Public Access (If Private Crossing) | 21. Type of Train | 22. Average Passenger Train Count Per Day |
|---|---|---|---|---|---|
| ☒ Public ☐ Private | ☒ Highway ☐ Pathway, Ped. ☐ Station, Ped. | ☒ At Grade ☐ RR Under ☐ RR Over | ☐ Yes ☐ No | ☐ Freight ☐ Transit ☒ Intercity Passenger ☐ Shared Use Transit ☐ Commuter ☐ Tourist/Other | ☐ Less Than One Per Day ☐ Number Per Day 0 |

23. Type of Land Use: ☐ Open Space ☐ Farm ☐ Residential ☒ Commercial ☐ Industrial ☐ Institutional ☐ Recreational ☐ RR Yard

24. Is there an Adjacent Crossing with a Separate Number? ☐ Yes ☒ No If Yes, Provide Crossing Number

25. Quiet Zone (FRA provided): ☒ No ☐ 24 Hr ☐ Partial ☐ Chicago Excused Date Established

| 26. HSR Corridor ID | 27. Latitude in decimal degrees | 28. Longitude in decimal degrees | 29. Lat/Long Source |
|---|---|---|---|
| ☐ N/A | (WGS84 std: nn.nnnnnnn) 36.0961270 | (WGS84 std: -nnn.nnnnnnn) -079.2680140 | ☒ Actual ☐ Estimated |

| | |
|---|---|
| 30.A. Railroad Use * | 31.A. State Use * |
| 30.B. Railroad Use * | 31.B. State Use * |
| 30.C. Railroad Use * | 31.C. State Use * |
| 30.D. Railroad Use * | 31.D. State Use * |
| 32.A. Narrative (Railroad Use) * | 32.B. Narrative (State Use) * |

| 33. Emergency Notification Telephone No. (posted) | 34. Railroad Contact (Telephone No.) | 35. State Contact (Telephone No.) |
|---|---|---|
| 800-453-2530 | 800-946-4744 | 919-715-8803 |

**Part II: Railroad Information**

1. Estimated Number of Daily Train Movements

| 1.A. Total Day Thru Trains (6 AM to 6 PM) | 1.B. Total Night Thru Trains (6 PM to 6 AM) | 1.C. Total Switching Trains | 1.D. Total Transit Trains | 1.E. Check if Less Than One Movement Per Day ☐ How many trains per week? |
|---|---|---|---|---|
| 12 | 4 | 0 | | |

| 2. Year of Train Count Data (YYYY) | 3. Speed of Train at Crossing |
|---|---|
| | 3.A. Maximum Timetable Speed (mph) 60 |
| | 3.B. Typical Speed Range Over Crossing (mph) From 5 to 25 |

4. Type and Count of Tracks: Main 1 Siding 1 Yard ____ Transit ____ Industry ____

5. Train Detection (Main Track only): ☒ Constant Warning Time ☐ Motion Detection ☐ AFO ☐ PTC ☐ DC ☐ Other ☐ None

| 6. Is Track Signaled? | 7.A. Event Recorder | 7.B. Remote Health Monitoring |
|---|---|---|
| ☐ Yes ☒ No | ☐ Yes ☐ No | ☐ Yes ☐ No |



**U. S. DOT CROSSING INVENTORY FORM**

| A. Revision Date (MM/DD/YYYY) | PAGE 2 | D. Crossing Inventory Number (7 char.) |
|---|---|---|
| 03/08/2016 | | 735471W |

**Part III: Highway or Pathway Traffic Control Device Information**

1. Are there Signs or Signals? ☒ Yes ☐ No

2. Types of Passive Traffic Control Devices associated with the Crossing

| 2.A. Crossbuck Assemblies (count) | 2.B. STOP Signs (R1-1) (count) | 2.C. YIELD Signs (R1-2) (count) | 2.D. Advance Warning Signs (Check all that apply; include count) ☒ None |
|---|---|---|---|
| 0 | 0 | 0 | ☒ W10-1 2 ☒ W10-3 0 ☒ W10-11 0 ☒ W10-2 0 ☒ W10-4 0 ☒ W10-12 0 |

| 2.E. Low Ground Clearance Sign (W10-5) | 2.F. Pavement Markings | 2.G. Channelization Devices/Medians | 2.H. EXEMPT Sign (R15-3) | 2.I. ENS Sign (I-13) Displayed |
|---|---|---|---|---|
| ☒ Yes (count 2) ☐ No | ☒ Stop Lines ☐ Dynamic Envelope ☒ RR Xing Symbols ☐ None | ☐ All Approaches ☐ Median ☐ One Approach ☒ None | ☐ Yes ☐ No | ☒ Yes ☐ No |

| 2.J. Other MUTCD Signs | 2.K. Private Crossing Signs (if private) | 2.L. LED Enhanced Signs (List types) |
|---|---|---|
| ☒ Yes ☐ No Specify Type R8-8 Count 1 Specify Type ____ Count 2 Specify Type ____ Count ____ | ☐ Yes ☐ No | |

3. Types of Train Activated Warning Devices at the Grade Crossing (specify count of each device for all that apply)

| 3.A. Gate Arms (count) | 3.B. Gate Configuration | 3.C. Cantilevered (or Bridged) Flashing Light Structures (count) | 3.D. Mast Mounted Flashing Lights (count of masts) 2 | 3.E. Total Count of Flashing Light Pairs |
|---|---|---|---|---|
| Roadway 2 Pedestrian 0 | ☒ 2 Quad ☐ 3 Quad ☐ 4 Quad ☐ Full (Barrier) Resistance ☐ Median Gates | Over Traffic Lane 0 ☐ Incandescent Not Over Traffic Lane 0 ☐ LED | ☒ Incandescent ☐ LED ☐ Back Lights Included ☐ Side Lights Included | 6 |

| 3.F. Installation Date of Current Active Warning Devices: (MM/YYYY) | 3.G. Wayside Horn | 3.H. Highway Traffic Signals Controlling Crossing | 3.I. Bells (count) |
|---|---|---|---|
| ____/____ ☐ Not Required | ☐ Yes Installed on (MM/YYYY) ____/____ ☒ No | ☐ Yes ☒ No | 1 |

| 3.J. Non-Train Active Warning | 3.K. Other Flashing Lights or Warning Devices |
|---|---|
| ☐ Flagging/Flagman ☐ Manually Operated Signals ☐ Watchman ☐ Floodlighting ☒ None | Count 0 Specify type ____ |

| 4.A. Does nearby Hwy Intersection have Traffic Signals? | 4.B. Hwy Traffic Signal Interconnection | 4.C. Hwy Traffic Signal Preemption | 5. Highway Traffic Pre-Signals | 6. Highway Monitoring Devices (Check all that apply) |
|---|---|---|---|---|
| ☒ Yes ☐ No | ☐ Not Interconnected ☒ For Traffic Signals ☐ For Warning Signs | ☐ Simultaneous ☒ Advance | ☐ Yes ☒ No Storage Distance * ____ Stop Line Distance * ____ | ☐ Yes - Photo/Video Recording ☐ Yes – Vehicle Presence Detection ☒ None |

**Part IV: Physical Characteristics**

| 1. Traffic Lanes Crossing Railroad | 2. Is Roadway/Pathway Paved? | 3. Does Track Run Down a Street? | 4. Is Crossing Illuminated? (Street lights within approx. 50 feet from nearest rail) |
|---|---|---|---|
| ☐ One-way Traffic ☒ Two-way Traffic ☐ Divided Traffic Number of Lanes 2 | ☒ Yes ☐ No | ☐ Yes ☒ No | ☒ Yes ☐ No |

5. Crossing Surface (on Main Track, multiple types allowed) Installation Date * (MM/YYYY) ____/____ Width * ____ Length * ____
☐ 1 Timber ☐ 2 Asphalt ☒ 3 Asphalt and Timber ☐ 4 Concrete ☐ 5 Concrete and Rubber ☐ 6 Rubber ☐ 7 Metal
☐ 8 Unconsolidated ☐ 9 Composite ☐ 10 Other (specify) ____

| 6. Intersecting Roadway within 500 feet? | 7. Smallest Crossing Angle | 8. Is Commercial Power Available? * |
|---|---|---|
| ☒ Yes ☐ No If Yes, Approximate Distance (feet) 75 | ☐ 0° – 29° ☐ 30° – 59° ☒ 60° - 90° | ☒ Yes ☐ No |

**Part V: Public Highway Information**

1. Highway System
☐ (01) Interstate Highway System
☐ (02) Other Nat Hwy System (NHS)
☐ (03) Federal AID, Not NHS
☒ (08) Non-Federal Aid

2. Functional Classification of Road at Crossing
☒ (0) Rural ☐ (1) Urban
☐ (1) Interstate ☐ (5) Major Collector
☐ (2) Other Freeways and Expressways
☐ (3) Other Principal Arterial ☐ (6) Minor Collector
☐ (4) Minor Arterial ☒ (7) Local

3. Is Crossing on State Highway System? ☐ Yes ☒ No

4. Highway Speed Limit 35 MPH ☐ Posted ☒ Statutory

5. Linear Referencing System (LRS Route ID) *

6. LRS Milepost *

| 7. Annual Average Daily Traffic (AADT) | 8. Estimated Percent Trucks | 9. Regularly Used by School Buses? | 10. Emergency Services Route |
|---|---|---|---|
| Year 2014 AADT 856 | 0 % | ☒ Yes ☐ No Average Number per Day 2 | ☐ Yes ☒ No |

**Submission Information** - *This information is used for administrative purposes and is not available on the public website.*

Submitted by ____ Organization ____ Phone ____ Date ____

Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.

**Figure 11 – 4th Street (735 471W), Photos of Directional Views**


Looking North

Looking South

Looking East

Looking West

## Figure 12 – NC 119 5th Street (735 472D), Crossing Inventory

CROSSING INVENTORY 735472D

**U. S. DOT CROSSING INVENTORY FORM**

**DEPARTMENT OF TRANSPORTATION**
FEDERAL RAILROAD ADMINISTRATION

OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For Private pathway grade crossings, complete the Header, Parts I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 2.0 and Part III Item 2.K. are required unless otherwise noted. An asterisk * denotes an optional field.

| A. Revision Date (MM/DD/YYYY) | B. Reporting Agency | C. Reason for Update (Select only one) | D. DOT Crossing Inventory Number |
|---|---|---|---|
| 03 / 08 / 2016 | ☐ Railroad ☐ Transit ☒ State ☐ Other | ☒ Change in Data ☐ Re-Open ☐ New Crossing ☐ Date Change Only ☐ Closed ☐ Change in Primary Operating RR ☐ No Train Traffic ☐ Admin. Correction ☐ Quiet Zone Update | 735472D |

**Part I: Location and Classification Information**

| 1. Primary Operating Railroad | 2. State | 3. County |
|---|---|---|
| Norfolk Southern Railway Company [NS] | NORTH CAROLINA | ALAMANCE |

| 4. City / Municipality | 5. Street/Road Name & Block Number | 6. Highway Type & No. |
|---|---|---|
| ☒ In ☐ Near MEBANE | FIFTH STREET (Street/Road Name) \| * (Block Number) | NC 119 |

7. Do Other Railroads Operate a Separate Track at Crossing? ☐ Yes ☒ No — If Yes, Specify RR

8. Do Other Railroads Operate Over Your Track at Crossing? ☐ Yes ☒ No — If Yes, Specify RR

| 9. Railroad Division or Region | 10. Railroad Subdivision or District | 11. Branch or Line Name | 12. RR Milepost |
|---|---|---|---|
| ☐ None PIEDMONT | ☐ None SOU | ☐ None MAIN | 0031.64 (prefix) \| (nnnn.nnn) \| (suffix) |

| 13. Line Segment * | 14. Nearest RR Timetable Station * | 15. Parent RR (If applicable) | 16. Crossing Owner (If applicable) |
|---|---|---|---|
| | MEBANE | ☐ N/A | ☐ N/A |

| 17. Crossing Type | 18. Crossing Purpose | 19. Crossing Position | 20. Public Access (If Private Crossing) | 21. Type of Train | 22. Average Passenger Train Count Per Day |
|---|---|---|---|---|---|
| ☒ Public ☐ Private | ☒ Highway ☐ Pathway, Ped. ☐ Station, Ped. | ☒ At Grade ☐ RR Under ☐ RR Over | ☐ Yes ☐ No | ☐ Freight ☐ Intercity Passenger ☐ Commuter ☐ Transit ☐ Shared Use Transit ☐ Tourist/Other | ☐ Less Than One Per Day ☐ Number Per Day 0 |

23. Type of Land Use: ☐ Open Space ☐ Farm ☐ Residential ☒ Commercial ☐ Industrial ☐ Institutional ☐ Recreational ☐ RR Yard

24. Is there an Adjacent Crossing with a Separate Number? ☐ Yes ☒ No — If Yes, Provide Crossing Number

25. Quiet Zone (FRA provided): ☒ No ☐ 24 Hr ☐ Partial ☐ Chicago Excused — Date Established

| 26. HSR Corridor ID | 27. Latitude in decimal degrees | 28. Longitude in decimal degrees | 29. Lat/Long Source |
|---|---|---|---|
| ☐ N/A | (WGS84 std: nn.nnnnnnn) 36.0957270 | (WGS84 std: -nnn.nnnnnnn) -079.2666150 | ☒ Actual ☐ Estimated |

| 30.A. Railroad Use * | 31.A. State Use * |
|---|---|
| 30.B. Railroad Use * | 31.B. State Use * |
| 30.C. Railroad Use * | 31.C. State Use * |
| 30.D. Railroad Use * | 31.D. State Use * |
| 32.A. Narrative (Railroad Use) * | 32.B. Narrative (State Use) * |

| 33. Emergency Notification Telephone No. (posted) | 34. Railroad Contact (Telephone No.) | 35. State Contact (Telephone No.) |
|---|---|---|
| 800-453-2530 | 800-946-4744 | 919-715-8803 |

**Part II: Railroad Information**

1. Estimated Number of Daily Train Movements

| 1.A. Total Day Thru Trains (6 AM to 6 PM) | 1.B. Total Night Thru Trains (6 PM to 6 AM) | 1.C. Total Switching Trains | 1.D. Total Transit Trains | 1.E. Check if Less Than One Movement Per Day ☐ How many trains per week? |
|---|---|---|---|---|
| 12 | 4 | 0 | | |

2. Year of Train Count Data (YYYY)

3. Speed of Train at Crossing
3.A. Maximum Timetable Speed (mph) 60
3.B. Typical Speed Range Over Crossing (mph) From 5 to 35

4. Type and Count of Tracks
Main 1 Siding 1 Yard Transit Industry

5. Train Detection (Main Track only)
☐ Constant Warning Time ☐ Motion Detection ☐ AFO ☐ PTC ☐ DC ☐ Other ☒ None

| 6. Is Track Signaled? | 7.A. Event Recorder | 7.B. Remote Health Monitoring |
|---|---|---|
| ☐ Yes ☒ No | ☐ Yes ☐ No | ☐ Yes ☐ No |

FORM FRA F 6180.71 (Rev. 3/15) OMB approval expires 3/31/2018 Page 1 OF 2

**U. S. DOT CROSSING INVENTORY FORM**

| A. Revision Date (MM/DD/YYYY) 03/08/2016 | PAGE 2 | D. Crossing Inventory Number (7 char.) 735472D |
|---|---|---|

**Part III: Highway or Pathway Traffic Control Device Information**

1. Are there Signs or Signals? ☒ Yes ☐ No

2. Types of Passive Traffic Control Devices associated with the Crossing

| 2.A. Crossbuck Assemblies (count) | 2.B. STOP Signs (R1-1) (count) | 2.C. YIELD Signs (R1-2) (count) | 2.D. Advance Warning Signs (Check all that apply; include count) ☒ None |
|---|---|---|---|
| 0 | 0 | 0 | ☒ W10-1 2 ☒ W10-3 0 ☒ W10-11 0 ☒ W10-2 0 ☒ W10-4 0 ☒ W10-12 0 |

| 2.E. Low Ground Clearance Sign (W10-5) | 2.F. Pavement Markings | 2.G. Channelization Devices/Medians | 2.H. EXEMPT Sign (R15-3) | 2.I. ENS Sign (I-13) Displayed |
|---|---|---|---|---|
| ☒ Yes (count 2) ☐ No | ☒ Stop Lines ☐ Dynamic Envelope ☒ RR Xing Symbols ☐ None | ☐ All Approaches ☐ Median ☐ One Approach ☒ None | ☐ Yes ☐ No | ☒ Yes ☐ No |

| 2.J. Other MUTCD Signs | 2.K. Private Crossing Signs (if private) | 2.L. LED Enhanced Signs (List types) |
|---|---|---|
| ☒ Yes ☐ No Specify Type R8-10 Count 2 Specify Type Count 0 Specify Type Count | ☐ Yes ☐ No | |

3. Types of Train Activated Warning Devices at the Grade Crossing (specify count of each device for all that apply)

| 3.A. Gate Arms (count) | 3.B. Gate Configuration | 3.C. Cantilevered (or Bridged) Flashing Light Structures (count) | 3.D. Mast Mounted Flashing Lights (count of masts) 0 | 3.E. Total Count of Flashing Light Pairs |
|---|---|---|---|---|
| Roadway 4 Pedestrian 0 | ☐ 2 Quad ☐ 3 Quad ☒ 4 Quad ☐ Full (Barrier) Resistance ☐ Median Gates | Over Traffic Lane 2 ☒ Incandescent ☐ LED Not Over Traffic Lane 0 ☐ LED | ☐ Incandescent ☐ LED ☐ Back Lights Included ☐ Side Lights Included | 12 |

| 3.F. Installation Date of Current Active Warning Devices: (MM/YYYY) | 3.G. Wayside Horn | 3.H. Highway Traffic Signals Controlling Crossing | 3.I. Bells (count) |
|---|---|---|---|
| / ☐ Not Required | ☐ Yes Installed on (MM/YYYY) / ☒ No | ☐ Yes ☒ No | 1 |

| 3.J. Non-Train Active Warning | 3.K. Other Flashing Lights or Warning Devices |
|---|---|
| ☐ Flagging/Flagman ☐ Manually Operated Signals ☐ Watchman ☐ Floodlighting ☒ None | Count 0 Specify type |

| 4.A. Does nearby Hwy Intersection have Traffic Signals? | 4.B. Hwy Traffic Signal Interconnection | 4.C. Hwy Traffic Signal Preemption | 5. Highway Traffic Pre-Signals | 6. Highway Monitoring Devices (Check all that apply) |
|---|---|---|---|---|
| ☒ Yes ☐ No | ☐ Not Interconnected ☒ For Traffic Signals ☐ For Warning Signs | ☐ Simultaneous ☒ Advance | ☐ Yes ☒ No Storage Distance * Stop Line Distance * | ☒ Yes - Photo/Video Recording ☐ Yes – Vehicle Presence Detection ☐ None |

**Part IV: Physical Characteristics**

| 1. Traffic Lanes Crossing Railroad | 2. Is Roadway/Pathway Paved? | 3. Does Track Run Down a Street? | 4. Is Crossing Illuminated? (Street lights within approx. 50 feet from nearest rail) |
|---|---|---|---|
| ☐ One-way Traffic ☒ Two-way Traffic ☐ Divided Traffic Number of Lanes 5 | ☒ Yes ☐ No | ☐ Yes ☒ No | ☐ Yes ☒ No |

5. Crossing Surface (on Main Track, multiple types allowed) Installation Date * (MM/YYYY) / Width * Length *
☐ 1 Timber ☐ 2 Asphalt ☒ 3 Asphalt and Timber ☐ 4 Concrete ☐ 5 Concrete and Rubber ☐ 6 Rubber ☐ 7 Metal ☐ 8 Unconsolidated ☐ 9 Composite ☐ 10 Other (specify)

| 6. Intersecting Roadway within 500 feet? | 7. Smallest Crossing Angle | 8. Is Commercial Power Available? * |
|---|---|---|
| ☒ Yes ☐ No If Yes, Approximate Distance (feet) 75 | ☐ 0° – 29° ☐ 30° – 59° ☒ 60° - 90° | ☒ Yes ☐ No |

**Part V: Public Highway Information**

| 1. Highway System | 2. Functional Classification of Road at Crossing | 3. Is Crossing on State Highway System? | 4. Highway Speed Limit |
|---|---|---|---|
| ☐ (01) Interstate Highway System ☐ (02) Other Nat Hwy System (NHS) ☐ (03) Federal AID, Not NHS ☒ (08) Non-Federal Aid | ☒ (0) Rural ☐ (1) Urban ☐ (1) Interstate ☐ (5) Major Collector ☐ (2) Other Freeways and Expressways ☐ (3) Other Principal Arterial ☐ (6) Minor Collector ☒ (4) Minor Arterial ☐ (7) Local | ☒ Yes ☐ No | 35 MPH ☐ Posted ☒ Statutory |

5. Linear Referencing System (LRS Route ID) *

6. LRS Milepost *

| 7. Annual Average Daily Traffic (AADT) | 8. Estimated Percent Trucks | 9. Regularly Used by School Buses? | 10. Emergency Services Route |
|---|---|---|---|
| Year 2014 AADT 12193 | 3 % | ☒ Yes ☐ No Average Number per Day 11 | ☐ Yes ☒ No |

**Submission Information** - *This information is used for administrative purposes and is not available on the public website.*

Submitted by Organization Phone Date

Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.

FORM FRA F 6180.71 (Rev. 3/15) OMB approval expires 3/31/2018 Page 2 OF 2

**Figure 13 – NC 119 5th Street (735 472D), Photos of Directional Views**

Looking North

Looking South

Looking East

Looking West

## Figure 14 – SR 1402 Mattress Factory Road (735 474S), Crossing Inventory

CROSSING INVENTORY 735474S

**U. S. DOT CROSSING INVENTORY FORM**

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For Private pathway grade crossings, complete the Header, Parts I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 2.0 and Part III Item 2.K. are required unless otherwise noted. An asterisk * denotes an optional field.

| A. Revision Date (MM/DD/YYYY) | B. Reporting Agency | C. Reason for Update (Select only one) | D. DOT Crossing Inventory Number |
|---|---|---|---|
| 03 / 08 / 2016 | ☐ Railroad ☐ Transit ☒ State ☐ Other | ☒ Change in Data ☐ New Crossing ☐ Closed ☐ No Train Traffic ☐ Quiet Zone Update ☐ Re-Open ☐ Date Change Only ☐ Change in Primary Operating RR ☐ Admin. Correction | 735474S |

**Part I: Location and Classification Information**

| 1. Primary Operating Railroad | 2. State | 3. County |
|---|---|---|
| Norfolk Southern Railway Company [NS] | NORTH CAROLINA | ORANGE |

| 4. City / Municipality | 5. Street/Road Name & Block Number | 6. Highway Type & No. |
|---|---|---|
| ☐ In ☒ Near MEBANE | MATTRESS FACTORY ROAD (Street/Road Name) \| * (Block Number) | SR 1402 |

7. Do Other Railroads Operate a Separate Track at Crossing? ☐ Yes ☒ No — If Yes, Specify RR:

8. Do Other Railroads Operate Over Your Track at Crossing? ☒ Yes ☐ No — If Yes, Specify RR: ATK

| 9. Railroad Division or Region | 10. Railroad Subdivision or District | 11. Branch or Line Name | 12. RR Milepost |
|---|---|---|---|
| ☐ None PIEDMONT | ☐ None SOU | ☐ None MAIN | H \| 0032.79 \| (prefix) \| (nnnn.nnn) \| (suffix) |

| 13. Line Segment * | 14. Nearest RR Timetable Station * | 15. Parent RR (If applicable) | 16. Crossing Owner (If applicable) |
|---|---|---|---|
| | | ☐ N/A | ☐ N/A |

| 17. Crossing Type | 18. Crossing Purpose | 19. Crossing Position | 20. Public Access (If Private Crossing) | 21. Type of Train | 22. Average Passenger Train Count Per Day |
|---|---|---|---|---|---|
| ☒ Public ☐ Private | ☒ Highway ☐ Pathway, Ped. ☐ Station, Ped. | ☒ At Grade ☐ RR Under ☐ RR Over | ☐ Yes ☐ No | ☐ Freight ☐ Transit ☐ Intercity Passenger ☐ Shared Use Transit ☐ Commuter ☐ Tourist/Other | ☐ Less Than One Per Day ☐ Number Per Day 0 |

23. Type of Land Use: ☐ Open Space ☐ Farm ☐ Residential ☒ Commercial ☐ Industrial ☐ Institutional ☐ Recreational ☐ RR Yard

24. Is there an Adjacent Crossing with a Separate Number? ☒ Yes ☐ No — If Yes, Provide Crossing Number 735475Y

25. Quiet Zone (FRA provided): ☒ No ☐ 24 Hr ☐ Partial ☐ Chicago Excused — Date Established

| 26. HSR Corridor ID | 27. Latitude in decimal degrees | 28. Longitude in decimal degrees | 29. Lat/Long Source |
|---|---|---|---|
| ☐ N/A | 36.0912350 (WGS84 std: nn.nnnnnnn) | -079.2469780 (WGS84 std: -nnn.nnnnnnn) | ☒ Actual ☐ Estimated |

| 30.A. Railroad Use * | 31.A. State Use * |
|---|---|
| 30.B. Railroad Use * | 31.B. State Use * |
| 30.C. Railroad Use * | 31.C. State Use * |
| 30.D. Railroad Use * | 31.D. State Use * |
| 32.A. Narrative (Railroad Use) * | 32.B. Narrative (State Use) * |

| 33. Emergency Notification Telephone No. (posted) | 34. Railroad Contact (Telephone No.) | 35. State Contact (Telephone No.) |
|---|---|---|
| 800-946-4744 | 800-946-4744 | 919-715-8803 |

**Part II: Railroad Information**

| 1. Estimated Number of Daily Train Movements | | | | |
|---|---|---|---|---|
| 1.A. Total Day Thru Trains (6 AM to 6 PM): 12 | 1.B. Total Night Thru Trains (6 PM to 6 AM): 4 | 1.C. Total Switching Trains: 0 | 1.D. Total Transit Trains: | 1.E. Check if Less Than One Movement Per Day ☐ How many trains per week? |

| 2. Year of Train Count Data (YYYY) | 3. Speed of Train at Crossing |
|---|---|
| | 3.A. Maximum Timetable Speed (mph) 60 — 3.B. Typical Speed Range Over Crossing (mph) From 5 to 49 |

4. Type and Count of Tracks: Main 1 Siding Yard Transit Industry

5. Train Detection (Main Track only): ☐ Constant Warning Time ☒ Motion Detection ☐ AFO ☐ PTC ☐ DC ☐ Other ☐ None

| 6. Is Track Signaled? | 7.A. Event Recorder | 7.B. Remote Health Monitoring |
|---|---|---|
| ☐ Yes ☒ No | ☐ Yes ☐ No | ☐ Yes ☐ No |

FORM FRA F 6180.71 (Rev. 3/15) OMB approval expires 3/31/2018 Page 1 OF 2

**U. S. DOT CROSSING INVENTORY FORM**

| A. Revision Date (MM/DD/YYYY) 03/08/2016 | PAGE 2 | D. Crossing Inventory Number (7 char.) 735474S |
|---|---|---|

**Part III: Highway or Pathway Traffic Control Device Information**

1. Are there Signs or Signals? ☒ Yes ☐ No

2. Types of Passive Traffic Control Devices associated with the Crossing

| 2.A. Crossbuck Assemblies (count) | 2.B. STOP Signs (R1-1) (count) | 2.C. YIELD Signs (R1-2) (count) | 2.D. Advance Warning Signs (Check all that apply; include count) ☒ None |
|---|---|---|---|
| 0 | 0 | 0 | ☒ W10-1 2 ☒ W10-3 4 ☒ W10-11 0 ☒ W10-2 0 ☒ W10-4 0 ☒ W10-12 0 |

| 2.E. Low Ground Clearance Sign (W10-5) | 2.F. Pavement Markings | 2.G. Channelization Devices/Medians | 2.H. EXEMPT Sign (R15-3) | 2.I. ENS Sign (I-13) Displayed |
|---|---|---|---|---|
| ☒ Yes (count 2) ☐ No | ☒ Stop Lines ☐ Dynamic Envelope ☒ RR Xing Symbols ☐ None | ☐ All Approaches ☐ Median ☐ One Approach ☒ None | ☐ Yes ☐ No | ☒ Yes ☐ No |

| 2.J. Other MUTCD Signs | 2.K. Private Crossing Signs (if private) | 2.L. LED Enhanced Signs (List types) |
|---|---|---|
| ☒ Yes ☐ No | ☐ Yes ☐ No | |
| Specify Type Count 2 | | |
| Specify Type R8-10 Count 2 | | |
| Specify Type Count | | |

3. Types of Train Activated Warning Devices at the Grade Crossing (specify count of each device for all that apply)

| 3.A. Gate Arms (count) | 3.B. Gate Configuration | 3.C. Cantilevered (or Bridged) Flashing Light Structures (count) | 3.D. Mast Mounted Flashing Lights (count of masts) 2 | 3.E. Total Count of Flashing Light Pairs |
|---|---|---|---|---|
| Roadway 2 Pedestrian 0 | ☒ 2 Quad ☐ 3 Quad ☐ 4 Quad ☐ Full (Barrier) Resistance ☐ Median Gates | Over Traffic Lane 0 ☐ Incandescent Not Over Traffic Lane 0 ☐ LED | ☒ Incandescent ☐ LED ☐ Back Lights Included ☐ Side Lights Included | 4 |

| 3.F. Installation Date of Current Active Warning Devices: (MM/YYYY) | 3.G. Wayside Horn | 3.H. Highway Traffic Signals Controlling Crossing | 3.I. Bells (count) |
|---|---|---|---|
| / ☐ Not Required | ☐ Yes Installed on (MM/YYYY) / ☒ No | ☐ Yes ☒ No | 1 |

| 3.J. Non-Train Active Warning | 3.K. Other Flashing Lights or Warning Devices |
|---|---|
| ☐ Flagging/Flagman ☐ Manually Operated Signals ☐ Watchman ☐ Floodlighting ☒ None | Count 0 Specify type |

| 4.A. Does nearby Hwy Intersection have Traffic Signals? | 4.B. Hwy Traffic Signal Interconnection | 4.C. Hwy Traffic Signal Preemption | 5. Highway Traffic Pre-Signals | 6. Highway Monitoring Devices (Check all that apply) |
|---|---|---|---|---|
| ☐ Yes ☒ No | ☒ Not Interconnected ☐ For Traffic Signals ☐ For Warning Signs | ☐ Simultaneous ☐ Advance | ☐ Yes ☒ No Storage Distance * Stop Line Distance * | ☐ Yes - Photo/Video Recording ☐ Yes – Vehicle Presence Detection ☒ None |

**Part IV: Physical Characteristics**

| 1. Traffic Lanes Crossing Railroad | 2. Is Roadway/Pathway Paved? | 3. Does Track Run Down a Street? | 4. Is Crossing Illuminated? (Street lights within approx. 50 feet from nearest rail) |
|---|---|---|---|
| ☐ One-way Traffic ☒ Two-way Traffic ☐ Divided Traffic Number of Lanes 2 | ☒ Yes ☐ No | ☐ Yes ☒ No | ☐ Yes ☒ No |

5. Crossing Surface (on Main Track, multiple types allowed) Installation Date * (MM/YYYY) / Width * Length *
☐ 1 Timber ☐ 2 Asphalt ☒ 3 Asphalt and Timber ☐ 4 Concrete ☐ 5 Concrete and Rubber ☐ 6 Rubber ☐ 7 Metal ☐ 8 Unconsolidated ☐ 9 Composite ☐ 10 Other (specify)

| 6. Intersecting Roadway within 500 feet? | 7. Smallest Crossing Angle | 8. Is Commercial Power Available? * |
|---|---|---|
| ☒ Yes ☐ No If Yes, Approximate Distance (feet) 200 | ☐ 0° – 29° ☐ 30° – 59° ☒ 60° - 90° | ☒ Yes ☐ No |

**Part V: Public Highway Information**

| 1. Highway System | 2. Functional Classification of Road at Crossing | 3. Is Crossing on State Highway System? | 4. Highway Speed Limit |
|---|---|---|---|
| ☐ (01) Interstate Highway System ☐ (02) Other Nat Hwy System (NHS) ☐ (03) Federal AID, Not NHS ☒ (08) Non-Federal Aid | ☒ (0) Rural ☐ (1) Urban ☐ (1) Interstate ☐ (5) Major Collector ☐ (2) Other Freeways and Expressways ☐ (3) Other Principal Arterial ☒ (6) Minor Collector ☐ (4) Minor Arterial ☐ (7) Local | ☒ Yes ☐ No — 5. Linear Referencing System (LRS Route ID) * — 6. LRS Milepost * | 55 MPH ☐ Posted ☒ Statutory |

| 7. Annual Average Daily Traffic (AADT) | 8. Estimated Percent Trucks | 9. Regularly Used by School Buses? | 10. Emergency Services Route |
|---|---|---|---|
| Year 2014 AADT 2109 | 0 % | ☒ Yes ☐ No Average Number per Day 6 | ☐ Yes ☒ No |

**Submission Information** - *This information is used for administrative purposes and is not available on the public website.*

Submitted by Organization Phone Date

Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.

FORM FRA F 6180.71 (Rev. 3/15) OMB approval expires 3/31/2018 Page 2 OF 2

**Figure 15 – SR 1402 Mattress Factory Road (735 474S), Photos of Directional Views**

Looking North

Looking South

Looking East

Looking West

**Figure 16 – SR 1114 Buckhorn Road (735 141R), Crossing Inventory**

CROSSING INVENTORY 735141R

U. S. DOT CROSSING INVENTORY FORM

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For Private pathway grade crossings, complete the Header, Parts I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 20 and Part III Item 2.K. are required unless otherwise noted. An asterisk * denotes an optional field.

| A. Revision Date (MM/DD/YYYY) | B. Reporting Agency | C. Reason for Update (Select only one) | D. DOT Crossing Inventory Number |
|---|---|---|---|
| 03 / 08 / 2016 | ☐ Railroad ☐ Transit ☒ State ☐ Other | ☒ Change in Data ☐ New Crossing ☐ Closed ☐ No Train Traffic ☐ Quiet Zone Update ☐ Re-Open ☐ Date Change Only ☐ Change in Primary Operating RR ☐ Admin. Correction | 735141R |

**Part I: Location and Classification Information**

| 1. Primary Operating Railroad | 2. State | 3. County |
|---|---|---|
| Norfolk Southern Railway Company [NS] | NORTH CAROLINA | ORANGE |

| 4. City / Municipality | 5. Street/Road Name & Block Number | 6. Highway Type & No. |
|---|---|---|
| ☐ In ☒ Near HILLSBOROUGH | BUCKHORN ROAD (Street/Road Name) \| * (Block Number) | SR 1114 |

7. Do Other Railroads Operate a Separate Track at Crossing? ☐ Yes ☒ No — If Yes, Specify RR:

8. Do Other Railroads Operate Over Your Track at Crossing? ☒ Yes ☐ No — If Yes, Specify RR: ATK

| 9. Railroad Division or Region | 10. Railroad Subdivision or District | 11. Branch or Line Name | 12. RR Milepost |
|---|---|---|---|
| ☐ None EASTERN | ☐ None NC LINE | ☐ None MAIN | H \| 0034.11 \| (prefix) \| (nnnn.nnn) \| (suffix) |

| 13. Line Segment * | 14. Nearest RR Timetable Station * | 15. Parent RR (if applicable) | 16. Crossing Owner (if applicable) |
|---|---|---|---|
| | MEBANE | ☐ N/A | ☐ N/A |

| 17. Crossing Type | 18. Crossing Purpose | 19. Crossing Position | 20. Public Access (if Private Crossing) | 21. Type of Train | 22. Average Passenger Train Count Per Day |
|---|---|---|---|---|---|
| ☒ Public ☐ Private | ☒ Highway ☐ Pathway, Ped. ☐ Station, Ped. | ☒ At Grade ☐ RR Under ☐ RR Over | ☐ Yes ☐ No | ☐ Freight ☐ Intercity Passenger ☐ Commuter ☐ Transit ☐ Shared Use Transit ☐ Tourist/Other | ☐ Less Than One Per Day ☐ Number Per Day 0 |

23. Type of Land Use: ☐ Open Space ☐ Farm ☒ Residential ☐ Commercial ☐ Industrial ☐ Institutional ☐ Recreational ☐ RR Yard

24. Is there an Adjacent Crossing with a Separate Number? ☐ Yes ☒ No — If Yes, Provide Crossing Number: _____

25. Quiet Zone (FRA provided): ☒ No ☐ 24 Hr ☐ Partial ☐ Chicago Excused — Date Established: _____

| 26. HSR Corridor ID | 27. Latitude in decimal degrees | 28. Longitude in decimal degrees | 29. Lat/Long Source |
|---|---|---|---|
| ☐ N/A | (WGS84 std: nn.nnnnnn) 36.0846139 | (WGS84 std: -nnn.nnnnnn) -079.2257998 | ☐ Actual ☒ Estimated |

| 30.A. Railroad Use * | 31.A. State Use * |
|---|---|
| 30.B. Railroad Use * | 31.B. State Use * |
| 30.C. Railroad Use * | 31.C. State Use * |
| 30.D. Railroad Use * | 31.D. State Use * |
| 32.A. Narrative (Railroad Use) * | 32.B. Narrative (State Use) * |

| 33. Emergency Notification Telephone No. (posted) | 34. Railroad Contact (Telephone No.) | 35. State Contact (Telephone No.) |
|---|---|---|
| 800-453-2530 | 800-946-4744 | 919-715-8803 |

**Part II: Railroad Information**

1. Estimated Number of Daily Train Movements

| 1.A. Total Day Thru Trains (6 AM to 6 PM) | 1.B. Total Night Thru Trains (6 PM to 6 AM) | 1.C. Total Switching Trains | 1.D. Total Transit Trains | 1.E. Check if Less Than One Movement Per Day ☐ How many trains per week? |
|---|---|---|---|---|
| 12 | 2 | 2 | | |

2. Year of Train Count Data (YYYY): _____

3. Speed of Train at Crossing
3.A. Maximum Timetable Speed (mph) 60
3.B. Typical Speed Range Over Crossing (mph) From 5 to 49

4. Type and Count of Tracks
Main 1 Siding _____ Yard _____ Transit _____ Industry _____

5. Train Detection (Main Track only)
☐ Constant Warning Time ☐ Motion Detection ☐ AFO ☐ PTC ☐ DC ☐ Other ☒ None

| 6. Is Track Signaled? | 7.A. Event Recorder | 7.B. Remote Health Monitoring |
|---|---|---|
| ☐ Yes ☒ No | ☐ Yes ☐ No | ☐ Yes ☐ No |



U. S. DOT CROSSING INVENTORY FORM



**Part III: Highway or Pathway Traffic Control Device Information**

1. Are there Signs or Signals? ☒ Yes ☐ No

2. Types of Passive Traffic Control Devices associated with the Crossing

| 2.A. Crossbuck Assemblies (count) | 2.B. STOP Signs (R1-1) (count) | 2.C. YIELD Signs (R1-2) (count) | 2.D. Advance Warning Signs (Check all that apply; include count) ☒ None |
|---|---|---|---|
| 0 | 0 | 0 | ☒ W10-1 2 ☒ W10-3 2 ☒ W10-11 0 ☒ W10-2 0 ☒ W10-4 0 ☒ W10-12 0 |

| 2.E. Low Ground Clearance Sign (W10-5) | 2.F. Pavement Markings | 2.G. Channelization Devices/Medians | 2.H. EXEMPT Sign (R15-3) | 2.I. ENS Sign (I-13) Displayed |
|---|---|---|---|---|
| ☐ Yes (count 0) ☒ No | ☒ Stop Lines ☐ Dynamic Envelope ☒ RR Xing Symbols ☐ None | ☐ All Approaches ☐ Median ☐ One Approach ☒ None | ☐ Yes ☐ No | ☒ Yes ☐ No |

| 2.J. Other MUTCD Signs | 2.K. Private Crossing Signs (if private) | 2.L. LED Enhanced Signs (List types) |
|---|---|---|
| Specify Type _____ Count 2 Specify Type R8-10 Count 2 Specify Type _____ Count _____ | ☒ Yes ☐ No ☐ Yes ☐ No | |

3. Types of Train Activated Warning Devices at the Grade Crossing (specify count of each device for all that apply)

| 3.A. Gate Arms (count) | 3.B. Gate Configuration | 3.C. Cantilevered (or Bridged) Flashing Light Structures (count) | 3.D. Mast Mounted Flashing Lights (count of masts) 2 | 3.E. Total Count of Flashing Light Pairs |
|---|---|---|---|---|
| Roadway 2 Pedestrian 0 | ☒ 2 Quad ☐ 3 Quad ☐ 4 Quad ☐ Full (Barrier) Resistance ☐ Median Gates | Over Traffic Lane 0 ☐ Incandescent Not Over Traffic Lane 0 ☐ LED | ☒ Incandescent ☐ LED ☐ Back Lights Included ☐ Side Lights Included | 7 |

| 3.F. Installation Date of Current Active Warning Devices: (MM/YYYY) | 3.G. Wayside Horn | 3.H. Highway Traffic Signals Controlling Crossing | 3.I. Bells (count) |
|---|---|---|---|
| _____/_____ ☐ Not Required | ☐ Yes Installed on (MM/YYYY) _____/_____ ☒ No | ☐ Yes ☒ No | 1 |

| 3.J. Non-Train Active Warning | 3.K. Other Flashing Lights or Warning Devices |
|---|---|
| ☐ Flagging/Flagman ☐ Manually Operated Signals ☐ Watchman ☐ Floodlighting ☒ None | Count 0 Specify type _____ |

| 4.A. Does nearby Hwy Intersection have Traffic Signals? | 4.B. Hwy Traffic Signal Interconnection | 4.C. Hwy Traffic Signal Preemption | 5. Highway Traffic Pre-Signals | 6. Highway Monitoring Devices (Check all that apply) |
|---|---|---|---|---|
| ☐ Yes ☒ No | ☒ Not Interconnected ☐ For Traffic Signals ☐ For Warning Signs | ☐ Simultaneous ☐ Advance | ☐ Yes ☒ No Storage Distance * _____ Stop Line Distance * _____ | ☐ Yes - Photo/Video Recording ☐ Yes – Vehicle Presence Detection ☒ None |

**Part IV: Physical Characteristics**

| 1. Traffic Lanes Crossing Railroad | 2. Is Roadway/Pathway Paved? | 3. Does Track Run Down a Street? | 4. Is Crossing Illuminated? (Street lights within approx. 50 feet from nearest rail) |
|---|---|---|---|
| ☐ One-way Traffic ☒ Two-way Traffic ☐ Divided Traffic Number of Lanes 2 | ☒ Yes ☐ No | ☐ Yes ☒ No | ☐ Yes ☒ No |

5. Crossing Surface (on Main Track, multiple types allowed) Installation Date * (MM/YYYY) _____/_____ Width * _____ Length * _____
☐ 1 Timber ☐ 2 Asphalt ☒ 3 Asphalt and Timber ☐ 4 Concrete ☐ 5 Concrete and Rubber ☐ 6 Rubber ☐ 7 Metal ☐ 8 Unconsolidated ☐ 9 Composite ☐ 10 Other (specify) _____

| 6. Intersecting Roadway within 500 feet? | 7. Smallest Crossing Angle | 8. Is Commercial Power Available? * |
|---|---|---|
| ☒ Yes ☐ No If Yes, Approximate Distance (feet) 75 | ☐ 0° – 29° ☐ 30° – 59° ☒ 60° - 90° | ☒ Yes ☐ No |

**Part V: Public Highway Information**

1. Highway System
☐ (01) Interstate Highway System ☐ (02) Other Nat Hwy System (NHS) ☐ (03) Federal AID, Not NHS ☒ (08) Non-Federal Aid

2. Functional Classification of Road at Crossing
☒ (0) Rural ☐ (1) Urban ☐ (1) Interstate ☐ (2) Other Freeways and Expressways ☐ (3) Other Principal Arterial ☐ (4) Minor Arterial ☐ (5) Major Collector ☒ (6) Minor Collector ☐ (7) Local

| 3. Is Crossing on State Highway System? | 4. Highway Speed Limit |
|---|---|
| ☒ Yes ☐ No | 35 MPH ☒ Posted ☐ Statutory |

5. Linear Referencing System (LRS Route ID) *

6. LRS Milepost *

| 7. Annual Average Daily Traffic (AADT) | 8. Estimated Percent Trucks | 9. Regularly Used by School Buses? | 10. Emergency Services Route |
|---|---|---|---|
| Year 2014 AADT 8039 | 1 % | ☒ Yes ☐ No Average Number per Day 25 | ☐ Yes ☒ No |

**Submission Information** - *This information is used for administrative purposes and is not available on the public website.*

Submitted by _____ Organization _____ Phone _____ Date _____

Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.

**Figure 17 – SR 1114 Buckhorn Road (735 141R), Photos of Directional Views**

Looking North

Looking South

Looking East

Looking West

C. CROSSING ANALYSIS

*1. Exposure Index*

NCDOT uses an exposure index as one indicator to determine if a grade separation structure is warranted at street/rail grade crossings. The exposure index is calculated by multiplying the number of trains per day by the number of vehicles per day that use the crossing. As a general rule, grade separations should be considered in RURAL areas when the exposure index is 15,000 or more. In URBAN areas grade separations should be considered when the exposure index is 30,000 or more. Other factors that need to be considered in the feasibility of grade separations are:

- Accident history
- Topography
- Adjacent land use
- Geometric designs
- Construction impacts
- Costs

The exposure index was calculated for each of the six crossings (see Table D-1) using the following formula.

$$EI = N \times ADT$$

Where:

EI = NCDOT Rail Division's Exposure Index
N = Number of Trains per Day
ADT = Average Daily Traffic at at-grade crossing

**TABLE C-1 – Exposure Index**

| NS Crossings | | | | |
|---|---|---|---|---|
| **Crossing No.** | **Street Name** | **Trains per Day** | **2014 ADT** | **Exposure Index** |
| 735 464L | SR 1940 – Gibson Road | 16 | 2,304 | 36864 |
| 735 465T | SR 1976 – Lake Latham Road | 16 | 1,381 | 22096 |
| 735 468N | SR 1965 – Moore Road | 16 | 766 | 12256 |
| 735 496V | SR 1962 – S 3rd Street | 16 | 4,546 | 72736 |
| 735 471W | 4th Street | 16 | 856 | 13696 |
| 735 472D | NC 119 - 5th Street | 16 | 12,193 | 195088 |
| 735 474S | SR 1402 - Mattress Factory | 16 | 2,109 | 33744 |
| 735 141R | SR 1114 - Buckhorn Road | 16 | 8,039 | 128624 |

*2. Train Operations*

The primary users of the NCRR Corridor through Mebane, NC include Amtrak and Norfolk Southern Corporation. Currently there are 6 passenger trains (*Carolinian* and *Piedmont*) daily serving 12 cities provided by Amtrak. Norfolk Southern Corporation operates regularly scheduled freight train service (8 freight trains daily).

*3. Delay Analysis*

Level of Service is a measure of the operational efficiency of the street/rail grade crossing. It is determined using procedures from the *Highway Capacity Manual* procedures. Level of service is expressed as a letter ranging from A (free flowing) to F (severely congested) and is determined using the

average delay for all vehicles. Table C-2 summarizes the average delay and corresponding level of service.

**TABLE C-2 - LOS**

| Level of Service | Avg. Delay/Vehicle (seconds) |
|---|---|
| A | 10.0 |
| B | >10.0 to 15.0 |
| C | >15.0 to 25.0 |
| D | >25.0 to 35.0 |
| E | >35.0 to 50.0 |
| F | >50.0 |

The delay calculations are based on the methodology developed for the Proposed Conrail Acquisition Draft Environmental Impact Statement (DEIS) by the Surface Transportation Board's Sections of Environmental Analysis (SEA) and modified as needed for this project.

The following values were calculated for existing and future conditions.

- Blocked crossing time per train
- Event time
- Average delay per day
- Maximum vehicle queue
- Total stopped vehicle delay per day
- Average delay for all vehicles
- Traffic level of service (LOS)

The level of service (LOS) for each crossing was determined based on these computed values and the Highway Capacity Manual procedures. Table C-3 summarizes the delay and LOS results for the existing conditions.

**TABLE C-3 – Delay and LOS**

| NS Crossings Capacity Analysis | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Crossing No. | Street Name | No. Lanes (one-way direction) | ADT | Arrival Rate (Veh/Min) 2x uniform | Departure Rate | Trains per day | Train Speed (miles/hr) | Train Length (ft) | Crossing Blockage Time (min) $T_c$ | Event (Queue) Time (min) $T_e$ | Total Stopped Vehicle Delay Per Day (min/day) $D_T$ | Number Vehicles Delayed/Day $V_D$ | Max. Peak Hr. Queue (veh/lane) Q | Average Delay /Stopped Veh. (mins) $D_{avg}$ | Avg. Delay/Veh. In Secs. (All Vehicles) $D_V$ | LOS |
| 735 464L | SR 1940 – Gibson Road | 1 | 2,304 | 3.20 | 30 | 16 | 45 | 9,000 | 2.27 | 2.54 | 82.85 | 65 | 5 | 1.27 | 4.31 | A |
| 735 465T | SR 1976 – Lake Latham Road | 1 | 1,381 | 1.92 | 30 | 16 | 45 | 9,000 | 2.27 | 2.43 | 45.23 | 37 | 3 | 1.21 | 3.93 | A |
| 735 468N | SR 1965 – Moore Road | 1 | 766 | 1.06 | 30 | 16 | 45 | 9,000 | 2.27 | 2.36 | 23.63 | 20 | 2 | 1.18 | 3.70 | A |
| 735 496V | SR 1962 – S 3rd Street | 1 | 4,546 | 6.31 | 30 | 16 | 45 | 9,000 | 2.27 | 2.88 | 209.27 | 145 | 10 | 1.44 | 5.52 | A |
| 735 471W | 4th Street | 1 | 856 | 1.19 | 30 | 16 | 45 | 9,000 | 2.27 | 2.37 | 26.63 | 23 | 2 | 1.18 | 3.73 | A |
| 735 472D | NC 119 - 5th Street | 2 | 12,193 | 16.93 | 60 | 16 | 45 | 9,000 | 2.27 | 5.22 | 1844.75 | 707 | 14 | 2.61 | 18.16 | C |
| 735 474S | SR 1402 - Mattress Factory | 1 | 2,109 | 2.93 | 30 | 16 | 45 | 9,000 | 2.27 | 2.52 | 74.33 | 59 | 5 | 1.26 | 4.23 | A |
| 735 141R | SR 1114 - Buckhorn Road | 1 | 8,039 | 11.17 | 30 | 16 | 45 | 9,000 | 2.27 | 3.62 | 585.26 | 323 | 18 | 1.81 | 8.74 | A |

*4. Crash Analysis*

At-Grade Crossings

At least thirty crashes have occurred in the corridor since the 1970's. Only two vehicular crashes have occurred in the past ten years, and only one of those involved injuries. Table C-4 summarizes the accident data.

Crashes are summarized using the following classifications:

- Fatality
- Injury
- PDO – property damage only

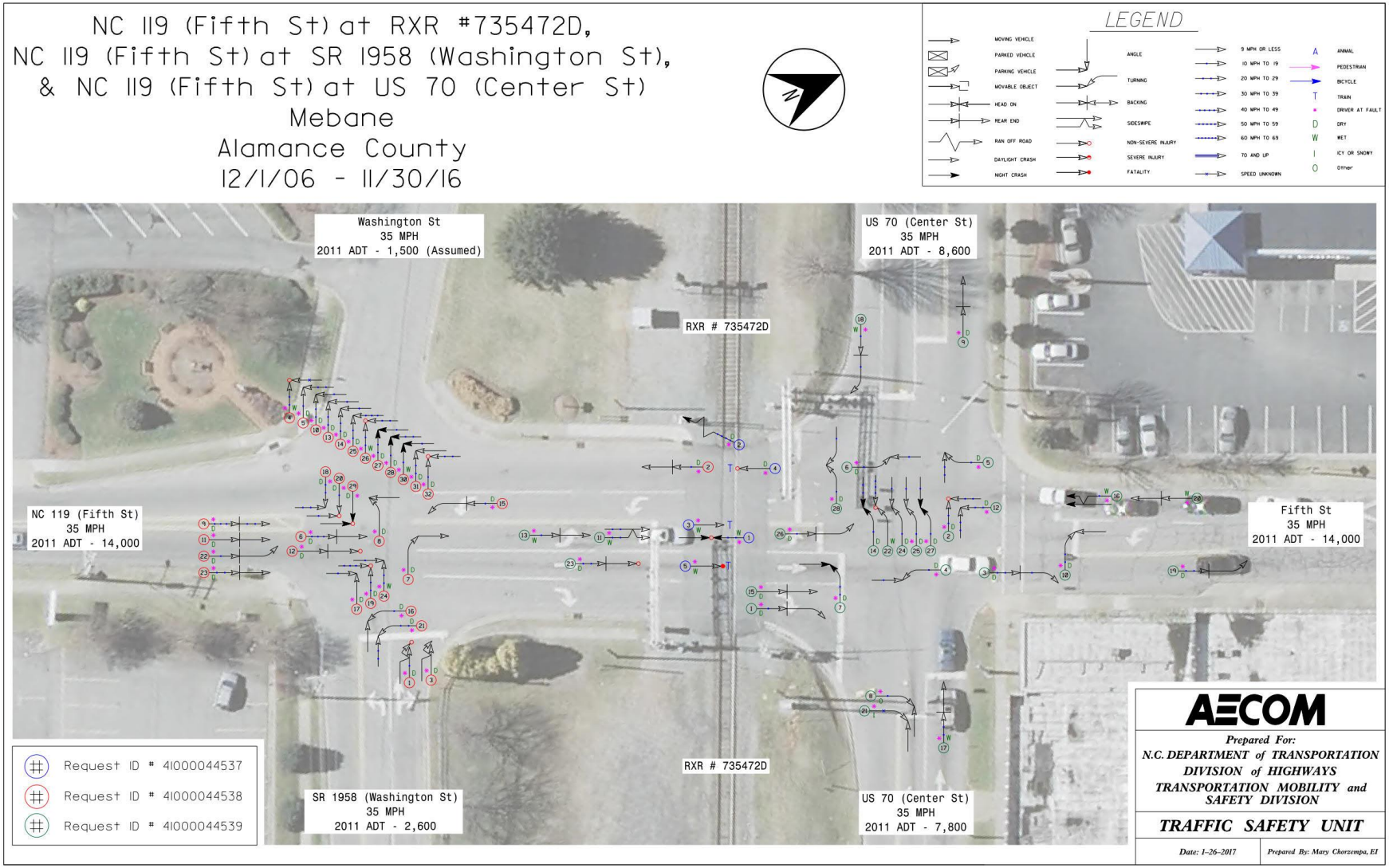
NCDOT Division 7 Highways recently conducted an intersection diagnostics analysis pertaining to the signalized intersection of NC 119 (5th Street) and Washington Street and US 70. The analysis identified short term improvements for the signal operations and vehicle queueing along 5th Street. Recently, NCDOT Division removed the advanced stop lines And re-stripped the intersection of 5th Street and Washington Street with a "Do not block intersection" marking (along with signage). Prior to the TSS study, results of those stripping improvements showed minimal improvements due to the continuous left turn ability onto Washington Street.

Recently, NCDOT Division 7 conducted a crash analysis at the intersections to identify the types of accidents and at which locations. As shown in Figure 18, there is a high volume of accidents at the intersection of 5th Street and Washington Street, relating to left turn traffic crossing 5th Street or vehicles trying to cross 5th Street.

**TABLE C-4 – Crash Summary**

| NS Crossings | | | | | |
|---|---|---|---|---|---|
| **Crossing No.** | **Street Name** | **Total # of Crashes** | **# of Fatalities** | **# of Injuries** | **PDO** |
| 735 464L | SR 1940 – Gibson Road | 3 | 0 | 3 | 0 |
| 735 465T | SR 1976 – Lake Latham Road | 4 | 0 | 1 | 3 |
| 735 468N | SR 1965 – Moore Road | 2 | 0 | 1 | 1 |
| 735 496V | SR 1962 – S 3rd Street | 0 | 0 | 0 | 0 |
| 735 471W | 4th Street | 2 | 0 | 1 | 1 |
| 735 472D | NC 119 - 5th Street | 8 | 2 | 1 | 5 |
| 735 474S | SR 1402 - Mattress Factory | 4 | 0 | 3 | 1 |
| 735 141R | SR 1114 - Buckhorn Road | 3 | 1 | 0 | 2 |
| Pedestrian Crossing Tracks | | 3 | 4 | 0 | 0 |

**Figure 18 – NC 119 & SR 1958 Crash Analysis**



*5. Future Highway Projects*

One project is listed in the current NCDOT 2016-2025 State Transportation Improvement Program (STIP). U-3109A – NC 199 Bypass. This project is currently in the final design phase and will be located within the western portion of the study area. The project will construct a grade separation over the railroad corridor, Holt Road, and US 70, thus closing the existing Lake Latham Road at-grade crossing. Access will be provided to US 70 via interchange on the north side of US 70.

## D. SAFETY AND MOBILITY ISSUES

There are several methods available to enhance railroad-crossing safety. This chapter discusses some of these methods in more detail.

*1. Vehicles Queuing across Railroad Tracks*

The presence of nearby traffic signals, intersections, or parallel roadways can result in queues of stopped vehicles extending onto or across a street/rail crossing. As such, vehicles may then queue over the railroad tracks when the tracks are near parallel roadways, especially when vehicles on the road across the railroad tracks are required to stop at a stop sign or traffic signal. All study crossings have "Do Not Stop On Tracks" and/or "Stop Here When Flashing" signs, as appropriate. In several locations where the railroad tracks are close to the adjacent signalized intersection, the stop bar with a "Stop Here On Red" sign is behind the railroad tracks. The intent of this design is to discourage drivers from queuing over the railroad tracks when stopped at the traffic signal.

If vehicles are queued over the tracks when the train is approaching, they may become trapped by the vehicles in front of them and behind them, and become unable to exit from between the gates. Where four quadrant gate systems are installed, the gates are timed to allow vehicles to clear the crossing prior to both gates coming down; however, if vehicles are queued up, this may cause a vehicle to become trapped between gates. The table below identifies the location of four-quad gate systems. Traffic signals are often coordinated with the train signals to allow all vehicles to clear the tracks before the train arrives. Table D.1 lists the study crossings that are within 75 feet of a parallel roadway and which one's contain four quadrant gates.

**TABLE D-1 – At-Grade Crossings within 75 feet of Parallel Roadway**

| Crossing No. | Street Name | Approx. Distance | Adjacent Roadway | Four-Quad Gates |
|---|---|---|---|---|
| 735 465T | SR 1976 – Lake Latham Road | 85 feet | US 70 | Yes |
| 735 468N | SR 1965 – Moore Road | 73 feet | US 70 | No |
| 735 496V | SR 1962 – S 3rd Street | 63 feet | US 70 | No |
| 735 471W | 4th Street | 63 feet | US 70 | No |
| 735 472D | NC 119 - 5th Street | 63 feet | US 70 | Yes |

*2. Traffic Signal Preemption*

Standard practice (based on *The Manual on Uniform Traffic Control Devices*) requires that traffic signals located within 200 feet of a street/rail at-grade crossing be coordinated with the crossing's train detection and warning system to preempt normal operations of the traffic signal. 3rd Street, 4th Street, and 5th Street currently have signal preemption with the NS rail line.

*3. Humped Crossings*

A "humped" crossing exists where the elevation of the railroad is significantly higher than the crossing roadway, causing vehicles to ascend on one side of the tracks and descend on the other. The severity of this condition can range from

discomfort at normal speeds, to “bottoming out” of vehicles with long wheelbases or low clearances. This dragging can damage vehicles, or cause them to become stuck on the crossing, creating a serious hazard. Routine track maintenance tends to exacerbate the problem over time, as track ballast work typically adds about three inches per occurrence. Over a ten-year period, the railroad may rise as much as one foot as a result of this routine maintenance.

Crest vertical curves across the tracks that do not create a need for the driver to reduce speed are not considered to be a humped profile. The combination of short crest and sag vertical curves caused by a buildup of the ballast and raising of the track create a need to reduce speed across the crossing. The following crossing has a slight humped profile: 5th Street.

*4. Grade Crossing Condition*

A poor grade crossing surface can result in a rough, uneven ride. This can increase wear and tear on vehicles, potentially create a traffic safety hazard, and may add to congestion by reducing travel speeds. The crossing materials used on these grade crossings include asphalt, concrete slab, and rubber. Even though some materials provide a slightly improved ride and longer term maintenance, the main safety issue is the condition of the crossing. None of the crossings have surfaces that are deemed to be in poor condition.

*5. Vehicles Driving Around Automated Gates*

Several situations can lead to the circumvention of automated gates by motorists:

- Gates are lowered, but no train is visible
- Gates fail, and remain in the lowered position
- Gates are lowered and train is visible, but motorist is too impatient to wait

During the field analysis, there were no signs of vehicles circumventing the gates when a train was approaching. There were also no signs (tire tracks, disturbed ground) of vehicles previously circumventing the gates.

## E. SYSTEM ENHANCEMENT OPTIONS

*1. Grade Separation Structures*

Many factors must be considered before suggesting grade separation, including:

- Traffic volumes (both vehicle and train)
- Accident history
- Topography
- Adjacent land use
- Construction impacts
- Costs

Some of these factors apply to Buckhorn Road, suggesting the potential need for grade separating Buckhorn Road. A grade separation is already programmed for Lake Latham Road.

*2. Crossing Protection Device Upgrades*

Example of gates, signs and flashing lights

The most common and cost-effective way to increase the safety at a railway crossing is to upgrade existing warning devices at the crossing. Typical warning devices include signs, gate arms, flashing lights and bells. *Passive* devices, such as advanced warning signs and crossbucks, merely warn the motorist of the existence of a railroad crossing. These devices are most suitable where train and traffic volumes and speeds are low, and where sight distance is adequate.

NCDOT Rail and Norfolk Southern have been using advanced crossing protection devices on the main line from Raleigh to Charlotte since 1995. These devices are most appropriate where high-volume multi-lane roadways cross railroad main lines, and where significant numbers of motorists are ignoring or circumventing existing warning devices.

*Active* devices that warn motorists of approaching trains include flashing lights, bells, and automated gates. Such devices are usually employed at locations exhibiting higher volumes or speeds, or greater potential for accidents.

a. Gates and Signals

Gates and signals are mainly installed where trains travel at 25 miles per hour or more. They are electronic warning devices for road vehicles at railroad grade crossings with flashing red lights, a crossbuck and a bell. The gates are typically activated and fully lowered before the train arrives. The gates will rise or the signals will shut off once the end of the train clears the island circuit. All of the crossings within the study area have gates and signals.

b. Median Separators

Median separators consist of markers mounted on raised islands along the roadway centerline to discourage motorists from driving in opposing travel lanes to avoid lowered gates. Where markers are not preferred, a

Example of Median Barriers

4-foot median can be constructed with an 8-inch curb, which allows for landscaping. Median treatments typically extend 70 feet to 100 feet back from the gates, but may be precluded by driveways or intersecting roads within this distance.

c. Four-Quadrant Gates

Example of four-quadrant gate

Four-quadrant gate treatments involve gate arms on both approaches and departures of the roadway. This restricts vehicles from being able to drive around the approach gate arms, completely "sealing" the crossing. Several measures are employed to prevent vehicles from becoming “trapped” inside the gates, including careful timing of the gates to allow traffic to clear; providing 16 feet of clearance between track center and gates; leaving adequate space between gate tips for a vehicle to “squeeze” out; and use of breakaway arms. 5th Street is only crossing that has four-quadrant gates within the study area.

d. Remote Video Detection

The Crossing Law Enforcement and Research of (CLEAR) Violations program employs video cameras to monitor selected crossings. The recordings provide information on crossing operations, violations, and accidents for both enforcement and research purposes.

e. Roadway Improvements

Roadway improvements can reduce both accident potential and traffic delay at railroad crossings. Realignment and re-grading can improve visibility and reduce the time required to traverse a crossing. Additional lanes significantly increase capacity, reducing the residual delay following a crossing event. New roadways can provide alternative routes, allowing crossings to occur at more desirable locations, and potentially eliminate the number of crossing trips.

f. Traffic Signals

Traffic signals are not specifically intended as warning devices at railroad crossings. However, when a street/rail grade crossing is located near a signalized intersection (typically within 200 feet), special steps should be taken to insure that vehicles do not get trapped on the tracks due to queues resulting from an adjacent street intersection’s red signal. The normal sequence of traffic signal indications should be preempted by the approach of a train, eliminating the possibility of entrapment due to conflicting traffic and railroad crossing signals. Ideally, the preempted signal phasing should be designed to allow non-conflicting movements to proceed during a train crossing, thereby minimizing overall traffic delay. 3rd Street, 4th Street and 5th Street have signal pre-emption installed due to their close proximity to US 70.

g. Crossing Consolidation & Elimination

Crossing consolidations eliminate the potential for train/vehicle collisions. Crossing-related installation and

maintenance costs are reduced, and concentrates traffic at fewer, higher-volume crossings.

Redundant low-volume crossings can be unnecessary due to the availability of alternative access across the tracks. Train volumes, geometry, and safety are factors that are considered when identifying potential crossing closures.

Therefore, consolidation and closure of these minor crossings is an effective strategy in terms of both costs and safety benefits. A crossing is considered redundant (and therefore a candidate for elimination) if it is within a reasonable distance of another crossing connected to the same street network. Crossings with high potential for elimination include:

- Crossings with relatively low traffic volumes where alternative access is reasonably available.
- Redundant crossings near parallel crossings or grade separations, or where traffic can be safely and efficiently diverted to another crossing;
- Skewed crossings, or those where sight distance is limited by horizontal/vertical curvature, vegetation, or permanent obstructions;
- Crossings with a history of accidents;
- Crossings adjacent to a newly constructed crossing or grade separation;
- Private crossings with no identifiable owner, or where the owner is unwilling or unable to fund crossing upgrades (and where alternative access is reasonably available); Since NCDOT does not currently have jurisdiction over private crossings; closing of these crossings is determined by the railroad and property owner if identified.
- Complex crossings that cannot be effectively served by warning devices due to multiple tracks, extensive switching operations, etc.

j. Grade Separation

Grade-separated crossings eliminate the potential for train/vehicle collisions while maintaining vehicular and pedestrian access across the railroad tracks. Railroad overpasses of highways require approximately 17 feet of vertical clearance, and highway overpasses of railroad tracks require approximately 23 feet of clearance. Sight distance requirements on the overpass vertical curves generally result in long approaches, which can create adjacent property access and connectivity issues. In addition, visual and noise impacts associated with overpasses can negatively affect neighborhoods or historic areas.

Crossings with a history of crashes, humped crossings (topography challenges), high vehicular volumes, and an exposure rating that exceeds the standard are locations where grade separations should be considered.

As grade separations are considered, topography, adjacent land uses, construction costs, and impacts need to be thoroughly vetted. The cost of grade separation can be significantly reduced in situations where the topography facilitates a highway overpass due to the need for relatively minimal earthwork or right-of-way requirements. With challenging site constraints, it may be necessary to adjust roadway and railroad grades to facilitate an acceptable grade separation. Likewise, grade separations may not be feasible in heavily developed areas such as central business or historic districts. Right-of-Way costs or socio-economic impacts associated with the potential loss of businesses and jobs can result in an unfavorable cost-benefit ratio for the

project. New bridges also have the potential to relocate a large number of people and/or disrupt neighborhoods.

The impacts associated with the construction of new grade-separated crossings can be substantial and can include visual, noise, and access degradation and the relocation of dwellings or businesses. Environmental features like wetlands or woodlands, historical and archaeological sites, and the presence of hazardous materials can also pose considerable challenges. Finally, grade separations are significant long term infrastructure investments. A detailed feasibility study, including a cost benefit analysis, is required before a grade separation is implemented.

## F. PUBLIC INVOLVEMENT

A Public Involvement program was established as part of this study.

The program involved:

- Two Stakeholder Committee Meetings
- Two Public Informational Workshops (PIWs)

A Stakeholder Committee was established to provide critical input in reaching consensus on grade crossing recommendations. The Stakeholder Committee met three times during the course of this study. The first meeting was held on June 10th with various city departments, local neighborhood associations, emergency response, and school district representatives.

The Stakeholders included the following:

- NCDOT Rail Division
- Norfolk Southern
- NCDOT Division 7
- City of Mebane
- Burlington-Graham MPO
- Durham-Chapel Hill-Carrboro MPO
- City of Mebane Fire Department
- City of Mebane Police Department
- Alamance County Schools

A second Stakeholder Committee meeting was held on February 16th to present that various design concepts for improving the safety at the at-grade crossings and receive feedback on concepts. The concepts would be carried forward to a second Public Information Workshop.

The third Stakeholder Committee meeting was held on June 14, 2017. The final recommendations were presented to the committee for their approval to include in the report and present to City Council. Discussions revolved around options for 735 472D (NC 119/5th St). The committee recommended moving forward the option that is found in Section G. Further studies relating to the 735 141R (Buckhorn Rd) at-grade crossing should coordinate with Orange County Planning Department and the Interchange Analysis & Corridor Study for Mattress Factory Road and any modifications to Buckhorn Road related to that study.

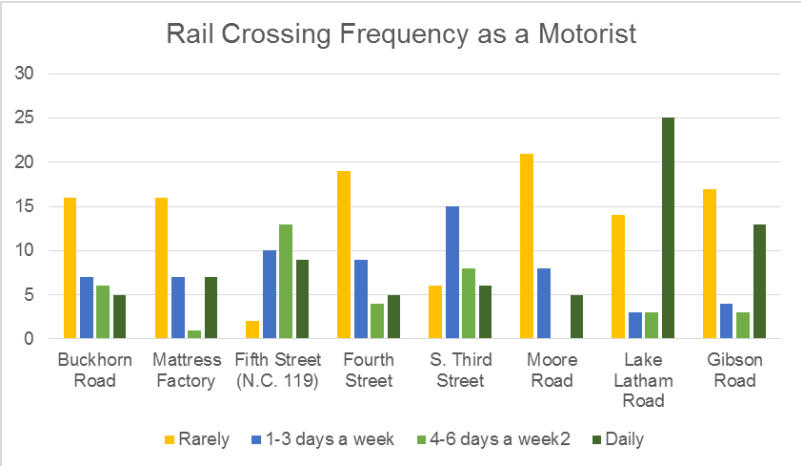
**Citizen Informational Workshops**

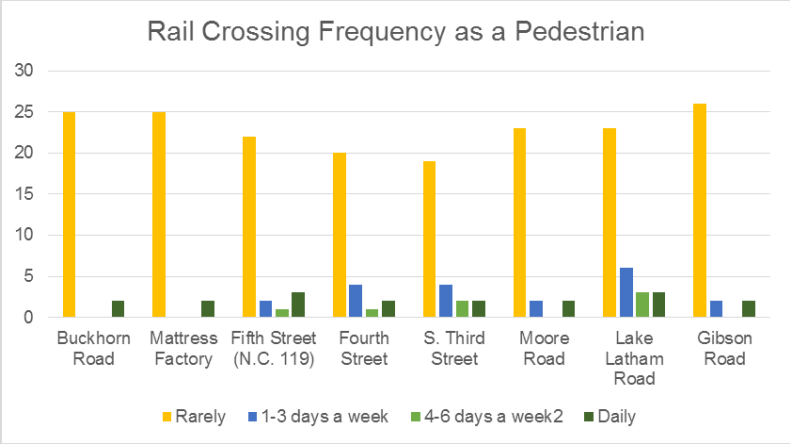
The Citizen Involvement program included two Public Informational Workshops (CIWs). These meetings are summarized below.

***Citizen Informational Workshop #1***

The first CIW was held on November 15th. Study team members were available to introduce the Mebane Traffic Separation Study, to answer questions related to the study, and to receive comments to aid in developing recommendations for improving the eight rail crossings.

During the workshop, attendees were asked questions relating to the frequency of use per at-grade crossings as a motorist and as a pedestrian. This information provided insight on how the residents utilized the roadway network to traverse through the City. Responses are found in the following two graphs.



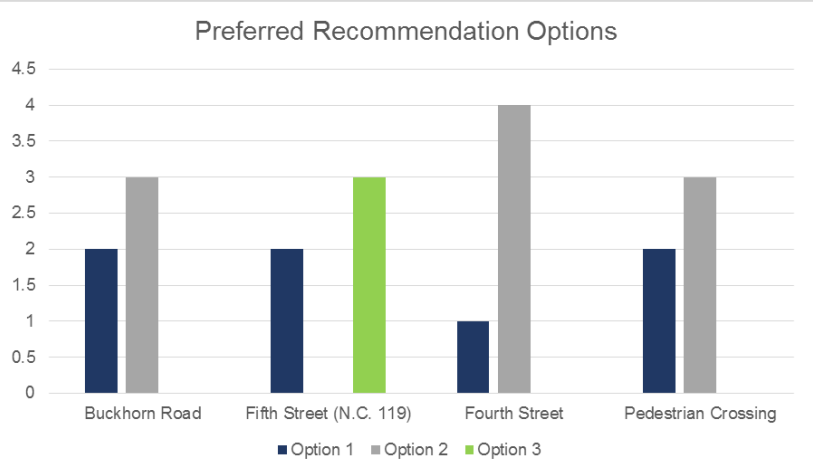

Residents of area neighborhoods were primarily concerned with increased traffic along Holt Street and reduced access to US 70 through the closing of Lake Latham Road at-grade crossing. The closing of the crossing is part of the NC 119 Bypass (U-3109A). Concern revolved around the traffic along the 5th Street at-grade crossing, as well as the lack of pedestrian connectivity between Washington Street and US 70.

***Citizen Informational Workshop #2***

The second CIW was held on April 18th, 2017 at Mebane City Hall. The workshop presented the various improvement options for each crossing, provided explanation onto how/why the concepts were developed, and answered questions related to the concept recommendations for improving the six of the eight rail crossings.

The study team presented improvements for six of the eight rail crossings, with two rail crossings identifying multiple options for improvements. Two crossings recommended median barriers and widening of crossing shoulders, one crossing identified three different types of grade separation options, one crossing with multiple intersection improvements, and a crossing closure option, and two pedestrian grade separated crossing options.

Comments revolved around utilizing elevators and not ramps at the pedestrian crossing options in order to reduce the footprint. One other common theme was 5th Street Option 3 was preferred, though recommended closing 4th Street at-grade crossing. The graph below provides a summary of the preferred recommendations per the four most discussed crossings the second public information workshop.




**City of Mebane Council**

The TSS was presented to the City Council on September 11, 2017. The intent was to provide the council with a synopsis of the study process, findings, and recommendations.

Council members were in full support of majority of the recommendations. Though council members did convey their concern about approving the closure of 4th Street at-grade crossing and the design configuration of 5th Street at-grade crossing. Council members believed that 4th Street should remain open.

As for 5th Street, council members agreed that combining the through and right turn movements into a single lane, thus providing opportunity for constructing a sidewalk and reducing the radius at the intersection with US 70 would be beneficial. However, council members were concerned that the mountable median barrier along 5th Street would impact travel movements across Washington Street. Council members believed that there was a significant movement across Washington Street and by requiring drives to turn right on 5th Street would impact their ability to cross through town.

Their motion was to adopt the TSS recommendations except for not closing 4th Street at-grade crossing. In addition, the motion included approving, in concept, the 5th Street recommendation but that further study and design coordination with an on-going signal improvement project at 5th Street evaluate a solution where the Washington Street/5th Street intersection remains a full access intersection.

## G. RECOMMENDATIONS

With the projected increase in both passenger and freight rail traffic, there is a need to focus attention to the safety of this corridor. Recommendations were identified for improvements to eight at-grade crossings in the City of Mebane to provide safer and improved mobility on and adjacent to the rail corridor for all forms of traffic. The corridor is also part of the Southeast High Speed Rail Corridor, and NCDOT Rail Division has committed to enhancing the operations of passenger rail service by upgrading the rail corridor for increased passenger train operations and speeds. It will be important for the City of Mebane and NCRR work together in installing fencing along the rail corridor through the downtown. This would facilitate and direct pedestrians to the appropriate sidewalks at at-grade crossings as a safe crossing movement.

*Street/Rail Grade Crossing Recommendations*

This section describes the recommendations for the eight at-grade crossings. The primary objective of these improvements is to provide guidance to the local and state agencies on the mechanisms that could trigger the need for further evaluation and design. The following figures illustrate the various options at each crossing.

*Financial Guidance*

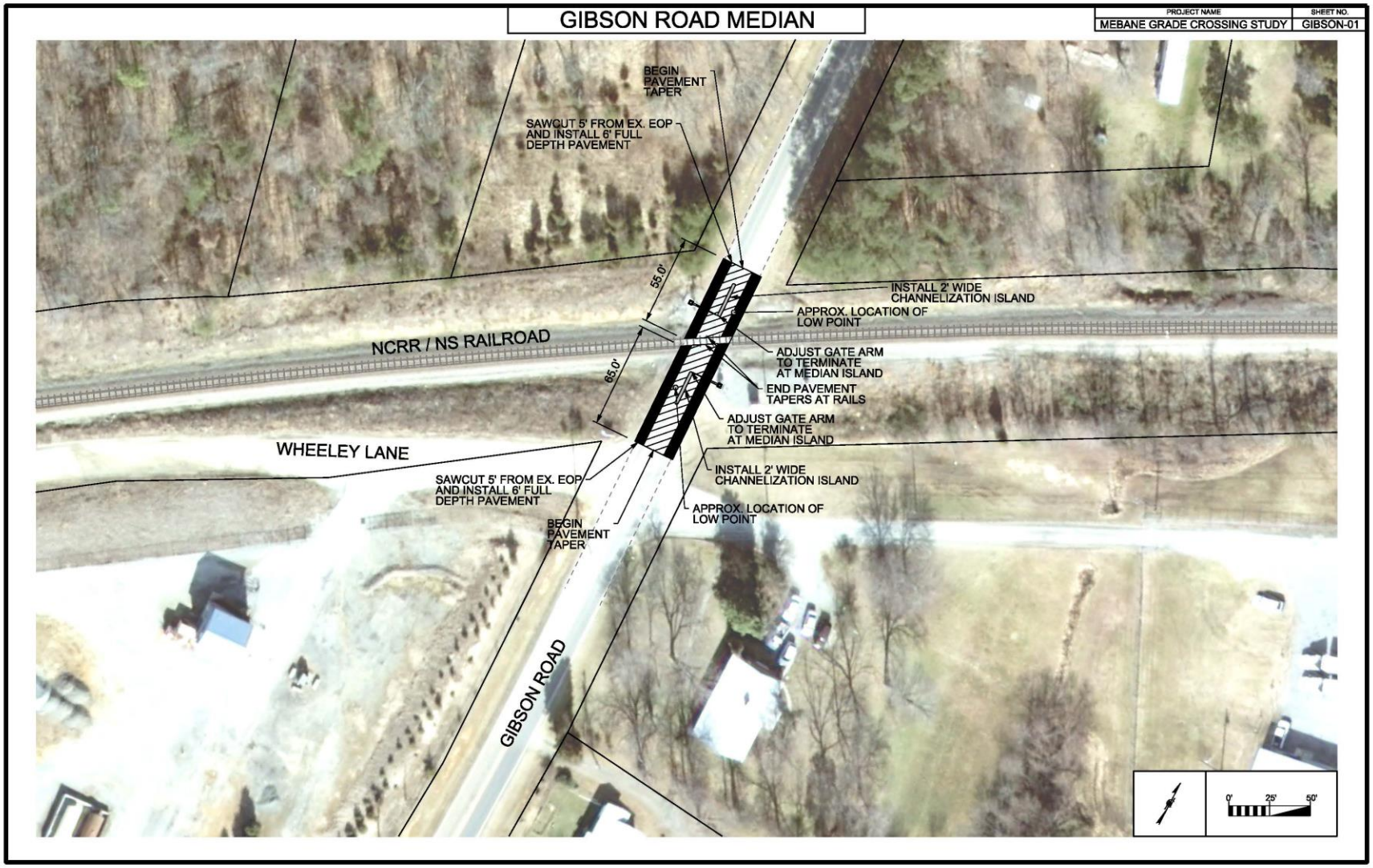
The at-grade crossing improvements will most likely be funded through either State or Federal funding, however the pedestrian grade separations would not be eligible.

## A. SR 1940 – Gibson Road (Crossing # 735 464L, MP H0034.11)

1. Short-Term
   Crossing to continue to operate as an at-grade crossing and install median barriers and widen crossing shoulders. The widened shoulder is also intended to provide additional width for projected truck traffic.

   The 2014 annual daily traffic (ADT) at this crossing is 2,304.

**Figure 19: SR 1940 – Gibson Road (Crossing # 735 464L) Recommendations**



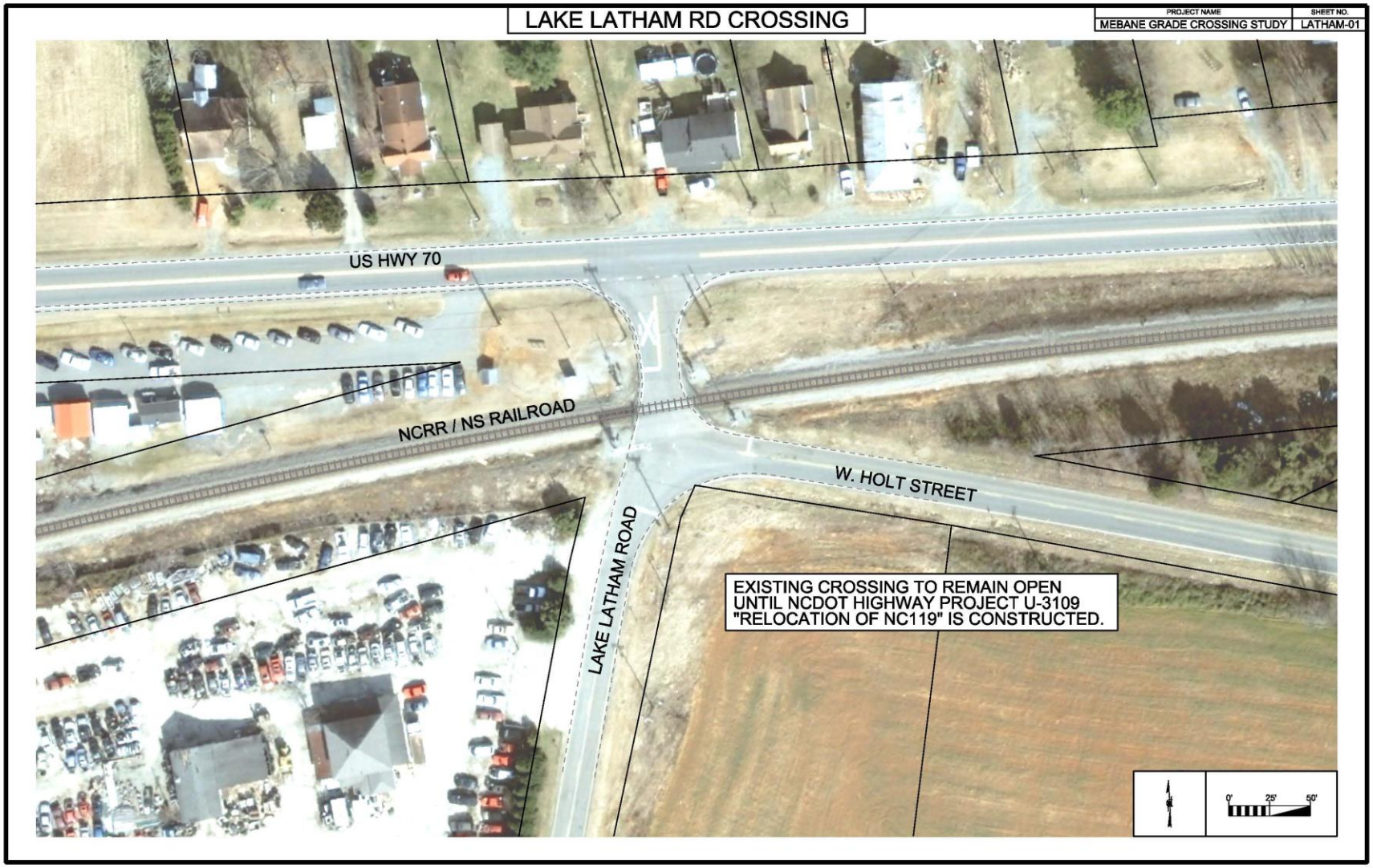
**B. SR 1976 – Lake Latham Road (Crossing # 735 465T, MP H0029.83)**

1. Short-Term
   Continue to operate the crossing as an at-grade crossing.

2. Long-Term
   Existing at-grade crossing will be closed once the NC 119 Bypass (NCDOT Project U-3109) is constructed.

   The 2014 ADT is 1,381.

**Figure 20: SR 1976 – Lake Latham Road (Crossing # 735 465T) Recommendation**

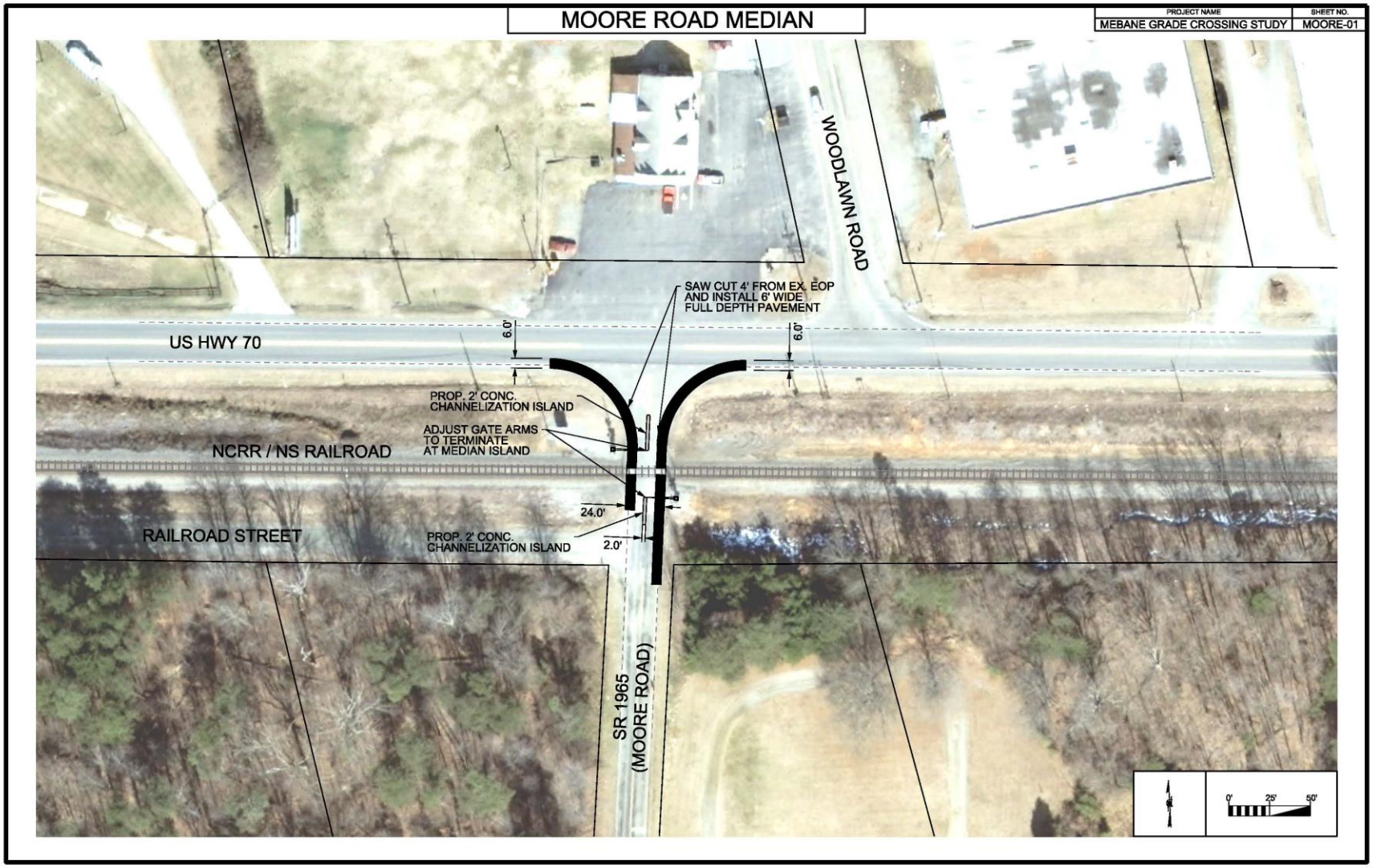


## C. SR 1965 – Moore Road (Crossing # 735 468N, MP H0030.69)

1. Short-Term
   Crossing to continue to operate as an at-grade crossing and install median barriers and widen crossing shoulders. The widened shoulder is also intended to provide a safer pedestrian connection across the railroad corridor at this crossing.

   The 2014 ADT is 766.

**Figure 21: SR 1956 – Moore Road (Crossing # 735 468N) Recommendation**

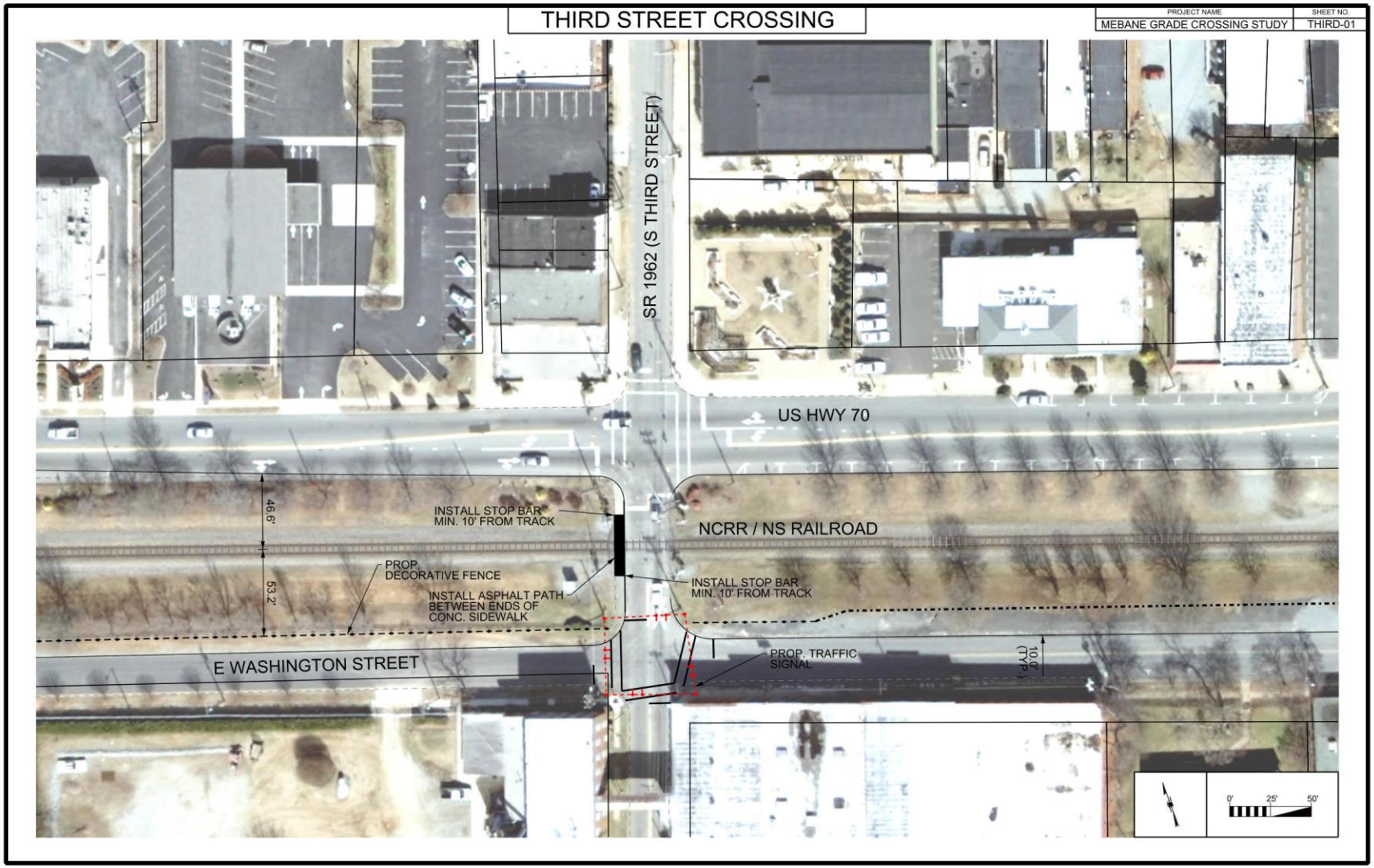


**D. SR 1962 3rd Street (Crossing # 735 496V, MP H0031.46)**

1. Short-Term
   Crossing to continue to operate as an at-grade crossing. Widen the existing at-grade crossing shoulder six (6) feet on each side to provide a safer pedestrian connection across the railroad corridor. The widened shoulder will provide the pedestrian connection that is needed within the downtown of Mebane. This will also connect to the intersection improvements at 3rd Street and Washington Street, and the existing sidewalk network in downtown Mebane.

   The 2014 ADT is 4,546.

**Figure 22: SR 1962 – 3rd Street (Crossing # 735 486V) Recommendation**



## E. 4th Street (Crossing # 735 471W, MP 0031.56)

1. Short-Term
   Crossing to remain open. The existing crossing would continue to operate as an at-grade crossing. Widen the existing at-grade crossing shoulder six (6) feet on each side to provide a safer pedestrian connection across the railroad corridor. The widened shoulder will provide the pedestrian connection that is needed within the downtown of Mebane due to the numerous pedestrian fatalities with trains. This will also connect to the intersection improvements at 4th Street and Washington Street, and the existing sidewalk network in downtown Mebane.

   The 2014 ADT is 856.

**Figure 23: 4th Street (Crossing # 735 471W) Recommendation**

See Figure 24 (5th Street)

## F. NC 119 – 5th Street (Crossing # 735 472D, MP H0031.64)

Results from the crash analysis at the intersections identified a high volume of accidents at the intersection of 5th Street and Washington Street relating to left turn traffic crossing 5th Street or vehicles trying to cross 5th Street. Various scenarios were evaluated and designed.

1. Short-Term

   The recommendation includes installing mountable medians, with a pedestrian refuge along 5th Street from the at-grade crossing south of Washington Street and along Washington Street west of 5th Street. The mountable median along 5th Street would eliminate the left turn conflicts and through movements from Washington Street to eliminate majority of the accidents at that location.

   5th Street would continue to operate as an at-grade crossing but also improve the geometry at the crossing and intersection with US 70. Eliminate the northbound dedicated right turn lane onto US 70 to increase the curve radii for vehicle turning movements. Install asphalt path to connect sidewalks on the eastern side of crossing to improve pedestrian connectivity. Install cross walks on the south and east segments of Washington St/5th Street intersection.

   4th Street crossing would remain open. The existing crossing would continue to operate as an at-grade crossing. Widen the existing at-grade crossing shoulder six (6) feet on each side to provide a safer pedestrian connection across the railroad corridor. The widened shoulder will provide the pedestrian connection that is needed within the downtown of Mebane due to the numerous pedestrian fatalities with trains. This will also connect to the intersection improvements at 4th Street and Washington Street, and the existing sidewalk network in downtown Mebane.

   The 2014 ADT is 12,193.

**Figure 24: NC 119 – 5th Street (Crossing # 735 472D) Recommendation**

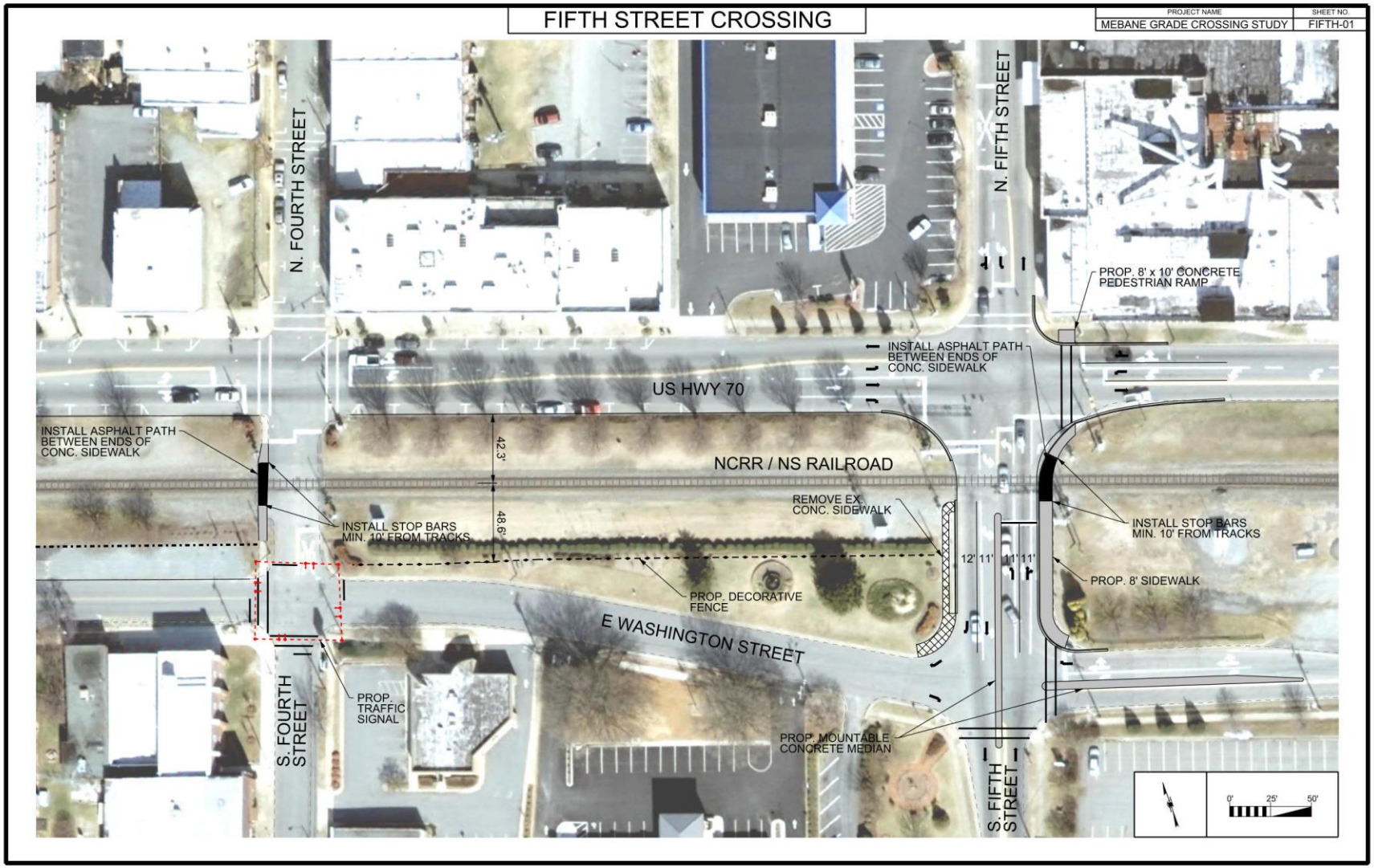


**Figure 25: Example of a Mountable Concrete/Asphalt Median that could be installed on 5th Street**

*Type of and aesthetic design of mountable median will be determined during the design phase, when funded.

**Figure 26: NC 119 – 5th Street (Crossing # 735 472D) –** Exhibit depicting if sidewalks could be installed on the western side of 5th Street, which would require eliminating one of the two southbound travel lanes on Fifth Street.

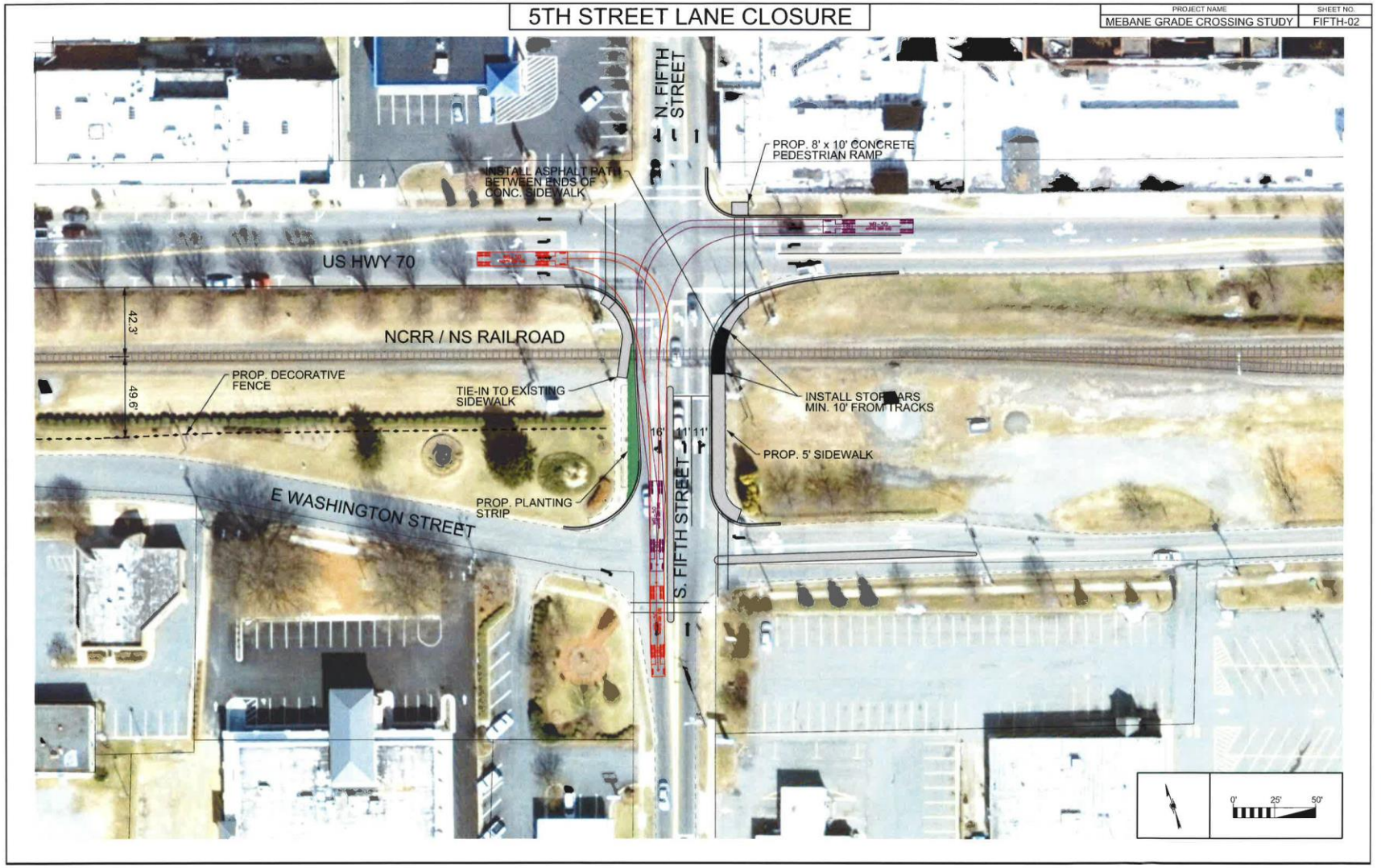
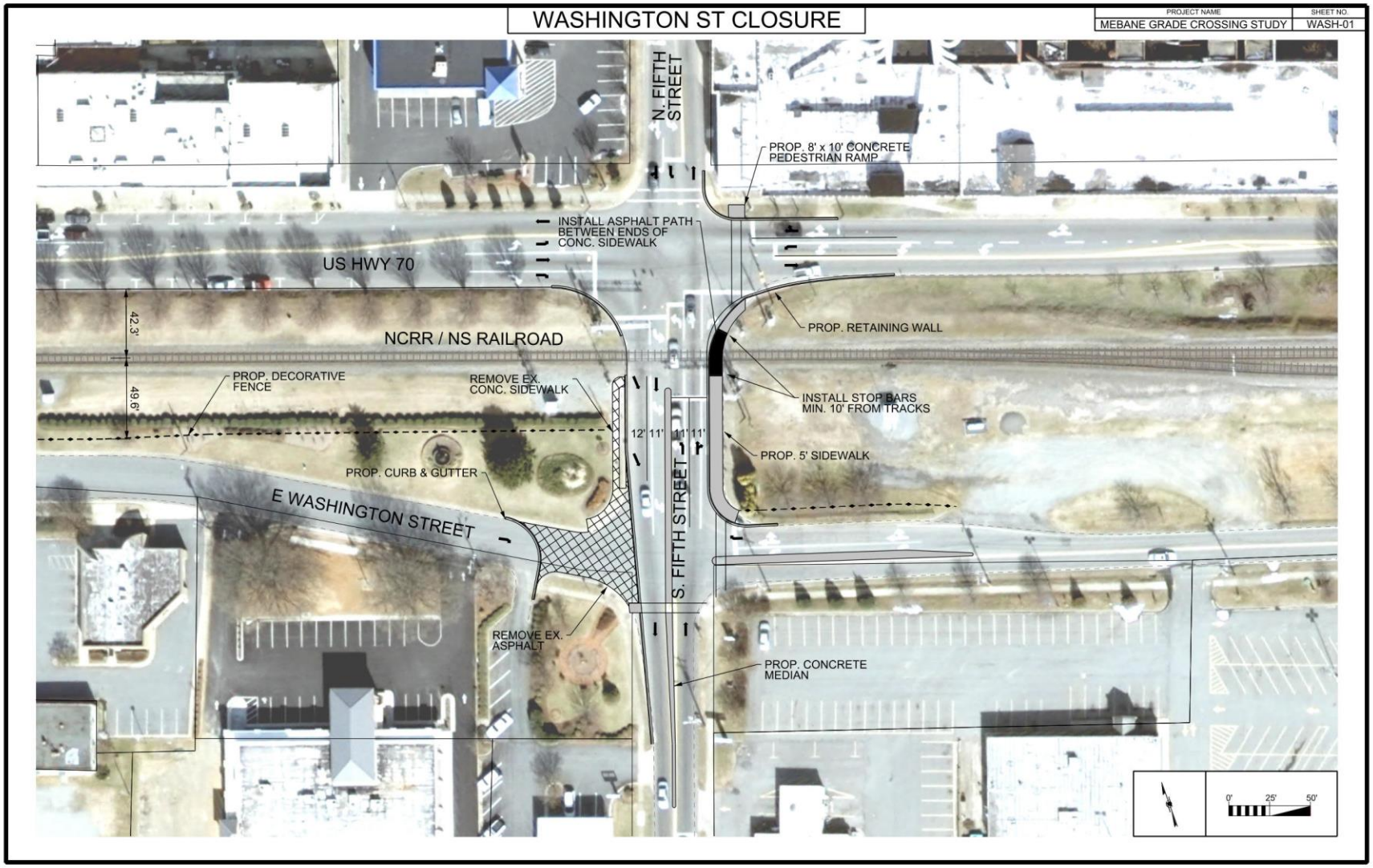


**Figure 27: NC 119 – 5th Street (Crossing # 735 472D) – Other Concepts Evaluated but not Selected**



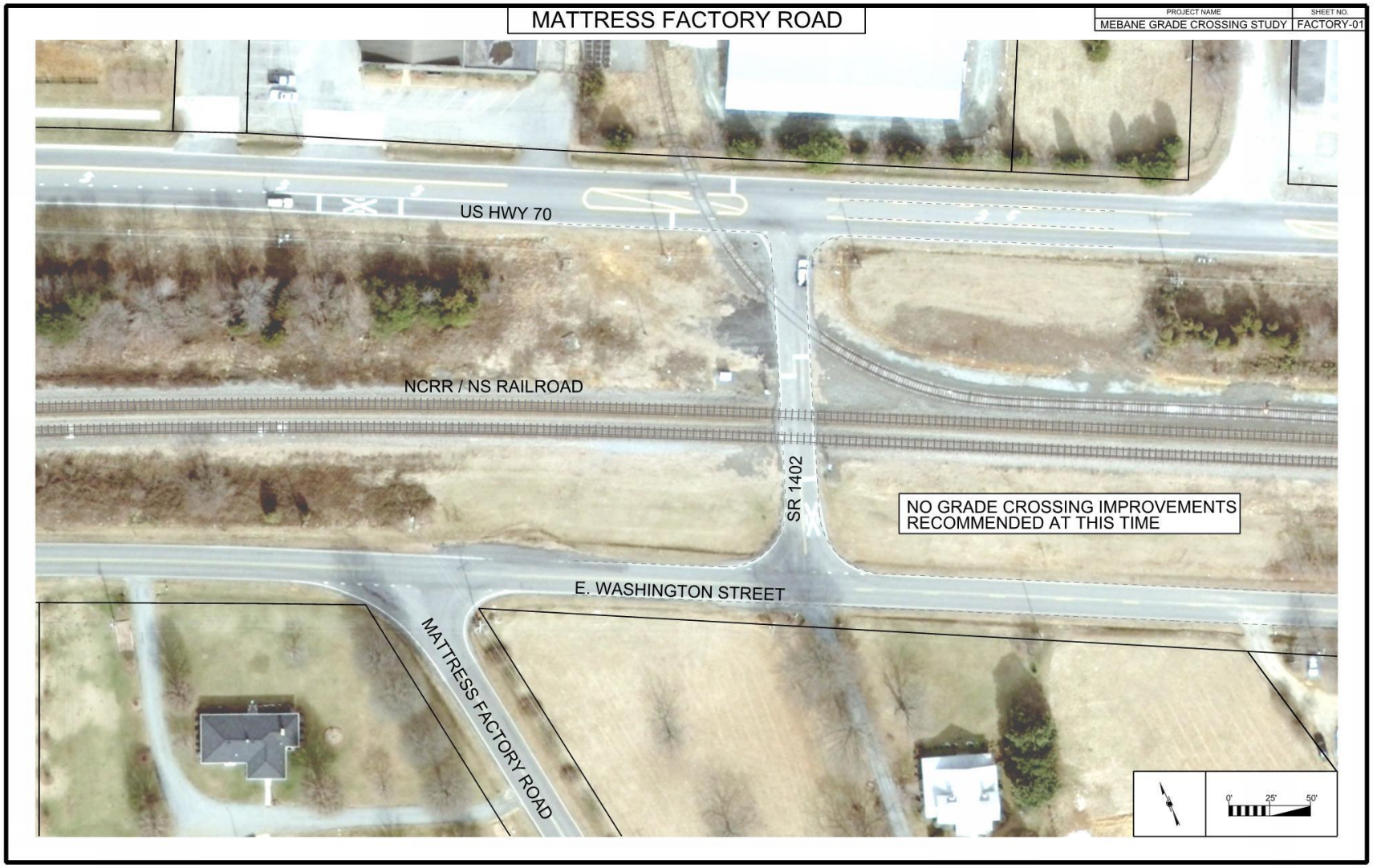
## G. SR 1402 – Mattress Factory Road (Crossing # 735 474S, MP H0032.79)

1. Short-Term
   Continue to operate the crossing as an at-grade crossing.

2. Long-Term
   None

   The 2014 ADT is 2,109.

**Figure 28: SR 1402 – Mattress Factory Road (Crossing # 735 474S) Recommendation**



## H. SR 1114 – Buckhorn Road (Crossing # 735 141R, MP H0034.11)

1. Short-Term
   Continue to operate the crossing as an at-grade crossing.

2. Long-Term
   Grade-separate Buckhorn Road by building a roadway bridge over the tracks (this includes three (3) grade separated options). These options depict an ability to construct a grade separation while limiting surrounding impacts. As funding is secured for this improvement, these three options, along with other potential options will be developed and evaluated during the NEPA process. These options are intended to be concepts only for the ability to develop order-of-magnitude costs in order to assist in identification of funding sources.

   As the recommendation of grade separating Buckhorn Road moves forward, it will be important to continue to collaborate and coordinate with the Orange County Interchange Analysis and Corridor Study. This study has identified the need to extend Industrial Drive to the east. Continued coordination in future roadway networks, connections with existing intersections, and interchange ramp modifications should occur to ensure proper planning and design.

   The 2014 ADT is 8,039.

**Figure 29: SR 1114 – Buckhorn Road (Crossing # 735 141R) Recommendation Option 1**

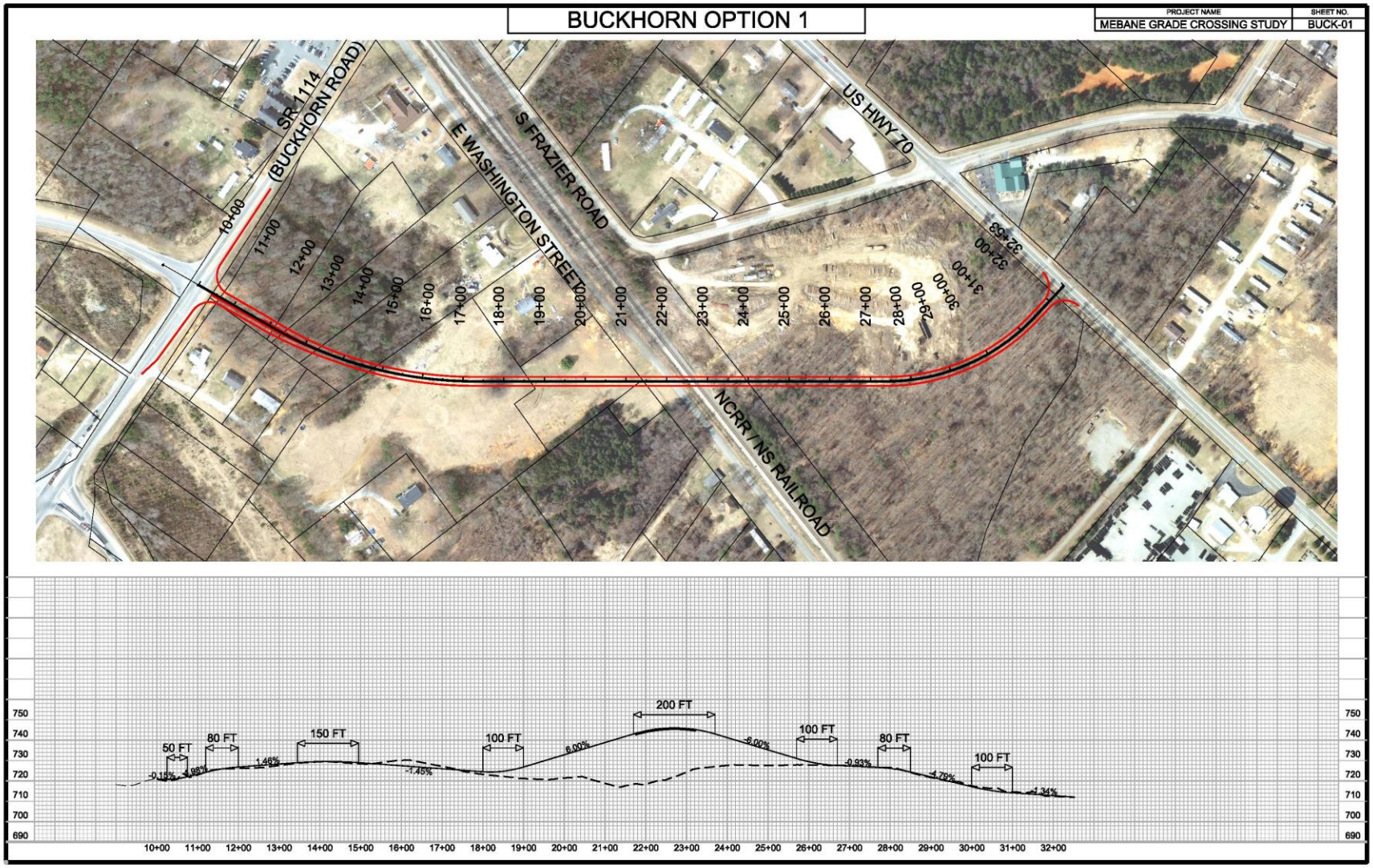


**Figure 30: SR 1114 – Buckhorn Road (Crossing # 735 141R) Recommendation Option 2**

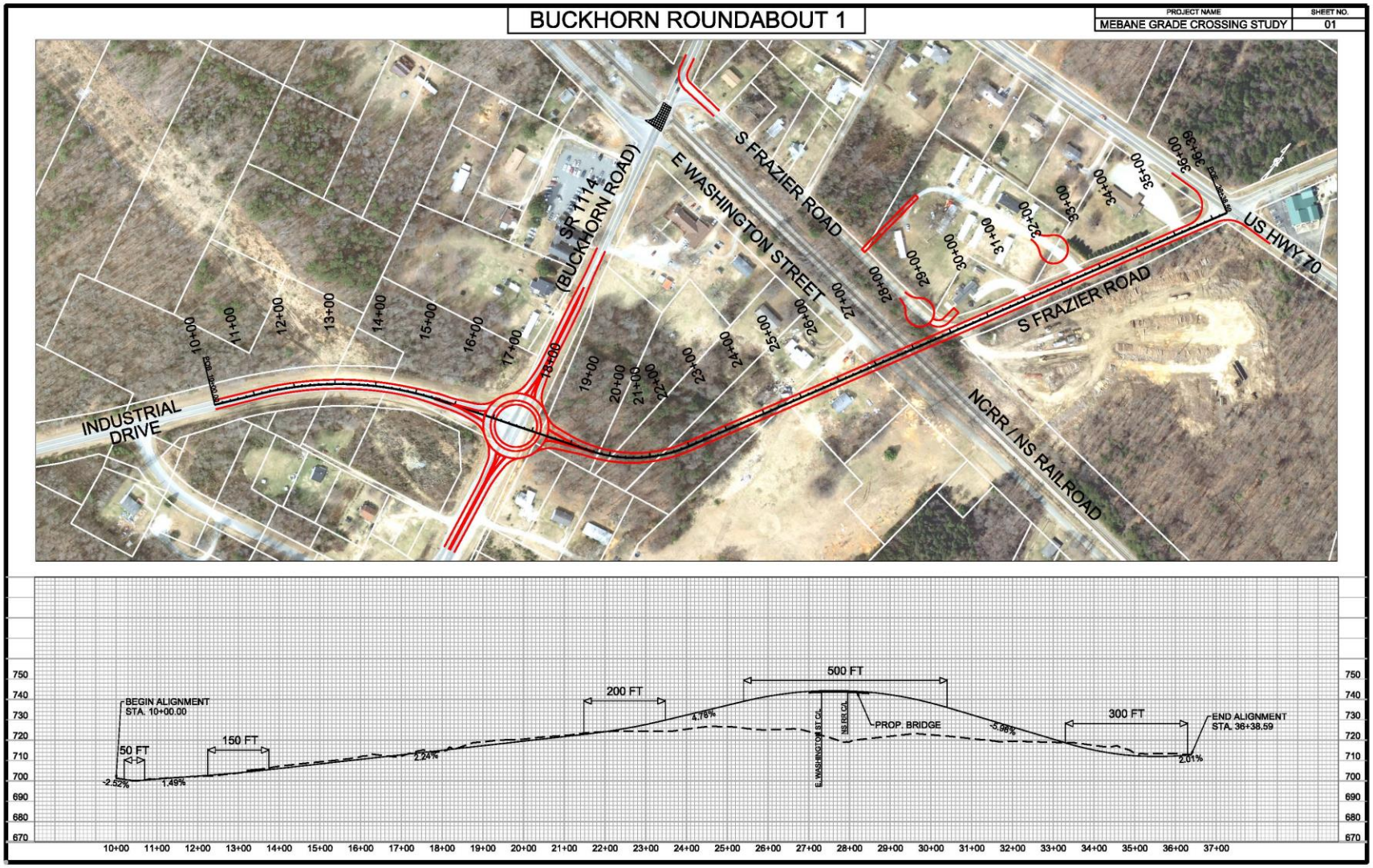
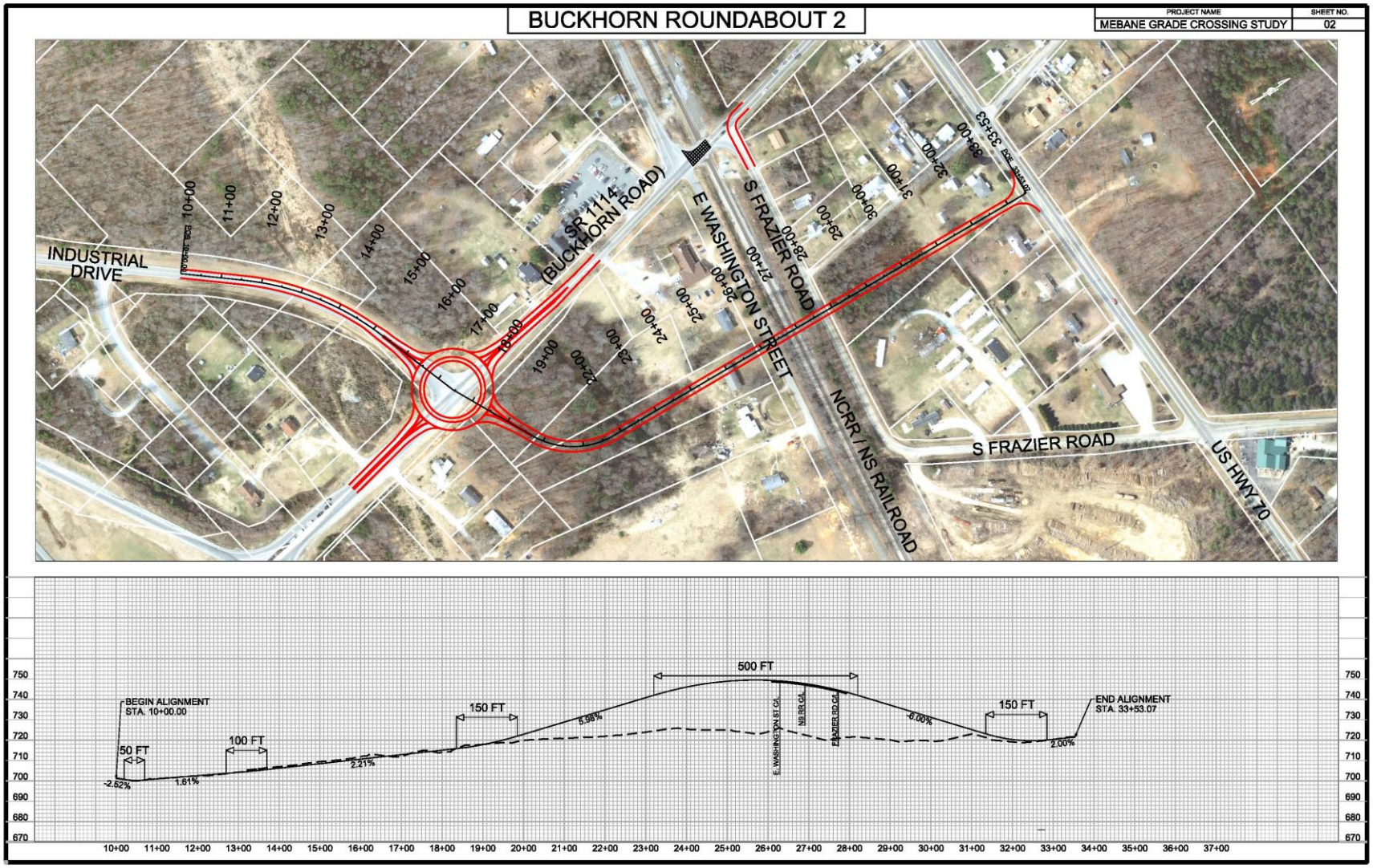


**Figure 31: SR 1114 – Buckhorn Road (Crossing # 735 141R) Recommendation Option 3**

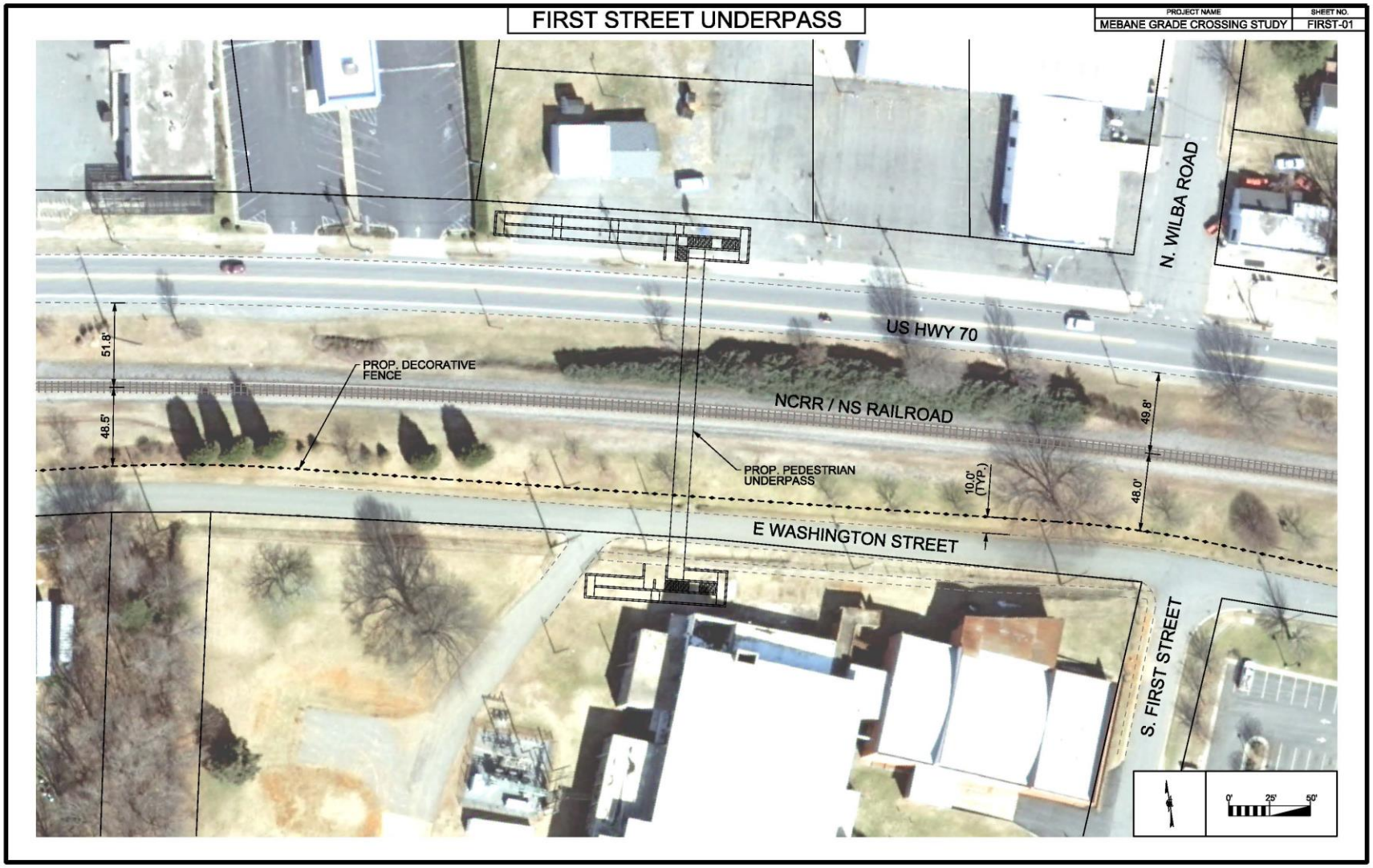


## I. Pedestrian crossing near First Street – Underpass Option

1. Long-Term
   Construct an underpass connecting Mebane Mill Lofts and northern side of US 70. The intent for evaluating a pedestrian connection between the north side of Mebane to the south side is due to the historic pedestrian fatalities within this area. Fatalities have occurred where residents were crossing the NCRR Corridor. Any type of pedestrian grade separated structure (aerial or underpass) must meet the following design standards:

   - Designed with a minimum clear span between bridge piers and /or abutments of 100 feet (perpendicular to track centerlines).
   - Minimum for vertical clearances for a proposed span over main tracks, measured at a distance of 5 feet 6 inches from centerline of track, shall be 24 feet 3 inches from the top of rail of any existing or potential future track.
   - Location of pedestrian crossing structure shall take into account the location and grade of the existing and potential future tracks within the NCRR corridor.
   - Depth of an underpass shall be adequate to provide enough cover over the pedestrian structure to account for freight track loading, track drainage, utilities within the rail corridor including railroad communication and signal needs, and any other requirements to allow the operating railroad to safely operate and maintain the railroad.
   - Any sidewalk and stairway structures, required to provide access to an overhead/underpass pedestrian structure, need to be constructed on the opposite sides of US Hwy 70 and E Washington Street respectively from the railroad roadbed.

**Figure 32: Pedestrian Crossing near S. First Street/N. Wilba Road – Underpass Option Recommendation**



## J. Pedestrian Crossing near Second Street – Overpass Option

1. Long-Term
   Construct an overpass connecting southern side of Washington Street near Second Street and northern side of US 70. Any type of pedestrian grade separated structure (aerial or underpass) must meet the following design standards:

   - Designed with a minimum clear span between bridge piers and /or abutments of 100 feet (perpendicular to track centerlines).
   - Minimum for vertical clearances for a proposed span over main tracks, measured at a distance of 5 feet 6 inches from centerline of track, shall be 24 feet 3 inches from the top of rail of any existing or potential future track.
   - Location of pedestrian crossing structure shall take into account the location and grade of the existing and potential future tracks within the NCRR corridor.
   - Depth of an underpass shall be adequate to provide enough cover over the pedestrian structure to account for freight track loading, track drainage, utilities within the rail corridor including railroad communication and signal needs, and any other requirements to allow the operating railroad to safely operate and maintain the railroad.
   - Any sidewalk and stairway structures, required to provide access to an overhead/underpass pedestrian structure, need to be constructed on the opposite sides of US Hwy 70 and E Washington Street respectively from the railroad roadbed.

**Figure 33: Pedestrian Crossing near Second Street – Overpass Option Recommendation**

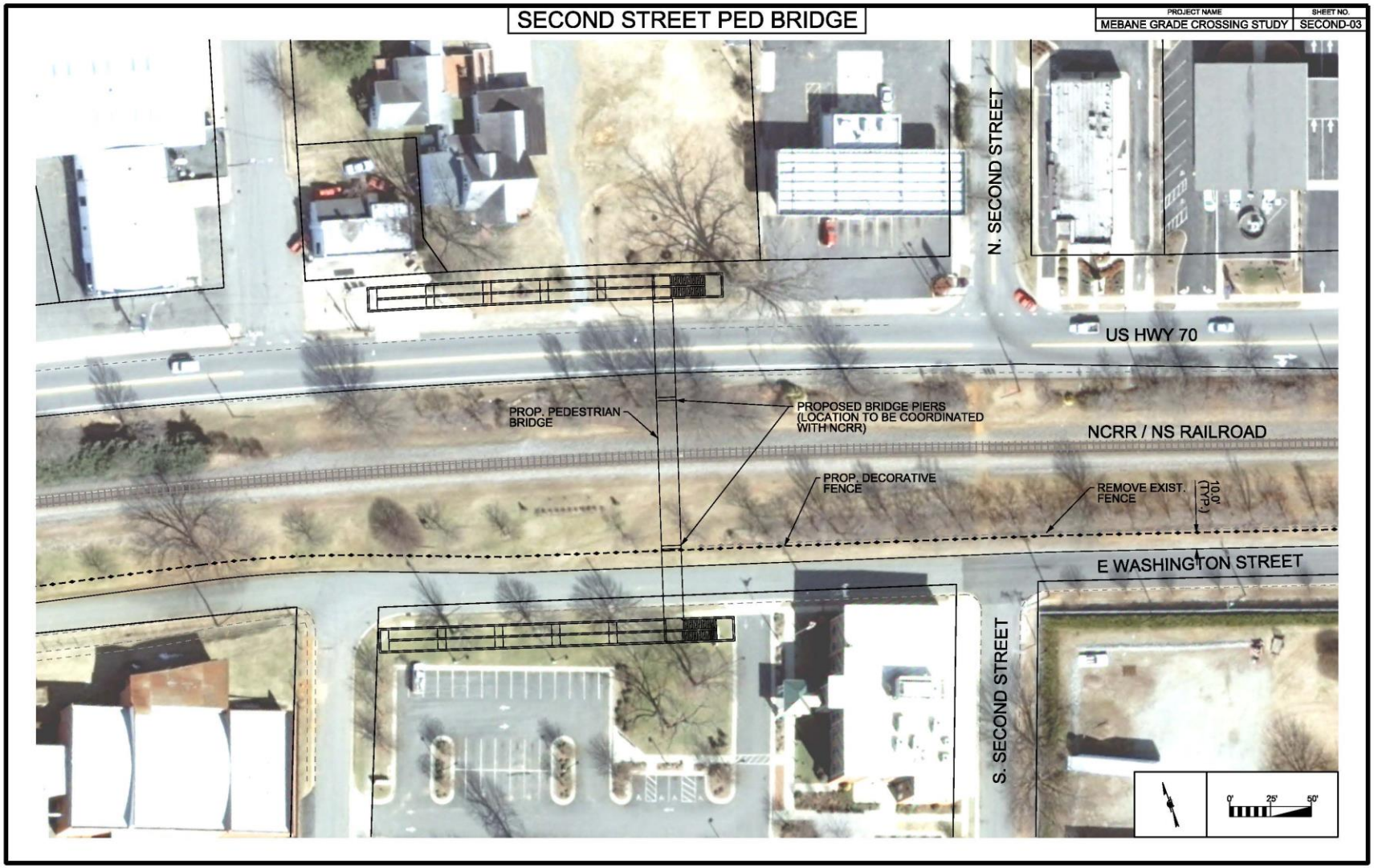


*Table G1 - Order of Magnitude Costs*

| Crossing Number | Street Name | Cost Range | |
|---|---|---|---|
| | | Low | High |
| 735 464L | SR 1940 – Gibson Road | $43,000 | $55,000 |
| 735 465T | SR 1976 – Lake Latham Road | NA | NA |
| 735 468N | SR 1965 – Moore Road | $49,000 | $62,000 |
| 735 496V | SR 1962 – S 3rd Street | $31,000 | $39,000 |
| 735 471W | 4th Street | NA | NA |
| 735 472D | NC 119 - 5th Street/4th Street | $74,000 | $94,000 |
| 735 474S | SR 1402 - Mattress Factory | NA | NA |
| 735 141R | SR 1114 - Buckhorn Road: All Options* | $5,900,000 | $7,500,000 |
| Pedestrian Crossing | Near First Street – underpass | $2,700,000 | $3,400,000 |
| Pedestrian Crossing | Near Second Street - overpass | $3,700,000 | $4,700,000 |
| Fencing | Within Downtown Mebane | $60,000 | $120,000 |

**Includes preliminary costs for right-of-way needs*

Appendix A – Stakeholder Meeting Minutes

**PLANNING & INSPECTIONS DEPARTMENT**
**Craig N. Benedict, AICP, Director**

**Administration**
**(919) 245-2575**
**(919) 644-3002 (FAX)**
**www.orangecountync.gov**

ORANGE COUNTY
NORTH CAROLINA

**131 W. Margaret Lane**
**Suite 201**
**P. O. Box 8181**
**Hillsborough, NC 27278**

## MEMORANDUM – TRANSMITTED BY EMAIL

**DATE:** June 14, 2017

**TO:** Scot Sibert, AICP, Senior Rail and Transit Planner, Parsons Brinckerhoff
Nancy Horne, Project Manager, NC Department of Transportation (NCDOT)
David Cheek, City of Mebane Manager
Chris Rollins, City of Mebane Assistant City Manager

**FROM:** Craig Benedict, Planning & Inspections Department Director

**SUBJECT:** Comment on Buckhorn Road rail-highway crossing options for the Mebane Traffic Separation Study (TSS)

**ATTACHMENTS:** Buckhorn Road TSS options
EDD area between Buckhorn Road and Mt. Willing Road
Orange County Future Land Use Map
Orange County Development Pod Map

Orange County Planning staff has reviewed the three options provided for the Buckhorn Road rail-highway crossing included in the Mebane TSS and has the following comments:

1. We have a strong preference for the connections with Industrial Drive and S. Frazier Road depicted in Option 2. This alignment coordinates well with the County's future road alignment concepts through this area, which is the focus of many of our economic development efforts. We will need an on-grade connection to the east economic development area. This is imperative since this area is isolated due to the rail line and the interstate (see attached map).

2. A connection with S. Frazier Road will provide a more direct route around the western side of Hillsborough and north into Virginia. Buckhorn Road is one of the main interchanges being used by truckers to avoid the truck scales at the NCDOT weigh station on I-85/I-40. This alignment will help with the problem of truckers using primary and secondary streets in Efland to avoid the weigh station, and/or headed to Virginia.

3. The elevated rail crossing will help with school bus traffic in the area.

4. Option 2 intersects US 70 in locations that will promote future traffic lights which will be necessary in the Buckhorn I-85/I-40 area. Buckhorn Road will likely be a four-lane divided roadway between US 70 and West Ten Road based on our studies and adopted land use map (see attached). The other alternatives do not intersect US 70 in locations that will promote these future traffic lights.

5. There is substantial concern however about the proposed round-about depicted at Buckhorn Road and Industrial Drive due to a limited distance of approximately 600 feet from the interchange ramps, the high volume of traffic forecasted and the heavy truck traffic. An Orange County transportation consultant has recently completed a technical study that indicates very high future 2025 traffic projections on Buckhorn Road (north of I-85/I-40, south of US 70) with a Level of Service (LOS) of F. This analysis was based on a fairly detailed build-out analysis for the area, performed with the designation and examination of eighteen development pods. For reference, a Development Pod map is attached with the approximate future square footage of development in those pods impacting Buckhorn Road. A cross intersection with turn lanes is recommended by Orange County to address these issues. The intersection at Industrial Drive will need to accommodate a high volume of traffic and trucks, and quickly move them away from the interstate interchange.

Orange County Planning appreciates the opportunity provided to comment on the proposed rail-highway options included in the Mebane TSS. We would welcome the occasion to collaborate with the City of Mebane and NCDOT in planning the future transporation network through the Mebane-Efland-Buckhorn area.

Please contact Abigaile Pittman of my staff at 919-245-2567, or myself at 919-245-2585 should you wish to further discuss our comments or future collaboration.

Appendix B – Public Workshop Summaries


**We need your input! Please provide us with your comments regarding the Mebane Traffic Separation Study. All comments will be provided to the project team for review and consideration. Thank you!**

Name: CHARLES DOHN

Address: 311 LAKE LATHAM RD

Email: CHARLES.DOHN@HOTMAIL.COM

1. After reviewing the handout and display boards select the option you prefer most for each crossing location listed below.

| | Option 1 | Option 2 | Option 3 |
|---|---|---|---|
| **Buckhorn Road** | ☐ | ☒ ROUNDABOUT 1 | ☐ |
| **Fifth Street (N.C. 119)** | ☒ | ☐ | ☐ |
| **Fourth Street** | ☒ CLOSE | ☐ | **N/A** |
| **Pedestrian Crossings** | ☐ | ☒ OVERPASS | **N/A** |

(Mattress Factory, South Third Street, Moore Road, Lake Latham Road, and Gibson Road are not listed above because those crossings either have only one recommended option or no grade crossing recommendations at this time.)

→

2. Are there any improvements you wish to tell the project team about that were not shown today?

3. Comments: THANKS

Please return this comment card before leaving today. If you need to return this form later, please email or mail it **no later than May 18, 2017** to:

**Mr. Scot Sibert, sibertsr@pbworld.com**

**1001 Morehead Square Drive, Suite 610**

**Charlotte, NC 28203**

For more information on this project please contact:

**Ms. Nancy Horne, NCDOT Project Engineer**

**1548 Mail Service Center, Raleigh, NC 27699-1548**

**(919) 715-3686, nhorne@ncdot.gov**


**We need your input! Please provide us with your comments regarding the Mebane Traffic Separation Study. All comments will be provided to the project team for review and consideration. Thank you!**

Name: Sandy Barnhart

Address: 16 Leeds Court, Mebane

Email: Sandy_barnhart@med.unc.edu

1. After reviewing the handout and display boards select the option you prefer most for each crossing location listed below.

| | Option 1 | Option 2 | Option 3 |
|---|---|---|---|
| **Buckhorn Road** | ☒ | ☐ | ☐ |
| **Fifth Street (N.C. 119)** | ☐ | ☐ | ☒ |
| **Fourth Street** | ☐ | ☒ | **N/A** |
| **Pedestrian Crossings** | ☐ | ☒ with Elevator | **N/A** |

(Mattress Factory, South Third Street, Moore Road, Lake Latham Road, and Gibson Road are not listed above because those crossings either have only one recommended option or no grade crossing recommendations at this time.)

→

2. Are there any improvements you wish to tell the project team about that were not shown today?

Consider elevators in Pedestrian options to reduce required space.

3. Comments:

Please return this comment card before leaving today. If you need to return this form later, please email or mail it **no later than May 18, 2017** to:

**Mr. Scot Sibert, sibertsr@pbworld.com**

**1001 Morehead Square Drive, Suite 610**

**Charlotte, NC 28203**

For more information on this project please contact:

**Ms. Nancy Horne, NCDOT Project Engineer**

**1548 Mail Service Center, Raleigh, NC 27699-1548**

**(919) 715-3686, nhorne@ncdot.gov**


**We need your input! Please provide us with your comments regarding the Mebane Traffic Separation Study. All comments will be provided to the project team for review and consideration. Thank you!**

Name: John F. Barnhart

Address: 16 Leeds Court Mebane, N.C. 27302

Email: johnbarnhart@hpw.com

1. After reviewing the handout and display boards select the option you prefer most for each crossing location listed below.

| | Option 1 | Option 2 | Option 3 |
|---|---|---|---|
| **Buckhorn Road** | ☑ | ☐ | ☐ |
| **Fifth Street (N.C. 119)** | ☐ | ☐ | ☑ |
| **Fourth Street** | ☑ | ☑ | **N/A** |
| **Pedestrian Crossings** | ☑ | ☐ | **N/A** |

(Mattress Factory, South Third Street, Moore Road, Lake Latham Road, and Gibson Road are not listed above because those crossings either have only one recommended option or no grade crossing recommendations at this time.)

→

2. Are there any improvements you wish to tell the project team about that were not shown today?

Use Fifth Street option 3 AND
still close 4th Street

3. Comments:

Please return this comment card before leaving today. If you need to return this form later, please email or mail it **no later than May 18, 2017** to:

**Mr. Scot Sibert, sibertsr@pbworld.com**

**1001 Morehead Square Drive, Suite 610**

**Charlotte, NC 28203**

For more information on this project please contact:

**Ms. Nancy Horne, NCDOT Project Engineer**

**1548 Mail Service Center, Raleigh, NC 27699-1548**

**(919) 715-3686, nhorne@ncdot.gov**


**We need your input! Please provide us with your comments regarding the Mebane Traffic Separation Study. All comments will be provided to the project team for review and consideration. Thank you!**

Name: David Cheek

Address: 207 Colonial Way

Email: cheek.david@gmail.com

1. After reviewing the handout and display boards select the option you prefer most for each crossing location listed below.

| | Option 1 | Option 2 | Option 3 |
|---|---|---|---|
| **Buckhorn Road** | ☐ | ☑ | ☐ |
| **Fifth Street (N.C. 119)** | ☐ | ☐ | ☑ |
| **Fourth Street** | ☐ | ☑ | N/A |
| **Pedestrian Crossings** | ☐ | ☑ | N/A |

(Mattress Factory, South Third Street, Moore Road, Lake Latham Road, and Gibson Road are not listed above because those crossings either have only one recommended option or no grade crossing recommendations at this time.)

→

2. Are there any improvements you wish to tell the project team about that were not shown today?

3. Comments:

Please return this comment card before leaving today. If you need to return this form later, please email or mail it **no later than May 18, 2017** to:

**Mr. Scot Sibert, sibertsr@pbworld.com**

**1001 Morehead Square Drive, Suite 610**

**Charlotte, NC 28203**

For more information on this project please contact:

**Ms. Nancy Horne, NCDOT Project Engineer**

**1548 Mail Service Center, Raleigh, NC 27699-1548**

**(919) 715-3686, nhorne@ncdot.gov**

# MEBANE TRAFFIC SEPARATION STUDY COMMENT CARD

**We need your input! Please provide us with your comments regarding the Mebane Traffic Separation Study. All comments will be provided to the project team for review and consideration. Thank you!**

Name: IRVING PATRICK SHEPPARD

Address: 866 Beech Glen Court Mebane NC 27302

Email: irvingsheppard@GMAIL.com

1. After reviewing the handout and display boards select the option you prefer most for each crossing location listed below.

| | Option 1 | Option 2 | Option 3 |
|---|---|---|---|
| **Buckhorn Road** | ☐ | ☒ | ☐ |
| **Fifth Street (N.C. 119)** | ☒ | ☐ | ☐ |
| **Fourth Street** | ☐ | ☒ | **N/A** |
| **Pedestrian Crossings** | ☒ | ☐ | **N/A** |

(Mattress Factory, South Third Street, Moore Road, Lake Latham Road, and Gibson Road are not listed above because those crossings either have only one recommended option or no grade crossing recommendations at this time.)

→

2. Are there any improvements you wish to tell the project team about that were not shown today?

5th Street widening. 119 BY Pass information. Arrowhead BLVD Retail improvements. Tanger Area Retail improvement.

3. Comments: _____

Please return this comment card before leaving today. If you need to return this form later, please email or mail it **no later than May 18, 2017** to:


**Mr. Scot Sibert, sibertsr@pbworld.com**

**1001 Morehead Square Drive, Suite 610**

**Charlotte, NC 28203**


For more information on this project please contact:


**Ms. Nancy Horne, NCDOT Project Engineer**

**1548 Mail Service Center, Raleigh, NC 27699-1548**

**(919) 715-3686, nhorne@ncdot.gov**

## Sibert, Scot R.

**From:** Sibert, Scot R.
**Sent:** Thursday, November 17, 2016 9:28 AM
**To:** Rubrecht, Genevieve
**Subject:** FW: Fourth Street Pedestrian Bridge

Please put this on file for public comments

Scot Sibert, AICP
Senior Rail and Transit Planner
( c ) 704-962-4962
sibertsr@pbworld.com
**WSP | Parsons Brinckerhoff**

Use the Train!
1-800-ByTrain http://www.ncbytrain.org/
Amtrak http://www.amtrak.com/home

---

**From:** Horne, Nancy M [mailto:nhorne@ncdot.gov]
**Sent:** Wednesday, November 16, 2016 4:30 PM
**To:** Sibert, Scot R.
**Subject:** FW: Fourth Street Pedestrian Bridge

I don't think these would be ADA compliant but below is a comment I received this afternoon.

**From:** Stephen Vargha [mailto:tvgnusnc@gmail.com]
**Sent:** Wednesday, November 16, 2016 4:24 PM
**To:** Horne, Nancy M <nhorne@ncdot.gov>
**Cc:** David Cheek <dcheek@cityofmebane.com>; Chris Rollins <crollins@cityofmebane.com>
**Subject:** Fourth Street Pedestrian Bridge

Good afternoon, Ms. Horne.

Thank you very much for last night's public meeting concerning the railroad grade crossings for the Mebane area. Per the folks from NCDOT, I submitted my ideas and thoughts concerning the grade crossings in our area.

As I stated on paper and to a couple of NCDOT employees, I see no need for vehicular traffic to cross the railroad tracks via Fourth Street. It is not a thoroughfare, and it is not a busy street. Having the crossing only tempts fate with a train and a vehicle. Anyone that needs to go south on Fourth Street can easily use Fifth Street and Third Street. Using those streets will not make one's trek much longer no would it really be inconvenient.

What I tried to stress to NCDOT with my written input was the dire need for pedestrian safety. Mebane's hands are tied due to the antiquated railroad laws in this country. Apparently, Mebane cannot build a sidewalk along Fifth Street between US-70 / East Center Street and Washington Street. This is dangerous! The old White Furniture

is now home to about 300 residents. More and more people are living in downtown Mebane, making it extremely important that pedestrians be able to walk around the area.

US-70 / Center Street has just one crosswalk with a crossing light. Right now, eleven of the twelve crosswalks at the Center Street intersections with traffic lights do not have any signals to help pedestrians cross the road. Center Street is extremely busy. Fifth Street / NC-119 is always heavy with vehicular traffic. Every time I cross Center Street at Fifth Street, I hold my breath. I do not want to think about the number of times vehicles have stopped within a foot or two of my legs.

One of your NCDOT employees and I talked about a tunnel or a bridge for pedestrians to use at Fourth Street. A tunnel may end looking like a ditch, and drainage could be a problem. We talked about a pedestrian bridge over the railroad tracks, half way between Third Street and Fourth Street. The biggest concern is that there is not a huge amount of land between Washington Street and Center Street. A standard, straight pedestrian bridge is really not feasible.

Because there are more and more pedestrians crossing the railroad tracks, some sort of safe way to get across is needed. I tried to show an example on my written submission to NCDOT. Because of the space limitations, I fear that I have not presented my idea in the best manner.

A quick look at the Internet helps me present bridge possibilities. There is a pedestrian bridge in Purmurend, Netherlands that gets one's attention. The Dutch town had similar space restrictions and came up with a cool bridge. It is actually more than one bridge, but I want to focus on the one that arches. In the two photos below, you can see how the Dutch dealt with the narrow space. People of all ages climb this high arched bridge. Many take photos from the top of it. With the numerous railroad buffs in the area, they would love that vantage point! Here are two different angles of the Dutch pedestrian bridge:

There are three more photos below. All of them are pedestrian bridges with spiral ramps. By using curved ramps, NCDOT can defeat the narrow width of the land to have enough height for trains to get underneath it. The ramp on the south side could end up at Mebane City Hall as many residents would have 106 East Washington Street as their destination.

The first photo below shows a very green bridge. It blends in to the landscape. Mebane has done a great job of landscaping the railroad corridor in downtown. A green bridge would be a lovely addition to the historic district. The other two photos are just to show what many cities are doing. A bridge can be a work of art while providing a safe way for pedestrians to cross the railroad tracks.

We have to think outside of the box with downtown Mebane. This progressive city is growing rapidly thus building something to serve its residents who are traveling on foot is an immediate concern. It is especially true with the recent fatalities in this small stretch of railroad tracks.

I am copying this email to my town's leaders as I have strong feelings for a pedestrian bridge to be built. Hopefully, you will find my idea to be a very valid one, and one that can be implemented in a reasonable amount of time. Thank you very much for your time with my thoughts and concerns.

Best regards,

**Stephen Vargha**
201 East Center Street #339
Mebane, NC 27302-2553
919.475.3592
tvgnusnc@gmail.com

---

Appendix C – Public Hearing Minutes and Comments

The Mebane City Council met for its regular monthly meeting at 6:00 p.m., Monday, September 11, 2017 in the Council Chambers of the Municipal Building located at 106 East Washington Street.

Councilmembers Present:
Mayor Glendel Stephenson
Mayor Pro-Tem Ed Hooks
Councilmember Patty Philipps
Councilmember Jill Auditori
Councilmember Everette Greene
Councilmember Tim Bradley

Also Present:
David Cheek, City Manager
Chris Rollins, Assistant City Manager
Lawson Brown, City Attorney
Cy Stober, Development Director
Franz Holt, City Engineer
Stephanie Shaw, City Clerk
Jeanne Tate, Finance Director
Mark Reich, Engineer, AWCK, Inc.

Mayor Stephenson called the meeting to order and Mr. Bradley announced that earlier this year the NC General Assembly enacted a law designating September 11th as First Responders Day. He then gave the invocation.

During the Public Comment period Bradley Dixon, 503-A Hawfields Road, Mebane, shared a proposal for a public disc golf course on the recently purchased 54.6 acres of the Cates Farm to be used as passive recreational purposes. He spoke of his passion for the growing sport, along with several reasons why he feels Mebane needs this sport as an additional recreational opportunity for the community.

Mr. Cheek stated staff has talked with Mr. Dixon. Staff thinks it is a good fit for the property and would like to include the disc golf course in the comprehensive plan.

Ross Davis, 2360 Deep Creek Church Road, Burlington, owns a 30 acre private disc golf course. He shared details about the sport and offered to help with the design should the City decide to proceed with a course.

Council spoke favorably about the idea of a disc golf course. No formal action taken.

Will Atherton, Business Owner at 126 W. Clay Street, Mebane, shared his desire for Council to adopt an ordinance prohibiting smoking on the sidewalks downtown, especially near the businesses front doors. He stated many of the businesses downtown have external areas around the back of their businesses where folks could gather to smoke. He requested that this issue be considered during the downtown improvement plans. Council requested staff look into this.

Mary McFarland, 307 N. Wilba Road, Mebane, suggested the City should consider having a downtown public restroom. She suggested the pocket park/parking lot area beside the old Warrens Drug store at the corner of Fourth and Clay Streets.

Mr. Cheek presented the consent agenda as follows:

a) Approval of Minutes- Regular Meeting- August 14, 2017

b) Contract Award for 2017-18 Street Repair & Resurfacing

c) Contract Award for Effluent Discharge Line at WRRF

d) NC Division of Water Infrastructure Asset Inventory and Assessment Grant- Sanitary Sewer System

Mr. Bradley made a motion, seconded by Mr. Hooks, to approve the consent agenda as presented. The motion carried unanimously.

A Public Hearing was held for presentation of the Traffic Separation Study Rail Crossing Recommendations. In a joint cooperative effort with the City of Mebane, Norfolk Southern (NS), the North Carolina Department of Transportation Rail Division (NCDOT Rail), and North Carolina

Railroad (NCRR), the Mebane Traffic Separation Study (TSS) focused on eight (8) existing at-grade roadway-railroad crossings along a 5-mile span. Also at the request of the City of Mebane, NCDOT Rail also studied the possibility of an underpass and overpass pedestrian crossing (one near First Street and one near Second Street) due to the history of pedestrian fatalities. Scot Sibert, AICP consultant for NCDOT Rail, explained that TSS is part of a comprehensive evaluation of vehicular, train, and pedestrian patterns and interactions along a defined local or regional rail corridor. The purpose of the TSS is to determine the need for improvements and/or elimination of public at-grade crossings to improve safety and mobility for motorists, pedestrians, rail passengers, and train crews. The TSS evaluated the rail line in Mebane that crosses various streets, as well as any planned or programmed railroad and roadway improvements within the study area. The process involved components relating to Crash Data, Traffic Data, Capacity Analysis, Safety and Mobility Issues, and Public Involvement. Two Stakeholder Committee Meetings and two Public Informational Workshops were held during the course of the study. Mr. Siebert presented the following recommended improvements for each of the crossings:

A. SR 1940 – Gibson Road (Crossing # 735 464L)-
   Continue to operate as an at-grade crossing and install median barriers and widen crossing shoulders. By installing a median barrier with bollards, there will be a significant reduction in vehicles driving around gates that are down. The widened shoulder is also intended to provide additional width for projected truck traffic.

Council questioned why the widening and if it was for pedestrian traffic. Mr. Sibert replied to allow installation of the bollards, not for pedestrian traffic as the study did not reveal major pedestrian movement at this crossing but it does provide a wider shoulder. Nancy Horne, PE with NCDOT Rail, stated once this plan moved into design they could look at making the shoulder wide enough so that if the City decided at a later time they wanted to put sidewalks in, the widening would accommodate the same.

B. SR 1976 – Lake Latham Road (Crossing # 735 465T)-
   Continue to operate the crossing as an at-grade crossing. Existing at-grade crossing will be closed once the NC 119 Bypass is constructed.

Ms. Horne stated they noted the proximity to the new park on the north side and the residential community on the south, so they will have to take that into consideration determining the width of the crossing. This crossing will need to allow pedestrian traffic.

C. SR 1965 – Moore Road (Crossing # 735 468N)-
   Crossing to continue to operate as an at-grade crossing and install median barriers and widen crossing shoulders. By installing a median barrier with bollards, there will be a significant reduction in vehicles driving around gates that are down. The widened shoulder is also intended to provide a safer pedestrian connection across the railroad corridor.

Council questioned if any turn lanes or other improvements were discussed in conjunction with the new park and this study due to the high vehicle traffic during school hours. Mr. Siebert said there were discussions stakeholder-wise about this intersection and one thing that can be done is for NCDOT-Division of Highways to do a traffic signal warrant study.

D. SR 1962 3rd Street (Crossing # 735 496V)-
   Crossing to continue to operate as an at-grade crossing. Widen the existing at-grade crossing shoulder six (6) feet on each side to provide a safer pedestrian connection across the railroad corridor. The widened shoulder will provide the pedestrian connection that is needed within the downtown of Mebane due to the numerous pedestrian fatalities with trains. This will also connect to the intersection improvements at 3rd Street and Washington Street, and the existing sidewalk network in downtown Mebane.

Council stated that the west side is wide already and questioned if a pedestrian crossing (sidewalk) could be added to the east side as well. Ms. Horne stated that is not be likely to happen. There was discussion about a fence to divert pedestrian traffic to the designated pedestrian crossings and funding sources.

E. 4th Street (Crossing # 735 471W)-

Continue to operate the existing at-grade crossing if the 5th Street crossing improvements are constructed per the below recommendation. If the 5th Street improvements are not made, 4th Street is recommended for closure.

Ms. Philipps expressed opposition to closing Fourth Street which resonated with Council.

F. NC 119 – 5th Street (Crossing # 735 472D)-

Continue to operate the crossing as an at-grade crossing and improve the geometry at the crossing and intersection with US 70. Eliminate the northbound right turn land onto US 70 to increase the curve radii for vehicle turning movements. Install asphalt path to connect sidewalks on the eastern side of crossing in order to improve pedestrian connectivity. Install cross walks on the south and east segments of Washington St/Fifth St intersection. Install mountable medians, with a pedestrian refuge along Fifth Street from the at-grade crossing south of Washington Street and along Washington Street west of Fifth Street. Pedestrian crossing warning signs will be installed leading up to the crosswalks at Washington Street.

Fourth Street crossing would not be closed. The existing crossing would continue to operate as an at-grade crossing. Widen the existing at-grade crossing shoulder six (6) feet on each side to provide a safer pedestrian connection across the railroad corridor. The widened shoulder will provide the pedestrian connection that is needed within the downtown of Mebane due to the numerous pedestrian fatalities with trains. This will also connect to the intersection improvements at 4th Street and Washington Street, and the existing sidewalk network in downtown Mebane.

Mr. Bradley expressed strong opposition to the blocking of E. Washington Street from left or right turns.

G. SR 1402 – Mattress Factory Road (Crossing # 735 474S)-

Continue to operate the crossing as an at-grade crossing.

H. SR 1114 – Buckhorn Road (Crossing # 735 141R)-

Grade-separate Buckhorn Road by building a roadway bridge over the tracks. There are three options for the roadway bridge. Two of the options include a roundabout at the intersection of Industrial Drive and the re-aligned Buckhorn Road, while the other option would not include a roundabout. These options depict an ability to construct a grade separation while limiting surrounding impacts. As funding is secured for this improvement, these three options, along with other potential options will be developed and evaluated during the NEPA process. These options are intended to be concepts only for the ability to develop order-of-magnitude costs in order to assist in identification of funding sources.

As the recommendation of grade separating Buckhorn Road moves forward, it will be important to continue to collaborate and coordinate with the Orange County Interchange Analysis and Corridor Study. This study has identified the need to extend Industrial Drive to the east. Continued coordination in future roadway networks, connections with existing intersections, and interchange ramp modifications should occur to ensure proper planning and design.

I. Pedestrian crossing near First Street – Underpass Option

Construct an underpass connecting Mebane Mill Lofts and northern side of US 70.

J. Pedestrian Crossing near Second Street – Overpass Option

Construct an overpass connecting southern side of Washington Street near Second Street and northern side of US 70.

Abigail Pittman, Orange County Transportation Planner, provided comments in regard to the Buckhorn Road rail-highway crossing options. She cited their strong preference for the connections with Industrial Drive and Frazier Road, option 2, and shared the reasons behind their preference.

Mr. Stober read aloud comments submitted by Mark Angel, 617 N. Charles Street, who was unable to stay for the meeting. His comments suggested rebuilding the Mebane Train Depot as a solution

to the train wrecks.

Johnny Jeffries, 4870 Mebane Rogers Road, Mebane, suggested that earlier warnings be provided when a train is approaching the crossings. Ms. Horne stated Amtrak runs on a schedule, however freight trains do not. Mr. Bradley stated discussions took place with DOT in the past and according to DOT they are meeting federal regulations in regard to the timing of crossing warnings but he feels it's a point well made. Mr. Boney commented that he was under the impression that local municipalities could govern the timing within their jurisdiction as long as they didn't lessen the time. Ms. Horne added that when you lengthen the warning time, people become impatient and that's when they go around the arms/gates.

David Shanklin, Mebane resident, stated the traffic signals at the intersection of Center Street, Fifth Street and Washington Street which govern traffic coming across the train tracks headed north of Fifth Street are unsafe and confusing and should be angled to shine in the proximity of the driver's eyesight. Mr. Rollins and Mr. Bradley explained DOT's reasoning for having the signals work that way, which is an effort to keep someone from being trapped on the tracks.

Mayor Stephenson called for a motion to close the public hearing. Mr. Bradley made a motion, seconded by Mr. Greene, to close the public hearing. The motion carried unanimously.

Mr. Cheek suggested that further discussion take place with the consultants to clarify some of the recommendations. Mr. Bradley stated if accepting the report does not include the Buckhorn Road item, he is comfortable with the recommendations, except for the blocking of E. Washington Street from left or right turns. Ms. Auditori said she agrees with Mr. Bradley but she also opposes closing Fourth Street.

Ms. Auditori made a motion, seconded by Mr. Bradley, to accept the TSS report with the understanding that Council, staff and the consultants with revisit the item of the intersection of Washington Street and Fifth Street before moving forward and omit the blocking of Fourth Street. The motion carried unanimously.

A Quasi-judicial Public Hearing was held on a request from Franklin Legacy, LLC to amend the Special Use Permit for "Northeast Village", Phase 1 previously approved by the City Council on November 4, 2014 for 99 single-family homes.

City Clerk Shaw swore in and/or affirmed the following:

Jim Parker- Developer with Franklin Legacy, LLC
Phil Koch- Engineer with EarthCentric Engineering
Cy Stober- Development Director
Chris Rollins- Asst. City Manager

Mr. Stober stated staff has no objection to the amendment request and the burden is upon the applicant to make their case. Jim Parker spoke on behalf of Franklin Legacy, LLC requesting that the approved SUP for the Northeast Village be amended based on the following:

- To include vinyl siding as an acceptable building material, such that at least 25% of house's front elevation will have stone or masonry finishes

Mr. Greene commented on how the market has changed and vinyl siding has improved over the years.

Mr. Parker stated other subdivisions in Mebane currently have been approved with vinyl siding allowed, and prohibiting the use in this subdivision is making the property unmarketable. He continued stating that the change of the building material will not materially endanger the public health or safety and will not substantially injure the value of adjoining or abutting property as the value of homes would begin at a minimum of $185,000. The homes would be in harmony with the area in which it is located and would be in conformity with the land development plan because it was approved in 2005 and 2014.

No one from the public spoke. Ms. Philipps made a motion, seconded by Ms. Auditori, to close the

Public Hearing. The motion carried unanimously.

Mr. Bradley made a motion, seconded by Ms. Phillipps, to approve the special use permit amendment as presented. The application is generally consistent with the objectives and policies for growth and development in the City's 2017 Comprehensive Land Development Plan, *Mebane by Design*. It is both reasonable and in the public interest based on the findings that it:

1. Will not materially endanger the public health or safety;
2. Will not substantially injure the value of adjoining or abutting property;
3. Will be in harmony with the area in which it is located ; and
4. Will be in conformity with the land development plan, thoroughfare plan, or other plans officially adopted by the City Council

The motion carried unanimously.

A Public Hearing was held on a request to amend the Unified Development Ordinance (UDO)-

a. Article 6, Section D(5): Tree Placement, pg. 6-26
b. Article 7, Section 4.4(D): Review Process for Final Major Subdivision Plats, pg. 7-9
   AND
   Article 7, Section 4.5(B): Dedication and Acceptance, pg. 7-10
c. Article 12, Section 4: Definitions, page 12-29
d. Article 12, Section 4: Definitions, page 12-38
e. Appendix A, various pages
f. Appendix B, five amended certificates and one new certificate: *City of Mebane Certificate of Approval* on new page B-9

Mr. Stober reviewed the proposed amendments. No one from the public spoke. Mr. Greene made a motion, seconded by Ms. Auditori, to close the public hearing. The motion carried unanimously. Mr. Hooks made a motion, seconded by Mr. Bradley, to approve the amendments as presented. All proposed amendments are designed to enhance the plan review process for the City, plat recordation needs for applicants going to the Planning Department, and improve municipal safety. They are consistent with the City's mission and goals, and are reasonable and within the public's interest, placing no burdens upon any distinct population of the City. The motion carried unanimously.

Mr. Stober presented a request for approval to create a Bicycle and Pedestrian Advisory Commission, to advise City Council on relevant matters. The Commission shall be composed of seven (7) community members, including at least one member of City Council. Terms shall last three (3) years. The Commission shall meet at least once every three (3) months, for a minimum of four (4) meetings per year. The positions will be advertised. Staff hopes to have a committee established by November 2017. Ms. Philipps made a motion, seconded by Ms. Auditori, to adopt the Ordinance to create the City of Mebane Bicycle and Pedestrian Advisory Commission. The motion carried unanimously.

Mr. Stober explained that The North Carolina Department of Commerce, Rural Economic Development Division, is offering the City of Mebane a $50,000 grant for the expressed purpose of "Downtown Revitalization and Economic Development," as stipulated by North Carolina Session Law 2017-257 §15.8(a). The City Planning Department proposes to use these funds to support a Small Area Plan to realize the Historic Downtown Mebane Vision. He stated that in October 2017 staff would issue a Request for Qualifications for a $50,000 Small Area Plan for City of Mebane Historic Downtown District and a firm would be selected by December 2017. All aspects would need to be completed by October 2018. The plan would be a detailed assessment of current conditions in the Downtown District and recommendations on how to best capitalize on its strengths and address its challenges. The plan will address aesthetic, safety, economic, infrastructure, and navigability needs for the District, with a robust stakeholder and public input effort to inform the plan and its recommendations.

Mr. Bradley stated earlier in the meeting issues of smoking downtown and the need for public restrooms downtown were addressed. He questioned if this plan would address issues of that

nature. Mr. Stober replied the plan will address the visible and invisible atmosphere of downtown. Mr. Stober stated the $50,000 will pay for the product which will be the vision plan, including engineering and architectural designs for city blocks. Mr. Cheek stated he would like to put the Fifth Street Improvement Plan on hold until this plan is complete so that the plans will be cohesive. Ms. Philipps made a motion, seconded by Ms. Auditori, to approve the execution of the application for 2017-2018 NC Department of Commerce Downtown Revitalization and Economic Development grant valued at $50,000. The motion authorizes the Mayor of the City of Mebane to sign on its behalf to receive these funds, for use by the City to solicit third party services to address it economic development needs. The motion carried unanimously.

Mr. Cheek requested that Council consider the purchase of vacant land (GPIN #9825046382) on the south side of Clay Street for $25,000, an issue that arose when staff discovered that the land was for sale, and in light of discussions to improve the storm water runoff in the alleyway behind the Police Department. Business owners and staff have been discussing problems with storm water drainage in this alleyway for over a year, and as a result, the 2017-18 budget includes $100,000 to address the storm water issue. The decision on whether to purchase this land is predicated on how extensively the alleyway should be improved. As such, the Council will be presented with three options with varying degrees of infrastructure improvements. Depending on the scope of the project, the purchase of the vacant lot may be necessary.

Mr. Reich shared a PowerPoint depicting the existing conditions of the alleyway and the gravel parking lot in question. The storm water runoff from the City's alleyway behind the Police Department during major rain events has resulted in complaints from adjoining property owners. The existing 12-inch and 4-inch storm sewer piping system is undersized and not functioning properly. Replacing the existing piping system with larger piping should resolve the matter; however, in addition to resolving the storm water issues, staff believes that improving the condition of the alleyway, as well as creating a possible throughway for traffic should be considered as well. The following options were presented for consideration.

Option 1. Improvements with this option include the installation of a 15-inch storm drain and 8-inch trench drains that connect to a 30-inch pipe, installed in 2009 located in North Third Street. This option only addresses the storm water runoff issues and the purchase of land is not required. The cost of these improvements is $144,000.

Option 2. In addition to addressing the storm water runoff issues, this option improves the condition of the alleyway, provides potential additional public parking, allows for better garbage pickup for business owners, and creates vehicular access with the connection to Clay Street from Third Street. The purchase of the land is required with this option. The cost of these improvements is $270,000.

Option 3. In addition to the improvements included in Option 2, this option adds a pedestrian component with a new walkway from Center Street to Clay Street. The purchase of the land is required with this option. The cost of these improvements is $309,000.

Staff recommended, at a minimum, Option 2 and therefore, the purchase of the land on Clay Street. Final determination of needed improvements to the alleyway could be postponed until the Downtown Vision Plan is completed. After considerable discussion, Mr. Bradley made a motion, seconded by Mr. Greene, to proceed with Option 1 and have staff speak with property owners as soon as possible in regard to acquiring easements. The motion carried unanimously.

Ms. Philipps spoke about the issue of school overcrowding in the Mebane. She said as a municipality, we know what our responsibilities are, as far as infrastructure: police, fire, recreation, and public works. She added that all of the Councilmembers are tax payers to Alamance County and the City of Mebane. The North Carolina General Statutes places responsibility for school facilities on the Counties, not the municipalities. She urged everyone to encourage, persuade, aide and partner with other governmental entities in the County to make things move forward to ensure that everyone has an adequate public education and to ensure that our schools are adequately funded. Mr. Bradley added that Mebane is not the only city or town adding to Eastern High School's overcrowding. More schools need to be built in Alamance County. Mr. Hooks added some additional comments about Mebane's efforts to make sure that the county and the school system has been a part of Mebane's planning process including individual meetings with county commissioners and the school superintendent.

Mr. Cheek announced the following:

- Groundbreaking for New Community Park- October 11th at 4:00pm
- Public Meeting – Mebane Oaks Interchange- September 14th, 5-7pm
- Single Family Rehabilitation Funding Available
- Parks & Recreation Trust Fund Grant not funded
- Gateway Signage – Highway 70

Mr. Hooks assured the citizens that Mebane will, in addition to NCDOT's already great landscaping plan, enhance the landscaping after the 119 Bypass has been completed.

There being no further business, the meeting was adjourned at 9:25pm.

_____
Glendel Stephenson, Mayor

ATTEST:

_____
Stephanie W. Shaw, City Clerk

Appendix D – Public Meeting Sign-In Sheets

| | | | |
|---|---|---|---|
| **Project** | Road/Railroad Traffic Separation Study (TSS) in Mebane | | November 15, 2016 |
| **Location** | Mebane City Hall, 106 E. Washington Street | | Alamance, and Orange Counties |

# SIGN IN SHEET (please print)

| | NAME | ADDRESS | EMAIL | PHONE |
|---|---|---|---|---|
| 1 | Montrena W. Hadley | City of Mebane Planning dept. | mhadley@cityofmebane.com | 919-563-9990 |
| 2 | MARY MCWHEETER | 107 KESTREL CT MEBANE | mandj74@hotmail.com | 919-304-2422 |
| 3 | Melissa Wheteel | 363 Gibson Rd Mebane | melissa.whetzel@duke.edu | 3362663041 |
| 4 | Roger James | " " " | roger.james@commed.com | 919 822-6986 |
| 5 | CAROL Wimberly | 1200 PEACHTREE ST. ATLANTA GA | | 404 582 5295 |
| 6 | Yvonne J Daniel | 3144 Lake Latham Circle Dr. | — | 919-563-9056 |
| 7 | JALENE Hoffman | 212 S Fifth Mebane | okiejay@hotmail.com | 580-532-5597 |
| 8 | ERIC CORBETT | 1768 W HOLT ST MEBANE | ECORBETT@GANNETT.COM | 714 887 7363 |
| 9 | Max Bushell | 150 W. Margaret Ln., Hillsborough, NC | mbushell@orangecountync.gov | (919) 245-2582 |
| 10 | Oscar Betancourt | 204 Emerson Dr, Mebane | courtlina7@yahoo.com | |
| 11 | Donald Arant | 2809 Highwoods Blvd. Raleigh NC 27604 | donaldarant@ncrr.com | 919 954 7601 |
| 12 | Adam Powell | Mebane Enterprise Newspaper | Kaspowell@yahoo.com | (919) 260-1989 |
| 13 | STEPHEN VARSHA | 201 E. CENTER ST. #339, MEBANE | tugnutsnc@gmail.com | 919.475.3592 |
| 14 | Bruce Cunningham | 301 Large Oak Ln. Mebane | Bruce.cunningham@bd.com | 9196385986 |
| 15 | Audrey Allen | 125 Gibson Rd Mebane | vacounty@gmail.com | 336-483-1729 |

*NCDOT Mission: Connecting people and places safely and efficiently, with accountability and environmental sensitivity to enhance the economy, health and well-being of North Carolina.*

| | | | |
|---|---|---|---|
| **Project** | Road/Railroad Traffic Separation Study (TSS) in Mebane | | November 15, 2016 |
| **Location** | Mebane City Hall, 106 E. Washington Street | | Alamance, and Orange Counties |

# SIGN IN SHEET (please print)

| | NAME | ADDRESS | EMAIL | PHONE |
|---|---|---|---|---|
| 1 | OMEGA R Wilson | PO Box 661 / 206 Moore Rd MEBANE, NC | WERA1USA@EARTHLINK.NET | (336) 675-1608 |
| 2 | Marty Dalby | 125 Gibson Rd | | 336-516-1644 |
| 3 | Curtis Reamey | 125 GIBSON RD MEBANE | | 919-568 9977 |
| 4 | Brenda Wilson | P.O. Box 661 / Mebane (206 Moore Rd) | WERA1USA@EarthLink.net | 336-213-6105 |
| 5 | Middy | | | 336 269-4064 |
| 6 | Bill Lunsford | 100 E. Roosevelt St | bjlunsog@mail.com | 919-563-0326 |
| 7 | Sandra Walker | 5822 Rainey wood Dr | Swalker025@nc.rr.com | 919-563-2503 |
| 8 | Gloria Bond | 409 TATE AVE | | 919-563-2679 |
| 9 | Barry Parker | 514 Mattress Factory Rd | | 919-563-8840 |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |

*NCDOT Mission: Connecting people and places safely and efficiently, with accountability and environmental sensitivity to enhance the economy, health and well-being of North Carolina.*

| | | |
|---|---|---|
| **Project** | Road/Railroad Traffic Separation Study (TSS) in Mebane | November 15, 2016 |
| **Location** | Mebane City Hall, 106 E. Washington Street | Alamance, and Orange Counties |

# SIGN IN SHEET (please print)

| | NAME | ADDRESS | EMAIL | PHONE |
|---|---|---|---|---|
| 1 | Margie Alston | 431 Woodlawn Rd, P.O. Box 1032 Mebane NC | margiealston@bellsouth.net | (336) 684-1717 |
| 2 | Brenda Holt | 611 W. McKinley St, Mebane NC | — | (919) 563-1569 |
| 3 | Tom Shideler | 2853 Willoughby Ct., Burlington, NC | | 336-229-6481 |
| 4 | Davon Holt | 715 McKinley St. Mebane NC. | — | 336 84 6124 |
| 5 | Harry Marvin | 200 Oakmont Ct, Mebane | | |
| 6 | Paul Scheible | 499 Brookhaven Ct., Mebane | paul@psdurhamcpa.com | (919) 382-2507 |
| 7 | Mary F. McClendon | 704 Nasim Road NC. 27302 | | |
| 8 | Mike Walker | 5822 Rainwood, Mebane | | 919-563-2503 |
| 9 | Vanessa D. Tust | 214 North Street | | 919 563-5981 |
| 10 | Chuck Edwards | | CWCDWARDS@NCDOT.GOV | (336) 570-6833 |
| 11 | Cheryl Parker | 514 Mattress Factory Rd | cparker@div.duke.edu | (336) 214-6195 |
| 12 | Jim Harding | 505 S. 4th / Mebane | hardingl649@gmail.com | (919) 599-[illegible]720 |
| 13 | Matt Kemnitz | 1950 Martin St. Durlington NC 27215 | Matthew.kemnitz@alamance-nc.com | (336) 570-4080 |
| 14 | | | | |
| 15 | | | | |

*NCDOT Mission: Connecting people and places safely and efficiently, with accountability and environmental sensitivity to enhance the economy, health and well-being of North Carolina.*

| | | | |
|---|---|---|---|
| | **Project** | Road/Railroad Traffic Separation Study (TSS) in Mebane | April 18, 2017 |
| | **Location** | Mebane City Hall, 106 E. Washington Street | Alamance, and Orange Counties |

# SIGN IN SHEET (please print)

| | NAME | ADDRESS | EMAIL | PHONE |
|---|---|---|---|---|
| 1 | Lonnie Workman | 230 Gibson Rd. | Lworkman@triad.rr.com | 919-304-2901 |
| 2 | CHARLES DOHN | 311 LAKE LATHAM RD | CHARLES.DOHN@HOTMAIL | 8505727695 |
| 3 | Donald Arant | 2809 Highwoods Blvd. Raleigh NC 27604 | donaldarant@ncrr.com | 919 895 8806 |
| 4 | Cecil Dove | 133 N. Gibson Rd | RockyDove52@yahoo.com | 336-516-0651 |
| 5 | David Cheek | 207 Colonial Wy | cheek.david@gmail.com | 336-5720928 |
| 6 | ED LEWIS | NCDOT 7 | elewis@ncdot.gov | 3364870000 |
| 7 | John Barnhart | 16 Leeds Ct Mebane | johnbarnhart@hpw.com | 919-923-8984 |
| 8 | Sandy Barnhart | 16 Leeds Ct. Mebane | sandy_barnhart@med.unc.edu | 919-656-9566 |
| 9 | Lynwood Martin | 707W Holt st. Mebane | lyn_dee@live.com | 919-563-6414 |
| 10 | IRVING SHEPPARD | 806 Beech Glen Court 27302 | irvingsheppard@GMAIL.com | 919-7682585 |
| 11 | Sandy Straw | 311 Lake Latham Rd. | smstraw@hotmail.com | 828-575-4547 |
| 12 | | | | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |

*NCDOT Mission: Connecting people and places safely and efficiently, with accountability and environmental sensitivity to enhance the economy, health and well-being of North Carolina.*