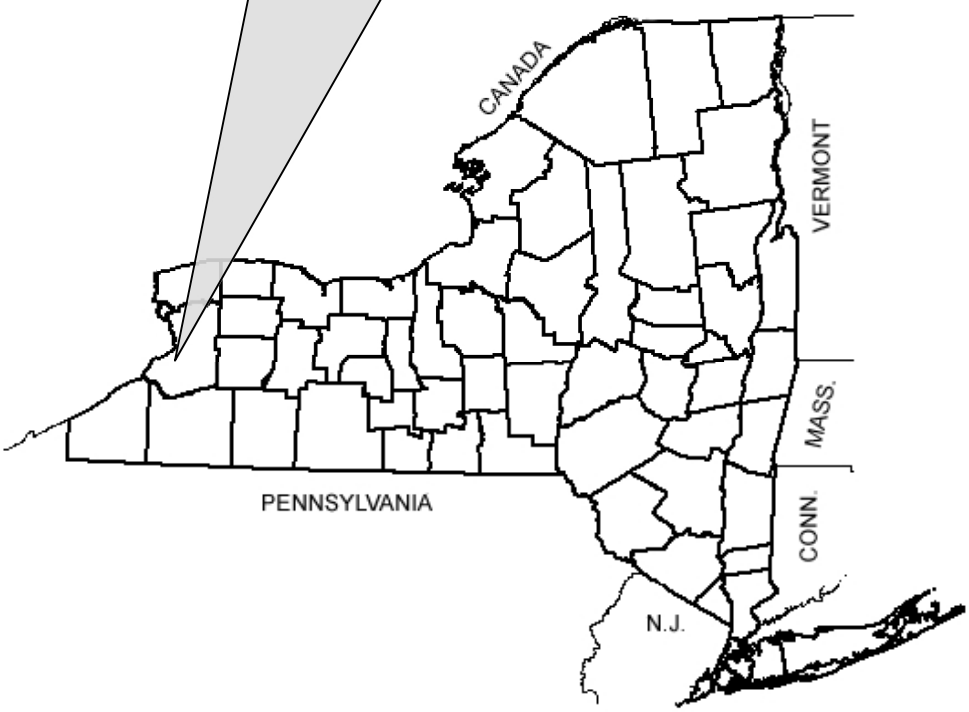
TRANSPORTATION PROJECT REPORT

FINAL DESIGN REPORT

August 2013

Highway Project
P.I.N. 5759.70
Rogers Road and Cloverbank Road
Railroad Quiet Zones
Town of Hamburg
Erie County



UNITED STATES DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

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Description of Work Performed by Firm: Directed the preparation of the Design Approval Document in accordance with established standards, policies, regulations and procedures, except as otherwise explained in this document.

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CHAPTER 1 – EXECUTIVE SUMMARY

1.1. Introduction

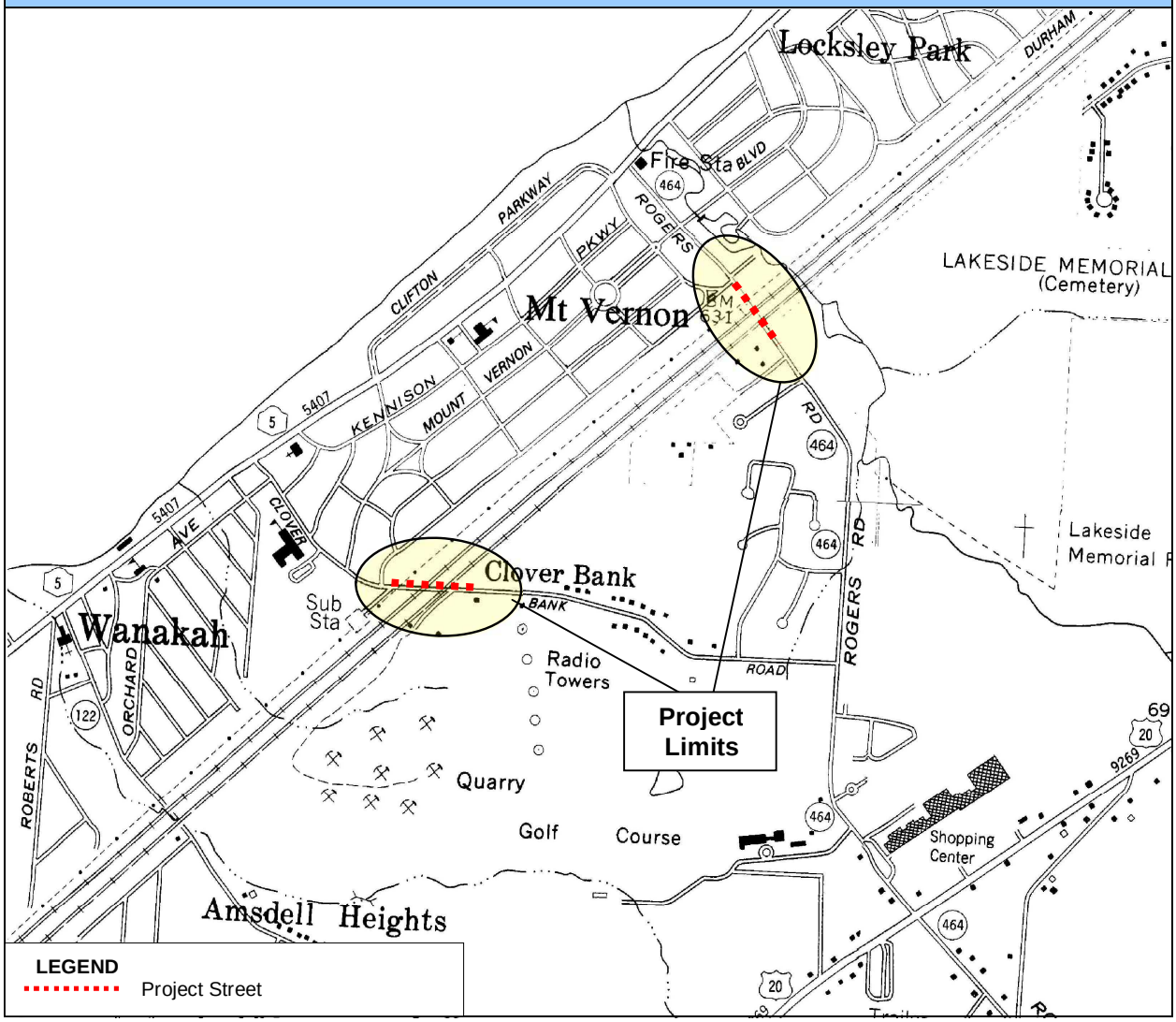
This report was prepared in accordance with the NYSDOT Procedures for Locally Administered Federal Aid Projects, the State Environmental Quality Review Act (SEQR, 6 NYCRR Part 617) and National Environmental Policy Act (NEPA, 23 CFR 771). The SEQR Lead Agency is the Town of Hamburg.

1.2. Purpose and Need

1.2.1. Where Is the Project Located?

The project is located in the Town of Hamburg, Erie County, NY. The project is located at the CSX Transportation (CSXT) and Norfolk Southern (NS) railroad crossings at Rogers Road (C.R. 464) and Cloverbank Road and extends approximately 150 feet east and west of the crossings.

Exhibit 1.2.1
Project Location Map



1.2.2. Why Is the Project Needed?

On June 25, 2005, the Federal Railroad Administration (FRA) issued its Final Train Horn Rule (49 CFR Parts 222 and 229). Under the Rule, locomotive engineers must begin to sound train horns at least 15 seconds, and no more than 20 seconds, in advance of all public grade crossings. Train horns must be sounded in a standardized pattern of 2 long, 1 short and 1 long blasts. The pattern must be repeated or prolonged until the lead locomotive or lead cab car occupies the grade crossing. The minimum sound level of the locomotive horn is 96 decibels (dBA) 100 feet in front of the train in its direction of travel and the maximum sound level is 110 decibels. While the locomotive horn is an effective deterrent to accidents at grade crossings, the sound level from the locomotive horn creates a significant noise that often depreciates the quality of life in communities where trains operate.

Residents of the Town of Hamburg have been significantly affected by these recent changes. The Town has eight highway grade crossings located in a 12-mile corridor operated by two Class 1 Railroads – CSX Transportation and Norfolk Southern Corporation. CSXT operates an average of 86 trains per day on its triple-track mainline and NS operates upwards of 14 on its single-track mainline, depending on their operational needs. There are over 20,000 Town residents, seven schools, and numerous parks and recreation areas located within two miles of this heavily-used corridor. Prior to the Final Train Horn Rule, locomotive engineers were able to use discretion in sounding of the train horn in the area; however, that is no longer the case.

Exhibit 1.2.2
Typical Grade Crossing Conditions

The Final Train Horn Rule also provides the opportunity for communities to mitigate the effects of train horn noise by establishing quiet zones. In a quiet zone, railroads are directed to cease the routine sounding their horns when approaching public highway-rail grade crossings. In order to implement a quiet zone, the increased risk that comes from silencing of train horns must either be minimized by implementing Supplemental Safety Measures or show that the lack of horns does not pose a significant risk. Train horns may still be used in emergency situations or to comply with other Federal regulations or railroad operating rules.

1.2.3. What Are the Objectives/Purposes of the Project?

The project will be developed with the following objectives:

- Provide Supplemental Safety Measures or Alternate Safety Measures in accordance with current FRA guidelines to allow for the implementation of the quiet zones.
- Restore pavement to good condition and rideability using cost effective pavement treatments which provide a minimum service life of 25 years.

1.3. What Alternatives Are Being Considered?

The following alternatives are being considered:

- Alternative 5: Traffic Channelization Device Installation with Pavement Milling & Overlay
- Alternative 5A: Traffic Channelization Device Installation with Single-Course Pavement Overlay
- Alternative 5B: Traffic Channelization Device Installation with Pavement Repair

Alternative 5: Traffic Channelization Device Installation with Pavement Milling & Overlay
This alternative provides for the installation of 9-inch-wide reflective traffic channelization devices with integral curbing along the centerline of both roadways for a length of 100 feet from each crossing gate arm as Supplemental Safety Measures (SSM). Pavement would be milled to remove existing surface defects and provide a consistent cross slope, and overlayed with a single HMA course at Rogers Road and two HMA courses at Cloverbank Road to provide an estimated service life of 25 years. One 11-foot travel lane and 4-foot paved shoulder would be provided on Rogers Road and one 10-foot travel lane and 2-foot paved shoulder would be provided on Cloverbank Road in each travel direction. Shoulder backup material would be placed at a 2 feet width beyond the paved shoulders to provide additional buffer space for vehicle maneuverability and minimize the chance that errant vehicle would destabilize at the dropoff. The open drainage system would be improved to provide a traversable cross section and underdrain would be installed where needed to address subgrade drainage deficiencies.

Alternative 5A: Traffic Channelization Device Installation with Single-Course Pavement Overlay
This alternative provides for the installation of 9-inch-wide reflective traffic channelization devices with integral curbing along the centerline of both roadways for a length of 100 feet from each crossing gate arm as Supplemental Safety Measures (SSM). Pavement rebates will be milled at the work limits and grade crossing approaches, and overlayed with a single 1½" HMA course at both Rogers Road and Cloverbank Road to provide an estimated service life of 18 years. One 11-foot travel lane and 4-foot paved shoulder will be provided on Rogers Road and one 10-foot travel lane and 2-foot paved shoulder will be provided on Cloverbank Road in each travel direction. Shoulder backup material will be placed at a 2-foot width beyond the paved shoulders to provide additional buffer space for vehicle maneuverability and minimize the chance that errant vehicle will destabilize at the dropoff. The open drainage system will be improved to provide a traversable cross section and underdrain will be installed where needed to address subgrade drainage deficiencies. While this alternative does not meet the objective to provide a minimum 25-year service life for the pavement, it is being carried forward due to budget constraints.

Alternative 5B: Traffic Channelization Device Installation with Pavement Repair
This alternative provides for the installation of 9-inch-wide reflective traffic channelization devices with integral curbing along the centerline of both roadways for a length of 100 feet from each crossing gate arm as Supplemental Safety Measures (SSM). Minimal preventive maintenance consisting of spot pavement repairs and crack sealing would be performed at both Rogers Road and Cloverbank Road to provide an estimated service life of 5 years. Existing 10- to 11-foot travel lanes with 4- to 5-foot paved shoulders on Rogers Road and 10- to11-foot travel lanes with 2- to 3-foot paved shoulders on Cloverbank Road would be retained. Shoulder backup material would be placed at a 2-foot width beyond the paved shoulders to provide additional buffer space for vehicle maneuverability and minimize the chance that errant vehicle would destabilize at the dropoff. The open drainage system would be improved to provide a traversable cross section and underdrain would be installed where needed to address subgrade drainage deficiencies. While this alternative does not meet the objective to provide a minimum 25-year service life for the pavement, it is being carried forward due to budget constraints.

The following alternatives have been eliminated from further study:

- Alternative 0: "Null" or No Action
- Alternative 1: Crossing Closure
- Alternative 2: Four Quadrant Gate Installation
- Alternative 3: Wayside Horn Installation
- Alternative 4: Mountable Median Installation with Pavement Widening

Alternative 0: "Null" or No Action
This alternative provides for only continued maintenance of the existing roadway network. No pavement, operational, or safety improvements would be implemented and adjacent residences, schools, and park users would continue to be burdened by train horn noise. This alternative was rejected as it does not address all of the project objectives.

Alternative 1: Crossing Closure

This alternative provides for the closure of one or both of the grade crossings, on a permanent or temporary (nighttime only) basis, in order to enact the quiet zone. The approximately 9,800 vehicles which use these crossings on a daily basis would be rerouted to adjacent grade-separated crossings at Camp Road (Route 75) and Amsdell Road. This alternative was rejected as it is not feasible for these locations, due to the significant volume of traffic which uses these roads, impacts on emergency response times, and the lengthy additional travel distance which would be necessary to reroute affected traffic to Camp Road and Amsdell Road.

Alternative 2: Four Quadrant Gate Installation

This alternative provides for the installation of supplemental gates to completely block all lanes on both sides of the tracks at the grade crossings, thus eliminating the gate runaround scenario. Four quadrant gates are effective in preventing accidents by sealing the crossing from vehicles; however, slow-moving vehicles could conceivably be trapped in the railroad zone after the gates descend. Vehicle presence detectors (VPDs) can be installed that sense the presence of slow-moving vehicles to keep the supplemental exit gate arms in the vertical position until all vehicles have cleared the track crossing area. Railroads typically have issues regarding the additional maintenance costs of four quadrant gate systems, especially maintenance of the VPDs. While this alternative is feasible, it has been eliminated from consideration due to these factors as well as substantially high initial costs estimates.

Alternative 3: Wayside Horn Installation

This alternative provides for the installation of wayside horns at the grade crossings to replace the sounding of train horns. The wayside horn is stationary at a grade crossing, designed to provide audible warning to oncoming motorists of the approach of a train. Wayside horns are mounted on poles at the crossing and emit a louder, longer and more consistent audible alarm than the conventional train horn when the train is 1/4 mile from the crossing. The Wayside horn sound is directed right toward motorists and pedestrians on the roadway. While wayside horn installation would lessen the noise impact on the surrounding area by reducing the noise footprint, it would do little to lessen the impact immediately adjacent to the crossings. Cost estimates for this alternative have not been provided by the Railroads, but are expected to be comparable to four quadrant gate installation based on available guidance. While this alternative is feasible, it has been eliminated from consideration due to limited public benefits, substantially high costs, and maintenance requirements that would likely be unfavorable to the Railroads.

Alternative 4: Mountable Median Installation with Pavement Widening

This alternative provides for the installation of 3-foot mountable concrete medians with reflective traffic channelization devices along the centerline of both roadways for a length of 100 feet from each crossing gate arm as Supplemental Safety Measures (SSM). The existing pavement section would be rehabilitated with full-depth widening of the traveled way and shoulders to provide a service life of 25 years. One 11’-6” travel lane (striped 11’) and 3’-0” shoulder would be provided on Rogers Road and one 11’-6” travel lane (striped 11’) and 2’-0” shoulder would be provided on Cloverbank Road in each direction adjacent to the medians. Beyond the median, pavement would transition to the existing lane and shoulder widths. Existing grade crossing surfaces would be replaced by the Railroads to accommodate the widened approach pavement. This would be done at the cost of the project and would require approximately one year to implement. While this alternative is feasible, it has been eliminated from consideration due to the substantially high costs and impact on project schedule.

Refer to section 3.2 of this report for in-depth discussion of the design criteria, non-standard features, and non-conforming features.

1.4. How Will the Alternative(s) Affect the Environment?

Exhibit 1.4-A Environmental Summary					
NEPA Classification	Class II Programmatic	BY	NYSDOT	Date	Pending
SEQR Type:	Type II	BY	Town of Hamburg	Date	Pending
Permits that must be obtained during Final Design: ▪ Norfolk Southern Right-of-Entry Permit ▪ CSXT Right-of-Entry Permit					

Exhibit 1.4-B Comparison of Alternatives						
Category	Alternative					
	0	2	4	5	5A	5B
Wetland impact	None	None	None	None	None	None
100-year floodplain impact	None	None	Minor	None	None	None
Cultural resources impact	None	Not Determined	Not Determined	Not Determined	Not Determined	Not Determined
Highway noise impact	None	None	None	None	None	None
Train Horn Noise Reduction	None	High	High	High	High	High
Soil disturbance	None	<0.1 acre	0.54 acres	0.47 acres	0.47 acres	0.47 acres
Property impacts	None	None	5 Releases	3 Releases	3 Releases	3 Releases
Pavement Service Life	<5 years	<5 years	25 years	25 years	18 years	5 years
Construction cost (2013)	None	$3.56M	$0.93M	$0.33M	$0.28M	$0.20M

Refer to Chapters 3 and 4 for detailed information for the various alternatives under consideration, including any proposed mitigation measures.

Anticipated permits\certifications\coordination include:

<u>NYS Department of Environmental Conservation (NYSDEC):</u>
- None

<u>NYS Department of Transportation (NYSDOT):</u>
- None

<u>US Army Corps of Engineers (USACE):</u>
- None

<u>Coordination:</u>
- Erie County DPW Highway Division
- Federal Highway Administration
- Federal Railroad Administration
- New York State Department of Transportation
- New York Natural Heritage Program
- US Fish and Wildlife Service
- CSX Transportation
- Norfolk Southern Corp.

1.5. What Are the Costs & Schedules?

Design Approval is scheduled for August 2013, with construction beginning in fall 2013 and lasting approximately 8 months.

Exhibit 1.5-A
Project Schedule

Activity	Date Occurred/Tentative
Scoping Approval	N/A
Design Approval	Summer 2013
Construction Start	Fall 2013
Construction Complete	Spring 2014

Exhibit 1.5-B
Summary of Alternative Costs (2013)

Category		Alternative				
		2	4	5	5A	5B
Construction Costs	Bridge	$0	$0	$0	$0	$0
	Highway	$15,000	$328,000	$250,500	$214,000	$150,000
	Railroad	$2,568,000[4]	$340,000	$0	$0	$0
Incidentals[1] (10%)		$258,000	$67,000	$25,000	$22,000	$15,000
Subtotal		$2,841,000	$735,000	$275,500	$236,000	$165,000
Contingency[2] (10%)		$426,000	$74,000	$28,000	$24,000	$17,000
Subtotal		$3,267,000	$809,000	$303,500	$260,000	$182,000
Potential Field Change Order[3]		$160,000	$88,000	$14,000	$13,000	$10,000
Subtotal		$3,427,000	$897,000	$317,500	$273,000	$192,000
Mobilization (4% max)		$137,000	$36,000	$12,500	$11,000	$7,700
Subtotal		$3,564,000	$933,000	$330,000	$284,000	$199,700
Construction Inspection (Town)		$0	$0	$0	$0	$0
ROW Acquisition Costs		$0	$0	$0	$0	$0
Total Project Costs		**$3,564,000**	**$933,000**	**$330,000**	**$284,000**	**$199,700**

Notes:
1. The potential cost increase due to unknown or un-tabulated items.
2. NYSDOT recommended standard contingencies: 25% Scoping stage, 15% Design Approval stage, 5% Advanced Detail Plans stage.
3. NYSDOT recommended budget for changes in field conditions.
4. Construction costs for Alternative 2 are based upon estimates provided by the Railroads in 2010 with 4% annual adjustment.

1.6. Which Alternative Is Preferred?

The feasible and prudent alternative that best meets the project objectives is Alternative 5A.

1.7. What are the Opportunities for Public Involvement?

The Town of Hamburg is the project sponsor, as well as the SEQR Lead Agency, and is responsible for selection of the preferred alternative. The preferred alternative was selected after coordination with regulatory agencies and project stakeholders including:

- New York State Department of Transportation
- Erie County DPW Highway Division
- CSX Transportation and Norfolk Southern Corp.
- Residents and businesses adjacent to the project

A Public Information Meeting on the project was held on March 1, 2006 at the Town Hall. Representatives from the Town, CSX Transportation, Norfolk Southern, and Federal Railroad Administration were in attendance. Updates regarding the project have been given at various Town Board meetings, on the Town website, and through an e-mail contact list of interested residents.

The anticipated public involvement schedule is included in Exhibit 1.7.

Exhibit 1.7
Public Involvement Plan Schedule of Milestone Dates

Activity	Date Occurred/Tentative
Public Information Meeting	March 1, 2006
In-house Scoping Meeting	March 25, 2013
Current Project Letting	Fall 2013

For additional project information, or to provide your thoughts, you can contact the Town Engineer's Office:

telephone: (716) 649-6111 x2350
e-mail: engineering@townofhamburgny.com

Mailing Address:
6100 South Park Avenue
Hamburg, New York 14075

Please identify this project as Rogers Road and Cloverbank Road Railroad Quiet Zones and include the six digit Project Identification Number (PIN 5759.70) in all correspondence and when requesting additional information.

All comments received by the Town Engineer during the comment phase have been included in Appendix G. The deadline for submitting comments on the Draft Design Report was July 22, 2013.

The remainder of this report is a detailed technical evaluation of the existing conditions, the proposed alternatives, the impacts of the alternatives, copies of technical reports and plans and other supporting information.

CHAPTER 2 – PROJECT CONTEXT: HISTORY, TRANSPORTATION PLANS, CONDITIONS AND NEEDS

This chapter addresses the history and existing context of the project site, including the existing conditions, deficiencies, and needs for the subject study area.

2.1. Project History

The project was initiated by the Town of Hamburg to address the quality of life of the residents, students, and park users near the Rogers Road and Cloverbank Road crossings. The Town began scoping of the project in 2005 and held a Public Meeting on March 1, 2006. Attendees included Town, County, NYSDOT, and Railroad representatives. The project was initially intended to be funded by Town sources; however, significantly higher costs than originally anticipated forced the project to be delayed until a suitable alternative and funding could be identified. The Town received $475,000 in Section 125 funding under the Omnibus Appropriations Act of 2009 as well as $50,000 in New York State Legislative Initiative funding. An Initial Project Proposal (IPP) was prepared for the project by the Town of Hamburg and approved on May 17, 2012. The project was programmed by NYSDOT and is included in the Greater Buffalo-Niagara Regional Transportation Council (GBNRTC) *Transportation Improvement Program 2011-2015*.

2.2. Transportation Plans and Land Use

2.2.1. Local Plans for the Project Area

2.2.1.1. Local Master Plan:

Improvements along Rogers Road and Cloverbank Road are consistent with the 2007 *Town of Hamburg Comprehensive Plan Update*. This project does not preclude future development plans, as it would maintain existing capacity and access. There are no approved public or private developments planned within the project limits that will affect vehicular, bicyclist, or pedestrian traffic.

2.2.1.2. Local Private Development Plans:

There are no approved public or private developments planned within the project limits that will affect vehicular, bicyclist, or pedestrian traffic.

2.2.2. Transportation Corridor

2.2.2.1. Importance of the Project Route Segment:

Rogers Road (C.R. 464) is a heavily traveled urban collector linking Southwestern Boulevard (US Route 20) with Lake Shore Road (NY Route 5). Cloverbank Road is a Town road that links the residential area between the railroads and Lake Shore Road to Rogers Road and connecting routes. The proposed quiet zones cover a 4.3 mile length of the CSX Transportation (CSXT) and Norfolk Southern (NS) railroad tracks which traverse the Town from north to south. There are approximately 20,000 Town residents who live within hearing range of these railroad tracks.

2.2.2.2. Alternate Routes:

There are no suitable alternative routes on the existing roadway network with excess capacity to receive a diversion of existing traffic or new traffic generated by future development.

2.2.2.3. Corridor Deficiencies and Needs:

There are no highway capacity concerns along either Rogers Road or Cloverbank Road. Both roadways appear to operate at acceptable levels of service with minimal delays.

2.2.2.4. Transportation Plans:

This project is on the Greater Buffalo-Niagara Regional Transportation Council (GBNRTC) *2011-2014 Transportation Improvement Program* (TIP).

The GBNRTC 2035 *Long Range Transportation Plan Update* (LRTP) was reviewed for consistency with the project needs and objectives. Some of the goals listed in the LRTP include:

- Protect and enhance the environment, improve quality of life, and promote consistency between transportation improvements and State and local planned growth patterns.
- Enhance integration and connectivity of the transportation system, across and between modes for people and freight.
- Emphasize the preservation of the existing transportation system.

2.2.2.5. Abutting Highway Segments and Future Plans for Abutting Highway Segments:

The abutting segments of Rogers Road and Cloverbank Road are similar in character to that of the project improvement area. Travel lane and shoulder widths, posted speed limits, and clear zones are consistent with those within the project limits.

Erie County DPW Highway Division has programmed a locally funded project to rehabilitate Rogers Road from Southwestern Boulevard to Lake Shore Road. Construction is scheduled for completion by mid-summer 2013. A single-course mill and overlay will take place from approximately 150 feet north of the CSXT grade crossing and extend to Lake Shore Road. The segment from Southwestern Boulevard to approximately 150 feet from the NS grade crossing will receive a two-course mill and overlay. The project is being done in part due to the implementation of the quiet zone improvements. The Town of Hamburg intends to take over ownership and maintenance jurisdiction of this segment upon completion of the rehabilitation work.

The Town of Hamburg has indicated that there are no plans to reconstruct or widen the abutting segments of Cloverbank Road within the next 20 years. Routine capital projects, including pavement resurfacing and drainage improvements, will be performed as conditions warrant.

2.3. Transportation Conditions, Deficiencies and Engineering Considerations

2.3.1. Operations (Traffic and Safety) & Maintenance

2.3.1.1. Functional Classification and National Highway System (NHS):

The NYSDOT functional classification of the respective roadway segments is presented in the following exhibit.

Exhibit 2.3.1.1
Classification Data

Roadway	Rogers Road	Cloverbank Road
Functional Classification	Urban Major Collector	Urban Local
National Highway System (NHS)	No	No
Designated Truck Access Highway[1]	No	No
Qualifying Highway[1]	No	No
Within 1 mile of a Qualifying Highway	No	No
Within the 16-ft vertical clearance network	No	No

Notes:
1. Obtained from NYSDOT's *Official Description of Designated Qualifying and Access Highways in New York State*, January 2013.

2.3.1.2. Control of Access:

Access onto Rogers Road and Cloverbank Road is unrestricted within the project limits.

2.3.1.3. Traffic Control Devices:

There are no traffic signals within the project limits or within one half mile of the abutting roadway segments. Signs and delineators installed throughout the project limits are in fair condition, although some show evidence of vehicular impact and loss of reflectivity. Signs on Cloverbank Road are generally in poorer condition than Rogers Road. Advance railroad crossing warning signs and supplemental pavement markings are in poor condition and are located significantly farther from the crossings than current MUTCD standards.

2.3.1.4. Intelligent Transportation Systems (ITS):

There are no ITSs in operation or planned for the project study area.

2.3.1.5. Speeds and Delay:

Posted speed limits were obtained from field observation as well as review of the *Code of the Town of Hamburg*. Operating speeds were obtained using the test car (following-car) method. Speed data is presented in the following exhibit:

Exhibit 2.3.1.5-A
Speed Data

Street Name	Posted/ Regulatory Speed	Average Speed	85th Percentile Speed
Rogers Road	35 mph	35-40 mph	40 mph
Cloverbank Road	30 mph	30-35 mph	35 mph

The operating speed is a single speed that reflects the majority of motorists. Rather than using an average speed, which may only accommodate half the highway motorists, transportation agencies use the internationally accepted off-peak 85th percentile speed to represent the operating speed. The 85th percentile speed is the operating speed that only 15% of the motorists exceed during off-peak hours.

2.3.1.6. Traffic Volumes:

Twenty-four-hour continuous traffic counts were obtained from NYSDOT for the roadway segments. All data from the available traffic counts was projected to the estimated time of completion (ETC) and various future scenarios. Various growth assumptions were utilized to project the two-way annual average daily traffic (AADT) and two-way design-hour volume (DHV).

Additional traffic data is included in Appendix C. Existing and future no build traffic volumes are presented in the following exhibit.

Exhibit 2.3.1.6
Traffic Data Forecast (No Build)

Segment		Existing (2013)	ETC (2014)	ETC+20 (2034)
Rogers Road	AADT	7,550	7,587	8,331
	DHV	679	683	750
	Heavy Vehicles	5.0%	5.0%	5.0%
Cloverbank Road	AADT	2,273	2,284	2,508
	DHV	205	206	226
	Heavy Vehicles	5.0%	5.0%	5.0%

Heavy vehicle percentages noted above were estimated based on facilities with similar functional classification in the Region.

2.3.1.7. Level of Service and Mobility:

The standard procedures for roadway and intersection capacity analysis are based on the Transportation Research Board's *2000 Highway Capacity Manual* (HCM). The procedures yield a level of service (LOS) as an indicator of roadway and intersection operation. LOS is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption and lost travel time. LOS ranges from "A" to "F", with "A" describing free flow traffic operations and "F" describing operations where demand volumes exceed capacity.

LOS and capacity analysis were performed on major connecting links and intersection within the project study area. The LOS was calculated from AM and PM peak hours on order to determine delay and congestion during commuter travel periods. Roadway segment LOS data is shown in the following exhibit. Values in parentheses refer to PM volumes.

Exhibit 2.3.1.7-A
Segment LOS Summary (No Build)

Segment	ETC	ETC+10	ETC+20
Rogers Road	B (B)	B (B)	B (B)
Cloverbank Road	A (A)	A (A)	A (A)

Roadway segments in the project area will likely continue operating with acceptable delays until the design year approaches.

2.3.1.8. Safety Considerations, Accident History and Analysis:

The FRA accident database was queried for all grade crossings in the study area. The database returned 3 Highway-Rail Grade Crossing Accident/Incident Reports for Cloverbank Road in the past 10 years. One incident occurred on the Norfolk Southern Corp. track in December 2011 and involved the train striking a vehicle stopped on the crossing. The two other accidents occurred on the CSX tracks in 2006 and 2007. Both of which involved vehicles that crossed the tracks and struck the train. Refer to Appendix C for copies of the reports.

No Accident/Incident Reports were found in the past 10 years for the Rogers Road grade crossing.

2.3.1.9. Existing Police, Fire Protection and Ambulance Access:

No emergency service providers are located on the project corridor. Rogers Road and Cloverbank Road are serviced by the Lakeshore Volunteer Fire Company. Police services are provided by the Hamburg Police Department.

2.3.1.10. Parking Regulations and Parking Related Conditions:

There are no parking restrictions on Rogers Road or Cloverbank Road within the project study area.

2.3.1.11. Lighting:

Street lighting is provided by cobra head style light fixtures mounted on bracket arms attached to the existing wood utility poles. There are no known plans in place to upgrade the lighting system.

2.3.1.12. Ownership and Maintenance Jurisdiction:

The ownership and maintenance responsibility of the roadway features within the project limits are shown in the following exhibit:

Exhibit 2.3.1.12 Existing Ownership and Maintenance Jurisdiction				
Highway	**Limits**	**Feature(s) Maintained**	**Agency**	**Authority**
Roadways				
Rogers Road (C.R. 464)	Entirety	Pav't, drainage, landscaping, signs, pavement markings, lighting	Erie County	Section 129 Highway Law
Cloverbank Road	Entirety	"	Town of Hamburg	Section 81 Highway Law
Snow Removal				
Rogers Road	Entirety	snow and ice removal	Erie County	Section 129 Highway Law
Cloverbank Road	Entirety	"	Town of Hamburg	Section 81 Highway Law

2.3.2. Multimodal

2.3.2.1. Pedestrians:

There are no separate provisions for pedestrians within the project limits for Rogers Road and Cloverbank Road. The only pedestrian accommodations that exist close to the project corridors are sidewalks at their respective intersection with Morgan Parkway to the west. Pedestrians are accommodated on the paved shoulder of Rogers Road and Cloverbank Road.

There are no approved plans for sidewalk extensions, trails, or other pedestrian routes within the project limits. A pedestrian generator checklist is included in Appendix C.

2.3.2.2. Bicyclists:

There are no designated bicycle routes or separate provisions for bicyclists in the project limits. The occasional bicyclist may legally use the travelway or paved shoulder.

2.3.2.3. Transit:

Public transportation services for the Town of Hamburg are provided by Niagara Frontier Transportation Authority (NFTA). Transit routes do not utilize Rogers Road or Cloverbank Road within the project limits.

2.3.2.4. Airports, Railroad Stations, and Ports:

There are no airports, railroad stations or port entrances within the project limits.

2.3.2.5. Access to Recreation Areas (Parks, Trails, Waterways, State Lands

The entrance to William D. Williams Park is located on the south side of Rogers Road near the easterly project limit. One entrance to Lakeside Memorial Park cemetery is located on the north side of Rogers Road east of the project limit. There are no entrances to recreation areas within the Cloverbank Road project limits.

2.3.3. Infrastructure

2.3.3.1. Existing Highway Section:

Rogers Road is comprised of varying pavement widths near the railroad crossings. The total pavement width west of the CSX grade crossing is 32 feet, between the CSX and NS crossings is 29 feet and east of the NS crossing is 30 feet. Travel lane widths vary from 10 feet to 11 feet wide. There are no auxiliary lanes throughout the length of the project. Pavement cross slope varies from level to 2% and the profile is

rolling with grades up to 5.0%

Cloverbank Road also varies in width near the railroad crossings. The total pavement width west of the CSX tracks is 28 feet, between the CSX and NS tracks is 25 feet and east of the NS tracks is 26-1/2 feet. Cloverbank Road also has one travel lane in each direction which varies from 10 feet to 11 feet wide. Pavement cross slope varies from level to 5% and the profile is rolling with grades up to 7.0%

Right-of-way widths are 66 feet on Rogers Road and 49-1/2 feet on Cloverbank Road. The widths were determined from record plans and acquisition maps provided by Erie County for Rogers Road and tax maps for the Town of Hamburg for Cloverbank Road.

Refer to Section 2.3.3.10 for discussion regarding existing grade crossings.

2.3.3.2. Geometric Design Elements Not Meeting 2R/3R or Bridge Rehabilitation Standards:

This section compares the existing geometric elements with the minimum standards used to make capital infrastructure improvements. This section helps ensure the objectives and feasible alternatives consider key deficiencies.

2.3.3.2.(1) Critical Design Elements:

There are no non-standard features based on the current NYSDOT 2R/3R Standards. The geometric features of the subject roadways were evaluated in accordance with design standards set forth in the HDM. The lane and shoulder width, grades, horizontal and vertical alignments, superelevation, sight distance, cross slope, clearances, and rollover on Rogers Road and Cloverbank Road appear to coincide with the safe operating and regulatory speeds of the facilities.

2.3.3.2.(2) Other Controlling Parameters:

The following existing nonconforming features were determined based on the current NYSDOT 2R/3R Standard:

- Cross slope on Cloverbank Road is generally level to superelevated (up 2%) rather than normal crown in the eastbound travel lane. This impacts positive drainage from the travel lane, which may lead to icing conditions and accelerate pavement deterioration.
- All grade crossing approaches on Cloverbank Road are profile deficient or “humped.” Ideally, the profile of the roadway approach should be no more than 3 inches above or below the top of at a distance of 30 feet from the outside rail. This ensures a smooth transition that eliminates bottoming out of low clearance vehicles and minimizes impact forces on the crossing surface. The west approach at the CSX crossing is particularly problematic, with grades in excess of 21 inches from level. The NS crossing is not as severe, with grades approximately 13 inches from level on both approaches.
- Advance railroad crossing warning signs and supplemental pavement markings are located significantly farther from the crossings than current MUTCD standards.

2.3.3.3. Pavement and Shoulders:

Record plans for Rogers Road were provided by Erie County DPW Highway Division. Rogers Road was constructed by two separate projects between 1957 and 1962. The pavement from sta. 13+50 to 22+00 was reconstructed and the crossing approaches elevated by PSC Case no. 17313 in 1957. The abutting roadway segments were reconstructed in 1962 to a width of 30± feet with approximately 11-foot travel lanes. The pavement section was constructed with 2-1/2 inch asphalt concrete course, a 4-inch bituminous macadam course, a 12-inch subbase course and surface dusting with fine aggregate. This is consistent with the depths obtained from pavement cores taken in the travel lane and shoulder.

No record plans are available for Cloverbank Road. Based on information obtained from the pavement cores and soil borings, the pavement section consists of approximately 15-1/2 inches of asphalt and 15 inches of subbase.

Existing pavement conditions were observed by Erdman Anthony during a site visit on August 10, 2012 and again on June 21, 2013. The pavement and shoulders on Rogers Road are in good condition and show few signs of rutting, longitudinal cracking, or other deterioration. The roadway approaches are constructed on an embankment in excess of five feet from the surrounding terrain. Given these conditions, it appears that the existing pavement structure is sufficient and subgrade soils are not frost susceptible.

Pavement conditions on Cloverbank Road are fair to poor, with significant wheelpath cracking, edge cracking, and wheelpath rutting. These types of distresses are indicative of poor subgrade support, frost action, inadequate drainage, insufficient pavement thickness, and poor lateral (shoulder) support. The roadbed is in a shallow cut section at the grade crossing approaches, which suggests that the underlying soils are poorly draining and susceptible to frost heave. This is confirmed by wet conditions encountered in the underlying subbase and subgrade materials during the soil borings. The pavement section itself is sufficiently thick given adequate drainage conditions.

Refer to Appendix D for additional information regarding pavement.

2.3.3.4. Drainage Systems:

Drainage on Rogers Road is mainly accommodated by the perched roadway embankment, as well as shallow roadside and a closed drainage system near the south end. A 24-inch CMP culvert crosses the road and drains to the ditch beyond the southerly project limit. This culvert carries roadside drainage to a 12-inch PVC sewer that appears to continue northeasterly through Lakeside memorial Park.

Cloverbank Road drainage is accommodated by a combination of open and closed drainage systems. A 24-inch CMP culvert carrying railroad drainage crosses Cloverbank Road between the CSX and NS tracks. The inlet of this culvert could not be located in the field. A 15-inch CMP culvert crosses Cloverbank Road east of the NS tracks. This culvert carries roadside drainage as well as trackside drainage from the NS right-of-way and discharges to a trackside ditch that flows northeasterly.

The Town has indicated that there are no known problems with the existing drainage system within the project limits.

2.3.3.5. Geotechnical:

A subsurface exploration program consisting of soil borings with split-spoon sampling and field California Bearing Ratio testing was performed. The results of the exploration program indicate that soils within the project limits of Rogers Road are generally moist clayey Silt or crushed stone that provide adequate subgrade support of the roadway. Cloverbank Road generally consists of fine/course Sand which provides adequate support of the roadway, given adequate drainage conditions. Based on pavement distresses noted previously as well as soil exploration, subsurface drainage is inadequate and is leading to premature pavement deterioration.

At this time, there are no special geotechnical concerns with soils or rock slopes within the project area. Refer to Appendix D for additional geotechnical information.

2.3.3.6. Structures:

There are no existing bridges or large culverts within the project limits.

2.3.3.7. Hydraulics of Bridges and Culverts:

There are no existing bridges or culverts over waterways within the project limits.

2.3.3.8. Guide Railing, Median Barriers and Impact Attenuators:

The existing guide railing on Rogers Road is generally in fair condition. There is no guide railing on Cloverbank Road. Exhibit 2.3.3.8 notes the existing guide railing along the project corridor.

Exhibit 2.3.3.8 Existing Guide Railing, Median Barriers and Impact Attenuators			
Type	**Location**	**Length (ft)**	**Condition**
W-Beam	15+47, RT	147	Fair
W-Beam	15+75, LT	123	Fair
W-Beam	15+31, LT	52	Fair
W-Beam	15+34, RT	39	Fair
W-Beam	18+60, RT	79	Fair
W-Beam	18+61, LT	80	Fair
W-Beam	20+05, LT	186	Fair
W-Beam	20+12, RT	85	Fair

There are no median barriers or impact attenuators within the project limits.

2.3.3.9. Utilities:

Utility companies and municipal agencies were contacted to determine the location of any existing underground and overhead facilities. The following utilities are present in the vicinity of the project limits:

- Overhead electric transmission and distribution lines owned by National Grid (private)
- Overhead and underground telephone lines owned by Verizon (private)
- Overhead and underground cable television lines owned by Time Warner Cable (private)
- Overhead and underground railroad communication and signal lines owned by CSXT and NS (private)
- Underground fiber optic lines parallel to the CSXT right-of-way owned by AT&T and Sprint (private)
- Underground gas transmission and distribution lines owned by National Fuel Gas (private)
- Underground water transmission and distribution lines owned by Erie County Water Authority (public)
- Underground sanitary sewers owned by Erie County (public)

A detailed evaluation of the existing utilities in the project limits will be prepared as the design progresses.

2.3.3.10. Railroad Facilities:

The following grade crossings are located within the limits of the proposed quiet Zones:

Exhibit 2.3.3.10 Railroad Grade Crossings						
Inventory No.	**Road Name**	**Railroad**	**Type of Crossing**	**No. of Tracks**	**Warning Devices**	**Trains per Day**
519502A	Rogers Road	CSXT	Public	3	FLG	86
471716C	Rogers Road	NS	Public	1	FLG	14
519501T	Cloverbank Road	CSXT	Public	3	FLG	86
471717J	Cloverbank Road	NS	Public	1	FLG	14

All grade crossing surfaces are in good condition. Surfaces on CSXT's crossing are normal duty with rubber rail interfaces, timber headers, and asphalt pavement on a timber track structure. CSXT has indicated that the surfaces at Rogers Road and Cloverbank Road were installed within the past decade and there are no immediate plans to replace them. CSXT also indicated that the average service life of a

grade crossing surface on a high tonnage line such as the Lake Shore Subdivision is approximately 12-15 years.

Norfolk Southern's crossings are also normal duty with rubber rail interfaces and asphalt paving on a timber track structure. NS indicated that the surfaces at both roadways were replaced within the past five years and there are no immediate plans to replace them. NS did not provide an expected service life for the crossings on the Lake Erie District.

All grade crossings have active warning devices consisting of flashing lights, gates, and bells. NYSDOT has programmed four projects (PINs 5933.53.321, 5933.24.321, 5933.26.321, and 5933.27.321) to upgrade the warning devices at all grade crossings within the project limits. Improvements will consist of replacement of existing devices with new 12-inch LED flashing lights, gate mechanisms, gate arms, electronic bell, signal mast/stanchions, and foundations. Existing grade crossing surfaces were planned to lengthened as needed to accommodate the wider roadway approaches proposed by the quiet zone project; however, that is no longer the case given budget constraints. The existing signal enclosures, predictors, and crossing approach circuitry will not be replaced. The project was originally programmed for construction in 2008, but has been delayed to coordinate efforts with the Town's quiet zone project. The project is currently anticipated to be constructed in late 2013 or early 2014.

2.3.4. Landscape and Environmental Enhancement Opportunities

2.3.4.1. Landscape:

The landscape of the surrounding area is formed on a level terrain with limited land use density. The project site is located in an area with residential, commercial, and recreational uses. The periphery contains limited open spaces.

2.3.4.1.(1) Terrain:

According to properties described in the HDM, the terrain of the project improvement area is level. Highway sight distances, as governed by both horizontal and vertical restrictions, are generally long or could be made to be so without construction difficulty or major expenses.

2.3.4.1.(2) Unusual Weather Conditions:

The climate is typical of the region and consists of warm to hot summers and cold winters with moderate to heavy snowfall. Average annual precipitation is 38.5 inches. On average there are 137 days annually with measurable frost. The open spaces adjacent to both roadways likely result in localized blowing snow conditions, although no problem areas have been brought to attention by the Town.

2.3.4.1.(3) Visual Resource Inventory:

The visual environment does not contain any known visually sensitive receptors including significant scenic views, State/National Register of Historic Places structures, buildings or district, nor unusual land forms.

2.3.4.2. Opportunities for Environmental Improvements:

No practical opportunities for environmental enhancements within the project area have been identified to date. Opportunities for improvements in accordance with NYSDOT's Environmental Initiative should be examined as the project progresses. These are actions to enhance the natural and manmade environment above and beyond the required project mitigation measures. They may include features that provide the opportunity for enhancement by local governments or other agencies or organizations as betterments. Examples include: fishing access, boat and canoe launch sites, development of pocket parks, habitat improvements, and enhanced wetlands.

2.3.5. Miscellaneous:

None.

CHAPTER 3 – ALTERNATIVES

This chapter discusses the alternatives considered and examines the engineering aspects for all feasible alternatives to address the project objectives outlined in Chapter 1 of this report.

3.1. Alternatives Considered and Eliminated from Further Study

Project alternatives were developed to meet the project objectives using the design criteria in Section 3.2.3.2 of this report. The following alternatives were considered and have been eliminated from further study:

- Alternative 0: "Null" or No Action
- Alternative 1: Crossing Closure
- Alternative 2: Four Quadrant Gate Installation
- Alternative 3: Wayside Horn Installation
- Alternative 4: Mountable Median Installation with Pavement Widening

Alternative 0: "Null" or No Action
This alternative provides for only continued maintenance of the existing roadway network. No pavement, operational, or safety improvements would be implemented and adjacent residences, schools, and park users would continue to be burdened by train horn noise. This alternative was rejected as it does not address all of the project objectives.

Alternative 1: Crossing Closure
This alternative provides for the closure of one or both of the grade crossings, on a permanent or temporary (nighttime only) basis, in order to enact the quiet zone. The approximately 9,800 vehicles which use these crossings on a daily basis would be rerouted to adjacent grade-separated crossings at Camp Road (Route 75) and Amsdell Road. This alternative was rejected as it is not feasible for these locations, due to the significant volume of traffic which uses these roads, impacts on emergency response times, and the lengthy additional travel distance which would be necessary to reroute affected traffic to Camp Road and Amsdell Road.

Alternative 2: Four Quadrant Gate Installation
This alternative provides for the installation of supplemental gates to completely block all lanes on both sides of the tracks at the grade crossings, thus eliminating the gate runaround scenario. Four quadrant gates are effective in preventing accidents by sealing the crossing from vehicles; however, slow-moving vehicles could conceivably be trapped in the railroad zone after the gates descend. Vehicle presence detectors (VPDs) can be installed that sense the presence of slow-moving vehicles to keep the supplemental exit gate arms in the vertical position until all vehicles have cleared the track crossing area. Railroads typically have issues regarding the additional maintenance costs of four quadrant gate systems, especially maintenance of the VPDs. While this alternative is feasible, it has been eliminated from consideration due to these factors as well as substantially high initial costs estimates.

Alternative 3: Wayside Horn Installation
This alternative provides for the installation of wayside horns at the grade crossings to replace the sounding of train horns. The wayside horn is stationary at a grade crossing, designed to provide audible warning to oncoming motorists of the approach of a train. Wayside horns are mounted on poles at the crossing and emit a louder, longer and more consistent audible alarm than the conventional train horn when the train is 1/4 mile from the crossing. The Wayside horn sound is directed right toward motorists and pedestrians on the roadway. While wayside horn installation would lessen the noise impact on the surrounding area by reducing the noise footprint, it would do little to lessen the impact immediately adjacent to the crossings. Cost estimates for this alternative have not been provided by the Railroads, but are expected to be comparable to four quadrant gate installation based on available guidance. While this alternative is feasible, it has been eliminated from consideration due to limited public benefits, substantially high costs, and maintenance requirements that would likely be unfavorable to the Railroads.

Alternative 4: Mountable Median Installation with Pavement Widening
This alternative provides for the installation of 3-foot mountable concrete medians with reflective traffic channelization devices along the centerline of both roadways for a length of 100 feet from each crossing gate arm as Supplemental Safety Measures (SSM). The existing pavement section would be rehabilitated with full-depth widening of the traveled way and shoulders to provide a service life of 25 years. One 11'-6" travel lane (striped 11') and 3'-0" shoulder would be provided on Rogers Road and one 11'-6" travel lane (striped 11') and 2'-0" shoulder would be provided on Cloverbank Road in each direction adjacent to the medians. Beyond the median, pavement would transition to the existing lane and shoulder widths. Existing grade crossing surfaces would be replaced by the Railroads to accommodate the widened approach pavement. This would be done at the cost of the project and would require approximately one year to implement. While this alternative is feasible, it has been eliminated from consideration due to the substantially high costs and impact on project schedule.

Refer to section 3.2 of this report for in-depth discussion of the design criteria, non-standard features, and non-conforming features.

3.2. Feasible Build Alternatives

3.2.1. Description of Feasible Alternatives

Project alternatives were developed to meet the project objectives using the design criteria in Section 3.2.3.2 of this report. The following alternatives are considered feasible as they meet the project objectives outlined in Chapter 1:

- Alternative 5: Traffic Channelization Device Installation with Pavement Milling & Overlay
- Alternative 5A: Traffic Channelization Device Installation with Single-Course Pavement Overlay
- Alternative 5B: Traffic Channelization Device Installation with Pavement Repair

Alternative 5: Traffic Channelization Device Installation with Pavement Milling & Overlay
This alternative provides for the installation of 9-inch-wide reflective traffic channelization devices with integral curbing along the centerline of both roadways for a length of 100 feet from each crossing gate arm as Supplemental Safety Measures (SSM). Pavement would be milled to remove existing surface defects and provide a consistent cross slope, and overlayed with a single HMA course at Rogers Road and two HMA courses at Cloverbank Road to provide an estimated service life of 25 years. One 11-foot travel lane and 4-foot paved shoulder would be provided on Rogers Road and one 10-foot travel lane and 2-foot paved shoulder would be provided on Cloverbank Road in each travel direction. Shoulder backup material would be placed at a 2 feet width beyond the paved shoulders to provide additional buffer space for vehicle maneuverability and minimize the chance that errant vehicle would destabilize at the dropoff. The open drainage system would be improved to provide a traversable cross section and underdrain would be installed where needed to address subgrade drainage deficiencies.

Key elements of this alternative include:

Geometry	▪ Rehabilitation of the roadway generally on existing alignment with an 11-foot travel lane and 4-foot shoulder in each direction for Rogers Road and 10-foot travel lane and 2-foot shoulder for Cloverbank Road. ▪ The cross slope of the pavement will be constructed to 2% and the maximum rollover will be 8%. ▪ Paved shoulder width at the Cloverbank Road grade crossings with both Railroads will be limited to 3 feet by the existing surfaces.
Operational	▪ The standard travel lanes and shoulder widths maintain the level of service along the corridor.
Control of Access	▪ Access control along the corridor will generally remain unchanged. ▪ Access to the power line access driveways on both roads will be limited to one way in and out by the traffic separators, unless they are mounted by equipment or temporarily removed.

Right-of-Way	▪ All work necessary to construct the project will be contained inside the existing 66-foot wide ROW on Rogers Road and 49.5-foot wide ROW on Cloverbank Road. Nonessential work will require temporary work releases.
Environmental	▪ There are no significant environmental concerns.
Cost	▪ Construction cost of this alternative is $0.33M.
Project Goals	▪ This improvement meets the overall objectives of providing Supplemental Safety Measures in accordance with current FRA guidelines for implementation of quiet zones and restoring the pavement to good condition for an estimated service life of 25 years.

The following alternatives provide generally the same improvements as Alternative 5, with variations on pavement treatments to allow the project to meet funding constraints.

Alternative 5A: Traffic Channelization Device Installation with Single-Course Pavement Overlay

This alternative provides for the installation of 9-inch-wide reflective traffic channelization devices with integral curbing along the centerline of both roadways for a length of 100 feet from each crossing gate arm as Supplemental Safety Measures (SSM). Pavement rebates will be milled at the work limits and grade crossing approaches, and overlayed with a single 1½" HMA course at both Rogers Road and Cloverbank Road to provide an estimated service life of 18 years. One 11-foot travel lane and 4-foot paved shoulder will be provided on Rogers Road and one 10-foot travel lane and 2-foot paved shoulder will be provided on Cloverbank Road in each travel direction. Shoulder backup material will be placed at a 2-foot width beyond the paved shoulders to provide additional buffer space for vehicle maneuverability and minimize the chance that errant vehicle will destabilize at the dropoff. The open drainage system will be improved to provide a traversable cross section and underdrain will be installed where needed to address subgrade drainage deficiencies. While this alternative does not meet the objective to provide a minimum 25-year service life for the pavement, it is being carried forward due to budget constraints.

Key elements of this alternative include:

Geometry	▪ Rehabilitation of the roadway generally on existing alignment with an 11-foot travel lane and 4-foot shoulder in each direction for Rogers Road and 10-foot travel lane and 2-foot shoulder for Cloverbank Road. ▪ The cross slope of the pavement will be constructed to 2% and the maximum rollover will be 8%. ▪ Paved shoulder width at the Cloverbank Road grade crossings with both Railroads will be limited to 3 feet by the existing surfaces.
Operational	▪ The standard travel lanes and shoulder widths maintain the level of service along the corridor.
Control of Access	▪ Access control along the corridor will generally remain unchanged. ▪ Access to the power line access driveways on both roads will be limited to one way in and out by the traffic separators, unless they are mounted by equipment or temporarily removed.
Right-of-Way	▪ All work necessary to construct the project will be contained inside the existing 66-foot wide ROW on Rogers Road and 49.5-foot wide ROW on Cloverbank Road. Nonessential work will require temporary work releases.
Environmental	▪ There are no significant environmental concerns.
Cost	▪ Construction cost of this alternative is $0.28M.
Project Goals	▪ This improvement meets the overall objectives of providing Supplemental Safety Measures in accordance with current FRA guidelines for implementation of quiet zones, but provides less than the desired estimated service life of 25 years for pavement.

Alternative 5B: Traffic Channelization Device Installation with Pavement Repair

This alternative provides for the installation of 9-inch-wide reflective traffic channelization devices with integral curbing along the centerline of both roadways for a length of 100 feet from each crossing gate arm as Supplemental Safety Measures (SSM). Minimal preventive maintenance consisting of spot pavement repairs and crack sealing would be performed at both Rogers Road and Cloverbank Road to provide an estimated service life of 5 years. Existing 10- to 11-foot travel lanes with 4- to 5-foot paved shoulders on Rogers Road and 10- to11-foot travel lanes with 2- to 3-foot paved shoulders on Cloverbank Road would be retained. Shoulder backup material would be placed at a 2-foot width beyond the paved shoulders to provide additional buffer space for vehicle maneuverability and minimize the chance that errant vehicle would destabilize at the dropoff. The open drainage system would be improved to provide a traversable cross section and underdrain would be installed where needed to address subgrade drainage deficiencies. While this alternative does not meet the objective to provide a minimum 25-year service life for the pavement, it is being carried forward due to budget constraints.

Key elements of this alternative include:

Geometry	▪ Minimal pavement repairs to maintain Existing 10- to 11-foot travel lanes with 4- to 5-foot paved shoulders on Rogers Road and 10- to11-foot travel lanes with 2- to 3-foot paved shoulders on Cloverbank Road ▪ The existing cross slope of the pavement will remain greater 3% max. ▪ Paved shoulder width at the Cloverbank Road grade crossings with both Railroads will be limited to 3 feet by the existing surfaces.
Operational	▪ The standard travel lanes and shoulder widths maintain the level of service along the corridor.
Control of Access	▪ Access control along the corridor will generally remain unchanged. ▪ Access to the power line access driveways on both roads will be limited to one way in and out by the traffic separators, unless they are mounted by equipment or temporarily removed.
Right-of-Way	▪ All work necessary to construct the project will be contained inside the existing 66-foot wide ROW on Rogers Road and 49.5-foot wide ROW on Cloverbank Road. Nonessential work will require temporary work releases.
Environmental	▪ There are no significant environmental concerns.
Cost	▪ Construction cost of this alternative is $0.20M.
Project Goals	▪ This improvement meets the overall objectives of providing Supplemental Safety Measures in accordance with current FRA guidelines for implementation of quiet zones, but provides less than the desired estimated service life of 25 years for pavement.

Exhibit 1.5-B Summary of Alternative Costs (2013)						
Category		Alternative				
		2	4	5	5A	5B
Construction Costs	Bridge	$0	$0	$0	$0	$0
	Highway	$15,000	$328,000	$250,500	$214,000	$150,000
	Railroad	$2,568,000[4]	$340,000	$0	$0	$0
Incidentals[1] (10%)		$258,000	$67,000	$25,000	$22,000	$15,000
Subtotal		$2,841,000	$735,000	$275,500	$236,000	$165,000
Contingency[2] (10%)		$426,000	$74,000	$28,000	$24,000	$17,000
Subtotal		$3,267,000	$809,000	$303,500	$260,000	$182,000
Potential Field Change Order[3]		$160,000	$88,000	$14,000	$13,000	$10,000
Subtotal		$3,427,000	$897,000	$317,500	$273,000	$192,000
Mobilization (4% max)		$137,000	$36,000	$12,500	$11,000	$7,700
Subtotal		$3,564,000	$933,000	$330,000	$284,000	$199,700
Construction Inspection (Town)		$0	$0	$0	$0	$0
ROW Acquisition Costs		$0	$0	$0	$0	$0
Total Project Costs		**$3,564,000**	**$933,000**	**$330,000**	**$284,000**	**$199,700**

Notes:
1. The potential cost increase due to unknown or un-tabulated items.
2. NYSDOT recommended standard contingencies: 25% Scoping stage, 15% Design Approval stage, 5% Advanced Detail Plans stage.
3. NYSDOT recommended budget for changes in field conditions.
4. Construction costs for Alternative 2 are based upon estimates provided by the Railroads in 2010 with 4% annual adjustment.

3.2.2 Preferred Alternative:

Alternative 5A has been identified as the preferred alternative.

3.2.3. Design Criteria for Feasible Alternative(s)

3.2.3.1. Design Standards:

Chapter 7 of the NYSDOT *Highway Design Manual* (HDM) is the primary source for design standards. The primary work type is 3R.

3.2.3.2. Critical Design Elements:

The minimum design criteria for critical design elements serve as the basis for developing and evaluating the design alternatives and are shown in Exhibit 3.2.3.2-A through Exhibit 3.2.3.2-B. The HDM was used to establish these criteria.

The Proposed Conditions columns are reflective of Alternatives 5 and 5A. Conditions for Alternative 5B are the same as the existing conditions, since pavement improvements would be limited to preventive maintenance.

Exhibit 3.2.3.2-A
Critical Design Elements for Rogers Road

PIN:	5759.70	**NHS (Y/N):**	N
Route No. & Name:	Rogers Road (C.R. 464)	**Functional Class:**	Urban Major Collector
Project Type:	Non-freeway 3R	**Design Class:**	Collector
% Trucks:	5.0%	**Terrain:**	Level
ADT:	7,587	**Truck Access/Qualifying Hw.**	N/A

	Element	Standard	Existing Condition	Proposed Condition
1	Design Speed	30 mph min, 60 mph max[1] HDM §2.7.3.2 A	35 mph	35 mph
2	Lane Width	10' min travel lane HDM §7.5.2.2 B, Exhibit 7-8	10-11 ft	11 ft
3	Shoulder Width	4' min (uncurbed) 0' min (curbed) HDM §7.5.2.2 C, Exhibit 7-4 and 7-8	3-5 ft	4 ft
4	Bridge Roadway Width	28' min width but not > than approach roadway width BM §2.3.1 Table 2-1, App. 2A Table X & R	N/A	N/A
5	Maximum Grade	No min/max (uncurbed) 0.5% des. (curbed) HDM §7.5.2.2 E	4.7%	4.7%
6	Horizontal Curvature	86' (@ e = 4.0%) HDM §7.5.2.2 F, Exhibit 7-6	2,864.79 ft @ NC	2,864.79 ft @ NC
7	Superelevation Rate	4% max HDM §7.5.2.2 G	NC	NC
8	Stopping Sight Distance	250' min HDM §7.5.2.2 H, Exhibit 7-7	>334 ft	>334 ft
9	Horizontal Clearance	greater of shoulder width or 1.5' HDM §7.5.2.2 I	5 ft	5 ft
10	Vertical Clearance	14' min, 14'-6" desirable BM §2.4.1 Table 2-2 and §2.4.3	N/A	N/A
11	Pavement Cross Slope	1.5% min to 3% max (travel lanes) 2% min to 8% max (shoulders) HDM §7.5.2.2 K	2%	2%
12	Rollover	4% max between lanes 8% max at EOT; HDM §7.5.2.2 L	4% 4%	4% 0%
13	Structural Capacity	NYSDOT LRFD Specifications AASHTO HL-93 Live Load and NYSDOT Design Permit Vehicle BM §2.6.1	N/A	N/A
14	Pedestrian Accommodation	Complies with HDM Chapter 18 and ADAAG	Shoulder	Shoulder

Notes:
1. Design Speed of 40 mph is consistent with the anticipated off-peak 85th percentile speed within the range of functional class speeds for the terrain and volume. Refer to Section 2.3.1.5, Speeds and Delays, and Appendix C of this report for additional information on speed data.

Exhibit 3.2.3.2-B
Critical Design Elements for Cloverbank Road

PIN:	5759.70	**NHS (Y/N):**	N
Route No. & Name:	Cloverbank Road	**Functional Class:**	Urban Local
Project Type:	Non-freeway 3R	**Design Class:**	Local
% Trucks:	5.0%	**Terrain:**	Level
ADT:	2,284	**Truck Access/Qualifying Hw.**	N/A

	Element	Standard	Existing Condition	Proposed Condition
1	Design Speed	20 mph min, 30 mph max[1] HDM §2.7.4.2 A	30 mph	30 mph
2	Lane Width	9' min travel lane HDM §7.5.2.2 B, Exhibit 7-8	10-11 ft	10 ft
3	Shoulder Width	2' min (uncurbed) 0' min (curbed) HDM §7.5.2.2 C, Exhibit 7-4 and 7-8	2-3 ft	2 ft
4	Bridge Roadway Width	28' min width but not > than approach roadway width BM §2.3.1 Table 2-1, App. 2A Table X & R	N/A	N/A
5	Maximum Grade	No min/max (uncurbed) 0.5% des. (curbed) HDM §7.5.2.2 E	7.0%	6.65%
6	Horizontal Curvature	42' (@ e = 4.0%) HDM §7.5.2.2 F, Exhibit 7-6	N/A	N/A
7	Superelevation Rate	4% max HDM §2.7.3.2 G	N/A	N/A
8	Stopping Sight Distance	200' min HDM §7.5.2.2 H, Exhibit 7-7	>200 ft	>200 ft
9	Horizontal Clearance	greater of shoulder width or 1.5' HDM §7.5.2.2 I	3 ft	3 ft
10	Vertical Clearance	14' min, 14'-6" desirable BM §2.4.1 Table 2-2 and §2.4.3	N/A	N/A
11	Pavement Cross Slope	1.5% min to 3% max (travel lanes) 2% min to 8% max (shoulders) HDM §7.5.2.2 K	0-5%	2%
12	Rollover	4% max between lanes 8% max at EOT; HDM §7.5.2.2 L	6% 8%	4% 0%
13	Structural Capacity	NYSDOT LRFD Specifications AASHTO HL-93 Live Load and NYSDOT Design Permit Vehicle BM §2.6.1	N/A	N/A
14	Pedestrian Accommodation	Complies with HDM Chapter 18 and ADAAG	Shoulder	Shoulder

Notes:
1. Design Speed of 40 mph is consistent with the anticipated off-peak 85th percentile speed within the range of functional class speeds for the terrain and volume. Refer to Section 2.3.1.5, Speeds and Delays, and Appendix C of this report for additional information on speed data.

3.2.3.3. Other Design Parameters:

Other important engineering standards and normally accepted practices upon which the alternatives are based are included in the following exhibits.

Exhibit 3.2.3.3-A Other Design Parameters: Design Vehicle		
Location	**Design Vehicle**	**Vehicle Accommodated**
Rogers Road	SU, HDM §5.7.1.1	SU (Medium Truck)
Cloverbank Road	SU, HDM §5.7.1.1	SU (Medium Truck)

Exhibit 3.2.3.3-B Other Design Parameters: Miscellaneous		
Element	**Criteria**	**Proposed Condition**
Rogers Road		
Level of Service (non-interstate)	D min, C desirable; HDM §5.2.2.1	D min.
Design Storm: Culverts = Storm Drainage System = Ditches =	50 yrs: HDM §8.3.2.4 5 yrs: HDM §8.3.2.4 10 yrs: HDM §8.3.2.4	50 5 10
Cloverbank Road		
Level of Service (non-interstate)	D min, C desirable; HDM §5.2.2.1	D min.
Design Storm: Culverts = Storm Drainage System = Ditches =	50 yrs: HDM §8.3.2.4 5 yrs: HDM §8.3.2.4 10 yrs: HDM §8.3.2.4	50 5 10

3.3. Engineering Considerations

3.3.1. Operations (Traffic and Safety) & Maintenance

3.3.1.1. Functional Classification and National Highway System:

The project will not affect the functional classification of any existing roadways in the area. Rogers Road will remain functionally classified as an Urban Collector (FC-17) and will not be on the NHS. Likewise, Cloverbank Road will remain a Local Road (FC-19).

3.3.1.2. Control of Access:

Vehicular access onto Rogers Road and Cloverbank Road will not be restricted by ordinance or by construction of the approach medians. All commercial and residential access points will be evaluated for their conformity to standardized entrances to highways and will be modified to accommodate the design vehicle accordingly.

The access points to National Grid's transmission line right-of-way will be blocked at both roadways by construction of the medians and channelization devices. There should be sufficient pavement width to allow National Grid to maneuver around the ends of the medians with maintenance equipment, so the project should not hinder their access. Coordination with National Grid will take place during the final design phase.

3.3.1.3. Traffic Control Devices:

All existing signs within the work limits will be inspected for condition and evaluated for conformance with current standards during final design. All proposed signs and pavement markings should conform to current standards outlined in the MUTCD.

Supplemental Safety Measures (SSMs) in the form of reflective traffic channelization devices (centerline traffic separator system) with integral curb will be installed along the centerline of both roadways for a

length of 100 feet from each crossing gate arm to comply with the requirements of the Notice of Intent to Create Railroad Quiet Zones. Approach pavement markings and signs in accordance with the MUTCD and NYS Supplement will be installed at all approaches.

3.3.1.4. Intelligent Transportation Systems (ITS):

No ITS measures are proposed.

3.3.1.5. Speeds and Delay:

Travel time estimates have not been performed since the feasible alternatives are not expected to adversely affect the capacity of the existing roadway network. The posted 35-mph speed limit on Rogers Road and 30-mph speed limit on Cloverbank Road will not be affected by the project.

3.3.1.6. Traffic Data Forecast:

Traffic volumes for the build condition are not expected to vary significantly from the no-build condition presented in Exhibit 2.3.1.6.

3.3.1.7. Level of Service and Mobility

3.3.1.7. (1) At Project Completion & Design Year:

Design year traffic volumes are expected to be the same as the future no-build design year volumes presented in Chapter II. The improvements occurring as a result of this project are not expected to draw significant additional traffic to these routes, since the number and width of travel lanes will not be increased, the roadway geometry will not be improved substantially, and the development potential in the area is limited.

Roadway design year LOS for Rogers Road and Cloverbank Road is expected to be the same as future no-build design year traffic volumes presented in Chanter II. The LOS was calculated for AM and PM peak hours in order to determine delay and congestion during commuter travel periods. Roadway segment LOS data is shown in the following exhibit. Values in parentheses refer to PM volumes.

Exhibit 2.3.1.7-A
Segment LOS Summary (Build)

Segment	ETC	ETC+10	ETC+20
Rogers Road	B (B)	B (B)	B (B)
Cloverbank Road	A (A)	A (A)	A (A)

The Rogers Road and Cloverbank Road segments within the project limits are projected to continue operating with acceptable delays through the design year.

Refer to Section 3.3.1.8 for further discussion regarding safety considerations.

3.3.1.7.(2) Work Zone Safety & Mobility:

The traffic control scheme for both roadways may vary depending on the timing of the NYSDOT crossing signal project. Ideally, both projects would be constructed at essentially the same with work staged to allow one roadway to remain fully open while work progresses on the other.

If the schedule of the NYSDOT project is delayed, traffic on Rogers Road and Cloverbank Road will be maintained on existing or temporary roadway surfaces for the duration of construction. No detours or long-term lane closures are anticipated to be required to construct the new roadway segments. Traffic will be controlled with short-term, daily lane closures and flagging operations. In some cases, short-term driveway closures or restrictions to vehicle size may be required to complete construction along the

corridor. Work on the railroad may require short term road closure. A posted detour is not expected. Access to the driveways in the vicinity of the crossings will be maintained at all times during construction.

Details pertaining to work zone traffic control during construction – including recommended staging and sequencing of construction – will be developed during final design of the project. The proposed traffic control scheme on Rogers Road may require review and approval from Erie County DPW as well as a Highway Work Permit for Non-Utility Work. Due to the close proximity to residential homes and the ability to maintain traffic with acceptable delays during daylight hours, nighttime construction will not be utilized.

Any staging schemes or access restrictions should be coordinated with emergency service providers, transit agencies, and school districts during the final design phase as well as construction. At a minimum, coordination should take place with:

- Lakeshore Volunteer Fire Company
- Hamburg Police Department
- Town of Hamburg Public Safety Dispatch Office
- Frontier Central School District

The project does not include work on an Interstate located within a designated Transportation Management Area (TMA); therefore, further coordination for Significant Projects as defined in 23 CFR 630.1010 is not necessary.

3.3.1.8. Safety Considerations, Accident History and Analysis:

Desirable clear zones widths will be provided where right-of-way and environmental constraints allow. Where minimum clear zones cannot be provided, any obstructions will be appropriately shielded. The final determination of the design clear zone width will be made during the final design phase.

3.3.1.9. Impacts on Police, Fire Protection and Ambulance Access:

The project will have minimal impact on emergency services providers. The proposed collapsible reflective channelization devices will not impede emergency access to the grade crossings.

During construction, the work zone traffic control scheme may negatively affect response times for short periods. Refer to Section 3.3.1.7(2) for a discussion of the anticipated impacts during construction.

3.3.1.10. Parking Regulations and Parking Related Issues:

No changes in parking restrictions are proposed by the project.

3.3.1.11. Lighting:

Any existing bracket arms with cobra head fixtures mounted to utility poles impacted by construction will be relocated. Additional lighting along the project corridor does not appear to be warranted.

3.3.1.12. Ownership and Maintenance Jurisdiction:

Ownership and maintenance jurisdiction of Rogers Road will be transferred from Erie County to the Town of Hamburg upon completion of the improvements. Rogers Road will become a Town highway, which will also include the existing County stormwater drainage system within the highway right-of-way.

Ownership and maintenance responsibilities for Cloverbank Road, including any improvements, will remain as described in Section 2.3.1.12 of this report.

3.3.1.13. Constructability Review:

The project work elements are expected to be routine, the work area should not be overly-confining or restrictive, and the schedule is not expected to be compressed. A final constructability review should be performed by the proposed construction inspection staff during the final design phase of the project.

3.3.2. Multimodal

3.3.2.1. Pedestrians:

No separate pedestrian accommodations will be provided, due to the lack of pedestrian generator density and stakeholder interest. Pedestrians will be accommodated on the proposed paved shoulders and travelways. Refer to Appendix B for the Pedestrian Generator Checklist.

3.3.2.2. Bicyclists:

No separate provisions to accommodate bicyclists are proposed. The occasional bicyclist can be accommodated on the proposed paved shoulders or travelways.

3.3.2.3. Transit:

There are no transit routes within the project limits.

3.3.2.4. Airports, Railroad Stations, and Ports:

There are no airports, railroad stations or port entrances within the project limits.

3.3.2.5. Access to Recreation Areas (Parks, Trails, Waterways, and State Lands):

The project will not affect access to any recreation areas.

3.3.3. Infrastructure

3.3.3.1. Proposed Highway Section:

Refer to Appendix A for preliminary typical sections, plans, and profiles for Alternative 5. Drawings for Alternatives 5A and 5B are not included in the appendix, since the project footprint will essentially be the same as Alternative 5.

3.3.3.1. (1) Right-of-Way:

There are no proposed right-of-way acquisitions. All essential work can be perfomed within the existing right-of-way and permanent easements.

Releases from private property owners may be required for non-essential work such as reconnecting existing driveways, clearing trees and brush, and providing flatter cut and fill slopes that are easier to maintain and more aesthetically pleasing. Releases to Perform Contract Work on Private Land will be obtained during the final design phase in accordance with EI 11-010, prior to commencing any work on private property. In the event that work releases cannot be obtained, the contract work will be modified to fit within the existing right-of-way and permanent easements.

3.3.3.1. (2) Curb:

No curb installation is proposed by the project. The reflective traffic channelization devices will rest on a mountable, integral curb.

3.3.3.1. (3) Grades:

The proposed maximum grade will be 4.70% on Rogers Road and 6.65% on Cloverbank Road. Minimum grades will be 0.5% in to avoid creating flat spots and birdbaths at the flow line.

3.3.3.1. (4) Intersection Geometry and Conditions:

No intersections will be impacted by the project.

3.3.3.1. (6) Roadside Elements:

Snow storage will be accommodated on the embankment slopes or within the ditch sections. Any wide or otherwise undesirable driveways will be modified to comply with current NYSDOT *Policy and Standards for Design of Entrances to State Highways*.

Desirable clear zones widths will be provided where right-of-way and environmental constraints allow. Where minimum clear zones cannot be provided, any obstructions will be appropriately shielded. The final determination of the design clear zone width will be made during the final design phase.

3.3.3.2. Special Geometric Design Elements:

3.3.3.2. (1) Non-Standard Features:

No features within the project limits that do not meet the critical design elements described in Section 3.2.3.2 will be retained by the project.

3.3.3.2. (2) Non-Conforming Features:

No features within the project limits will be created that do not conform with standard engineering practice or other design parameters described in Section 3.2.3.2. Cross slope conditions described in Section 2.3.2.(2) will be corrected by the proposed improvements. The profile deficient crossing characteristics noted in the same section will be improved slightly by adjusting the proposed profile; however, it is not feasible to correct the conditions to conform with current standards.

3.3.3.3. Pavement and Shoulders:

The proposed pavement treatments vary with the respective alternative as described in Section 3.2. The pavement sections for Alternatives 4 and 5 were designed for a minimum 25-year service life using the ESAL-based method described in the NYSDOT *Comprehensive Pavement Design Manual* (2000). The pavement treatments for Alternative 5A and 5B will provide an estimated service life of 18 and 5 years, respectively.

Refer to the Pavement Evaluation and Treatment Selection Report in Appendix D for detailed information.

3.3.3.4. Drainage Systems:

Overall drainage patterns within the project limits will not be altered significantly. An open drainage system consisting of roadside ditches will be maintained except where right-of-way constraints or utilities do not allow. Existing drainage structures and culvert will be cleaned and frame and grate adjustments may be necessary.

The project will not involve greater than one acre of soil disturbance; therefore, a State Pollution Discharge Elimination System (SPDES) permit for construction activities will not be required. Refer to Section 4.4.8 for additional information.

3.3.3.5. Geotechnical:

Continuous edge drain trenches will be constructed along both roadways to mitigate the negative effects of the wet subgrade soils on the pavement structure. No other special soil conditions are anticipated.

3.3.3.6. Structures:

There are no bridges or large culverts within the project limits.

3.3.3.7. Hydraulics of Bridges and Culverts:

There are no bridges or large culverts over waterways within the project limits. No detailed hydraulic analyses have been performed.

3.3.3.8. Guide Railing, Median Barriers and Impact Attenuators:

The existing guide railing on Rogers Road will not be affected by the project.

3.3.3.9. Utilities:

Various underground and overhead utilities may be impacted by the project. Impacts to private utilities, including gas, telephone, and cable television, should be coordinated with the respective owners for relocation. Resolution of conflicts with public utilities, including water and sanitary sewers and services, will be included in the project. Potential utility conflicts include:

- *Water*: No conflicts with existing water mains and water services are anticipated. Hydrant elevation adjustment and valve box adjustment may be required to accommodate the proposed grading.
- *Sanitary Sewer*: No conflicts with existing sanitary sewers and laterals are anticipated. Manhole cover adjustment may be required to accommodate the proposed grading.
- *Natural Gas*: No conflicts with the existing transmission or distribution mains are anticipated.
- *Electric:* Overhead electric lines carried by utility poles near or outside of the existing right-of-way are not expected to be in conflict. Several utility poles on the north side of Cloverbank Road may conflict with the grading. Guy wires for several utility poles near Rogers Road may also conflict with the grading.
- *Telephone*: No records have been received to date.
- *Cable Television*: Conflicts with overhead CTV lines carried by poles shared with electric and telephone will be required.
- *Railroad C&S Lines*: No conflicts are anticipated.

All costs associated with public utility relocations or private utility relocations outside of the existing public right-of-way will be subject to reimbursement by the project. Costs for any private utility relocations within the existing public right-of-way will be the responsibility of the respective utility owner; with an exception for any underground electric services, which will be included in the project.

A final utility inventory would be completed during the final design phase of the project to verify impacts to the above-mentioned facilities.

3.3.3.10. Railroad Facilities:

The existing grade crossing surfaces will not be affected by the project. While the surfaces were originally planned to be extended by NYSDOT under the signal upgrade project to accommodate the widened pavement approaches for the quiet zone project, the Railroads did not look favorably upon that approach and required that any widening would necessitate reconstruction of the surfaces in their entirety. The crossing surfaces are not programmed for reconstruction in the foreseeable future, so the Railroads and NYSDOT indicated that the significant additional costs to reconstruct the surfaces would have to be borne by the Town. In light of this, the existing surfaces will remain and the approach pavement work will terminate at the field side of the outermost rails. This leaves a less than desirable paved shoulder width at the grade crossing surfaces on Cloverbank Road – 4 feet is desirable, 3 feet is proposed – but little can be done to remedy the situation within the scope of the project.

Approximate locations of proposed signal stanchions and gates are shown on the plans based on current MUTCD standards. The locations of proposed signals will be coordinated with the Railroads as well as NYSDOT as the project progresses.

3.3.4. Landscape and Environmental Enhancements

3.3.4.1. Landscape Development and Other Aesthetics Improvements:

The extent of landscaping improvements, including plantings, screenings, and aesthetic improvements will be determined as the design phase progresses. The need for any such treatments would be determined with input from the public including stakeholders.

3.3.4.2. Environmental Enhancements:

No practical opportunities for environmental enhancements within the project area have been identified to date. Opportunities for improvements in accordance with NYSDOT's Environmental Initiative should be examined as the project progresses. These are actions to enhance the natural and manmade environment above and beyond the required project mitigation measures. They may include features that provide the opportunity for enhancement by local governments or other agencies or organizations as betterments. Examples include: fishing access, boat and canoe launch sites, development of pocket parks, habitat improvements, and enhanced wetlands.

3.3.5. Miscellaneous:

None.

CHAPTER 4 – SOCIAL, ECONOMIC AND ENVIRONMENTAL CONDITIONS AND CONSEQUENCES

4.1. Introduction

The chapter discusses the environmental issues associated with the proposed quiet zone improvements at the Rogers Road and Cloverbank Road grade crossings located in the Town of Hamburg, Erie County, New York. The proposed project will include a traffic channelization and pavement improvements to allow for the implementation of two railroad quiet zones along the corridor.

4.1.1. Environmental Classification and Lead Agencies

NEPA Classification
This Federal-Aid project is expected to be progressed as a Class II action (Programmatic Categorical Exclusion) because it does not individually or cumulatively have a significant environmental impact, and is excluded from the requirement to prepare an Environmental Impact Statement (EIS) or an Environmental Assessment (EA). In accordance with the Federal Highway Administration's regulations 23 CFR 771.117(d) (the 'D List') this project meets the project description of the D List as highway reconstruction.

Projects that meet the criteria for Programmatic Categorical Exclusion require administrative approval to qualify for this designation. A copy of the completed NEPA Assessment Checklist is included in Appendix B.

The Federal Highway Administration (FHWA) is the NEPA lead agency.

SEQR Classification
This project is expected to be classified as a Type II action in accordance with 6 NYCRR Part 617 §617.5(c)(4) and §617.5(c)(16), procedure for implementation of State Environmental Quality Review (SEQR) Act. SEQR classification is not yet complete.

The Town of Hamburg is the lead agency for SEQR.

4.2. Environmental Considerations

4.2.1. Screenings and Preliminary Investigations

4.2.1.1. General Ecology and Endangered Species:

The New York State Department of Environmental Conservation (NYSDEC), the U.S. Fish and Wildlife Service (USFWS), and the National Oceanic and Atmospheric Administration (NOAA) division of National Marine Fisheries Service (NMFS) were contacted for information regarding the presence of state and/or federally listed threatened, endangered or special concern species that may be impacted by the proposed project.

The NYSDEC Natural Heritage Program response letter dated May 14, 2013 (included within Appendix G) indicates that there are no known occurrences or rare or State-listed animals or plants, significant natural communities, or other significant habitats, on or in the immediate vicinity of the project site. As such, no impacts upon State-listed, endangered or species of concern are anticipated.

A review of the U.S. Fish and Wildlife Service (USF&WS) database indicates that there are no Federally listed, delisted, or proposed endangered or threatened species located within Erie County. There is no habitat located within the project area that is currently designated "Critical Habitat" in accordance with the Endangered Species Act (ESA).

A direct response from NOAA-National Marine Fisheries Service is not anticipated.

Copies of applicable correspondence are included in Appendix G of this report.

4.2.1.2. Ground Water:

Federal Sole Source Aquifer
A review of the EPA-designated Sole Source Aquifer Areas Federal Register Notices, Maps, and Fact Sheets indicates that the project is not located in a Sole Source Aquifer Project Review Area. No federal review and/or approvals are required pursuant to Section 1424(e) of the Safe Drinking Water Act.

State Aquifer
NYSDEC aquifer GIS data files have been reviewed and it has been determined that the proposed project is not located in an identified Primary Water Supply or Principal Aquifer Area. No further investigation for NYSDEC designated aquifers is required.

Unconfined Aquifer
The USGS Numbered Series map from the Water-Resources Investigations Report entitled *Potential Yields of Wells in Unconsolidated Aquifers in Upstate New York*, Niagara Sheet, dated 1988, indicates there are no designated unconfined aquifers within the project area.

4.2.1.3. Surface Water:

There are no named streams, ponds, or other waterways within the project limits. Surface waters within the project limits consist of a creek that flows west near Rogers Road. The creek is located north of the Rogers Road grade crossings. No permits for stream disturbance will be required.

It is not expected that the project will result in changes to the overall surface water drainage patterns and will not significantly increase pavement surface area. Therefore, increases in the surface water runoff rates and volumes are not expected as a result of the proposed project.

During construction, storm water runoff from exposed soil surfaces may flow into the existing surface conveyance system and subsequently into adjacent surface water streams. These flows will be managed by the use of sediment and erosion control techniques. These techniques will be part of a sediment and erosion control plan to be implemented during construction and will conform with the requirements of the NYSDOT *Standard Specification for Temporary Soil Erosion and Water Pollution Control* and the *NYS Guidelines for Urban Erosion and Sediment Control*.

No adverse impact to surface water is expected as a result of this project.

State Wild, Scenic and Recreational Rivers
There are no NYSDEC Designated, Study or Inventory state listed Wild, Scenic or Recreational Rivers within the project limits. No further review is required.

National Wild and Scenic Rivers
There are no National Wild or Scenic Rivers within the project limits. No further review is required.

4.2.1.4. State Wetlands:

There are no NYSDEC regulated freshwater wetlands or regulated adjacent areas (100 feet) within the project area, as per the NYSDEC Freshwater Wetlands Map; Buffalo SE, Hamburg and Eden Quadrangles; and the NYSDEC online Environmental Resource Mapper. An Article 24 wetland permit will not be required.

4.2.1.5. Federal Jurisdictional Wetlands:

The National Wetlands Inventory (NWI) database accessed from the United States Fish and Wildlife Service (USFWS) indicated that there are no federally regulated wetlands within the project limits.

The project site has been reviewed for potential wetlands in accordance with the criteria defined in the 1987 US Army Corps of Engineers *Wetland Delineation Manual*. Preliminary observations of the vegetation present at the project location indicate that non-hydrophytic vegetation is present. The National Resources Conservation Service (NRCS) Web Soil Survey of the project location indicated the presence of predominantly non-hydric soils. It has been determined the project will not impact areas that meet this criteria. No further coordination with the U.S. Army Corps of Engineers (USACE) is anticipated.

4.2.1.6. Floodplains:

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) for the Town of Hamburg were reviewed to determine the presence of floodplains within the project limits. The entirety of the Rogers Road portion of the project is located within a Zone AE 100-year floodplain. The Cloverbank Road portion of the project is not located within a floodplain area.

The project will not significantly raise the profile of the road in a manner that will impact the existing flood rating within the project area.

4.2.1.7. Coastal Zone Management:

The project is not within a coastal zone and is not covered by either the Coastal Zone Management Act or the Waterfront Revitalization and Coastal Resources Act.

4.2.1.8. Navigable Waterways:

There are no navigable waterways within the project limits as defined by the USACE or the USCG; therefore, neither a Section 10 nor a Section 9 permit will be required.

4.2.1.9. Cultural Resource Investigations:

National Heritage Areas Program
Records from the New York State Historic Preservation Office (SHPO) and National Register of Historic Places were reviewed for listed historic properties that may be impacted by this project. There are no listed historic sites within the project limits.

The project is located within a potentially archeologically sensitive area as indicated by the NYSOPR&HP SHPO database. A NYSDOT Project Submittal Package was prepared and forwarded to the Regional Cultural Resources Coordinator for further review. Based on the review, the project activities have no potential to cause effects on historic properties in accordance with 36 CFR800.3(a)(1) therefore, there are no further obligations for compliance with Section 106 of the National Historic Preservation Act. The correspondence received from the Regional Cultural Resource Coordinator dated July 30, 2013 is included in Appendix G.

4.2.1.10. Parks:

The proposed project has a park located between the two grade crossings. Rogers Road is located approximately 0.4 miles north of William D. Williams Park and Cloverbank Road is located approximately 1.4 miles south of the park. No impacts to the park are expected due to this proposed project.

4.2.1.11. Hazardous Waste/Contaminated Materials:

Introduction
A Hazardous Waste/Contaminated Materials (HW/CM) Screening was conducted at the project site and adjoining areas within the project limits. This screening included available record review and a project site walkover. The purpose of this assessment is to identify potential areas of environmental concern that may be disturbed during construction of the proposed project.

Environmental Data Resources (EDR)
Environmental Data Resources (EDR) Inc. was contracted to provide a comprehensive review of Federal, State and local listed data to identify potential sites of environmental concern in the project vicinity. This data search was performed in accordance with ASTM E-1527-05 standards for minimum search distance.

The use of the EDR resource allows for a comprehensive listing of site of potential environmental concern. A complete copy of the EDR report is available upon request. Exhibit 4.2.1.11 summarizes the information obtained through a review of the EDR report and supplemental research of the project corridor.

Exhibit 4.2.1.11 Environmental Records Review		
STANDARD Environmental Record Sources	**Minimum Search Distance: ASTM Standard-Miles**	**No. of Listed Properties[1] (from EDR Report)**
Federal NPL Site List	1.0	0
Federal Delisted NPL Site List	1.0	0
Federal CERCLIS List	0.5	0
Federal CERCLIS NFRAP Site List	0.5	0
Federal RCRA CORRACTS Facilities List	1.0	0
Federal RCRA non-CORRACTS TSD Facilities List	0.5	0
Federal RCRA Generators List	0.25	0
Federal Institutional Control/ Engineering Control Registries	0.5	0
Federal ERNS List	Site only	0
State and Tribal Hazardous Waste Sites – equivalent CERCLIS	1.0	0
State and Tribal Landfill and/or Solid Waste Disposal Site Lists	0.5	0
State and Tribal Leaking Storage Tank Lists	0.5	5
State and Tribal Registered Storage Tank Lists	Site and adjoining properties	3
State and Tribal Institutional Control/Engineering Control Registries	Site and adjoining properties	0
State and Tribal Voluntary Cleanup Sites	0.5	0
State and Tribal Brownfield Sites	0.5	0
Additional Environmental Records		
Local Lists of Registered Storage Tanks	0.25	2
Records of Emergency Release Reports-NY Spills	0.125	8
Other Ascertainable Records		
RCRA-Non Gen	0.25	0
Hazardous Substance Waste Disposal Sites (HSWDS)	0.5	0
MANIFEST	0.25	0
Notes: 1. Sites may be listed in more than one database.		

EDR Findings Overview
Although several properties/areas of concern were identified by the EDR report, not all pose a concern to the proposed project. Some of the properties/sites were unlikely to pose a concern to the proposed project based on one or more of the following:

- Proximity to the proposed project.
- The assumed groundwater flow direction within the project area is away from the proposed project and is unlikely to pose a threat to the project.
- The issue was minor in nature and cleaned up immediately.
- Legal disposal records without indication of a violation.

The properties/areas of concern that may pose a concern to the project are indicated and discussed in the following sections.

Mount Vernon Sewer District property
4906 Rogers Road
Station 20+24 to 23+50 (approximate) west side of Rogers Road.
This property is located on the southern end of the Rogers Road project corridor. In September 1997 a diesel spill was reported at this property. According to the information provided, this spill was the result of a tank failure. Reportedly the spill was cleaned up and closed in November 1997.

Railroad Grade Crossings
Typical contaminants associated with railroads include: PSHs (polycyclic aromatic hydrocarbons), some metals, petroleum products, and herbicides. All grade crossings have been reconstructed as recently as the past five years and the Rogers Road Crossings were substantially raised in the late 1950s. The depth of construction in the vicinity of the grade crossings will also be minimal, so it is unlikely that any unknown contaminated materials may be encountered. Although unlikely, contamination may be encountered during construction, therefore the Town may wish to note this location in the Contract Documents and add a specification for the screening, segregating, sampling and potential disposal of contaminated soil associated with a former at grade railroad crossing.

The EDR report indicates several other spill reports and no MANIFEST records. The spill reports are listed as closed/meeting standards or are located a significant distance from the proposed improvements; therefore, they are not expected to impact the project location relative to the project corridor.

Historical Sanborn Map Review
Sanborn Maps are utilized as part of the HW/CM Screening since they serve as an historical reference to prior land use. The Certified Sanborn Map Report provided by EDR indicated that the complete holding of the Sanborn Library, LLC Collection was searched and fire insurance maps covering the project location were not found. This area is unmapped.

Aerial Photographs
Aerial photographs from years 1959, 1966, 1978, 1983, 1995, 2006, 2008, 2009 and 2011 were reviewed. There was no indication of potential hazardous waste sites visible from the photos.

Project Site Visit
The HW/CM Screening included a site visit of the project corridor. The objective of the site visit is to obtain familiarity with the project area and properties located adjacent to the project limits, to note observable environmental concerns, review the characteristics of the project corridor, and identify areas exhibiting signs of possible environmental degradation. No visual environmental concerns were noted during the site visit.

Hazardous Waste/Contaminated Materials Screening Conclusion/Recommendation
In conclusion, based on an initial review, the Mount Vernon Sewer District property was the only contaminated site that had the potential to be impacted by the proposed project. The known contaminant is petroleum due to a tank failure. The contaminated soil was removed from the site and closed by the DEC. Additional research revealed that all potentially contaminated areas of the properties are not close

to the proposed highway improvements or existing highway boundary. Therefore, no impacts during construction are anticipated and no additional analysis or testing is required.

As with any environmental screening in areas where subsurface testing was not completed, the possibility of unknown subsurface contamination exists. Should suspect materials be encountered during the course of project execution, appropriate measures should be taken to report such contamination, determine the nature and extent of any possible hazardous materials, and for proper management of such materials. Provisions will be included within the construction documents that will require the contractor to properly dispose of any contaminated materials during construction.

4.2.1.12. Asbestos:

An Asbestos Containing Material (ACM) Screening was conducted at the project site and adjoining areas within the project limits. This screening consisted of a review of available records and as-built drawings. The purpose of this Screening was to identify the potential of encountering ACM's that may be disturbed during construction of the proposed project.

Drawing Record Review
No suspect items were called out on the record drawings that were provided for the project corridor.

Utilities
The following utility drawings were provided and subsequently reviewed.

- Town of Hamburg Sanitary Sewer
- National Fuel Gas Transmission and Distribution Mains

It is anticipated that utility impacts will be limited to relocation of overhead utility poles or guy wires. No impacts to water, drainage sewer, gas, or communications are anticipated.

Asbestos Screening Conclusions/Recommendations
Asbestos containing materials (ACMs) were not identified on the utility records. Due to the nature of the project components, unknown asbestos containing materials may be present. Any ACMs discovered during construction activities should be addressed in accordance with all applicable state and federal regulations.

4.2.1.13. Noise:

No noise impacts are expected due to project implementation. This project involves reconstruction of the existing pavement of Rogers Road and Cloverbank Road with no significant change in alignment, no increase in the number of through traffic lanes and no increase in traffic volumes. This is not a Type I project; therefore, a noise study is not required.

4.2.1.14. Air Quality:

An Air Quality Analysis is not necessary since the project will not increase traffic volumes, reduce source-receptor distances, or change other existing conditions to such a degree as to jeopardize attainment of the National Ambient Air Quality Standards.

During construction, air quality is most affected by the increase of airborne particulates (dust). This increase is sporadic and temporary in nature and would be most noticeable in the area immediately adjacent to construction. The impacts can be minimized by the use of dust control provisions found in the NYSDOT Standard Specifications for Construction.

4.2.1.15. Energy:

The project will not have an impact on energy usage.

4.2.1.16. Farmlands:

The project area is not located within an agricultural district.

Exhibit 4.2.1.16 provides a summary of the soils mapped within the project corridor and the Natural Resources Conservation Service (NRCS) rating of each soil.

Exhibit 4.2.1.16 Mapped Soils and Farmland Classification		
Map Unit Symbol	**Map Unit Name**	**Rating**
BrA	Brockport silty clay loam, 0 to 8 percent slopes	Farmland of statewide importance
BrB	Brockport silty clay loam, 3 to 8 percent slopes	Farmland of statewide importance
CoA	Churchville silt loam, 0 to 3 percent slopes	Prime farmland if drained
RfB	Remsen silty clay loam, 3 to 8 percent slopes	Farmland of statewide importance
Uc	Udorthents, smoothed	Not prime farmland

As shown in Exhibit 4.2.1.16 some of the soils within the project corridor are rated as prime farmland if drained or farmland of statewide importance. The proposed project will not convert any prime or unique farmland, or farmland of state or local importance, or require the acquisition of any portion of actively farmed land, as defined by the USDA Natural resources Conservation Service, to a nonagricultural use. No further coordination regarding farmlands is required.

4.2.1.17. Visual Impacts:

The implementation of this project will result in a minor positive visual impact to the immediate environment.

4.2.1.18. Critical Environmental Areas:

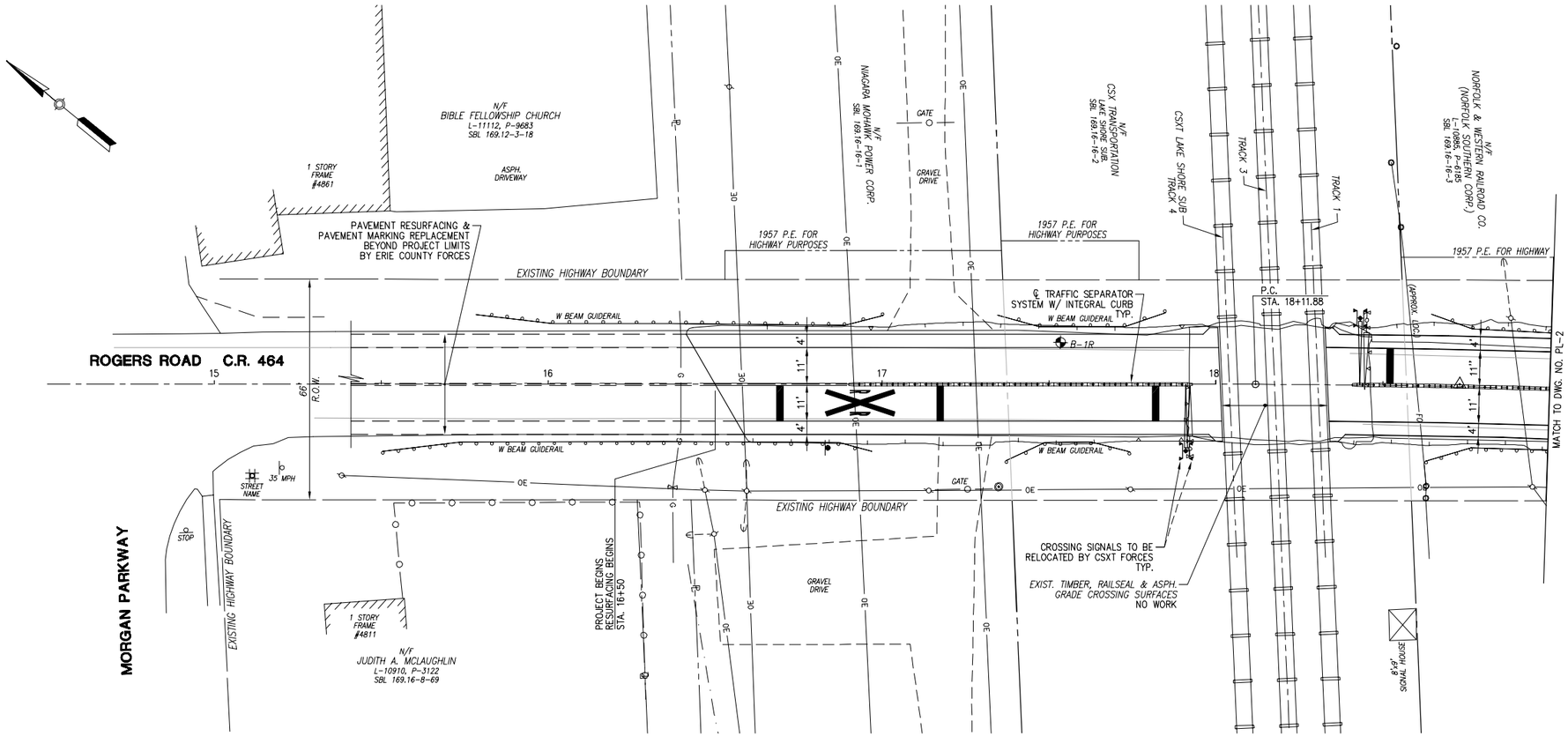
There are no critical environmental areas located within or adjacent to the project limits, per NYSDEC data.

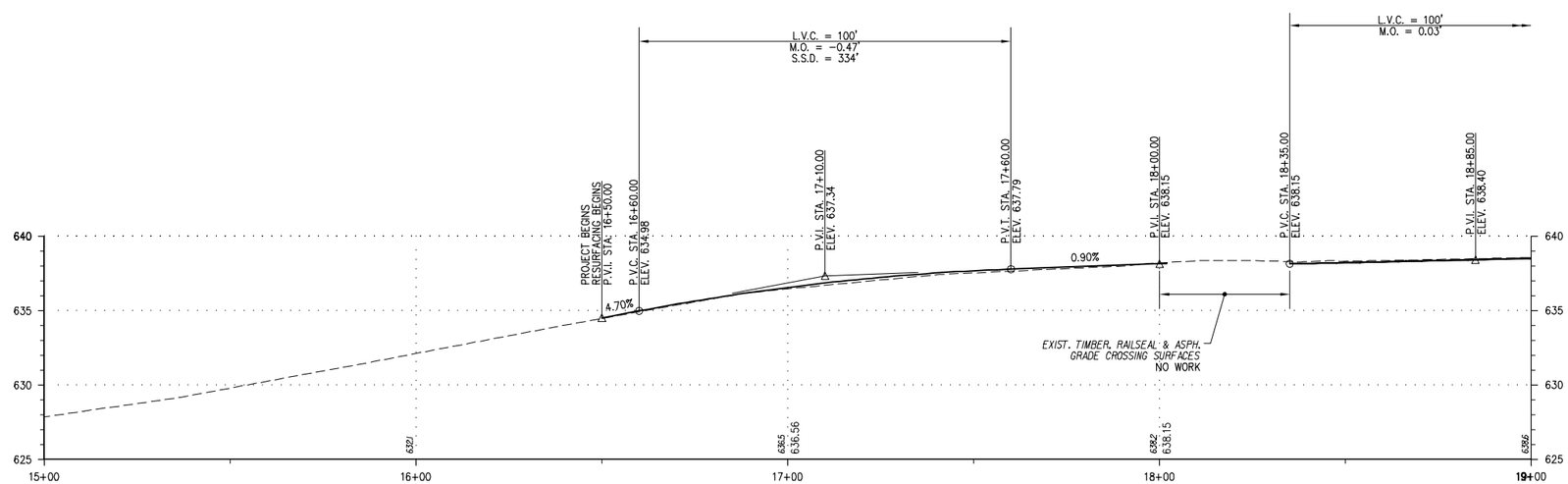
4.2.1.19. Anticipated Environmental Permits

No environmental permits are anticipated. The specific permitting and coordination activities are a function of the final highway configuration and design. It is noted that although specific permits may not be required, coordination with several agencies (SHPO, USACE and NYSDEC) may be required for various project activities.

APPENDIX A
PLANS, PROFILES & TYPICAL SECTIONS

PLANS, PROFILES & TYPICAL SECTIONS





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REVISIONS

NO.	DESCRIPTION	BY	DATE

CLIENT

PROJECT NAME

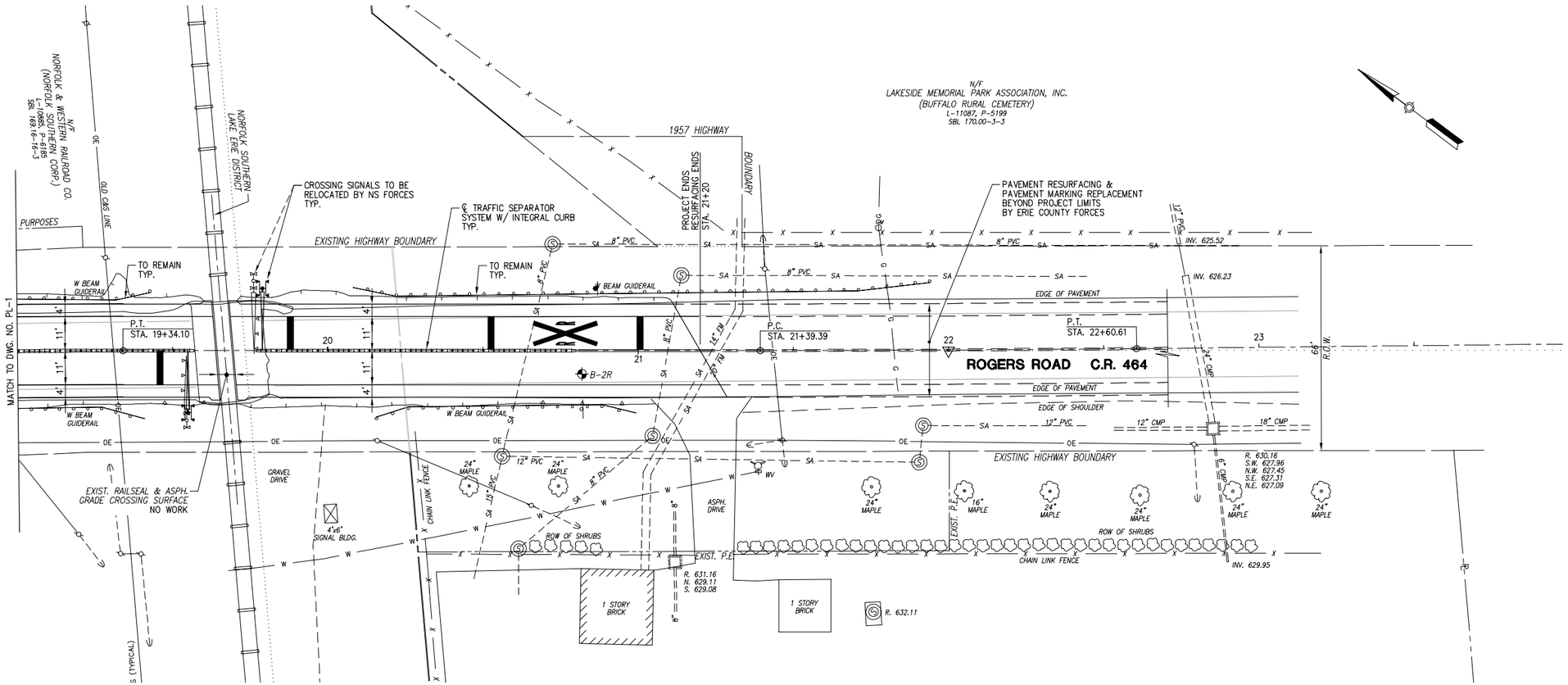
ROGERS ROAD & CLOVERBANK ROAD RAILROAD QUIET ZONES

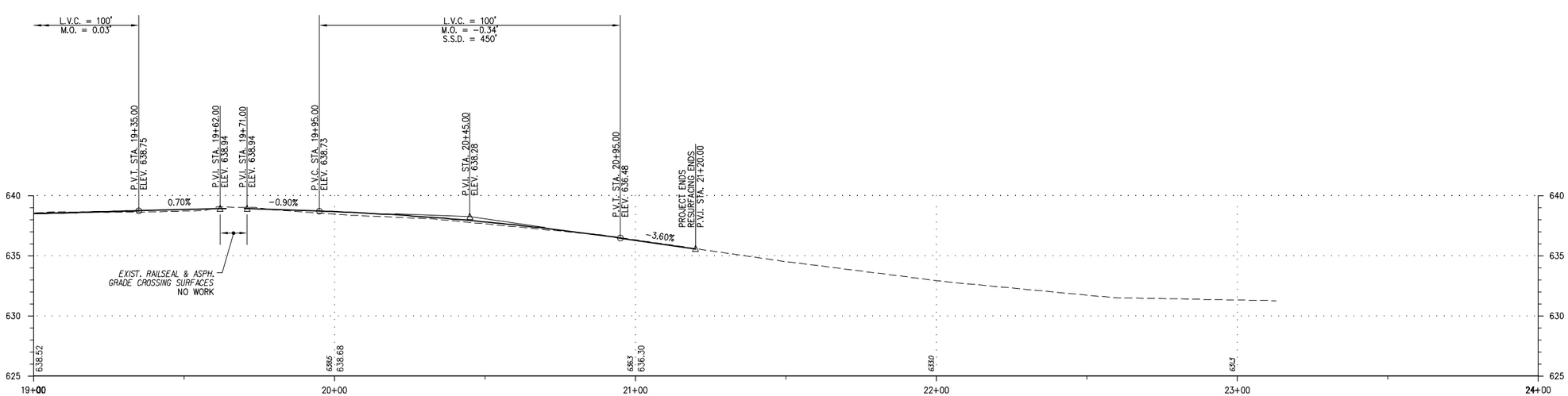
DRAWING TITLE

ROGERS ROAD
PLAN & PROFILE
STA. 15+00 TO STA. 19+00

SCALE	DATE
HORIZ: 1" = 20' VERT: 1" = 5'	6/27/2013
P.I.N. 5759.70	EAA PROJECT NO. 19406.00
SHEET NO. X OF	DRAWING NO. PL-1

DESIGN SUPERVISOR D. ZIEMIANSKI JOB MANAGER D. ELIAS DESIGNED BY J. ZHAO DRAFTED BY B. HYDE ESTIMATED BY D. ELIAS CHECKED BY J. ZHAO CHECKED BY D. ELIAS





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REVISIONS

NO.	DESCRIPTION	BY	DATE

CLIENT

TOWN OF HAMBURG SEAL 1812 ERIE COUNTY, NEW YORK

PROJECT NAME

ROGERS ROAD & CLOVERBANK ROAD RAILROAD QUIET ZONES

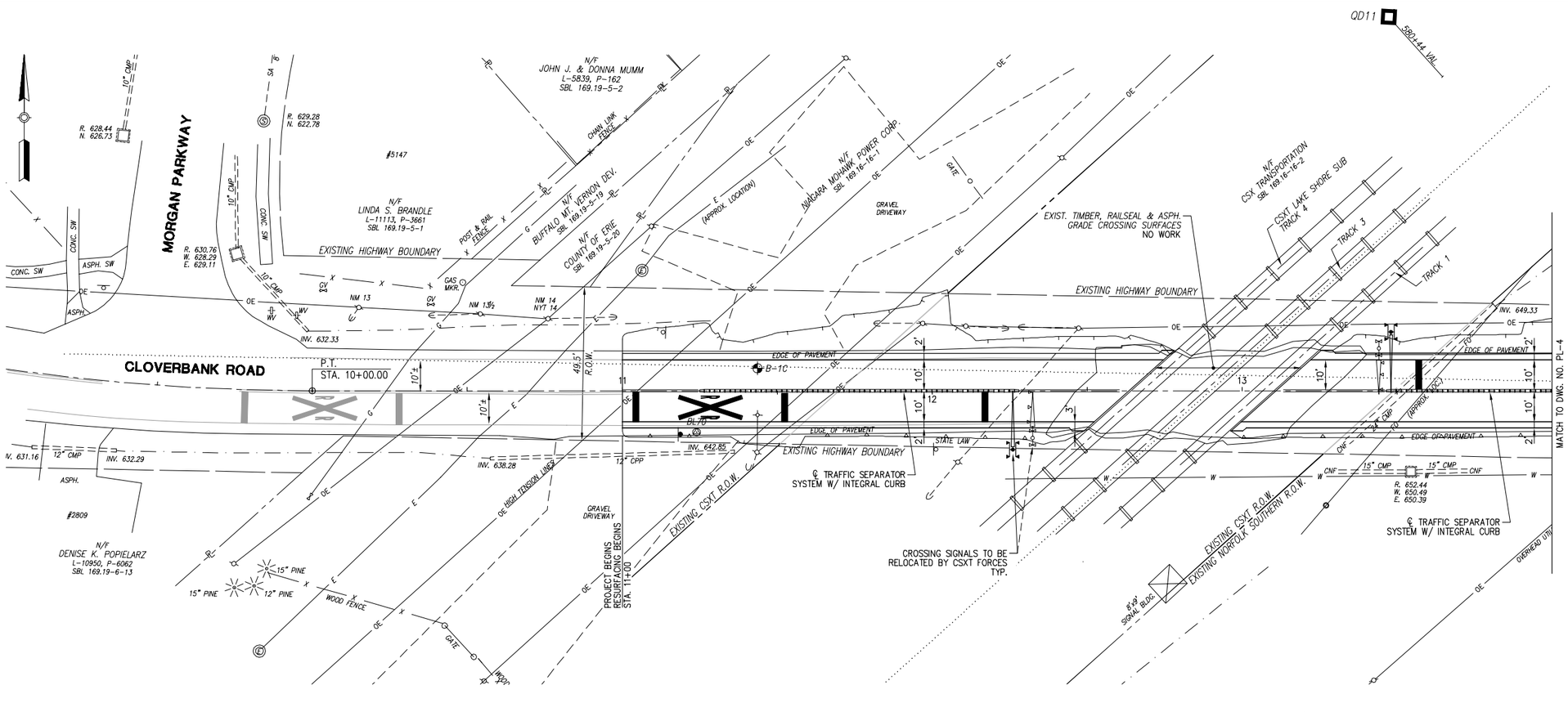
DRAWING TITLE

ROGERS ROAD PLAN & PROFILE

STA. 19+00 TO STA. 24+00

SCALE	DATE
HORIZ: 1" = 20' VERT: 1" = 5'	6/27/2013
P.I.N. 5759.70	EAA PROJECT NO. 19406.00
SHEET NO. X OF	DRAWING NO. PL-2

DESIGN SUPERVISOR D. ZIEMIANSKI JOB MANAGER D. ELIAS DESIGNED BY J. ZHAO DRAFTED BY B. HYDE ESTIMATED BY D. ELIAS CHECKED BY J. ZHAO CHECKED BY D. ELIAS



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REVISIONS

NO.	DESCRIPTION	BY	DATE

CLIENT

TOWN OF HAMBURG SEAL 1812 ERIE COUNTY, NEW YORK

PROJECT NAME

ROGERS ROAD & CLOVERBANK ROAD RAILROAD QUIET ZONES

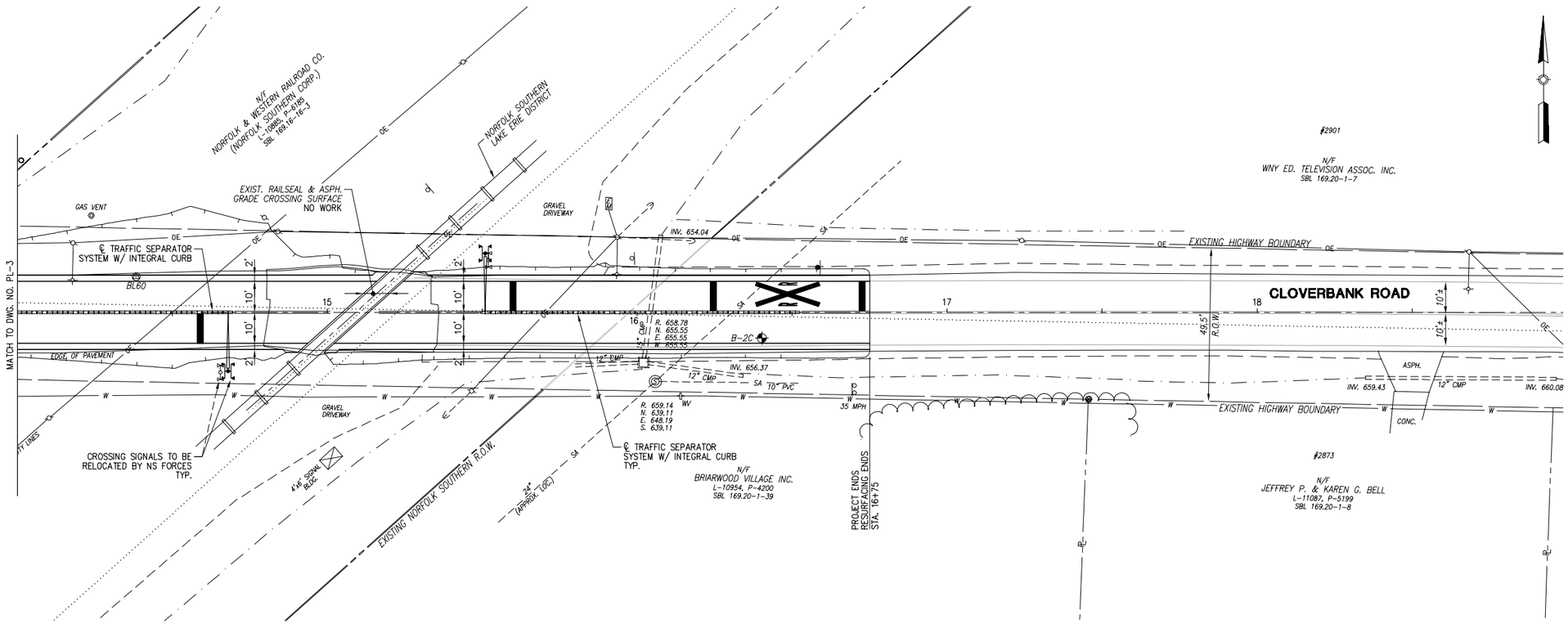
DRAWING TITLE

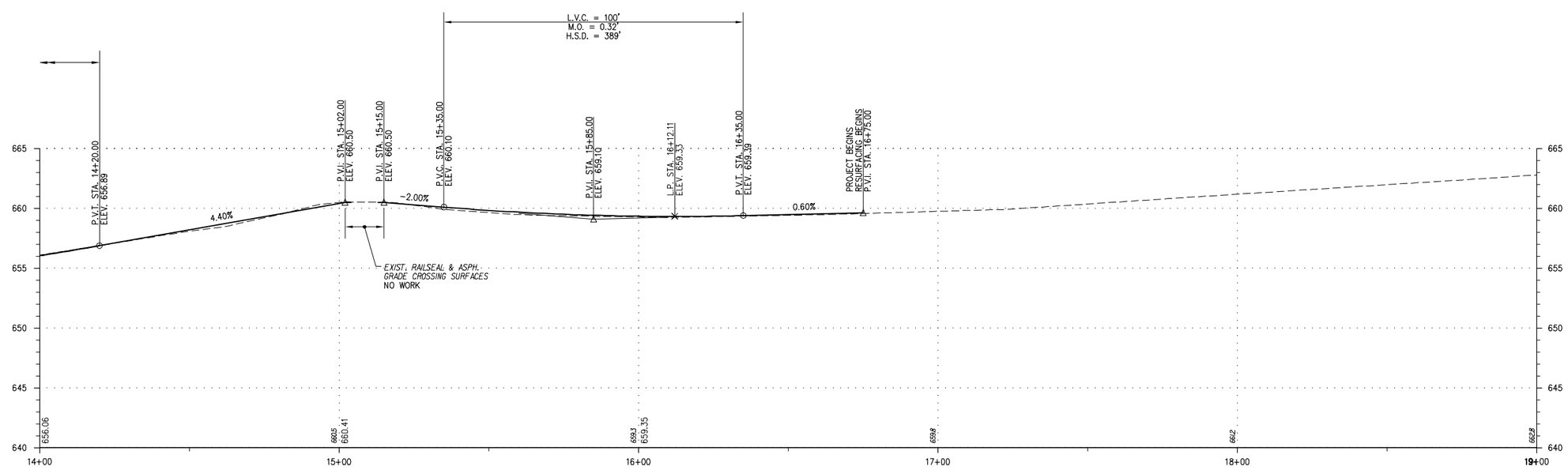
CLOVERBANK ROAD PLAN & PROFILE

STA. 9+00 TO STA. 14+00

SCALE	DATE
HORIZ: 1" = 20' VERT: 1" = 5'	6/27/2013
P.I.N. 5759.70	EAA PROJECT NO. 19406.00
SHEET NO. X OF	DRAWING NO. PL-3

DESIGN SUPERVISOR D. ZIEMIANSKI JOB MANAGER D. ELIAS DESIGNED BY J. ZHAO DRAFTED BY B. HYDE ESTIMATED BY D. ELIAS CHECKED BY J. ZHAO CHECKED BY D. ELIAS





DESIGN SUPERVISOR D. ZIEMIANSKI JOB MANAGER D. ELIAS DESIGNED BY J. ZHAO DRAFTED BY B. HYDE ESTIMATED BY D. ELIAS CHECKED BY J. ZHAO CHECKED BY D. ELIAS

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NO.	DESCRIPTION	BY	DATE

CLIENT

PROJECT NAME

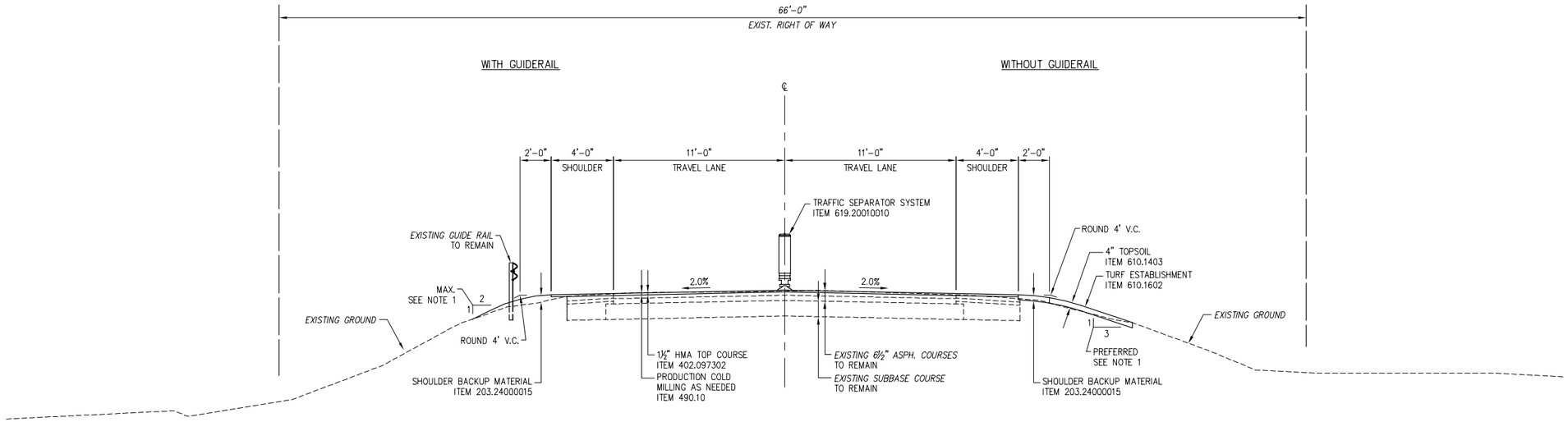
ROGERS ROAD & CLOVERBANK ROAD RAILROAD QUIET ZONES

DRAWING TITLE

CLOVERBANK ROAD PLAN & PROFILE

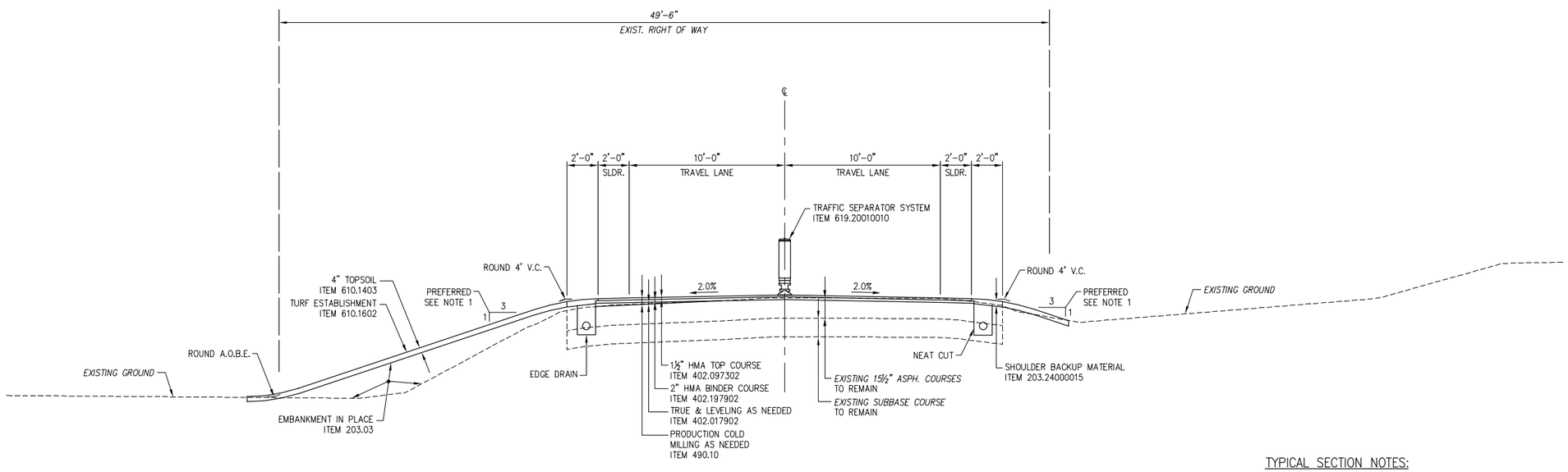
STA. 14+00 TO STA. 19+00

SCALE	DATE
HORIZ: 1" = 20' VERT: 1" = 5'	6/27/2013
P.I.N. 5759.70	EAA PROJECT NO. 19406.00
SHEET NO. X OF	DRAWING NO. PL-4



ROGERS ROAD
ALTERNATIVE 5

STA. 16+50 TO STA. 21+20
¼"=1'-0"



CLOVERBANK ROAD
ALTERNATIVE 5

STA. 11+00 TO STA. 16+75
¼"=1'-0"

TYPICAL SECTION NOTES:

1. THE PREFERRED SIDESLOPE TREATMENT INVOLVES FLATTENING OF EXISTING SIDESLOPES STEEPER THAN 1:3 AND PROVISION OF A CLEAR RUNOUT AREA AT THE BOTTOM OF THE FILL SLOPES. DOING SO MAY REQUIRE WORK BEYOND THE EXISTING HIGHWAY BOUNDARY OR EASEMENTS TO RE-ESTABLISH DRIVEWAYS, GRADE & RE-ESTABLISH TURF, OR REMOVE/TRIM TREES. A PERMISSION FORM WILL BE REQUIRED FROM EACH PROPERTY OWNER, WHICH WILL BE OBTAINED BY THE ENGINEER IF NECESSARY. IF THE RELEASE IS NOT GRANTED FROM THE PROPERTY OWNERS, THE PROPOSED WORK SHALL TERMINATE AT THE EXISTING HIGHWAY BOUNDARY OR EASEMENT LIMIT. WORK SHALL NOT COMMENCE BEYOND THE HIGHWAY BOUNDARY UNTIL SO DIRECTED BY THE ENGINEER.

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REVISIONS

NO.	DESCRIPTION	BY	DATE

CLIENT

PROJECT NAME

ROGERS ROAD & CLOVERBANK ROAD RAILROAD QUIET ZONES

DRAWING TITLE

TYPICAL SECTIONS

SCALE	DATE
AS NOTED	6/27/2013
P.I.N. 5759.70	EAA PROJECT NO. 19406.00
SHEET NO. X OF	DRAWING NO. TS-1

DESIGN SUPERVISOR D. ZIEMIANSKI JOB MANAGER D. ELIAS DESIGNED BY J. ZHAO CHECKED BY D. ELIAS
ESTIMATED BY B. HYDE DRAFTED BY J. ZHAO CHECKED BY D. ELIAS

APPENDIX B
ENVIRONMENTAL INFORMATION

NEPA CHECKLIST

P.I.N. 5759.70
Rogers Road and Cloverbank Road Railroad Quiet Zones
August 2013

NEPA ASSESSMENT CHECKLIST

Answer the following questions by checking YES or NO:

I. THRESHOLD QUESTION	YES	NO
1. Does the project involve unusual circumstances as described in 23 CFR §771.117(b)?	____	✓

- If YES, the project does not qualify as a Categorical Exclusion and an EA or EIS is required. You may STOP COMPLETING THE CHECKLIST.

- If NO, go on:

II. AUTOMATIC CATEGORICAL EXCLUSION	YES	NO
2. Is the project an action listed as an Automatic Categorical Exclusion in 23 CFR §771.117(c) (C List) and/or is the project an element-specific Project classified by FHWA as a Categorical Exclusion on July 22, 1996?	____	✓

- If YES to Question 2, the project qualifies for a C List Categorical Exclusion. You may STOP COMPLETING THE CHECKLIST. The Checklist should be included in the Appendix of the Final Design Report (or Scope Summary Memorandum/Final Design Report). The CATEGORICAL EXCLUSION DETERMINATION memo is to be sent to the appropriate Main Office Design liaison unit with a copy of the Final Design report (or Scope Summary Memorandum/Final Design Report). A copy of the CATEGORICAL EXCLUSION DETERMINATION memo must also be sent to the Office of Budget and Finance, Project and Letting Management, and others (see sample DETERMINATION memo attached).

  (Note – Even if YES to Question 2, there may be specific environmental issues that still require an action such as an EO 11990 Wetland Finding or a determination of effect on cultural resources. The project is still an Automatic Categorical Exclusion, but the necessary action must be taken, such as obtaining FHWA's signature on the wetland finding. Refer to the appropriate section of the Environmental Procedures Manual for guidance.)

- If NO to Question 2, go on:

III. PROGRAMMATIC CATEGORICAL EXCLUSION	YES	NO
3. Is the project on new location or does it involve a change in the functional classification or added mainline capacity (add through-traffic lanes)?	_____	✓
4. Is this a Type I project under 23 CFR 772 "Procedures for Abatement of Highway Traffic Noise and Construction"?	_____	✓
5. If the project is located within the limits of a designated sole source aquifer area or the associated stream flow source area, is the drainage patter altered?	_____	✓
6. Does the project involve changes in travel patterns?	_____	✓
7. Does the project involve the acquisition of more than minor amounts of temporary or permanent right-of-way? [a minor amount of right-of-way is defined as not more than 10 percent of a parcel for parcels under 4 ha (10 acres) in size, 0.4 ha (1 acre) of a parcel 4 ha to 40.5 ha (10 to 100 acres) in size, and 1 percent of a parcel for parcels greater than 40.5 ha (100 acres) in size]	_____	✓
8. Does the project require a Section 4(f) evaluation and determination in accordance with the FHWA guidance?	_____	✓
9. Does the project involve commercial or residential displacement?	_____	✓
10. If Section 106 applies, does FHWA's determination indicate an opinion of adverse effect?	_____	✓
11. Does the project involve any work in wetlands requiring a Nationwide Wetland Permit #23?	_____	✓
12. Does the project involve any work in wetlands requiring an individual Executive Order 11990 Wetland Finding?	_____	✓

	YES	NO
13. Has it been determined that the project will significantly encroach upon a flood plain based on preliminary hydraulic analysis and consideration of EO 11988 criteria as appropriate?	____	✓
14. Does the project involve construction in, across or adjacent to a river designated as a component proposed for or included in the National System of Wild and Scenic Rivers?	____	✓
15. Does the project involve any change in access control?	____	✓
16. Does the project involve any known hazardous material sites or previous land users with potential for hazardous material remains within the right-of-way?	____	✓
17. Does the project occur in an area where there are Federally listed endangered or threatened species or critical habitat?	____	✓
18. Is the project, pursuant to EPM Chapter 1A and Table 2 and Table 3 of 40 CFR Parts 51 and 93, non-exempt or does it exceed any ambient air quality standard?	____	✓
19. Does the project lack consistency with the New York State Coastal Zone Management Plan and policies of the Department of State, Office of Coastal Zone Management?	____	✓
20. Does the project impact or acquire any Prime or Unique Farmland as defined in 7 CFR Part 657 of the Federal farmland Protection Policy Act and are there outstanding compliance activities necessary? (Note: Interpret compliance activity to mean completion of Form AD 1006.)	____	✓

- If NO to Questions 3-20, go on to answer Question 21.
- If YES, to any question 3-20, project will not qualify as a Programmatic Categorical Exclusion. Answer Questions 21 and 22 for documentation only and go on to Question 23.

	YES	NO
21. Does the project involve the use of a temporary road, detour or ramp closure?	✓	

- If NO to Questions 3-20 and NO to Question 21, the project qualifies as a Programmatic Categorical Exclusion. You may STOP COMPLETING THE CHECKLIST. The checklist should be included in the Appendix of the Final Design Report (or Scope Summary Memorandum/Final Design Report). The CATEGORICAL EXCLUSION DETERMINATION memo is to be sent to the appropriate Main Office Design liaison unit with a copy of the Final Design report (or Scope Summary Memorandum/Final Design Report). A copy of the CATEGORICAL EXCLUSION DETERMINATION memo must also be sent to the Office of Budget and Finance, Project and Letting Management, and others (see sample DETERMINATION memo attached).

- If YES to Question 21, preparer should complete Question 22 (i-v). If Questions 3-20 are NO and 21 is YES, the project will still qualify as a Programmatic Categorical Exclusion if Question 22 (i-v) are YES.

	YES	NO
22. Since the project involves the use of temporary road, detour or ramp closure, will all of the following conditions be met:		
i. Provisions will be made for pedestrian access, where warranted, and access by local traffic and so posted.	✓	
ii. Through-traffic dependent business will not be adversely affected.	✓	
iii. The detour or ramp closure, to the extent possible, will not interfere with any local special event or festival.	✓	
iv. The temporary road, detour or ramp closure does not substantially change the environmental consequences of the action.	✓	

v.	There is no substantial controversy associated with the temporary road, detour or ramp closure.	✓	

- If Questions 3-20 are NO, 21 is YES and 22 (i-v) are YES, the project qualifies as a Programmatic Categorical Exclusion. You may STOP COMPLETING THE CHECKLIST. The checklist should be included in the Appendix of the Final Design Report (or Scope Summary Memorandum/Final Design Report). The CATEGORICAL EXCLUSION DETERMINATION memo is to be sent to the appropriate Main Office Design liaison unit with a copy of the Final Design report (or Scope Summary Memorandum/Final Design Report). A copy of the CATEGORICAL EXCLUSION DETERMINATION memo must also be sent to the Office of Budget and Finance, Project and Letting Management, and others (see sample DETERMINATION memo attached).

- If Questions 3-20 are NO, 21 is YES and any part of 22 is NO, go on to Question 23:

	YES	**NO**
23. Is the project section listed in 23 CFR §771.117(d) (D List) or is the project An action similar to those listed in 23 CFR §771.117(d)?		

For those questions which precluded a Programmatic Categorical Exclusion, documentation should be provided for an YES response to Questions 3-20 or for a NO response to any part of Questions 22 (i-v). This documentation, as well as the checklist, should be included in the Design Approval Document, i.e., Final Design report, etc., to be submitted to the Main office/FHWA Design liaison unit for submission to the FHWA Decision for classification of the project as D List Categorical Exclusion.

APPENDIX C
TRAFFIC INFORMATION

TRAFFIC DATA ANALYSIS
HIGHWAY-RAIL GRADE CROSSING ACCIDENT/INCIDENT REPORT
CROSSING INVENTORY INFORMATION
PEDESTRIAN GENERATOR CHECKLIST

ERDMAN ANTHONY

SHEET _____ **OF** _____ **SUB-SHEET NO.** _____

BY JZ **DATE** 5/21/2013 **CKD** _____ **DATE** _____

PROJECT NAME & NO. Rogers Road & Cloverbank Road Railroad Quiet Zones

CLIENT Town of Hamburg

SUBJECT Traffic Data Analysis (AADT & DHV)

Cloverbank Road

	AADT	DHV	
6/21/2010	2239	202	9%

Projected annual growth rate 0.50% per yr.

Existing	2013	2,273	205
ETC	2014	2,284	206
ETC+10	2024	2,396	216
ETC+20	2034	2,508	226

Rogers Road

	AADT	DHV	
6/21/2010	7438	669	9%

Projected annual growth rate 0.50% per yr.

Existing	2013	7,550	679
ETC	2014	7,587	683
ETC+10	2024	7,959	716
ETC+20	2034	8,331	750

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION (FRA)

HIGHWAY-RAIL GRADE CROSSING ACCIDENT/INCIDENT REPORT

OMB Approval No. 2130-0500

1.Name of Reporting Railroad: Norfolk Southern Corp. [NS]	1a. Alphabetic Code: NS	1b. Railroad Accident/Incident No.: 097233
2.Name of Other Railroad or Other Entity Filling for Equipment Involved in Train Accident/Incident	2a. Alphabetic Code	2b. Railroad Accident/Incident No.
3. Name of Railroad or Other Entity Responsible for Track Maintenance *(single entry)*: Norfolk Southern Corp. [NS]	3a. Alphabetic Code: NS	3b. Railroad Accident/Incident No.: 097233
4. U.S. DOT Grade Crossing ID No.: 471717J	5. Date of Accident/Incident (month / day / year): 12 / 03 / 2011	6. Time of Accident/Incident: 12:28 AM ☐ PM ☑
7. Nearest Railroad Station: HAMBURG	8. Subdivision: PITTSBURGH	9. County: ERIE
10. State Abbr.: NY	Code: 36	
11. City *(if in a city)*: HAMBURG	12. Highway Name or No.: CLOVERBANK ROAD	Public ☑ Private ☐

Highway User Involved

13. Type
A. Auto B. Truck C. Truck-trailer D. Pick-up truck E. Van F. Bus G. School Bus H. Motorcycle J. Other Motor Vehicle K. Pedestrian M. Other *(specify)*
Code: A

14. Vehicle Speed *(est. mph at impact)*: 0

15. Direction *(geographical)*: 1. North 2. South 3. East 4. West
Code: 1

16. Position: 1. Stalled or stuck on crossing 2. Stopped on Crossing 3. Moving over crossing 4. Trapped on crossing by traffic 5. Blocked on crossing by gates
Code: 2

20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials? 1. Highway User 2. Rail Equipment 3. Both 4. Neither
Code: 4

Rail Equipment Involved

17. Equipment
1. Train *(units pulling)* 2. Train *(units pushing)* 3. Train *(standing)* 4. Car(s) *(moving)* 5. Car(s) *(standing)* 6. Light loco(s) *(moving)* 7. Light loco(s) *(standing)* 8. Other *(specify)*
A. Train pulling- RCL B. Train pushing- RCL C. Train standing- RCL D. EMU Locomotive(s) E. DMU Locomotive(s)
Code: 1

18. Position of Car Unit in Train: 1

19. Circumstance: 1. Rail equipment struck highway user 2. Rail equipment struck by highway user
Code: 1

20b. Was there a hazardous materials release by: 1. Highway User 2. Rail Equipment 3. Both 4. Neither
Code: 4

20c. State here the name and quantity of the hazardous material released, if any

21. Temperature *(specify if minus)*: 43 °F

22. Visibility *(single entry)*: 1. Dawn 2. Day 3. Dusk 4. Dark
Code: 2

23. Weather *(single entry)*: 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow
Code: 1

24. Type of Equipment Consist *(single entry)*: 1. Freight Train 2. Passenger Train-Pulling 3. Commuter Train-Pulling 4. Work Train 5. Single Car 6. Cut of cars 7. Yard/Switching 8. Light loco(s) 9. Maint./inspect. car A. Spec. MoW Equip. B. Passenger Train-Pushing C. Commuter Train-Pushing D. EMU E. DMU
Code: 1

25. Track Type Used by Rail Equipment Involved: 1. Main 2. Yard 3. Siding 4. Industry
Code: 1

26. Track Number or Name: BUFFALO LINE

27. FRA Track Class (1-9,X): 4

28. Number of Locomotive Units: 2

29. Number of Cars: 68

30. Consist Speed *(Recorded speed if available)*: R. Recorded E. Estimated — 45 mph
Code: R

31. Time Table Direction: 1. North 2. South 3. East 4. West
Code: 4

32. Type of Crossing Warning: 1. Gates 2. Cantilever FLS 3. Standard FLS 4. Wig wags 5. Hwy. traffic signals 6. Audible 7. Crossbucks 8. Stop signs 9. Watchman 10. Flagged by crew 11. Other *(specify)* 12. None
Code(s): 01 03 07

33. Signaled Crossing Warning (See reverse side for instructions and codes)
Code: 1

34. Roadway Conditions: A. Dry B. Wet C.Snow/Slush D.Ice E. Sand.Mud.Dirt.Oil.Gravel F.Water (Standing, Moving)
Code: A

35. Location of Warning: 1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach
Code: 1

36. Crossing Warning Interconnected with Highway Signals: 1. Yes 2. No 3. Unknown
Code: 2

37. Crossing Illuminated by Street Lights or Special Lights: 1. Yes 2. No 3. Unknown
Code: 2

38. Hignway User's Age

39. Highway User's Gender: 1. Male 2. Female
Code: 1

40. Highway User Went Behind or in Front of Train and Struck or was Struck by Second Train: 1. Yes 2. No 3. Unknown
Code: 2

41. Highway User: 1. Went around the gate 2. Stopped and then proceeded 3. Did not stop 4. Stopped on crossing 5. Other *(specify)* 6. Went around/thru temporary barricade (if yes, see instructions) 7. Went thru the gate 8. Suicide/Attempted suicide
Code: 4

42. Driver Passed Standing Highway Vehicle: 1. Yes 2. No 3. Unknown
Code: 2

43. View of Track Obscured by *(primary obstruction)*: 1. Permanent Structure 2. Standing railroad equipment 3. Passing Train 4. Topography 5. Vegetation 6. Highway Vehicles 7. Other (specify) 8. Not Obstructed
Code: 8

Casualties to:	Killed	Injured
46. Highway-Rail Crossing Users	0	0
49. Railroad Employees	0	0
52. Passengers on Train	0	0

44. Driver was: 1. Killed 2. Injured 3. Uninjured
3

45. Was Driver in the Vehicle? 1. Yes 2. No
Code: 1

47. Highway Vehicle Property Damage *(est. dollar damage)*: $1,000

48. Total Number of Vehicle Occupants *(including driver)*: 1

50. Total Number of People on Train *(include passengers and train crew)*: 2

51. Is a Rail Equipment Accident / Incident Report Being Filed 1. Yes 2. No
Code: 2

53a. Special Study Block
Video Taken? ☐ Yes ☑ No
Video Used? ☐ Yes ☑ No

53b. Special Study Block

54. Narrative Description *(Be specific, and continue on separate sheet if necessary)*

DRIVER'S AGE UNKNOWN. TRAIN 287C903 TRAVELING WESTWARD WITH 2 UNITS, 11 LOADS, 57 EMPTIES, AND 3874 TONS ON THE BUFFALO LINE, STRUCK A 2011 TOYOTA CAMRY STOPPED ON THE CROSSING.

55. Typed Name and Title | 56. Signature | 57. Date

NOTE: This report is part of the reporting railroad's accident report pursuant to the accident reports statute and, as such shall not "be admitted as evidence or used for any purpose in any suit or action for damages growing out of any matter mentioned in said report...." 49 U.S.C. 20903. See 49 C.F.R. 225.7 (b).

FORM FRA F 6180.57 (Rev. 08/10)

* NOTE THAT ALL CASUALTIES MUST BE REPORTED ON FORM FRA F 6180.55A

OMB approval expires 02/28/2014

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION (FRA)

HIGHWAY-RAIL GRADE CROSSING ACCIDENT/INCIDENT REPORT

OMB Approval No. 2130-0500

Name Of		Alphabetic Code	RR Accident/Incident No.
1. Reporting Railroad	CSX Transportation [CSX]	1a. CSX	1b. 000030393
2. Other Railroad Involved in Train Accident/Incident		2a.	2b.
3. Railroad Responsible for Track Maintenance	CSX Transportation [CSX]	3a. CSX	3b. 000030393

4. U.S. DOT-AAR Grade Crossing ID No.	5. Date of Accident/Incident	6. Time of Accident/Incident
519501T	03/20/07	01:11 PM

7. Nearest Railroad Station	8. Division	9. County	10. State Abbr.	Code
BUFFALO	ALBANY	ERIE	36	NY

11. City *(if in a city)* HAMBURG
12. Highway Name or No. CLOVER BANK RD. ☑ Public ☐ Private

Highway User Involved

13. Type — A. Auto, B. Truck, C. Truck-trailer, D. Pick-up truck, E. Van, F. Bus, G. School Bus, H. Motorcycle, J. Other Motor Vehicle, K. Pedestrian, M. Other *(specify)* — Code: A

14. Vehicle Speed *(est. mph at impact)*: 10

15. Direction *(geographical)* 1. North 2. South 3. East 4. West — Code: 1

16. Position 1. Stalled on crossing 2. Stopped on Crossing 3. Moving over crossing 4. Trapped — Code: 3

20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials? 1. Highway User 2. Rail Equipment 3. Both 4. Neither — Code: 4

Rail Equipment Involved

17. Equipment — 1. Train *(units pulling)* 2. Train *(units pushing)* 3. Train *(standing)* 4. Car(s) *(moving)* 5. Car(s) *(standing)* 6. Light loco(s) *(moving)* 7. Light loco(s) *(standing)* 8. Other *(specify)* A. Train pulling- RCL B. Train pushing- RCL C. Train standing- RCL — Code: 1

18. Position of Car Unit in Train: 1

19. Circumstance 1. Rail equipment struck highway user 2. Rail equipment struck by highway user — Code: 1

20b. Was there a hazardous materials release by 1. Highway User 2. Rail Equipment 3. Both 4. Neither — Code: 4

20c. State the name and quantity of the hazardous material released, if any

21. Temperature *(specify if minus)*: 20 °F

22. Visibility *(single entry)* 1. Dawn 2. Day 3. Dusk 4. Dark — Code: 2

23. Weather *(single entry)* 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow — Code: 1

24. Type of Equipment Consist *(single entry)* 1. Freight train 2. Passenger train 3. Commuter train 4. Work train 5. Single car 6. Cut of cars 7. Yard/Switching 8. Light loco(s) 9. Main./inspect. car A. Spec. MoW Equip. — Code: 1

25. Track Type Used by Rail Equipment Involved 1. Main 2. Yard 3. Siding 4. Industry — Code: 1

26. Track Number or Name: #1 MAIN

27. FRA Track Class: 4

28. Number of Locomotive Units: 2

29. Number of Cars: 33

30. Consist Speed *(Recorded if available)* R. Recorded E. Estimated 40 mph — Code: E

31. Time Table Direction 1. North 2. South 3. East 4. West — Code: 3

32. Type of Crossing Warning 1. Gates 2. Cantilever FLS 3. Standard FLS 4. Wig wags 5. Hwy. traffic signals 6. Audible 7. Crossbucks 8. Stop signs 9. Watchman 10. Flagged by crew 11. Other *(specify)* 12. None

Code(s): 01 03 11

33. Signaled Crossing Warning: 20 sec warn min (1);

34. Whistle Ban 1. Yes 2. No 3. Unknown — Code: 2

35. Location of Warning 1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach — Code: 1

36. Crossing Warning Interconnected with Highway Signals 1. Yes 2. No 3. Unknown — Code: 2

37. Crossing Illuminated by Street Lights or Special Lights 1. Yes 2. No 3. Unknown — Code: 2

38. Driver's Age

39. Driver's Gender 1. Male 2. Female — Code:

40. Driver Drove Behind or in Front of Train and Struck or was Struck by Second Train 1. Yes 2. No 3. Unknown — Code: 2

41. Driver 1. Drove around or thru the gate 2. Stopped and then proceeded 3. Did not stop 4. Stopped on crossing 5. Other *(specify)* — Code: 1

42. Driver Passed Standing Highway Vehicle 1. Yes 2. No 3. Unknown — Code: 3

43. View of Track Obscured by *(primary obstruction)* 1. Permanent Structure 2. Standing railroad equipment 3. Passing Train 4. Topography 5. Vegetation 6. Highway Vehicles 7. Other *(specify)* 8. Not Obstructed — Code: 8

Casualties to:	Killed	Injured
46. Highway-Rail Crossing Users	0	0
49. Railroad Employees	0	0
52. Passengers on Train	0	0

44. Driver was 1. Killed 2. Injured 3. Uninjured — Code: 3

45. Was Driver in the Vehicle? 1. Yes 2. No — Code: 1

47. Highway Vehicle Property Damage *(est. dollar damage)*: $1.800

48. Total Number of Highway-Rail Crossing Users *(include driver)*: 1

50. Total Number of People on Train *(include passengers and crew)*: 2

51. Is a Rail Equipment Accident / Incident Report Being Filed 1. Yes 2. No — Code: 2

53a. Special Study Block

53b. Special Study Block

54. Narrative Description

Q14019 ON #1 MAIN APPROACHING CROSSING WHEN AUTO DASHED ACROSS TRACKS RESULTING IN LEAD LOCO CLIPPING REAR OF AUTO. AUTO FLED SCENE. AGE AND GENDER OF DRIVER UNKNOWN. ALSO AT CROSSING: ADVANCED WARNING, PAVEMENT MARKINGS (STOP LINES & RR XING SYMBOLS) AND 2 SIGNS SPECIFYING 3 TRACKS.///

55. Typed Name and Title

56. Signature

57. Date

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION (FRA)

HIGHWAY-RAIL GRADE CROSSING ACCIDENT/INCIDENT REPORT

OMB Approval No. 2130-0500

Name Of		Alphabetic Code	RR Accident/Incident No.
1. Reporting Railroad	CSX Transportation [CSX]	1a. CSX	1b. 000027234
2. Other Railroad Involved in Train Accident/Incident		2a.	2b.
3. Railroad Responsible for Track Maintenance	CSX Transportation [CSX]	3a. CSX	3b. 000027234

4. U.S. DOT-AAR Grade Crossing ID No.	5. Date of Accident/Incident	6. Time of Accident/Incident
519501T	11/24/06	05:12 AM

7. Nearest Railroad Station	8. Division	9. County	10. State Abbr.	Code
BUFFALO	ALBANY	ERIE	36	NY

11. City *(if in a city)* HAMBURG
12. Highway Name or No. CLOVER BANK RD. ☑ Public ☐ Private

Highway User Involved

13. Type — A. Auto, B. Truck, C. Truck-trailer, D. Pick-up truck, E. Van, F. Bus, G. School Bus, H. Motorcycle, J. Other Motor Vehicle, K. Pedestrian, M. Other *(specify)* — Code: A

14. Vehicle Speed *(est. mph at impact)*: 40

15. Direction *(geographical)* 1. North 2. South 3. East 4. West — Code: 2

16. Position 1. Stalled on crossing 2. Stopped on Crossing 3. Moving over crossing 4. Trapped — Code: 3

20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials? 1. Highway User 2. Rail Equipment 3. Both 4. Neither — Code: 2

Rail Equipment Involved

17. Equipment — 1. Train *(units pulling)* 2. Train *(units pushing)* 3. Train *(standing)* 4. Car(s) *(moving)* 5. Car(s) *(standing)* 6. Light loco(s) *(moving)* 7. Light loco(s) *(standing)* 8. Other *(specify)* A. Train pulling- RCL B. Train pushing- RCL C. Train standing- RCL — Code: 1

18. Position of Car Unit in Train: 1

19. Circumstance 1. Rail equipment struck highway user 2. Rail equipment struck by highway user — Code: 2

20b. Was there a hazardous materials release by 1. Highway User 2. Rail Equipment 3. Both 4. Neither — Code: 4

20c. State the name and quantity of the hazardous material released, if any

21. Temperature *(specify if minus)*: 34 °F

22. Visibility *(single entry)* 1. Dawn 2. Day 3. Dusk 4. Dark — Code: 4

23. Weather *(single entry)* 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow — Code: 4

24. Type of Equipment Consist *(single entry)* 1. Freight train 2. Passenger train 3. Commuter train 4. Work train 5. Single car 6. Cut of cars 7. Yard/Switching 8. Light loco(s) 9. Main./inspect. car A. Spec. MoW Equip. — Code: 1

25. Track Type Used by Rail Equipment Involved 1. Main 2. Yard 3. Siding 4. Industry — Code: 1

26. Track Number or Name: MAIN

27. FRA Track Class: 4

28. Number of Locomotive Units: 2

29. Number of Cars: 97

30. Consist Speed *(Recorded if available)* R. Recorded E. Estimated: 46 mph — Code: R

31. Time Table Direction 1. North 2. South 3. East 4. West — Code: 3

32. Type of Crossing Warning 1. Gates 2. Cantilever FLS 3. Standard FLS 4. Wig wags 5. Hwy. traffic signals 6. Audible 7. Crossbucks 8. Stop signs 9. Watchman 10. Flagged by crew 11. Other *(specify)* 12. None

Code(s): 01 03 07

33. Signaled Crossing Warning: 20 sec warn min (1);

34. Whistle Ban 1. Yes 2. No 3. Unknown — Code: 2

35. Location of Warning 1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach — Code: 1

36. Crossing Warning Interconnected with Highway Signals 1. Yes 2. No 3. Unknown — Code: 2

37. Crossing Illuminated by Street Lights or Special Lights 1. Yes 2. No 3. Unknown — Code: 3

38. Driver's Age: 31

39. Driver's Gender 1. Male 2. Female — Code: 2

40. Driver Drove Behind or in Front of Train and Struck or was Struck by Second Train 1. Yes 2. No 3. Unknown — Code: 2

41. Driver 1. Drove around or thru the gate 2. Stopped and then proceeded 3. Did not stop 4. Stopped on crossing 5. Other *(specify)* — Code: 1

42. Driver Passed Standing Highway Vehicle 1. Yes 2. No 3. Unknown — Code: 2

43. View of Track Obscured by *(primary obstruction)* 1. Permanent Structure 2. Standing railroad equipment 3. Passing Train 4. Topography 5. Vegetation 6. Highway Vehicles 7. Other *(specify)* 8. Not Obstructed — Code: 8

Casualties to:	Killed	Injured
46. Highway-Rail Crossing Users	0	1
49. Railroad Employees	0	0
52. Passengers on Train	0	0

44. Driver was 1. Killed 2. Injured 3. Uninjured — Code: 2

45. Was Driver in the Vehicle? 1. Yes 2. No — Code: 1

47. Highway Vehicle Property Damage *(est. dollar damage)*: $5.750

48. Total Number of Highway-Rail Crossing Users *(include driver)*: 1

50. Total Number of People on Train *(include passengers and crew)*: 2

51. Is a Rail Equipment Accident / Incident Report Being Filed 1. Yes 2. No — Code: 2

53a. Special Study Block

53b. Special Study Block

54. Narrative Description

MOTORIST WENT AROUND GATES AND STRUCK TRAIN.**

55. Typed Name and Title

56. Signature

57. Date

FORM FRA F 6180.57 * NOTE THAT ALL CASUALTIES MUST BE REPORTED ON FORM FRA F 6180.55A

U.S. DOT - CROSSING INVENTORY INFORMATION
AS OF 5/24/2013

Crossing No.: ***519502A*** Update Reason: ***Changed Crossing*** Effective Begin-Date of Record: ***09/28/12***

Railroad: ***CSX CSX Transportation [CSX]*** End-Date of Record:

Initiating Agency ***Railroad*** Type and Positiion: ***Public At Grade***

Part I Location and Classification of Crossing

Division:	***ALBANY***	State:	***NY***
Subdivision:	***BUFFALO TERM***	County:	***ERIE***
Branch or Line Name:		City:	***In HAMBURG***
Railroad Milepost:	***0010.25***	Street or Road Name:	***ROGERS RD***
RailRoad I.D. No.:	***QD***	Highway Type & No.:	***C-464***
Nearest RR Timetable Stn:	***HAMBURG***	HSR Corridor ID:	
Parent Railroad:		County Map Ref. No.:	***2709***
Crossing Owner:	***CSX Transportation [CSX]***	Latitude:	***42.7547955***
ENS Sign Installed:	***Yes***	Longitude:	***-78.8796913***
Passenger Service:	***AMTRAK***	Lat/Long Source:	***Actual***
Avg Passenger Train Count:	***2***	Quiet Zone:	***No***
Adjacent Crossing with Separate Number:	***Yes*** ***471716C***		

Private Crossing Information:

Category: Public Access: ***Unknown***

Specify Signs: Specify Signals:

	ST/RR A	ST/RR B	ST/RR C	ST/RR D
Railroad Use:				
State Use:				

Narrative:

Emergency Contact: ***(800)232-0144*** Railroad Contact: ***(904)359-1048*** State Contact: ***(518)457-5521***

Part II Railroad Information

Number of Daily Train Movements: Less Than One Movement Per Day: ***No***

Total Trains: ***47*** Total Switching: ***0*** Day Thru: ***23***

Typical Speed Range Over Crossing: From ***74*** to ***79*** mph Maximum Time Table Speed: ***79***

Type and Number of Tracks: Main: ***3*** Other ***0*** Specify:

Does Another RR Operate a Separate Track at Crossing? ***No***

Does Another RR Operate Over Your Track at Crossing? ***Yes: ATK***

U.S. DOT - CROSSING INVENTORY INFORMATION
Continued

Crossing ***519502A***

Effective Begin-Date of Record: ***09/28/12***

End-Date of Record:

Part III: Traffic Control Device Information

Signs:

Crossbucks:	***2***	Highway Stop Signs:	***0***
Advanced Warning:	***Yes***	Hump Crossing Sign:	***No***
Pavement Markings:	***No Markings***	Other Signs: ***2*** ***0***	Specify: ***3 TRACKS***

Train Activated Devices:

Gates:	***2***	4 Quad or Full Barrier:	***No***
Mast Mounted FL:	***2***	Total Number FL Pairs:	***4***
Cantilevered FL (Over):	***0***	Cantilevered FL (Not over):	***0***
Other Flashing Lights:	***0***	Specify Other Flashing Lights:	
Highway Traffic Signals:	***0***	Wigwags: ***0***	Bells: ***2***
Other Train Activated Warning Devices:		Special Warning Devices Not Train Activated:	
Channelization:	***None***	Type of Train Detection:	***Motion Detectors***
Track Equipped with Train Signals?	***Yes***	Traffic Light Interconnection/Preemption:	***N/A***

Part IV: Physical Characteristics

Type of Development:	***Open Space***	Smallest Crossing Angle:	***60 to 90 Degrees***
Number of Traffic Lanes Crossing Railroad:	***2***	Are Truck Pullout Lanes Present?	***No***
Is Highway Paved?	***Yes***		
Crossing Surface:	***Asphalt and Flange***	If Other:	
Nearby Intersecting Highway?	***201 to 500 feet***	Is it Signalized?	***No***
Does Track Run Down a Street?	***No***	Is Crossing Illuminated?	***Yes***
Is Commercial Power Available?	***Yes***		

Part V: Highway Information

Highway System:	***Other FA Highway - Not NHS***	Functional Classification of Road at Crossing:	***Urban Collector***
Is Crossing on State Highway System:	***No***		
Annual Average Daily Traffic (AADT):	***007405***	AADT Year:	***2010***
Estimated Percent Trucks:	***05***	Avg. No of School Buses per Day:	***2***
Posted Highway Speed:	***35***		

U.S. DOT - CROSSING INVENTORY INFORMATION
AS OF 5/24/2013

Crossing No.: ***471716C*** Update Reason: ***Changed Crossing*** Effective Begin-Date of Record: ***01/01/12***

Railroad: ***NS*** ***Norfolk Southern Corp. [NS]*** End-Date of Record:

Initiating Agency ***Railroad*** Type and Positiion: ***Public At Grade***

Part I Location and Classification of Crossing

Division:	***ALBANY***	State:	***NY***
Subdivision:	***BUFFALO***	County:	***ERIE***
Branch or Line Name:	***BUFFALO***	City:	***In HAMBURG***
Railroad Milepost:	***0010.22***	Street or Road Name:	***ROGERS RD***
RailRoad I.D. No.:		Highway Type & No.:	***C-464***
Nearest RR Timetable Stn:	***HAMBURG***	HSR Corridor ID:	
Parent Railroad:		County Map Ref. No.:	***4419***
Crossing Owner:		Latitude:	***42.7544770***
ENS Sign Installed:	***Yes***	Longitude:	***-78.8793454***
Passenger Service:	***None***	Lat/Long Source:	***Actual***
Avg Passenger Train Count:	***0***	Quiet Zone:	***No***
Adjacent Crossing with Separate Number:	***Yes*** ***519502A***		

Private Crossing Information:

Category: Public Access: ***Unknown***

Specify Signs: Specify Signals:

	ST/RR A	ST/RR B	ST/RR C	ST/RR D
Railroad Use:				
State Use:				

Narrative:

Emergency Contact: ***(800)453-2530*** Railroad Contact: ***(800)946-4744*** State Contact: ***(518)457-5521***

Part II Railroad Information

Number of Daily Train Movements: Less Than One Movement Per Day: ***No***

Total Trains: ***13*** Total Switching: ***0*** Day Thru: ***6***

Typical Speed Range Over Crossing: From ***40*** to ***60*** mph Maximum Time Table Speed: ***60***

Type and Number of Tracks: Main: ***1*** Other ***0*** Specify:

Does Another RR Operate a Separate Track at Crossing? ***Yes: CSX***

Does Another RR Operate Over Your Track at Crossing? ***No***

U.S. DOT - CROSSING INVENTORY INFORMATION
Continued

Crossing ***471716C***

Effective Begin-Date of Record: ***01/01/12***

End-Date of Record:

Part III: Traffic Control Device Information

Signs:

Crossbucks:	***2***	Highway Stop Signs:			***0***
Advanced Warning:	***Yes***	Hump Crossing Sign:			***No***
Pavement Markings:	***No Markings***	Other Signs:	***1***	Specify:	***SEE MEMO***
			1		***SEE MEMO***

Train Activated Devices:

Gates:	***2***	4 Quad or Full Barrier:			***No***
Mast Mounted FL:	***2***	Total Number FL Pairs:			***4***
Cantilevered FL (Over):	***0***	Cantilevered FL (Not over):			***0***
Other Flashing Lights:	***6***	Specify Other Flashing Lights:			***GATE ARM***
Highway Traffic Signals:	***0***	Wigwags:	***0***	Bells:	***1***
Other Train Activated Warning Devices:		Special Warning Devices Not Train Activated:			
Channelization:	***None***	Type of Train Detection:			***DC/AFO***
Track Equipped with Train Signals?	***Yes***	Traffic Light Interconnection/Preemption:			***N/A***

Part IV: Physical Characteristics

Type of Development:	***Residential***	Smallest Crossing Angle:	***60 to 90 Degrees***
Number of Traffic Lanes Crossing Railroad:	***2***	Are Truck Pullout Lanes Present?	***No***
Is Highway Paved?	***Yes***		
Crossing Surface:	***Asphalt and Flange***	If Other:	
Nearby Intersecting Highway?	***76 to 200 feet***	Is it Signalized?	***No***
Does Track Run Down a Street?	***No***	Is Crossing Illuminated?	***Yes***
Is Commercial Power Available?	***Yes***		

Part V: Highway Information

Highway System:	***Other FA Highway - Not NHS***	Functional Classification of Road at Crossing:	***Urban Collector***
Is Crossing on State Highway System:	***No***		
Annual Average Daily Traffic (AADT):	***006224***	AADT Year:	***2010***
Estimated Percent Trucks:	***05***	Avg. No of School Buses per Day:	***0***
Posted Highway Speed:	***35***		

U.S. DOT - CROSSING INVENTORY INFORMATION
AS OF 5/24/2013

Crossing No.: ***519501T*** Update Reason: ***Changed Crossing*** Effective Begin-Date of Record: ***09/28/12***

Railroad: ***CSX CSX Transportation [CSX]*** End-Date of Record:

Initiating Agency ***Railroad*** Type and Positiion: ***Public At Grade***

Part I Location and Classification of Crossing

Division:	***ALBANY***	State:	***NY***
Subdivision:	***BUFFALO TERM***	County:	***ERIE***
Branch or Line Name:		City:	***In HAMBURG***
Railroad Milepost:	***0011.02***	Street or Road Name:	***CLOVERBANK RD***
RailRoad I.D. No.:	***QD***	Highway Type & No.:	***L***
Nearest RR Timetable Stn:	***HAMBURG***	HSR Corridor ID:	
Parent Railroad:		County Map Ref. No.:	***2710***
Crossing Owner:	***CSX Transportation [CSX]***	Latitude:	***42.7471910***
ENS Sign Installed:	***Yes***	Longitude:	***-78.8909357***
Passenger Service:	***AMTRAK***	Lat/Long Source:	***Actual***
Avg Passenger Train Count:	***2***	Quiet Zone:	***No***
Adjacent Crossing with Separate Number:	***Yes*** ***471717J***		

Private Crossing Information:

Category: Public Access: ***Unknown***

Specify Signs: Specify Signals:

	ST/RR A	ST/RR B	ST/RR C	ST/RR D
Railroad Use:				
State Use:				

Narrative:

Emergency Contact: ***(800)232-0144*** Railroad Contact: ***(904)359-1048*** State Contact: ***(518)457-5521***

Part II Railroad Information

Number of Daily Train Movements: Less Than One Movement Per Day: ***No***

Total Trains: ***47*** Total Switching: ***0*** Day Thru: ***23***

Typical Speed Range Over Crossing: From ***74*** to ***79*** mph Maximum Time Table Speed: ***79***

Type and Number of Tracks: Main: ***3*** Other ***0*** Specify:

Does Another RR Operate a Separate Track at Crossing? ***No***

Does Another RR Operate Over Your Track at Crossing? ***Yes: ATK***

U.S. DOT - CROSSING INVENTORY INFORMATION
Continued

Crossing ***519501T***

Effective Begin-Date of Record: ***09/28/12***

End-Date of Record:

Part III: Traffic Control Device Information

Signs:

Crossbucks:	***2***	Highway Stop Signs:	***0***
Advanced Warning:	***Yes***	Hump Crossing Sign:	***No***
Pavement Markings:	***Stop Lines and RR Xing Symbols***	Other Signs: ***2*** ***0***	Specify: ***3 Tracks***

Train Activated Devices:

Gates:	***2***	4 Quad or Full Barrier:	***No***
Mast Mounted FL:	***2***	Total Number FL Pairs:	***4***
Cantilevered FL (Over):	***0***	Cantilevered FL (Not over):	***0***
Other Flashing Lights:	***6***	Specify Other Flashing Lights:	***GATE ARMS***
Highway Traffic Signals:	***0***	Wigwags: ***0***	Bells: ***0***
Other Train Activated Warning Devices:		Special Warning Devices Not Train Activated:	
Channelization:	***None***	Type of Train Detection:	***Motion Detectors***
Track Equipped with Train Signals?	***Yes***	Traffic Light Interconnection/Preemption:	***N/A***

Part IV: Physical Characteristics

Type of Development:	***Open Space***	Smallest Crossing Angle:	***60 to 90 Degrees***
Number of Traffic Lanes Crossing Railroad:	***2***	Are Truck Pullout Lanes Present?	***No***
Is Highway Paved?	***Yes***		
Crossing Surface:	***Asphalt and Flange***	If Other:	
Nearby Intersecting Highway?	***201 to 500 feet***	Is it Signalized?	***No***
Does Track Run Down a Street?	***No***	Is Crossing Illuminated?	***Yes***
Is Commercial Power Available?	***Yes***		

Part V: Highway Information

Highway System:	***Non-Federal-aid***	Functional Classification of Road at Crossing:	***Urban Local***
Is Crossing on State Highway System:	***No***		
Annual Average Daily Traffic (AADT):	***002239***	AADT Year:	***2010***
Estimated Percent Trucks:	***04***	Avg. No of School Buses per Day:	***0***
Posted Highway Speed:	***0***		

U.S. DOT - CROSSING INVENTORY INFORMATION
AS OF 5/24/2013

Crossing No.: ***471717J*** Update Reason: ***Changed Crossing*** Effective Begin-Date of Record: ***03/23/11***

Railroad: ***NS*** ***Norfolk Southern Corp. [NS]*** End-Date of Record:

Initiating Agency ***State*** Type and Positiion: ***Public At Grade***

Part I Location and Classification of Crossing

Division:	***ALBANY***	State:	***NY***
Subdivision:	***BUFFALO***	County:	***ERIE***
Branch or Line Name:	***BUFFALO***	City:	***In HAMBURG***
Railroad Milepost:	***0011.65***	Street or Road Name:	***CLOVERBANK RD***
RailRoad I.D. No.:		Highway Type & No.:	***L***
Nearest RR Timetable Stn:	***HAMBURG***	HSR Corridor ID:	
Parent Railroad:		County Map Ref. No.:	***4420***
Crossing Owner:		Latitude:	***42.7472001***
ENS Sign Installed:	***Yes***	Longitude:	***-78.8901177***
Passenger Service:	***None***	Lat/Long Source:	***Actual***
Avg Passenger Train Count:	***1***	Quiet Zone:	***No***
Adjacent Crossing with Separate Number:	***Yes*** ***519501T***		

Private Crossing Information:

Category: Public Access: ***Unknown***

Specify Signs: Specify Signals:

	ST/RR A	ST/RR B	ST/RR C	ST/RR D
Railroad Use:				
State Use:				

Narrative:

Emergency Contact: ***(800)453-2530*** Railroad Contact: ***(800)946-4744*** State Contact: ***(518)457-5521***

Part II Railroad Information

Number of Daily Train Movements: Less Than One Movement Per Day: ***No***

Total Trains: ***18*** Total Switching: ***0*** Day Thru: ***8***

Typical Speed Range Over Crossing: From ***40*** to ***60*** mph Maximum Time Table Speed: ***60***

Type and Number of Tracks: Main: ***1*** Other ***0*** Specify:

Does Another RR Operate a Separate Track at Crossing? ***Yes: CSX***

Does Another RR Operate Over Your Track at Crossing? ***No***

U.S. DOT - CROSSING INVENTORY INFORMATION
Continued

Crossing ***471717J***

Effective Begin-Date of Record: ***03/23/11***

End-Date of Record:

Part III: Traffic Control Device Information

Signs:

Crossbucks:	***2***	Highway Stop Signs:			***0***
Advanced Warning:	***Yes***	Hump Crossing Sign:			***No***
Pavement Markings:	***No Markings***	Other Signs:	***1***	Specify:	***SEE MEMO***
			1		***SEE MEMO***

Train Activated Devices:

Gates:	***2***	4 Quad or Full Barrier:			***No***
Mast Mounted FL:	***2***	Total Number FL Pairs:			***4***
Cantilevered FL (Over):	***0***	Cantilevered FL (Not over):			***0***
Other Flashing Lights:	***6***	Specify Other Flashing Lights:			***ON GATES***
Highway Traffic Signals:	***0***	Wigwags:	***0***	Bells:	***1***
Other Train Activated Warning Devices:		Special Warning Devices Not Train Activated:			
Channelization:	***None***	Type of Train Detection:			***None***
Track Equipped with Train Signals?	***Yes***	Traffic Light Interconnection/Preemption:			***N/A***

Part IV: Physical Characteristics

Type of Development:	***Residential***	Smallest Crossing Angle:	***60 to 90 Degrees***
Number of Traffic Lanes Crossing Railroad:	***2***	Are Truck Pullout Lanes Present?	***No***
Is Highway Paved?	***Yes***		
Crossing Surface:	***Asphalt and Flange***	If Other:	
Nearby Intersecting Highway?	***76 to 200 feet***	Is it Signalized?	***No***
Does Track Run Down a Street?	***No***	Is Crossing Illuminated?	***Yes***
Is Commercial Power Available?	***Yes***		

Part V: Highway Information

Highway System:	***Non-Federal-aid***	Functional Classification of Road at Crossing:	***Urban Local***
Is Crossing on State Highway System:	***No***		
Annual Average Daily Traffic (AADT):	***002239***	AADT Year:	***2010***
Estimated Percent Trucks:	***04***	Avg. No of School Buses per Day:	***2***
Posted Highway Speed:	***35***		

P.I.N.: 5759.70 Project Location: Town of Hamburg

PEDESTRIAN GENERATOR CHECKLIST

Note: The term "generator" in this document refers to both pedestrian generators (where pedestrians originate) and destinations (where pedestrians travel to).
A check of" yes" indicates a potential need to accommodate pedestrians and coordination with the Regional Bicycle and Pedestrian Coordinator is necessary during project scoping. Answers to the following questions should be checked with the local municipality to ensure accuracy.

1.	Is there an existing or planned sidewalk, trail, or pedestrian-crossing facility?	**YES**☐ **NO**☑
2.	Are there bus stops, transit stations or depots/terminals located in or within 800 m of the project area?	**YES**☐ **NO**☑
3.	Is there more than occasional pedestrian activity? Evidence of pedestrian activity may include a worn path.	**YES**☐ **NO**☑
4.	Are there existing or approved plans for generators of pedestrian activity in or within 800m of the project that promote or have the potential to promote pedestrian traffic in the project area, such as schools, parks, playgrounds, places of employment, places of worship, post offices, municipal buildings, restaurants, shopping centers, or other commercial areas, or shared-use paths?	**YES**☑ **NO**☐
5.	Are there existing or approved plans for seasonal generators of pedestrian activity in or within 800 m of the project that promote or have the potential to promote pedestrian traffic in the project area, such as ski resorts, state parks, camps, amusement parks?	**YES**☐ **NO**☑
6.	Is the project located in a residential area within 800 m of existing or planned pedestrian generators such as those listed in 4 above?	**YES**☑ **NO**☐
7.	From record plans, were pedestrian facilities removed during a previous highway reconstruction project?	**YES**☐ **NO**☑
8.	Did a study of secondary impacts indicate that the project promotes or is likely to promote commercial and/or residential development within the intended life cycle of the project?	**YES**☑ **NO**☐
9.	Does the community's comprehensive plan call for development of pedestrian facilities in the area?	**YES**☑ **NO**☐
10.	Based on the ability of students to walk and bicycle to school, would the project benefit from engineering measures under the Safe-Routes-To-School program? Eligible infrastructure-related improvements must be within a 3.2 km radius of the project.	**YES**☑ **NO**☐

Note: This checklist should be revisited due to a project delay or if site conditions or local planning changes during the project development process.

Comments:

Regional Bicycle and Pedestrian Coordinator:

Project Designer:

APPENDIX D
PAVEMENT INFORMATION

PAVEMENT EVALUATION AND TREATMENT SELECTION REPORT (PETSR)
ESAL CALCULATIONS & THICKNESS DESIGN (ATTACHMENT D.1)
GEOTECHNICAL INFORMATION FOR ROGERS ROAD AND CLOVERBANK ROAD

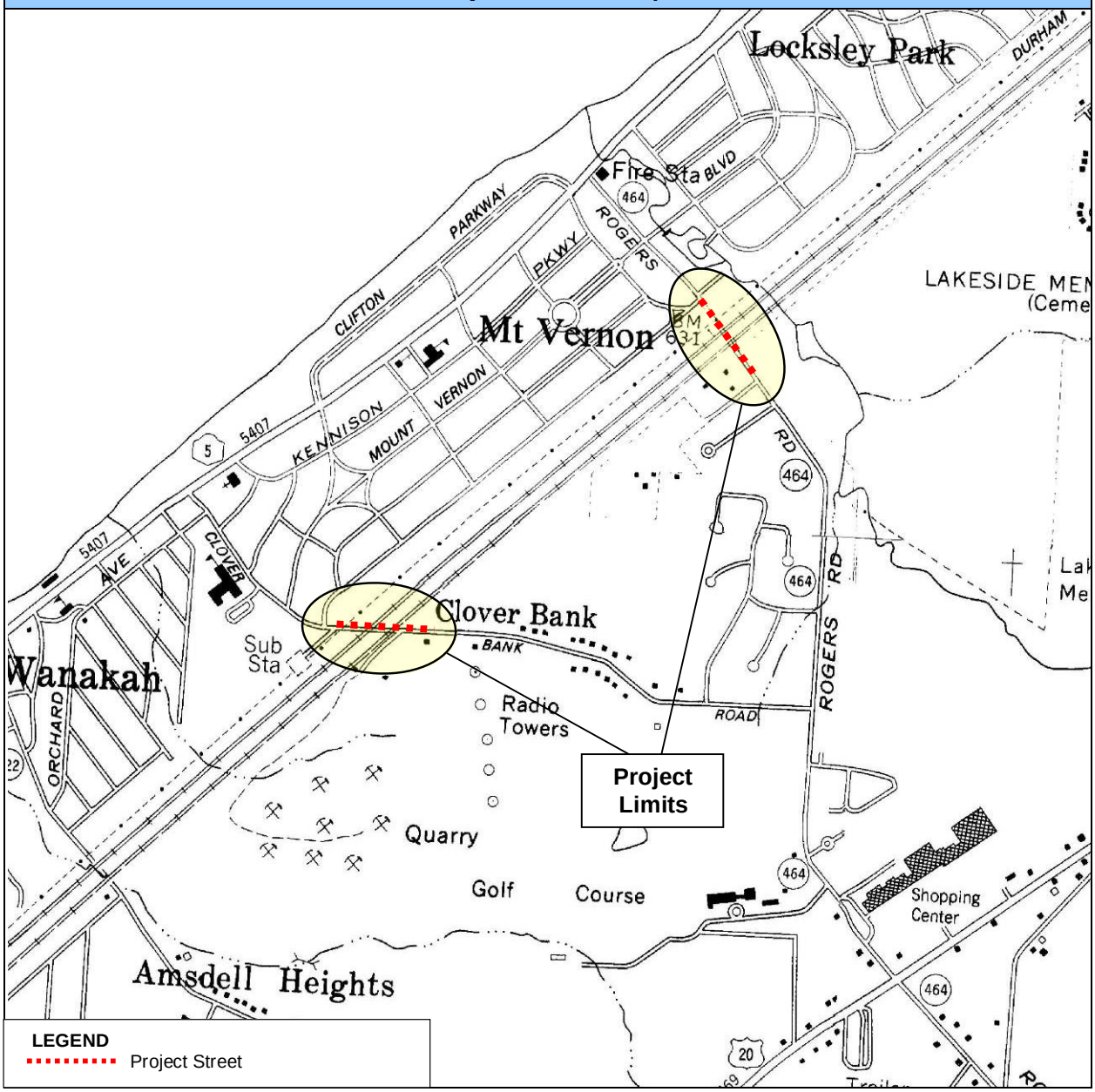
Pavement Evaluation and Treatment Selection Report

D.1. Introduction

This report, the Pavement Evaluation and Treatment Selection Report (PETSR) is the technical document for evaluation of selection of pavement design alternatives for the Rogers Road and Cloverbank Road project and was conducted according to the NYSDOT *Comprehensive Pavement Design Manual (CPDM)*.

The project is located in the Town of Hamburg, Erie County, NY. The project is located at the CSX Transportation (CSXT) and Norfolk Southern (NS) railroad crossings at Rogers Road (C.R. 464) and Cloverbank Road and extends approximately 150 feet east and west of the crossings

Exhibit D.1
Project Location Map



This study identified pavement design alternatives for resurfacing, restoration and rehabilitation of the existing pavement design for Rogers Road and Cloverbank Road. This report includes the following:

a) Investigation of existing conditions
b) Design of pavement alternatives using ESAL based design methods
c) Selection of appropriate pavement treatment

D.2. Existing Conditions

D.2.1. As-Builts

Record plans for Rogers Road were provided by Erie County DPW Highway Division. Rogers Road was constructed by two separate projects between 1957 and 1962. The pavement from sta. 13+50 to 22+00 was reconstructed and the crossing approaches elevated by PSC Case no. 17313 in 1957. The abbuting roadway segments were reconstructed in 1962 to a width of 30± feet with approximately 11-foot travel lanes. The pavement section was constructed with 2-1/2 inch asphalt concrete course, a 4-inch bituminous macadam course, a 12-inch subbase course and surface dusting with fine aggregate. This is consistent with the depths obtained from pavement cores taken in the travel lane and shoulder.

No record plans are available for Cloverbank Road. Based on information obtained from the pavement cores and soil borings, the pavement section consists of approximately 15-1/2 inches of asphalt and 15 inches of subbase.

Existing pavement conditions were observed by Erdman Anthony during a site visit on August 10, 2012. The pavement and shoulders on Rogers Road are in good condition and show few signs of rutting, longitudinal cracking, or other deterioration. The roadway approaches are constructed on an embankment in excess of five feet from the surrounding terrain. Given these conditions, it appears that the existing pavement structure is sufficient and subgrade soils are not frost susceptible.

Pavement conditions on Cloverbank Road were fair to poor, with significant wheelpath cracking, edge cracking, and wheelpath rutting. These types of distresses are indicative of poor subgrade support, frost action, inadequate drainage, insufficient pavement thickness, and poor lateral (shoulder) support. The roadbed is in a shallow cut section at the grade crossing approaches, which suggests that the underlying soils are poorly draining and susceptible to frost heave. This is confirmed by wet conditions encountered in the underlying subbase and subgrade materials during the soil borings. The pavement section itself is sufficiently thick given adequate drainage conditions.

D.2.2. Roadway Data

Rogers Road and Cloverbank Road were analyzed to determine the projected Annual Average Daily Traffic (AADT), percent heavy vehicles (% Trucks) and compound growth rate projected from the Expected Time of Completion (ETC). Exhibit D.2.2-A includes roadway data required for the pavement design process.

Exhibit D.2.2-A
Roadway Data

Segment	Functional Classification	AADT	% Trucks	Annual Truck Volume Growth Rate	Design Life
Rogers Road	Urban Major Collector	7587	5.0%	1.0%	25 yrs
Cloverbank Road	Urban Local	2284	5.0%	1.0%	25 yrs

D.2.3. Geotechnical

Sub-surface exploration has been performed in the project area. The resilient modulus (M_R) values were calculated for both Rogers Road and Cloverbank Road. The estimated M_R values were determined based on factors that converted the results from the field California Bearing Ratio (CBR) tests. The M_R of Rogers Road was estimated to be 5000 psi (34 MPa) and the M_R of Cloverbank Road was estimated to be 9000

psi (62 MPa). CBR values of 4.5% and 29.5% were used for Rogers Road and Cloverbank Road respectively. The field CBR test results are included in the geotechnical evaluation report. The conversion factors used are included in NCHRP Report 128, *Evaluation of AASHTO Interim Guides for Design of Pavement Structures*.

M_R of 5000 psi to 7000 psi are characteristic of the fine to medium-grained soils located under most NYS roadways according to NYSDOT *CPDM* §6.6.2. The M_R is a measure of the stiffness of the subgrade and a higher M_R value is indicative of stronger subgrade soil which will provide better support to the pavement. The existing pavement compositions are tabulated below in Exhibit D.2.3-A.

Exhibit D.2.3-A
Existing Pavement Composition

Layer	Rogers Road	Cloverbank Road
Asphalt Concrete Overlay	6.5 inches	15 inches
Sub-base Aggregate	12 inches	15 inches
Sub-Grade (M_R)	5000 psi	9000 psi

D.3. Life-Cycle Cost Analysis

A life-cycle cost analysis was not performed since the project is classified as a 3R project.

D.4. Treatment Selection

The pavement treatment selection is conducted according to the NYSDOT *CPDM* and the PRM *Volume II*. The pavement treatment proposed for this project will be rehabilitation and widening of Rogers Road and Cloverbank Road. Typical Sections based on these designs can be found in the Final Design Report: Appendix A.

The pavement thickness designs for Rogers Road and Cloverbank Road were calculated using the ESAL calculator developed from the NYSDOT *CPDM* and the AASHTO Guide for Design of Pavement Structure. The ESAL flexible pavement design calculations are included in Attachment D.1. Rogers Road and Cloverbank Road will be designed as rehabilitation with widening with flexible pavement. The pavement thickness design for both roadways is shown in Exhibit D.2.1-A. Cloverbank Road will have geotextile separation underneath the subbase course for the black Silt (topsoil) found in the borings.

The results of the ESAL calculator were checked against to insure accuracy and are shown in Exhibit D.4.1-A.

Exhibit D.4.1-A
Recommended Pavement Thickness Design

Item No.	Thickness	Layer	Technical Description
Rogers Road			
402.126302	1.5 inches	Top	12.5 F2 Top Course HMA, 60 Series Compaction
402.196902	2.5 inches	Binder	19 F9 Binder Course HMA, 60 Series Compaction
402.376902	4.0 inches	Base	37.5 F9 Base Course HMA, 60 Series Compaction
304.12	15.0 inches	Subbase	Subbase Course, Type 2
Cloverbank Road			
402.126302	1.5 inches	Top	12.5 F2 Top Course HMA, 60 Series Compaction
402.196902	2.5 inches	Binder	19 F9 Binder Course HMA, 60 Series Compaction
402.376902	3.0 inches	Base	37.5 F9 Base Course HMA, 60 Series Compaction
304.12	12.0 inches	Subbase	Subbase Course, Type 2

Note: Lift thickness must comply with criteria in CPDM Table 6-6

D.5. Summary

The typical sections in the Final Design Report: Appendix A, are based on finding from this report. Exhibit D.4.1-A describe the recommended pavement designs for Rogers Road and Cloverbank Road.

Pavement Thickness Design
Based on NYS Thickness Design Manual for New and Reconstructed Pavements

P.I.N. 5759.70
Description Rogers Road Railroad Quiet Zone

Table A-6 80-kN (18 KIP) ESAL calculation work sheet "simple" method with simple traffic growth

Item #	Input Parameters:		
1	Design Life	25	Years
2	Initial AADT	7587	Vehicles / Day
3	Percent Heavy Trucks (Class 5 or Greater)	5.00	%
4	Percent Trucks in Design Direction	50.0	%
5	Percent Trucks in Design Lane	100.0	%
6	Truck Equivalency Factor	1.35	80 kN Loads / Vec
7	Annual Truck Volume Growth Rate	1.0	%
8	Annual Truck Weight Growth Rate	0.5	%
Traffic Analysis for Pavement Design:			
9	Traffic Volume Growth Factor [1 + Item 7] $^{(\text{Item 1-1})}$ =	1.27	
10	Truck Growth Factor [1 + Item 8] $^{(\text{Item 1-1})}$ =	1.13	
11	Design Year AADT Item 2 x Item 9	9,633	Vehicles/ Day
12	Average AADT (Item 2 +Item 11)/2	8,610	Vehicles/ Day
13	Design Year Truck Factor Item 6 x Item 10	1.52	80 kN Loads / Vec
14	Average Truck Factor (Item 6 + Item 13)/2	1.44	80 kN Loads / Vec
15	AADT in One Direction (Item 12 X Item 4)	4,305	Vec / Day/ Direction
16	Truck AADT in One Direction (Item 15 X Item 3)	215	Trucks / Day/ Direction
17	Daily 80 kN (18 kip) Esal Count (Item 14 X Item 12)	309	80 kN Loads/Day/Direction
18	Total 80 kN (18 kip) ESAL Count (Item 15 X 365 X Item 1 X Item 5)	2,820,278	80 kN Loads / Design Life

Flexible Pavement Design	(NYSDOT Comprehensive Pavement Design Manual)		
1	Mr Value (From Regional Geotechnical Group)	34	MPa
		5	ksi
2	Total 80 kN (ESAL) Loads over design life.	2.8	Million
From Table 3; Pavement Design Manual:			
	AC Layer Thickness	200	mm
3	Permeable Type II base	0	mm
	Subbase Course	300	mm
	Select Granular Subgrade Thickness	0	mm
	Total pavement section depth	500	mm

ESAL	2.82E+06	
Zr	-1.282	
So	0.45	
Po	4.2	
Pt	2.5	
Mr	5000	
Sn	4.7306	Input this value until log(esal) converge

LOG(ESAL) = (Zr*So)+(9.36*LOG(Sn+1))-0.2+(LOG((Po-Pt)/(4.2-1.5)))/
(0.4+1094/(Sn+1)^5.19)+(2.32*LOG(Mr))-8.07

	6.4503
LOG(ESAL)	6.4503

Design Inputs	(ESAL Design)			Resulting SN/Layer
use Sn =	4.73		Structural number determined in previous step	
a1	0.42		Structural coefficient of the AC layer (top, binder and base)	3.36
D1	0	unknown	Thickness of the asphalt concrete courses (top, binder and base)	
a2	0.23		Structural coefficient of the asphalt-treated permeable base	0.00
D2	0	unknown	Thickness of the asphalt-treated permeable base	
a3	0.12		Structural coefficient of the subbase course	1.62
D3	0.00	unknown	Thickness of the subbase course	
m3	0.9		Drainage coefficient of the subbase course	
a4	0.1		Structural coefficient of the select granular subgrade course	0.00
D4	0	unknown	Thickness of the select granular subgrade course	
m4	0.9		Drainage coefficient of the select granular subgrade course	

Equation

Sn=(a1*D1)+(a2*D2)+(a3*D3*m3)+(a4*D4*m4)

TOTAL SN	4.98
REQUIRED SN	4.73

Results

	Layer	Thickness	
Asphalt Concrete	D1 =	8.00	Inches
Permeable Base	D2 =	0.00	Inches
Subbase Course	D3 =	15.00	Inches
Subgrade Course	D4 =	0.00	Inches
		23.00	TOTAL

Pavement Thickness Design
Based on NYS Thickness Design Manual for New and Reconstructed Pavements

P.I.N. 5759.70
Description Cloverbank Road Railroad Quiet Zones

Table A-6 80-kN (18 KIP) ESAL calculation work sheet "simple" method with simple traffic growth

Item #	Input Parameters:		
1	Design Life	25	Years
2	Initial AADT	2284	Vehicles / Day
3	Percent Heavy Trucks (Class 5 or Greater)	5.00	%
4	Percent Trucks in Design Direction	50.0	%
5	Percent Trucks in Design Lane	100.0	%
6	Truck Equivalency Factor	1.35	80 kN Loads / Vec
7	Annual Truck Volume Growth Rate	1.0	%
8	Annual Truck Weight Growth Rate	0.5	%
Traffic Analysis for Pavement Design:			
9	Traffic Volume Growth Factor [1 + Item 7] $^{(\text{Item 1-1})}$ =	1.27	
10	Truck Growth Factor [1 + Item 8] $^{(\text{Item 1-1})}$ =	1.13	
11	Design Year AADT Item 2 x Item 9	2,900	Vehicles/ Day
12	Average AADT (Item 2 +Item 11)/2	2,592	Vehicles/ Day
13	Design Year Truck Factor Item 6 x Item 10	1.52	80 kN Loads / Vec
14	Average Truck Factor (Item 6 + Item 13)/2	1.44	80 kN Loads / Vec
15	AADT in One Direction (Item 12 X Item 4)	1,296	Vec / Day/ Direction
16	Truck AADT in One Direction (Item 15 X Item 3)	65	Trucks / Day/ Direction
17	Daily 80 kN (18 kip) Esal Count (Item 14 X Item 12)	93	80 kN Loads/Day/Direction
18	Total 80 kN (18 kip) ESAL Count (Item 15 X 365 X Item 1 X Item 5)	849,020	80 kN Loads / Design Life

Flexible Pavement Design	(NYSDOT Comprehensive Pavement Design Manual)		
1	Mr Value (From Regional Geotechnical Group)	62	MPa
		9	ksi
2	Total 80 kN (ESAL) Loads over design life.	0.8	Million
From Table 3; Pavement Design Manual:			
	AC Layer Thickness	155	mm
3	Permeable Type II base	0	mm
	Subbase Course	300	mm
	Select Granular Subgrade Thickness	0	mm
	Total pavement section depth	455	mm

ESAL	8.49E+05	
Zr	-1.282	
So	0.45	
Po	4.2	
Pt	2.5	
Mr	9000	
Sn	3.6608	Input this value until log(esal) converge

LOG(ESAL) = (Zr*So)+(9.36*LOG(Sn+1))-0.2+(LOG((Po-Pt)/(4.2-1.5)))/
(0.4+1094/(Sn+1)^5.19)+(2.32*LOG(Mr))-8.07

	6.3232
LOG(ESAL)	5.9289

Design Inputs	(ESAL Design)			Resulting SN/Layer
use Sn =	3.66		Structural number determined in previous step	
a1	0.42		Structural coefficient of the AC layer (top, binder and base)	2.94
D1	0	unknown	Thickness of the asphalt concrete courses (top, binder and base)	
a2	0.23		Structural coefficient of the asphalt-treated permeable base	0.00
D2	0	unknown	Thickness of the asphalt-treated permeable base	
a3	0.12		Structural coefficient of the subbase course	1.30
D3	0.00	unknown	Thickness of the subbase course	
m3	0.9		Drainage coefficient of the subbase course	
a4	0.1		Structural coefficient of the select granular subgrade course	0.00
D4	0	unknown	Thickness of the select granular subgrade course	
m4	0.9		Drainage coefficient of the select granular subgrade course	

Equation

Sn=(a1*D1)+(a2*D2)+(a3*D3*m3)+(a4*D4*m4)

TOTAL SN	4.24
REQUIRED SN	3.66

Results

	Layer	Thickness	
Asphalt Concrete	D1 =	7.00	Inches
Permeable Base	D2 =	0.00	Inches
Subbase Course	D3 =	12.00	Inches
Subgrade Course	D4 =	0.00	Inches
		19.00	TOTAL

Subsurface Log

Applus RTD

Boring No.: B-1R

Elevation: N/A

Date	Time	Start Depth	Finish Depth	Weather	Temp	Driller
1/ 18/ 13		0 ft.	6.5 ft.	Cloudy	20 F	RB

Drilling Method/Size of Casing: 2.25 inch ID HSA	Type of Drill Rig: Soil Max (Truck)
Type of Sampler: Split Spoon	*Sample Hammer WT/Fall: 140 lbs/30 inches*

Project: Erdman Anthony - Road Borings
Rogers Road

Location: Hamburg, New York

Water Level (bgs)		Date	Time
1)	N/A		
2)			

Depth (feet)	Sample Number	Blows on Sampler		"N" Value	REC	Classification of Soil/Rock Materials/Well	Notes
0- 2.5						0.0'-0.5': Asphalt Pavement (0.3' top; 0.2' base)	
						0.5'-2.5' Gray-blk. SLAG/GRAVEL Subbase)	
2.5- 4.5	S -1	2	22	53	1.2'	Gray & Black CRUSHED STONE/CINDERS, moist (FILL)	
		31	8				
4.5- 6.5	S -2	6	5	10	1.0'	5.5'	
		5	4			Brown Clayey SILT and fine/coarse Sand, some Cinders, moist (FILL)	
						Boring Complete at 6.5 feet	

bgs= below ground surface

Well Materials: ___-inch PVC/Steel Screen/Riser # ____ Slot

Sand: _____ Bentonite: _____ Cement/Grout: _____ bags

Quality Inspection Services, Inc., 37 Franklin Street, Buffalo, New York, 14202, Tel: 716-853-2611

Subsurface Log

Applus RTD

Boring No.: B-2R

Elevation: N/A

Date	Time	Start Depth	Finish Depth	Weather	Temp	Driller
1/ 18/ 13		0 ft.	6.5 ft.	Cloudy	20 F	RB

Drilling Method/Size of Casing: 2.25 inch ID HSA	Type of Drill Rig: Soil Max (Truck)
Type of Sampler: Split Spoon	*Sample Hammer WT/Fall: 140 lbs/30 inches*

Project: Erdman Anthony - Road Borings
Rogers Road

Location: Hamburg, New York

Water Level (bgs)		Date	Time
1)	N/A		
2)			

Depth (feet)	Sample Number	Blows on Sampler		"N" Value	REC	Classification of Soil/Rock Materials/Well	Notes
0-1 .05						0.0'-1.05': Asphalt Pavement (0.55' top; 0.5' base)	
1- 3	S -1	42	50	87	2.0'	Gray CRUSHED STONE/SLAG, moist (FILL)	
		37	40				
3- 5	S -2	28	25	45	1.5'		
		20	29				
5- 6.5	S -3	40	30	48	1.5'	5.5'±	
		18	-			Black SILT/CINDERS, moist (FILL)	
						Boring Complete at 6.5 feet	Asphalt/Petro. odors noted at Boring Comp.

bgs= below ground surface

Well Materials: ___-inch PVC/Steel Screen/Riser # ____ Slot

Sand: _____ Bentonite: _____ Cement/Grout: _____ bags

Quality Inspection Services, Inc., 37 Franklin Street, Buffalo, New York, 14202, Tel: 716-853-2611

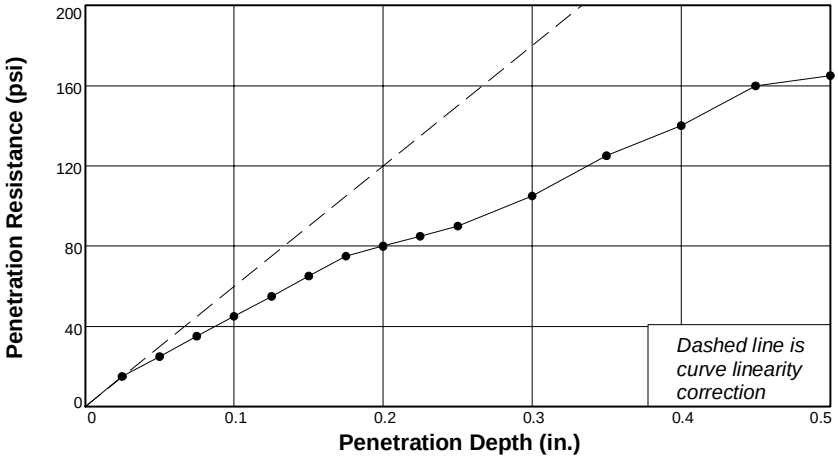
CALIFORNIA BEARING RATIO TESTING RESULTS
(ASTM D 4429)

Date:	1/18/2013
Project No.:	ROC.13.003
Project:	Hamburg Pavement Coring
Location:	B-1R - Rogers Road
Depth:	31 inches below top of asphalt
Material Description:	Fill: Slag, Gravel, Sand, Silt
Test Description:	ASTM D4429 - CBR of Soils in Place

Test B-1R (Surcharge: 20 lbs.)

Penetration Test Data

Pen. in.	Dial Reading	Stress psi	CBR %
0.0	0	0.0	
0.025	3	15.0	
0.05	5	25.0	
0.075	7	35.0	
0.1	9	45.0	4.5
0.125	11	55.0	
0.15	13	65.0	
0.175	15	75.0	
0.2	16	80.0	5.3
0.225	17	85.0	
0.25	18	90.0	
0.3	21	105.0	
0.35	25	125.0	
0.4	28	140.0	
0.45	32	160.0	
0.5	33	165.0	



Subsurface Log

Applus RTD

Boring No.: B-1C

Elevation: N/A

Date	Time	Start Depth	Finish Depth	Weather	Temp	Driller
1/ 31/ 13		0 ft.	6.5 ft.	Cloudy	20 F	RB

Drilling Method/Size of Casing: 2.25 inch ID HSA	Type of Drill Rig: Soil Max (Truck)
Type of Sampler: Split Spoon	*Sample Hammer WT/Fall: 140 lbs/30 inches*

Project: Erdman Anthony - Road Borings
Cloverbank Road

Location: Hamburg, New York

Water Level (bgs)		Date	Time
1)	0.0 (full)		
2)			

Depth (feet)	Sample Number	Blows on Sampler		"N" Value	REC	Classification of Soil/Rock Materials/Well	Notes
0- 1.2						0.0'-1.2': Asphalt Pavement (0.3' top; 0.9. base)	Core breaks at: 0.2' and 0.7'
1.2- 3	S -1	14	12	22	1.5'	Brown fractured ROCK FRAGMENTS, little Silt, wet (FILL)	
		10	7				
3- 5	S -2	6	5	10	0.3'	Black fine/coarse SAND, little fine/ medium Gravel, trace Silt, wet (FILL)	
		5	4				
5- 6.5	S -3	7	9	21	0.5'	- trace Gravel	
		12				Gry.-blk. FRACTURED ROCK, little Silt, wet	
						Boring Complete at 6.5 feet	

bgs= below ground surface

Well Materials: ___-inch PVC/Steel Screen/Riser # ____ Slot

Sand: _____ Bentonite: _____ Cement/Grout: _____ bags

Quality Inspection Services, Inc., 37 Franklin Street, Buffalo, New York, 14202, Tel: 716-853-2611

Subsurface Log

Applus RTD

Boring No.: B-2C

Elevation: N/A

Date	Time	Start Depth	Finish Depth	Weather	Temp	Driller
1/ 18/ 13		0 ft.	6.5 ft.	Cloudy	20 F	RB

Drilling Method/Size of Casing: 2.25 inch ID HSA	Type of Drill Rig: Soil Max (Truck)
Type of Sampler: Split Spoon	*Sample Hammer WT/Fall: 140 lbs/30 inches*

Project: Erdman Anthony - Road Borings
Cloverbank Road

Location: Hamburg, New York

Water Level (bgs)		Date	Time
1)	N/A		
2)			

Depth (feet)	Sample Number	Blows on Sampler		"N" Value	REC	Classification of Soil/Rock Materials/Well	Notes
0- 2.5						0.0'-1.3': Asphalt Pavement (0.55' top; 0.75' base)	
						1.2' Crushed Stone (Subbase Materials) 3.0'	
2.5- 4.5	S -1	2	2	5	0.7'	Black SILT (Topsoil), little fine/coarse	
		3	4			Sand, moist	
4.5- 6.5	S -2	3	2	4	0.6'	5.5'	
		2	2			Gry.-blk. FRACTURED ROCK, some Clayey	
						Silt, moist	
						Boring Complete at 6.5 feet	

bgs= below ground surface

Well Materials: ___-inch PVC/Steel Screen/Riser # ____ Slot

Sand: _____ Bentonite: _____ Cement/Grout: _____ bags

Quality Inspection Services, Inc., 37 Franklin Street, Buffalo, New York, 14202, Tel: 716-853-2611

CALIFORNIA BEARING RATIO TESTING RESULTS
(ASTM D 4429)

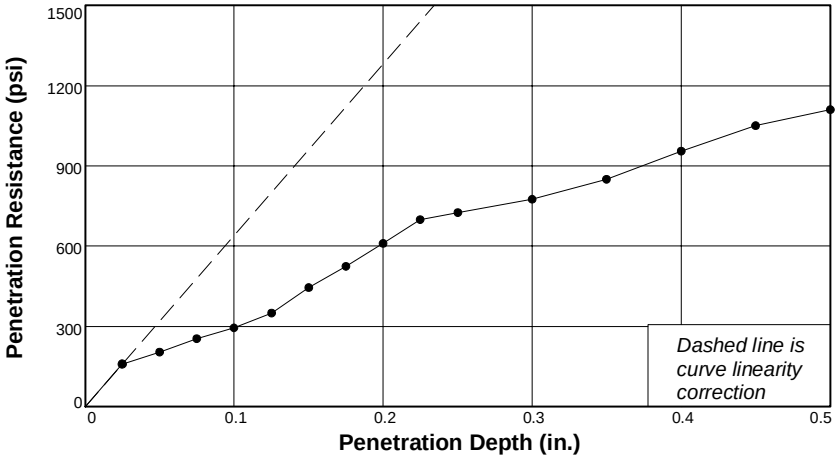
Date: 1/18/2013
Project No.: ROC.13.003
Project: Hamburg Pavement Coring
Location: B-2C- Cloverbank Road
Depth: 30 inches below top of asphalt
Material Description: Brown Silty SAND, little Gravel

Test Description: ASTM D4429 - CBR of Soils in Place

Test B-2C (Surcharge: 20 lbs.)

Penetration Test Data

Pen. in.	Dial Reading	Stress psi	CBR %
0.0	0	0.0	
0.025	32	160.0	
0.05	41	205.0	
0.075	51	255.1	
0.1	59	295.1	29.5
0.125	70	350.1	
0.15	89	445.1	
0.175	105	525.1	
0.2	122	610.1	40.7
0.225	140	700.1	
0.25	145	725.1	
0.3	155	775.2	
0.35	170	850.2	
0.4	191	955.2	
0.45	210	1050.2	
0.5	222	1110.2	



APPENDIX E
STRUCTURES INFORMATION

(VACANT)

APPENDIX F
NON-STANDARD FEATURE JUSTIFICATION

(VACANT)

APPENDIX G
PUBLIC INVOLVEMENT PLAN

PUBLIC INVOLVEMENT PLAN
MEETING MINUTES, STAKEHOLDER & PROJECT CORRESPONDANCE

Public Involvement Plan

This Public Involvement (PI) Plan has been prepared and conducted in general accordance with the NYSDOT *Project Development Manual* (PDM) *Appendix 2: Public Involvement Manual*.

G.1. Project Information

G.1.1. Project Identification

Rogers Road and Cloverbank Road Railroad Quiet Zones
PIN: 5759.70
Erie County
Town of Hamburg

G.1.2. Initial Project Proposal (IPP)

An Initial Project Proposal (IPP) was prepared for the project on March 27, 2012 by the Town of Hamburg. The IPP was approved by the Regional Planning & Program Manager on May 17, 2012.

G.1.3 Project Type

This PI is for a highway project located in the Town of Hamburg, Erie County, NY. The project is located at the CSX Transportation (CSXT) and Norfolk Southern (NS) railroad crossings at Rogers Road (C.R. 464) and Cloverbank Road and extends approximately 150 feet east and west of the crossings. The preliminary environmental classifications are as follows:

NEPA – Class II Programmatic
SEQR – Type II

G.1.4. Costs and Project Schedule

Design Approval is scheduled for August 2013, with construction beginning in fall 2013 and lasting approximately 8 months.

Exhibit 1.5-A
Project Schedule

Activity	Date Occurred/Tentative
Scoping Approval	N/A
Design Approval	Summer 2013
Construction Start	Fall 2013
Construction Complete	Spring 2014

G.1.5. Previous Public Involvement

The public has had opportunities for involvement during the various planning studies that have been prepared for the project.

G.1.6. Project Coordination

Project coordination that occurred during the preparation of this report primarily involved correspondence with agencies to determine the environmental significance of the project.

Exhibit G.1.6 Included Correspondence		
Date	Correspondence	Topic
May 24, 2012	Letter from G. Kapsiak	Railroad Quiet Zones Notice of Intent
May 14, 2013	Letter from N. Conrad to J. Zhao	NY National Heritage Program
July 30, 2013	Letter from S. Jones to K. Felgemacher	Section 106 Recommendations

G.2. Context Identification

G.2.1. Identify Stakeholders

The stakeholders in this project are as follows:

- New York State Department of Transportation (NYSDOT)
- Erie County DPW Highway Division
- CSX Transportation and Norfolk Southern Corp.
- Residents and businesses adjacent to the project

G.2.2. Identify Potential Concerns

Potential concerns are as follows:

- Aged and deteriorated pavement
- Quality of life of the community
- Protecting public waters from storm water pollution
- Limiting impacts to abutting properties
- Limiting impacts on existing flood plains

G.2.3. Community Impact Assessment

The project is not anticipated to negatively impact the community in the project study area. The project will improve pavement conditions and provide Supplemental Safety Measures in accordance with current FRA guidelines to allow for the implementation of the quiet zones.

G.3. PI Plan Objectives

G.3.1. Anticipated level of PI

Stakeholders have been highly involved in the project development process and continued public involvement is anticipated.

G.3.2. Structured Decision Making

The Town of Hamburg is the project sponsor, as well as the SEQR Lead Agency, and is responsible for selection of the preferred alternative. The preferred alternative was selected after extensive coordination with regulatory agencies, project stakeholders, and the public.

G.4. PI Plan Activities

Public involvement activities shall be coordinated with project development milestones. Project information shall be made available to stakeholders prior to coordination of public information meetings. Exhibit 1.7 shows the anticipated PI schedule.

Exhibit 1.7 Public Involvement Plan Schedule of Milestone Dates	
Activity	Date Occurred/Tentative
Public Information Meeting	March 1, 2006
In House Scoping Meeting	March 25, 2013
Current Project Letting	Fall 2013

A Public Information Meeting on the project was held on March 1, 2006 at the Frontier Middle School. Representatives from the Town, CSX Transportation, Norfolk Southern, and Federal Railroad Administration were in attendance. Updates regarding the project have been given at various Town Board meetings, on the Town website, and through an e-mail contact list of interested residents.

TOWN OF HAMBURG, NEW YORK
NOTICE OF INTENT
TO CREATE RAILROAD QUIET ZONES

In accordance with the regulations associated with the Federal Railroad Administration's (FRA) Train Horn Rule, we are hereby notifying all appropriate parties of the Town of Hamburg's intention to create two railroad quiet zones through public authority designation. Per the FRA regulations, please submit any questions, comments, or related information in regard to this Notice of Intent to the Town contact person shown on Page 3 within 60 days (by no later than July 23, 2012).

The Town of Hamburg (population 56,936) is located in Erie County, 11 miles south of the City of Buffalo. The quiet zones are proposed to be established over a 4.3 mile length of the CSX and Norfolk Southern (NS) railroad tracks which traverse the Town from north to south. These quiet zones will prohibit the use of horns for trains traveling along this length except in emergency situations where an imminent danger is perceived by the train engineer. This will serve to improve the quality of life for the approximately 20,000 Town residents who live within hearing range of these railroad tracks. It will also provide benefits to daily activities at several schools and recreational facilities that are located in close proximity to the tracks.

Per the FRA requirements in this regard, we are hereby providing the following information under this notification:

(1) The following grade crossings are located with the Town of Hamburg's proposed quiet zones (see attached location maps):

Grade Crossing Inventory No.	Street Name	Railroad	Type of Crossing	Highway Jurisdiction
519502A	Rogers Road	CSX	Public	Erie County
471716C	Rogers Road	NS	Public	Erie County
519501T	Cloverbank Road	CSX	Public	Town of Hamburg
471717J	Cloverbank Road	NS	Public	Town of Hamburg

Each of the above grade crossings is presently equipped with flashing lights and gates. The two CSX crossings (Rogers Road and Cloverbank Road) are to constitute one quiet zone, while the second quiet zone will be comprised of the two NS crossings (Rogers Road and Cloverbank Road).

(2) It is intended that the train horn restrictions will be in effect on a continuous 24 hour daily basis.

(3) The tentative plan for implementing required supplemental safety measures within the quiet zones is to install 3 feet wide mountable concrete medians with reflective channelization devices along the centerline of the highway for a distance of 100 feet from the crossing gate arm on each side of the tracks at the following grade crossings:

- Rogers Road (CSX and NS)
- Cloverbank Road (CSX and NS)

Photos and further info about this SSM are presented in the attached June 2010 FRA Research Report entitled "Use of Traffic Channelization Devices at Highway-Rail Grade Crossings" (see Figures 1 and 3 for examples that are similar to what the Town is proposing). The Town has also contacted other municipalities with installations of this type in northern climates (in Montana, Michigan, and Indiana), and they all reported no problems with snowplowing or any other factors in this regard.

In order to compensate for the width of the medians, the highway pavement is proposed to be widened along the approaches to these crossings as part of the project, as follows:

- For the Rogers Road crossing, the current pavement widths are 32' west of the CSX tracks, 29' between the CSX and NS tracks, and 30' east of the NS tracks. It is proposed that the pavement be widened to a uniform width of 32' in this area [11.5' travel lanes (with striping), 3' shoulders, 3' median = 32' total width].

- For the Cloverbank Road crossing, the current pavement widths are 28' west of the CSX tracks, 25' between the CSX and NS tracks, and 26.5' east of the NS track. It is proposed that the pavement be widened to a uniform width of 30' in this area [11.5' travel lanes (with striping), 2' shoulders, 3' median = 30' total width].

It is additionally noted that the two railroads, in conjunction with the New York State Dept. of Transportation, are in the process of undertaking a project to upgrade the existing signal and gate equipment at these crossings. They have agreed to provide wider track beds as part of their project, in order to accommodate the increased approach pavement width associated with the Town's quiet zone project. Construction of their equipment upgrade project is scheduled for early-spring 2013.

(4) Through the use of the FRA Quiet Zone Calculator and data in the most recent U.S. Dept. of Transportation Grade Crossing Inventory forms for each crossing, the following risk indices have been cumulatively determined for the grade crossings within the proposed quiet zones:

		CSX	NS
• Nationwide Significant Risk Threshold (NSRT)	=	13,722	13,722
• Risk Index with Horns (RIWH)	=	47,416	27,631
• Existing Quiet Zone Risk Index (QZRI)	=	79,090	49,424
• QZRI with Supplemental Safety Measures (SSMs)	=	19,772	12,356

In that the QZRI with SSMs is less than the RIWH for each of the quiet zones, the proposed quiet zones are qualified to be established, on the basis established by FRA that the SSMs sufficiently reduce the risk index to a level which allows train horns to not be sounded without compromising the safety of motorists. Copies of the scenario spreadsheets generated by the FRA Quiet Zone Calculator in this regard are enclosed.

(5) The Town of Hamburg has received a total of $525,000 in Federal and State funding for this project. It is expected that the project will be able to be completed within the limits of this funding.

(6) The Town of Hamburg is in the process of preparing and issuing a Request for Proposals to engineering consultants for design services associated with this project. It is anticipated that construction will be initiated in May 2013 (following completion of the aforementioned signal and gate upgrade project) and be completed within four months thereafter, following which the quiet zones will be put into place.

(7) The Town's contact person for the development of the quiet zones is as follows:

Name: Gerard M. Kapsiak P.E.
Title: Town Engineer
Address: Town of Hamburg
6100 South Park Avenue
Hamburg, New York 14075
Phone: (716) 649-6111, ext. 2355
Fax: (716) 649-2522
E-Mail: gkapsiak@townofhamburgny.com

(8) This Notice of Intent has been sent to the following:

- Robert Lauby, Acting Associate Administrator for Safety
  Federal Railroad Administration
  1200 New Jersey Avenue, SE
  Washington, D.C. 20590

- Cliff R. Stayton, Director of Public Affairs & Safety
  CSX Transportation, Inc.
  500 Water Street (C205)
  Jacksonville, Florida 32202

- William L. Barringer, Director of Grade Crossing Safety
  Norfolk Southern Corp.
  1200 Peachtree St., NE
  Box 36
  Atlanta, Georgia 30309-0036

- Joan McDonald, Commissioner
  New York State Dept. of Transportation
  50 Wolf Road
  Albany, New York 12205

- Darrell F. Kaminski, P.E., Acting Regional Director
  New York State Dept. of Transportation
  100 Seneca Street
  Buffalo, New York 14203

- John Loffredo, P.E., Commissioner
  Erie County Dept. of Public Works
  Division of Highways
  95 Franklin Street
  Buffalo, New York 14202

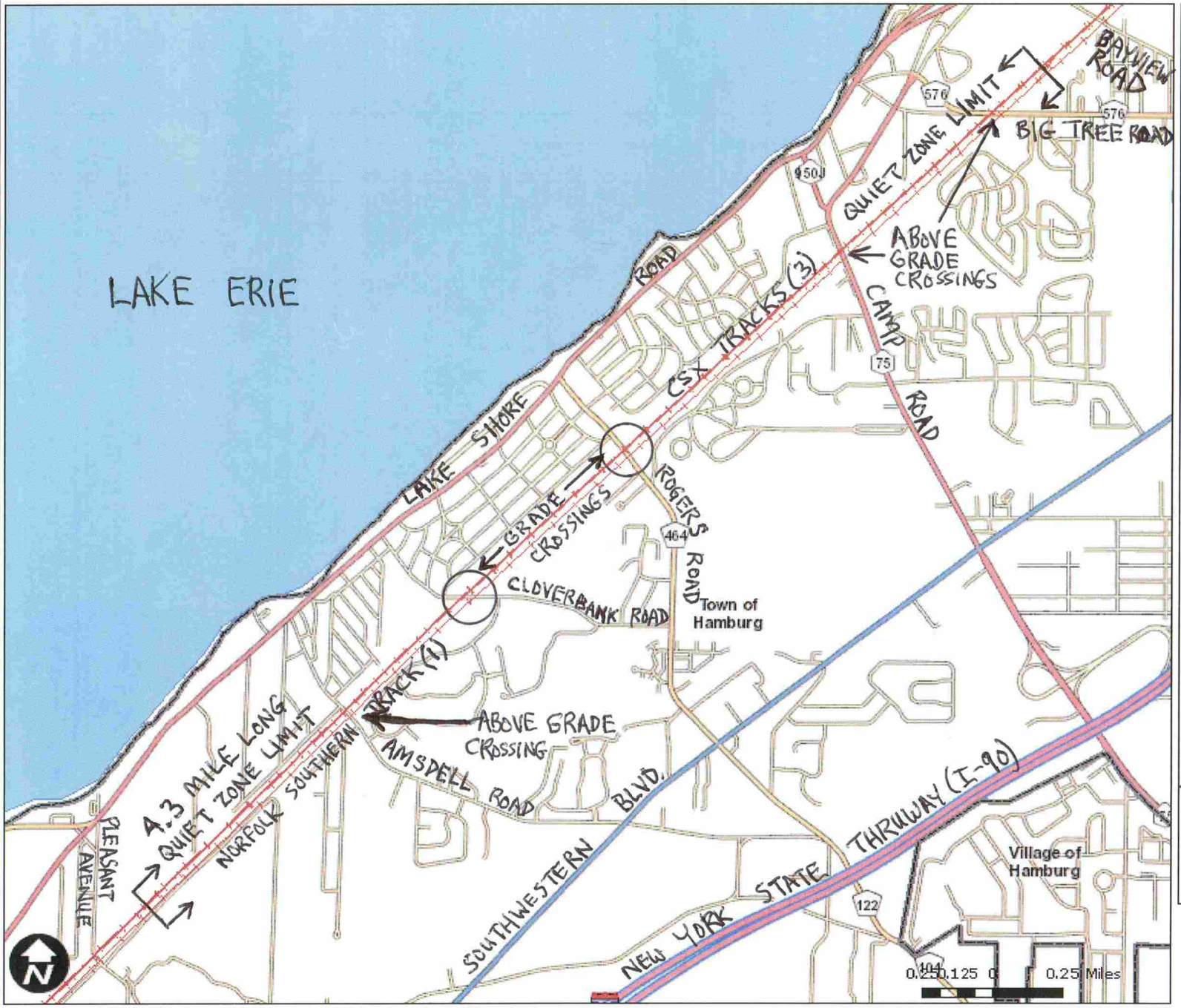
Respectfully submitted,

Gerard M. Kapsiak, P.E.

Gerard M. Kapsiak, P.E.
Town Engineer

Date Distributed: May 24, 2012

Town of Hamburg Railroad Quiet Zones



Legend

Town of Hamburg

Neighboring Municipalities

Railroad

Lake Ontario & Erie

LOCATIONS OF PROPOSED SUPPLEMENTAL SAFETY MEASURES (ROGERS ROAD & CLOVERBANK ROAD)

GENERAL LOCATION MAP

WENDEL

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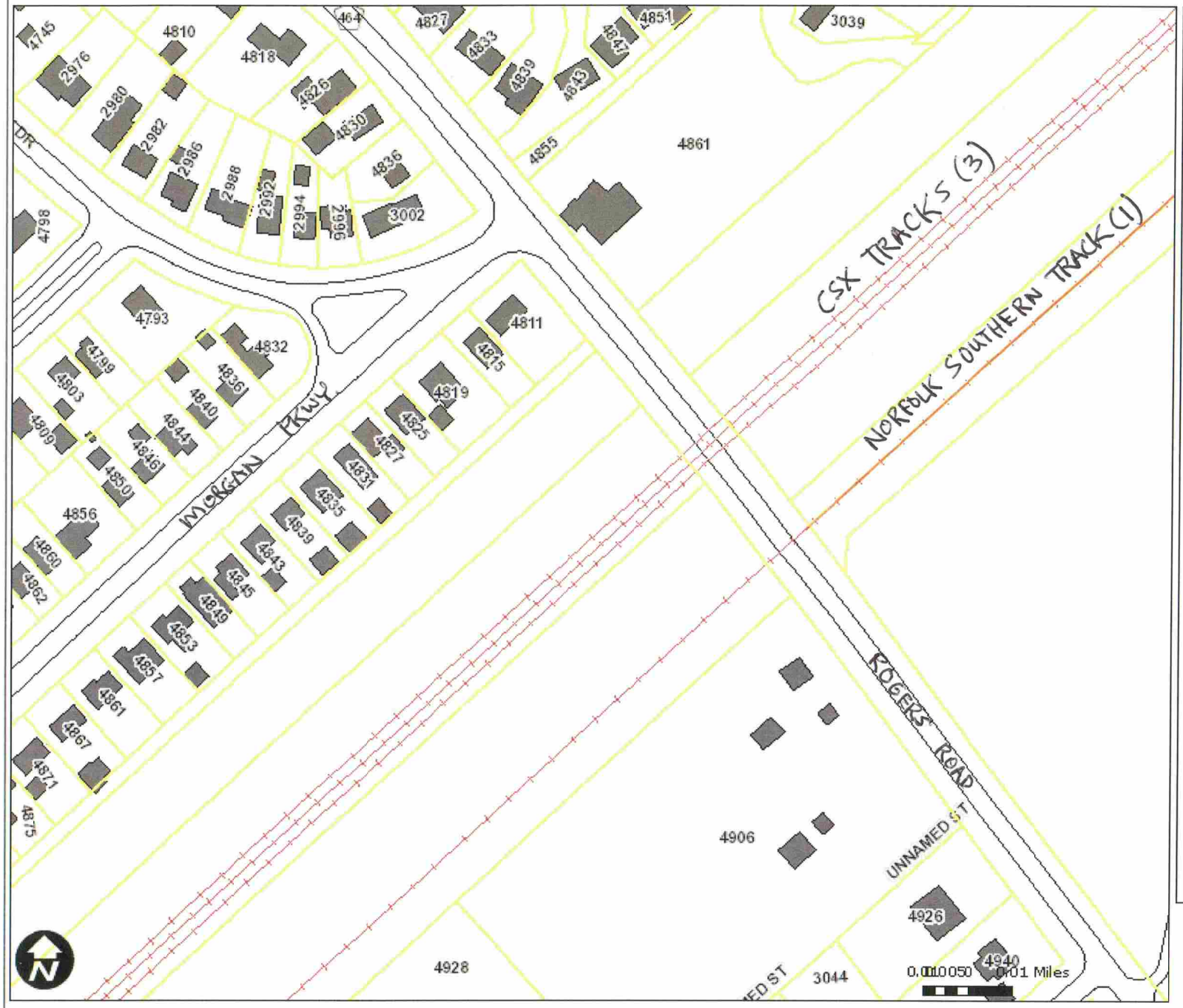
Specific Location Map - Rogers Road Railroad Crossings



Legend

- Parcels (Aerial Overlay)
- Parcels Labels
- Town of Hamburg
- Railroad
- Lake Ontario & Erie
- Building Footprints
- Pavement Edges
- Route Signs
- Road Names (all)

WENDEL

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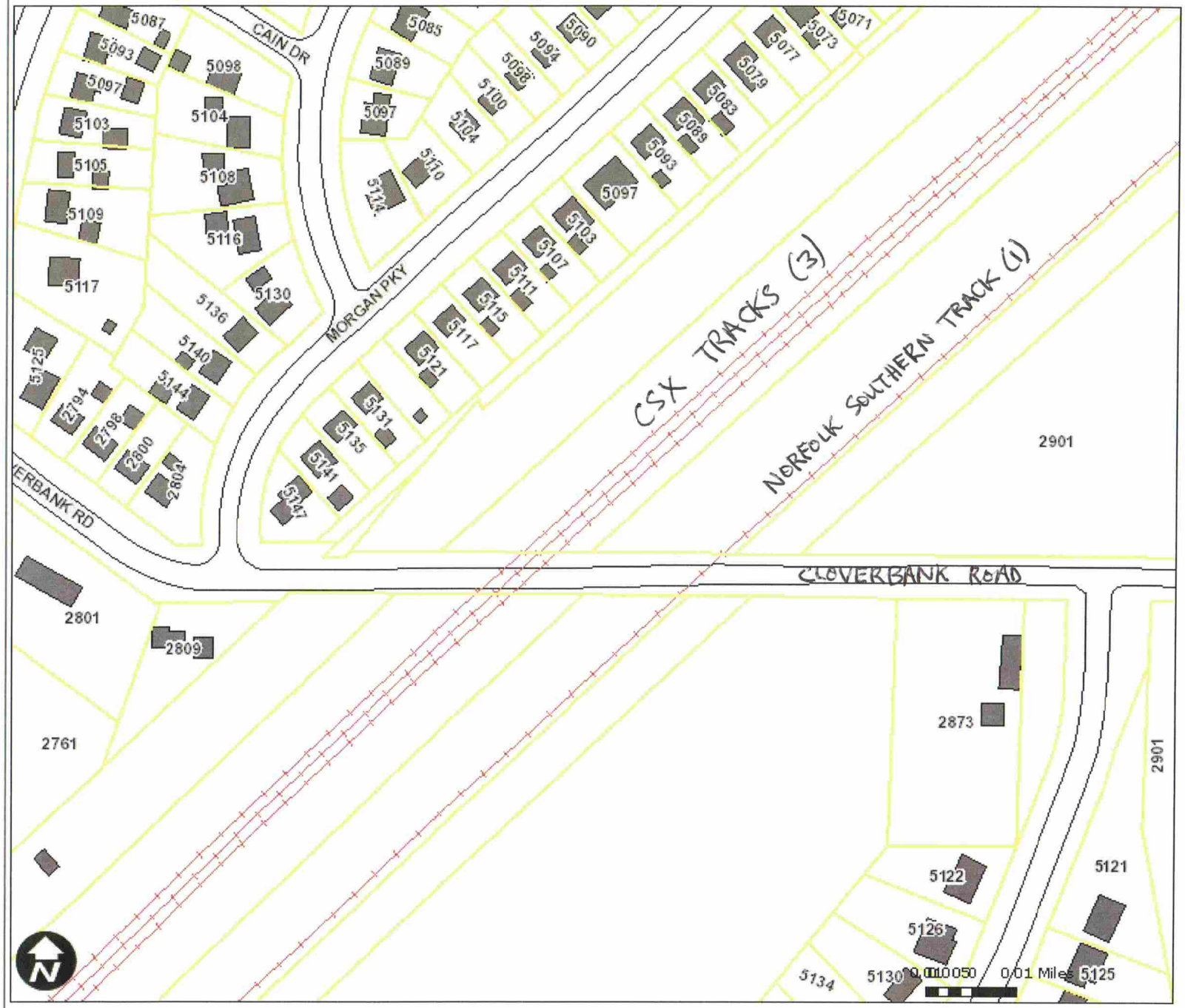
Specific Location Map - Cloverbank Road Railroad Crossings



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US Department
of Transportation

**Federal Railroad
Administration**

Research
Results

**RR 10-03
June 2010**

Use of Traffic Channelization Devices at Highway-Rail Grade Crossings

SUMMARY

Traffic channelization devices have a long history of use on highways as a means to separate vehicular traffic or to accommodate smooth traffic flow. These devices have found new applications as safety measures at highway-rail grade crossings. Studies on driver behavior at grade crossings indicate that a strong correlation exists between violations of the crossing warning devices and collisions. Deterring the risky behavior of driving around a lowered gate makes the grade crossing a safer environment.

The U.S. Department of Transportation (DOT) Federal Railroad Administration (FRA) promotes the use of traffic channelization devices at highway-rail grade crossings with active warning devices, where applicable. The traffic channelization devices provide a proven safety benefit without the same hindrances to mobility that occur with crossing closure or the costs associated with four-quadrant gate systems. Median barriers that meet the criteria within the Final Rule on the Use of Locomotive Horns at Highway-Rail Grade Crossings are approved supplemental safety measures for the establishment of a quiet zone. Many studies have been performed at locations where driver violations occurred at highway-rail grade crossings and after installation of channelization devices at these locations; a significant reduction in driver violations occurred.

The purpose of this research is to provide information about the use of traffic channelizing devices at highway-rail grade crossings. It includes a survey of the types of installations available, considerations for design, quiet zones, and special circumstances, as well as a discussion on the effectiveness of traffic channelization devices at improving safety at highway-rail grade crossings.

Figure 1: Traffic Channelization Devices (photo courtesy of NCDOT)

BACKGROUND

Since 1994, collisions at highway-rail grade crossings have declined by more than 40 percent. However, in 2008, 286 fatalities occurred in 2,391 highway-rail grade crossing collisions [1]. Eliminating these incidents altogether continues to pose a challenge. Studies on driver behavior at grade crossings indicate that a strong correlation between violations of the crossing warning devices and collisions. Deterring the risky behavior of driving around a lowered gate makes the grade crossing a safer environment.

The U.S. Department of Transportation (DOT) Federal Railroad Administration (FRA) promotes the use of traffic channelization devices at highway-rail grade crossings with active warning devices where applicable. In 2008, the FRA Office of Safety issued the brochure, "Guidance on the Use of Traffic Channelizing Devices at Highway-Rail Grade Crossings" [2], which was designed to assist in the selection of the appropriate traffic channelization device. It is distributed on the FRA Web site and at rail conferences with the hope of encouraging traffic engineers to pursue traffic channelization at grade crossings.

OBJECTIVES

The objective of this research is to provide information about the use of traffic channelizing devices at highway-rail grade crossings. The information is intended for the use of transportation professionals and practitioners when considering improvements to highway-rail grade crossings.

METHODS

The approach to this project was to gather pertinent information about the use of traffic channelization devices at highway-rail grade crossings. States have already installed these at grade crossings in an effort to improve compliance with the active warning devices and in turn, safety at the crossings. The experiences of states and researchers can be shared to encourage the appropriate use of median barriers at highway-rail grade crossings.

FINDINGS

Traffic Channelization Options

Wide raised medians provide the opportunity to include landscaping in its design. Although not a barrier, it can be an effective deterrent against violations of the crossing warning devices.

Barrier wall systems typically consist of concrete barriers, which are the most effective deterrent against circumventing lowered gates, but require a wide section between the roadway lanes.

Figure 2: Wide Raised Median

Nonmountable curb islands can be described as an island 6 to 9 inches high and 2 feet wide in which common roadway vehicles cannot mount and cross the island. This does cause concern, however, of increased crash risk and severity along the roadway and should be used judiciously.

Mountable raised curb seem to be the most effective traffic channelization device. It has minimal impact on the existing roadway and can easily be removed, if necessary. Raised vertical panels should always be installed with this system. The panels provide a visual deterrent to circumventing a lowered gate.

Installations at Crossings within a Quiet Zone

One of the most frequent uses of median barriers at highway-rail grade crossings is in conjunction with the establishment of a quiet zone. The Final Rule on the Use of Locomotive Horns at Highway-Rail Grade Crossings standardized the establishment of quiet zones.

One of the supplemental safety measures (SSM) identified in this rule is gates with medians or channelization devices. The intent of an SSM is to reduce the risk at the crossing to permit the silencing of the train horn. The use of channelization devices as SSMs must be compliant with the specification outlined in the rule. Per the rule, the channelization devices or median barriers must be installed on both approaches to the crossing. This prevents drivers from circumventing the lowered gates by approaching the crossing in the opposing lane. The median barriers or channelization devices must extend 100 feet from the crossing gate arm, or if an intersection is within 100 feet of the crossing, the channelization device must extend 60 feet. Any intersections within 60 feet of the crossing should be closed or relocated.

One major reason that channelization devices are a popular installation at quiet zones is the cost. The cost of some SSMs can be prohibitive. For example, four-quadrant gate installations can cost upwards of $250,000. The installation of median barriers at a crossing costs on average $14,000 [3]. This magnitude of cost difference makes channelization devices an attractive safety measure to reduce risk at highway-rail grade crossings.

Figure 3: Mountable Raised Curb
(photo courtesy of NCDOT)

Issues and Considerations

A successful median barrier project considers all potential impacts of the installation. If the crossing is on a route that is used by emergency vehicles, heavy trucks, or large farm equipment, it may be necessary to accommodate a U-turn for these vehicles. This is especially important for vertically challenging "humped" crossings that low-clearance trailer trucks could potentially have problems traversing successfully. To accommodate U-turns for large vehicles, a potential option is to utilize mountable raised curbs with vertical panels. These installations can be driven over, if necessary. And, the replacement of the upright panels is easy and inexpensive.

The Final Rule on the Use of Locomotive Horns at Highway-Rail Grade Crossings states that the recommended length for a median barrier at a highway-rail grade crossing is 100 feet. However, a divided roadway for 100 feet could restrict access to intersecting streets or driveways within the 100-foot zone. An analysis of traffic patterns should be performed to see if the installation of a median barrier is appropriate for that location.

The installation of traffic channelization devices at highway-rail grade crossings requires the cooperation of many stakeholders. It is in the interest of the railroad to improve safety at the crossing and they are often the chief proponent of implementing a crossing with traffic channelization devices. However, because the traffic channelization devices extend beyond the right of way of the railroad, the roadway authority must also be involved. The local government will be in the best position to negotiate the purchase of additional frontage should there be any changes to the roadway width to accommodate median barriers.

Effectiveness

Several demonstration studies have been conducted that included an evaluation of the reduction of risky driver behavior after traffic channelization devices were installed at a grade crossing. Because incidents are rare, the studies frequently used circumventing the gates or other unsafe behavior as a surrogate. When the results from a variety of studies were averaged, it indicated that unsafe driver actions at grade

crossings were reduced by 68 percent after the installation of traffic channelization devices. The Final Rule on the Use of Locomotive Horns at Highway-Rail Grade Crossings assigned a 75 percent effectiveness rating to traffic channelization devices over crossings equipped with two-quadrant gates, which is in general agreement with the studies.

CONCLUSIONS

The installation of traffic channelization devices at highway rail grade crossings has proven to be a cost-effective means of improving safety. The traffic channelization devices provide a proven safety benefit without the same hindrances to mobility that occur with crossing closure or the costs associated with four-quadrant gate systems. Median barriers/traffic channelization devices that meet the criteria within the Final Rule on the Use of Locomotive Horns at Highway-Rail Grade Crossings are approved supplemental safety measures for the establishment of a quiet zone.

Implementing median barriers at a highway-rail grade crossing with active warning devices can reduce the risk of a collision at that crossing.

REFERENCES

[1] U.S. Department of Transportation, Federal Railroad Administration, Railroad Accident-Incident Reporting System–Highway-Rail Accidents, June 2009.

[2] U.S. Department of Transportation, Federal Railroad Administration, "Guidance on the Use of Traffic Channelizing Devices at Highway-Rail Grade Crossings," Washington, DC: U.S. DOT, January 2008.

[3] Code of Federal Regulations Volume 4, Title 49 Parts 222 and 229, "Final Rule on the Use of Locomotive Horns at Highway-Rail Grade Crossings," August 17, 2006.

ACKNOWLEDGEMENTS

This work is performed under an interagency agreement between FRA's Signals, Train Control, and Communications Division in the Office of Research and Development and the Volpe National Transportation Systems Center's System Engineering and Safety Division.

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KEYWORDS

Traffic channelization devices, median barriers, highway-rail grade crossings, railroad safety

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Print This Page

PROPOSED TOWN OF HAMBURG RAILROAD QUIET ZONE CSX CROSSINGS (EXISTING CONDITIONS)

Home | Help | Contact | logoff gkapsiak@townofhamburgny.com

Cancel | Change Scenario: HAMBURG-CS_37828 | **Continue**

Create New Zone
Manage Existing Zones
Log Off

Crossing	Street	Traffic	Warning Device	Pre-SSM	SSM	Risk	
519501T	**CLOVERBANK RD**	**2239**	**Gates**	0	0	104,568.90	MODIFY
519502A	**ROGERS RD**	**7405**	**Gates**	0	0	53,610.57	MODIFY

* Only Public At Grade Crossings are listed.

Click for Supplementary Safety Measures [SSM]

Click for ASM spreadsheet: **ASM** | * Note:The use of ASMs requires an application to and approval from the FRA.

Summary	
Proposed Quiet Zone:	HAMBURG-CSX-ROGERS & CLOVERBANK
Type:	New 24-hour QZ
Scenario:	HAMBURG-CS_37828
Estimated Total Cost:	$0.00
Nationwide Significant Risk Threshold:	13722 .00
Risk Index with Horns:	47415.91
Quiet Zone Risk Index:	79089.74

Step by Step Instructions:

Step 1: To specify New Warning Device (For Pre-Rule Quiet Zone Only) and/or SSM, click the MODIFY Button

Step 2: Select proposed warning device or SSM. Then click the UPDATE button.To generate a spreadsheet of the values on this page, click on ASM button—This spreadsheet can then be used for ASM calculations.

Step 3: Repeat Step (2) until the SELECT button is shown at the bottom right side of this page. Note that the SELECT button is shown ONLY when the Quiet Zone Risk Index falls below the NSRT or the Risk Index with Horn.

Step 4: To save the scenario and continue, click the SELECT button

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PROPOSED TOWN OF HAMBURG RAILROAD QUIET ZONE
CSX CROSSINGS (WITH SUPPLEMENTAL SAFETY MEASURES)

Home | Help | Contact | logoff gkapsiak@townofhamburgny.com

Cancel | Change Scenario: HAMBURG-CS_37828 | **Continue**

Create New Zone
Manage Existing Zones
Log Off

Crossing	Street	Traffic	Warning Device	Pre-SSM	SSM	Risk	
519501T	**CLOVERBANK RD**	**2239**	**Gates**	0	12	26,142.23	MODIFY
519502A	**ROGERS RD**	**7405**	**Gates**	0	12	13,402.64	MODIFY

* Only Public At Grade Crossings are listed.

ALERT: Quiet Zone qualifies because SSM has been applied in each crossing.

Click for Supplementary Safety Measures [SSM]

Click for ASM spreadsheet: **ASM** * Note:The use of ASMs requires an application to and approval from the FRA.

Summary	
Proposed Quiet Zone:	Hamburg-CSX-Rogers & Cloverbank
Type:	New 24-hour QZ
Scenario:	HAMBURG-CS_37828
Estimated Total Cost:	$26,000.00
Nationwide Significant Risk Threshold:	13722 .00
Risk Index with Horns:	47415.91
Quiet Zone Risk Index:	19772.43

Select

Step by Step Instructions:

Step 1: To specify New Warning Device (For Pre-Rule Quiet Zone Only) and/or SSM, click the MODIFY Button

Step 2: Select proposed warning device or SSM. Then click the UPDATE button.To generate a spreadsheet of the values on this page, click on ASM button—This spreadsheet can then be used for ASM calculations.

Step 3: Repeat Step (2) until the SELECT button is shown at the bottom right side of this page. Note that the SELECT button is shown ONLY when the Quiet Zone Risk Index falls below the NSRT or the Risk Index with Horn.

Step 4: To save the scenario and continue, click the SELECT button

Print This Page

PROPOSED TOWN OF HAMBURG RAILROAD QUIET ZONE NORFOLK SOUTHERN CROSSINGS (EXISTING CONDITIONS)

Home | Help | Contact | logoff gkapsiak@townofhamburgny.com

Cancel | Change Scenario: HAMBURG-NS_37829 | **Continue**

Create New Zone
Manage Existing Zones
Log Off

Crossing	Street	Traffic	Warning Device	Pre-SSM	SSM	Risk	
471716C	**ROGERS RD**	**6224**	**Gates**	0	0	27,523.04	MODIFY
471717J	**CLOVERBANK RD**	**2239**	**Gates**	0	0	71,325.93	MODIFY

* Only Public At Grade Crossings are listed.

Click for Supplementary Safety Measures [SSM]

Click for ASM spreadsheet: **ASM** * Note:The use of ASMs requires an application to and approval from the FRA.

Summary	
Proposed Quiet Zone:	HAMBURG-NS-ROGERS & CLOVERBANK
Type:	New 24-hour QZ
Scenario:	HAMBURG-NS_37829
Estimated Total Cost:	$0.00
Nationwide Significant Risk Threshold:	13722 .00
Risk Index with Horns:	29630.99
Quiet Zone Risk Index:	49424.48

Step by Step Instructions:

Step 1: To specify New Warning Device (For Pre-Rule Quiet Zone Only) and/or SSM, click the MODIFY Button

Step 2: Select proposed warning device or SSM. Then click the UPDATE button.To generate a spreadsheet of the values on this page, click on ASM button—This spreadsheet can then be used for ASM calculations.

Step 3: Repeat Step (2) until the SELECT button is shown at the bottom right side of this page. Note that the SELECT button is shown ONLY when the Quiet Zone Risk Index falls below the NSRT or the Risk Index with Horn.

Step 4: To save the scenario and continue, click the SELECT button

Print This Page

PROPOSED TOWN OF HAMBURG RAILROAD QUIET ZONE
NORFOLK SOUTHERN CROSSINGS (WITH SUPPLEMENTAL SAFETY MEASURES)

Home | Help | Contact | logoff gkapsiak@townofhamburgny.com

Cancel | Change Scenario: HAMBURG-NS_37829 | **Continue**

Create New Zone
Manage Existing Zones
Log Off

Crossing	Street	Traffic	Warning Device	Pre-SSM	SSM	Risk	
471716C	**ROGERS RD**	**6224**	**Gates**	0	12	6,880.76	MODIFY
471717J	**CLOVERBANK RD**	**2239**	**Gates**	0	12	17,831.48	MODIFY

* Only Public At Grade Crossings are listed.

ALERT: Quiet Zone qualifies because SSM has been applied in each crossing.

Click for Supplementary Safety Measures [SSM]

Click for ASM spreadsheet: **ASM** * Note: The use of ASMs requires an application to and approval from the FRA.

Summary	
Proposed Quiet Zone:	HAMBURG-NS-ROGERS & CLOVERBANK
Type:	New 24-hour QZ
Scenario:	HAMBURG-NS_37829
Estimated Total Cost:	$26,000.00
Nationwide Significant Risk Threshold:	13722 .00
Risk Index with Horns:	29630.99
Quiet Zone Risk Index:	12356.12

Select

Step by Step Instructions:

Step 1: To specify New Warning Device (For Pre-Rule Quiet Zone Only) and/or SSM, click the MODIFY Button

Step 2: Select proposed warning device or SSM. Then click the UPDATE button.To generate a spreadsheet of the values on this page, click on ASM button—This spreadsheet can then be used for ASM calculations.

Step 3: Repeat Step (2) until the SELECT button is shown at the bottom right side of this page. Note that the SELECT button is shown ONLY when the Quiet Zone Risk Index falls below the NSRT or the Risk Index with Horn.

Step 4: To save the scenario and continue, click the SELECT button

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Fish, Wildlife & Marine Resources
New York Natural Heritage Program
625 Broadway, 5th Floor, Albany, New York 12233-4757
Phone: (518) 402-8935 • **Fax:** (518) 402-8925
Website: www.dec.ny.gov

Joe Martens
Commissioner

May 14, 2013

Jia Zhao
Erdman Anthony
2165 Brighton Henrietta Town Rd
Rochester, NY 14623

Dear Ms. Zhao:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to an Environmental Assessment for the Proposed Project – PIN 5759.70, site as indicated on your enclosed map, located in the Town of Hamburg, Erie County.

We have no records of rare or state listed animals or plants, or significant natural communities, on, or in the immediate vicinity, of your project sites.

The absence of data does not necessarily mean that rare or state-listed species, or significant natural communities, do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information which indicates their presence. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant ntural communities. This information should not be substituted for on-site surveys that may be required for environmental assessment.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities and other significant habitats maintained in the Natural Heritage Databases. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

Sincerely,

Nicholas Conrad, Information Services
NYS Department Environmental Conservation

Enc.
cc: Reg, 9, Wildlife Mgr.

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MEMORANDUM
DEPARTMENT OF TRANSPORTATION

TO: Kurt Felgemacher, Regional Local Project Liaison

FROM: Sylvia Jones, Regional Cultural Resource Coordinator

SUBJECT: **PROJECT SUBMITTAL PACKAGE - SECTION 106 RECOMMENDATIONS**
HAMBURG RAILROAD QUIET ZONE
TOWN OF HAMBURG, ERIE COUNTY
PIN 5759.70

DATE: **July 30, 2013**

As the Regional Cultural Resource Coordinator, I have reviewed the Project Submittal Package (PSP) prepared for the above referenced Locally Administered Federal Aid project for assessment of obligations under Section 106 of the National Historic Preservation Act (36 CFR Part 800).

Based on review of this PSP, I conclude:

☒ The project activities have no potential to cause effects on historic properties in accordance with 36 CFR 800.3(a)(1) therefore, there are no further obligations for compliance with Section 106 of the National Historic Preservation Act. This determination should be recorded in the project environmental documentation.

☐ The project activities may cause effects on historic properties:

- ☐ However, no historic properties are present. Therefore, there are no further obligations for compliance with Section 106 of the National Historic Preservation Act. This determination should be recorded in the project environmental documentation.
- ☐ A Cultural Resource Survey is needed to identify historic and cultural resources.

☐ A bridge inventory and evaluation of National Register eligibility is needed for BIN _____, a pre-1961 bridge that has not been previously evaluated.

☐ A Finding Documentation package is needed to assess the project effect on previously identified National Register (NR) listed property(s) and/ or NR eligible historic bridge(s).

☐ The following additional information is needed to complete our assessment:

- ☐ Detailed project description
- ☐ Project location map showing project limits (USGS Quad)
- ☐ BIN and date of construction for pre-1961 bridge(s)
- ☐ Documentation of prior ground disturbance
- ☐ Photos of buildings
- ☐ Information from SHPO web site (archaeological sensitivity and NR listed buildings)
- ☐ Other _____

SJJ/FRG/mwb

GREATER BUFFALO-NIAGARA
REGIONAL TRANSPORTATION COUNCIL

INITIAL PROJECT PROPOSAL

PIN: 575970 **DATE SUBMITTED:** 3/27/12

PROJECT TITLE: ESTABLISHMENT OF RAILROAD QUIET ZONES IN THE TOWN OF HAMBURG, NEW YORK (FFY 2009 APPROPRIATIONS DEMO NO. NY 749)

FUNCTIONAL CLASS.: County & Town Roads **FED. AID SYSTEM:** [ ] Interstate [ ] NHS **[X] Non-NHS**

PROBLEM DESCRIPTION: CSX and Norfolk Southern Railroad train horns are required to be sounded at all hours, disrupting the quality of life for approximately 20,000 Town residents living within hearing range of the tracks, as well as at several schools and recreational facilities located in close proximity to the tracks.

PROPOSED OBJECTIVES: To silence train horns through the installation of supplemental safety measures in compliance with Federal Railroad Administration requirements at the Rogers Road and Cloverbank Road crossings, thereby creating quiet zones along a 4.3 mile length of the parallel and adjacent CSX and Norfolk Southern tracks.

PRELIMINARY SOLUTION: Installation of 3 feet wide mountable concrete medians with reflective channelization devices along the centerline of the roads for a distance of 100 feet on each side of the CSX and Norfolk Southern crossings on Rogers Road and Cloverbank Road.

RELATIONSHIP TO LONG RANGE PLAN:

GOAL	Safety
PERF. MEAS.	FAPI Score
%	> 1%

ENVIRONMENTAL CLASSIFICATION:

[ ] NEPA Class I or SEQR Non-Type II (EIS)
[X] NEPA Class II or SEQR Type II (CE)
[ ] NEPA Class III or SEQR Non-Type II
[ ] SEQR Non-Type II (DR)
[ ] SEQR Exempt (Unlisted)

LANE KM (MILES): 0.40 mi. **CENTERLINE KM (MILES):** 0.20 mi. **AADT:** 7405 (Rogers) 2239 (Cloverbank) **TRUCK %:** 5% 4%

NUMBER OF BRIDGES: 0 **BIN(S):** N/A

PROJECT PURPOSE	WORK TYPE DESCRIPTION	SUB-WORK TYPE DESCRIPTION
Safety	Safety	Railroad Crossing Improvements

CONGRESSIONAL DISTRICT: 27 **SENATORIAL DISTRICT:** 58 **ASSEMBLY DISTRICT:** 146

REFERENCE MARKER LIMITS: FROM N/A TO N/A

MILEPOINT: FROM N/A TO N/A

TIP STATUS: [X] Required [ ] Not Required **STIP STATUS:** [X] Required [ ] Not Required

AIR QUALITY CONFORMITY [X] EXEMPT [ ] NON-EXEMPT [ ] N/A

CONSULTANT NEEDS: [ ] Scoping [X] Survey [X] Phase 1-4 [X] Phase 5-6 [X] Constr. Insp.

PROJECT MANAGEMENT GROUP: [ ] A [ ] BS [ ] BA [ ] BC [ ] C **SCHEDULE MODEL #** NA

PROJECT PHASES	ACTIVITY DURATION (Months)	ESTIMATED COST	FUND SOURCE	OBLIGATION/ LET DATE
Preliminary Design (1 - 4)	6	$0.025M	LOCAL (NYSDOS Contract No.TM07157)	5/1/12
Detailed Design (5 - 6)	6	$0.025M	LOCAL (NYSDOT Contract No. TM60503)	5/1/12
Construction	6	$0.450M	09 SPEC APPROP - SECT 125	5/1/13 LET
Construction Inspection	6	$0.025M	09 SPEC APPROP - SECT 125	5/1/13 LET
TOTAL PROJECT		$0.525M		

BASIS OF COST ESTIMATE: Federal Railroad Administration Quiet Zone Calculator cost estimates, vendor quotes, and construction bid prices.

BOND FUNDS: [ ] YES [X] NO **2005-2010 TRANSPORTATION MOU:** [ ] YES [X] NO

FUND MATCH: [ ] STATE [ ] LOCAL (specify) _____ [X] N/A

SPECIAL PROJECT CIRCUMSTANCES AND/OR PROGRAMMING REQUIREMENTS FFY 2009 Appropriations Demo No. NY 749; 100% Federal Funds; Town of Hamburg is the sponsor. This project is to be coordinated with grade crossing projects: PINs 593323, 593324, 593326, and 593327.

IPP PREPARER:	Gerard Kapsiak, P. E.	**DATE:**	3/26/12
PROJECT MANAGER:	Kurt Felgemacher	**DATE:**	3/26/12
RPPM RECOMMENDATION:		**DATE:**	5/17/12
LOCAL SPONSOR CONCURRENCE:		**DATE:**	5.22.12

ATTACHMENTS: General Location Map
Specific Location Maps

APPENDIX H
RIGHT-OF-WAY INFORMATION

TABLE OF ANTICIPATED PROPERTY RELEASES

Exhibit H.1 Table of Anticipated Property Releases				
TRN	**Property Address**	**Tax Account**	**Reputed Owner**	**Type of Release**
Alternative 5, 5A & 5B				
1	Cloverbank Road	169.16-16-1	Niagara Mohawk Power Corp.	Grading
2	Cloverbank Road	169.16-16-2	CSX Transportation	Grading
3	Rogers Road & Cloverbank Road	169.16-16-3	Norfolk & Western Railroad Co.	Grading