Infrastructure Project Recommendations

Infrastructure Project Recommendations

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Establish Regional Truck and Delivery Vehicle Electric Charging Stations

May 2021

BACKGROUND/NEED

As companies look to expand and promote their sustainability and "green" platforms, electrification of freight and delivery vehicles, along with the imminent increase in AV delivery vehicles, is on the near horizon. One effect this will have is to necessitate demand for electric vehicle charging stations (whether public or private). Canadian truck companies are a little ahead of the U.S. in terms of electrification of trucking fleets, however truck electric charging stations in the U.S. aren't as prevalent, making travel in the U.S. by Canadian electric trucking fleets more difficult. The need to deploy truck electric charging stations across the region will help accommodate Canadian trucking companies, can facilitate the electrification of local trucking and delivery fleets, and can help promote the area as that "Green" Cross-Border Logistics Hub.

DESCRIPTION

Identify locations to begin planning for delivery vehicle electric charging stations and identify grant or pilot programs to initiate such upgrades, then develop RFP's to work with vendors on deploying pilot electrification stations. Areas where the utility grid needs upgrades to accommodate electric charging stations for freight, transit, and municipal vehicle fleets (whether public or private charging stations) should also be identified and coordinated with the Public Service Commission, utilities, and fleet operators. Electrification of trucking will likely come for long distance hauling first (within next 5 years), and autonomous, electric delivery logistics will follow for "last-mile" deliveries.

IMPLEMENTATION

GBNRTC is currently working with the Western NY EV Taskforce, led by National Grid to create a process to solve the region's EV infrastructure planning needs. The taskforce aims to eventually identify a prioritized list of where to locate new charging sites in WNY. To further these efforts GBNRTC should coordinate with NYSERDA, NYSDOT, NYS Public Service Commission, New York Power Authority (NYPA), ITGO, the freight and logistics industry, and utilities to identify locations to begin planning for delivery vehicle electric charging stations and identify grant or pilot programs to initiate such upgrades, then develop RFP's to work with vendors on deploying pilot electrification stations. Areas where the utility grid needs upgrades to accommodate electric charging stations for freight, transit, and municipal vehicle fleets (whether public or private charging stations) should also be identified and coordinated with the Public Service Commission, utilities, and fleet operators. Electrification of trucking will likely come for long distance hauling first (within next 5 years), and autonomous, electric delivery logistics will follow for "last-mile" deliveries. Use of the New York State Public Service Commission "Make Ready Fund" and NYSERDA programs can be utilized.

SUMMARY

Goals Met:

Federal FAST Act

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NYS Freight Plan

●●●●●○

WNY REDC Strategic Plan

●●●○○○○○○○○○○○○

GBNRTC Moving Forward 2050

●●●○○○○○○

Freight Modes Benefited:

Priority:

MEDIUM

Estimated Cost: **$500 K* per station**

*Planning level estimate based on similar projects

GBNRTC
Greater Buffalo Niagara Regional Transportation Council

Establish Regional Truck and Delivery Vehicle Electric Charging Stations

May 2021

IMPLEMENTATION

NEAR TERM

- Coordinate with stakeholders on identifying the need for electric vehicle charging stations for the freight and logistics industry.
- Identify funding sources to start demonstration projects in the Buffalo-Niagara region.

LONG TERM

- Seek funding for design and construction of electric vehicle infrastructure.

LOCATION

Western New York and Finger Lakes regions

Example electric charging station for trucks. Source: North American Council for Freight Efficiency

AGENCY PARTNERS

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

NEW YORK STATE OF OPPORTUNITY. NYSERDA

NEW YORK STATE OF OPPORTUNITY. NY Power Authority

GBNRTC Greater Buffalo Niagara Regional Transportation Council

ITG

New York State Public Service Commission

Implement Buffalo-Niagara Integrated Corridor Management Strategies

May 2021

BACKGROUND/NEED

ICM uses technology-enabled transportation management and operations strategies that leverage existing assets to reduce congestion and enhance safety. ICM strategies are able to provide information to empower motorists to make decisions, offer variable toll rates that incentivize travel during less congested times, and enable the rapid removal of incidents, the optimizing of traffic signals, and other strategies to manage transportation capacity. The key benefits of ICM are:

- Increased safety with a reduction and/or prevention of crashes
- Reduction in vehicle hours traveled
- Improved weekday commute period travel conditions
- Greatest travel improvements found with traveler information and incident response strategies
- Reduction in emissions
- Arterial signal management increases the benefit-cost ratio

DESCRIPTION

NITTEC and GBNRTC tested ICM strategies for five different base conditions including weekday AM and PM peak commute periods, incident, holiday, snow, and game day traffic conditions along the I-190 corridor between Downtown Buffalo and Niagara Falls. The ICM strategies tested include:

- Dynamic Traveler Information
- Variable Speed Limits and Queue Warning
- Dynamic Lane Controls
- Freeway Incident Detection & Patrols
- Variable Toll Pricing
- Parking ITS
- Ramp Metering
- Arterial Signal Coordination
- Road Weather Information Systems and Plow Management System

The results of the tested ICM strategies indicated that two packages of ICM strategies are recommended – Package A (which includes Dynamic Traveler Information, Freeway Incident Detection and Patrol, Ramp Metering, Variable Speed Limits and Queue Warnings, and Variable Toll Pricing) and Package B (which includes the same strategies as Package A plus Arterial Signal Coordination). ICM strategies were grouped into packages because ICM strategies work together to improve congestion and benefits cannot be accurately understood when looking at them one at a time. Package A is a slightly less expensive concept, while Package B, which includes Arterial Signal Coordination, is a more expensive concept but provides a better benefit/ cost ratio. These packages of ICM strategies are highlighted further as separate project tasks under the ICM project.

SUMMARY

Goals Met:

Federal FAST Act

NYS Freight Plan

WNY REDC Strategic Plan

GBNRTC Moving Forward 2050

Freight Modes Benefited:

Priority:

Estimated Cost:

Package A	A	**$4,936,110**
Package B	B	**$5,109,416**

GBNRTC
Greater Buffalo Niagara Regional Transportation Council

Implement Buffalo-Niagara Integrated Corridor Management Strategies

May 2021

IMPLEMENTATION

NEAR TERM

- Seek funding opportunities such as grants for design and development
- Conduct a detailed design for specific ICM locations and equipment

LONG TERM

- Explore staged or phased deployment since it may be cost prohibitive to implement the whole system at one time.
- Provide a Performance Evaluation Program to evaluate effectiveness and make adjustments based on real-world conditions.

AGENCY PARTNERS

U.S. Department of Transportation
Federal Highway Administration

NEW YORK STATE OF OPPORTUNITY. NYSERDA

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

GBNRTC
Greater Buffalo Niagara Regional Transportation Council

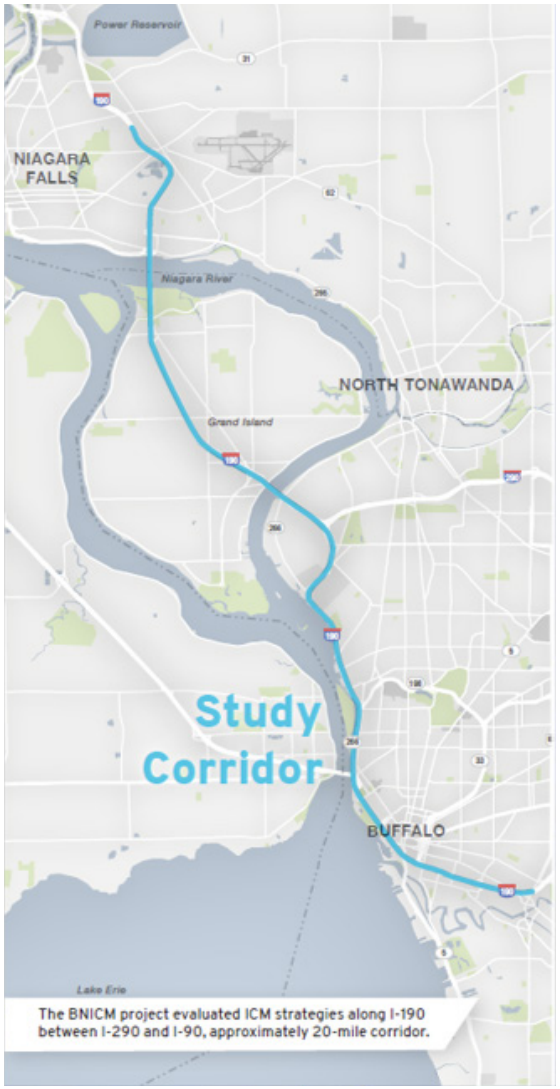
nittec
Travel Smart.

NEW YORK STATE OF OPPORTUNITY. Thruway Authority

ATCMTD is a potential source of funding for these projects.

LOCATION

Erie and Niagara Counties



Source: NITTEC

Implement Buffalo-Niagara Integrated Corridor Management Strategies

Package A and Package B Solutions

May 2021

STRATEGY 1 : Dynamic Traveler Information

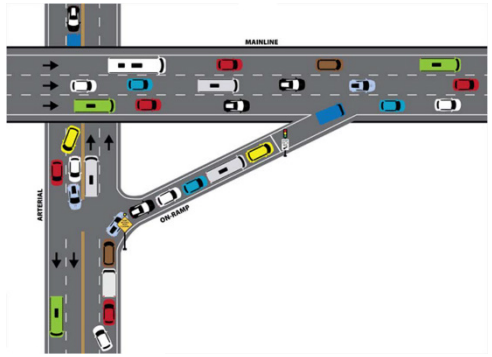
This strategy provides travelers with better information on road conditions before and during their trip, letting them make more informed and better decisions. Information is provided to the traveler through Variable Message Signs, mobile apps such as the NITTEC app, NYS 511, mobile GPS-based programs such as Waze and Google Maps, and other media, web, and mobile-based information. The estimated annual cost of this strategy is $144,978.

STRATEGY 2 : Freeway Incident Detection and Patrol

This strategy improves incident detection and clearance times using patrol vehicle teams (like current HELP trucks) to respond to incidents, assist motorists, and clear vehicles and debris. The estimated annual cost of this strategy is $296,998.

STRATEGY 3 : Ramp Metering

This strategy provides signaling at I-190 on-ramps to control the frequency at which vehicles enter the flow of traffic on I-190 during peak times. This improves traffic flow and reduces crashes by managing the amount of traffic entering the highway and by breaking up platoons that make it difficult to merge onto the highway. The estimated annual cost of this strategy is $356,791.



GBNRTC
Greater Buffalo Niagara Regional Transportation Council

Implement Buffalo-Niagara Integrated Corridor Management Strategies

Package A and Package B Solutions

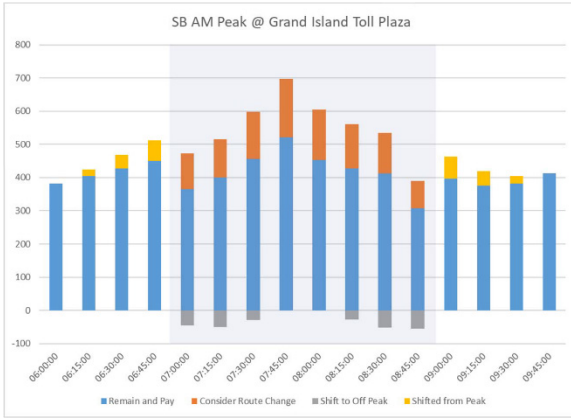
May 2021

STRATEGY 4 : Variable Speed Limits and Queue Warnings

This strategy uses an overhead gantry system with signs that can be changed to show variable speed limits based on the presence of congestion, incidents, or weather impairments along the highway. The intent of the variable speed limit is to adjust the speed of vehicles based on conditions of the highway to improve safety, or when congestion is present, reduce the speed of vehicles, which in turn allows for more capacity and allows the highway to handle more traffic at a slower, but not stop-and-go speed. The estimated annual cost of this strategy is $4,137,343.

STRATEGY 5 : Variable Toll Pricing

This strategy dynamically increases or decrease the price of tolls based on time of day to try to shift some travelers to travel during non-peak times. This would include the tolls for the I-190 north and south Grand Island Bridges.



STRATEGY 6 : Arterial Signal Coordination

This strategy improves flow on key arterials adjacent to I-190 by coordinating and optimizing traffic signals and providing travelers with better alternative routes in the event of congestion or an incident on I-190. The estimated annual cost of this strategy is $173,306.

GBNRTC
Greater Buffalo Niagara Regional Transportation Council

Expand Intelligent Transportation Systems (ITS) in the Region

May 2021

BACKGROUND/NEED

NITTEC was the recipient of an Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) grant from the USDOT to deploy a variety of ITS technologies across the region. NITTEC is currently undertaking the planning phase of this project, which includes Project Management Plan, System Engineering Management Plan, Project Evaluation Plan, Concept of Operations, System Requirements, and development of an RFP for the design, development, and implementation phases of the project.

DESCRIPTION

As outlined in the ATCMTD program, pilot projects should:

- Balance multi-modal demand at international border crossings through active demand management to provide acceptable levels of service;
- Improve freight operations through freight operator-targeted traveler information, including development of vehicle-to-infrastructure (V2I) applications supporting in-vehicle dissemination of alerts and advisories;
- Enable the benefits of integrated regional mobility by extending existing integrated corridor management (ICM) activities; and,
- Move toward an integrated region by creating the opportunity for agencies to share information and collaborate in real-time.

ELEMENTS

Below are a list of potential pilot projects that were discussed in concept as part of this study effort with NITTEC and various stakeholders that have the ability to benefit the freight and logistics industry, and that could be funded and implemented in the region once the ATCMTD planning phase is complete and NITTEC is ready to issue RFP's for pilot projects:

1. **Expand Border Crossing Travel Information in the Region**
2. **Develop Pilot Integrated Corridor Management (ICM) Strategies**
3. **Support NYSERDA Planning for New York State Platooning Demonstration**
4. **Implement Smart & Enhanced Multimodal Corridors (SEMA)**
5. **Expand Real-Time Truck Parking Information**
6. **Create Urban Truck Hub or Mobile Depot**
7. **Improve Circulation of Weather and Incident Related Closure Information**
8. **Implement Truck Low Bridge Clearance**

SUMMARY for each recommendation in the following pages

IMPLEMENTATION

NITTEC is currently undertaking the planning phase of this project, which includes Project Management Plan, System Engineering Management Plan, Project Evaluation Plan, Concept of Operations, System Requirements, and development of an RFP for the design, development, and implementation phases of the project.

Once the planning phase is completed, NITTEC will coordinate with transportation agencies and other community stakeholders to identify pilot projects to fund and implement across the region that deploy a variety of ITS technologies, help realize a multi-agency, technology enabled, and integrated regional mobility management system, and enhanced real-time information to travelers as part of the ATCMTD program.

AGENCY PARTNERS

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

GBNRTC Greater Buffalo Niagara Regional Transportation Council

NEW YORK STATE OF OPPORTUNITY. Thruway Authority

NEW YORK STATE OF OPPORTUNITY. NYSERDA

nittec Travel Smart.

Expand Border Crossing Travel Information in the Region

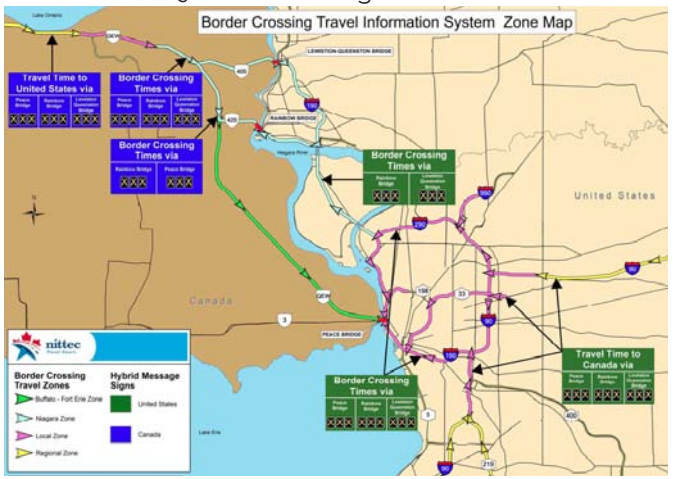
May 2021

DESCRIPTION

The freight and logistics community has continuously indicated that maneuvering the border is a challenge, whether it be from a congestion standpoint or a clearance standpoint. As discussed previously, technological pre-clearance of all commercial vehicles crossing the Peace Bridge is currently under design and involves relocation of CBP technologies (drive-thru non-intrusive inspection, license plate reads, radiation portal monitors, biometric identification) to Canada. Screening trucks and drivers on the Canadian side of the bridge will allow CBP to adjudicate as the truck is traversing the bridge and make an admissibility or referral determination prior to the truck arriving at the primary inspection booth. This will result in a much quicker primary inspection and significantly reduce commercial border wait times. Completion of this project is anticipated by the fall of 2021. Relocation of CBP infrastructure to Canada allows for the opportunity to redesign and reconfigure the U.S. Customs plaza to make it more efficient and functional and more aesthetically pleasing, befitting a key entry to the United States. This demonstration project can be transferrable to the Lewiston-Queenston Bridge in the near-term.

As a compliment to the Peace Bridge technological pre-clearance project, NITTEC has identified the need to expand the deployment of Variable Message Signs (VMS) across the region in order to enhance real-time border crossing information. These VMS boards would be dedicated to portraying real-time border crossing information for the Peace Bridge, Rainbow Bridge, and Lewiston-Queenston Bridge. Proposed locations for new VMS boards are outlined below:

- Westbound I-90 (NYS Thruway) just east of the Transit Road interchange (Exit 49).
- Westbound SR 33 (Kensington Expressway) east of the Union Road interchange.
- Eastbound I-90 (NYS Thruway) between SR 400 and I-190.
- Westbound I-290 west of the Delaware Avenue interchange.
- Northbound I-190 east of the Oak/ Elm Street interchange.
- Northbound I-190 on Grand Island approaching the North Grand Island Bridge (this VMS board will only display real-time border crossing information for Rainbow Bridge and Lewiston-Queenston Bridge).



Proposed Locations of Additional Border Crossing VMS Boards. Source: NITTEC

NEAR TERM

- Continue the ATCMTDplanning phase to then identify pilot projects to be

LONG TERM

- Develop scope for specific projects to be implemented and seek funding sources to implement.

SUMMARY

Goals Met:

Federal FAST Act ●●●●●●○

NYS Freight Plan ●●●●●●

WNY REDC Strategic Plan ●●●●○○○○○○○○○○○○

GBNRTC Moving Forward 2050 ●●●●○○○○○

Freight Modes Benefited:

Priority: HIGH

Estimated Cost: $3 M*

AGENCY PARTNERS

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

GBNRTC Greater Buffalo Niagara Regional Transportation Council

nittec Travel Smart.

*Planning level estimate based on similar projects

Develop Pilot Integrated Corridor Management (ICM) Strategies

May 2021

DESCRIPTION

Following completion of the ATCMTD planning project, early next steps would be to identify specific ICM elements at border crossings and along the I-190 corridor that should be piloted, and then develop an application for use of ATCMTD funds for an ICM demonstration project. One potential ICM project is discussed as part of its own project sheet - Buffalo-Niagara Integrated Corridor Management.

To further alleviate peak commercial vehicle congestion at the Peace Bridge and Lewiston-Queenston Bridge, the ICM project could explore deploying a dynamic variable toll pricing system. This would allow the toll for crossing the bridge to be adjusted based on expected peak truck volumes throughout the week in an attempt to better spread peak commercial vehicle traffic out across the day and week. This would work by charging a premium price for commercial vehicles to cross the bridges during typical congested periods, and lower prices for commercial vehicles to cross during typical low volume periods.

Another corridor that could become the focus of ICM strategies is I-90 between Buffalo and Rochester. According to the FAF, by 2045, some rural sections of I-90 between Buffalo and Rochester begin to show up as reaching V/C ratio capacity and may become congested. For these rural sections of I-90, the use of a smart and connected ICM environment would help the corridor become less congested through the use of technology. The onset of connected vehicles (i.e., truck platooning and other CVs) is imminent and already being piloted. Early strategies would be to deploy vehicle-to-infrastructure (V2I) roadside sensors that establish the framework to allow for Connected and Autonomous Vehicle use. Connected Vehicles are able to travel closer together and thus help to safely increase capacity of roadways. V2I infrastructure also improves freight operations through freight operator-targeted traveler information, including development of applications supporting in-vehicle dissemination of alerts and advisories. This deployment can be done to compliment ongoing truck platooning pilot planning along the New York State Thruway, discussed further in the following.

IMPLEMENTATION

NEAR TERM

- Continue the ATCMTD xplanning phase to then identify pilot projects to be implemented.

LONG TERM

- Develop scope for specific projects to be implemented and seek funding sources to implement.

LOCATION

Buffalo-Niagara Region, New York

Example of variable speed limits and queue warnings. Source: NITTEC

SUMMARY

Goals Met:

Federal FAST Act

NYS Freight Plan

WNY REDC Strategic Plan

GBNRTC Moving Forward 2050

Freight Modes Benefited:

Priority:

MEDIUM

Estimated Cost: **Not Known at this Time**

AGENCY PARTNERS

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

GBNRTC Greater Buffalo Niagara Regional Transportation Council

nittec Travel Smart.

Support NYSERDA Planning for New York State Platooning Demonstrations

May 2021

DESCRIPTION

NYSERDA, in partnership with NYSDOT, recently performed stakeholder interviews and preliminary planning for a potential New York State platooning demonstration. The findings from the NYS platooning stakeholder workshop and the preliminary planning discussions indicate that continuing to pursue a truck platooning demonstration in NYS is warranted.

LOCATION

Buffalo-Niagara Region, New York

Potential location for truck platoon staging.

Buffalo-Niagara Regional Freight Plan

BACKGROUND

Truck Platooning, linking two or more trucks through connected vehicle technology is an application of vehicle technology that increases the efficiency of Freight . Benefits of using connected vehicle in this way include, fuel savings, GHG reduction, time savings, and increased safety. As capabilities ncrease there is greater potential to incorporate automated truck vehicles.

AGENCY PARTNERS

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

GBNRTC
Greater Buffalo Niagara Regional Transportation Council

NEW YORK STATE OF OPPORTUNITY. NYSERDA

NEW YORK STATE OF OPPORTUNITY. Thruway Authority

IMPLEMENTATION

NEAR TERM

- GBNRTC should monitor this demonstration and begin to identify areas for potential truck platoon staging, which could be located near the I-90 interchange at Transit Road (where a park-and-ride lot and trucking terminals already exist).

LONG TERM

- If agreements can be reached on the legalities of truck platooning and with a commercial truck platoon system developer, then GBNRTC should work with stakeholders to implement a truck platoon staging area in the region.

SUMMARY

Goals Met:

Federal FAST Act

NYS Freight Plan

WNY REDC Strategic Plan

GBNRTC Moving Forward 2050

Freight Modes Benefited:

Priority:

MEDIUM HIGH

Estimated Cost: $8.4 M*
for Truck Platooning Staging Area (based on construction estimates from an FHWA study in Ohio)

*Planning level estimate based on similar projects

GBNRTC
Greater Buffalo Niagara Regional Transportation Council

Implement Smart & Enhanced Multimodal Corridors (SEMA)

May 2021

DESCRIPTION

Using technology to increase capacity of roadways and facilitate the flow of goods movement should be considered for corridors that are heavily relied upon for freight movements. Overall, freight and logistics stakeholders indicated that the Buffalo-Niagara region's transportation network is adequate for their needs. Comments were made that, in general, urban delivery could be improved by way of better coordinating traffic signals to reduce urban congestion and improve on-time performance of deliveries. One potential ATCMTD recommendation that could be applied for is to identify one or more corridors in the region where piloting SEMA strategies would benefit the freight and logistics industry. Important SEMA features would entail V2I roadside sensors that would facilitate dynamic traffic signal coordination and supply real-time travel information to vehicles. Potential freight and logistics benefited SEMA corridors could include:

- Route 5/ Main Street
- Bailey Avenue (with focus on the stretch between Main Street and South Park Avenue)
- One of the east-west corridors such as Walden Avenue (with focus on the stretch between Bailey Avenue and Town Line Road at the Lancaster/ Alden border), Genesee Street (with focus on the stretch between Union Road and Town Line Road at the Lancaster/ Alden border), or Broadway (with focus on the stretch between Bailey Avenue and Village of Lancaster)
- Niagara Falls Boulevard, with focus on the section in Niagara Falls between Packard Road and Niagara Falls International Airport.

AGENCY PARTNERS

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

GBNRTC Greater Buffalo Niagara Regional Transportation Council

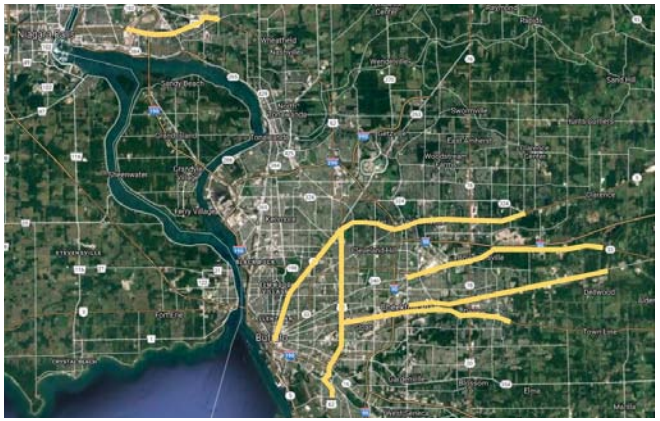
nittec Travel Smart.

SEAL OF THE CITY OF BUFFALO

NEW YORK STATE OF OPPORTUNITY. NYSERDA

LOCATION

Amherst, New York



IMPLEMENTATION

NEAR TERM

- GBNRTC should monitor this demonstration and begin to identify areas for potential truck platoon staging, which could be located near the I-90 interchange at Transit Road (where a park-and-ride lot and trucking terminals already exist).

LONG TERM

- If agreements can be reached on the legalities of truck platooning and with a commercial truck platoon system developer, then GBNRTC should work with stakeholders to implement a truck platoon staging area in the region.

SUMMARY

Goals Met:

Federal FAST Act

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NYS Freight Plan

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WNY REDC Strategic Plan

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GBNRTC Moving Forward 2050

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Freight Modes Benefited:

Priority:

MEDIUM HIGH

Estimated Cost: **Not Known at this time**

GBNRTC Greater Buffalo Niagara Regional Transportation Council

Expand Real-Time Truck Parking Information

May 2021

DESCRIPTION

There are two general categories of truck parking needs: locations for long haul drivers to stop for rest/ sleep, and locations for drivers making local deliveries or pickups to stage while awaiting appointment times. The FHWA has been working with a number of states on implementing Truck Parking Information Management Systems (TPIMS). These systems are intended to convey real-time information to truck drivers about available parking, thereby maximizing utilization of existing truck parking capacity. TPIMS collects real-time parking information using sensors in the parking facility. The data is then sent to an information processing center or advanced traffic management center and is then disseminated to the trucking community via in-cab units, roadside VMS boards, and mobile applications. The system can be expanded to allow for a reservation type system to be in place where truck drivers can reserve a parking space ahead of time. The TPIMS is being deployed in a number of states outside of New York. In addition to TPIMS, FHWA is working with states on other deployment technologies, including overhead sensors that simply count the number of trucks that enter and exit a rest stop, providing information as to approximately how much capacity exists at a truck parking area.

LOCATION

Buffalo-Niagara Region, New York

Typical TPIMS system,
Source: www.trucksparkhere.com

IMPLEMENTATION

NEAR TERM

- GBNRTC should work with NYS Thruway Authority, NYSDOT, NYSERDA, and other public, private, and not-for-profit partners to explore deployment of a real-time truck parking information system (TPIMS or a similar compatible system).

LONG TERM

- A demonstration project for the system could initially be put in place at Thruway rest areas and then expanded to include private truck stops (such as at the Walden Avenue exit).

AGENCY PARTNERS

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

GBNRTC
Greater Buffalo Niagara Regional Transportation Council

nittec

NEW YORK STATE OF OPPORTUNITY. NYSERDA

NEW YORK STATE OF OPPORTUNITY. Thruway Authority

SUMMARY

Goals Met:

Federal FAST Act ●●●●●●●○

NYS Freight Plan ●●●●●●

WNY REDC Strategic Plan ●●●●○○○○○○○○○○○○

GBNRTC Moving Forward 2050 ●●○○○○○○○

Freight Modes Benefited:

Priority:

MEDIUM HIGH

Estimated Cost: **$1.75 M***
estimate for 5 sites based on similar projects

*Planning level estimate based on similar projects

GBNRTC
Greater Buffalo Niagara Regional Transportation Council

Create Urban Truck Hub or Mobile Depot

May 2021

DESCRIPTION

The concept behind Urban Truck Hubs or Mobile Depots is to identify truck parking areas in urban areas where larger trucks making deliveries can stage while other "last-mile" delivery methods make final deliveries to their destinations. The growing difficulty with multiple trucks and vans maneuvering and using curb space on narrow and congested urban streets, combined with the growing desire by consumers to have next-day or same-day delivery of goods is proving difficult to serve consumer needs solely through the use of delivery trucks that transport directly from a warehouse, distribution or sorting center, or retailer. The current state of next-day or same-day delivery is focused on time sensitivity rather than cost sensitivity. As the need to focus more on cost sensitivity increases, alternative "last-mile" delivery methods will continue to be tested and deployed, such as contractor or third-party delivery providers (i.e., Instacart, Uber Eats, Amazon Fresh), autonomous vehicles, cargo bikes, delivery bots, and drones. This concept, already being deployed in Europe and soon to be tested in Toronto, allows for a larger delivery vehicle to get close enough to its destination for the "last-mile" delivery method to complete the delivery in a more economically efficient way.

An Urban Truck Hub or Mobile Depot uses an underutilized site (typically a surface parking lot, land use that experiences different peaks than deliveries such as a church, or underutilized curb space) to allow trucks and delivery vehicles to stage and complete "last-mile" pick-ups or deliveries to consumers that are located on congested urban streets rather than crowding urban streets and curb space with trucks. Some Mobile Depots are being tested for drone landing in urban areas, with "last mile" delivery from a larger drone to consumers.

IMPLEMENTATION

NEAR TERM

- In coordination with NITTEC, NYSERDA, City of Buffalo, freight stakeholders, third-party delivery providers, and parking lot operators, GBNRTC should begin coordination and planning for an Urban Truck Hub or Mobile Depot demonstration project for an urban neighborhood.

LONG TERM

- The concept of the Urban Truck Hub or Mobile Depot should be considered for implementation as a pilot project under the ATCMTD in one or more denser urban neighborhoods across the City.

AGENCY PARTNERS

GBNRTC Greater Buffalo Niagara Regional Transportation Council

SEAL OF THE CITY OF BUFFALO

NEW YORK STATE OF OPPORTUNITY. NYSERDA

nittec Travel Smart.

SUMMARY

Goals Met:

Federal FAST Act ●●●●○○○

NYS Freight Plan ●●●●●●

WNY REDC Strategic Plan ●●●●○○○○○○○○○○○○

GBNRTC Moving Forward 2050 ●●●●○○○○○

Freight Modes Benefited:

Priority:

MEDIUM LOW

Estimated Cost: **$500 K***
For Urban Tactical Pilot

*Planning level estimate based on similar projects

Improve Circulation of Weather and Incident Related Closure Information

May 2021

DESCRIPTION

NITTEC and freight stakeholders have both indicated that a more reliable and quicker communication method is needed to get real-time information regarding weather-related closures and detours, border crossing information, and incident related delays and closures to the trucking community. An example is when Pennsylvania and New York close I-90 for weather or incident related events, but Pennsylvania opens I-90 before New York State does. Trucks begin using I-90 through Pennsylvania but then when they reach the New York State line, must exit and use U.S. 20 or NYS Route 5, which aren't equipped to handle larger volumes of truck traffic. Ideally the system would include Vehicle-To-Infrastructure (V2I) Applications, conduct truck parking inventory, Real-Time Traffic, Parking and Weather Information, Municipal Signal Systems, an Integrated Incident Management System (IIMS), and an Advanced Traffic Management System. Exact details of the number of units and exact location will need to be coordinated with NITTEC and NYSDOT.

LOCATION

Buffalo-Niagara Region

Source: One Region Forward

AGENCY PARTNERS

GBNRTC Greater Buffalo Niagara Regional Transportation Council

SEAL OF THE CITY OF BUFFALO

NEW YORK STATE OF OPPORTUNITY. | NYSERDA

nittec Travel Smart.

IMPLEMENTATION

NEAR TERM

- Better coordination between New York and Pennsylvania officials on closures to and reopening of I-90 has been identified by the freight and logistics industry as an easy fix to avoid travel confusion.

LONG TERM

- A pilot project under the ATCMTD could be deployment of V2I infrastructure that would communicate closures and incidents in real-time to truck drivers, and more clearly relay information on detour routes to truck drivers. This would involve a larger deployment of roadside sensors along Interstate highway and along arterials that are designated as detour routes.

SUMMARY

Goals Met:

Federal FAST Act ●●●●●○○

NYS Freight Plan ●●●●●○

WNY REDC Strategic Plan ●●●○○○○○○○○○○○○○

GBNRTC Moving Forward 2050 ●●●●○○○○○

Freight Modes Benefited:

Priority:

HIGH

Estimated Cost: **$200K - $300K***
For each system
(V2I sensors, communication, and VMS Boards)

*Planning level estimate based on similar projects

GBNRTC Greater Buffalo Niagara Regional Transportation Council

Implement Truck Low Bridge Clearance Warning Detection

May 2021

DESCRIPTION

NYSDOT and other transportation agencies have started using technology such as truck height detectors, cameras, and electric signs to warn truck drivers of upcoming low bridge clearance heights. These detection systems can help save bridges with low clearance from constant collisions from trucks, and thus help to extend their structural life. The detection system works by using a camera or laser detection system prior to a low bridge that identifies if a vehicle is too tall for the bridge clearance. If the camera or laser detects a vehicle too large for the clearance, a VMS board or sign with flashing beacons lights up detecting the truck driver not to proceed. Advanced implementation involves the use of V2I infrastructure to provide in-cab notifications to the truck driver to not proceed to the bridge, and eventually automatic vehicle stopping mechanisms to avoid bridge collisions. Figure below hows an example of a low bridge clearance warning detection deployed by NYSDOT on Long Island.

GBNRTC is currently in the process of approving PIN 581451. This NYSDOT project will "bring expressway ramp termini and low clearance bridge locations into compliance with Statewide design standards, Federal MUTCD Section 2B.41, NYS MUTCD, and Section 1621(c) of NYS Vehicle and Traffic Law, effective signing to promote safe and efficient traffic flow will be provided." This mainly involves enhanced signing countermeasures. Locations for low clearance bridge detection include:

- Niagara Scenic Parkway and LaSalle Expressway in the City of Niagara Falls – The I-190 bridge over the Niagara Scenic Parkway/ LaSalle Expressway has a posted low clearance of 11' 8", and is routinely hit by trucks, buses, and other commercial vehicles. There is a portable VMS sign posted at the off-ramp from northbound I-190 to Niagara Scenic Parkway signaling that trucks are prohibited from using Niagara Scenic Parkway; however, the bridge is still routinely hit.
- Several locations on NY Route 249 in the Village of Farnham – The CSX and NS bridges over NY Route 249 have posted clearances of 12' 5".
- Several locations on NY Route 5 in the Town of Brant – The CSX and NS bridges over NY Route 5 have post clearances of 12' 6".

Example of low bridge clearance warning detection system in operation in Long Island. Source: NYSDOT.

SUMMARY

Goals Met:

Federal FAST Act

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NYS Freight Plan

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WNY REDC Strategic Plan

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GBNRTC Moving Forward 2050

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Freight Modes Benefited:

Priority:

MEDIUM

Estimated Cost: **$350 K* Each**

*Planning level estimate based on similar projects

Implement Truck Low Bridge Clearance Warning Detection

DESCRIPTION CONT.

Another pilot that could come out of the ATCMTD program deployment of a low bridge clearance warning detection system for non-expressway locations that can be piloted at several low bridges that frequently experience truck collisions, including the locations listed above as well as:

- Colvin Boulevard in the City of Buffalo – The CSX bridge over Colvin Boulevard between Amherst Street and Hertel Avenue has a posted low clearance point of 9' 1" and is routinely hit by trucks that aren't centered on the arch span.
- Clinton Street in the City of Buffalo – The CSX bridge over Clinton Street between Jefferson Avenue and Fillmore Avenue has a posted clearance of 11' 6". Additionally, the CSX bridge over Clinton Street between New Babcock Street and Bailey Avenue has a posted clearance of 11' 11". Clinton Street is signed as State Route 354 and is heavily used by trucks, and these bridges have been the recipient of several truck collisions in the past.
- Young Street in the City of Tonawanda – The CSX bridge over Young Street north of State Street has a posted clearance of 11' 10", and regardless of multiple signs posted warning of low bridge clearance, is constantly hit by trucks.

IMPLEMENTATION

NEAR TERM

- GBNRTC should coordinate with NYSDOT and local municipalities on a pilot for a low bridge clearance warning detection system, verifying the locations that should be prioritized for such a deployment.

LONG TERM

- A pilot under the ATCMTD could be deployment of a low bridge clearance warning detection system that can be piloted at several low bridges that frequently experience truck collisions.

AGENCY PARTNERS

GBNRTC Greater Buffalo Niagara Regional Transportation Council

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

SEAL OF THE CITY OF BUFFALO

nittec Travel Smart.

Improve Bethlehem Steel Advanced Manufacturing Park Infrastructure

May 2021

BACKGROUND/NEED

While improvements have been made and some infrastructure has been constructed to provide initial access to the Bethlehem Steel site, ECIDA has identified, through its Bethlehem Steel Advanced Manufacturing Park master plan, several additional transportation and water/ sewer infrastructure projects that are needed to enhance the park and further market the site as an Advanced Manufacturing Park.

DESCRIPTION

The below roadway access projects are identified as needed to help grow the Bethlehem Steel Advanced Manufacturing Park, and are also portrayed in the Bethlehem Steel Advanced Manufacturing Park Master Plan:

1. **Northern Access**

   Extend Ridge Road from Fuhrmann Boulevard west into the site to provide access to lots at the northern portion of the site (lots 7, 8, 9, and 10).

2. **Southern Access**

   Construct a new roadway from Route Construct a new roadway from Route 5 (aligned with the intersection of Madison Avenue) to provide access to the southern lot, south of Smokes Creek. Construction of this southern access is recommended to accompanied by a 200' southbound right turn lane (as outlined in the Bethlehem Steel Advanced Manufacturing Park Master Plan and GEIS) to minimize impacts to the southbound travel lanes.

3. **Additional Access**

   Construct a new roadway from Route 5 (aligned with the intersection of Odell Street) to provide additional access to the central portion of the site, with the potential to eventually provide public access to the Port of Buffalo.

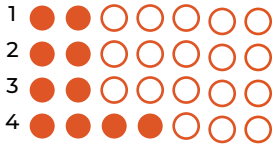
4. **Improve Route 5 /Ridge Road Interchange**

   Construction of designated left turn and right turn lane on southbound NY Route 5 off ramp intersection with Ridge Road to alleviate backups on the ramp during peak times. Currently, vehicles create left turn and right turn lanes by utilizing the shoulders of the ramp; reconstruction of the ramp would provide two lanes dedicated for left turns and right turns, and appropriate shoulder.

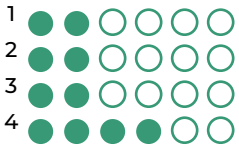
SUMMARY

Goals Met:

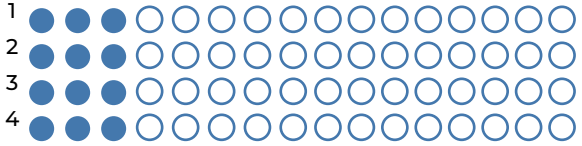
Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050

Freight Modes Benefited:

Priority:

Estimated Cost:

Northern Access	**$1.5M**
Southern Access	**$2M**
Additional Access	**$1.5M**
Improve NYS Route 5/ Ridge Road Interchange	**$1.5M**

*Planning level estimate based on similar projects

GBNRTC
Greater Buffalo Niagara Regional Transportation Council

Improve Bethlehem Steel Advanced Manufacturing Park Infrastructure

May 2021

IMPLEMENTATION

NEAR TERM

- GBNRTC, in partnership with ECIDA, should identify and seek funding mechanisms to get the remaining access roads constructed.

LONG TERM

- Continue to market the Bethlehem Steel Advanced Manufacturing Park.

LOCATION

Niagara Falls, New York

Bethlehem Steel Advanced Manufacturing Park Master Plan, source: ECIDA

AGENCY PARTNERS

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

NEW YORK STATE OF OPPORTUNITY. Western New York Regional Economic Development Council

GBNRTC Greater Buffalo Niagara Regional Transportation Council

ECIDA THE ECONOMIC DEVELOPMENT CORPORATION FOR ERIE COUNTY

Repair Niagara County Rural Bridges

May 2021

BACKGROUND/NEED

Niagara County sought USDOT BUILD grants in 2019 and 2020 to improve several roads and bridges in the county that are in disrepair and need attention through a BUILD grant application for their Niagara County Rural Bridges Improvement Initiative. While unsuccessful in attaining the BUILD grant, the need for improvements to these roads and bridges remains and are supported by freight stakeholders in the region and is one of the ITGO priorities for 2020.

DESCRIPTION

Improvements to these Niagara County bridges support agribusiness in Niagara County, as they are needed for transport of goods or raw materials and will yield a positive impact on the County's farms and agribusiness.

ELEMENTS

1. **Carmen Road over Golden Hill Creek, Town of Somerset**

   Replace this structurally deteriorating bridge with a longer, wider bridge to accommodate larger agricultural vehicles, including new abutment, footing, and wing walls.

2. **Johnson Creek Road over Golden Hill Creek, Town of Somerset**

   Replace this structurally deteriorating bridge with a longer, wider bridge to accommodate larger agricultural vehicles, including new abutment, footing, and wing walls.

3. **Gasport Road over Eighteen Mile Creek, Town of Royalton**

   Replace this structurally deteriorating bridge with a longer, wider bridge to accommodate larger agricultural vehicles, including new abutment, footing, and wing walls. Creek. Bridge rehab, will be included in the 2021 BUILD application

4. **Hartland Road over Golden Hill Creek, Town of Somerset**

   Replace this structurally deteriorating bridge with a longer, wider bridge to accommodate larger agricultural vehicles, including new abutment, footing, and wing walls.

5. **Royalton Center over Mud Creek**

   Rehab this bridge, which hasn't seen major rehab work done since its construction in 1964.

6. **Ditch Road over Black Creek**

   Undertake bridge rehab, which hasn't seen major rehab work done since 1982.

7. **West Somerset Road over Fish Creek** Undertake bridge rehab, will be included in the 2021 BUILD application.

8. **Ewings Road over Eighteen Mile Creek**. Undertake bridge rehab, will be included in the 2021 BUILD application.

SUMMARY

Goals Met:

Federal FAST Act
ALL ●●●○○○○

NYS Freight Plan
ALL ●●●●○○

WNY REDC Strategic Plan
ALL ●●○○○○○○○○○○○○○○

GBNRTC Moving Forward 2050
ALL ●●○○○○○○○

Freight Modes Benefited:

Priority:

5, 6	MEDIUM
1, 2, 3, 4, 7, 8	MEDIUM HIGH

Estimated Cost:

Carmen Road over Golden Hill Creek	**$1.56M**
Johnson Creek Road over Golden Hill Creek	**$1.37M**
Gasport Road over Eighteen Mile Creek	**$1.4M**
Hartland Road over Golden Hill Creek	**$1.1M**
Royalton Center over Mud Creek	**$500K**
Ditch Road over Black Creek	**$400K**
West Somerset Road over Fish Creek	**Unknown at this time**
Ewings Road over Eighteen Mile	**Unknown at this time**

*Planning level estimate based on similar projects

Repair Niagara County Rural Bridges

May 2021

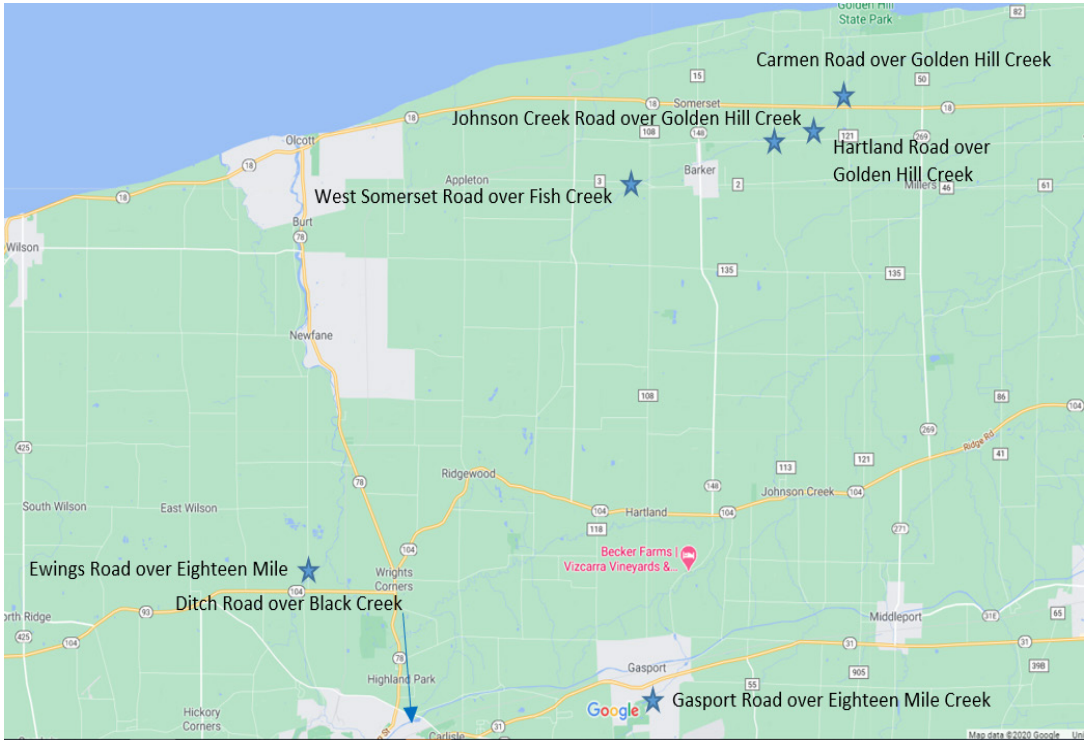
IMPLEMENTATION

NEAR TERM

- GBNRTC, in partnership with Niagara County, should continue to identify and seek funding mechanisms to reconstruct these Niagara County bridges.

LOCATION

Niagara County, New York



AGENCY PARTNERS

GBNRTC Greater Buffalo Niagara Regional Transportation Council

Niagara County Center for Economic Development

ITG

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

County Of NIAGARA STATE OF NEW YORK

Repair or Replace CP Draw Bridge

CP Draw Bridge Replacement, G&W Connection from NS to BPRR Line, CN Northern and CN Southern Connection

May 2021

BACKGROUND/NEED

The CP Draw Bridge is utilized by several Class I railroad as well as short line railroads. While this bridge still creates a bottleneck to the larger rail network as well as a lack of redundancy in rail connections over the Buffalo River, the stakeholders involved in this study, including Class I and Short Line Railroads, all indicated that the CP Draw Bridge satisfactorily addresses their needs from an operating standpoint. New Precision Scheduled Railroading (PSR) has allowed trains to pass over the bridge efficiently and with little congestion. The biggest concerns brought forth was that stakeholders would prefer alternative bridge crossings so that they don't have to constantly negotiate with the bridge dispatcher – CSX, even though the bridge is owned by Norfolk Southern. There is also a desire for additional crossings that will add redundancy to the rail network should the CP Draw Bridge have to close for repair and provide railroads with options if dispatch is backing up trains.

DESCRIPTION

The 2010 Freight Plan identified 4 potential projects that could either reconstruct or replace the CP Draw. These projects are outlined below:

1. CP Draw Bridge Replacement.
One concept was to replace the inactive northern bridge (currently fixed in the upright position) with a new bridge structure, connecting the CSX lines on either side of the Buffalo River and allowing NS and short lines use of the existing structure. The questions with this alternative revolve around whether this would be a moveable bridge (Buffalo River is a navigable waterway) or if the portion of the river could be de-designated as a navigable waterway to allow for a fixed bridge. This alternative would also require realigning CSX tracks on either side of the river to access a new bridge structure. This alternative has been under consideration for some time, but has never progressed One concept was to replace the inactive northern bridge (currently fixed in the upright position) with a new bridge structure, connecting the CSX lines on either side of the Buffalo River and allowing NS and short lines use of the existing structure. The questions with this alternative revolve around whether this would be a moveable bridge (Buffalo River is a navigable waterway) or if the portion of the river could be de-designated as a navigable waterway to allow for a fixed bridge. This alternative would also require realigning CSX tracks on either side of the river to access a new bridge structure.

2. G&W Connection from NS to Buffalo Line to BPRR Line.
Involves construction of a second rail connection across the Buffalo River to relieve congestion at CP Draw by providing a secondary rail crossing for Genesee & Wyoming Railroad (GWRR) and NS trains. This project was awarded Passenger Freight Rail Assistance Program (PFRAP)/ multimodal funds but has not advanced, as additional funding is still needed.

3. CN Northern Connection (Niagara Branch).
Canadian National Railway (CN) has experienced some delays in the Buffalo-Niagara region because they occasionally need to use the CSX tracks over CP Draw Bridge to access Frontier Yard in order to interchange with other rail carriers. Currently, trains coming from or going to Canada must use the Belt Line because the International Bridge rail connection only allows for movements to/from the north with no access to the Niagara Branch (through downtown). If CN had access to Frontier Yard via CSX trackage rights over the Niagara Branch, then they could avoid the CP Draw Bridge entirely, however there are clearance restrictions on the Niagara Branch south of International Bridge that may limit this traffic. This would require construction of a "wye" in the area near Niagara Street and Tonawanda Street that would allow trains to move southbound from Canada to the Niagara Branch rather than continuing to the Belt Line and accessing the CP Draw Bridge.

4. CN Southern Connection (Avenue Running Track).
This alternative complements the Northern Connection by providing for a new, automated southern connection from the Niagara Branch to the Avenue Running Track, thus allowing CN trains to access South Buffalo via CSX's Compromise Branch and bypassing both the CP Draw and Frontier Yard, however there are clearance restrictions on the Niagara Branch south of International Bridge that may limit this traffic.

SUMMARY

Goals Met:

Federal FAST Act

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NYS Freight Plan

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WNY REDC Strategic Plan

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GBNRTC Moving Forward 2050

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Freight Modes Benefited:

Priority:

MEDIUM

Estimated Cost:

CP Draw Bridge Replacement	**$40M**
G&W Connection from NS to BPRR Line	**$3M**
CN Northern Connection (Niagara Branch)	**$3M**
CN Southern Connection (Avenue Running Track)	**$5M**

(2010 dollars)

*Planning level estimate based on similar projects

Repair or Replace CP Draw Bridge

CP Draw Bridge Replacement, G&W Connection from NS to BPRR Line, CN Northern and CN Southern Connection

May 2021

IMPLEMENTATION

Prior to selecting any CP Draw alternative, it is first recommended that a further planning study be conducted to identify feasible alternatives for an additional Buffalo River railroad crossing that can address needs of all users and be a benefit to the region, as well as provide updated cost estimates for each so that a unified approach to enhancing a new Buffalo River rail crossing can be achieved.

LOCATION

Buffalo, New York

NEAR TERM

- Conduct planning study to identify feasible alternatives for an additional Buffalo River rail crossing.
- Develop updated cost estimates for feasible concepts.

LONG TERM

- Select Buffalo River rail crossing concept and pursue funding for design and construction.

AGENCY PARTNERS

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

CSX

GBNRTC Greater Buffalo Niagara Regional Transportation Council

ECIDA THE ECONOMIC DEVELOPMENT CORPORATION FOR ERIE COUNTY

NEW YORK STATE OF OPPORTUNITY. Empire State Development

Improve Falls Road Bridge over Erie Canal

May 2021

BACKGROUND/NEED

The Falls Road Bridge over Erie Canal, located in Lockport, is structurally deficient and currently has weight restrictions. The bridge has continuously been identified as a priority for improvements to address structural issues of the bridge, as well as track rehabilitation.

/DESCRIPTION

Rehabilitation of the Falls Road Bridge over Erie Canal is needed to ensure safety of railroad operations and increase capacity to allow for 286,000-pound rail cars.

LOCATION

Lockport, New York

IMPLEMENTATION

In 2018, $900,000 was awarded through the Governor's Passenger and Freight Rail Assistance Program for upgrades and state of good repair to Falls Road Railroad Bridge over Erie Canal. An additional $480,000 was awarded in 2019 from Northern Border Regional Commission to fund state of good repair to Falls Road Railroad. While construction of the bridge hasn't yet begun, the $1.38M in awarded grant funding should help to continue to advance the project towards that goal.

AGENCY PARTNERS

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

FALLS ROAD RAILROAD CO. INC.

GBNRTC Greater Buffalo Niagara Regional Transportation Council

Niagara County Center for Economic Development

NEW YORK STATE OF OPPORTUNITY. Empire State Development

NEAR TERM

- Work with Falls Road Railroad to identify additional funding needs and sources for either design or construction of bridge repairs.

LONG TERM

- Finalize design and begin construction of bridge repairs.

SUMMARY

Goals Met:

Federal FAST Act ●●○○○○

NYS Freight Plan ●●●●●○

WNY REDC Strategic Plan ●●○○○○○○○○○○○○○

GBNRTC Moving Forward 2050 ●●○○○○○○○

Freight Modes Benefited:

Priority:

MEDIUM HIGH

Estimated Cost: **$1.5M**

*Planning level estimate based on similar projects

GBNRTC Greater Buffalo Niagara Regional Transportation Council

Support Skyway Alternatives that Accommodate Freight & Logistics Industry

May 2021

BACKGROUND/NEED

The NYSDOT undertook a comprehensive and objective evaluation of a range of concepts for the Skyway Project, which involves a look at removing the Skyway and replacing it with alternative access. Of the 28 concepts considered, it was determined that only one concept (Concept I) would meet the purpose and all of the objectives. Based on these potential wetland impacts and in consideration of agency input, the NYSDOT studied variations to the Concept I alignment that would avoid, minimize, or reduce impacts to the wetlands referenced above.

PROJECT DESCRIPTION

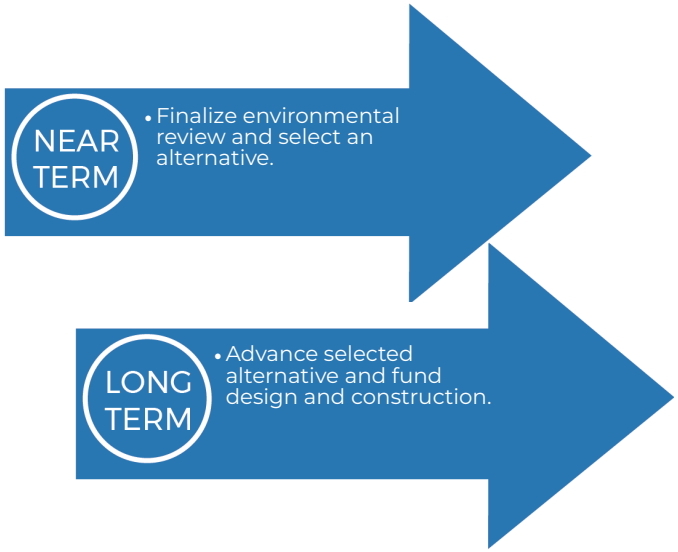
Two variations of the Concept I alignment were determined to be both reasonable and practicable and are being advanced for detailed study in the DDR/DEIS as two separate build alternatives, outlined below and discussed in the following recommendation pages. The initial alignment of Concept I was dismissed from further consideration.

ALTERNATIVES

1. **Build Alternative 1: New Highway Connecting NYS Route 5 to I-190**
2. **Build Alternative 2: New Boulevard Connecting NYS Route 5 to I-190s**

IMPLEMENTATION

The freight and logistics industry has indicated concern over removal of the Skyway because it provides a vital trucking link between the Peace Bridge and greater Interstate system with industrial areas and freight and logistics centers along Route 5 and throughout South Buffalo. The region has spent considerable resources on cleaning up, developing, and promoting industrial areas such as Lakeside Commerce Park and the Bethlehem Steel site as new light industrial, warehousing, and logistics centers. The continued growth of these and other industrial areas along Route 5 is hinged on maintaining quality access to the Interstate system and Peace Bridge. If/ when the Skyway removal moves ahead, the freight and logistics community has indicated that identifying and developing an alternative that maintains an equivalent level of or enhances access to/from I-190 and the Peace Bridge will need to be constructed.



SUMMARY

Goals Met:

Federal FAST Act

NYS Freight Plan

WNY REDC Strategic Plan

GBNRTC Moving Forward 2050

Freight Modes Benefited:

Priority:

ALL — HIGH

Estimated Cost: **$600M***

*Planning level estimate based on similar projects

GBNRTC
Greater Buffalo Niagara Regional Transportation Council

Build Alternative 1: New Highway Connecting NYS Route 5 to I-190

Support Skyway Alternatives that Accommodate

May 2021

DESCRIPTION

Build Alternative 1 would remove the Buffalo Skyway structure and elevated approaches between Tifft Street and Church Street and realign NYS Route 5 from Tifft Street to I-190 via a new controlled access highway partially utilizing abandoned railroad right-of-way. The highway connector would include interchanges at Tifft Street, South Park Avenue, and I-190. The new interchange with I-190 would replace the current partial interchange at Exit 3 and be dedicated to movements between the highway connector and I-190. To accommodate the additional traffic that would utilize I-190, improvements would be made to I-190 between the new Exit 3 and existing Exit 6 (Elm Street). Existing streets and intersections at key locations would be improved through the addition of turn lanes and traffic signal optimization and coordination. To improve operating conditions for bicyclists and pedestrians, a shared-use path would be constructed to connect Tifft Street with South Park Avenue.

AGENCY PARTNERS

GBNRTC Greater Buffalo Niagara Regional Transportation Council

ITG

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

LOCATION

Buffalo, New York

Build Alternative 1, Source: NYSDOT

Build Alternative 2: New Boulevard Connecting NYS Route 5 to I-190

Support Skyway Alternatives that Accommodate

May 2021

DESCRIPTION

Build Alternative 2 would remove the Buffalo Skyway structure and elevated approaches between Tifft Street and Church Street and realign NYS Route 5 from Tifft Street to I-190 via a new boulevard partially utilizing the existing Tifft Street corridor and abandoned railroad right-of-way. The boulevard would include connections at Fuhrmann Boulevard, Ship Canal Parkway, Tifft Street, South Park Avenue, and I-190. The new interchange with I-190 would replace the current partial interchange at Exit 3 and be dedicated to movements between the boulevard and I-190. To accommodate the additional traffic that would utilize I-190, improvements would be made to I-190 between the new Exit 3 and existing Exit 6 (Elm Street). Existing streets and intersections at key locations would be improved through the addition of turn lanes and traffic signal optimization and coordination. To improve operating conditions for bicyclists and pedestrians, a shared-use path would be constructed to connect Tifft Street with South Park Avenue.

AGENCY PARTNERS

GBNRTC Greater Buffalo Niagara Regional Transportation Council

ITG

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

LOCATION

Buffalo, New York

Build Alternative 2, Source: NYSDOT

Widen Transit Road Between Walden Avenue and Gould Avenue in Village of Depew

May 2021

BACKGROUND/NEED

This section of Transit Road (NYS Route 78) is 40-foot wide, and consists of four 10-foot lanes. The outside travel lanes are constrained with three railroad bridge support structures and their abutments that make use of the outside travel lanes difficult for larger vehicles and trucks. Further, during heavy rains, poor drainage causes flooding and often renders the outside lanes unusable. A project was undertaken in 2018 to remove one of the inactive railroad bridges and improve stormwater and curbing, allowing for full use of the four travel lanes.

DESCRIPTION

This section of Transit Road (NYS Route 78) is 40-foot wide, and consists of four 10-foot lanes. The outside travel lanes are constrained with three railroad bridge support structures and their abutments that make use of the outside travel lanes difficult for larger vehicles and trucks. Further, during heavy rains, poor drainage causes flooding and often renders the outside lanes unusable. A project was undertaken in 2018 to remove one of the inactive railroad bridges and improve stormwater and curbing, allowing for full use of the four travel lanes.

IMPLEMENTATION

NEAR TERM

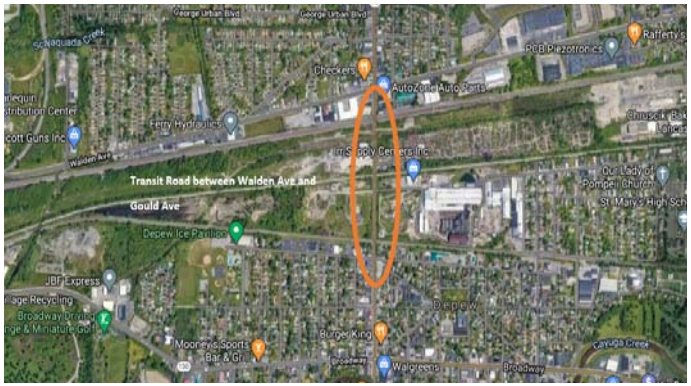
- GBNRTC, in coordination with ECIDA, should place the study into the UPWP for planning funds and develop a scope for the rail spur study.

LONG TERM

- If determined feasible, GBNRTC, in coordination with ECIDA, should identify and seek funding mechanisms to get this designed and constructed.

LOCATION

Depew, New York



SUMMARY

Goals Met:

Federal FAST Act

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NYS Freight Plan

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WNY REDC Strategic Plan

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GBNRTC Moving Forward 2050

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Freight Modes Benefited:

Priority:

LOW

Estimated Cost:

$60M*

(2010 dollars)

*Planning level estimate based on similar projects

AGENCY PARTNERS

GBNRTC Greater Buffalo Niagara Regional Transportation Council

ECIDA

NEW YORK STATE OF OPPORTUNITY. Western New York Regional Economic Development Council

GBNRTC Greater Buffalo Niagara Regional Transportation Council

Construct River Road Roundabout at Riverview Solar Technology Park

May 2021

BACKGROUND/NEED

The construction of Riverwalk Parkway was completed to accommodate Riverview Solar Technology Park, a 200-acre business park located in the Town of Tonawanda. As the park has continued to fill in, truck traffic has increased. Further, the development of an Amazon facility has brought about heavier volumes of truck and van traffic exiting and entering the park to/ from River Road. To date, there is no traffic signal at the intersection due to lack of a warrant.

DESCRIPTION

The Sustainable Tonawanda Brownfield Opportunity Plan identified constructing a roundabout at this intersection to serve multiple purposes:

- Provide improved truck access to/from Riverview Solar Technology Park
- Assist in applying a road diet to River Road to make the corridor more pedestrian and bike friendly
- Allow for a safer transition for pedestrians and bicyclists to cross between the Riverview Solar Technology Park trail and the Shoreline Trail. As part of improvements to the Shoreline Trail being undertaken by Erie County, a trail switchback will provide access between the Shoreline Trail and a point across from Riverview Parkway the higher noise generating freight yard as far away as possible from any residential areas.

SUMMARY

Goals Met:

Federal FAST Act

NYS Freight Plan

WNY REDC Strategic Plan

GBNRTC Moving Forward 2050

Freight Modes Benefited:

Priority:

MEDIUM LOW

Estimated Cost: **$1.3 M**

*Planning level estimate based on similar projects

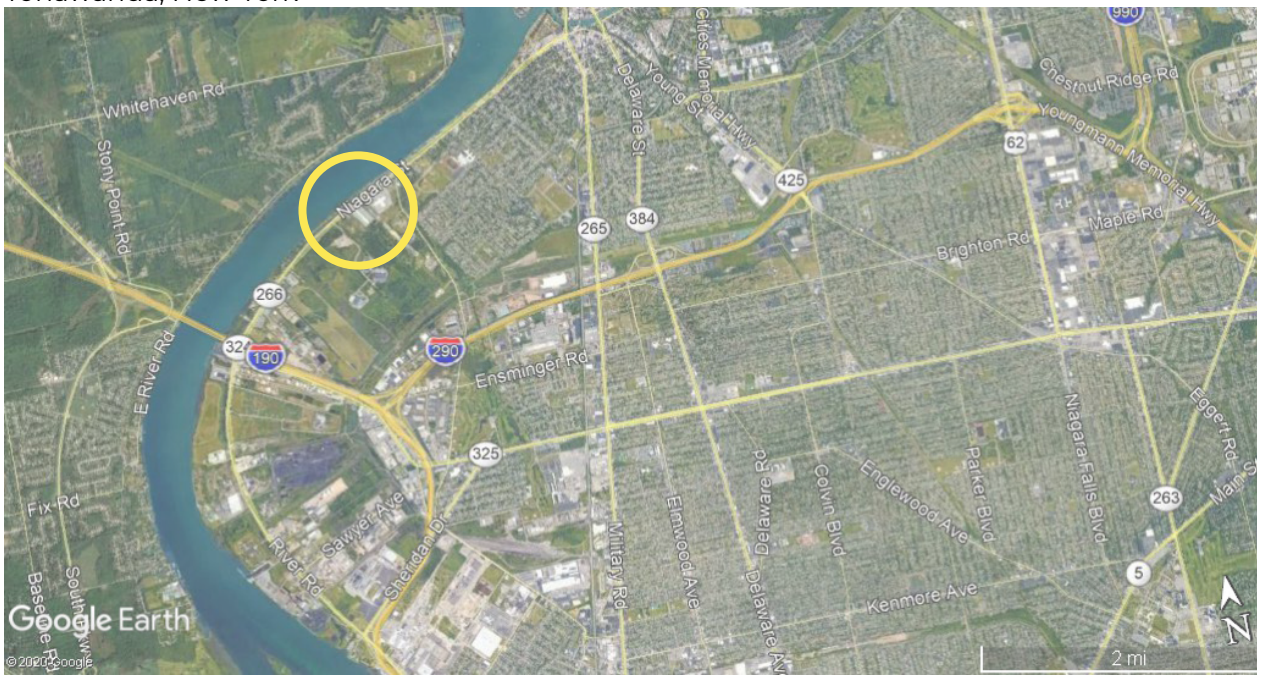
GBNRTC
Greater Buffalo Niagara Regional Transportation Council

Construct River Road Roundabout at Riverview Solar Technology Park

May 2021

LOCATION

Tonawanda, New York



AGENCY PARTNERS

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

GBNRTC
Greater Buffalo Niagara Regional Transportation Council

IMPLEMENTATION

NEAR TERM

- GBNRTC, in coordination with NYSDOT and Town of Tonawanda, should identify and seek funding mechanisms to get this recommendationmoved into design. The project can be designed with additional trail accommodations to/from the Shoreline Trail, which will connect to River Road via a switchback trail being constructed as part of the Shoreline Trail enhancements.

LONG TERM

- GBNRTC, in coordination with NYSDOT, should identify and seek funding mechanisms to get this project constructed.

Upgrade Depew, Lancaster & Western (DL&W) Railroad Line Upgrades

May 2021

BACKGROUND/NEED

The Erie County IDA offers operational assistance to several short line railroads in the Buffalo-Niagara region, including the DL&W Railroad. The DL&W Railroad operates terminal switching operations with Norfolk Southern and handles a range of agricultural products, plastics, forest materials, and freight too large for over-the-road trucking. Their operations are focused between a switching yard with NS in Cheektowaga and a transloading facility in Lancaster.

DESCRIPTION

The Erie County IDA, in partnership with the Genesee Valley Transportation Company, Inc., have identified several infrastructure needs of the short line DL&W railroad, outlined below and discussed in more detail on the following recommendationpages.

1. **Improve Driveway Access to/from the DL&W Transload Facility**
2. **Extend Engine House Track**
3. **Improve the DL&W Interchange with Norfolk Southern**
4. **Replace Structurally Deteriorating Bridge**

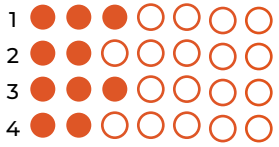
IMPLEMENTATION

The projects identified for DL&W are important for improving safety and efficiency and maintaining compliance to run the heavier 286K rail cars on their line. GBNRTC should work with ECIDA, NYSDOT, and the short line railroads to identify and seek funding opportunities to undertake the mentioned improvement projects.

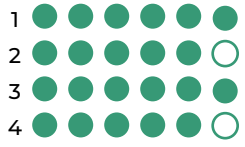
SUMMARY

Goals Met:

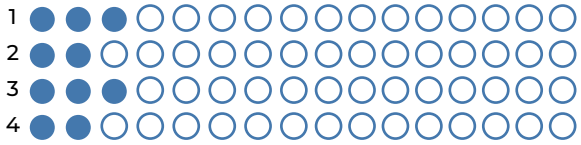
Federal FAST Act



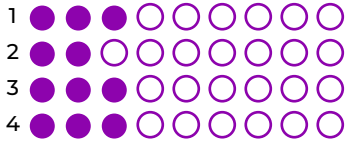
NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:

Priority:

ALL | MEDIUM

Estimated Cost:

Improve Driveway Access to/from the DL&W Transload Facility	**$150 K**
Extend Engine House Track	**$1 M**
Improve the DL&W Interchange with Norfolk Southern	**$850 K**
Replace Structurally Deteriorating Bridge	**$350 K**

*Planning level estimate based on similar projects

GBNRTC
Greater Buffalo Niagara Regional Transportation Council

Improve Driveway Access to/from the DL&W Transload Facility

May 2021

DESCRIPTION

This recommendationfocuses on improving the driveway access to/from the DL&W transload facility in Lancaster from Walter Winter Road by paving and widening the access into a two-way access road. Currently the driveway supports only one-way movement of trucks, with trucks entering from Walter Winter Road and either having to back out or uses a neighboring property to exit, which is not a long-term solution.

LOCATION

Lancaster, NY

Google Street View of DL&W Transload Facility access drive

IMPLEMENTATION

NEAR TERM

- GBNRTC should assist project partners in identifying and seeking funding to undertake needed upgrades to the DL&W Transload access drive.

AGENCY PARTNERS

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

GBNRTC Greater Buffalo Niagara Regional Transportation Council

NEW YORK STATE OF OPPORTUNITY. Empire State Development

ECIDA THE ECONOMIC DEVELOPMENT CORPORATION FOR ERIE COUNTY

SUMMARY

Goals Met:

Federal FAST Act ●●●○○○○

NYS Freight Plan ●●●●●●

WNY REDC Strategic Plan ●●●○○○○○○○○○○○○○

GBNRTC Moving Forward 2050 ●●●○○○○○○

Freight Modes Benefited:

Priority:

MEDIUM

Estimated Cost: **$150K**

*Planning level estimate based on similar projects

GBNRTC Greater Buffalo Niagara Regional Transportation Council

Extend Engine House Track

May 2021

DESCRIPTION

This recommendation focuses in on the engine house area in Lancaster and the switching and off-loading activities at the east end of operations. DL&W proposes to extend the engine house track east 250 feet and re-join the mainline with a turnout creating a run around for safer switching. In addition, DL&W looks to upgrade frogs and switch stands to accompany the improved driveway access. These upgrades will benefit health and safety concerns and create efficiencies for switching and transload staging in and near to their Lancaster, NY engine house.

LOCATION

Lancaster, New York

IMPLEMENTATION

NEAR TERM

- GBNRTC should assist project partners in identifying and seeking funding needed to extend the DL&W Engine House track.

AGENCY PARTNERS

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

GBNRTC
Greater Buffalo Niagara Regional Transportation Council

NEW YORK STATE OF OPPORTUNITY. Empire State Development

ECIDA
THE ECONOMIC DEVELOPMENT CORPORATION FOR ERIE COUNTY

SUMMARY

Goals Met:

Federal FAST Act

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NYS Freight Plan

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WNY REDC Strategic Plan

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GBNRTC Moving Forward 2050

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Freight Modes Benefited:

Priority:

MEDIUM

Estimated Cost: **$1 M**

*Planning level estimate based on similar projects

GBNRTC
Greater Buffalo Niagara Regional Transportation Council

Improve the DL&W Interchange with Norfolk Southern

May 2021

DESCRIPTION

This recommendationfocuses on improving the DL&W interchange with Norfolk Southern in Depew and building new interchange sidetrack using relay track for better car hand-offs to NS. This recommendationwould also include a robust mainline tie replacement and surfacing. Currently, DL&W Railroad is required to bring railcars to the NS yard to interchange, which is inefficient because it often requires two trips. It would construct a new interchange track close to the property line with NS on the DL&W side of the property so that cars can be left near the interchange for NS to pick up without DL&W cars going onto NS tracks. Benefits here are to eliminate the need to push cars into place with an employee hanging on the end of a train; the operator would be able to pull cars into hand-off track and leave at the west end and the NS operators would be able to hook up and pull out directly instead of pushing cars. Further, the it will support and maintain the good level of track maintenance to care for the growth of traffic in this industrial area of WNY.

LOCATION

Depew, New York

Improve DL&W Interchange with NS

IMPLEMENTATION

NEAR TERM

- GBNRTC should assist project partners in identifying and seeking funding to improve the DL&W interchange with Norfolk Southern

AGENCY PARTNERS

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

NEW YORK STATE OF OPPORTUNITY. Empire State Development

ECIDA

NS NORFOLK SOUTHERN

GBNRTC Greater Buffalo Niagara Regional Transportation Council

SUMMARY

Goals Met:

Federal FAST Act

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NYS Freight Plan

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WNY REDC Strategic Plan

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GBNRTC Moving Forward 2050

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Freight Modes Benefited:

Priority:

MEDIUM

Estimated Cost: **$850 K**

*Planning level estimate based on similar projects

GBNRTC Greater Buffalo Niagara Regional Transportation Council

Replace Structurally Deteriorating Bridge

May 2021

DESCRIPTION

This focuses on removing a structurally deteriorating bridge on the DL&W line over a drainageway, located between Broadway and Walden Avenue, east of Dick Road in Depew, and replacing it with a culvert. The neighboring tracks on the NS Railway have removed their bridge at this location and replaced it with a culvert for drainage purposes. DL&W would propose doing the same which would eliminate operating over one of the oldest rapidly deteriorating bridge structures on the old Erie Lackawanna Line. Figure below shows the location of this bridge

LOCATION

Depew, New York

Aerial view of Structurally Deficient Bridge

IMPLEMENTATION

NEAR TERM

- GBNRTC should assist project partners in identifying and seeking funding to replace this structurally.

AGENCY PARTNERS

GBNRTC Greater Buffalo Niagara Regional Transportation Council

ECIDA The Economic Development Corporation for Erie County

NEW YORK STATE OF OPPORTUNITY. Empire State Development

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

NS NORFOLK SOUTHERN

SUMMARY

Goals Met:

Federal FAST Act

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NYS Freight Plan

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WNY REDC Strategic Plan

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GBNRTC Moving Forward 2050

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Freight Modes Benefited:

Priority:

MEDIUM

Estimated Cost: **$350 K**

*Planning level estimate based on similar projects

Improve the Buffalo Southern Railroad (BSOR) Line 1246

May 2021

BACKGROUND/NEED

The Erie County IDA offers operational assistance to several short line railroads in the Buffalo-Niagara region, including the Buffalo Southern Railroad (BSOR). The BSOR operates between Buffalo and Gowanda.

DESCRIPTION

The Erie County IDA identified infrastructure needs of BSOR Railroad. BSOR railroad has two projects that include bridge and highway crossing upgrades that would be important for improving safety and efficiency, as well as upgrading track standards, outlined below and discussed in more detail on the following recommendation pages.

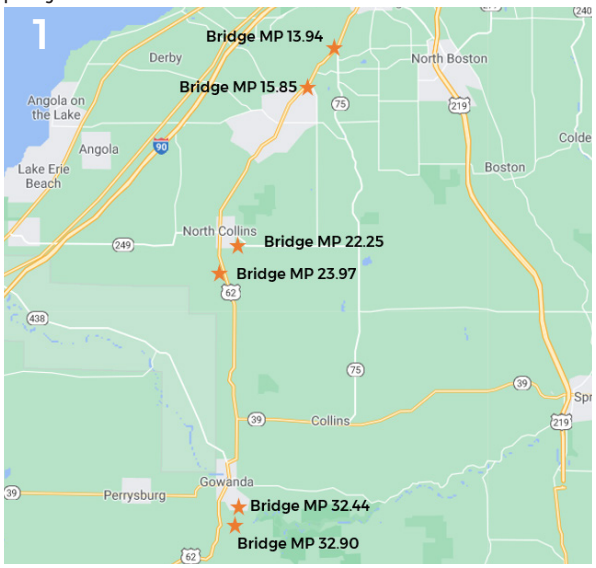
The major benefits of completing these safety and operational track improvements are to maintain the ability of the farming industries in WNY to be able to continue receiving bulk resources (allowing for 286K rail cars) by rail keeping the prices down, allow BSOR to continue to transport 20 million gallons of Liquid Propane to 20 different retail marketers in the area, and also to shift more heavy product shipments from highway to rail, thus reducing truck traffic and highway maintenance costs.

ELEMENTS

1. Improving Six Railroad Bridges
2. Replacing Five Highway at-grade Crossings

IMPLEMENTATION

The projects identified for BSOR are important for improving safety and efficiency and bringing the track up to compliance with operating the heavier 286K rail cars on their line. GBNRTC should work with ECIDA, NYSDOT, and the short line railroads to identify and seek funding opportunities to undertake the mentioned improvement projects.



Railroad Bridge Locations

Highway at-grade Crossing

SUMMARY

1 Improving Six Railroad Bridges

2 Replacing Five Highway at-grade Crossings

Goals Met:

Federal FAST Act
1 ●●●●○○○
2 ●●●●○○○

NYS Freight Plan
1 ●●●●●●
2 ●●●●●●

WNY REDC Strategic Plan
1 ●●●○○○○○○○○○○○○○
2 ●●●○○○○○○○○○○○○○

GBNRTC Moving Forward 2050
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2 ●●○○○○○○○

Freight Modes Benefited:

Priority:

ALL | MEDIUM

*Planning level estimate based on similar projects

GBNRTC
Greater Buffalo Niagara Regional Transportation Council

Improve Six Bridges & Railroad Ties

May 2021

DESCRIPTION

This recommendation focuses on improving six bridges in four Erie County towns. Four of the bridges primarily require new bridge timbers and a walkway, one small bridge needs a new steel or concrete structure to bring it up to 286K compliance, and one bridge needs new ties and ballast with sealant applied to the steel structure. The BSOR serves a host of businesses between Buffalo and North Collins and some of the rural areas that are serviced require crossing large creek bed bridges. The steel structures are in good shape but in most cases the bridge timbers are at the end of their useful service life.

The bridges needing repair include:

- **Bridge MP 13.94** over North Branch Eighteen Mile Creek, Town of Hamburg. Replace bridge timbers, add safety walkway, and repair approaches.
- **Bridge MP 15.85** over South Branch Eighteen Mile Creek, Town of Hamburg. Replace bridge timbers, add safety walkway, repair steel, and repair abutment and approach ties.
- **Bridge MP 22.25** over Franklin Gulf, Town of North Collins. Replace bridge timbers, add safety walkway, repair approach ties, and add ballast and guard rail.
- **Bridge 23.97** through Ballast, Town of North Collins. Replace deck ties, replace approach ties, add guard rail and ballast, steel repair, and provide deck sealing.
- **Bridge 32.44** near Perry Street, Village of Gowanda. Replace existing structure with precast concrete, repair slabs on abutment, add ballast, replace 15 wood timbers, and repair approach ties.
- **Bridge 32.90** over Cattaraugus Creek, Village of Gowanda. Replace bridge timbers, add safety walkway, provide ballast, repair approach ties.

IMPLEMENTATION

NEAR TERM

- GBNRTC should assist project partners in identifying and seeking funding to undertake needed upgrades to the BSOR bridges.

AGENCY PARTNERS

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

GBNRTC Greater Buffalo Niagara Regional Transportation Council

ECIDA THE ECONOMIC DEVELOPMENT CORPORATION FOR ERIE COUNTY

NEW YORK STATE OF OPPORTUNITY. Empire State Development

BRIDGE SUMMARY

Priority:

ALL | **MEDIUM**

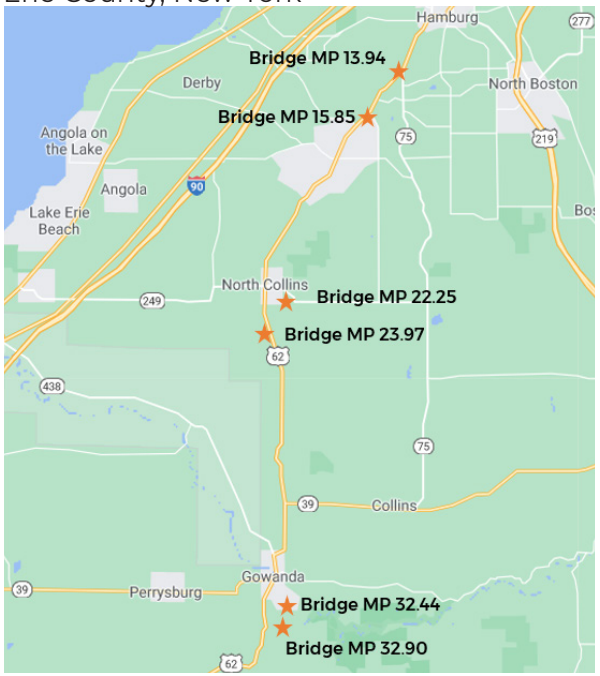
Estimated Cost:

Bridge MP 13.94	**$308K**
Bridge MP 15.85	**$540.5K**
Bridge MP 22.25	**$184.75K**
Bridge 23.97	**$86.4K**
Bridge 32.44	**$51.5K**
Bridge 32.90	**$148K**

*Planning level estimate based on similar projects

LOCATION

Erie County, New York



GBNRTC Greater Buffalo Niagara Regional Transportation Council

Replace Five Highway At-Grade Crossings

May 2021

DESCRIPTION

This recommendation replaces five highway at-grade crossings with modular pre-cast concrete panels, new rail sections, and conduits for signal wire upgrades. The BSOR has been using precast panel crossings for full depth replacements beginning in 2003. The added benefit is whenever the highway paving is upgraded, they receive railroad approvals to pave right up to the sides of the panels to restore and new driving condition as needed. The municipalities have really appreciated these crossing replacements. The Towns of Hamburg, Eden, and N. Collins will be beneficiaries of the next round of crossing replacements.

The highway at-grade crossing upgrades include:

- **MP 14.08 at South Creek Road, Town of Hamburg.** Upgrade at-grade crossing with precast concrete panels, provide welded rail, repair approach ties, and provide/ update ballast, conduit, and signaling system.
- **MP 15.14 at Hickox Road, Town of Hamburg/ Town of Eden.** Upgrade at-grade crossing with precast concrete panels, provide welded rail, repair approach ties, and provide/ update ballast, conduit, and signaling system.
- **MP 16.37 at Bley Road, Town of Eden.** Upgrade at-grade crossing with precast concrete panels, provide welded rail, repair approach ties, and provide/ update ballast, conduit, and signaling system.
- **MP 18.87 at Hemlock Road, Town of Eden.** Upgrade at-grade crossing with precast concrete panels, provide welded rail, repair approach ties, and provide/ update ballast, conduit, and signaling system.
- **MP 22.76 at School Street, Town of North Collins.** Upgrade at-grade crossing with precast concrete panels, provide welded rail, repair approach ties, and provide/ update ballast, conduit, and signaling system.

IMPLEMENTATION

NEAR TERM

- GBNRTC should assist project partners in identifying and seeking funding to undertake needed upgrades to the BSOR at-grade crossings

AGENCY PARTNERS

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

GBNRTC Greater Buffalo Niagara Regional Transportation Council

ECIDA THE ECONOMIC DEVELOPMENT CORPORATION FOR ERIE COUNTY

NEW YORK STATE OF OPPORTUNITY. Empire State Development

SUMMARY

Priority:

ALL | **MEDIUM**

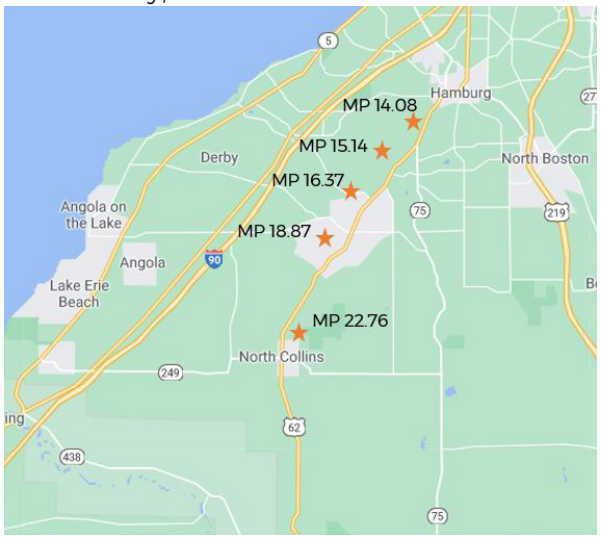
Estimated Cost:

MP 14.08	**$57.5K**
MP 15.14	**$57.5K**
MP 16.37	**$57.5K**
MP 18.87	**$65K**
MP 22.76	**$65K**

*Planning level estimate based on similar projects

LOCATION

Erie County, New York



Improve Safety to Roadways near Intermodal Yards

May 2021

BACKGROUND/NEED

An assessment of the NYS Safety Information Management System (SIMS) over the last 5 years (2015-2019) was undertaken to search for Priority Investigation Locations (PILs), Safety Deficient Locations (SDCs), or Priority Investigation Intersections (PIIs) along roadways that provide access to the region's three main rail/ intermodal facilities, which are:

- **Norfolk Southern Bison Yard and Buffalo Transload Facility located on Bison Parkway in Sloan, with access to Harlem Road (via Gruner Road), south of Broadway.**
- **CSX Frontier Yard located at 1836 Broadway in Buffalo, with access to Broadway east of Bailey Avenue.**
- **CSX Intermodal Terminal located at 257 Lake Avenue in Blasdell, with access to Lake Avenue east of Route 5.**

The assessment of the SIMS data was undertaken to identify intersections or corridors that have experienced freight related crashes and should become the focus of safety improvements that will aid in the safe, efficient flow of freight across the region. The following findings came from the SIMS assessment:

Nearby to Bison Yard and Frontier Yard.
Along Harlem Road between Walden Avenue and William Street, there were Specialty PILs identified in 2015, 2016, and 2018. This included speed related crashes, right angle crashes, head on crashes, large truck crashes, and fixed object/ run off road crashes. A view of the corridor suggests that many of these crashes might be attributed to the road profile, which consists of multiple bridge flyovers that result in slower acceleration uphill and faster speeds downhill, as well as a general lack of acceleration or deceleration lanes. The intersection of Harlem Road and Walden Avenue was identified as a PIL in 2017 with a high number of pedestrian crashes.

Nearby to CSX Intermodal Terminal.
In the vicinity of the CSX Intermodal Terminal, PILs were identified on South Park Avenue in 2015 and 2016, and SDLs were identified on Route 5 and South Park Avenue in 2015, 2016, and 2017. Specialty PILs were flagged on South Park Avenue and Route 5 in 2015, 2016, 2017, and 2018. Additionally, in 2017, SIMS identified two PILs in the vicinity of the Route 5/ Lake Avenue intersection. The assessment identified aggressive driving crashes, fixed object/ run off road crashes, right angle crashes, rear end crashes, and large truck crashes.

CSX has indicated that they don't experience any operational issues or congestion at their Intermodal Terminal on Lake Avenue. Safety issues near the Lake Avenue facility show up on Route 5 and South Park Avenue, with limited issues on Lake Avenue. Lake Avenue was recently repaved and contains a smoother surface for truck traffic.

SUMMARY

1 Harlem Road and Gruner Road
2 Harlem Road and Broadway Ramp
3 Broadway and CSX Frontier Yard Driveway

Goals Met:

Federal FAST Act
1 ●●●○○○○
2 ●●●○○○○
3 ●●●○○○○

NYS Freight Plan
1 ●●●●●●
2 ●●●●●●
3 ●●●●●●

WNY REDC Strategic Plan
1 ●●●○○○○○○○○○○○○
2 ●●●○○○○○○○○○○○○
3 ●●●○○○○○○○○○○○○

GBNRTC Moving Forward 2050
1 ●●●○○○○○○
2 ●●●○○○○○○
3 ●●●○○○○○○

Freight Modes Benefited:

Priority:

ALL MEDIUM HIGH

Estimated Cost:

Harlem Road and Gruner Road	**$721 K**
Harlem Road and Broadway Ramp	**$500 K**
Broadway and CSX Frontier Yard Driveway	**$75 K**

*Planning level estimate based on similar projects

GBNRTC
Greater Buffalo Niagara Regional Transportation Council

Improve Safety to Roadways near Intermodal Yards

May 2021

IMPLEMENTATION

Since all these safety improvements are located on NYSDOT roadways, GBNRTC would need to work with NYSDOT to fund and undertake the appropriate safety analysis to determine specific safety improvements to each location, and then projects can be moved into the Transportation Improvement Program (TIP) and funded for construction.

NEAR TERM

- Work with NYSDOT to fund and manage safety analysis and determine appropriate improvements for each site.

LONG TERM

- Move projects into Transportation Improvement Program(TIP) to be funded and executed.

LOCATION

Vicinity of NS Bison Yard and CSX Frontier Yard
Sloan, New York

AGENCY PARTNERS

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

NEW YORK STATE OF OPPORTUNITY. Empire State Development

GBNRTC Greater Buffalo Niagara Regional Transportation Council

ITG

ECIDA THE ECONOMIC DEVELOPMENT CORPORATION FOR ERIE COUNTY

NEW YORK STATE OF OPPORTUNITY. Western New York Regional Economic Development Council

Improve Safety at Intersection of **Harlem Road and Gruner Road**

May 2021

DESCRIPTION

There are two areas along the section of Harlem Road between Walden Avenue and William Street where safety improvements would enhance safety. The first is at the intersection of Harlem Road and Gruner Road. Gruner Road, with continued access to Bison Parkway, provides the main access for the Norfolk Southern Bison Yard, as well as other trucking, warehousing, and manufacturing business. A signalized intersection at Harlem Road and Gruner Road allows for controlled truck access to/from these industrial areas. Vehicles traveling northbound are coming down the bridge, typically at accelerated speeds and with limited sight distance. Trucks turning right onto Gruner Road do so from the right travel lane, meaning they must begin decelerating on the downhill and make a tight 90 degree turn onto Gruner. An upgrade here would be to add a northbound deceleration and right turn lane so turning vehicles and trucks can do so out of the travel lanes. The turning radii for the right turn should also be increased to avoid trucks jumping the curb to make the turn. Increasing the turning radii would require relocating a utility pole on the southeast corner of the intersection.

LOCATION

Sloan, New York

Improve Safety at Intersection of **Harlem Road and Broadway Ramp Road**

May 2021

DESCRIPTION

The other recommendation on Harlem Road is located at the ramp that provides access between Harlem Road and Broadway. There are two sets of access ramps – one that provides access between southbound Harlem Road and Broadways and the ramp that provides access between northbound Harlem Road and Broadway. Broadway is used by truck traffic to access the CSX Frontier Yard to the west and warehousing and distribution centers to the east. The safety problem arises from the traffic merging from the ramp to northbound Harlem Road, which then begins to incline up a bridge flyover. Traffic often backs up on this ramp during peak hours because merging onto northbound Harlem can be difficult, especially for trucks which must directly merge into the right travel lane while accelerating up the inclining bridge. This merging and slow acceleration causes safety issues at that location. The northbound Harlem Road bridge embankment limits the ability to construct an acceleration lane. NYSDOT should undertake a more detailed intersection study to see if other improvements can be made, possibly signalizing the ramp interchange with Harlem Road, similar to how they are signalized at Broadway, to provide a safer access. The figure below shows the Broadway ramp intersecting with northbound Harlem Road.

LOCATION

Sloan, New York

GBNRTC
Greater Buffalo Niagara Regional Transportation Council

Improve Safety at Intersection of **Broadway and CSX Frontier Yard Driveway**

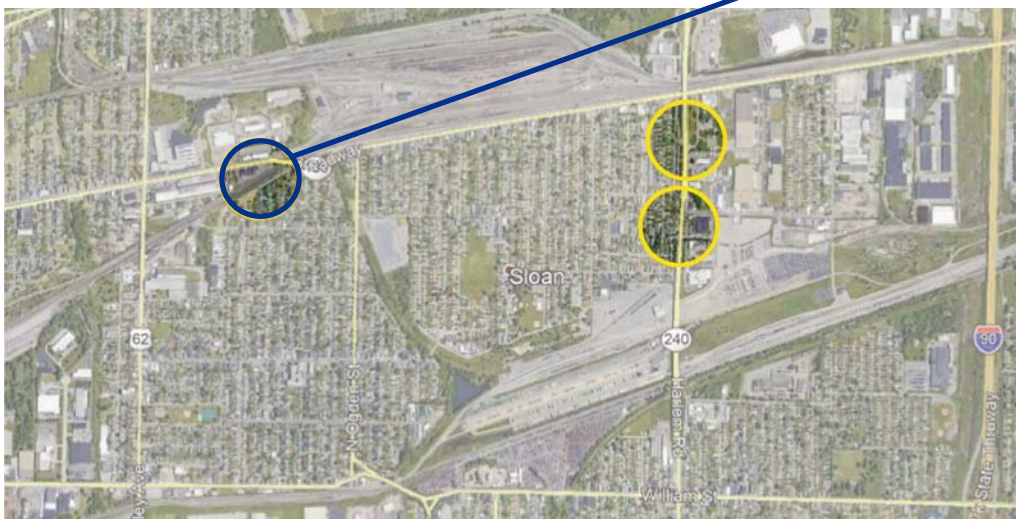
May 2021

DESCRIPTION

The main driveway for the CSX Frontier Yard intersects with Broadway at an odd angle and is located just beyond a railroad viaduct, creating an uncontrolled intersection with sight distance and safety issues. Trucks pulling out of the driveway must look into the viaduct for westbound oncoming vehicle and up an inclined roadway for eastbound oncoming vehicles. Trucks turning right must also then accelerate up an incline coming out of the viaduct. Trucks traveling westbound on Broadway face a difficult, skewed right turn into the driveway. With constraints around the intersection such as buildings, railroad bridges, and embankments, reconstructing the intersection is not feasible. NYSDOT could consider other safety improvements at the intersection, such as installation of flashing beacons prior to the bridge viaduct warning oncoming vehicles of the potential for stopped or slow moving trucks entering or exiting the driveway, as well as installing additional lighting near the intersection. Additionally, NYSDOT could assess the potential for converting the westbound right lane on Broadway into a deceleration/ acceleration lane to accommodate trucks turning into and exiting the driveway, removing these trucks from the travel lane and decreasing the chance for truck crashes. The average annual daily traffic for the westbound direction of Broadway is 8,247 (2014), which is typically within the threshold of the capacity of one travel lane.

LOCATION

Sloan, New York



GBNRTC
Greater Buffalo Niagara Regional Transportation Council

Expand Lehigh Valley Yard Development

May 2021

BACKGROUND/NEED

The NYSDOT owned Lehigh Valley Yard located in Niagara Falls was proposed in the 2010 plan to be used as an intermodal facility, and Lehigh Valley Yard would be expanded as an Intermodal and Free Trade Zone center. NYSDOT issued an RFP in 2012 for development of an intermodal yard, but no favorable responses were received. Following that RFP, NYSDOT pursued construction of an Amtrak maintenance facility that would aid in expanding New York State's High Speed Rail Plan. To date, NYSDOT continues to seek funding to construct an Amtrak maintenance facility at the site and work with the Federal Railroad Administration (FRA) and Amtrak to determine the best method in which to continue to maintain trains and equipment for passenger rail service in Niagara Falls given that the existing facility is near the end of its useful service life.

DESCRIPTION

The Amtrak maintenance facility recommendation at Lehigh Valley Yard would relocate the existing mainline tracks and provide Amtrak with a greatly improved ability to perform train consist maintenance operations that only a new modern facility can provide. The new facility would provide a new Storage Canopy and Service & Inspection (S&I) Shop that will allow for the ability to safely change out coach wheelsets, air conditioning units, and provide storage space for layover trains. The new facility would also allow for maintenance activities such as interior cleaning, coupler inspections, and toilet repair to be performed in a covered environment. It should also be noted that the FRA approved the National Environmental Policy Act (NEPA) Categorical Exclusion for this recommendation on May 16, 2016.

*Although most of the new yard is being developed to maintain and store passenger rail rolling stock, it should be noted that as much area as possible is being reserved in the eastern portion of the yard for a future freight storage yard. The main considerations for placing the future freight storage yard in the eastern portion were the following:

- **Locate the higher noise generating freight yard as far away as possible from any residential areas.**
- **Locate the freight yard as close to the yard entrance as possible so that heavily loaded tractor trailers can enter and exit more efficiently.**
- **Since most rail freight would enter from the east and exit to the east, having the yard on the east end would result in less interference with passenger trains to/from the yard and Niagara Falls Station.**
- **Comply with Amtrak's request to place the canopy close to the old station building.**

SUMMARY

Goals Met:

Federal FAST Act

NYS Freight Plan

WNY REDC Strategic Plan

GBNRTC Moving Forward 2050

Freight Modes Benefited:

Priority:

MEDIUM LOW

Estimated Cost:

Not known at this time

GBNRTC
Greater Buffalo Niagara Regional Transportation Council

Improve U.S. 219

May 2021

BACKGROUND/NEED

The Buffalo-Niagara region is generally lacking a good north-south trade corridor, connecting the region and Canada with areas to the south. U.S. 219 is part of the State Freight Core Highway Network and the WNY Regional Sustainability Plan identifies the extension of U.S. 219 as an integral development in shipping for Cattaraugus County. Also, U.S. 219 is part of the Continental 1 Trade Corridor – a vison for a 1,500-mile, four lane, limited access highway between Toronto, ON and Miami, FL.

The Freight Flow Analysis indicates that a much larger volume of highway tonnage passing through the Buffalo-Niagara region to/from the Peace Bridge or Lewiston-Queenston Bridge uses U.S. 219 than does freight inbound to or outbound from the Buffalo-Niagara region.

DESCRIPTION

A Record of Decision (ROD) was granted by FHWA in 2003 to allow NYSDOT to construct a four-lane limited access freeway. A Partial-Build Assessment determined that NYSDOT could build 6.8 miles of the proposed 27 miles of freeway alternative between NY Route 39 in Springville and Snake Run Road in Ashford, Cattaraugus County (referred to as Sections 5 and 6). Design commenced for Sections 5 and 6, including the design of two bridges over Cattaraugus Creek, followed by construction of the U.S. Route 219, Section 5 freeway segment (between NY Route 39 and Peters Road) in 2007 and opening for traffic in 2010. The final design of the Section 6 freeway segment (between Peters Road and Snake Run Road) was never constructed because it was determined that there were more wetland and stream impacts than originally anticipated in the 2003 Final Environmental Impact Statement (FEIS).

While NYSDOT hasn't announced a determination on the future of U.S. 219 yet, the freight and logistics industry should remain involved in the U.S. 219 recommendations and advocate for improvements that satisfy trucking bottlenecks and safety concerns whether it be in the form of a full corridor improvement or nodal improvements at various bottlenecks or constrained locations. One such location consistently identified by freight and logistics stakeholders as needed for improvement is the area around the U.S. 219/ I-86 interchange. As NYSDOT studies for U.S. 219 continue, the interchange of U.S. 219 with I-86 should be looked at for improvement.

SUMMARY

Goals Met:

Federal FAST Act

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NYS Freight Plan

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WNY REDC Strategic Plan

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GBNRTC Moving Forward 2050

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Freight Modes Benefited:

Priority:

MEDIUM

Estimated Cost: **Unknown at this time**

*Planning level estimate based on similar projects

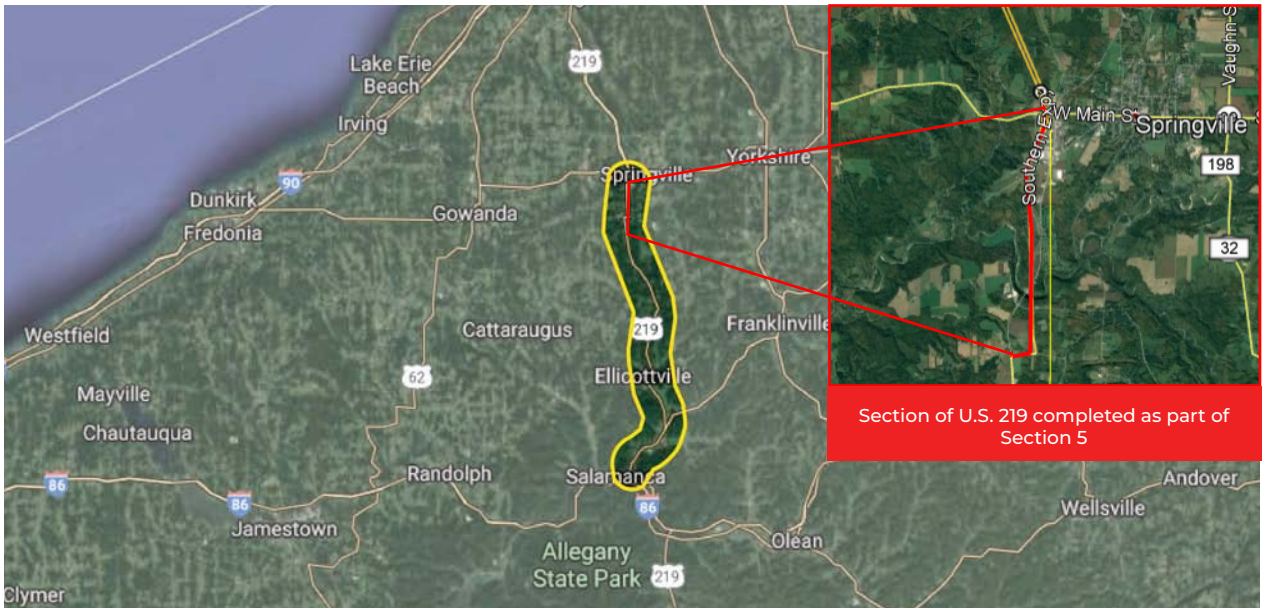
Improve U.S. 219

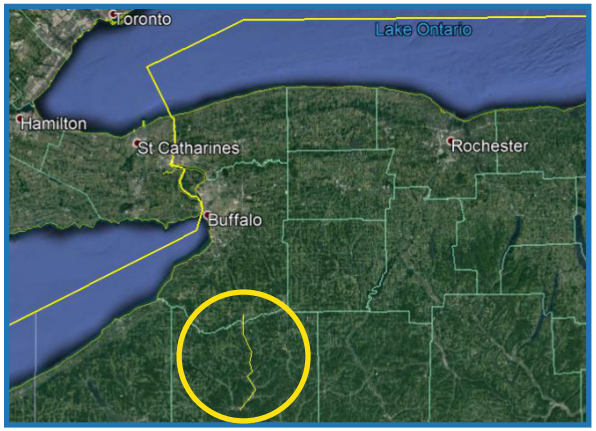
May 2021

IMPLEMENTATION

Since the opening of the Section 5 freeway segment and determination that Section 6 freeway segment wasn't moving forward, NYSDOT has determined that a Supplemental Environmental Impact Statement (SEIS) should be prepared to provide a proper design transition from the four-lane U.S. 219 to Peters Road, with improvements also considered for the Peters Road and Miller Road intersection.

LOCATION





NEAR TERM

- Complete Supplemental Environmental Impact Statement.
- Design proper transition from U.S. 219 to Peters Road and needed improvements at intersection of Peters Road and Miller Road intersection.

LONG TERM

- Study full U.S. 219 corridor-wide or nodal improvements.
- Study potential for improvements to I-86/ U.S. 219 Interchange.

AGENCY PARTNERS

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

GBNRTC Greater Buffalo Niagara Regional Transportation Council

ITG

NEW YORK STATE OF OPPORTUNITY. Empire State Development

Improve NY Route 270 Campbell Blvd
(N French Rd to Tonawanda Creek Rd)

May 2021

BACKGROUND/NEED

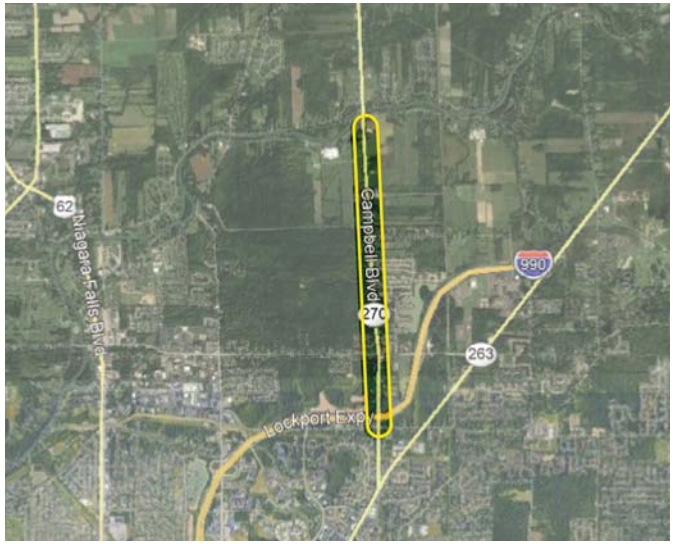
Improvements to NYS Route 270 Campbell Boulevard between N. French Road and Tonawanda Creek Road and to North French Road between NYS Route 270 and I-990.

IMPLEMENTATION

- Anticipated letting in 2024

LOCATION

Town of Amherst, Erie County



DESCRIPTION

Improvements includes pavement resurfacing, shoulder reconstruction and widening on NYS Route 270, truck turning radii improvements and installation and extension of turning lanes at intersection of NYS Route 270 and N. French Road, and installation of two-way left turn lanes on N. French Road between NYS Route 270 and I-990. The recommendation will address safety and capacity issues, non-standard shoulder widths, insufficient truck turning radii, and accommodation of bicycles and pedestrians.

AGENCY PARTNERS

GBNRTC
Greater Buffalo Niagara Regional Transportation Council

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

SUMMARY

Goals Met:

Federal FAST Act

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NYS Freight Plan

●●●○○○

WNY REDC Strategic Plan

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GBNRTC Moving Forward 2050

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Freight Modes Benefited:

Priority:

HIGH

Estimated Cost: **$5 M**

*Planning level estimate based on similar projects

GBNRTC
Greater Buffalo Niagara Regional Transportation Council

Expand Buffalo-Niagara International Airport (BNIA) Air Cargo

May 2021

BACKGROUND/NEED

Projects aimed at enhancing air cargo operations at the BNIA were identified in the New York State Freight Plan, and are continued into this study. Ongoing construction of a new travel lane on Transit Road (NY Route 78) between the I-90 New York State Thruway interchange and Genesee Street (NY Route 33) will help relieve congestion on this stretch of Transit Road and enhance the freight/ air cargo route between the Buffalo Niagara International Airport Air Cargo facility and the Interstate highway system.

ELEMENTS

1. **Air Cargo Apron Expansion**
2. **Air Cargo Building Expansion**

DESCRIPTION

1. Air Cargo Apron Expansion

Identified as a project to occur between 2020-2030 in the BNIA Airport Master Plan, this involves design and construction of an air cargo apron expansion to the existing apron to accommodate additional air cargo planes and allow for more efficient movements of planes.

2. Air Cargo Building Expansion

Identified as a project to occur in 2028 in the BNIA Airport Master Plan, this involves design and construction of a 100,000 square foot air cargo expansion to the existing air cargo facility.

SUMMARY

1 Air Cargo Apron Expansion

2 Air Cargo Building Expansion

Goals Met:

Federal FAST Act

NYS Freight Plan

WNY REDC Strategic Plan

GBNRTC Moving Forward 2050

Freight Modes Benefited:

Priority:

Estimated Cost:

Air Cargo Apron Expansion	**$5 M**
Air Cargo Building Expansion	**$25.5 M**

*Planning level estimate based on similar projects

GBNRTC
Greater Buffalo Niagara Regional Transportation Council

Expand Buffalo-Niagara International Airport (BNIA) Air Cargo

May 2021

LOCATION

Cheektowaga, New York

AGENCY PARTNERS

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

GBNRTC Greater Buffalo Niagara Regional Transportation Council

ECIDA THE ECONOMIC DEVELOPMENT CORPORATION FOR ERIE COUNTY

NEW YORK STATE OF OPPORTUNITY. Western New York Regional Economic Development Council

NFTA

IMPLEMENTATION

While BNIA has indicated that the current air cargo facility can adequately handle existing and future expansion of air cargo operations, the long-term strategy is to plan for accommodating much expanded air cargo operations.

NEAR TERM Work with NFTA and Buffalo-Niagara International Airport on phasing and priority of air cargo projects.

NEAR TERM Finalize design and begin construction of air cargo projects.

Expand Niagara Falls International Airport (NFIA) Air Cargo

Air Cargo Access Road Construction, Air Cargo Apron Construction, Air Cargo Building Construction

May 2021

BACKGROUND/NEED

Several projects aimed at enhancing air cargo operations and expansion at NFIA were identified in the New York State Freight Plan, and are continued into this study. NFIA contains long runways that can accommodate most aircraft types, consists of relatively inexpensive landing fees, has capacity to accommodate expanded use, and has air cargo facilities that can accommodate growth.

The recent announcement from Stavetti Aerospace to operate a production facility for prototype aerospace development, production, and aircraft on the 19.8-acre former U.S. Army Reserve Center located adjacent to Niagara Falls International Airport further emphasizes the need for proposed improvements at the airport in the near future.

DESCRIPTION

1. Air Cargo Access Road Construction

Identified as a Phase II project, with a construction timeline of 2022-2026 in the NFIA Airport Master Plan, this recommendation involves the design and construction of a new western access road for the air cargo facility and general aviation facility.

2. Air Cargo Apron Construction

Identified as a Phase III project, with a construction timeline of 2027-2036 in the NFIA Airport Master Plan, involves the design and construction of a new air cargo apron to facilitate operations at the air cargo facility.

3. Air Cargo Building Construction

Identified as a Phase III project, with a construction timeline of 2027-2036 in the NFIA Airport Master Plan, involves the design and construction of two 100,000 square foot air cargo facilities.

ELEMENTS

1 Access Road Construction

2 Apron Construction

3 Building Construction

SUMMARY

Goals Met:

Federal FAST Act

1 ●●●○○○○
2 ●●●○○○○
3 ●●○○○○○

NYS Freight Plan

1 ●●●●●○
2 ●●●●●○
3 ●●●●●○

WNY REDC Strategic Plan

1 ●●●○○○○○○○○○○○○
2 ●●●○○○○○○○○○○○○
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GBNRTC Moving Forward 2050

1 ●●○○○○○○
2 ●●○○○○○○
3 ●●○○○○○○

Freight Modes Benefited:

Priority:

ALL | MEDIUM

Estimated Cost:

Air Cargo Apron Construction	**$1.5M**
Air Cargo Apron Construction	**$5M**
Air Cargo Building Construction	**$15M**

*Planning level estimate based on similar projects

GBNRTC Greater Buffalo Niagara Regional Transportation Council

Expand Niagara Falls International Airport (NFIA) Air Cargo

Air Cargo Access Road Construction, Air Cargo Apron Construction, Air Cargo Building Construction

May 2021

IMPLEMENTATION

These projects are not needed in the near term but rather will facilitate additional air cargo handling as the market demands.

NEAR TERM

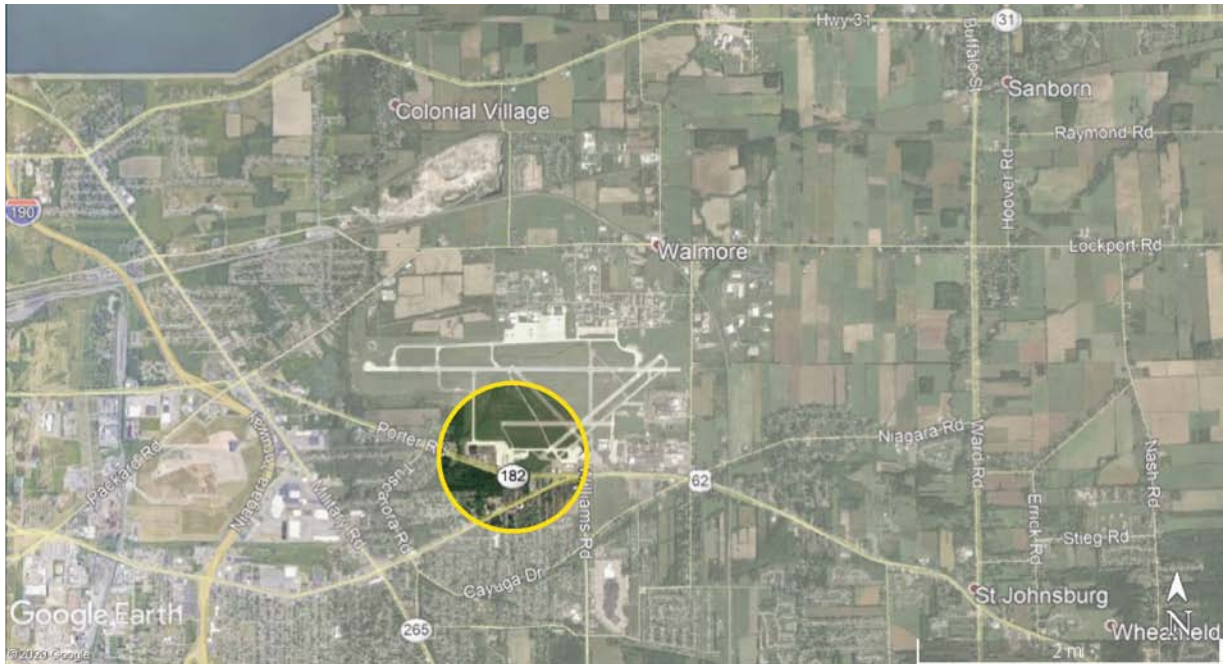
- Work with NFTA and Niagara Falls International Airport on phasing and priority of air cargo projects.

LONG TERM

- Finalize design and begin construction of air cargo projects.

LOCATION

Niagara Falls, New York



AGENCY PARTNERS

Niagara County Center for Economic Development

GBNRTC Greater Buffalo Niagara Regional Transportation Council

NFTA

NEW YORK STATE OF OPPORTUNITY. Department of Transportation