

May 2021

Buffalo-Niagara Regional Freight Plan



Update to 2010 Niagara Frontier
Urban Area Freight Transportation Study

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Executive Summary

This Executive Summary provides an overview of the Buffalo-Niagara Regional Freight Plan. This plan is an update to the original Niagara Frontier Urban Area Freight Transportation Plan, completed in 2010. The Buffalo-Niagara Regional Freight Plan is hereby referred to as the "Update". As this plan Update was progressing, the global economy was impacted by the Covid-19 pandemic which introduced uncertainty about potential longer-term economic implications and restructuring of supply chains.

It is expected that the Buffalo-Niagara region's economy will grow by approximately 30% over the 25-year horizon period. As the region grows, it will see an increased demand for goods amounting to over 33 million additional tons of goods being hauled by a mix of modes. These 33 million tons represent an expansion of freight tonnage of approximately 47% over the period of (2018 – 2045), which equates to freight activity growing at a rate of approximately 1.7% per year. The growth of freight activity is higher than the national average, but slower than average New York growth over the same period. This growth in demand for freight is largely being driven by an expansion of wholesale/retail distribution, and manufacturing activities – slated to contribute over \$10 billion to the regional economy in 2045 (constant 2018 dollars).

Due to Buffalo-Niagara's location, it should come as no surprise that Canada continues to grow as a prominent trade partner with the region. It is expected that the production of goods will shift towards international markets: up from 5.8% of exports in 2018 to approximately 17.6% in 2045. While the Buffalo-Niagara Region relies on its gateways to Canada, the overwhelming geography of users of border crossings/ ports within the region are external to Buffalo: with 71% of international border crossing/ port volumes in 2018 being from other states. The volume of trade occurring at the region's border crossings/ ports is expected to more than triple across all modes in the 27-year period (2018 – 2045).

Trade between the Buffalo-Niagara region and the ports associated with the PANYNJ is expected to increase by approximately 1.6 million tons. The 2045 FAF freight forecasts indicate decreasing highway tonnage on routes between the Buffalo-Niagara region and the New York City area, noting that freight will become increasingly served by rail connections rather than traditional truck traffic. This is likely due to an emphasis at PANYNJ to decrease dependence on truck traffic and utilize rail and inland ports to a greater extent. This likely requires additional capacity at Buffalo-Niagara region rail ports, transloading docks, and intermodal facilities. Buffalo-Niagara's freight traffic with the other ports along the northern New York border is expected to grow by 669,000 tons through 2045. According to FAF freight forecasts, this freight will predominantly be served by truck. As for the Buffalo-Niagara region's utilization of in-region ports, import and export tonnage handled is expected to increase by almost 4.6 million tons – which represents approximately 4% of all tonnage going through the region's ports of entries, with truck traffic expected to grow almost 50%. This signals an increase in truck traffic expected for the Peace Bridge and Lewiston-Queenston bridge.

This Buffalo-Niagara Regional Freight Plan reflects both expected economic and freight and logistics industry environments in the Buffalo-Niagara region based on conditions as they were trending prior to the Covid-19 pandemic as well as a contingent outlook if the pandemic restricts economic growth. Due to the COVID-19 pandemic, there is a large amount of concern about potential longer-term economic implications of the global economic slowdown and restructuring of supply chains. Sustained closure on the one hand has gutted small businesses and severely hurt the economic performance of the country (at least on a short-term basis) as we continue to languish from the lasting effects of the virus. On the other hand, it has forced awareness concerning the need for diversified supply chains, and

further made a case for re-shoring and near-shoring activity to support more diversified, closer distribution networks. Due to this uncertainty, we have included an analysis of FHWA's Freight Analysis Framework alternate forecast data, to look at how its modeled pessimistic growth scenario created a range in possible freight behaviors as a proxy way of trying to understand how economic shocks can alter the pattern of freight outcomes. On average, the alternate economic scenario reduced the volume of freight by approximately 10% on average, relative to the base.

This Plan identifies a number of new projects and recommendations to enhance the Buffalo-Niagara region's freight and logistics industry. The Buffalo-Niagara Regional Freight Plan involved the development of three separate Tech Memos, outlined below.

- ✓ Tech Memo #1: Regional Freight and Logistics Status – provides an overview of the current conditions facing the Buffalo-Niagara region as it relates to multimodal transportation, freight and logistics, economic development, and cross-border travel.
- ✓ Tech Memo #2: Regional Freight Flow Analysis – highlights the existing and forecasted economic conditions that influence the freight and logistics industry as well as provides an understanding of how economic conditions are expected to impact the freight and logistics industry in the Buffalo-Niagara region.
- ✓ Tech Memo #3: Gap Analysis and Project Development – summarizes the findings derived from a SWOT Analysis and outlines the strategies and projects that are recommended as part of the Buffalo-Niagara Regional Freight Plan.

The full Tech Memos are included as appendices to this plan. Tech memos were prepared in prior phases of this project and may not reflect the most up-to-date information. The material in this opening section presents the most current information on data, findings, and recommendations.

1 Status of 2010 Niagara Frontier Urban Area Freight Transportation Study Transportation Improvements Projects

The 2010 Greater Buffalo Niagara Regional Transportation Council (GBNRTC) Niagara Frontier Urban Area Freight Transportation Study (2010 study) included numerous project recommendations, as presented in Table 1-1. This section provides an overview of which projects have been undertaken and how they have addressed freight flow in the region. This section also provides a synopsis of which projects identified in the 2010 study are included in the Transportation Improvement Program (TIP) or other planning documents for near-term consideration.

Table 1-1 Projects Identified in 2010 Niagara Frontier Urban Area Freight Transportation Study

<i>Project</i>	<i>Mode</i>	<i>Status</i>
<i>Peace Bridge Expansion</i>	Highway	Various projects completed
<i>NY Route 63 Bypass</i>	Highway	Not completed
<i>US 219</i>	Highway	Partially completed
<i>Buffalo Logistics Complex</i>	Highway/ Rail	Not completed
<i>Portageville Bridge Replacement</i>	Rail	Completed
<i>CP Draw Bridge Replacement</i>	Rail	Not completed
<i>G&W Connection from NS to Buffalo Line to BPRR Line</i>	Rail	Not completed
<i>CN Northern Connection</i>	Rail	Not completed
<i>CN Southern Connection</i>	Rail	Not completed
<i>Rehabilitation of Falls Road Bridge over Erie Canal</i>	Rail	Not completed
<i>Lehigh Valley Yard Intermodal Expansion</i>	Rail	Not completed
<i>AES Lake Unloading Project</i>	Water	Not completed
<i>Revitalized Erie Canal</i>	Water	Not completed
<i>Short Sea Shipping</i>	Water	Not completed

1.1 RECOMMENDATIONS COMPLETED OR UNDERWAY

International Trade Gateway Organization

One of the most imminent recommendations stemming from the 2010 study was the formation of a freight and logistics group that would promote and facilitate the freight and logistics industry in the Buffalo Niagara region. The International Trade Gateway Organization (ITGO) is a collaborative initiative of the public, private, and academic sectors to create a globally known logistics center in the Buffalo Niagara region. ITGO has supported a number of freight infrastructure projects since its inception, such as the New York Gateway Connection Improvement Project and replacement of the Portageville Bridge. Additionally, ITGO has established a strategic relationship with the Port Authority of New York and New Jersey (PANYNJ) to promote the Buffalo-Niagara region as an "inland port" providing congestion relief and distribution capabilities. This led to a Memorandum of Understanding with PANYNJ to designate the region as a "strategic international gateway", creating a relationship based on joint marketing and sharing of resources and data.

Peace Bridge Expansion

Since the 2010 study, priorities surrounding Peace Bridge expansion have changed. With traffic volumes generally down in the last decade, the focus has shifted from expanding capacity on the bridge to improving clearance and inspections at the bridge plazas and enhancing connections to the Interstate system. Completed in 2017, the New York Gateway Connections Improvement Project was a \$56.7 million project to improve direct access between I-190 and the Peace Bridge while removing trucks and automobiles from the local street system. Since that project, the Buffalo and Fort Erie Public Bridge Authority has undertaken \$175 million in capital improvements that include expanding the U.S. bridge entry plaza and rehabilitation of the bridge deck. Additional pre-clearance pilot programs and advances in technology, discussed later in this memo, have also taken effect.

U.S. Route 219

In 2003, a Final Environmental Impact Statement (FEIS) was released for the improvement of the U.S. Route 219 Corridor from NY Route 39 in the Village of Springville to I-86. The Federal Highway Administration (FHWA) issued a Record of Decision (ROD) in September of 2003, based on the evaluation presented in the FEIS. A four-lane limited access freeway alternative was selected by the New York State Department of Transportation (NYSDOT) and adopted with stipulations by FHWA as the preferred alternative.

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) without requiring use of Seneca Nation Land and without causing significant impacts to the unimproved portions of the existing U.S. Route 219.

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 FEIS. Since then, 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.

Buffalo Logistics Complex

The Buffalo Logistics Complex project began as a combined marketing and infrastructure effort to bring heightened attention to WNY as a freight logistics hub and to provide infrastructure to enhance freight logistics transportation. A site at the Lakeside Commerce Park was previously identified and a developer partner announced; however, as of late 2020, the developer has since dropped plans for a Cross-Docking Facility for a solar energy facility due to subsurface contamination of the site. A new site will need to be identified.

Portageville Bridge Replacement

The Portageville Bridge project was a public/private partnership between NYSDOT and Norfolk Southern (NS) to replace the bridge over the Genesee River in Letchworth State Park, which was weight limited and experiencing structural and operational deficiencies. A new railroad bridge, since named the Genesee Arch Bridge, was completed in 2017, replacing the old Portageville Bridge. The new \$71 million bridge has increased efficiency along the Southern Tier line by allowing NS to haul industry standard 286,000-pound cars while allowing for increased speeds.

New York State Thruway Cashless Tolling

Beginning in 2019, the New York State Thruway Authority began switching over physical, manned toll collection booths to electronic tolling gantries with sensors. The Thruway converted to an entirely cashless tolling system in November 2020. The Niagara Section of the New York State Thruway (I-190) converted to cashless toll collection at its Grand Island locations in 2018. Cashless tolling will help reduce delays and congestion caused by toll collection booths at the I-90 Williamsville and Lackawanna toll booths.

1.2 RECOMMENDATIONS NOT COMPLETED

There are strategies or projects that were identified in the 2010 study that were not yet implemented or otherwise advanced towards implementation that are no longer identified to be advanced as part of this update. In some cases, strategies or recommendations identified in the 2010 study have been modified to fit new strategies or projects identified in the 2020 study update. The below recommendations are those that are no longer carried into the Buffalo-Niagara Regional Freight Plan or have been modified with different description. The rationale for not including these recommendations is provided in Tech Memo #3.

1. Peace Bridge Expansion (removed)
2. New York Route 63 Bypass (modified)
3. AES Lake Unloading Facility (removed)
4. Revitalized Erie Canal (removed)
5. CN Northern Connection
6. CN Southern Connection
7. Short Sea Shipping
8. G&W Connection from NS to Buffalo Line to BPRR Line

Several recommendations identified in the 2010 Niagara Frontier Urban Area Freight Study or 2019 New York State Freight Plan that were not yet implemented or otherwise advanced towards implementation at the time of preparing this update. These recommendations still have merit in being implemented to enhance the Buffalo-Niagara regional freight and logistics economy and transportation system, and thus are carried forward into this current plan for continued consideration, these include:

1. Buffalo Logistics Complex/ Lakeside Commerce Park Cross-Docking Facility
2. U.S. 219 Improvements
3. CP Draw Bridge Alternatives
4. Lehigh Valley Yard Development
5. Improve Falls Road Railroad Bridge over Erie Canal
6. Niagara Falls International Airport (NFIA) Air Cargo Expansion
7. Buffalo-Niagara International Airport (BNIA) Air Cargo Expansion

1.3 OTHER RECOMMENDATIONS

Other recommendations not identified in the 2010 study that have been undertaken to improve the freight and logistics industry or are included in the TIP include:

Bethlehem Steel Site Improvements

Erie County Industrial Development Agency (ECIDA) has undertaken several improvements at the Bethlehem Steel site to make it more attractive for industrial development. This includes the Rail Relocation Project, which replaced approximately 2 miles of track that previously hindered access to the site while also opening up 300 acres of land for development. The rail improvements now also provide direct rail access from the Bethlehem Steel site to major rail carriers, while also linking rail access with the Port of Buffalo site. Relocating the rail allowed for construction of Dona Street extension into the site, improving connections to Route 5.

Lewiston-Queenston Bridge U.S. Customs Plaza Improvements

The Niagara Falls Bridge Commission is in the midst of several U.S. bridge plaza improvements that will ultimately help truck traffic entering the U.S. The approximate \$90 million project is expected to be complete in 2023 and will include new secondary processing area, reconstruction of the primary lanes to provide nine auto, six truck, and one bus lanes, additional parking, and new administrative processing building.

I-90 Improvements

Since the 2010 study, a \$6.7 million safety enhancement project added one travel lane to I-90 in each direction, supplementing other ramp and safety improvements, to make it easier for traffic to merge while exiting to Cleveland Drive or I-290 eastbound and to Kensington Expressway (SR 33).

Western New York Regional Economic Development Council

The Western New York Regional Economic Development Council has annually awarded funding for several recommendations that support economic development, expansion of the freight and logistics industry and industries that support freight and logistics, continuous workforce training programs, and transportation improvements.

Projects recently funded through the Western New York Regional Economic Development Council that are now included in the Transportation Improvement Plans (TIP) include:

- NY Route 78 (Transit Road) – add a travel lane in each direction between I-90 interchange and Genesee Street to enhance freight access to/from the Buffalo-Niagara International Airport – 10.9 million.
- Elk Street Bridge over Norfolk Southern RR – bridge replacement - \$7.9 million.
- Ohio Street Lift Bridge over Buffalo River – bridge rehabilitation - \$17.7 million.
- I-290 Exit 7 Main Street Interchange Rehabilitation- reconfigure interchange to enhance safety - \$6.7 million.
- I-290 westbound exit ramp to Niagara Falls Boulevard safety improvements - \$1.95 million.

The 2020-2022 Unified Planning Work Program (UPWP) identifies several planning-level access improvement studies that will be undertaken that impact freight movement. These include:

- I-190 at Grand Island Boulevard/ South Parkway interchange
- I-290 ramp to Northbound I-190 (Grand Island Bridge)
- Westbound I-90 ramp to Northbound I-190
- I-90 future interchange with Youngs Road

2 Buffalo-Niagara Regional Freight Plan Value Statement

The Value Statement is a message that conveys the values and priorities of this Buffalo-Niagara Regional Freight Plan to be delivered, communicated, and acknowledged. The Value Statement helped guide the development of strategies and recommendations to achieve this Value Statement. The Value Statement of the Buffalo-Niagara Regional Freight Plan is as follows:

Promote the Buffalo-Niagara Region as a premier bi-national hub for freight and logistics industries integrating “Green” or sustainable platforms and as an intermodal gateway for freight and goods traveling between the bi-national region and the Port Authority of New York/ New Jersey (PANYNJ) and other East Coast locations.

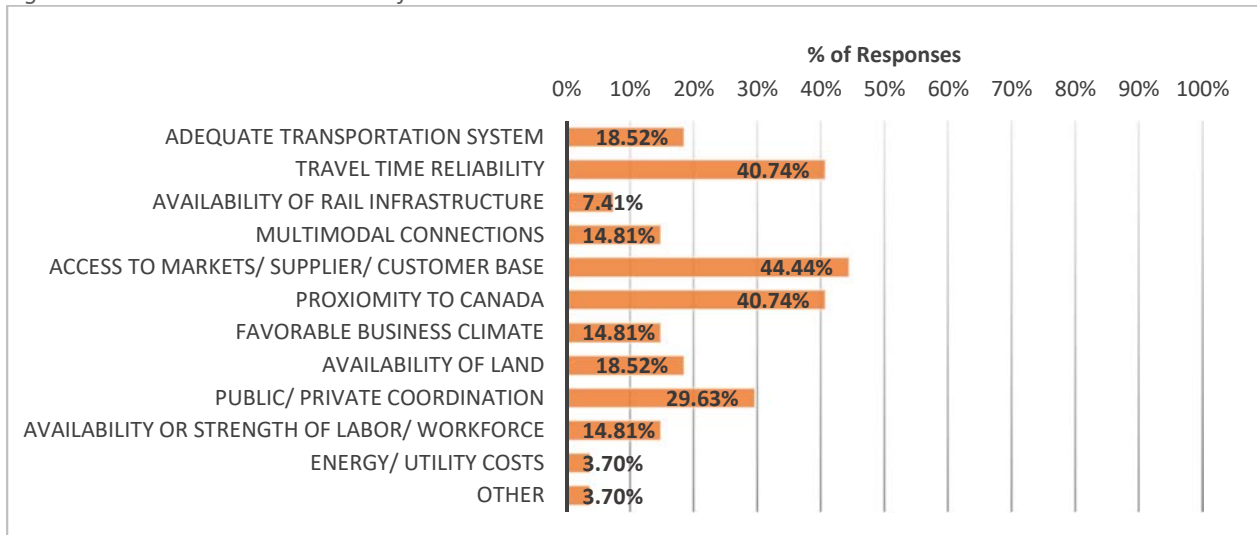
3 Freight Stakeholder Outreach and Engagement

Over the course of this project, outreach and engagement with several freight and logistics stakeholders occurred, providing valuable insight into the challenges and opportunities for both the existing and an expanding future freight and logistics industry in the Buffalo-Niagara region. Outreach and engagement consisted of Project Steering Committee meetings, ITGO Freight Stakeholder Roundtable (held October 2019), Freight Stakeholder Focus Group meetings, individual meetings and calls with freight stakeholders, Niagara University Supply Chain Forum, and a publicly accessible online survey. The stakeholders involved and findings from this outreach are summarized in Tech Memo #1.

An online freight survey was administered in January 2020 to gather input on a range of freight and logistics related questions. For most questions, participants were asked to respond with their "most important" response and were often allowed to choose multiple responses. The following are results from the online survey.

1. What characteristics of the Buffalo-Niagara region are most beneficial to your business?

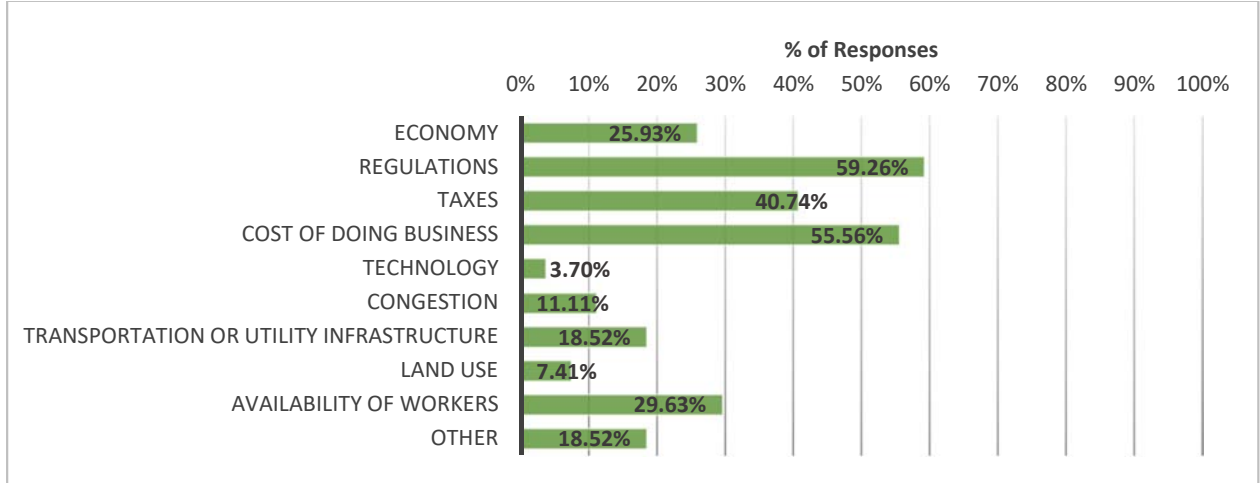
Figure 3-1 Characteristics most beneficial to business



"Other" responses include: Educating the public about Supply Chain Management issues.

2. What challenges/ barriers are impacting your business?

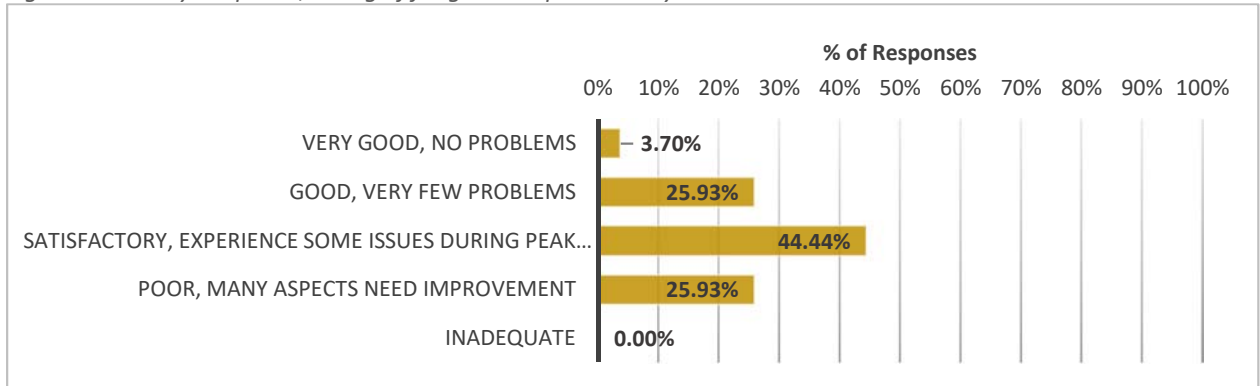
Figure 3-2 Challenges impacting business



Responses that have been expanded upon include: Ability to expand mass transit and carpooling to improve worker access to jobs and training, more government funding, unfavorable business climate in NYS, economy and regulations impact the amount of goods that travel between the U.S. and Canada (i.e., number of lanes open or processing times), insurance costs for trucking companies and freight brokers are rising fast, companies cutting out education and training to employees, border crossing delays are unpredictable, Worker's Comp rates going up in NYS, regulations add cost to service.

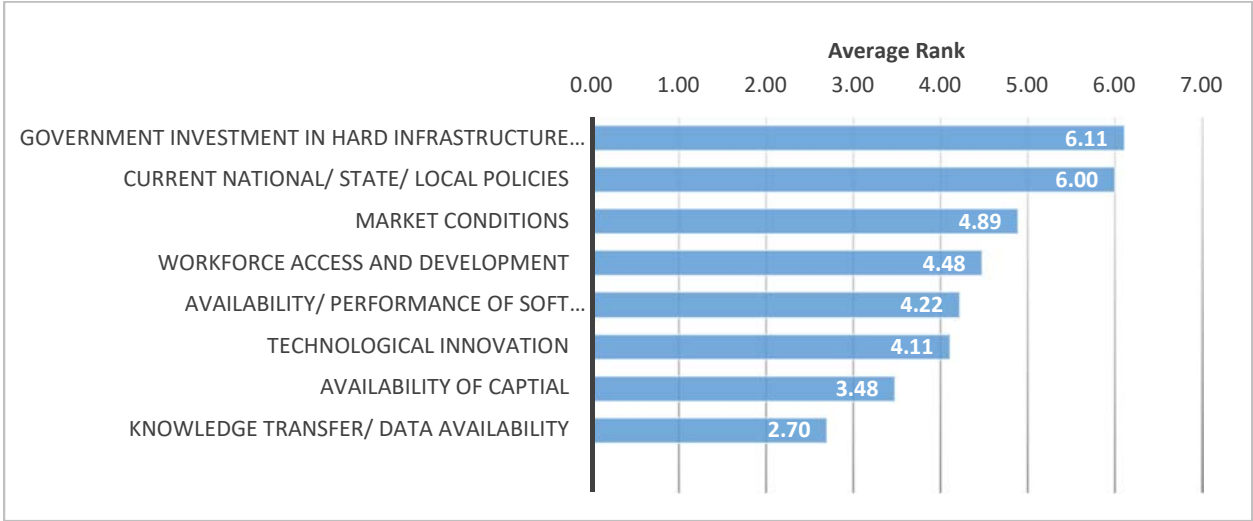
3. How would you rate the freight transportation system in the Buffalo-Niagara region?

Figure 3-3 Survey Response, rating of freight transportation system



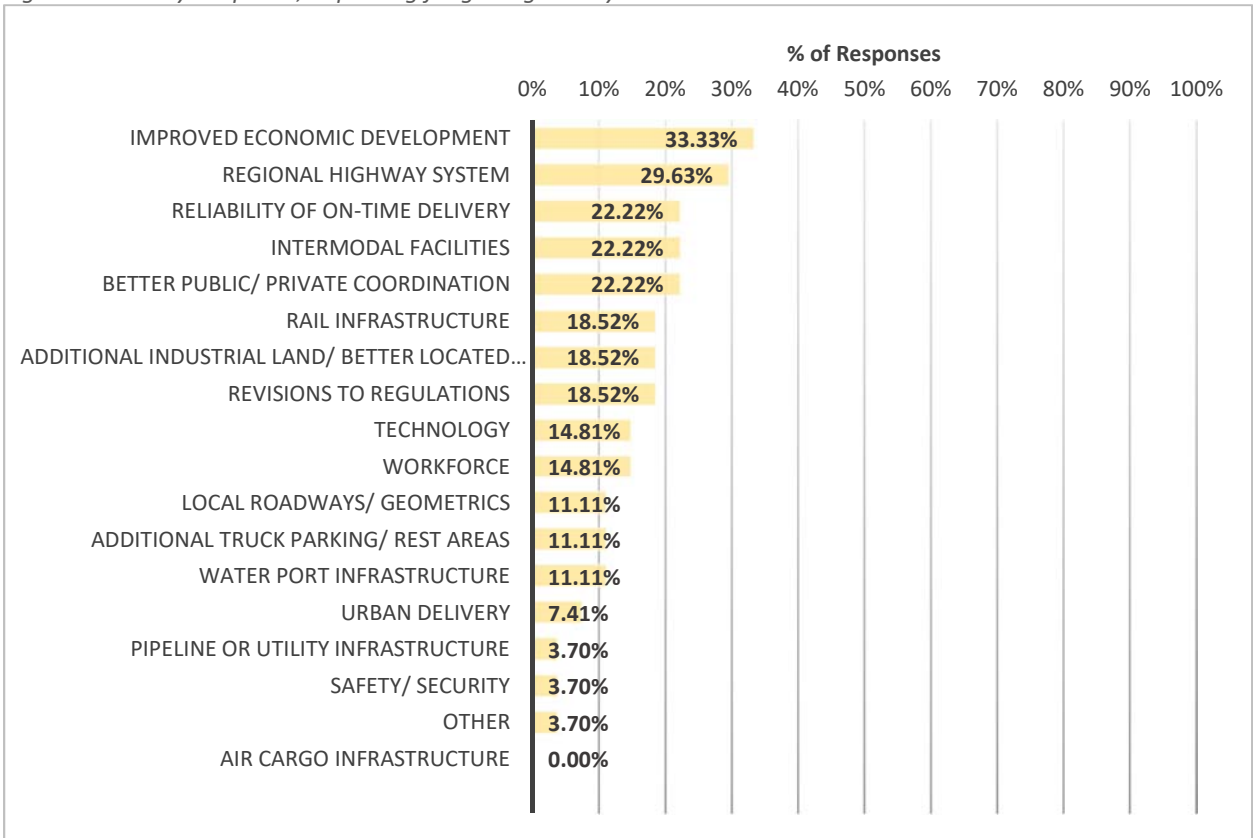
4. Please rank the following based on the impact you believe they may have on the near-term success of the freight/ logistics economy in the Buffalo-Niagara Region.

Figure 3-4 Survey Response, ranking of factors believed to impact near-term success of freight



5. If you could improve the freight/ logistics transportation system in the Buffalo-Niagara region, what would your focus be?

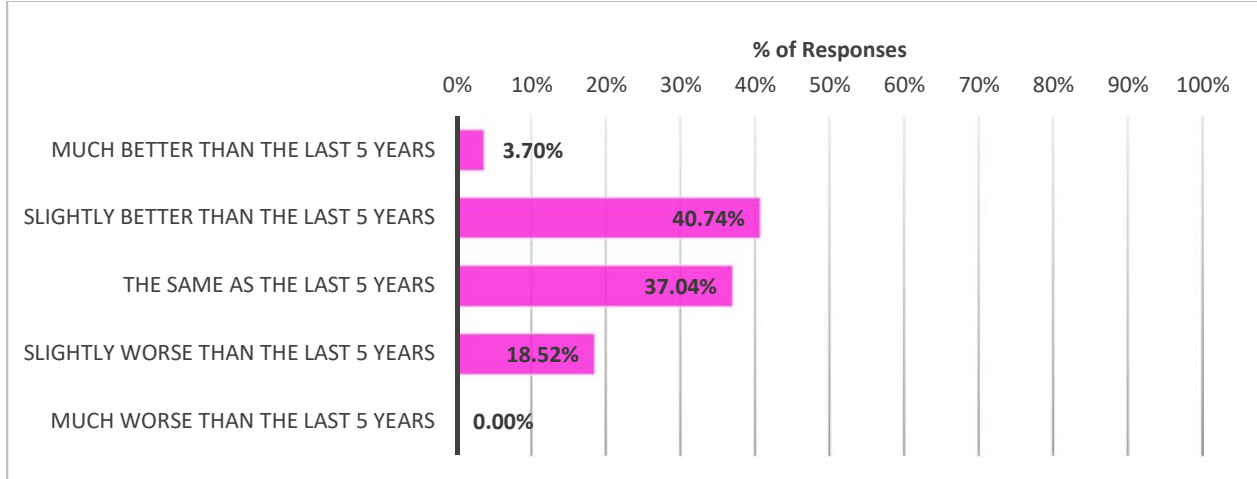
Figure 3-5 Survey Response, improving freight logistics system



"Other" responses included: More efficient routing of cargo traffic.

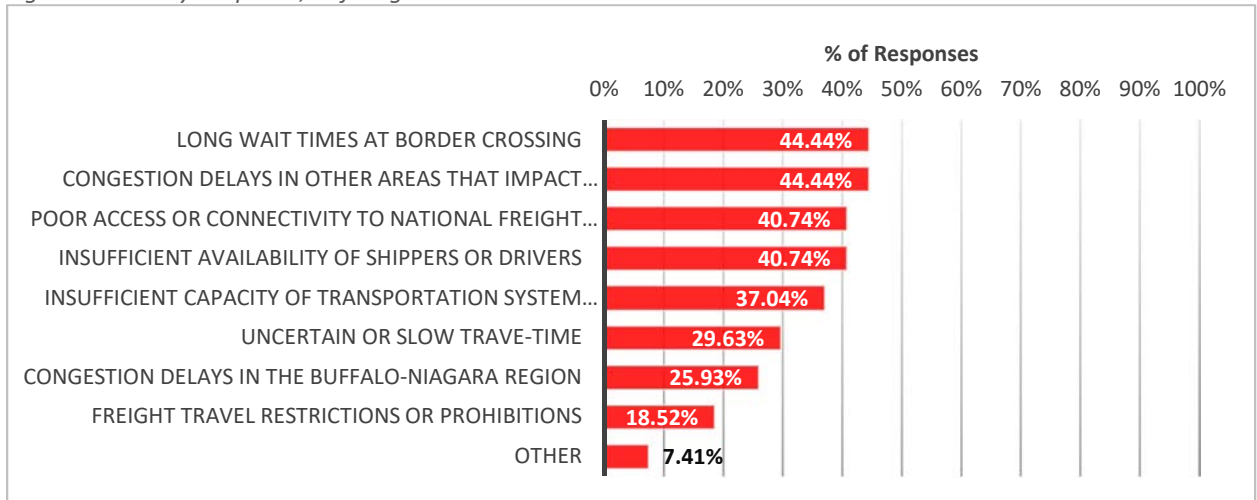
6. In the next 5 years, do you estimate that the economy associated with the freight/ logistics industry in the Buffalo-Niagara region will be:

Figure 3-6 Survey Response, estimating the future of freight economy



7. How would you define a bottleneck in your industry?

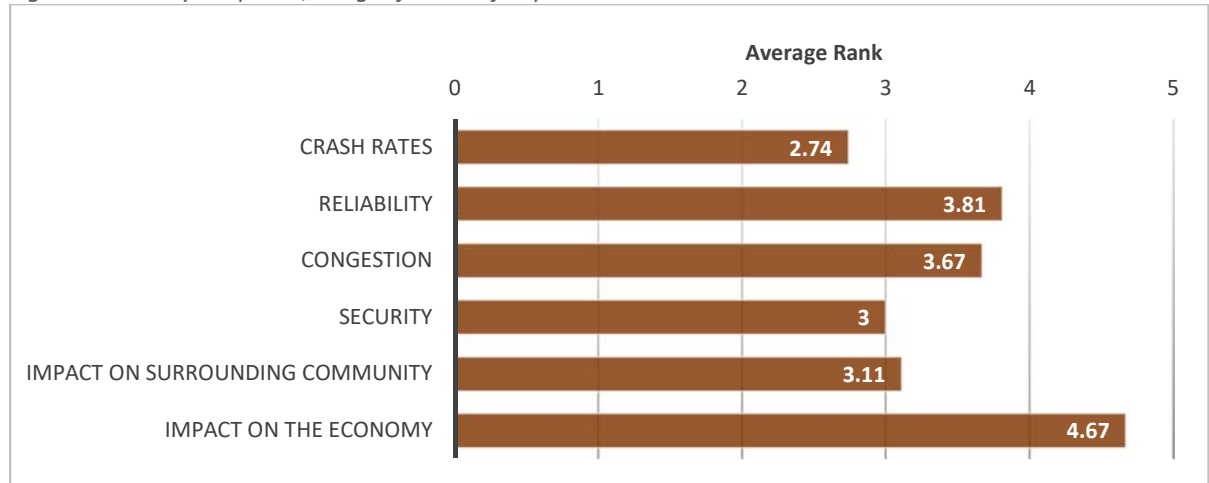
Figure 3-7 Survey Response, Defining Bottleneck



"Other" responses include: Attention to industry needs/ realities/ opportunities by state government.

8. When federal, state, or local governments measure the overall performance of the freight/ logistics network, what factors should they be focusing on?

Figure 3-8 Survey Response, Freight factors of importance



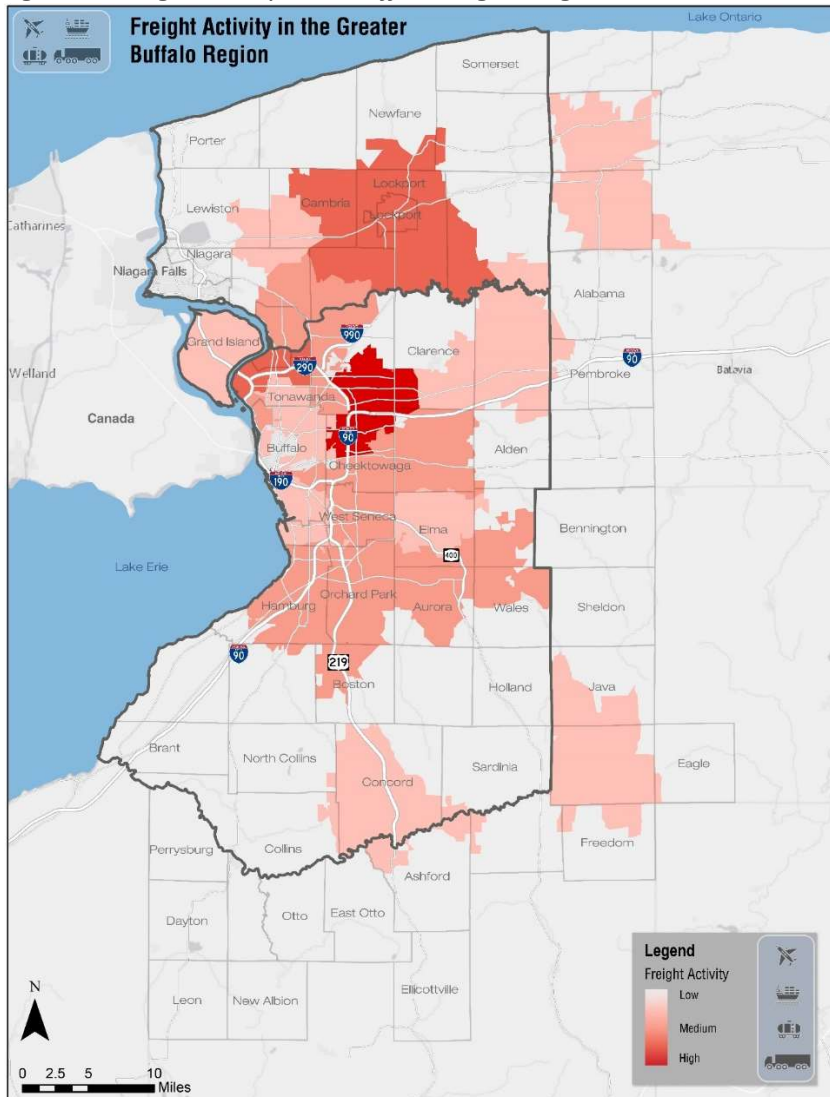
Other issues listed through the open comment section of the survey

- a. The root cause of the issue in WNY is the unfavorable business climate discouraging investment and business from the area.
- b. New York's leadership does not understand (or seem to care about) logistics, which hurts our regional economic development strategy. Point in question, between spending \$16M on an "inland port" in Syracuse that does almost zero import/ export business, turning the Skyway into a museum, and refusing to start the US 219 SEIS (which has already been funded), the state proves time and time again that they don't get it. Unfortunately, many of our peer regions are making logistics a priority and thriving from doing so. For a region whose history was built on logistics, there should be a stronger acknowledgement of the fact that investment in logistics, infrastructure, and cross-border trade would spur economic activity in the region.
- c. ELD Regulations have an adverse impact on the transportation industry.
- d. The current CSX rail service times are slower in/out of the region.
- e. The Port of Buffalo needs improved marketing and business development.
- f. Expanded DOT enforcement.
- g. Border ports are undersized and inefficiently designed. Truck traffic should be routed through Lewiston-Queenston Bridge with a large cargo port built there.
- h. Consequences of Skyway removal.
- i. Port of Buffalo is being neglected.
- j. Rail infrastructure and new opportunities for direct rail access.
- k. I believe the root cause of the issue in WNY is the NYS unfavorable business climate discouraging investment and business from the area.

4 Regional Freight Activity

To help understand clusters of activity that are reflective of freight supply and demand in the region, available employment in key sectors that are generally associated with generating freight supply and demand were analyzed. These employment categories include agriculture, manufacturing, mining, retail, transportation, and warehousing/wholesale, obtained through data generated by the U.S. Economic Census. The employment figures were used to generate a map that portrays general freight activity resulting from the supply and demand based (Figure 4-1). The map helps identify areas where freight activity is generally highest and clusters of employment sectors that generate freight supply and demand in the region. The maps show that areas in Amherst and Williamsville experience the greatest freight supply and demand in the region. Areas in and around Lockport and in the industrial sections of the Town of Tonawanda also represent higher freight activity.

Figure 4-1 Freight Activity in the Buffalo-Niagara Region



Source: Transearch, FHWA

4.1 BOTTLENECK ANALYSIS

A bottleneck analysis was conducted for the Buffalo-Niagara region to assess the locations of freight delays due to congestion, reduced speeds, delays, and/or rerouting. According to FHWA, non-recurring congestion (caused by non-recurring events such as incidents, weather, work zones, and/or special events) account for more than half of truck-based travel time bottlenecks. Recurring congestion is typically associated with bottlenecks and poor traffic signal timing.

2010 Freight Study

Bottlenecks previously identified in the 2010 study, including the Portageville Bridge (rail) and I-90/ I-290 interchange have seen upgrades since 2010. Additional infrastructure upgrades have been made to reduce congestion, and although not outlined in the 2010 study as bottlenecks, should be noted as improving truck transportation. These include upgrades to the Peace Bridge gateway plaza and the Lewiston-Queenston Bridge plaza.

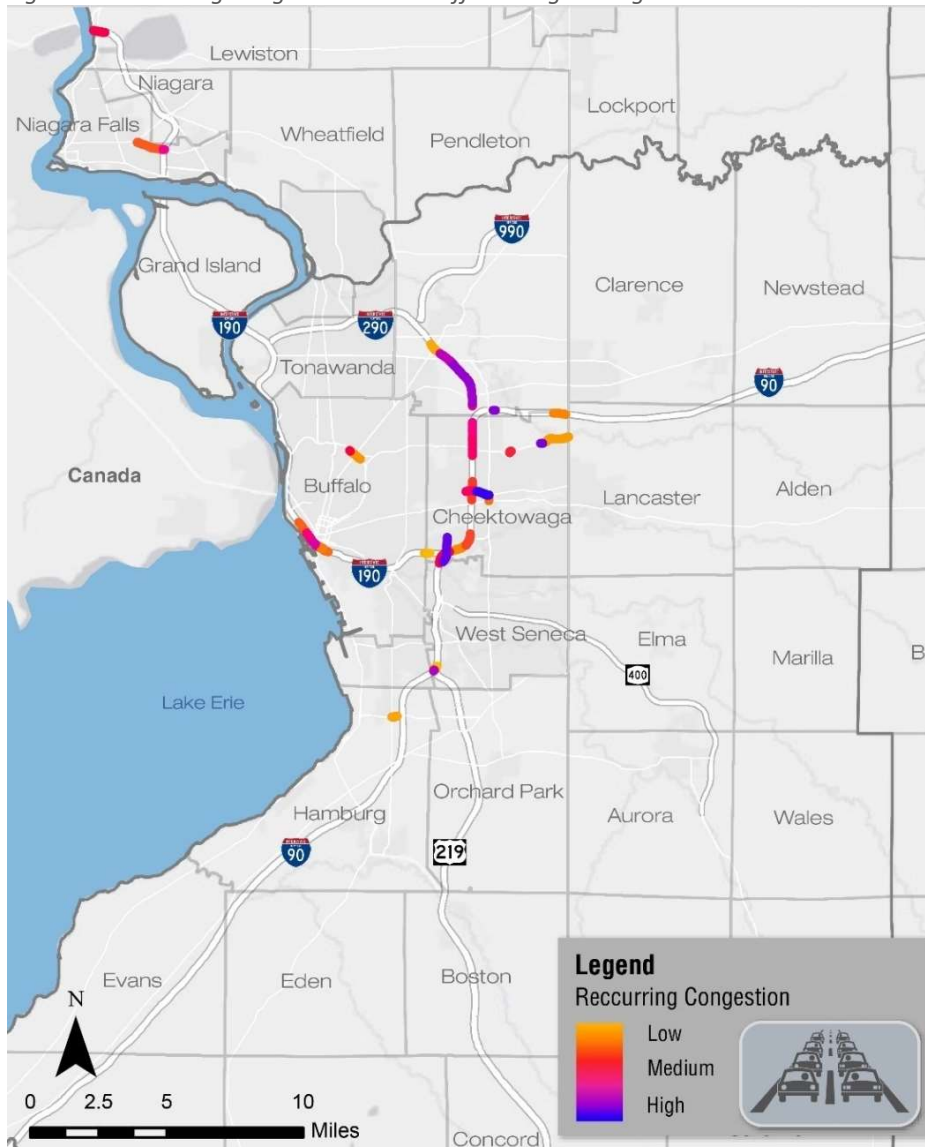
Bottleneck Analysis

A bottleneck analysis for trucking was conducted for the Buffalo-Niagara region using the 2019 FHWA's National Performance Measures Research Data Set (NPMRDS). In using the NPMRDS, all travel time records for trucks in Erie and Niagara Counties was downloaded. This resulted in 55.27 million travel time records for 2,593 roadway segments. The analysis excluded roadways with less than 100 counts over the course of the year. The following metrics were used to identify hourly congestion, helping to identify sections of roadways with recurring congestion (VEHT), congestion on roadways during peak travel periods and non-recurring congestion (VHU), such as crashes, disabled vehicles, work zones, adverse weather events, and planned special events:

- Vehicle Hours of Travel (VHT) = Truck Volume * Avg. Travel Times
- Vehicle Excess Hours of Travel (VEHT) = Truck Volume * (Avg. Travel Times – free flow)
- Vehicle Hours of Unreliability (VHU) = Truck Volume * (95th Percentile Travel Time – Avg. Travel Times)

Congestion metrics were then normalized by the length of the segment. Figure 4-2 portrays the top 50 locations by recurring congestion. Figure 4-3 portrays the top 50 locations by non-recurring congestion.

Figure 4-2 Recurring Congestion in the Buffalo-Niagara Region



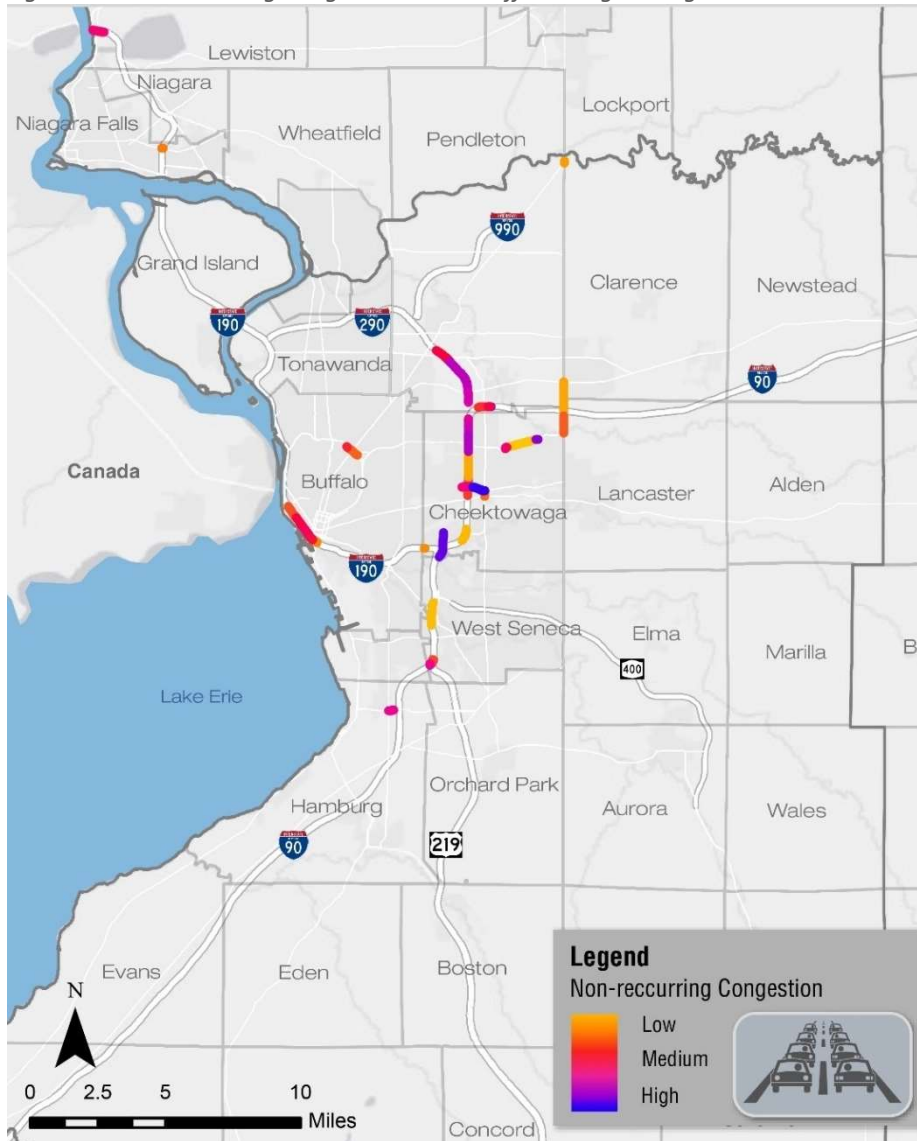
Source: NPMRDS

The top recurring congested segments are:

1. Walden Avenue, eastbound and westbound, between I-90 and Union Road (SR 277)
2. Harlem Road (SR 240), northbound and southbound, between William Street and Clinton Street
3. Genesee Street (SR 33), westbound near Holtz Drive
4. I-90, westbound, from I-290 to just south of Kensington Expressway (SR 33)
5. I-290, eastbound, between Millersport Highway and I-90

Two segments in Niagara County appear in the top 50, and they are northbound Niagara Falls Boulevard near I-190 and northbound I-190 approaching the Lewiston-Queenston Bridge.

Figure 4-3 Non-Recurring Congestion in the Buffalo-Niagara Region



Source: NPMRDS

The top non-recurring congested segments are:

1. Walden Avenue, eastbound and westbound, between I-90 and Union Road (SR 277)
2. Harlem Road (SR 240), northbound and southbound, between William Street and Clinton Street
3. Genesee Street (SR 33), westbound near Holtz Drive
4. I-290, eastbound, between Millersport Highway and I-90
5. I-190, northbound, near Church Street
6. I-90, westbound, between Kensington Expressway (SR 33) and I-290

Three segments in Niagara County appear in the top 50, and they are northbound and southbound Niagara Falls Boulevard near I-190 and northbound I-190 approaching the Lewiston-Queenston Bridge.

The bottleneck analysis for rail was explored through existing studies such as New York State Freight Plan and 2010 Niagara Frontier Urban Area Freight Transportation Study. Unlike the highway system, which is owned by public agencies, the majority of the rail network is owned by private railroad companies. With the recent construction of the Portageville Bridge (now known as Genesee Arch Bridge), major rail bottlenecks in Western New York have been addressed. There are still existing bottlenecks such as the CSX CP Draw Bridge – this bridge over the Buffalo River is used by multiple rail carriers (CSX and Norfolk Southern) and can cause delays in rail transport. There are also several bridge clearances in the region, mainly on the Niagara Branch railroad section through downtown Buffalo that prohibit double stack container movement on certain rail corridors.

4.2 SAFETY

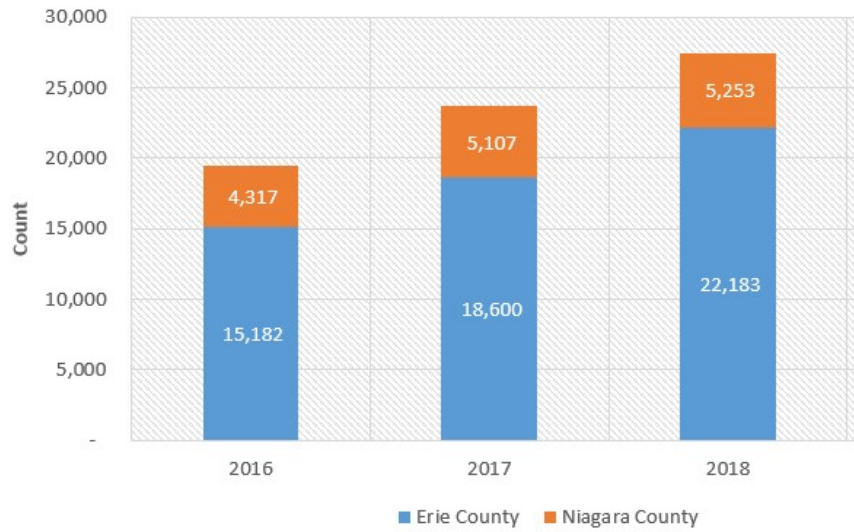
Safety is a top priority of the U.S. Department of Transportation and a major goal in public and private sector transportation programs. The growth in freight movement has heightened public concerns about safety nationwide. Highways and railroads account for nearly all fatalities and injuries involving freight transportation.

Per 2016 Federal Motor Carrier Safety Administration Data (FMCSA), 16% of all highway-related fatalities involve large truck occupants – an increase of 4% from 2015. In addition, 12% of all traffic fatalities were accounted to large trucks and busses. New York State ranked among the top ten states with the highest average of fatal truck and bus crashes from 2014-2016. The FMCSA broke down the 2016 large truck fatal crash data further to find:

- At least 39% of large truck occupants killed in crashed were not wearing a seatbelt.
- Speed was a factor in 17% of truck crashes with at least one large truck occupant fatality.
- 61% of fatal crashed involving a large truck occurred in rural areas.
- 27% of fatal crashed in work zones involved a large truck.
- 6% involved large truck driver distraction as a factor, of which 16% was related to cell phone use.

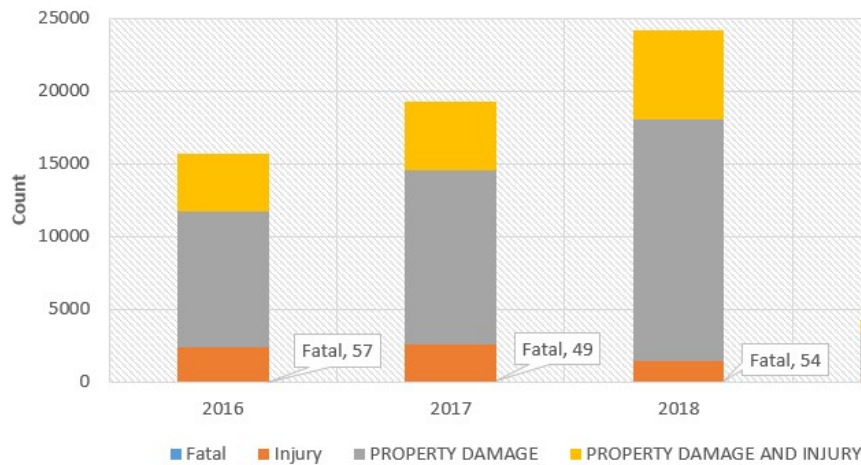
Erie and Niagara Counties face many of the same challenges *as the National Freight Network*; increased safety concerns due to increasing demand and thus an increased number of incidents. Figure 4-4 presents accident data for Erie and Niagara Counties, as obtained from GBNRTC. In 2018, Erie County had more than 22,000 accidents, almost one and a half of the total accidents reported in 2016. Although Niagara County did not see the same rate of increase in incidents, it did see an increased number of overall incidents. As presented in Figure 4-5, the number of fatalities and injuries in the Niagara-Buffalo region reduced from 2016 to 2018, while the number of accidents with property damage increased.

Figure 4-4 Number of Accidents in Erie and Niagara Counties



Source: Greater Buffalo-Niagara Regional Transportation Council

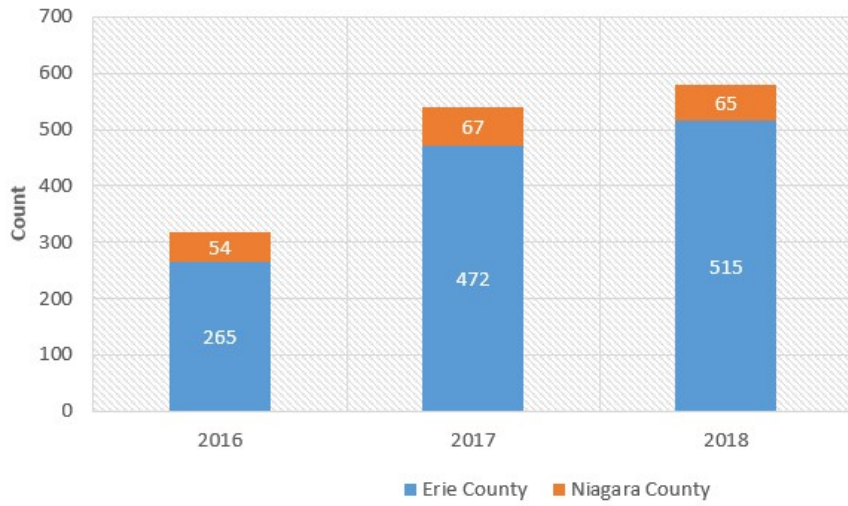
Figure 4-5 Number of Accidents by Severity in Erie and Niagara Counties



Source: Greater Buffalo-Niagara Regional Transportation Council

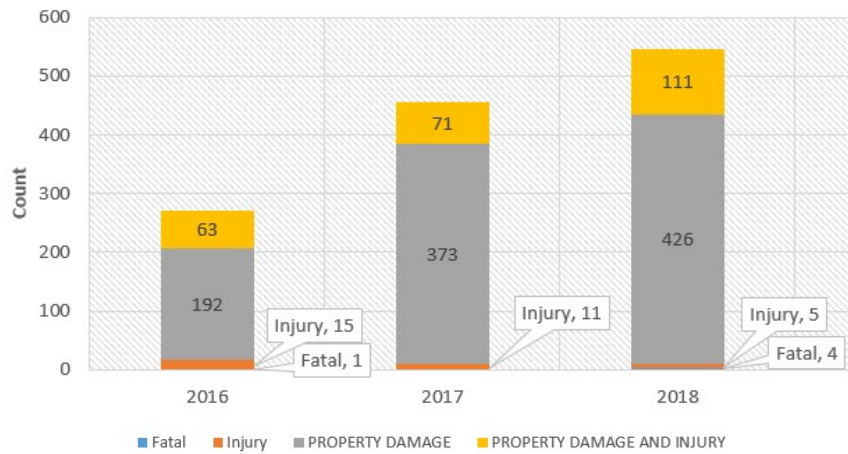
Many freight related crashes are due to roadway geometry (design deficiency), mode intersections such as railroad crossings and/or other roadway operational issues. In Erie and Niagara Counties, three types of collisions are counted as freight-related accidents: collisions with Guide Rail, Guide Rail End, and Railroad Train. As shown in Figure 4-6 and Figure 4-7, the number of rail-related accidents within the Niagara County has increased. In 2018 there were four fatalities in the Buffalo-Niagara region related to rail.

Figure 4-6 Number of Freight-Related Accidents in Erie and Niagara Counties



Source: Greater Buffalo-Niagara Regional Transportation Council

Figure 4-7 Number of Freight-Related Accidents by Severity in Erie and Niagara Counties



Source: Greater Buffalo-Niagara Regional Transportation Council

Using the crash data obtained through GBNRTC, Table 4-1 shows the highest frequency crash intersections in Niagara County.

Table 4-1 Top 25 Crash Frequency Roadway Intersections in Niagara County

Intersection	Count
Niagara Falls Boulevard & Military Road	163
S Transit Road & Robinson Road	120
Military Road & Packard Road	106
Niagara Falls Boulevard & I-190 Interchange	94
Niagara Falls Boulevard & Erie Avenue	78
190 Interchange at Robert Moses State Parkway	69
Niagara Falls Boulevard & 66th Street	69
S Transit Street & High Street	62
Porter Road & Packard Road	61
S Transit Road & Lockport Mall	58
Twin City Highway & Robinson Street	57
Niagara Falls Boulevard & 80th Street	56
Hyde Park Boulevard & Pine Avenue	54
S Transit Road & Strauss Road	52
Niagara Falls Boulevard & 73rd Street	50
Niagara Falls Boulevard & Niagara Consumer Square Driveway	49
S Transit Road & Shimer Dr	46
Pine Avenue & 19th Street	43
Niagara Falls Boulevard & Packard Road	42
190 Interchange at Packard Road	41
Niagara Falls Boulevard-Between Military Road & Tuscarora Road	39
Military Road & 3rd Ave	38
Niagara Falls Boulevard & Ward Road	38
Niagara Street & 7th Street	35
Niagara Falls Boulevard & Tuscarora Road	35

Source: Greater Buffalo-Niagara Regional Transportation Council

Table 4-2 shows the highest frequency crash intersections in Erie County.

Table 4-2 Top 25 Crash Frequency Roadway Intersections in Erie County

Intersection	Count
Southwestern Boulevard & Camp Road	140
290 Interchange at Sheridan Drive	130
198 & Main Street	123
Kensington Expressway West by E Delevan Avenue	121
290 Interchange at Main Street	117
Kensington Expressway ramp towards 198	111
90 Interchange at Kensington Expressway	103
198 Interchange at Elmwood Avenue	101
Maple Road & Sweet Home Road	99
McKinley Parkway & Southwestern Boulevard	97
Niagara Falls Boulevard & E Robinson Road	94
Transit Road & Maple Road	93
Kensington Expressway by E Ferry Street	92
Main Street & Transit Road	91
198 Interchange at Delaware Avenue	91
Transit Road & Walden Avenue	91
Bailey Avenue & E Delavan Avenue	89
Sheridan Drive & Hopkins Road	88
290 Interchange at Niagara Falls Boulevard	88
Kensington Expressway interchange at Grider Street	88
198 Interchange at Grant Street	88
Niagara Falls Boulevard & Maple Road	87
Sheridan Drive & Millersport Highway	86
290 Interchange at Millersport Highway	84
190 Interchange at Niagara Street	81

Source: Greater Buffalo-Niagara Regional Transportation Council

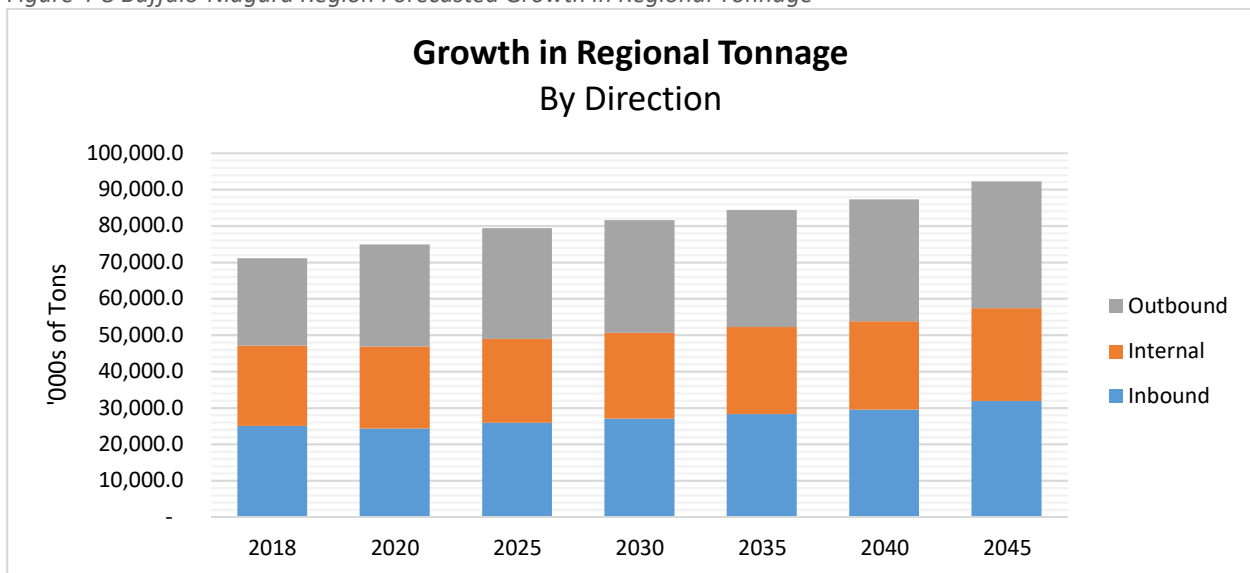
4.3 BUFFALO-NIAGARA REGION ECONOMY

It is expected that the Buffalo-Niagara region's economy will grow by approximately 30% over the 25-year horizon period. As the region grows, it will see an increased demand for goods amounting to over 33 million additional tons of goods being hauled by a mix of modes. These 33 million tons represent an expansion of freight tonnage of approximately 47% over the period of (2018 – 2045), which equates to freight activity growing at a rate of approximately 1.7% per year. The growth of freight activity is higher than the national average, but slower than average New York growth over the same period. This growth in demand for freight is largely being driven by an expansion of wholesale/retail distribution, and manufacturing activities – slated to contribute over \$10 billion to the regional economy in 2045 (constant 2018 dollars).

Figure 4-8 displays the expected growth in freight tonnage the Buffalo-Niagara region will experience between 2018 and 2045 for outbound, internal, and inbound freight. Note that the following definitions are functionally used to describe the flow of freight goods in moving in relation to the Buffalo-Niagara region.

- **Inbound Flows:** Flows where the point of origination resides outside of the region, and the terminating point lies within the region. This type of flow represents trade of intermediate inputs to production – being sourced from external domestic markets or imported in from other countries.
- **Outbound Flows:** Flows where the point of origination resides within the region, and the terminating point lies outside of the region. This type of flow represents the trade of region-produced goods with external markets: either of a domestic or international (export relation).
- **Internal Flows:** Represent movements of goods where both the origin and destination lie within the same region. Movements between Erie and Niagara Counties are counted as 'internal' moves. It is important to note that the definitions are based on ultimate origin, and ultimate destination. To this end, an imported good that enters the country at one of the international ports of entry and is then transported to its final destination in Erie County is considered an Inbound good – despite the fact the domestic origin and destination are within the Buffalo-Niagara region. On the opposite side of the equation, goods imported from Canada via one of the international ports of entry, destined for say Connecticut, are considered through flows – they are not associated with the regional economy and represent goods ultimately passing through the region. These through flows do however impose wear and tear on the region's transportation system.

Figure 4-8 Buffalo-Niagara Region Forecasted Growth in Regional Tonnage



Source: FAF, FHWA

Table 4-3 on the following page portrays the change in freight tonnage and value of goods between 2018 and 2045 for inbound, internal, and outbound freight. In summary, between 2018 and 2045, the overall tonnage of goods either inbound, outbound, or within (internal) the region is expected to grow by 46.57%, with the value of the goods expected to increase by 72.15%. A further breakdown shows that with the exception of "other and unknown", rail is expected to see the greatest percent increase (nearly 150%) in total tonnage handled (inbound, internal, and outbound) with truck expected to see the greatest volume increase (24,377,000 tons) in total tonnage handled (inbound, internal, and outbound). Air is the only mode expected to experience a decrease.

We can also see that despite the trending growth in tonnage, the value of goods being shipped is growing at a faster rate than the associated volumes. Again, with the exception of "other and unknown", rail is expected to see the greatest percent increase (nearly 177%) in total value of goods handled (inbound, internal, and outbound) with truck expected to see the greatest overall value increase (\$56,566,000,000) in total value of goods handled (inbound, internal, and outbound). Like tonnage, air is the only mode expected to experience a decrease in the value of goods handled.

Note the value of goods shipped reported below is in price adjusted 2018.

Table 4-3 Forecasted Growth in Volume

Volume of Inbound Goods Shipped ('000s of Tons)				
Domestic Mode	2018 Inbound	2045 Inbound	Numerical Change in Volume	% Change in Volume
Truck	17,483	25,342	7,859	44.95%
Rail	844	1,628	784	92.89%
Water	52	78	26	50%
Air (include truck-air)	25	15	-10	-40%
Multiple modes & mail	1,149	1,643	494	42.99%
Pipeline	5,493	7,464	1,971	35.88%
Other and unknown	1	11	10	1,000%
Total	25,047	36,181	11,134	44.45%

Volume of Internal Goods Shipped ('000s of Tons)				
Domestic Mode	2018 Internal	2045 Internal	Numerical Change in Volume	% Change in Volume
Truck	21,907	28,661	6,754	30.83%
Rail	26	33	7	26.92%
Water	0	0	0	-
Air (include truck-air)	0	0	0	-
Multiple modes & mail	110	111	1	0.91%
Pipeline	0	0	0	-
Other and unknown	0	0	0	-
Total	22,043	28,805	6,762	30.68%

Volume of Outbound Goods Shipped ('000s of Tons)				
Domestic Mode	2018 Outbound	2045 Outbound	Numerical Change in Volume	% Change in Volume
Truck	17,862	27,626	9,764	54.66%
Rail	719	2,311	1,592	221.42%
Water	2	4	2	100%
Air (include truck-air)	18	14	-4	-22.22%
Multiple modes & mail	612	626	14	2.29%
Pipeline	4,707	8,641	3,934	83.58%
Other and unknown	94	11	-83	-88.30%
Total	24,014	39,233	15,219	63.38%

Volume of All Goods Shipped ('000s of Tons)				
Domestic Mode	2018 Total	2045 Total	Numerical Change in Volume	% Change in Volume
Truck	57,252	81,629	24,377	42.58%
Rail	1,589	3,972	2,383	149.97%
Water	54	82	28	51.85%
Air (include truck-air)	43	29	-14	-32.56%
Multiple modes & mail	1,871	2,380	509	27.20%
Pipeline	10,200	16,105	5,905	57.89%
Other and unknown	95	22	-73	-76.84%
Total	71,104	104,219	33,115	46.57%

Source: FAF, FHWA

Table 4-4 Forecasted Growth in Value

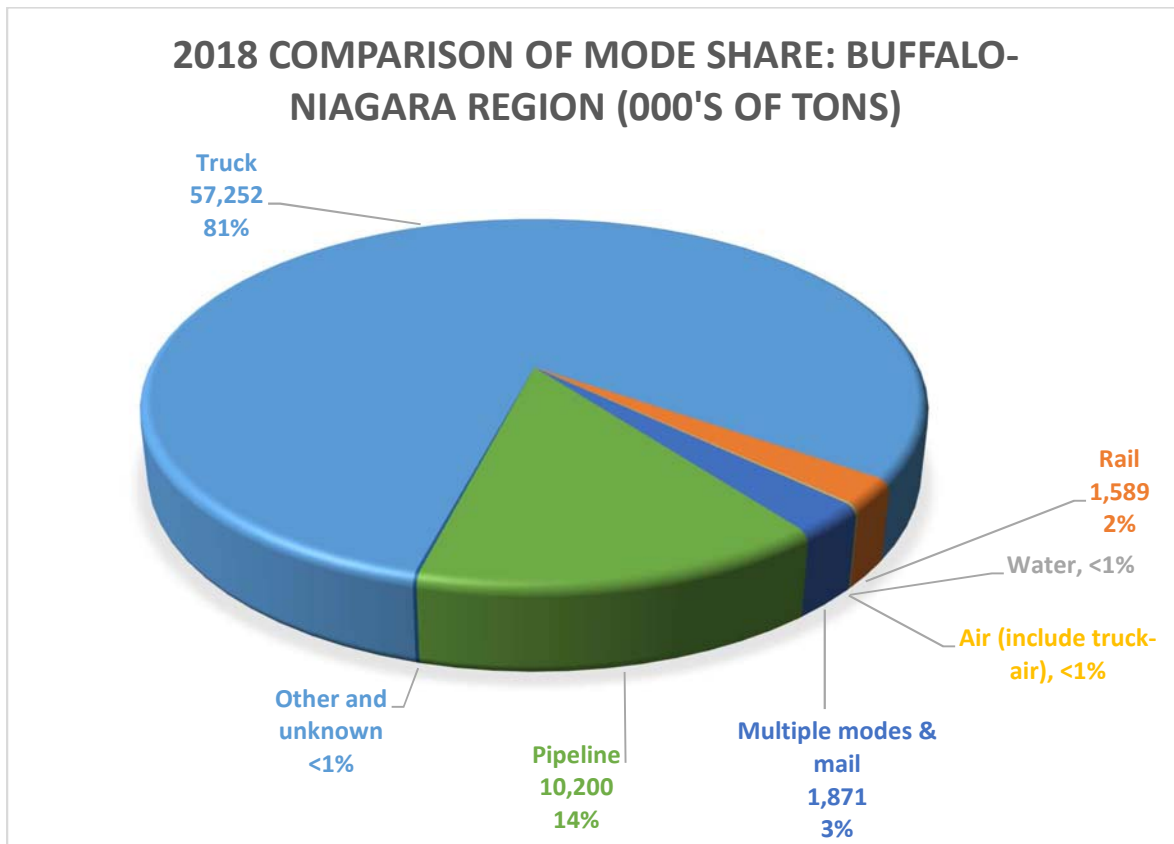
Value of Inbound Goods Shipped (Constant 2018 \$M)				
Domestic Mode	2018 Inbound	2045 Inbound	Numerical Change in Volume	% Change in Volume
Truck	29,320	58,166	28,846	98.38%
Rail	717	1,922	1,205	168.06%
Water	120	241	121	100.83%
Air (include truck-air)	4,039	1,077	-2,962	-73.33%
Multiple modes & mail	8,082	17,223	9,141	113.10%
Pipeline	1,517	2,064	547	36.06%
Other and unknown	75	289	214	285.33%
Total	43,870	80,982	37,112	84.60%
Value of Internal Goods Shipped (Constant 2018 \$M)				
Domestic Mode	2018 Internal	2045 Internal	Numerical Change in Volume	% Change in Volume
Truck	15,276	23,802	8,526	55.81%
Rail	11	13	2	18.18%
Water	0	0	0	-
Air (include truck-air)	0	0	0	-
Multiple modes & mail	3,460	9,969	6,509	188.12%
Pipeline	0	0	0	-
Other and unknown	0	0	0	-
Total	18,747	33,784	15,037	80.21%
Value of Outbound Goods Shipped (Constant 2018 \$M)				
Domestic Mode	2018 Outbound	2045 Outbound	Numerical Change in Volume	% Change in Volume
Truck	31,622	50,816	19,194	60.70%
Rail	1,606	4,532	2,926	182.19%
Water	5	51	46	920%
Air (include truck-air)	4,823	1,783	-3,040	-63.03%
Multiple modes & mail	8,000	14,765	6,765	84.56%
Pipeline	1,517	3,371	1,854	122.21%
Other and unknown	334	184	-150	-44.91%
Total	47,907	75,502	27,595	57.60%
Value of All Goods Shipped (Constant 2018 \$M)				
Domestic Mode	2018 Total	2045 Total	Numerical Change in Volume	% Change in Volume
Truck	76,218	132,784	56,566	74.22%
Rail	2,334	6,467	4,133	177.08%
Water	125	292	167	133.60%
Air (include truck-air)	8,862	2,860	-6,002	-67.73%
Multiple modes & mail	19,542	41,957	22,415	114.70%
Pipeline	3,034	5,435	2,401	79.14%
Other and unknown	409	473	64	15.65%
Total	110,524	190,268	79,744	72.15%

Source: FAF, FHWA

Figure 4-10 on the following page conveys the growth in tonnage handled. Truck continues to be a dominant mode of transportation, though it is expected to decrease in its overall share of tonnage transported – offset by growth in the rail and pipeline transportation sectors. In terms of the exact magnitude, it is expected to decrease from approximately 80% of tonnage handled in 2018, down to 78% by 2045. This slight rebalancing in mode preference is taking place with the backdrop of continuous growth in demand for all ground transportation services across the board. Note that this applies to the domestic mode of conveyance used to move goods to and from locations within the Buffalo-Niagara region.

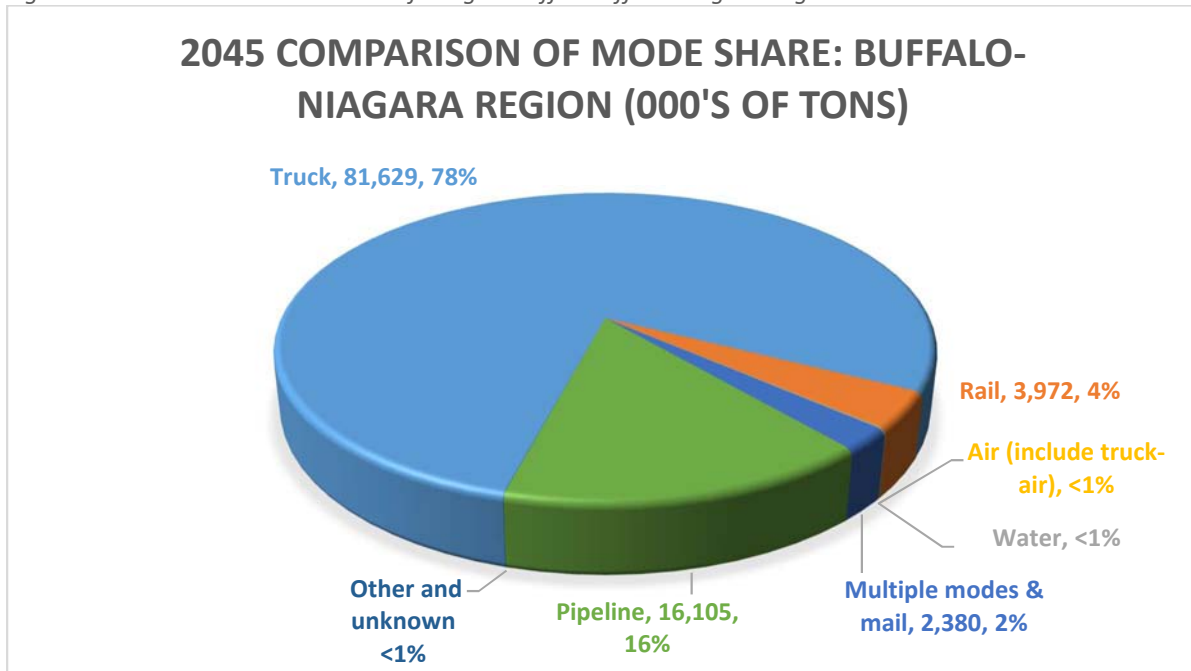
There is a slight decrease in the tonnage of air freight expected to be handled by the region, and a disproportionately greater decrease in the value of goods handled by the region. The nature of the goods movement relative to the region (domestic versus international trade related) will be expanded upon in a later section.

Figure 4-9 Mode Share of Freight Traffic: Buffalo-Niagara Region



Source: FAF, FHWA

Figure 4-10 Forecasted Mode Share of Freight Traffic: Buffalo-Niagara Region



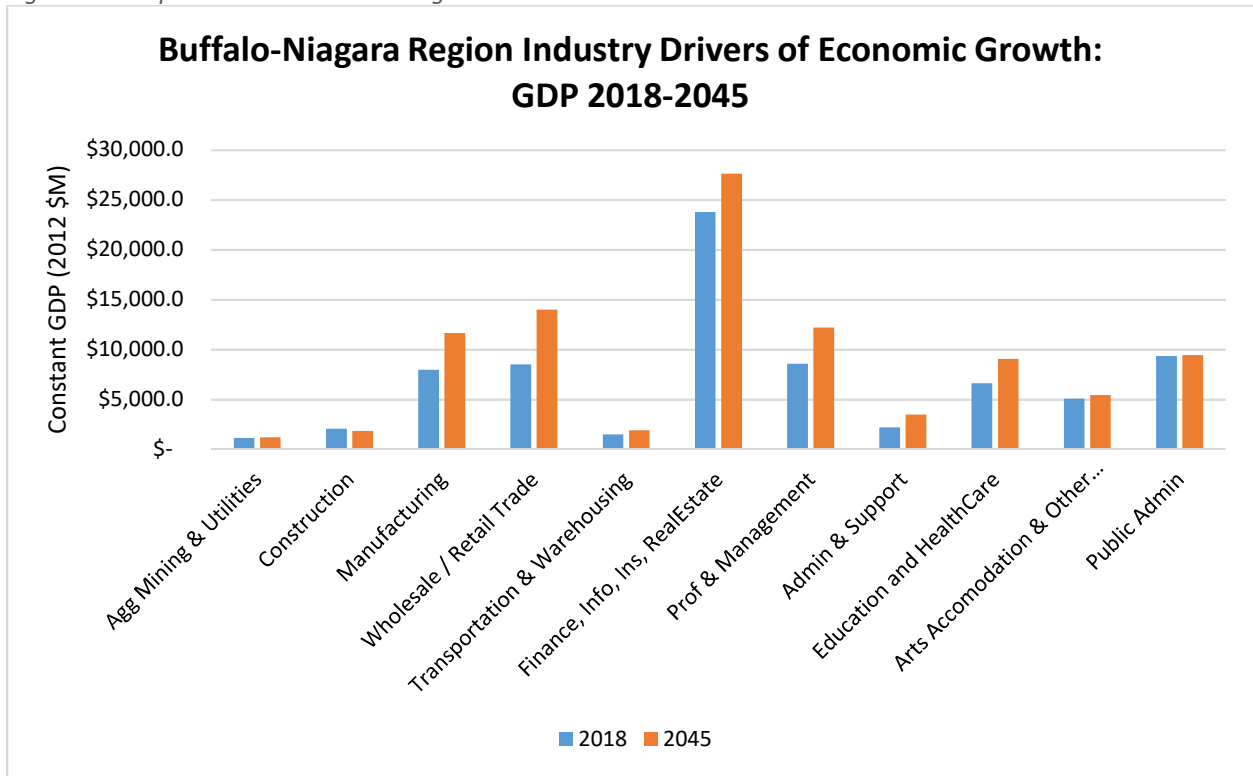
Source: FAF, FHWA

Regarding the commodities driving this demand, we see goods such as chemical products, pharmaceuticals, and mixed freight as the top growing inbound commodities by value, whereas growth in outbound goods is seen in goods such as pharmaceuticals, machinery, and base metal products being manufactured and sent elsewhere. On a tonnage basis, we see a strong presence and growth in coal, agriculture, waste/ scrap, and base metal products both as inputs to production, as well as finished goods being shipped elsewhere. Increased production related to agriculture is primarily associated with sustained growth in domestic markets, while you have goods such as waste/scrap being meant for international markets.

Moody's Economy.com forecasts of county-industry GDP growth were used to look at how regional growth is expected to occur over the next 25 years. Based on Figure 4-11, we can see that some of the fastest growing sectors are going to be related industries involved in the production of physical goods, and the sectors involved in the distribution of those goods within the region. While non-basic industries such as the finance/insurance and real-estate sectors continue to comprise a significant portion of the economy, their overall share of that economy is expected to decline from approximately 31% in 2018 to 28.2% by the year 2045¹.

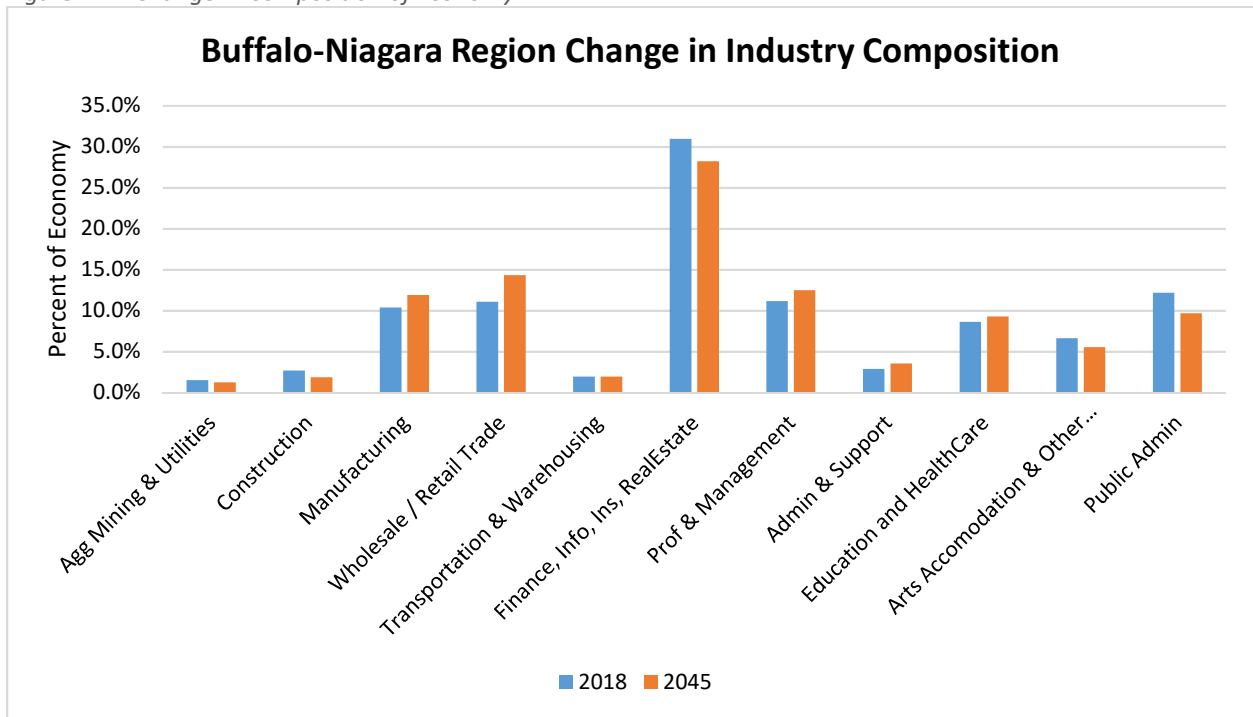
¹ We are using Constant 2012 dollars here to mitigate the distortion of using nominal dollars to talk about economic growth due to inflation.

Figure 4-11 Expected GDP Growth in Region



Source: Moodys

Figure 4-12 Change in Composition of Economy



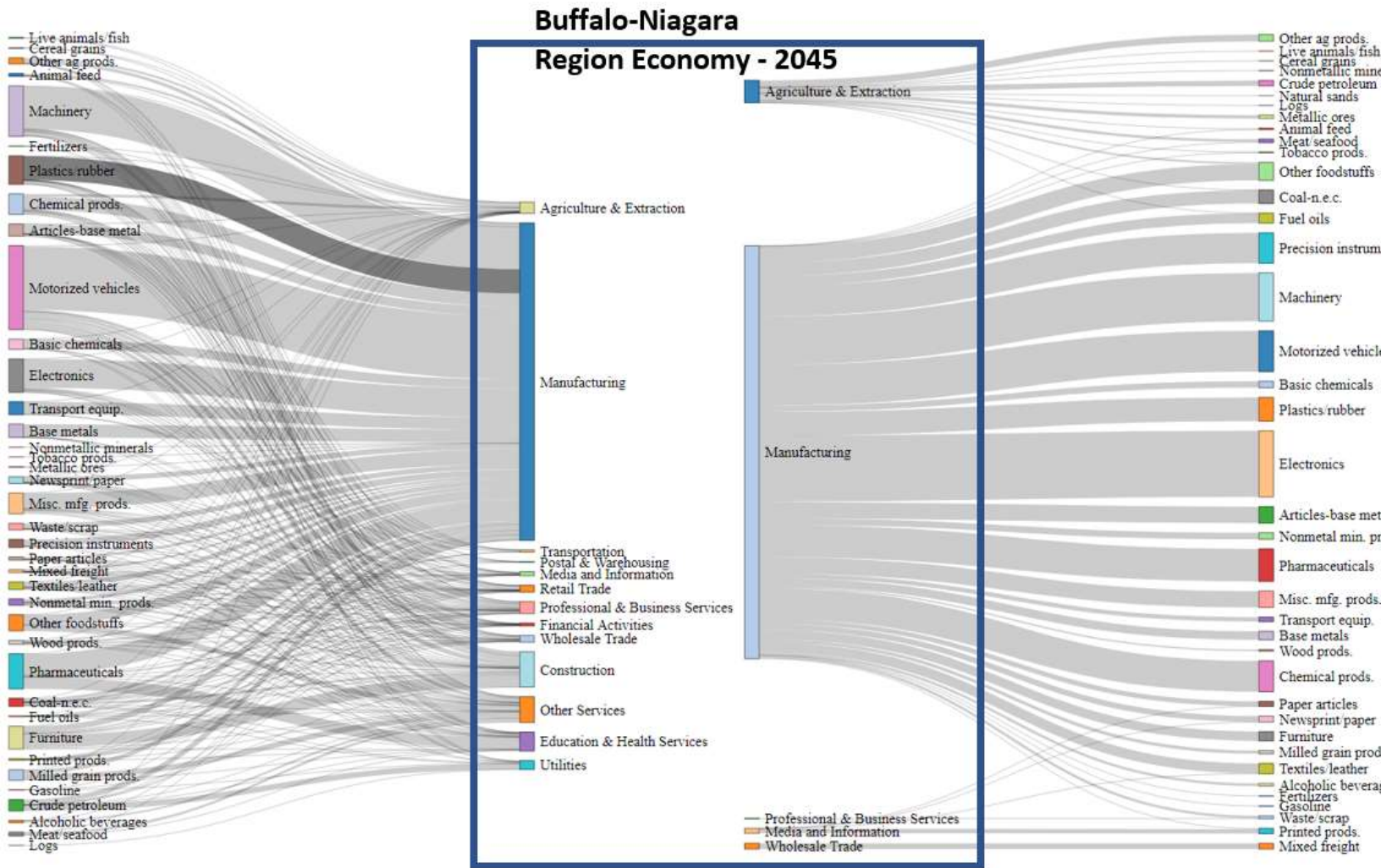
Source: Moodys

By combining the available data about commodities being moved by freight in 2045 with the expected growth in regional economies using our economic models², we are able to represent the regional supply chain as a flow diagram to look at how freight commodities are brought into the region as inputs to production, which then undergo value adding activities and are then ultimately shipped out of the region, as shown by Figure 4-13. This tells a comprehensive story of the raw extractive materials being brought in (from the left of the Buffalo-Niagara region Economy rectangle), their usage within the economy – as well as explicit linkages to the industry in region, and export material for use in other markets (to the right of the Buffalo-Niagara region Economy rectangle). This helps to explicitly show the linkages between industry growth and the relation to added commodity shipments into or out of a region.

Figure 4-13 The Projected Economic Flow of Goods in the Buffalo-Niagara Region Economy, 2045

Import

Export



Source: Moody's

² The team leveraged a 2017 national model to harvest the production functions detailing the types of commodities produced or consumed by industry from implan, and associated the industry data to work with the NAICS sectoring of the Moody's forecasts of industry activity to make a linked freight-economics model to help explain the growth in supply and demand for freight based on changes in economic activity.

International and Domestic Markets

Due to Buffalo-Niagara's location, it should come as no surprise that Canada continues to grow as a prominent trade partner with the region. It is expected that the production of goods will shift towards international markets: up from 5.8% of exports in 2018 to approximately 17.6% in 2045. While the Buffalo-Niagara Region relies on its gateways to Canada, the overwhelming geography of users of border crossings/ ports within the region are external to Buffalo: with 71% of international border crossing/ port volumes in 2018 being from other states. The volume of trade occurring at the region's border crossings/ ports is expected to more than triple across all modes in the 27-year period (2018 – 2045). When we look at the modes responsible for driving this trend in percentage terms, rail and pipeline activity stick out as showing higher percentage growths relative to volume average. These modes emphasize the movement of lots of bulk coal, petroleum, and mineral productions and speak to a future of increased trade with Canada.

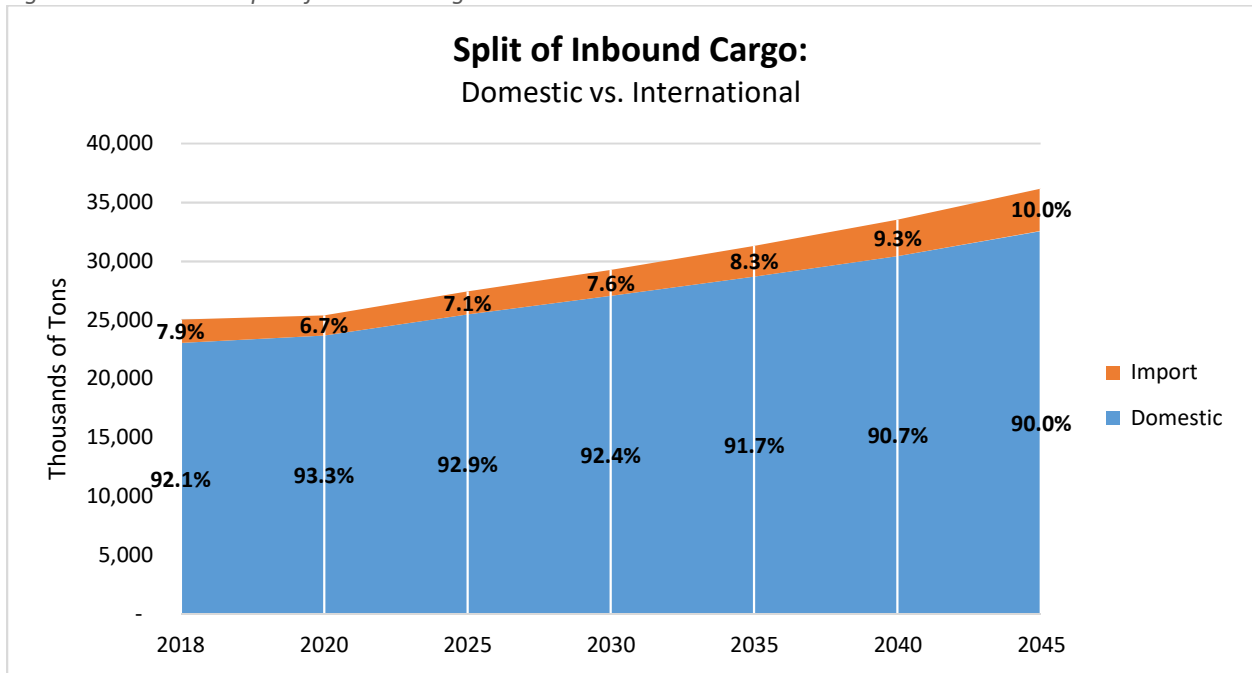
By 2045, the volume (in tons) of inbound freight to the Buffalo-Niagara region will have grown from 25 million tons to over 36 million, a nearly 45% increase in the volume of goods being imported to the region, as shown in Table 4-4. What is perhaps more interesting is that there is an increasing trend in sourcing these goods from international markets, though predominantly the bulk of goods on a tonnage basis are still being sourced from other states. There is a short-term contraction in the share of international imports, representing a potential reshoring: followed by a period of economic resurgence emphasizing a broader emphasis of change. This can be seen in Figure 4-14 on the following page by the increasing thickness of the area in orange representing the volume of imports: going from 7.9% of total volume of goods, to approximately 10% of all inbound goods.

Table 4-5 Forecasted Volume of Inbound Freight Goods Shipped

Volume of Goods Shipped ('000s of Tons)									
Mode	Inbound Domestic			Inbound (International)			Inbound (Total)		
	2018	2045	% Change in Volume	2018	2045	% Change in Volume	2018	2045	% Change in Volume
Truck	16,252	22,738	39.9%	1,231	2,604	111.4%	17,483	25,342	44.9%
Rail	496	1,063	114.5%	348	565	62.3%	844	1,628	93.0%
Water	-	-	<i>na</i>	52	78	50.7%	52	78	50.7%
Air (include truck-air)	6	10	62.8%	19	5	-75.5%	25	15	-39.9%
Multiple modes & mail	820	1,290	57.4%	330	353	7.0%	1,149	1,643	42.9%
Pipeline	5,493	7,464	35.9%	-	-	<i>Na</i>	5,493	7,464	35.9%
Other and unknown	-	-	<i>na</i>	1	11	1,514.7%	1	11	1,514.7%
Total	23,067	32,566	41.2%	1,980	3,614	82.6%	25,047	36,180	44.5%

Source: FAF, FHWA

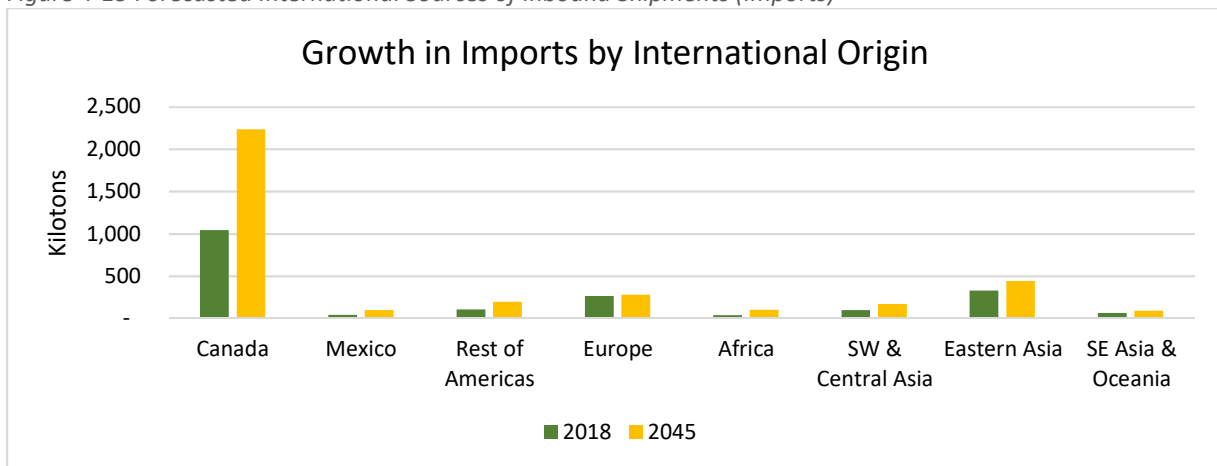
Figure 4-14 Trends in Split of Inbound Cargo



Source: FAF, FHWA

By observing the volume and value shown for 2018 and 2045, we can see less imported textiles/leather products and miscellaneous manufactured products, with an increasing emphasis in manufactured machinery and plastics/rubber. In terms of the specific markets involved – on the international side we can see that, in part due to its favorable location, the Buffalo-Niagara region relies mainly on Canada for its sourcing of goods, followed by China (East Asia). This trend is expected to continue to grow over the next 25-year period. Figure 4-15 portrays growth in imports by international origin.

Figure 4-15 Forecasted International Sources of Inbound Shipments (Imports)

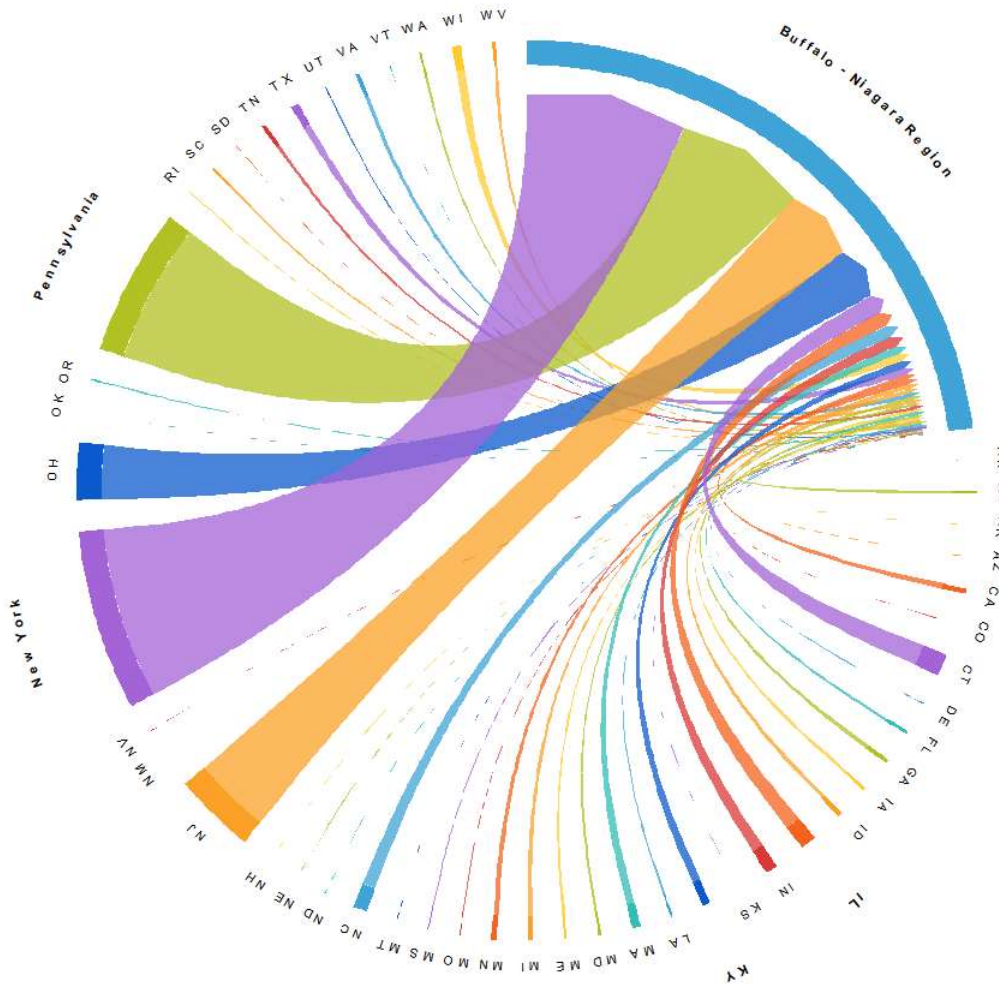


Source: FAF, FHWA

Trade between the Buffalo-Niagara Region and the ports associated with the Port Authority of New York and New Jersey (PANYNJ) is expected to increase by approximately 1.6 million tons. The 2045 FAF freight forecasts indicate decreasing highway tonnage on routes between the Buffalo-Niagara region and the New York City area, noting that freight will become increasingly served by rail connections rather than traditional truck traffic. This is likely due to an emphasis at PANYNJ to decrease dependence on truck traffic and utilize rail and inland ports to a greater extent. This likely requires additional capacity at Buffalo-Niagara Region rail ports, transloading docks, and intermodal facilities. Buffalo-Niagara's freight traffic with the other ports along the northern New York border is expected to grow by 669,000 tons through 2045. According to FAF freight forecasts, this freight will predominantly be served by truck. As for the Buffalo-Niagara region's utilization of in-region ports, import and export tonnage handled is expected to increase by almost 4.6 million tons – which represents approximately 4% of all tonnage going through the region's ports of entries, with truck traffic expected to grow almost 50%. This signals an increase in truck traffic expected for the Peace Bridge and Lewiston-Queenston bridge.

Separate from the international markets, Figure 4-16 highlights the top domestic trading partners in the U.S. responsible for supplying goods to the Buffalo-Niagara region in terms of volume of trade (measured in tons), which is represented by the thickness of the flow lines. Notably, there is a strong reliance on surrounding states to source goods. For domestic trade partners, much of the Buffalo-Niagara region freight goods are shipped within the northeast. Figure 4-18 shows the outbound domestic trade partners.

Figure 4-16 Market Specialization: Domestic Inbound Freight Markets



Source: FAF, FHWA

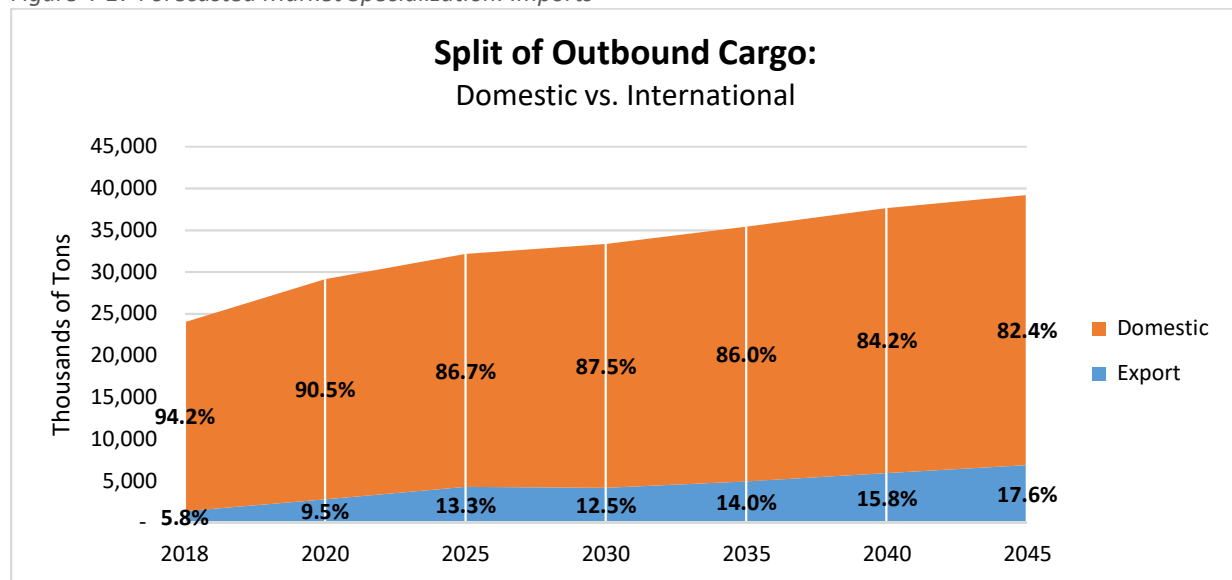
Like the trends present in the sourcing of inbound inputs for Buffalo-Niagara region consumption, there is a predominant trend of increasing interaction with the international markets. Production of goods meant for external consumption are slated to rise from 24 million tons of produced goods, to over 39 million over the next 25 years. This represents a staggering trend more than tripling the share of international exports as ultimate consumers of the Buffalo-Niagara region's products – going from approximately 6% in 2018 to over 17.5% by 2045. This surge in international traffic represents approximately a 395% increase in traffic – driven by a large growth in pipeline and rail traffic volumes, as shown in Table 4-5 and Figure 4-17.

Table 4-6 Forecasted Volume of Outbound Freight Goods Shipped

Volume of Goods Shipped ('000s of Tons)									
Mode	Outbound Domestic			Outbound (International)			Outbound (Total)		
	2018	2045	% Change in Volume	2018	2045	% Change in Volume	2018	2045	% Change in Volume
Truck	17,178	25,530	48.6%	684	2,097	206.5%	17,862	27,626	54.7%
Rail	396	444	12.1%	323	1,867	477.7%	719	2,311	221.4%
Water	-	-	Na	2	4	77.6%	2	4	77.6%
Air (include truck-air)	6	10	71.0%	13	5	-63.9%	18	14	-22.1%
Multiple modes & mail	521	529	1.5%	91	97	7.1%	612	626	2.4%
Pipeline	4,517	5,807	28.6%	190	2,833	1390.3%	4,707	8,641	83.6%
Other and unknown	-	-	Na	94	11	-88.6%	94	11	-88.6%
Total	22,618	32,320	42.9%	1,397	6,913	395.0%	24,014	39,233	63.4%

Source: FAF, FHWA

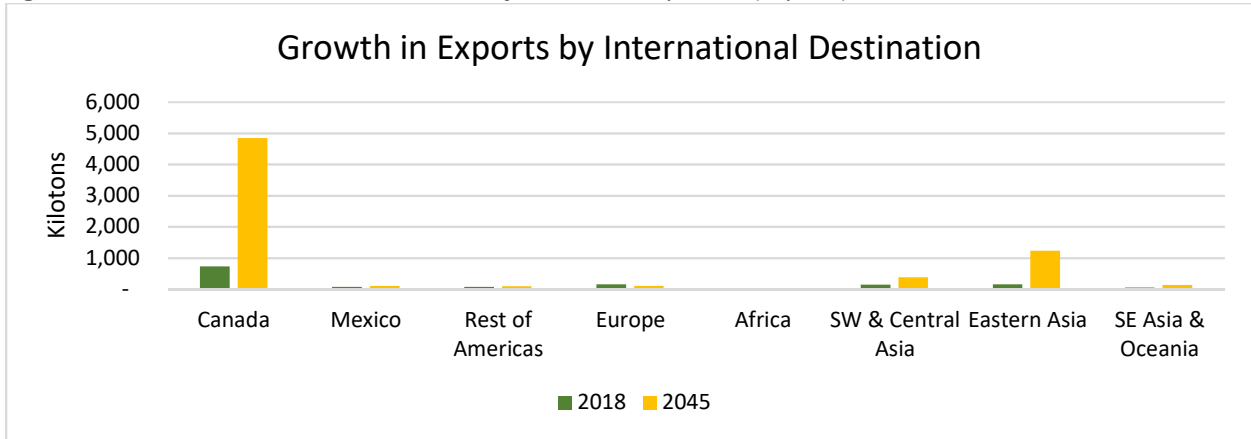
Figure 4-17 Forecasted Market Specialization: Imports



Source: FAF, FHWA

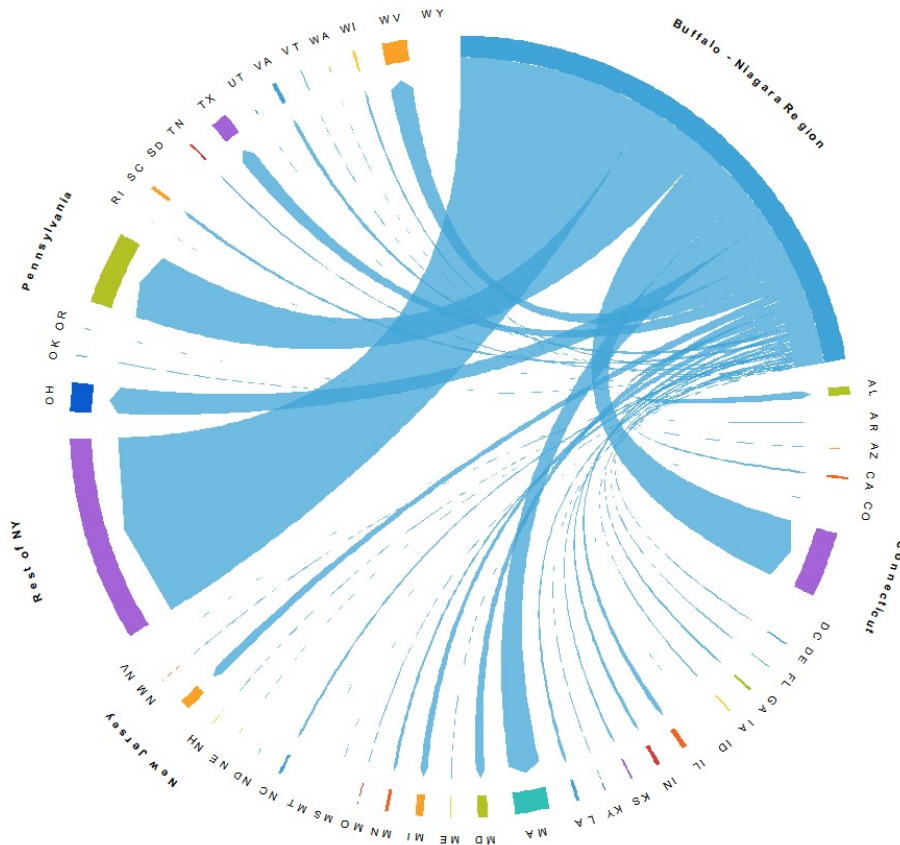
Based on Figure 4-18 below, we can see a pattern of continued trade with Canada and Eastern Asia as the predominant markets growing in demand for goods from the Buffalo Niagara region.

Figure 4-18 Forecasted International Sources of Outbound Shipments (Exports)



Source: FAF, FHWA

Figure 4-19 Market Specialization: Domestic Outbound Freight Markets



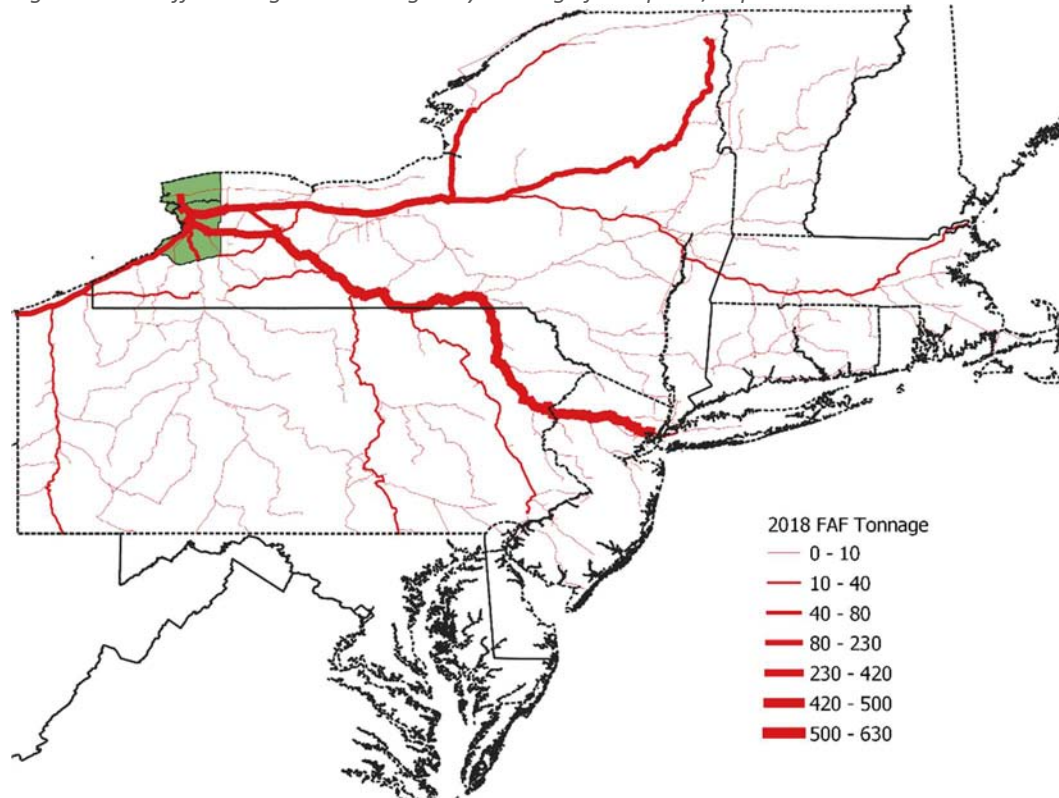
Source: FAF, FHWA

Tech Memo #2 in the appendix provides a complete overview of the economic conditions impacting the freight and logistics industry in the Buffalo-Niagara region.

4.4 HIGHWAY VOLUMES

Using the methodology outlined in the appendix, we can take the FAF highway volumes for 2018 and 2045 and apply the routing algorithms in Transearch to look at implications of the growth in trade. Figure 4-20 shows the 2018 volume of tonnage moving via highway corridors to and from other regions.

Figure 4-20 Buffalo-Niagara 2018 Highway Tonnage for Exports/Imports

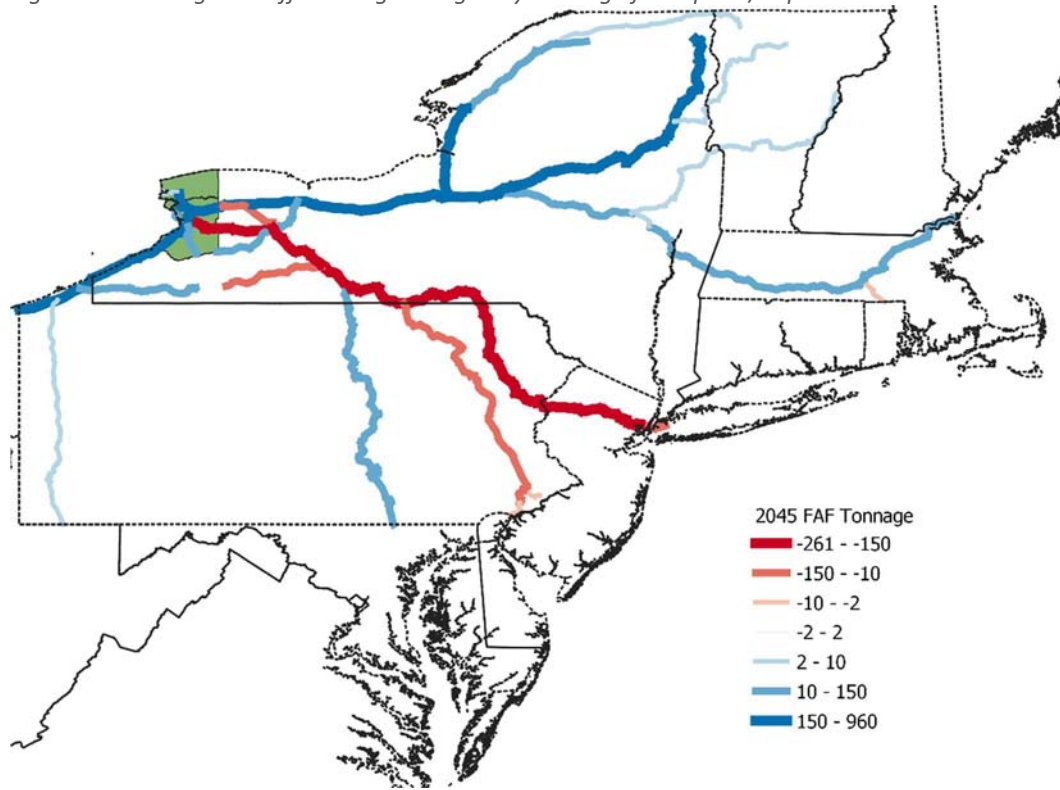


Source: FAF, FHWA

The resulting routing shows a heavy reliance on I-90, and I-390 to route goods to and from ports across the US. As the graphic depicts, a significant tonnage of the highway movement between the Buffalo-Niagara region and New York/ New Jersey ports uses a combination of surface streets (US 20A and NYS Route 63 through Mount Morris) to reach I-390 rather than the NYS Thruway (I-90).

Taking FAF freight forecasts and applying the same routing algorithms, we can compare future 2045 volumes to the 2018 routed tonnages to show the corridors of growth in Figure 4-21 on the following page. Based on the growth in Canada trade, we can see a shift towards border crossings in the Buffalo-Niagara region and Champlain-Rouses. This graphic also indicates a decrease in the amount of highway tonnage using US 20A and NYS Route 63 (through Mount Morris), with an overall decrease in truck traffic to/from New York/ New Jersey as truck traffic becomes increasingly concentrated along routes accessing ports of entry along the northern border.

Figure 4-21 Change in Buffalo-Niagara Highway Tonnage for Exports/Imports



Source: FAF, FHWA

Note that while Figure 4-21 shows decreasing highway tonnage on routes between the Buffalo-Niagara region and the New York City area, traffic with the PANYNJ is expected to rise by approximately 1.6 million tons – but according to the FAF freight forecasts, it will become increasingly served by rail connections rather than traditional truck traffic, thus the noted decrease in highway tonnage on the highway network map. On the other end of the spectrum, we have Buffalo-Niagara's freight traffic with the ports along the northern New York border, which is expected to grow by 669,000 tons through 2045, predominantly served by truck. As for the Buffalo-Niagara region's utilization of in-region ports, import and export tonnage handled is expected to increase by almost 4.6 million tons – which represents approximately 4% of all tonnage going through the region's ports of entries, with truck traffic expected to grow almost 50%.

Through 2045, FAF data shows activity is not only growing in the Buffalo-Niagara region ports of entry, but also growing across New York State as a whole, and surging in PANYNJ. The PANYNJ 2050 Plan indicates the port is expecting a 2.1% to 3.4% annual growth in container freight, an increase from 7.2 million twenty-foot equivalent units (TEU) in 2018 to 12-17 million TEU by 2050. Approximately 85% of that traffic is destined for the truck market. The intermodal rail market is expected to handle an increased load as well, and by 2050 there is expected to be between 1.5 million and 2.8 million intermodal rail lifts.

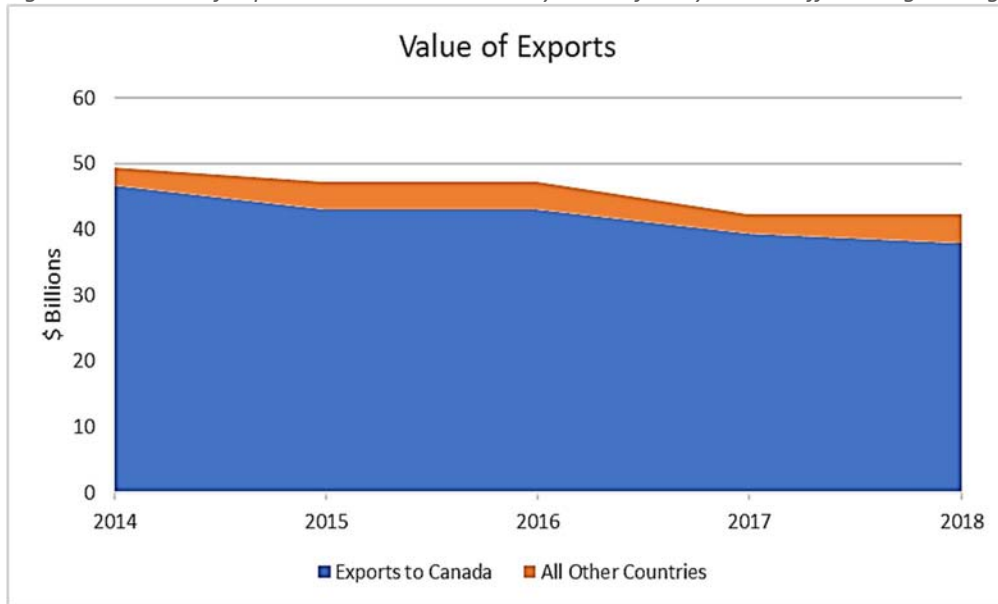
4.5 CROSS-BORDER FREIGHT VOLUME

Separate from our discussion on the economic trends and drivers of Buffalo-Niagara region centric freight activity is the emphasis on utilization by non-region users of ports/border crossings/ airports within the region. While not explicitly tied to the economy of the Buffalo-Niagara region, this traffic is part of the background activity taking place at sites of international commerce within the region. Trade with Canada, stemming from external states passing through the Buffalo-Niagara region, has an implicit effect on the health of the transportation system. This added traffic represents more vehicles and congestion to the region's highway system.

In 2018, 941,574 trucks moved through the Buffalo-Niagara region Land POEs, averaging 2,580 trucks a day. Since 2014, there has been a slight decrease in the volume of trucks crossing Buffalo-Niagara region POEs, with the 2018 volume down 2.1% from the 962,076 trucks in 2014. In total, 21% of those trucks crossing Buffalo-Niagara POEs in 2018 carried empty containers. In 2018, 2,081 trains carrying 58,133 containers moved through the Buffalo-Niagara POEs, averaging 5.7 trains a day. These trains consist of 58% of empty containers. The volume of trains has also decreased slightly since 2014, down 13% from 2,395 trains in 2014. The size of trains has decreased significantly, down 57% from the 135,263 containers in 2014.

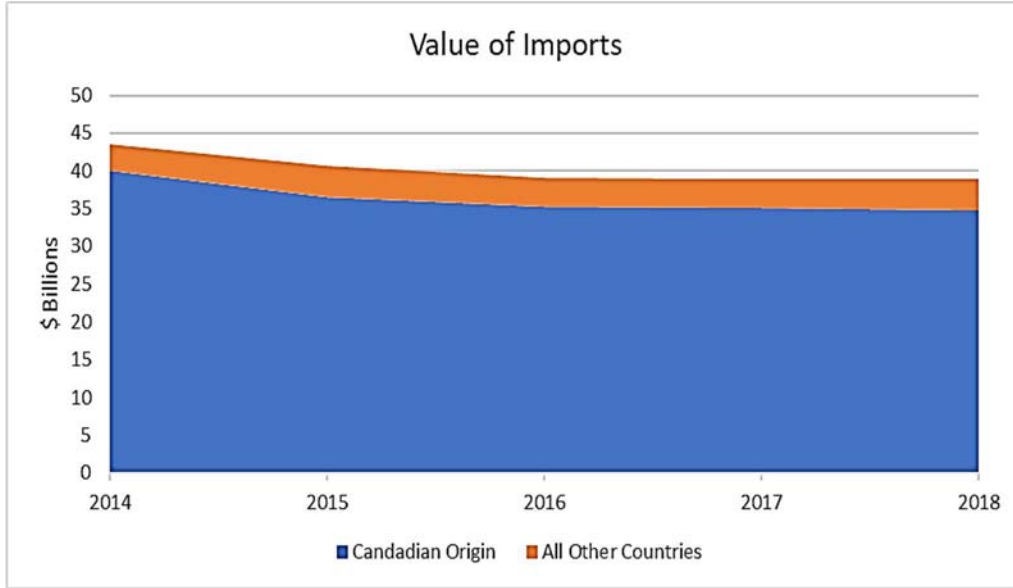
Canada is by far the largest international trading partner for the Buffalo-Niagara Land Ports of Entry (POE), accounting for 90% of exports and 89% of imports in 2018. However, both exports and imports to and from Canada have fallen over the past five years, as portrayed in Figures 4-22 and 4-23. For the purposes of this assessment, the Buffalo-Niagara region POE equates to the region covered by the U.S. Customs Port of Buffalo Service Area, which includes Buffalo Niagara International Airport, Niagara Falls International Airport, and the Lewiston-Queenston, Rainbow, Peace, and Whirlpool Bridges. The Buffalo-Niagara region is the largest Customs Port Sector to experience an overall decline in trade in 2018, as shown in Figure 4-24.

Figure 4-22 Value of Exports to Canada Handled by Ports of Entry in the Buffalo-Niagara Region



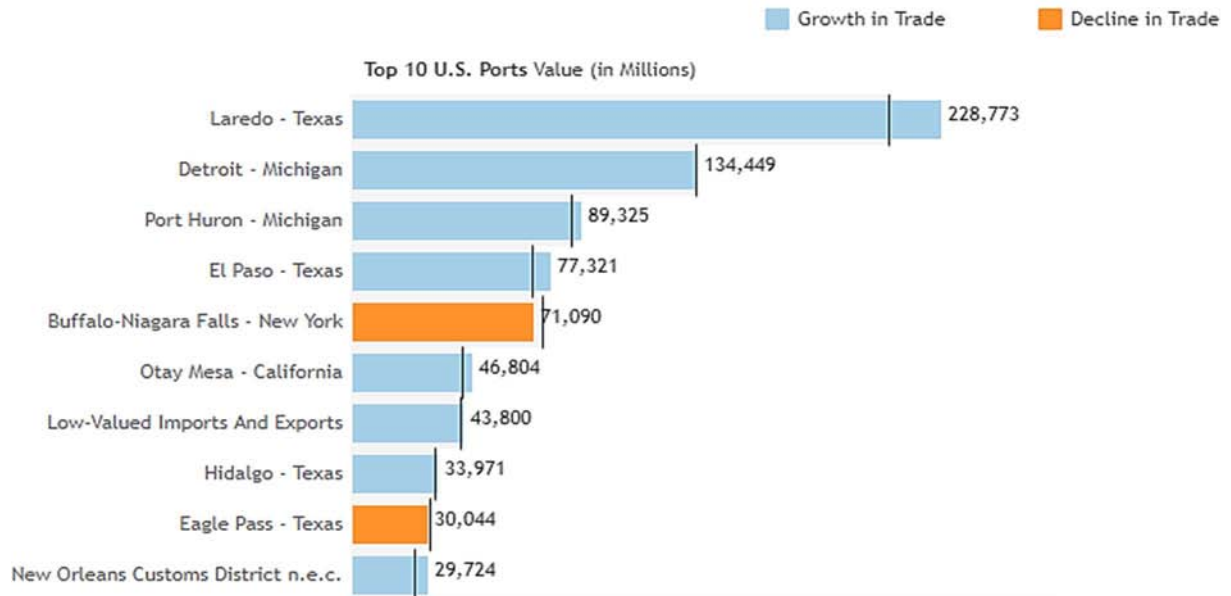
Source: Transearch, NYSDOT

Figure 4-23 Value of Imports from Canada Handled by Ports of Entry in the Buffalo-Niagara Region



Source: Transearch, NYSDOT

Figure 4-24: 2017-2018 Change in Overall Trade by Customs Port Sector

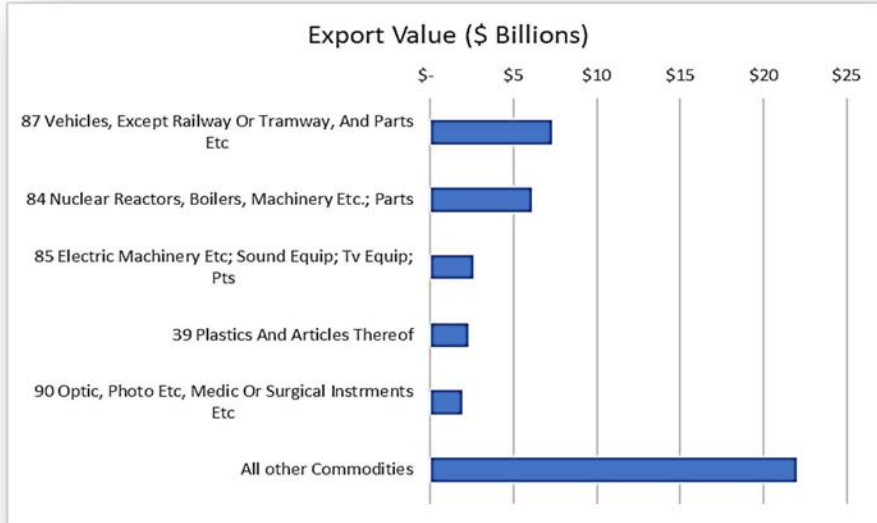


Source: BTS Transborder Dashboard

Freight planning for the Buffalo-Canada International Border requires special considerations for the busy Land POE and access highways as well as by regional and national rail lines. In 2017, New York State handled 24% percent of loaded containers crossing the U.S.-Canadian border. Ports of Entry in the Buffalo-Niagara region handled 57% percent of those loaded containers. The Buffalo-Niagara POEs provide important links for the eastern section of the Country and represent the gateway to a large variety of commodities including vehicles, computer machinery and parts, fuels and aluminum.

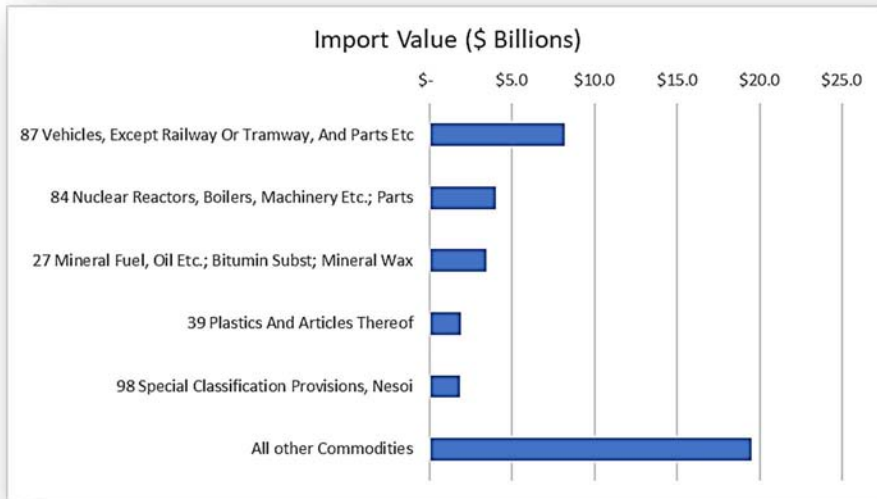
Vehicles represented both the top export and import by value that passed through the Buffalo-Niagara region in 2018. Figures 4-25 and 4-26 portray the export and import value of goods passing through the Buffalo-Niagara POEs.

Figure 4-25 Export Value of Goods Passing through Buffalo-Niagara Ports of Entry (2018)



Source: Transearch, NYSDOT

Figure 4-26 Import Value of Goods Passing through Buffalo-Niagara Ports of Entry (2018)

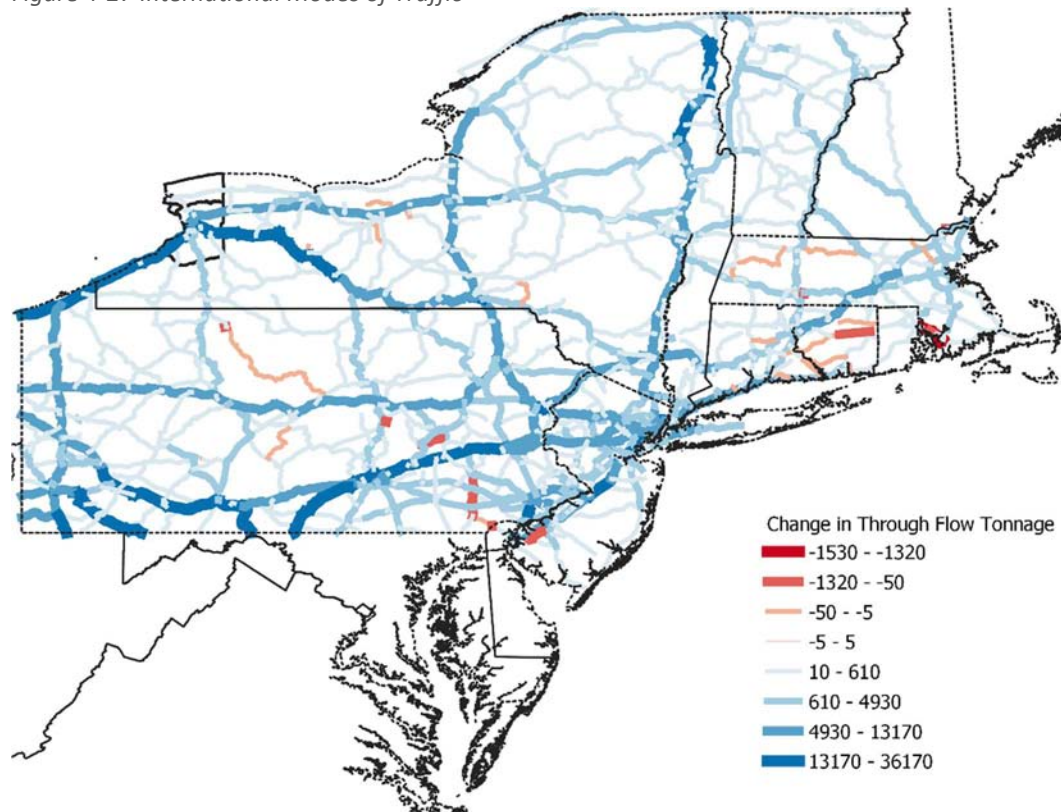


Source: Transearch, NYSDOT

Furthermore, if we take national, non-Buffalo-Niagara region, highway traffic and route it on the Transearch network, we can see the pattern of corridors being used by shippers and receivers shown in Figure 4-26. This further accentuates the significance of I-90 and I-390 as corridors supporting more than just regional traffic. Again, high use of US 20A and

NYS Route 63 through Mount Morris between the Buffalo-Niagara region and I-390 is experienced. Also, a much larger volume of highway tonnage passing through the Buffalo-Niagara region to the Peace Bridge or Lewiston-Queenston Bridge uses US 219 than does freight inbound to or outbound from the Buffalo-Niagara region. Notice that almost all major highway routes in the Buffalo-Niagara region are expected to experience an increase in pass through freight flow tonnage.

Figure 4-27 International Modes of Traffic



Source: Transearch, NYSDOT

4.6 AIR CARGO

Air freight includes goods movement through both the Buffalo-Niagara International Airport and Niagara Falls International Airport. In 2018, Air Freight through the Buffalo-Niagara airports accounted to \$143 million worth of goods imported and \$653 million worth of goods exported. The top inbound commodities by air are textiles, electronics, and motorized vehicles; the highest outbound commodities are chemical products, precision instruments, and miscellaneous manufacturing products. In 2018, both Federal Express (FedEx) and United Parcel Service (UPS) began shipping packages through Buffalo-Niagara International Airport, significantly increasing the region's air freight activity. The Buffalo-Niagara International Airport accounts for 99% of the air freight in the region (93%, excluding the 2018 UPS & FedEx shipments). The Niagara Falls International Airport has the potential to grow air cargo activities, particularly in heavy cargo, because of its expanded runway. Table 4-7 portrays air cargo freight (in tons) handled by the Buffalo-Niagara International Airport and Niagara Falls International Airport from 2014-2018. A detailed analysis of Air Cargo can be found in Tech Memo #2 found in the appendices, which expands on existing and future air cargo in the region.

Table 4-7 Air Cargo Freight (In Tons) Handled by Buffalo-Niagara Region Airports (2014-2018)

Airport	2014	2015	2016	2017	2018
Buffalo-Niagara	636	516	548	445	20,889
Niagara Falls	8	20	12	95	91

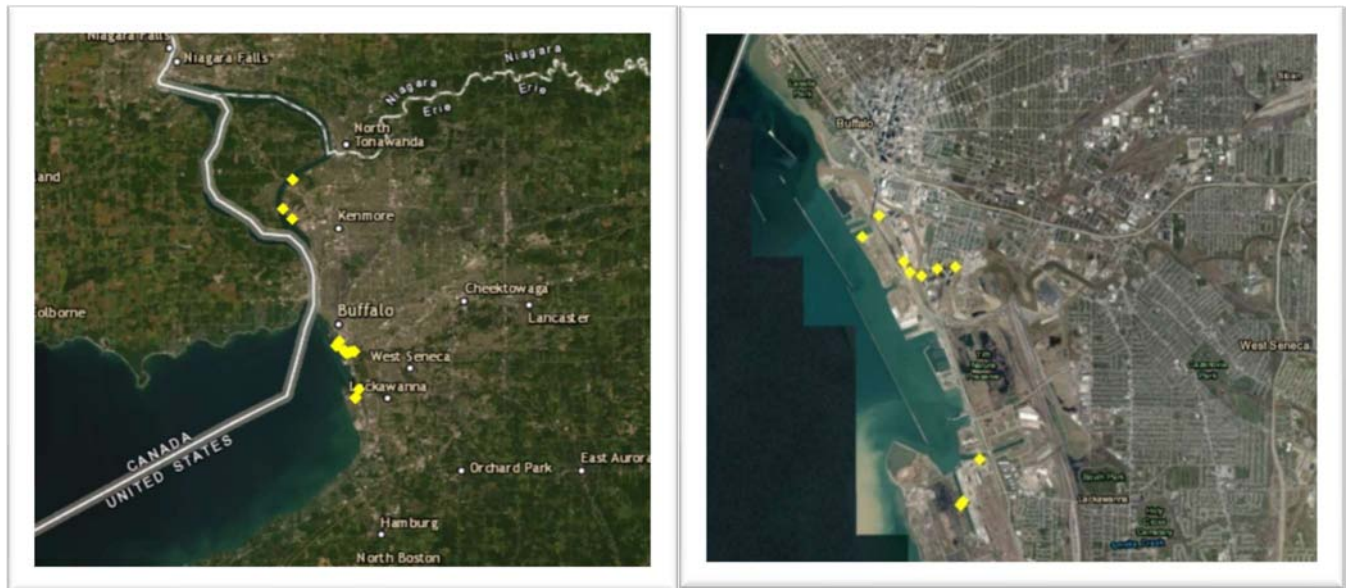
Source: Transearch, NYSDOT

4.7 WATERBORNE FREIGHT

Waterborne freight in the Buffalo-Niagara region includes 11 docks in Buffalo/Lackawanna along the Lake Erie Outer Harbor and along the Buffalo River and three downstream on the Niagara River. Figure 4-28 portray the locations of water ports in the region. In 2018, maritime trade accounted for \$108 million.

Tech Memo #2 in the appendix provides a complete overview of the waterborne freight activity within the Buffalo-Niagara region, including existing and future waterborne freight activity in the region.

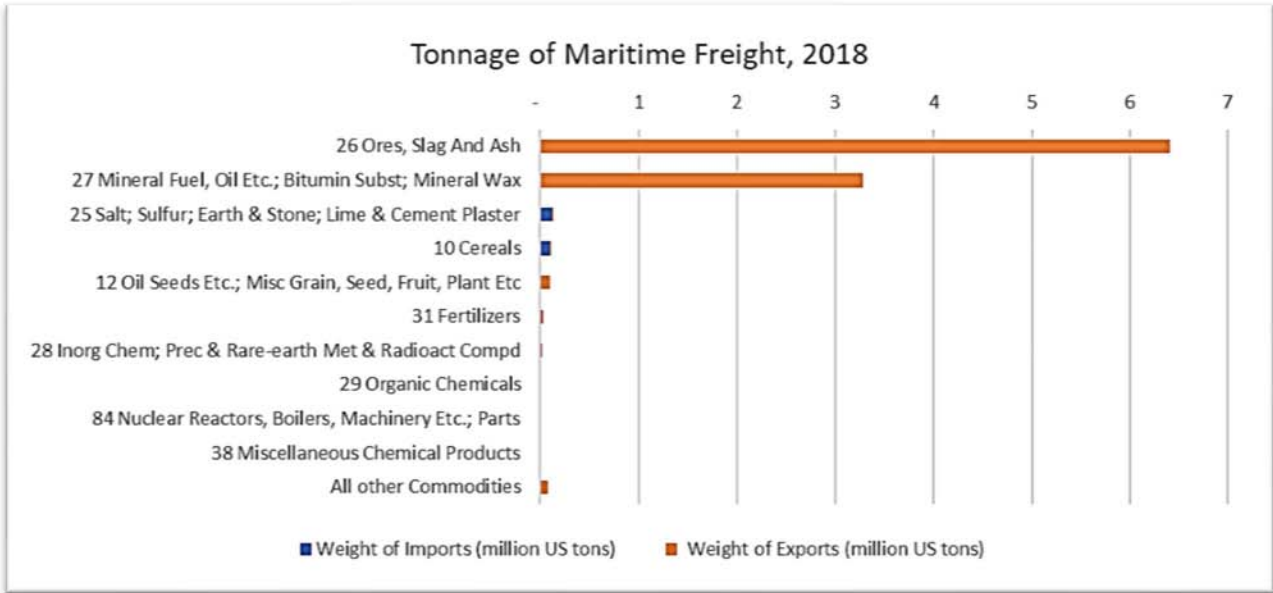
Figure 4-28 Locations of Water Ports in the Buffalo-Niagara Region



Source: U.S. Customs and Border Protection

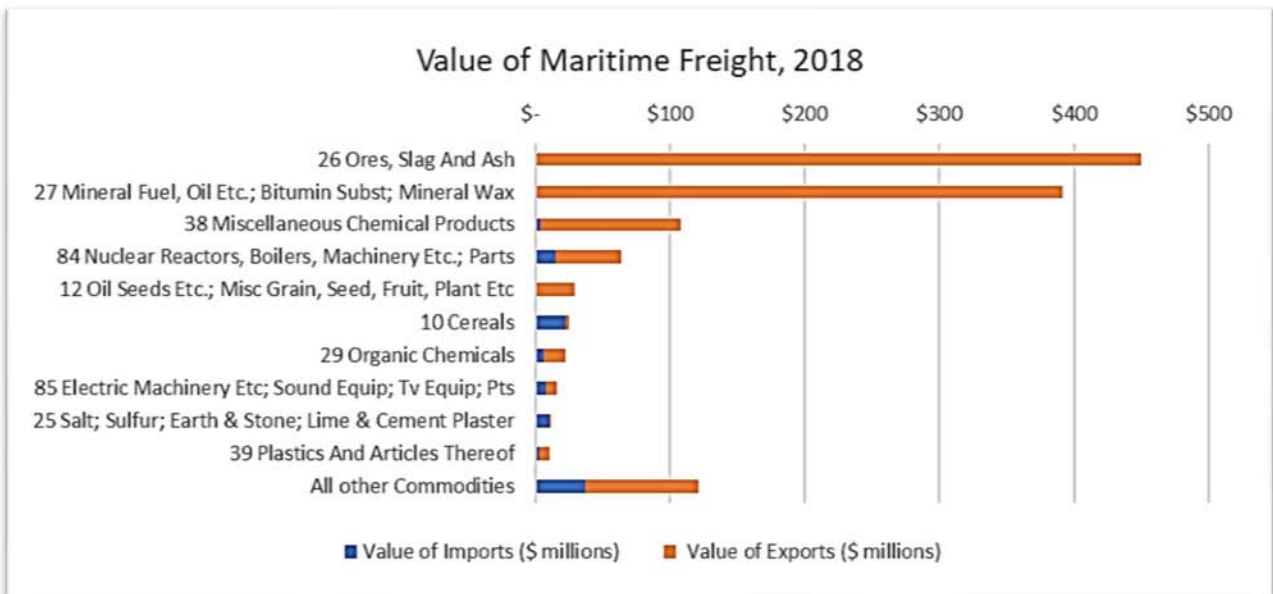
Figure 4-29 shows the tonnage of freight by commodity and Figure 4-30 the value of freight handled by water ports in the Buffalo-Niagara region.

Figure 4-29 Tonnage of Freight by Commodity Handled by Water Ports in the Buffalo-Niagara Region



Source: Transearch, NYSDOT

Figure 4-30 Value of Freight by Commodity Handled by Water Ports in the Buffalo-Niagara Region



Source: Transearch, NYSDOT

4.8 COVID-19 IMPACTS AND TRENDS

This Buffalo-Niagara Regional Freight Plan reflects both expected economic and freight and logistics industry environments in the Buffalo-Niagara region based on conditions as they were trending prior to the COVID-19 pandemic as well as a contingent outlook if the pandemic restricts economic growth.

Due to the COVID-19 pandemic, there is a large amount of concern about potential longer-term economic implications of the global economic slowdown and restructuring of supply chains. Sustained closure on the one hand has gutted small businesses and severely hurt the economic performance of the country (at least on a short-term basis) as we continue to languish from the lasting effects of the virus. On the other hand, it has forced awareness concerning the need for diversified supply chains, and further made a case for re-shoring and near-shoring activity to support more diversified, closer distribution networks. Due to this uncertainty, we have included an analysis of FHWA's Freight Analysis Framework alternate forecast data, to look at how its modeled pessimistic growth scenario created a range in possible freight behaviors as a proxy way of trying to understand how economic shocks can alter the pattern of freight outcomes. On average, the alternate economic scenario reduced the volume of freight by approximately 10% on average, relative to the base.

COVID-19 has acted to expedite the growth in e-commerce, with consumers in search of next-day and same-day delivery of their goods. Further, COVID-19 has facilitated a movement by consumers to search for more locally sourced food and to seek same-day delivery of food and produce. This has led to grocers and food producers seeing a growth in fresh food purchases, a resurgence in frozen foods, and growth in e-commerce and third-party deliveries for groceries. As a result of the growth in e-commerce, retail and distribution supply chains have had to continue to evolve. Retailers will increasingly look for ways to facilitate same-day or overnight delivery of goods directly to customers, in keeping with e-commerce service commitments, which likely will result in the need for additional regional and local distribution centers, temperature-controlled and regular warehouse space, and transformative "last-mile" delivery techniques. As of late 2020, warehouse space in the region is at 2.5% vacancy, so this business practice might set off a "warehouse boom" in the Buffalo-Niagara region.

4.9 SUEZ CANAL DISRUPTION

In March 2021, a cargo ship got diagonally stuck in the Suez Canal for six days. This event blocked hundreds of ships carrying billions of dollars in shipments from using the Suez Canal, many of which had to wait for the ship to be moved or reroute to longer shipping routes, causing significant delays in shipments. The blockage disrupted nearly 10% of global trade and delayed shipment of goods valued at nearly \$10 billion per day. While the blockage had a more significant impact on trade between Asia and Europe (trade between Asia and the U.S. routes across the Pacific), customers in the U.S. were less impacted and mostly experienced impacts regarding delayed shipments of crude oil, delays in finished products from coming from Europe awaiting component parts from Asia, and by empty containers returning to Asia delayed, which in turn delays shipments being sent out of Asia, potentially to the U.S. In the weeks following, the U.S. saw small spikes in oil prices, but larger impacts of the trade impact are yet to be seen.

5 Recommended Strategies and Projects

The strategies and projects recommended as part of the Buffalo-Niagara Regional Freight Plan were derived from the information and findings in the Tech Memos and are guided by national, state, and regional goals. The national, state, and regional goals are taken from:

- ✓ Federal Fixing America's Surface Transportation Act (FAST Act)
- ✓ New York State Freight Plan
- ✓ Western New York Regional Economic Development Council (WNY REDC)
- ✓ GBNRTC Moving Forward 2050
- ✓ Erie County Initiatives for a Smart Economy
- ✓ Niagara County Comprehensive Economic Development Strategy

As outlined in the appended Tech Memo #3, the Project Development section includes the following:

1. Those Buffalo-Niagara region recommendations that were identified in the 2019 New York State Freight Plan and have been funded by the National Highway Freight Program.
2. Those strategies and projects that were identified as part of the 2010 Niagara Frontier Urban Area Freight Transportation Study or 2019 New York State Freight Plan and are no longer recommended;
3. Those strategies and recommendations that were developed previously in the 2010 study or were identified in the 2019 New York State Freight Plan, but not yet advanced and should be kept and carried forward as part of this study; and,
4. New strategies and recommendations identified as part of this 2020 update in order to address unmet needs and to continue to strengthen the freight and logistics industry in the Buffalo-Niagara region.

There were two projects identified in the New York State Freight Plan that are currently programmed on the GBNRTC's 2020-2024 Transportation Improvement Plan and are being funded by the National Highway Freight Program. They are:

2. PIN 581361 – Construction of a new travel lane on Transit Road (NYS Route 78) between the I-90 New York State Thruway interchange and Genesee Street (NYS Route 33). The purpose of this additional travel lane is to 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. This project is included in the TIP with a construction cost of \$11M. The project is expected to be let in 2021 with construction completed in 2022.
3. PIN 575825 – Rehabilitation of both the Ohio Street and Michigan Street Lift Bridges is underway to provide state of good repair improvements. These lift bridges are vital to not only trucking routes that traverse the Buffalo River, but also to maritime barge traffic that travels the Buffalo River. This project is included in the TIP with a construction cost of \$20M. The expected completion date for the Michigan Avenue Bridge is October 2021; the expected completion date for the Ohio Street Bridge is June 2021.

There are strategies or projects that were identified in the 2010 study that were not yet implemented or otherwise advanced towards implementation that are no longer identified to be advanced as part of this update. In some cases, strategies or projects identified in the 2010 study have been modified to fit new strategies or recommendations identified in the 2020 study update. The below recommendations are those that are no longer carried into the Buffalo-Niagara Regional Freight Plan or have been modified with different description. The rationale for not including these recommendations is provided in Tech Memo #3.

1. Peace Bridge Expansion (removed)

2. New York Route 63 Bypass (modified)
3. AES Lake Unloading Facility (removed)
4. Revitalized Erie Canal (removed)
5. CN Northern Connection (removed)
6. CN Southern Connection (removed)
7. Short Sea Shipping (removed)
8. G&W Connection from NS to Buffalo Line to BPRR Line (removed)

There are strategies or recommendations that were identified in the 2010 Niagara Frontier Urban Area Freight Study or 2019 New York State Freight Plan that were not yet implemented or otherwise advanced towards implementation at the time of preparing this update. These recommendations still have merit in being implemented to enhance the Buffalo-Niagara regional freight and logistics economy and transportation system, and thus are carried forward into this current plan for continued consideration, these include:

1. Develop Buffalo Logistics Complex/ Lakeside Commerce Park Cross-Docking Facility
2. Improve U.S. 219
3. Repair or Replace CP Draw Bridge
4. Expand Lehigh Valley Yard Development
5. Improve Falls Road Railroad Bridge over Erie Canal
6. Expand Niagara Falls International Airport (NFIA) Air Cargo
7. Expand Buffalo-Niagara International Airport (BNIA) Air Cargo

5.1 NEW STRATEGIES AND RECOMMENDATIONS IDENTIFIED IN THIS PLAN

The following are strategies or recommendations that are newly identified in this Niagara Frontier Urban Freight Transportation Study update that will enhance the region's freight & logistics economy and transportation system. These may consist of strategies or recommendations that have merit but require further study to determine a specific action plan, those that consist of more policy level or conceptual recommendations that are more reliant upon other larger scale efforts to ensure conformance, and projects that mainly involve construction of infrastructure that can be transferred into the Transportation Improvement Program (TIP) or identified for other funding opportunities. The following recommendations are categorized by *Infrastructure Project Recommendations* and non-infrastructure, *Freight Planning and Policy Recommendations*.

Infrastructure Project Recommendations

1. Establish Regional Truck and Delivery Vehicle Electric Charging Stations
2. Implement Buffalo-Niagara Integrated Corridor Management Strategies
3. Expand Intelligent Transportation Systems (ITS) in the Region
 - a. Expand Border Crossing Travel Information in the Region
 - b. Develop Pilot Integrated Corridor Management (ICM) Strategies
 - c. Support NYSERDA Planning for New York State Platooning Demonstration
 - d. Implement Smart & Enhanced Multimodal Corridors (SEMA)
 - e. Expand Real-Time Truck Parking Information
 - f. Create Urban Truck Hub or Mobile Depot
 - g. Improve Circulation of Weather and Incident Related Closure Information

- h. Implement Truck Low Bridge Clearance
- 4. Improve Bethlehem Steel Advanced Manufacturing Park Infrastructure
 - a. Northern Access
 - b. Southern Access
 - c. Additional Access
 - d. Improve Route 5/ Ridge Road Interchange
- 5. Repair Niagara County Rural Bridges
 - a. Carmen Road over Golding Hill Creek
 - b. Johnson Creek Road over Golding Hill Creek
 - c. Gasport Road over Eighteen Mile Creek
 - d. Hartland Road over Golden Hill Creek
 - e. Royalton Center over Mud Creek
 - f. Ditch Road over Black Creek
 - g. West Somerset Road over Fish Creek
 - h. Gasport Road over Eighteen Mile Creek
 - i. Ewings Road over Eighteen Mile Creek
- 6. Support Skyway Alternatives that Accommodate Freight & Logistics Industry
 - a. Build Alternative 1: New Highway Connecting NYS Route 5 to I-190
 - b. Build Alternative 2: New Boulevard Connecting NYS Route 5 to I-190
- 7. Widen Transit Road Between Walden Avenue and Gould Avenue in Village of Depew
- 8. Construct River Road Roundabout at Riverview Solar Technology Park
- 9. Upgrade Depew, Lancaster & Western (DL&W) Railroad Lines
 - a. Improve Driveway Access to/from the DL&W Transload Facility
 - b. Extend Engine House Track
 - c. Improve the DL&W Interchange with Norfolk Southern
 - d. Replace Structurally Deteriorating Bridge
- 10. Improve Buffalo Southern Railroad (BSOR) Line 1246 Improvements
 - a. Improve Six Bridges & Railroad Ties
 - b. Replace Five Highway At-Grade Crossings
- 11. Improve Safety of Roadways near Intermodal Yards
 - a. Safety Improvements at Intersections of Harlem Road and Gruner Road
 - b. Safety Improvements at Intersection of Harlem Road and Broadway Ramp
 - c. Safety Improvements at Intersection of Broadway and CSX Frontier Yard Driveway
- 12. Improve NYS Route 270 Campbell Boulevard and N. French Road

Freight Planning and Policy Recommendations

- 1. Build Support for Long-Term Transportation Bill
- 2. Stay Abreast on Transportation Master Plan Update in Niagara Region, Ontario
- 3. Create a Transportation Improvement Program (TIP) Freight Funding Block
- 4. Promote Region as a "Green" Cross-Border Logistics Hub
 - a. Advance ITGO Involvement on NITTEC Cross-Border Committee and WNY REDC
 - b. Remove Perception that the Border is Difficult to Maneuver
 - c. Build Upon Ontario's Strategic Investment and Procurement Agreement

5. Enhance Regional Collaboration of the Freight and Logistics Industry in Regional Economic Development and Promotional Efforts
 - a. Support Regional Economic Development Collaboration and Strategies
 - b. Use Invest Buffalo-Niagara Study Findings to Guide Regional Economic Development
6. Target Development of "Site-Ready" and "Pad-Ready" Sites that Facilitate Freight and Logistics Industry Expansion
 - a. Investigate Expanding "Site-Ready" and "Pad-Ready" Incentives
 - b. Investigate Repurposing of "Greyfield" Sites for Local Distribution and Fulfillment Centers
 - c. Target Development of Temperature Controlled Warehousing
 - d. Develop a Regional GIS Database to Support Freight and Logistics Industry
7. Enhance Workforce Development and Access for Freight and Logistics Jobs
8. Advance Future UPWP Projects
 - a. Study I-290 Between Millersport Highway and I-90 and I-90/I-290 Interchange
 - b. Study I-90 Between I-290 and I-190
 - c. Study I-190/ LaSalle Expressway/ Niagara Scenic Parkway/ Buffalo Avenue Interchange Study
 - d. Study I-290 Interchanges at Sheridan Drive and Millersport Highway
 - e. Study Walden Avenue Between I-190 and Union Road
 - f. Study I-190 from Elm/ Oak to Porter Avenue
9. Continue to Advance UPWP Projects that Support Freight Transportation
 - a. Conduct I-290/ Main Street Interchange Area Assessment
 - b. Analyze Access Improvements for I-290 Ramp to I-190
 - c. Analyze the Ramp Configuration on Westbound I-90 to Northbound I-190
 - d. Further Analyze I-190 Niagara/ Virginia Street Ramps
 - e. Develop Alternatives for Twin Cities Highway (NY Route 425) and River Road (NY Route 265)
 - f. Undertake the Youngs Road Interchange Analysis
 - g. Undertake a I-190/ Niagara Falls Boulevard Interchange Improvement Assessment
10. Study Ganson Street Area
11. Study Rail Spur to Future WNY Agribusiness Park
12. Study of Multi-Agency Enhanced Freight Corridors
13. Develop Curbside Management and Autonomous Delivery and Micro-Delivery Policies and Procedures
 - a. Develop Curbside Management Policies
 - b. Create Autonomous Delivery and Micro-Delivery Vehicle Policies
14. Initiate Long-Term Planning for International Rail Crossings
 - a. Upgrade International Rail Bridge to State-of-Good-Repair
 - b. Assess Whirlpool Rapids Bridge Improvements Assessment
15. Collaborate with the Port of Buffalo on New Market Business Planning

Included with this final report are a series of project sheets that outline the strategies and recommendations that are carried over from the 2010 Plan or that have been developed for this Buffalo-Niagara Regional Freight Plan that can be used as "tear sheets" to help stakeholders and agencies seek funding and implement projects. The recommendations are categorized by Infrastructure related and Non-Infrastructure related.

All of the projects identified as part of the Buffalo-Niagara Regional Freight Plan have been evaluated and prioritized based on input from stakeholders, how well the strategy/ project conforms to national, state, and regional goals, and

the ability for the project to address opportunities or challenges identified in the SWOT Analysis. Strategy or project priority is laid out as High, Medium-High, Medium, Medium-Low, and Low.

Each project is also associated with a conceptual planning level cost estimates derived either from stakeholders who have begun to cost such improvements or taken from similar projects undertaken recently. Costs are only provided for those projects that involve a planning study or infrastructure construction; projects that involve an initiative that requires coordination with and actions by other entities are not provided.

Following the collection of recommendation sheets is a Goal Table, outlining how each recommendation conforms to and is consistent with national, state, and regional goals.

Appendix A outlines the strategies and projects recommended in this Buffalo-Niagara Regional Freight Plan organized by priority along with planning level cost estimates.

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



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost:

\$500 K*
per station

*Planning level estimate based on similar projects

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



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:



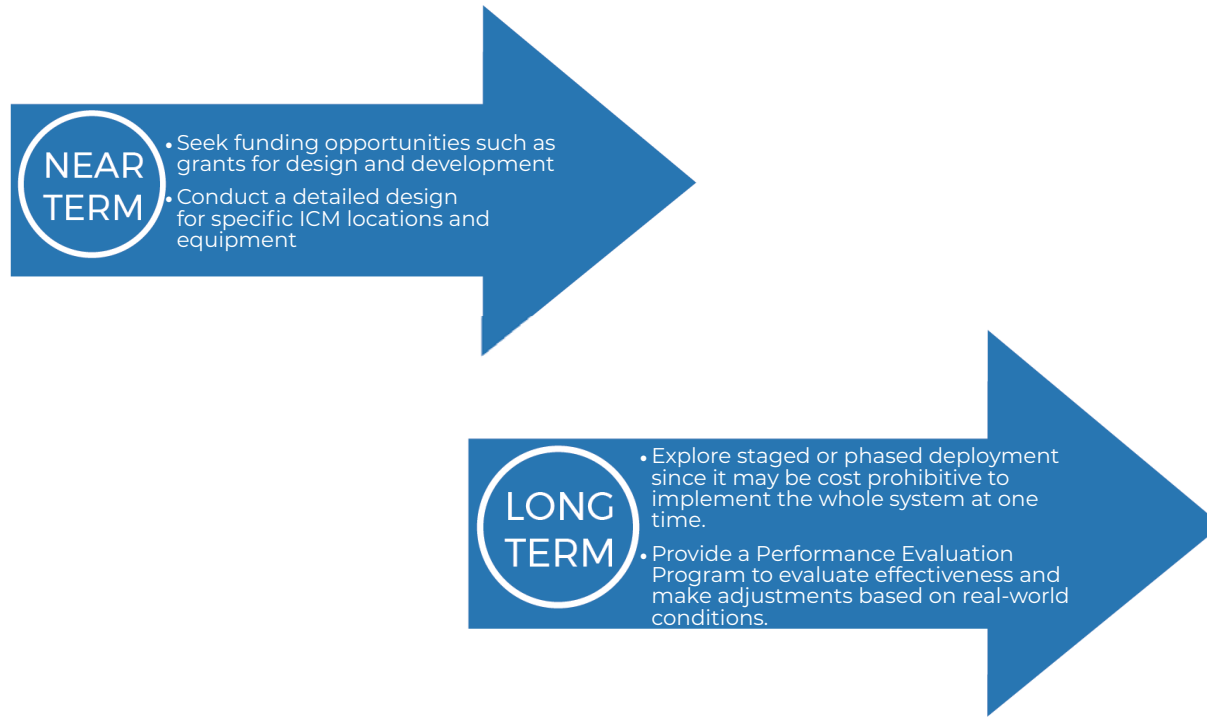
Estimated Cost:

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

Implement Buffalo-Niagara Integrated Corridor Management Strategies

May 2021

IMPLEMENTATION

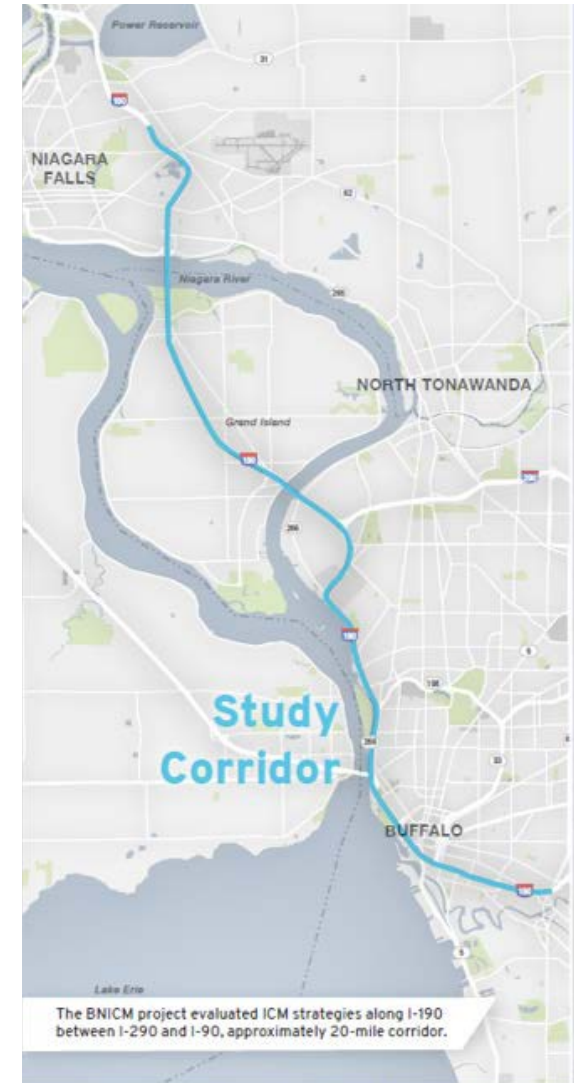


AGENCY PARTNERS



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



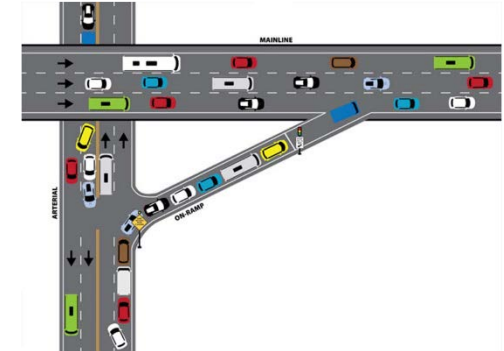
This strategy improves incident detection and clearance times using patrol vehicle teams (like current HELP trucks) to respond to incidents, assist motorists, and clear vehicles and debris. The estimated annual cost of this strategy is \$296,998.



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.



Implement Buffalo-Niagara Integrated Corridor Management Strategies

Package A and Package B Solutions

May 2021

STRATEGY 4 : Variable Speed Limits and Queue Warnings



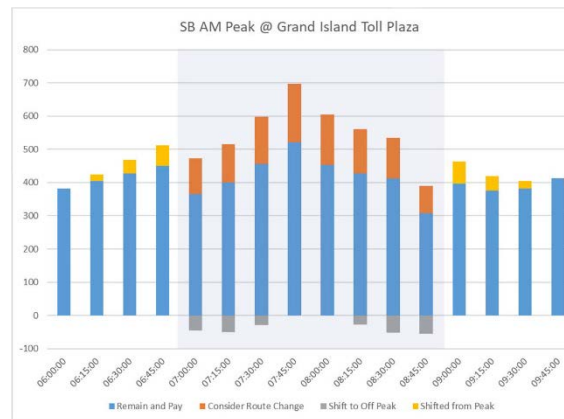
This strategy uses an overhead gantry system with signs that can be changed to show variable speed limits based on the presence of congestion, incidents, or weather impairments along the highway. The intent of the variable speed limit is to adjust the speed of vehicles based on conditions of the highway 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.



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 NYSEDA 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**

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



SUMMARY for each recommendation in the following pages

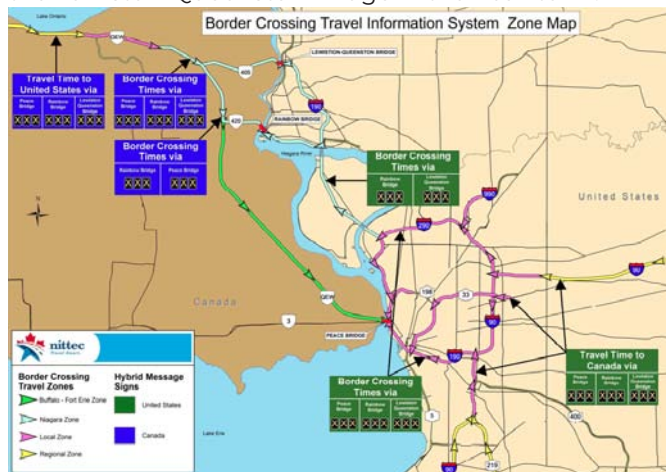
Expand Border Crossing Travel Information in the Region

DESCRIPTION

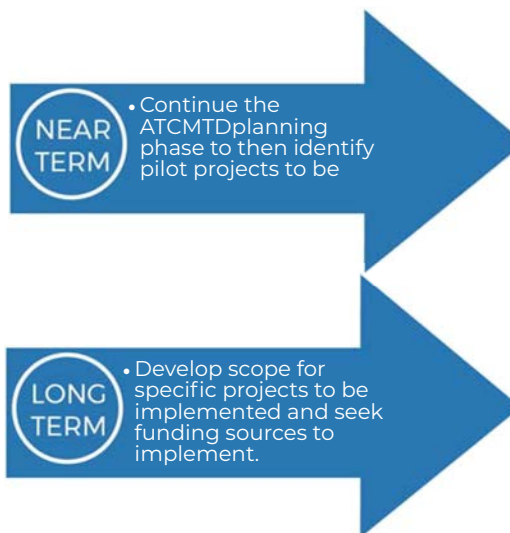
The freight and logistics community has continuously indicated that maneuvering the border is a challenge, whether it be from a congestion standpoint or a clearance standpoint. As discussed previously, technological pre-clearance of all commercial vehicles crossing the Peace Bridge is currently under 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



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost:

\$3 M*

AGENCY PARTNERS



*Planning level estimate based on similar projects

Develop Pilot Integrated Corridor Management (ICM) Strategies

May 2021

DESCRIPTION

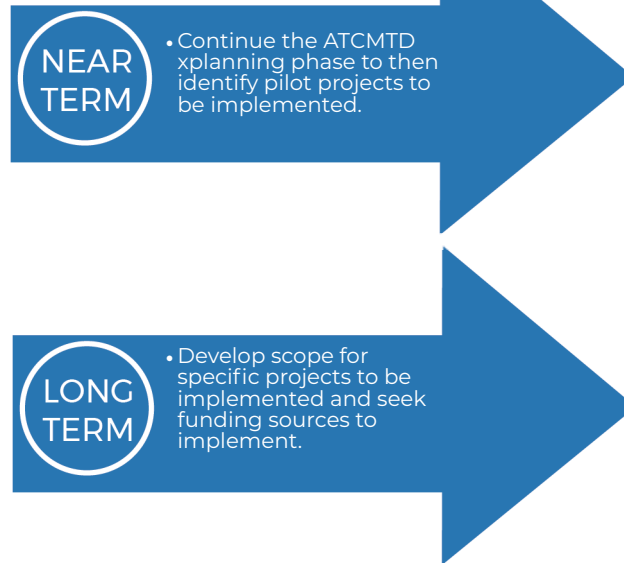
Following completion of the ATCMTD planning project, early next steps would be to identify specific ICM elements at border crossings and along the I-190 corridor that should be piloted, and then develop an application for use of ATCMTD funds for an ICM demonstration project. One potential ICM project 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



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:



Estimated Cost:

Not Known at this Time

AGENCY PARTNERS



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 increase there is greater potential to incorporate automated truck vehicles.

AGENCY PARTNERS



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



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

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.

*Planning level estimate based on similar projects

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:

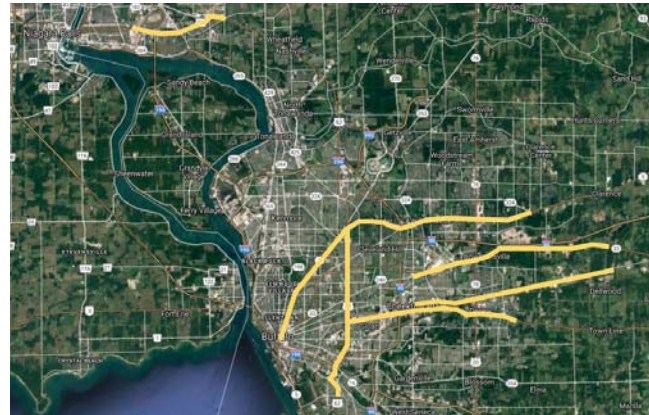
- Route 5/ Main Street
- Bailey Avenue (with focus on the stretch between Main Street and South Park Avenue)
- One of the east-west corridors such as Walden Avenue (with focus on the stretch between Bailey Avenue and Town Line Road at the Lancaster/ Alden border), Genesee Street (with focus on the stretch 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



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



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost:

Not Known at this time

Expand Real-Time Truck Parking Information

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.

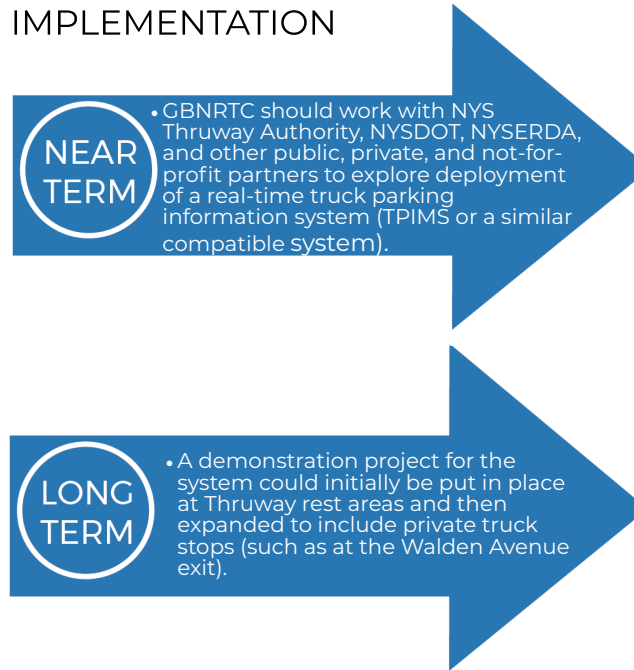
LOCATION

Buffalo-Niagara Region, New York



Typical TPIMS system, Source: www.trucksparkhere.com

IMPLEMENTATION



AGENCY PARTNERS



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



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

*Planning level estimate based on similar projects

Create Urban Truck Hub or Mobile Depot

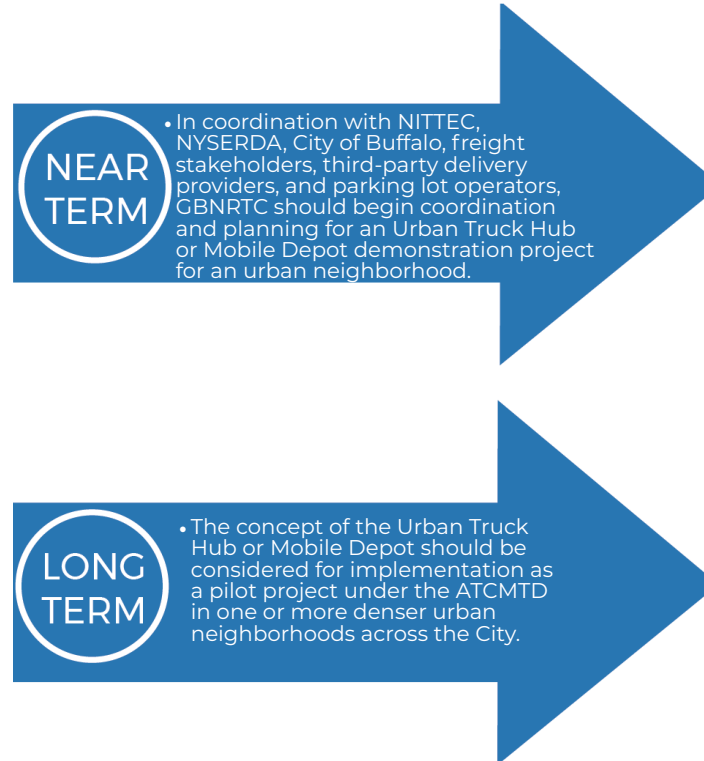
May 2021

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



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



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

AGENCY PARTNERS



*Planning level estimate based on similar projects

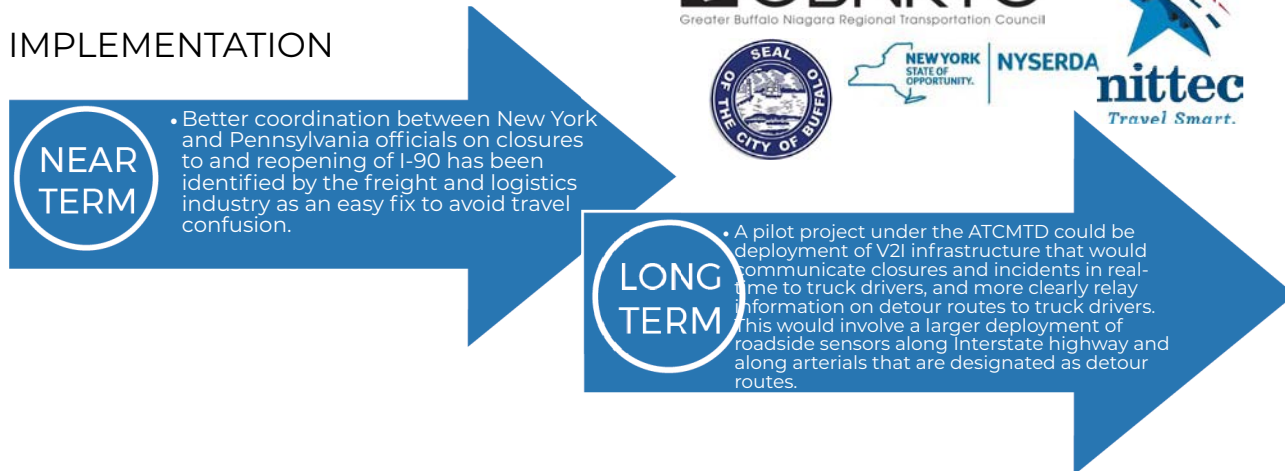
Improve Circulation of Weather and Incident Related Closure Information

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.

IMPLEMENTATION



LOCATION

Buffalo-Niagara Region



Source: One Region Forward

AGENCY PARTNERS



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



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

*Planning level estimate based on similar projects

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 shows 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



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



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

*Planning level estimate based on similar projects

Implement Truck Low Bridge Clearance Warning Detection

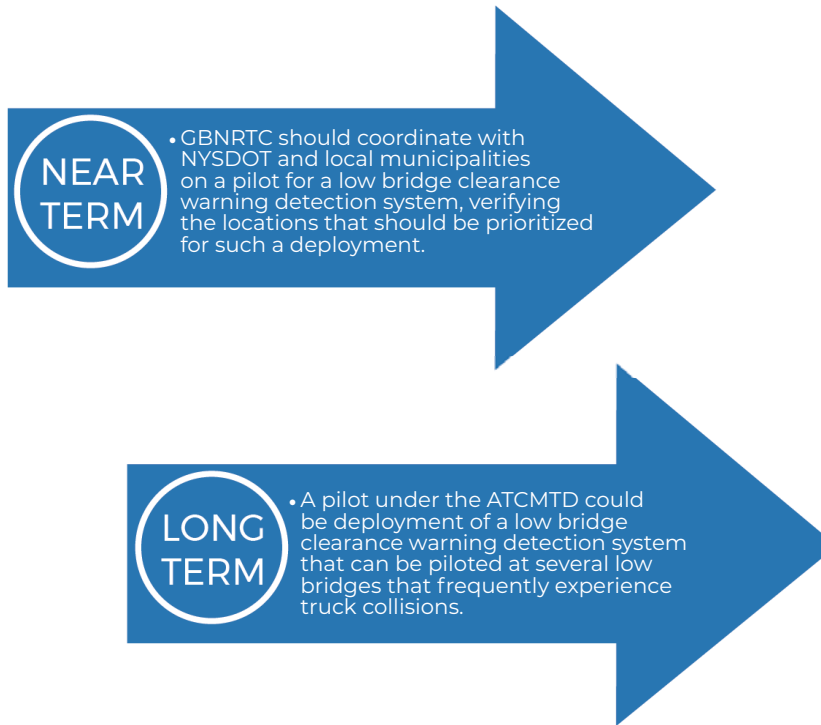
May 2021

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



AGENCY PARTNERS



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 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 be 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

Improve Bethlehem Steel Advanced Manufacturing Park Infrastructure

May 2021

IMPLEMENTATION

LOCATION Niagara Falls, New York

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.



Bethlehem Steel Advanced Manufacturing Park Master Plan, source: ECIDA

AGENCY PARTNERS



Department of
Transportation



Western New York
Regional Economic
Development Council



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

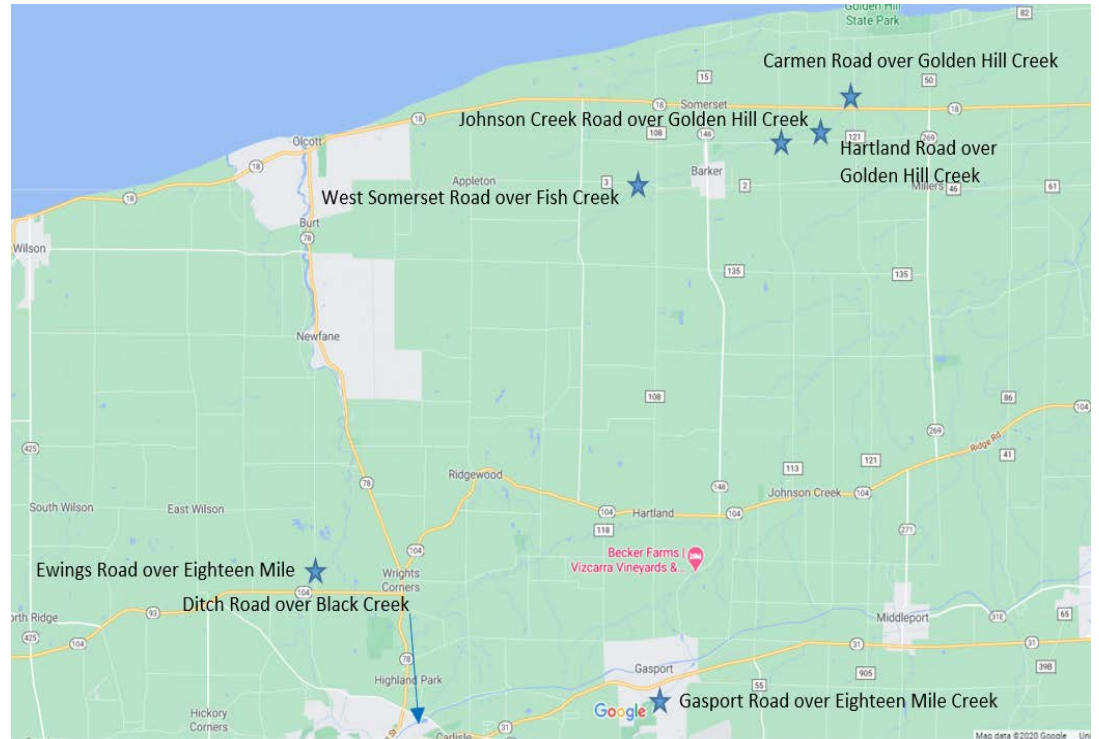
May 2021

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



Niagara County
Center for Economic Development



Department of
Transportation



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 "wyve" 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



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



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

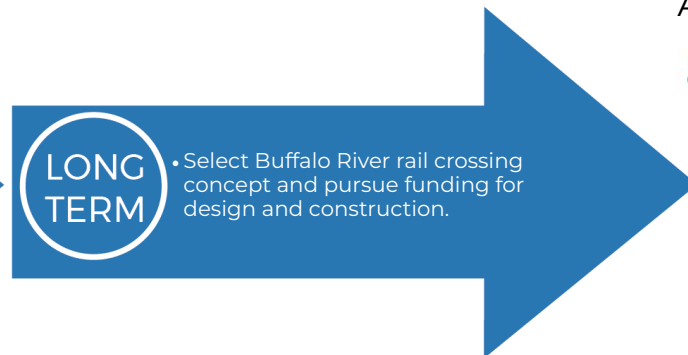
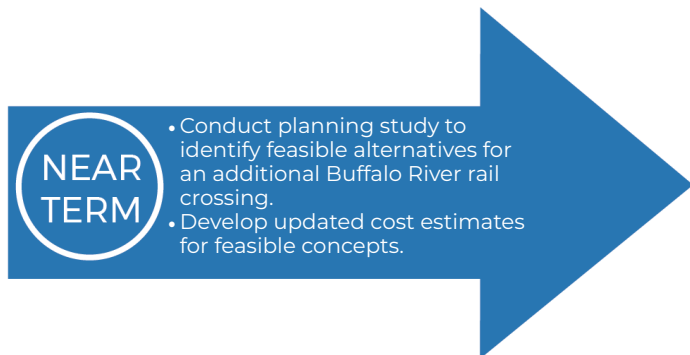
CP Draw Bridge Replacement, G&W Connection from NS to BPRR Line, CN Northern and CN Southern Connection

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



AGENCY PARTNERS



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



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost: \$1.5M

*Planning level estimate based on similar projects

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.

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

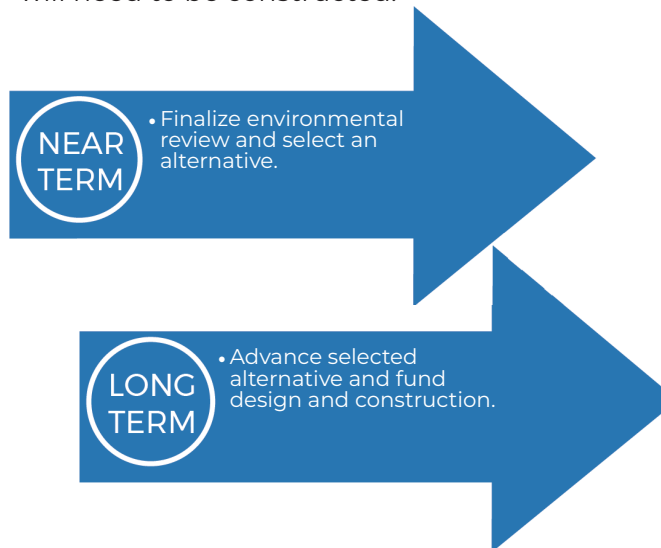
Two variations of the Concept I alignment were determined to be both reasonable and practicable and are being advanced for detailed study in the DDR/DEIS as two separate build alternatives, outlined below and discussed in the following recommendation pages. The initial alignment of Concept I was dismissed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



Estimated Cost: **\$600M***

*Planning level estimate based on similar projects

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 Tiftt Street and Church Street and realign NYS Route 5 from Tiftt Street to I-190 via a new controlled access highway partially utilizing abandoned railroad right-of-way. The highway connector would include interchanges at Tiftt 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 Tiftt Street with South Park Avenue.

AGENCY PARTNERS



LOCATION

Buffalo, New York



Build Alternative 1, Source: NYS DOT

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 Tiftt Street and Church Street and realign NYS Route 5 from Tiftt Street to I-190 via a new boulevard partially utilizing the existing Tiftt Street corridor and abandoned railroad right-of-way. The boulevard would include connections at Fuhrmann Boulevard, Ship Canal Parkway, Tiftt 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 Tiftt Street with South Park Avenue.

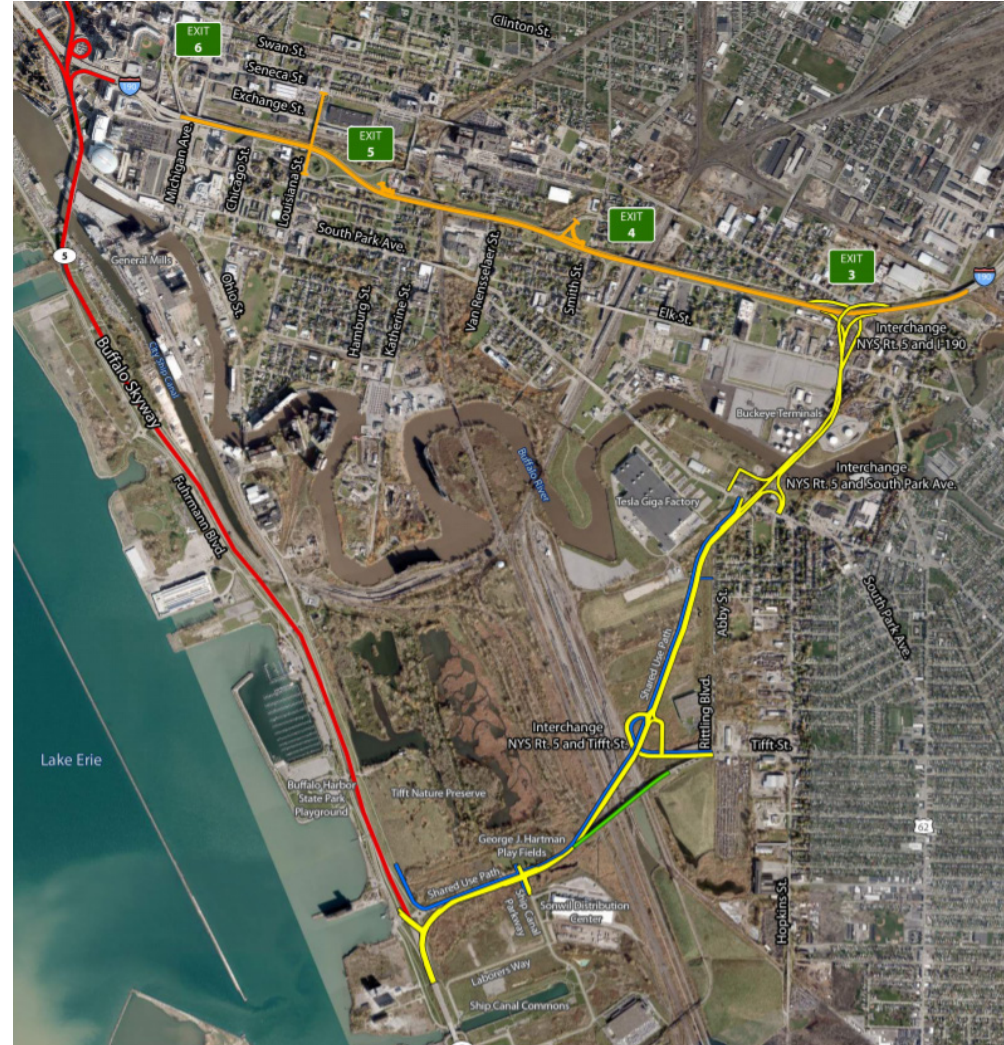
AGENCY PARTNERS



Department of
Transportation

LOCATION

Buffalo, New York



Build Alternative 2, Source: NYS DOT

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



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:

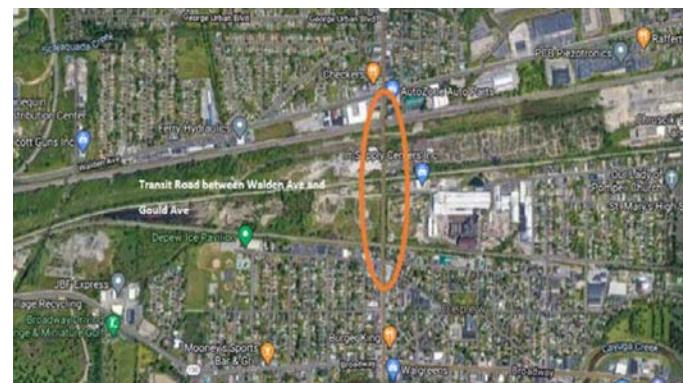


Estimated Cost:

\$60M*
(2010 dollars)

LOCATION

Depew, New York



AGENCY PARTNERS



*Planning level estimate based on similar projects

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:



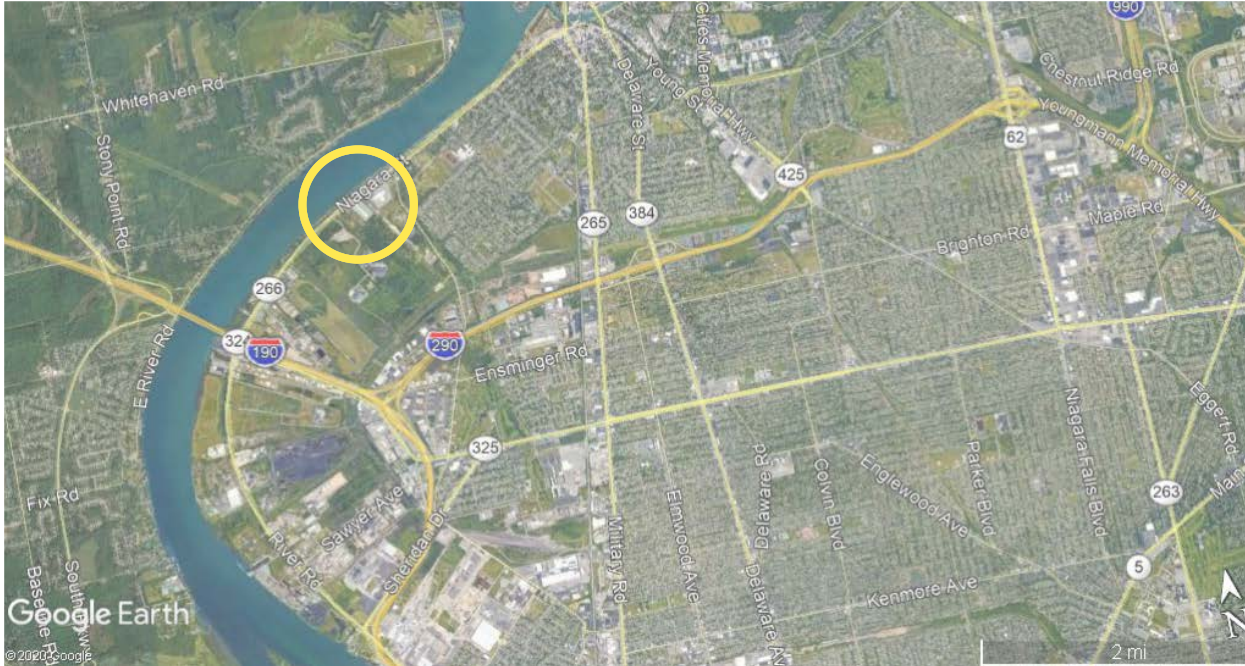
Estimated Cost: \$1.3 M

*Planning level estimate based on similar projects

Construct River Road Roundabout at Riverview Solar Technology Park

May 2021

LOCATION Tonawanda, New York



AGENCY PARTNERS



IMPLEMENTATION

NEAR TERM

- GBNRTC, in coordination with NYSDOT and Town of Tonawanda, should identify and seek funding mechanisms to get this recommendation moved 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 recommendation pages.

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.

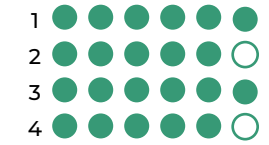
SUMMARY

Goals Met:

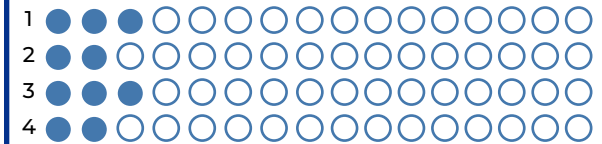
Federal FAST Act



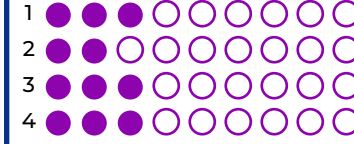
NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



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

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

May 2021

DESCRIPTION

This recommendation focuses 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



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost: \$150K

*Planning level estimate based on similar projects

Extend Engine House Track

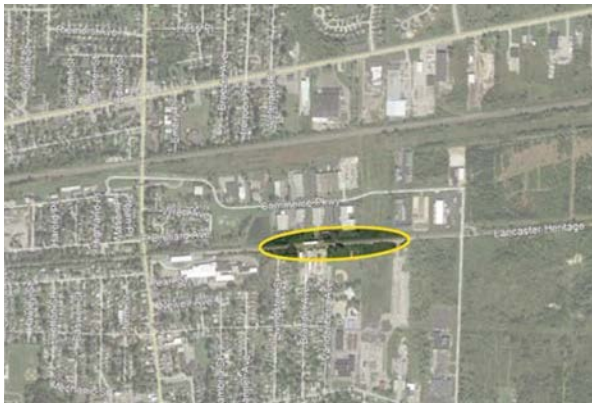
May 2021

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



AGENCY PARTNERS



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost:

\$1 M

*Planning level estimate based on similar projects

Improve the DL&W Interchange with Norfolk Southern

May 2021

DESCRIPTION

This recommendation focuses 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 recommendation would 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, it will support and maintain the good level of track maintenance to care for the growth of traffic in this industrial area of WNY.

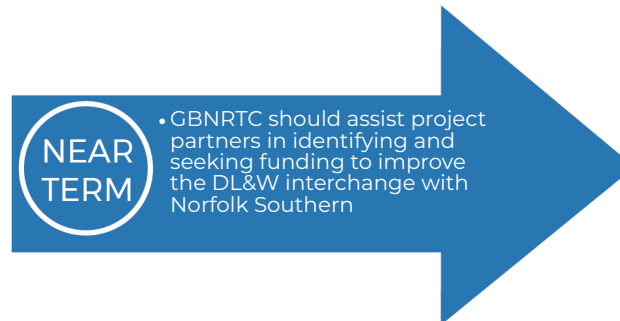
LOCATION

Depew, New York



Improve DL&W Interchange with NS

IMPLEMENTATION



AGENCY PARTNERS



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost:

\$850 K

*Planning level estimate based on similar projects

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

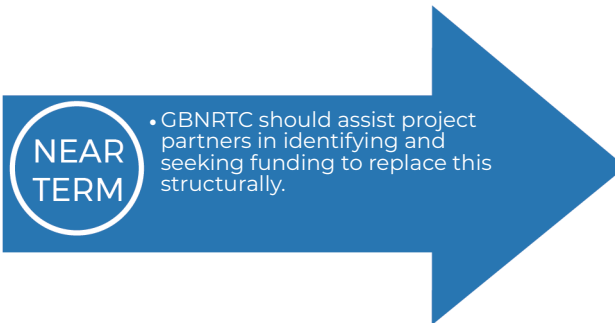
LOCATION

Depew, New York



Aerial view of Structurally Deficient Bridge

IMPLEMENTATION



AGENCY PARTNERS



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost: \$350 K

*Planning level estimate based on similar projects

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



BRIDGE SUMMARY

Priority:

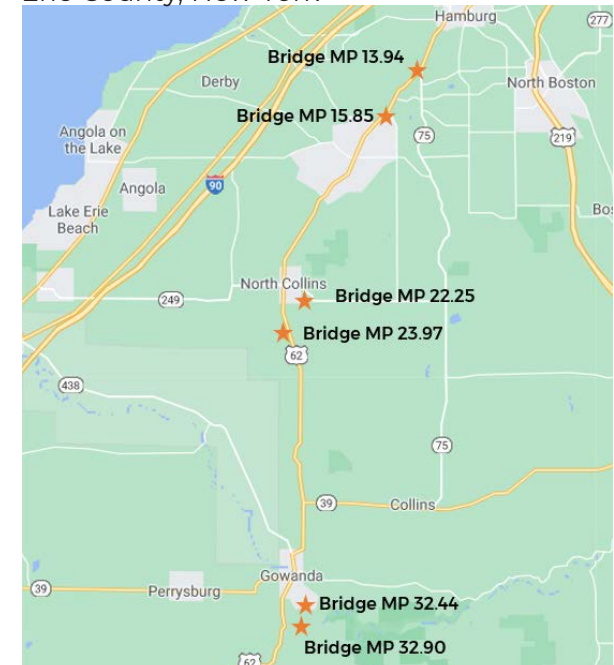
ALL MEDIUM

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



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



SUMMARY

Priority:

ALL MEDIUM

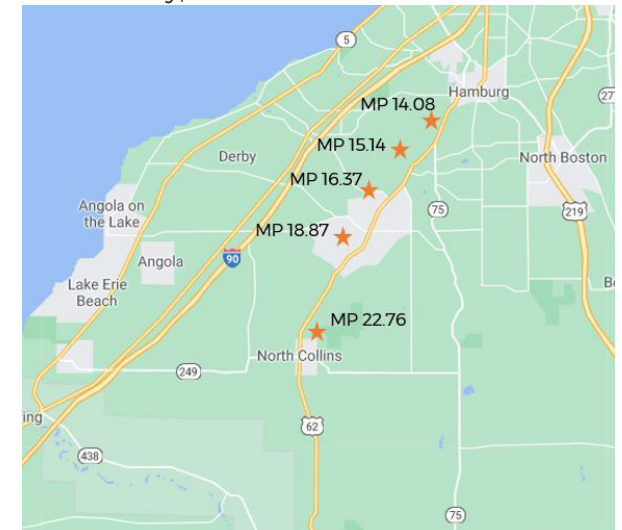
Estimated Cost:

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



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



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

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

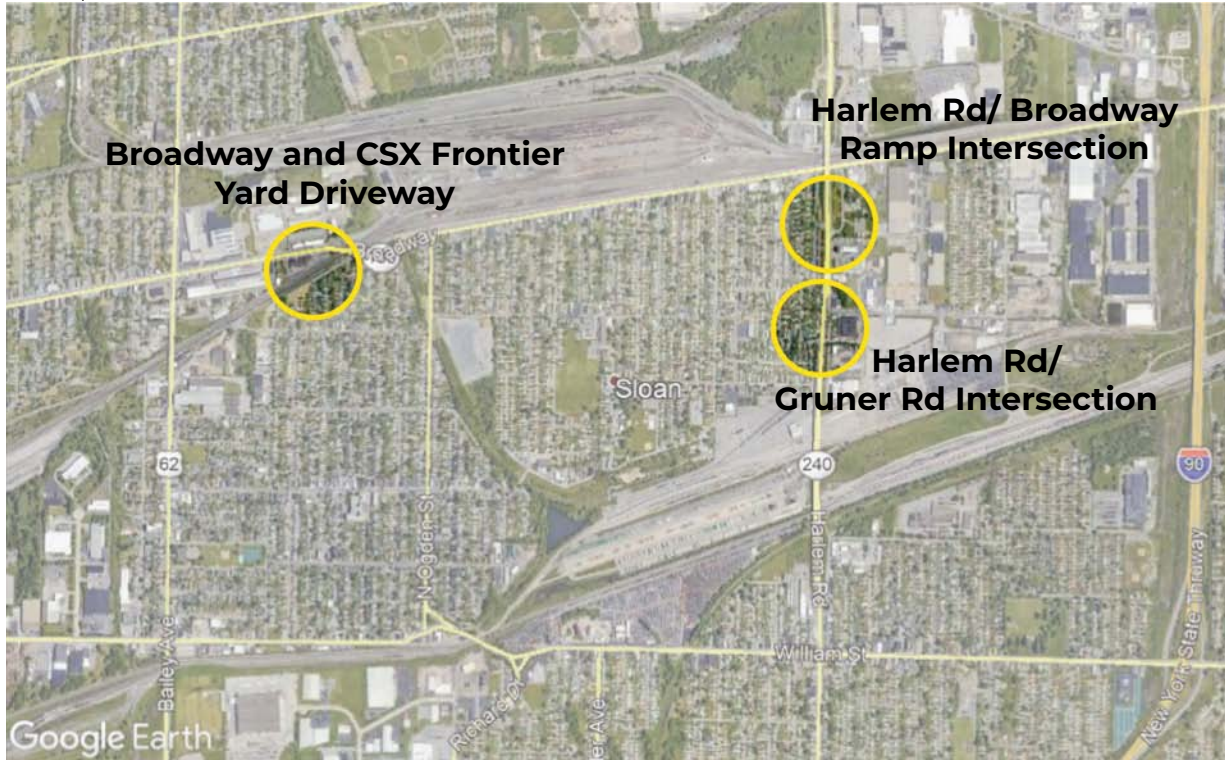
- Work with NYSDOT to fund and manage safety analysis and determine appropriate improvements for each site.

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



Department of Transportation



Empire State Development



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

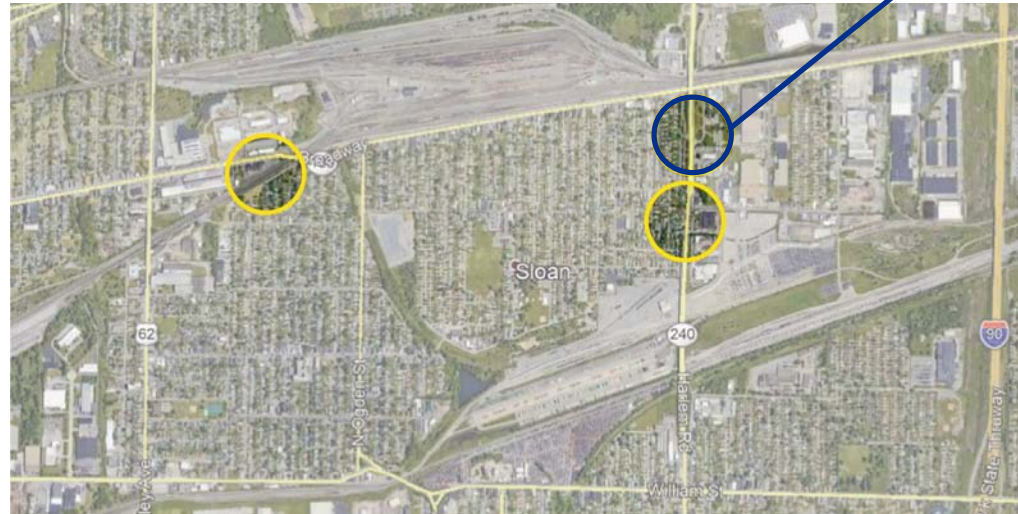
May 2021

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 signaling the ramp interchange with Harlem Road, similar to how they are signaled at Broadway, to provide a safer access. The figure below shows the Broadway ramp intersecting with northbound Harlem Road.

LOCATION

Sloan, New York



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



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:



Estimated Cost:

Not known at this time

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 vision 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



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost:

Unknown at this time

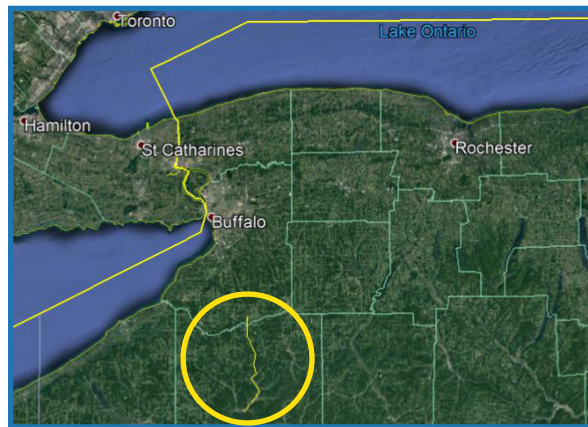
*Planning level estimate based on similar projects

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



AGENCY PARTNERS



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.

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

DESCRIPTION

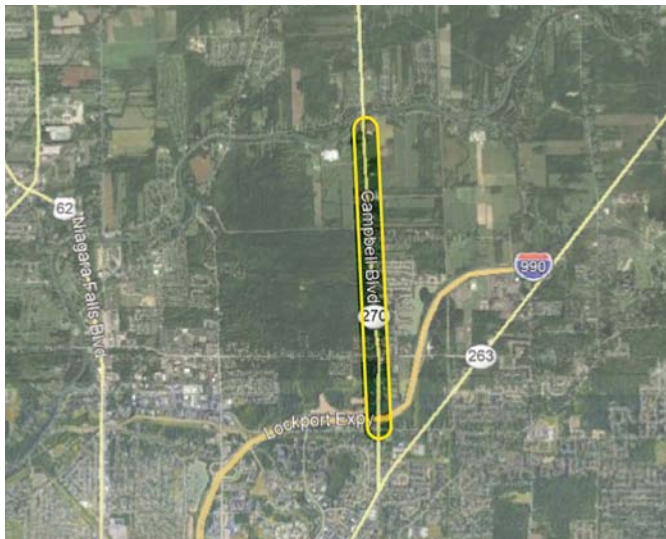
Improvements includes pavement resurfacing, shoulder reconstruction and widening on NYS Route 270, truck turning radii improvements and installation and extension of turning lanes at intersection of NYS Route 270 and N. French Road, and installation of two-way left turn lanes on N. French Road between 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



LOCATION

Town of Amherst, Erie County



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost:

\$5 M

*Planning level estimate based on similar projects

Expand Buffalo-Niagara International Airport (BNIA) Air Cargo

May 2021

LOCATION

Cheektowaga, New York

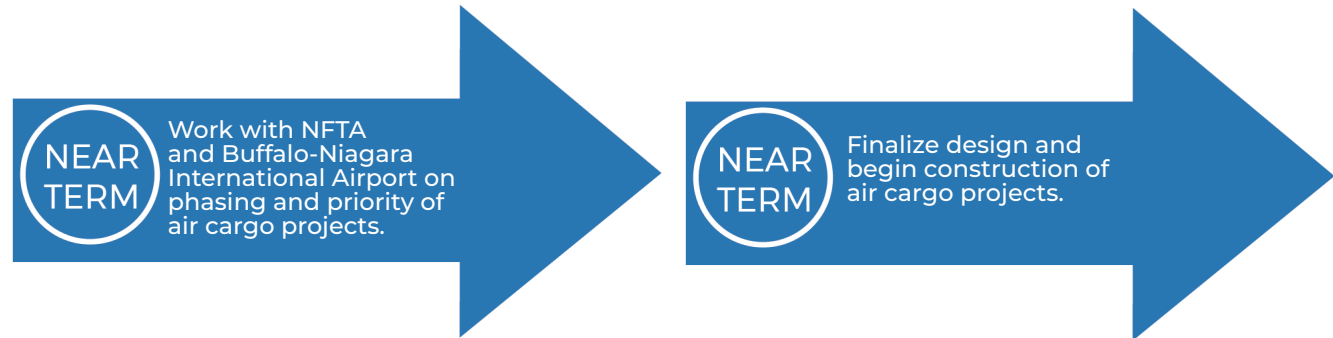


AGENCY PARTNERS



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.



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



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



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

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.

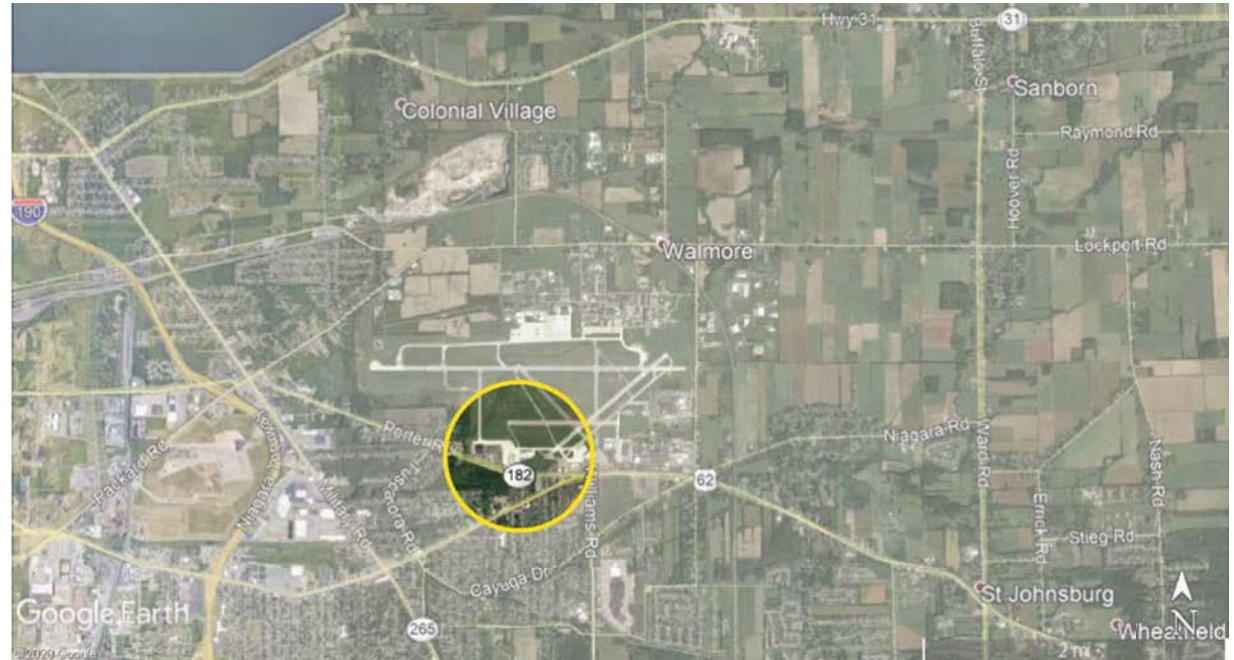
NEAR TERM

- 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



Freight Planning and Policy

Recommendations

Freight Planning and Policy Recommendations

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Build Support for Long-Term Transportation Bill

May 2021

BACKGROUND/NEED

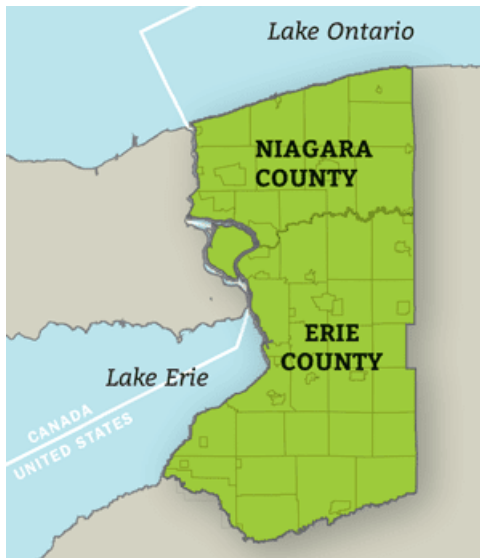
The FAST Act authorized \$305 billion over fiscal years 2016 through 2020. On September 30, 2020, as the FAST Act was set to expire, a 1-year extension was approved, providing funding for the 2021 fiscal year.

DESCRIPTION

There continues to be a need for a long-term federal transportation bill to follow the FAST Act that would enhance and modernize freight transportation infrastructure. This long-term transportation bill should also include identifying new sources of revenue as gas and diesel gas tax revenues remain stagnant and even decline, diminishing the main source of revenue for transportation infrastructure funding.

LOCATION

Buffalo-Niagara Region



Source: One Region Forward

IMPLEMENTATION

GBNRTC, along with transportation, freight, and logistics stakeholders should take on a collaborated advocacy role in supporting ongoing efforts by New York State Association of Metropolitan Planning Organizations (NYSAMPO), AASHTO, and other organizations to resolve this at the national level.

AGENCY PARTNERS



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost:

Not known at this time

*Planning level estimate based on similar projects

Stay Abreast on Transportation Master Plan Update in Niagara Region, Ontario

May 2021

BACKGROUND/NEED

At the time of this study, the Niagara Region, Ontario was updating their Transportation Master Plan. Stakeholders from the Niagara Region and Peel Region were involved in the Stakeholder meetings for this study and provided input on existing conditions, the SWOT analysis, and recommendations.

DESCRIPTION

Stakeholders from the Niagara Region and Peel Region indicated a desire in Ontario to improve border crossing congestion and clearance times and enhance Niagara-Greater Toronto Area freight access by looking at alternative corridors (such as the Niagara-Hamilton Trade Corridor between Hamilton and Welland and NGTA East Corridor between Welland and Fort Erie).

LOCATION

Buffalo-Niagara Region



Source: "How We Go" Niagara Region Transportation Master Plan

IMPLEMENTATION

GBNRTC and other freight and logistics stakeholders should remain involved in Niagara Region transportation planning as new or improved trade corridors can impact corridors and border crossings in the Buffalo-Niagara region.

AGENCY PARTNERS



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2020



Freight Modes Benefited:



Priority:



Estimated Cost:

Not known at this time

Create a TIP Freight Funding Block

May 2021

BACKGROUND/NEED

A Transportation Improvement Program (TIP) freight funding block would allow freight projects to be called out as a subset of the full Transportation Improvement Program for funding.

DESCRIPTION

A TIP funding block should be created as a subset to the full GBNRTC TIP to program select smaller freight and logistics projects. This would also identify opportunities for GBNRTC to coordinate on and support state and federal grant opportunities for freight projects.

AGENCY PARTNERS



IMPLEMENTATION

Upon completion of the Niagara Frontier Urban Freight Transportation Plan 2020 Update, GBNRTC can begin creating the TIP freight funding block as part of its TIP.

LOCATION

Buffalo-Niagara Region



Source: One Region Forward

SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost:

Not Known at this time

Promote Region as a “Green” Cross-Border Logistics Hub

May 2021

BACKGROUND/NEED

Regional stakeholders indicated a need to better promote the cross-border economy by using the region’s international location to grow bi-national logistics and trade, and by breaking the perception that the border is difficult to maneuver. This is further aligned with strategies outlined in the WNY REDC to “Leverage Our International Border Location”. Further, the region can market inexpensive, clean, renewable energy resources derived from hydro generation stations in Southern Ontario and Western New York to promote this “Green” Cross-Border Logistics Hub.

DESCRIPTION

With multiple regions competing against each other for economic development, one way the Buffalo-Niagara region can differentiate itself; one that has gained support in concept from freight and logistics stakeholders, is to promote the region as a “Green” or “Sustainable” Cross-Border Logistics Hub. This would take advantage of the region’s unique location along the Canadian border coupled with the ability to build green, sustainable development to create and promote a unique brand for the freight and logistics industry. The WNY REDC outlines strategies to create a Regional Smart Growth Coordination Council and establish the region as a center of green innovation, which would align with this strategy when combined with the Bi-National Logistics Council and ITGO efforts. The region could establish certain brownfield redevelopment sites and Foreign Trade Zones as demonstration sites for Green Cross-

Border Logistics Hubs. The sites could include Bethlehem Steel Advanced Manufacturing Park, Buffalo Lakeside Commerce Park, the 133-acre site adjacent to Niagara Falls International Airport, and 50-acre site south of Niagara Falls International Airport to name a few. Additionally, when marketing the Buffalo Logistics Complex the ability to use this Green Cross-Border Logistics Hub strategy to reduce the number of truck vehicle miles traveled by moving more freight to rail can help to prioritize the need for the facility.

ELEMENTS

1. **Advance ITGO Involvement on NITTEC Cross-Border Committee and WNY REDC**
2. **Remove Perception that the Border is Difficult to Maneuver**
3. **Build Upon Ontario’s Strategic Investment and Procurement Agreement**

IMPLEMENTATION

GBNRTC, in partnership with ITGO, NITTEC, and other entities should advocate for the creation of a “Bi-National Logistics Council” as outlined in the WNY REDC Strategic Plan. This Council would be tasked with “coordinating planning for key investments; advocating for public policy action on taxation, regulation, and infrastructure; building operational relationships among key stakeholders; and mounting a marketing and promotion strategy and program to reinforce the region as a primary hub in the global logistics network”. The Council could evolve into a number of subcommittees tasked with many of the strategies outlined in this Study update.

SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost:

Not Known at this time

*Planning level estimate based on similar projects

Advance ITGO Involvement on NITTEC Cross-Border Committee and WNY REDC

DESCRIPTION

When the Buffalo Niagara Partnership (BNP) reorganized its economic councils, the CanAm Council was reorganized into other councils and efforts. While the BNP still advocates for cross-border economy through partnerships with Niagara Region and Hamilton Region Chambers of Commerce, by advocating for policy that facilitates cross-border trade, and holding bi-national events, this reorganization leaves a need for a cross-border committee or alliance to regularly meet to collaborate cross-border economy, trade, and logistics and to promote the region as a bi-national logistics hub. NITTEC has a Cross-Border Committee that meets regularly on transportation and information collaboration. The NITTEC Cross-Border Committee realizes the importance of the freight and logistics industry and in 2019 extended an invitation to freight operators from the U.S. and Canada to discuss concerns with the Committee. The participation by freight operators is expected to continue and to be enhanced.

There are two recommendations outlined:

1. NITTEC’s Cross-Border Committee to make a permanent position available for ITGO and/or freight operators in the U.S. and Canada in order to bring a voice for the freight and logistics industry to the cross-border discussion.
2. GBNRTC, in partnership with ITGO, NITTEC, and other entities, should advocate for the WNY Regional Economic Development Council to include a member of the freight and logistics industry (potentially a member of ITGO). With an expected three-fold increase in freight volume utilizing Buffalo-Niagara region ports of entry by 2045, the region needs to be ready to facilitate cross-border trade.

IMPLEMENTATION



LOCATION

Buffalo-Niagara Region

Economic Development Council Strategic Plan
Source: "A Strategy for Prosperity" – WNY Regional

AGENCY PARTNERS

Remove Perception that the Border is Difficult to Maneuver

May 2021

DESCRIPTION

There is a need to better educate and relay information on clearance procedures and border wait times, and provide information on the best times to cross (lowest wait times) and the typical peak times that would result in longer waits. This could come in the form of improved communication of wait times, expanded use of real-time information, which is outlined later in this section, and bridge authorities/ commissions could even study the use of variable pricing to try to better distribute truck traffic throughout the day or week as to spread out demand for a few peak times. This involves a collaboration of NITTEC, bridge authorities/ commissions, and trucking industry stakeholders. This portion involves the communication aspect of removing the perception, technology and infrastructure elements are expanded upon under the Expanded Intelligent Transportation Systems in the Region action item.

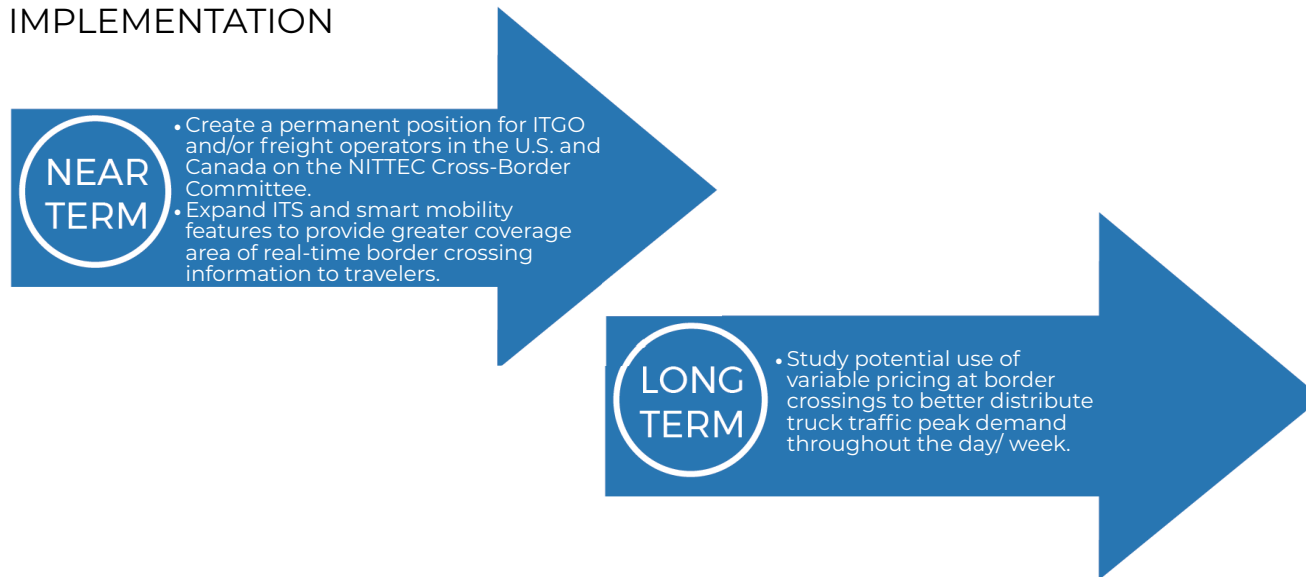
LOCATION

Buffalo-Niagara Region



Canadian Plaza at the Peace Bridge Border Crossing, Source: NORR Design

IMPLEMENTATION



AGENCY PARTNERS



Build Upon Ontario’s Strategic Investment and Procurement Agreement

May 2021

DESCRIPTION

The recently signed Ontario – Maryland Strategic Investment and Procurement Agreement (SIPA), a subnational agreement focusing on increasing trade, investment, and jobs in the areas of advanced manufacturing, infrastructure, and the agri-food sector, would be expected to increase freight moving through border crossings in the Buffalo-Niagara region between Maryland and Ontario. This SIPA is the first to come out of the Ontario government’s “Strategy for Trade with the U.S.” As part of the strategy, Ontario is pursuing additional agreements with other U.S. states, which seek to secure improved access to investment and government procurement opportunities in the U.S. for Ontario businesses. As other SIPA’s are signed, the Buffalo-Niagara region should look to position itself as the most logical ports of entry for which to conduct cross-border trade between Ontario and states in the eastern portion of the U.S. ITGO should look to spearhead similar SIPA opportunities with New York State that would help grow the freight and logistics industry in the Buffalo-Niagara region.

LOCATION

Buffalo-Niagara Region



Ontario and Maryland Strengthen Economic Partnership



*Ontario and Maryland Sign Historic Investment and Procurement Agreement
Source: Government of Ontario, Newsroom*

AGENCY PARTNERS

NEAR TERM

- The WNY Regional Economic Development Council, inclusive of a member of the freight and logistics industry (potentially a member of ITGO) should work with Ontario officials to advocate for the Buffalo-Niagara region to be the preferred port-of-entry for similar SIPA opportunities.

LONG TERM

- The WNY Regional Economic Development Council, inclusive of a member of the freight and logistics industry (potentially a member of ITGO) should work with Ontario officials spearhead similar SIPA opportunities with New York State that would grow the freight and logistics industry in the Buffalo-Niagara region.

Enhance Regional Collaboration of the Freight and Logistics Industry

Regional Economic Development and Promotional Efforts

May 2021

IMPLEMENTATION

GBNRTC should play an overall support and advocacy role to better align regional economic development with transportation planning and projects. GBNRTC and ITGO should advocate for regional collaboration amongst the WNY REDC, Invest Buffalo Niagara, GBNRTC, ITGO, industrial development agencies, economic development agencies, government and not-for-profit entities, and developers to use the results of the Invest Buffalo Niagara study to identify a strategy for targeting specific industries and addressing industrial and warehouse space needs; a subset of which can be used to target markets related to the freight and logistics industry..

LOCATION Buffalo-Niagara Region



Sites of industrial properties that are receiving an consulting team undertaking the Invest Buffalo Niagara WNY Industrial Real Estate Development Strategy assessment

Source: Western New York site tours fuel strategy, Invest Buffalo Niagara

NEAR TERM

- GBNRTC and ITGO should advocate for regional collaboration in using the Invest Buffalo Niagara study findings to identify a regional strategy for targeting specific industries and addressing warehouse demand.

LONG TERM

- Regional collaboration of industrial and economic development is undertaken by a single entity.

AGENCY PARTNERS



Target Development of “Site-Ready” and “Pad-Ready” Sites

Facilitate Freight and Logistics Industry Expansion

May 2021

BACKGROUND/NEED

Throughout the course of this study, stakeholders have indicated that there is a demand in the Buffalo-Niagara region for development sites that are “site-ready” or “pad-ready” and able to quickly accommodate construction of or conversion of industrial and warehouse space. These sites go beyond “shovel-ready” designation to prepare sites for quick accommodation of prospective tenants looking to be operational within a year.

Covid-19 has acted to expedite the growth in e-commerce, with consumers in search of next-day and same-day delivery of their goods. The expanded e-commerce market accelerated by Covid-19 has resulted in a number of Canadian logistics businesses looking for warehouse space (generally in excess of 200,000 square feet) in the U.S. (including the Buffalo-Niagara region). These Canadian businesses ship a majority of their inventory to the U.S. and they want to be set up for same-day and next-day shipping to their U.S. customers without having to be concerned over potential delays with border crossings, and to get ahead of any impending changes to tariffs and duties. These Canadian businesses are able to retain their employees in Canada, working remotely, while operating a highly-automated warehouse in the U.S. with only a few on-site administrative personnel. Overall, this helps Canadian companies become more efficient in working with their U.S. customer base.

At 2.6%, Buffalo-Niagara has one of the lowest industrial availability rates in the nation, according to market research conducted by CBRE|Buffalo

Further, Covid-19 has acted to expedite the growth in e-commerce, with consumers in search of next-day and same-day delivery of their goods. Further, Covid-19 has facilitated a movement by consumers to search for more

locally sourced food and to seek same-day delivery of food and produce. This has led to grocers and food producers seeing a growth in fresh food purchases, a resurgence in frozen foods, and growth in e-commerce and third-party deliveries for groceries. As a result of the growth in e-commerce, retail and distribution supply chains have had to continue to evolve. Retailers will increasingly look for ways to facilitate same-day or overnight delivery of goods directly to customers, in keeping with e-commerce service commitments. Many of these retailers will use a two-tiered distribution system whereby larger regional distribution



Source: Elmwood Warehousing

centers ship to smaller local fulfillment and sorting centers where small package carriers and contract drivers will deliver the goods directly to customers. The shifting retail and distribution supply chain combined with the expected increase in freight trade at Buffalo-Niagara region ports of entry will likely increase the demand for distribution warehousing, storage space (including cold-storage), and brokerage warehousing. That being said, developers in the region are reluctant to build spec space without the promise of a tenant unless there are numerous incentives to reduce financial risk, thus resulting in a gap in demand and supply. Without these “site-ready” or “pad-ready” sites, many stakeholders believe the region simply won’t be considered for many prospective projects.

LOCATION

Buffalo Niagara Region



Source: One Region Forward

DESCRIPTION

The following are several strategies aimed at targeting development of “site-read” and “pad-ready” sites that facilitate freight and logistics industry expansion:

1. Investigate Expanding “Site-Ready” and “Pad-Ready” Incentives
2. Investigate Repurposing of “Greyfield” Sites for Local Distribution and Fulfillment Center
3. Target Development of Temperature Controlled Warehousing
4. Develop a Regional GIS Database to Support Freight and Logistics Industry

Investigate Expanding “Site-Ready” and “Pad-Ready” Incentives

May 2021

DESCRIPTION

As part of the collaborated regional economic development approach outlined previously, GBNRTC should advocate for strategies that incentivize “site-ready” or “pad-ready” sites aimed at attracting such businesses. This strategy should also be approached as a program to modernize Buffalo’s industrial building stock, and ITGO, GBNRTC, and/or freight and logistics stakeholders can play a lead or support role in this. In an effort to help meet the demand for warehousing space, ECIDA is currently pursuing developers through an incentivized RFP package to spec build manufacturing/ warehousing space at Bethlehem Steel Advanced Manufacturing Park to help fill a need in manufacturing and warehousing space identified throughout the region. To accommodate a freight and logistics industry that is increasingly becoming more automated, many freight stakeholders have shown support for restructuring regional strategies and economic development based incentives to align with growth the number of businesses and in terms of square feet of development rather than only job-based or wage-based performance measures. Further, the region can market inexpensive, clean, renewable energy resources derived from hydro generation stations in Southern Ontario and Western New York as an incentive for “site-ready” and “pad-ready” sites.

Pad Ready Site

- Pad Ready = “Ready to Build”
- Properly Zoned and Annexed
- Utilities to the Site and of Adequate Size
- Access is Approved
- All Governmental Approvals Complete
 - Exception of a specific building permit
- Mass Grading Complete
 - Site graded to sub-grade with building pad constructed

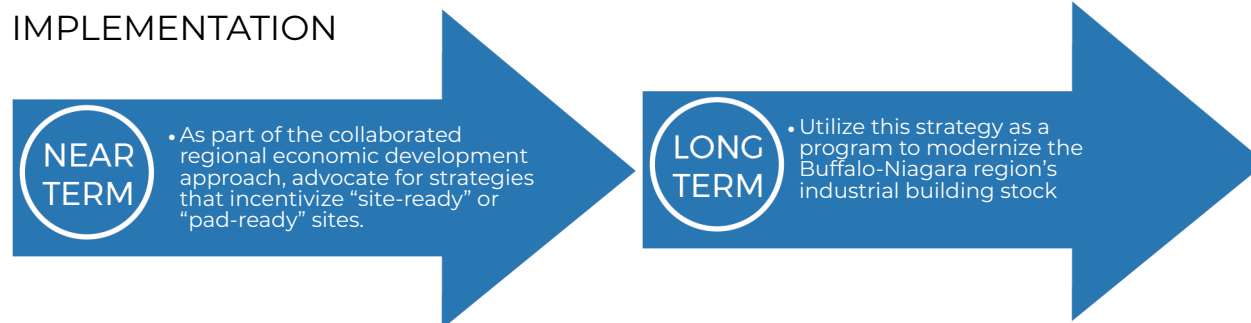


Example of Promotional Material for “Pad-Ready” Site
Source: National Association of Industrial and Office Properties (NAIOP)

AGENCY PARTNERS



IMPLEMENTATION



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost:

Not known at this time

Investigate Repurposing “Greyfield” Sites for Local Distribution and Fulfillment Centers

May 2021

DESCRIPTION

Many regions are looking at repurposing unproductive retail malls and large shopping centers left behind by the e-commerce market with distribution and fulfillment centers, bringing about an opportunity for “greyfield” reuse. A similar effort could be promoted in the Buffalo-Niagara region to revitalize older commercial areas, which would require a look at local Comprehensive Plans and Zoning codes to accommodate such warehouse and distribution space in older retail areas that can accommodate truck traffic. Incentive packages could be customized to target “greyfield” redevelopment of older commercial areas (New York State already provides incentives for roof-top solar installations).

AGENCY PARTNERS



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost:

Not known at this time

IMPLEMENTATION

NEAR TERM

- As part of the collaborated regional economic development approach, work with communities to identify “greyfield” sites that potentially would be feasible for conversion to light warehousing, distribution, or fulfillment centers.
- Work with real estate agencies, developers, warehousing operators, and economic development officials to identify resources needed to make older retail conversion to light warehousing, distribution, or fulfillment centers feasible.

LONG TERM

- As needed, update Comprehensive Plans and Zoning Codes to allow for conversion of older retail sites to light warehousing, distribution, or fulfillment centers.
- Advocate for incentives to convert larger, vacated retail sites to light warehousing, distribution, or fulfillment centers, where feasible.



Amazon distribution facility near Cleveland was built on the site of the Randall Park Mall, which closed in 2009. Source: Retail-to-Warehouse Conversions Gain Momentum, NAIOP

Target Development of Temperature Controlled Warehousing

May 2021

DESCRIPTION

The growth in next-day and same-day food and grocery e-commerce suggests additional need for temperature-controlled warehousing that can enable localized next-day and same-day delivery of fresh and frozen foods to customers. Further, logistics providers that deliver these goods are looking to optimize their supply chain, meaning they prefer to locate closer to warehouses to minimize “deadhead” miles travelled to pick up goods but also want to be close to their consumer base to minimize travel time. A similar strategy in using an incentivized RFP package developed by ECIDA for Bethlehem Steel Advanced Manufacturing Park could be developed for seeking temperature-controlled warehousing in the region.

Targeting the above strategies towards brownfields, greyfields, or as adaptive reuse of older industrial buildings, with the ability to locate some of these facilities that generate cross-border trade within Foreign Trade Zones, would further enable the area being able to promote itself as a Green Cross-Border Logistics Hub.

IMPLEMENTATION

NEAR TERM

- Prepare additional RFP packages, similar to those developed by ECIDA for Bethlehem Steel Advanced Manufacturing Park, for seeking additional temperature-controlled warehousing in the region.
- Target RFPs to incentivize development of temperature-controlled warehousing within brownfields, greyfields, or adaptive reuse of older buildings, with the ability to located some facilities in Foreign Trade Zones.

LONG TERM

- Target temperature-controlled warehousing recruitment as a way to further promote the Buffalo-Niagara region as a “Green” Cross-Border Logistics Hub.

AGENCY PARTNERS



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost:

Not known at this time

Develop a Regional Geographic Information System (GIS) Database to Support Freight and Logistics Industry

May 2021

DESCRIPTION

A GIS mapping interface is needed, and regularly updated, for use in economic development planning and marketing the region for industrial and freight/ logistics prospects. The database should identify available properties for development along with cost, their level of cleanup (greenfield, greyfield, brownfield), their status for development (approved, shovel-ready, pad-ready), and contact info for interested parties. This database should show all private and public sector properties.

AGENCY PARTNERS



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost:

\$50K for initial development of GIS mapping

IMPLEMENTATION

NEAR TERM

- Prepare a GIS mapping interface to be used as a single source of displaying development opportunities in the Buffalo-Niagara region.
- The GIS mapping tool can be developed as an interactive mapping tool that allows stakeholders to add/ delete/ modify information as needed.

LONG TERM

- Continuously update the GIS data to keep up-to-date mapping of development opportunities in the Buffalo-Niagara region.

Enhance Workforce Development and Access for Freight and Logistics Jobs

BACKGROUND/NEED

Regional stakeholders identified a need to enhance workforce development and job access for freight and logistics jobs. Workforce development is identified as one of ITGO's priorities for 2020.

DESCRIPTION

The main effort to enhance workforce development and job access for the freight and logistics industry involves establishing and implementing a new regional logistics workforce development upskilling and education program to include:

- **Regional Workforce Needs** – work directly with companies providing or requiring logistics services to determine the region's current and forward-looking personnel needs.
- **Logistics Career Promotion** – Create logistics workforce development and career path portal for students, job seekers, and workers changing careers. The portal can include job board, promotion of logistics careers, and links to education/ upskilling resources.

The collaboration with NCCC is advancing, however advocates have indicated that workforce development associated with the freight and logistics industry needs adequate funding and attention from state and local workforce agencies. The New York State Department of Labor needs to establish an apprentice job title for the freight and logistics industry.

The collaboration with NCCC is advancing, however advocates have indicated that workforce development associated with the freight and logistics industry needs adequate funding and attention from state and local workforce agencies. The New York State Department of Labor needs to establish an apprentice job title for the freight and logistics industry. Also, regional economic development agencies should look to align industrial development with existing transportation options, ensuring job centers have access to transit in terms of both routing and scheduling. Improving worker access would require collaboration with regional employers, transit operators, job training centers, and community service agencies to improve job access and mobility.

Also, regional economic development agencies should look to align industrial development with existing transportation options, ensuring job centers have access to transit in terms of both routing and scheduling. Improving worker access would require collaboration with regional employers, transit operators, job training centers, and community service agencies to improve job access and mobility.

SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost:

Not Known at this time

*Planning level estimate based on similar projects

Enhance Workforce Development and Access for Freight and Logistics Jobs

May 2021

IMPLEMENTATION

ITGO and other freight and logistics industry stakeholders should work with supply chain management and logistics centers and workforce training programs, such as at college and universities across the region (NCCC, Niagara University Center for Supply Chain Excellence, Buffalo State College, University at Buffalo, Canisius College), Northland Workforce Training Center, REDC Workforce Development Challenge, Erie-1 BOCES, WNY Talent Attraction and Retention Initiative, and other partners to secure grant funding.

NEAR TERM

- Work with supply chain management, logistic centers, workforce training programs, and colleges and universities to develop and promote workforce training programs geared towards the freight and logistics industry.
- Work directly with companies providing or requiring logistics services to determine the region's current and forward-looking personnel needs.
- Create logistics workforce development and career path portal for students, job seekers, and workers changing careers.

LOCATION

Buffalo Niagara Region



Source: One Region Forward



Northland Workforce Training Center Source: WBFO

AGENCY PARTNERS



- REDC Workforce Development Challenge
- Erie-1 BOCES
- WNY Talent Attraction and Retention Initiative

Advance Future UPWP Projects

May 2021

BACKGROUND/NEED

In addition to the projects already identified in the UPWP, the following interchanges/intersections that were identified during this freight planning effort as high-crash locations and corridors that were identified in the Bottleneck Analysis as experiencing congestion should be considered for future UPWP projects to study and evaluate potential improvements.

DESCRIPTION

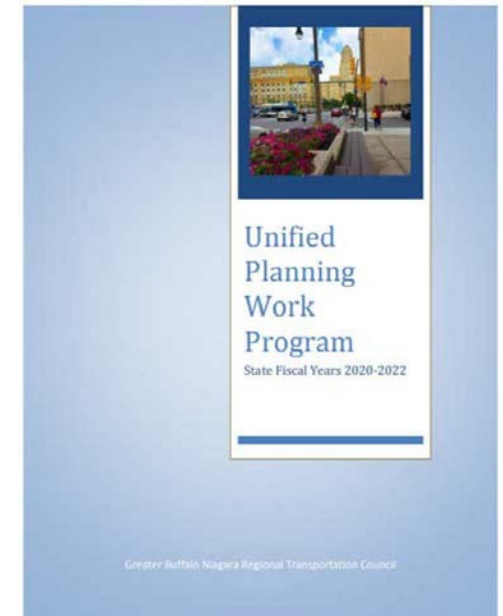
The projects on the following pages are areas that require further investigation:

1. Study I-290 Between Millersport Highway and I-90 and I-90/ I-290 Interchange
2. Study I-90 Between I-290 and I-190
3. Study I-190/ LaSalle Expressway/ Niagara Scenic Parkway/ Buffalo Avenue Interchange
4. Study I-290 Interchanges at Sheridan Drive and Millersport Highway
5. Study Walden Avenue Between I-90 and Union Road
6. Study I-190 from Elm/ Oak to Porter Avenue

IMPLEMENTATION

These projects will need to be put into future UPWP plans to fund planning and/ or analysis to refine specific strategies or projects before they can be implemented.

AGENCY PARTNERS



Cover of 2020-2022 GBNRTC UPWP

SUMMARY for each recommendation in the following pages

Study I-290 Between Millersport Highway and I-90 and I-90/ I-290 Interchange Advance Future UPWP Projects

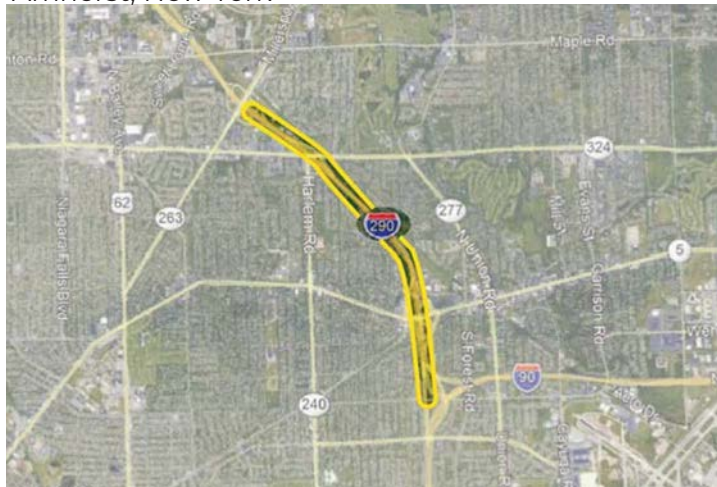
May 2021

DESCRIPTION

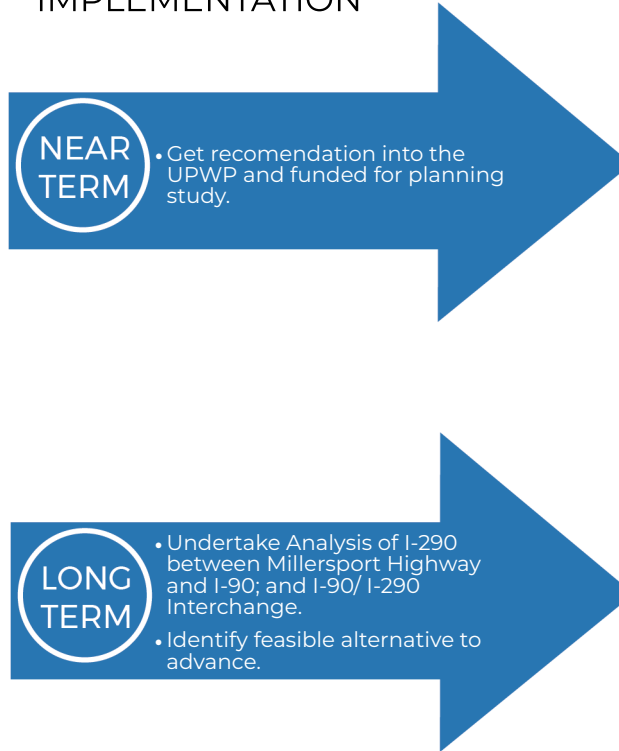
Both the eastbound and westbound sections of I-290 between I-90 and Millersport Highway have V/C ratios reaching capacity by 2045. In conjunction, the interchange of I-290 and I-90 has shown up as a key congestion point in bottleneck analysis for both the 2010 study and this study update. Studies have been undertaken on this interchange and improvements were made to eastbound I-90 approaching the interchange and on westbound I-90 between the I-90/I-290 merge and SR 33 Kensington Expressway, but the interchange still experiences congestion. Congestion on eastbound I-290 approaching the interchange routinely occurs in the AM and PM peak, often causing congestion beginning around Millersport Highway. This stretch of I-290 as well as the I-290/ I-90 interchange should be analyzed together to address one of the more congested interchanges in the region.

LOCATION

Amherst, New York



IMPLEMENTATION



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost:

\$250K

AGENCY PARTNERS



*Planning level estimate based on similar projects

Study I-90 Between I-290 and I-190 Advance Future UPWP Projects

May 2021

DESCRIPTION

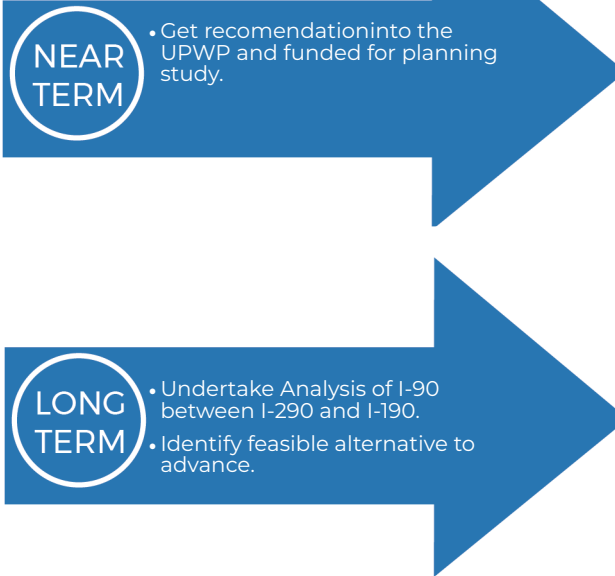
This stretch of I-90 known as the “Mainline” is identified in the Bottleneck Analysis as experiencing both recurring and non-recurring congestion by 2045. There have been several spot improvements done of the years, but the corridor still experienced congestion currently that is expected to worsen. A UPWP project should take a larger look at the corridor to identify whether additional interchange improvements or Integrated Corridor Management can address congestion or if additional capacity is needed.

LOCATION

Amherst and Cheektowaga, New York



IMPLEMENTATION



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost:

\$300K

AGENCY PARTNERS



*Planning level estimate based on similar projects

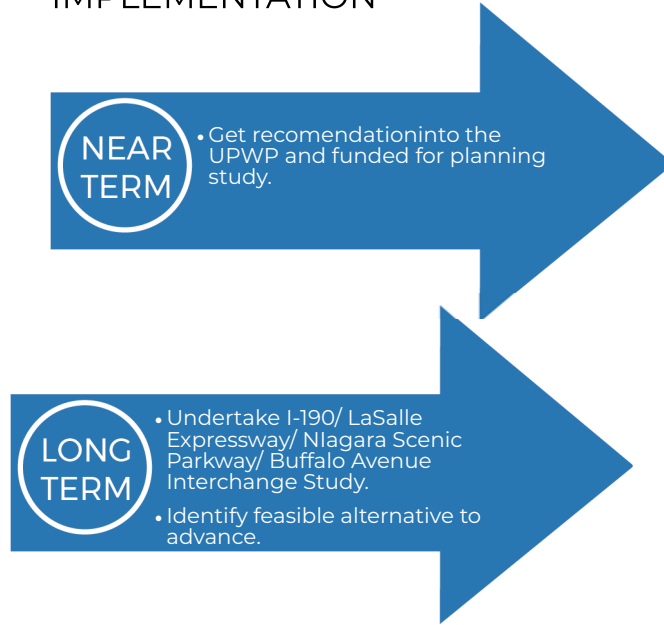
Study I-190/LaSalle Expressway/Niagara Scenic Parkway/ Buffalo Avenue Interchange Advance Future UPWP Projects

May 2021

DESCRIPTION

One of the projects identified in the Niagara Falls Transportation Management Study currently underway that should be pursued is an interchange study to assess how the I-190/ LaSalle Expressway/ Niagara Scenic Parkway/ Buffalo Avenue Interchange can be reconfigured and made more safe, navigable, and act as an attractive gateway to Niagara Falls. This could involve downgrading several roadways in the area, combining interchanges, and/or removing numerous ramps to open land for public waterfront access and development. This roadway is part of the Critical Urban Freight Corridor network.

IMPLEMENTATION



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost:

\$225K

LOCATION

Niagara Falls, New York



AGENCY PARTNERS



*Planning level estimate based on similar projects

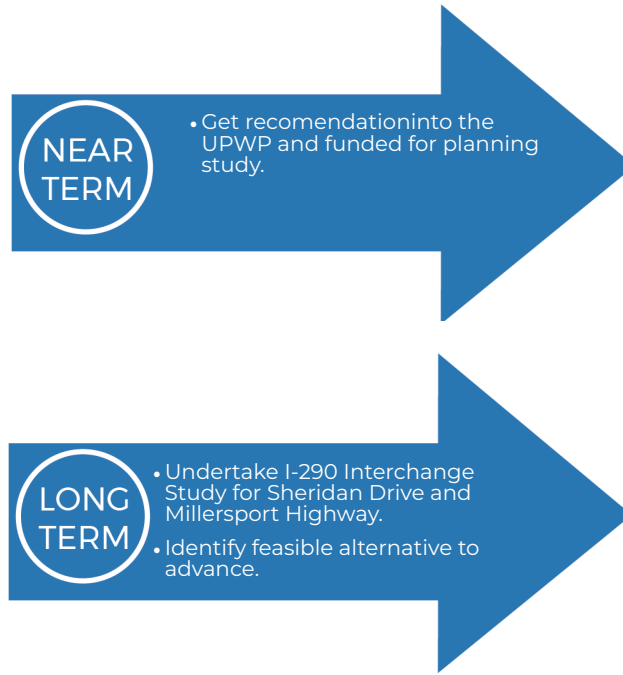
Study I-290 Interchanges at Sheridan Drive and Millersport Highway Advance Future UPWP Projects

May 2021

DESCRIPTION

Both the I-290 Interchanges at Sheridan Drive and Millersport Highway interchanges show up as high frequency crash locations in Tech Memo #1. A UPWP project should further evaluate how these interchanges can be upgraded to improve safety. This roadway is part of the Critical Urban Freight Corridor network.

IMPLEMENTATION



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost:

\$65K

LOCATION

Amherst, New York



AGENCY PARTNERS



*Planning level estimate based on similar projects

Study Walden Avenue Between I-90 and Union Road Advance Future UPWP Projects

May 2021

DESCRIPTION

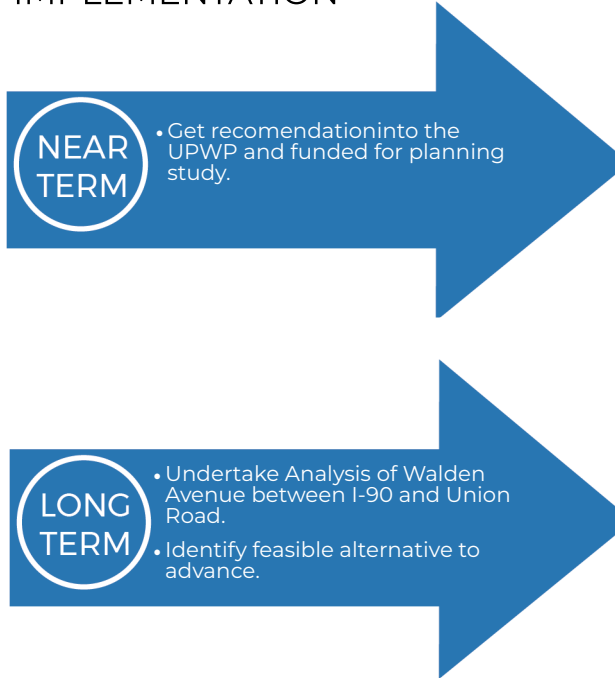
Congestion along the stretch of Walden Avenue between I-90 and Union Road is mainly caused by dense retail and numerous traffic signals in close proximity to the I-90 interchange ramps. The corridor experiences high truck usage associated with retail, a nearby truck stop, and industrial uses that are located further east and west where trucks are accessing I-90. The Walden Avenue corridor and interchange with I-90 should be analyzed for improvements, which could come in the form of short-term fixes such as traffic signal coordination; with consideration for longer-term improvements that could consist of interchange and driveway reconfigurations.

LOCATION

Cheektowaga, New York



IMPLEMENTATION



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost:

\$100K

AGENCY PARTNERS



*Planning level estimate based on similar projects

Study I-190 from Elm/ Oak to Porter Avenue Advance Future UPWP Projects

May 2021

DESCRIPTION

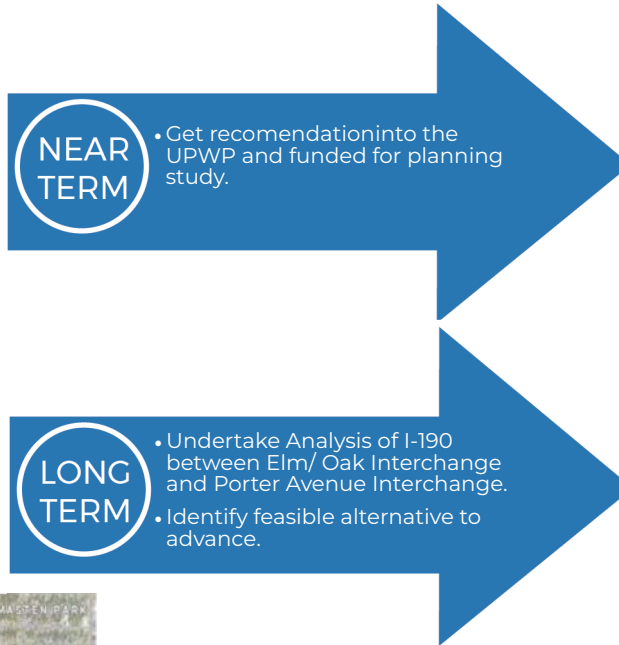
Both the northbound and southbound directions of I-190 through downtown experience volume/ capacity ratios reaching capacity by 2045, as outlined in the Bottleneck Analysis in Tech Memo #1. The corridor and associated interchanges should be analyzed for improvement to enhance safety and reduce congestions. This roadway is part of the Critical Urban Freight Corridor network.

LOCATION

Buffalo, New York



IMPLEMENTATION



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost:

\$200K

AGENCY PARTNERS



*Planning level estimate based on similar projects

Continue to Advance UPWP Projects that Support Freight Transportation

May 2021

BACKGROUND/NEED

The GBNRTC UPWP identifies several planning projects that aim to enhance safety and improve transportation for the freight and logistics industry that should be advanced in upcoming years.

LOCATION

Buffalo-Niagara Region, New York



Source: One Region Forward

DESCRIPTION

The projects on the following pages are UPWP projects that continue to be advanced.

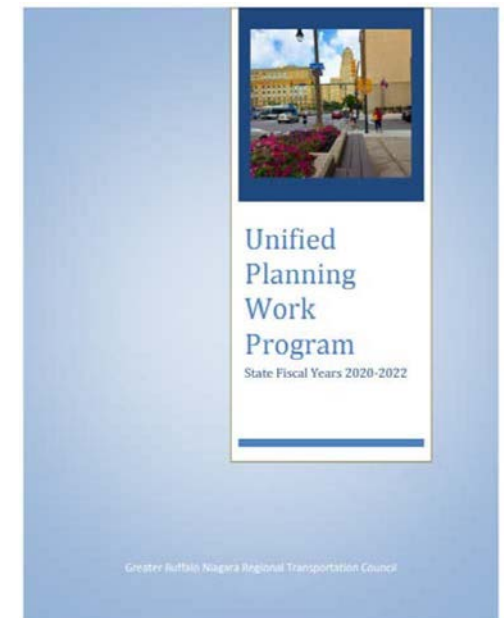
1. Conduct I-290/ Main Street Interchange Area Assessment
2. Analyze Access Improvements for I-290 Ramp to I-190
3. Analyze the Ramp Configuration on Westbound I-90 to Northbound I-190
4. Advance Analysis of I-190 Niagara/ Virginia Street Ramps
5. Develop Alternatives for Twin Cities Highway (NY Route 425) and River Road (NY Route 265)
6. Undertake Analysis of Youngs Road Interchange
7. Undertake a I-190/ Niagara Falls Boulevard Interchange Improvement Assessment

AGENCY PARTNERS



IMPLEMENTATION

These UPWP projects require additional planning and/or analysis to refine specific strategies or projects before they can be implemented.



Cover of 2020-2022 GBNRTC UPWP

SUMMARY for each recommendation in the following pages

Conduct I-290/ Main Street Interchange Area Assessment

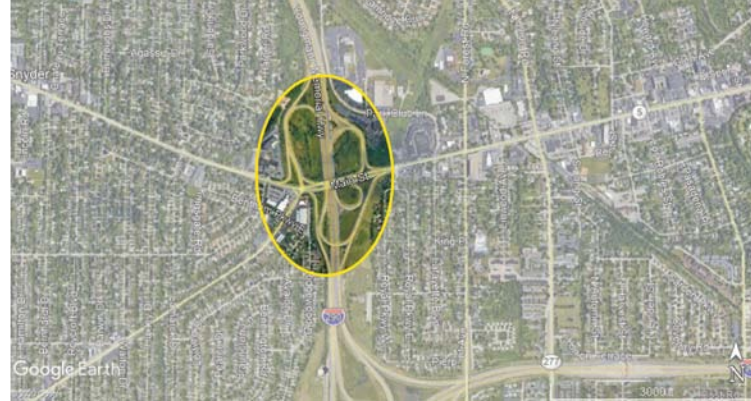
May 2021

DESCRIPTION

This has been identified as a location that needs attention to address safety improvements to reduce the number of crashes and attention to making the area safer and more walkable for pedestrians. This could include reconfiguring ramps.

LOCATION

Amherst, New York



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



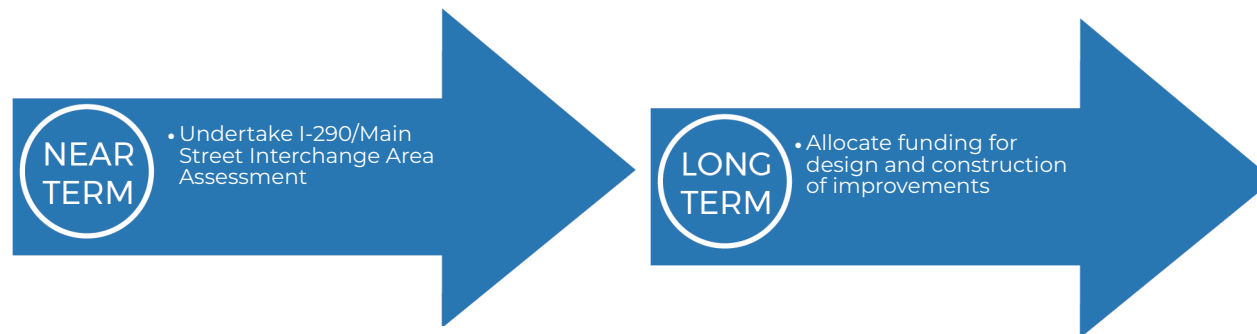
Priority:



Estimated Cost:

\$100 K

IMPLEMENTATION



AGENCY PARTNERS



*Planning level estimate based on similar projects

Analyze Access Improvements for I-290 Ramp to I-190

May 2021

DESCRIPTION

This assessment would look to reduce congestion that builds on northbound I-190 prior to the South Grand Island Bridge and improve the safety of merging vehicles onto I-190 northbound from I-290.

LOCATION

Tonawanda, New York



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:

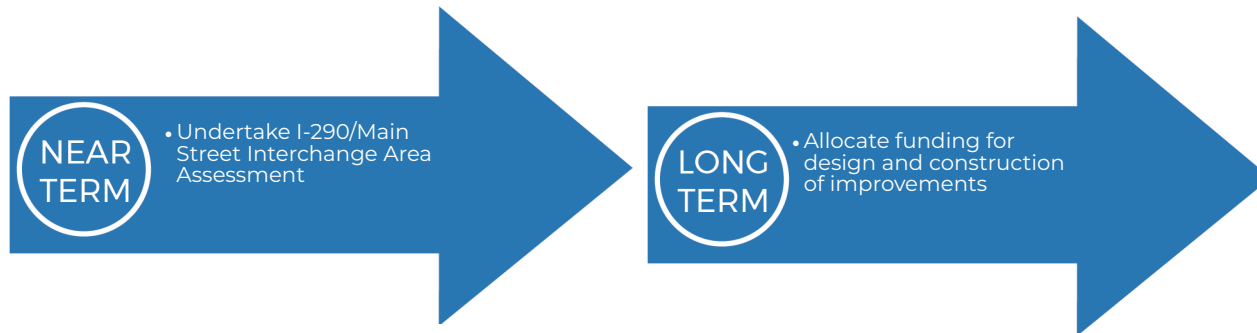


Priority:



Estimated Cost: \$65 K

IMPLEMENTATION



AGENCY PARTNERS



*Planning level estimate based on similar projects

Analyze the Ramp Configuration on Westbound I-90 to Northbound I-190

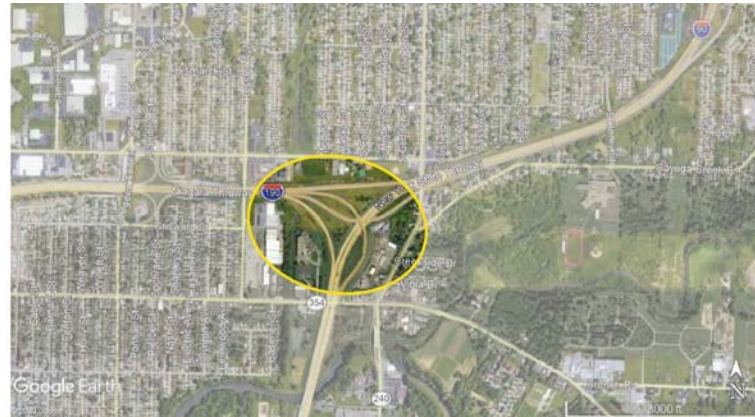
May 2021

DESCRIPTION

This assessment would look at ways to improve merging operations to reduce congestion and make the interchange safer.

LOCATION

Cheektowaga, New York



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:

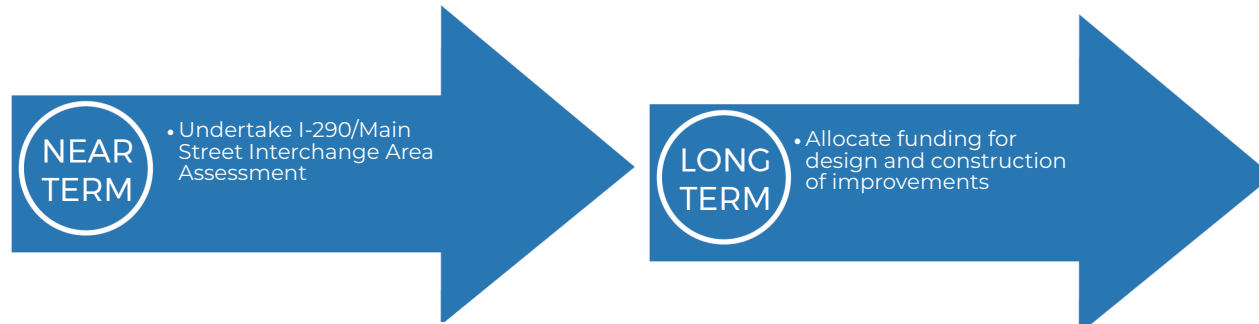


Priority:



Estimated Cost: \$65 K

IMPLEMENTATION



AGENCY PARTNERS



*Planning level estimate based on similar projects

Advance Analysis of I-190 Niagara/ Virginia Street Ramps

May 2021

DESCRIPTION

This assessment would look at ways to improve merging operations to reduce congestion and make the interchange safer.

LOCATION

Amherst, New York



IMPLEMENTATION



AGENCY PARTNERS



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost: \$300 K

*Planning level estimate based on similar projects

Develop Alternatives for Twin Cities Highway (NY Route 425) and River Road (NY Route 265)

May 2021

DESCRIPTION

Both of these corridors in North Tonawanda are utilized by truck traffic and the planning studies will look at opportunities to implement more context-appropriate roadway features and incorporate placemaking and pedestrian/ bicycle opportunities while balancing the needs of the freight and logistics industry.

LOCATION

North Tonawanda, New York



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:

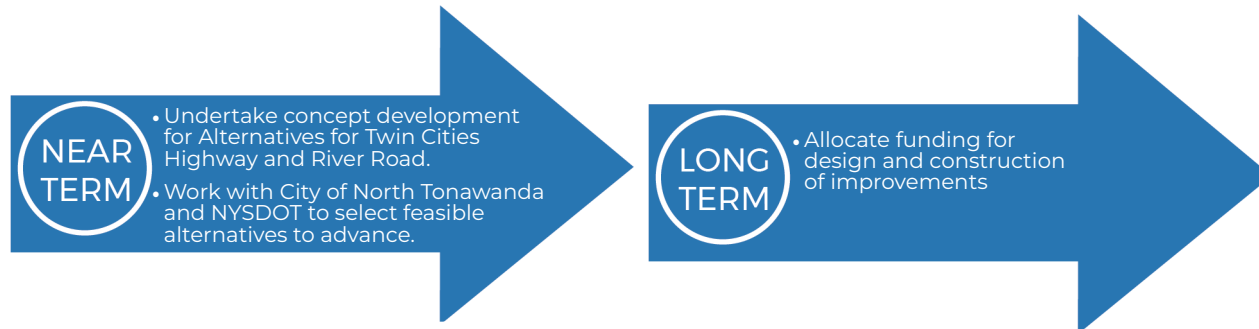


Priority:



Estimated Cost: \$150 K

IMPLEMENTATION



AGENCY PARTNERS



*Planning level estimate based on similar projects

Undertake Analysis of Youngs Road Interchange

May 2021

DESCRIPTION

This assessment would look at alternatives and feasibility of constructing a NYS Thruway Interchange at Youngs Road. This recommendation is one of ITGO's 2020 priorities and has been identified by freight stakeholders as well as elected officials and community stakeholders, as desirable to not only provide a freight and logistics benefit to support Air Cargo at Buffalo Niagara International Airport and nearby industrial, warehousing, and logistics community, but to provide a commuting benefit that would help alleviate congestion on nearby north-south roadways (Main Street and Wehrle Drive).

LOCATION

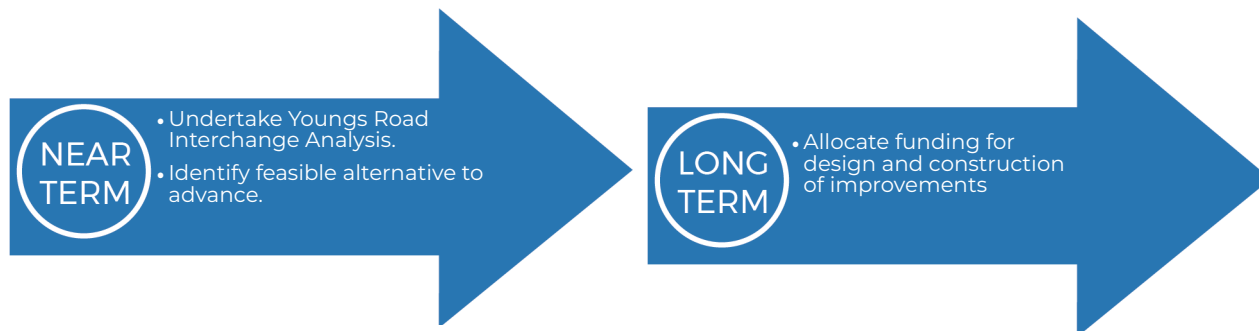
Niagara Falls, New York



AGENCY PARTNERS



IMPLEMENTATION



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost: \$200 K

*Planning level estimate based on similar projects

Undertake a I-190/ Niagara Falls Boulevard Interchange Improvement Assessment

May 2021

DESCRIPTION

With emerging freight congestion portrayed in the bottleneck analysis outlined earlier in this study, further analysis will identify recommendations for reducing congestion and improving freight flows in the area, while also enhancing other multi-modal mobility.

LOCATION Niagara Falls, NY



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:

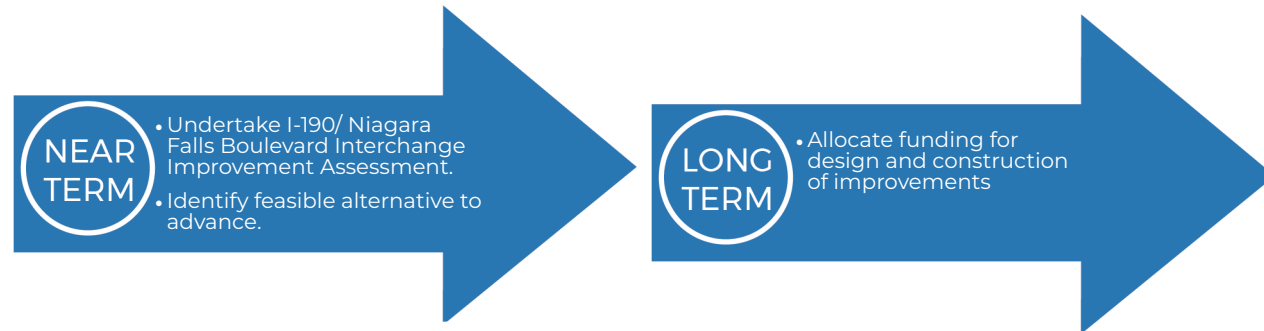


Priority:



Estimated Cost: \$150 K

IMPLEMENTATION



AGENCY PARTNERS



*Planning level estimate based on similar projects

Study Ganson Street Area Plan

May 2021

BACKGROUND/NEED

Numerous stakeholders throughout this study update process indicated that continuously conflicting land uses in former exclusive industrial areas are raising access, safety, and quality of life issues for the users of those areas. As an example, the increase in entertainment, restaurant, and residential uses in the Ganson Street area have been raised as increasing conflicts between industrial uses and the users of those non-industrial users.

DESCRIPTION

A small area plan for Ganson Street would identify a strategy to allow industrial and non-industrial uses to operate in sync. This plan will with focus on access (rail, truck, bicycle, pedestrian), safety (conflicts between pedestrians and customer vehicles and rail and truck), and quality of life issues (noise, night operations, etc.)

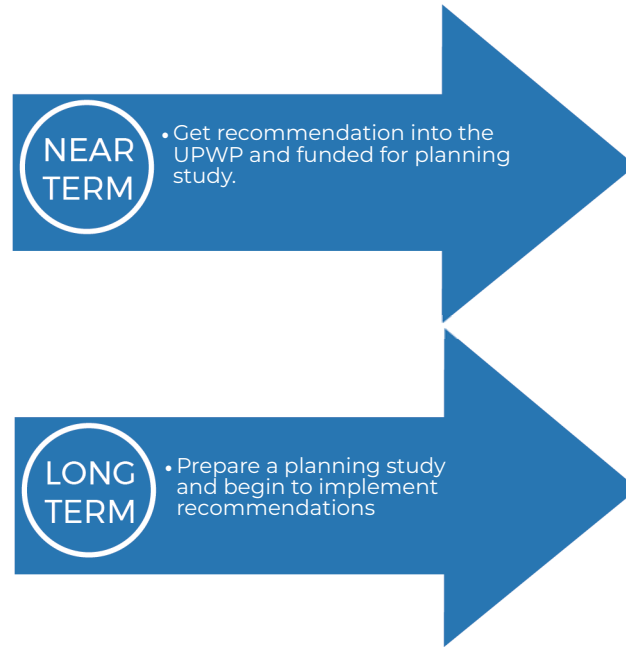
LOCATION

Buffalo, New York



IMPLEMENTATION

The findings from this study could be transferable to implementing strategies in other areas of the region experiencing a transition from industrial to mixed uses so that the various uses can continue to exist with minimal conflict.



PROJECT SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost:

\$75 K

AGENCY PARTNERS



*Planning level estimate based on similar projects

Study Rail Spur to Future WNY Agribusiness Park

May 2021

BACKGROUND/NEED

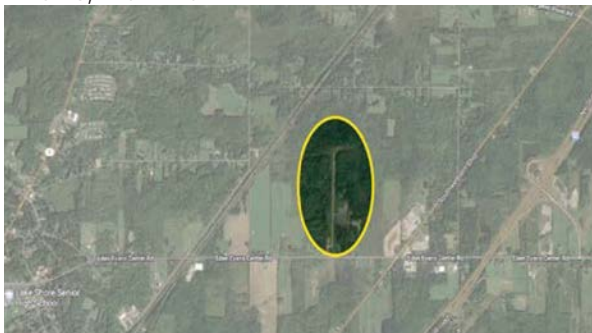
The Buffalo and Erie County Industrial Land Development Corporation (a member of ECIDA) is currently in the process of developing a Master Plan and General Environmental Impact Statement (GEIS) for a new agribusiness park located on the site of the former Eden Angola Airport in the Town of Evans. While the Master Plan and GEIS will study the feasibility of constructing the park, including needed utilities, transportation, stormwater, parcel size, and site amenities, it does not go as far as including a market assessment and feasibility of constructing a rail spur into the site to provide rail access.

DESCRIPTION

The agribusiness sector has indicated that rail usage for agricultural products is feasible in other agribusiness parks and would be a benefit to this park. As a follow up to the Master Plan and GEIS, a market and feasibility study should be undertaken to determine the feasibility of constructing a rail spur to the park, identify if construction of a rail spur into the site would provide a positive cost/benefit to filling the park, and estimating the cost and process for constructing such a rail spur would be.

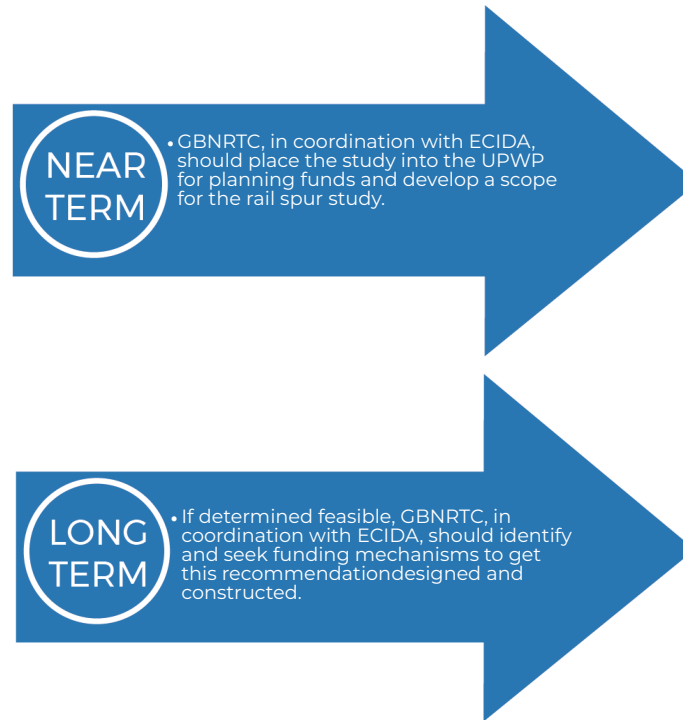
LOCATION

Evans, New York



Buffalo-Niagara Regional Freight Plan

IMPLEMENTATION



AGENCY PARTNERS



SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost:

\$150 K

*Planning level estimate based on similar projects

Study of Multi-Agency Enhanced Freight Corridors

May 2021

BACKGROUND/NEED

The FHWA Freight Flow Analysis conducted as part of this study portrays a large volume of truck traffic currently traveling between the region and the New York City Metro Area (PANYNJ) that uses U.S. 20, U.S. 20A, or NYS Route 63 to bypass the I-90 New York State Thruway to get to/ come from I-390 near Mount Morris. While the FHWA FAF indicates the growth in freight through 2045 between the Buffalo-Niagara region and New York City Metro Area shifting from truck to more rail and intermodal freight, truck traffic is expected to increase for freight coming through the region from New York City Metro Area to Southern Ontario. Further, until rail and intermodal infrastructure is able to support this growth in freight volume, trucks may be asked to handle a larger volume of freight between the regions in the meantime. With future freight flows increasing, there should also be a commitment to long-term I-390 and I-86 State of Good Repair to accommodate truck traffic. According to the Volume/Capacity analysis conducted as part of this study, capacity expansion isn't shown to be needed through 2045, as V/C ratios continue to remain acceptable.

DESCRIPTION

A larger multi-agency study is needed to assess freight movement between the Buffalo-Niagara region and the New York City Metro Area. This multi-agency study is needed to understand the larger issues of why trucks are diverting from I-390 and NYS Thruway and using surface streets through Livingston, Wyoming, and Genesee Counties, the effects of cashless tolling on the NYS Thruway, and to what extent these alternative routes need upgrades or by-passes to accommodate increasing truck traffic and to minimize impacts on local communities.

SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost:

\$175 K

*Planning level estimate based on similar projects

Study of Multi-Agency Enhanced Freight Corridors

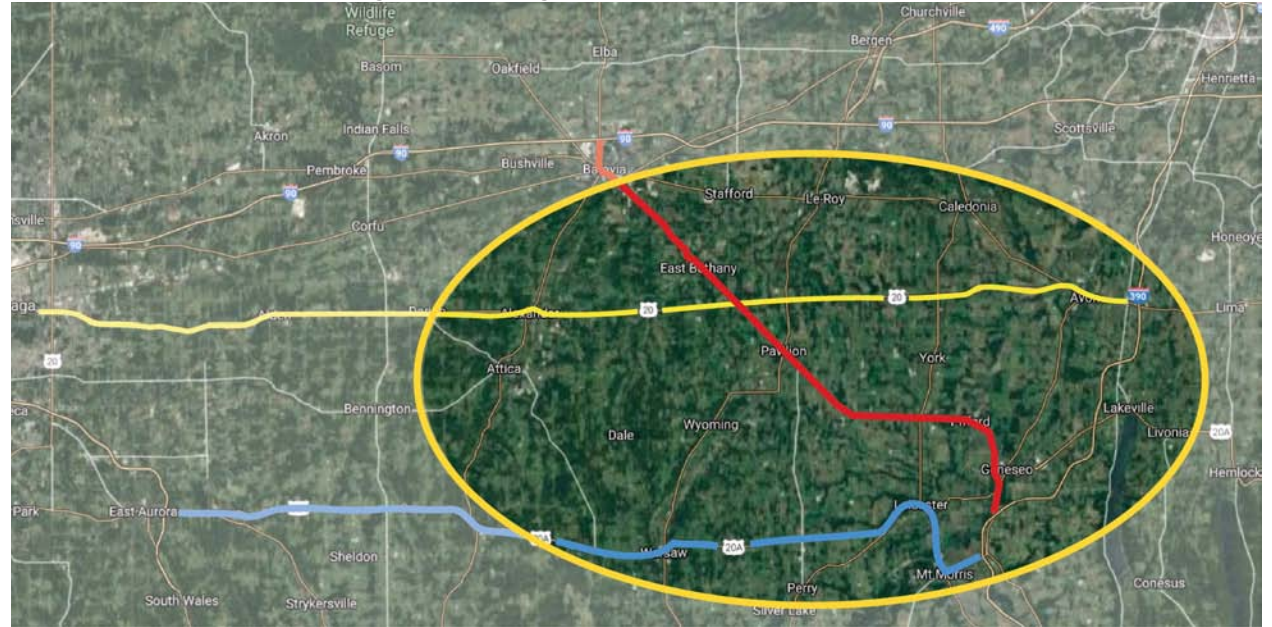
May 2021

IMPLEMENTATION

GBNRTC should coordinate a multi-agency planning study with NYSDOT and Genesee Transportation Council (GTC) and involve the trucking industry for this planning study.

LOCATION

Western New York and Finger Lakes regions



NEAR TERM

- Get recommendation into the UPWP and funded for planning study.

LONG TERM

- Undertake study

AGENCY PARTNERS



Develop Curbside Management and Autonomous Delivery/ Micro-Delivery Policies and Procedures

May 2021

BACKGROUND/NEED

As supply chains continue to evolve, new delivery techniques will likely emerge in the form of autonomous delivery vehicles and micro-delivery vehicles, or delivery bots. The changing supply chains will mean an increase in delivery vehicles in urban areas specifically on neighborhood streets.

DESCRIPTION

This brings to light the importance of curbside management that both allows businesses to load delivery vehicles to ship their products directly to consumers and to allow delivery vehicles to access consumer homes. The projects on the following pages are strategies that ready the region for such technologies and advancements in the freight and logistics industry.

ELEMENTS

- 1 Develop Curbside Management Policies
- 2 Create Autonomous Delivery and Micro-Delivery Vehicle Policies

IMPLEMENTATION

While much of the autonomous and micro-delivery policies and regulations would come from federal agencies or New York State, GBNRTC should be a liaison to local municipalities in getting policies and regulations regarding curbside management and autonomous and micro-delivery vehicles into their codes that are consistent with federal and state policies and regulations, and with industry best practices. It will be beneficial to the freight and logistics industry to have consistency across jurisdictional boundaries. Being proactive regarding new technologies and advancements in freight and logistics will ready communities for the deployment of these technologies rather than waiting for the private sector to force technology on a community (similar to how e-scooters were brought on the scene without policies or procedures in place).

These projects will need to be put into future UPWP plans to fund planning and/or analysis to work with local municipalities to refine specific strategies that can be implemented. The current UPWP already identifies providing support to the City of Buffalo to develop a flexible curb space framework, additional support should go towards other urbanized communities.

SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost: \$80 K both projects

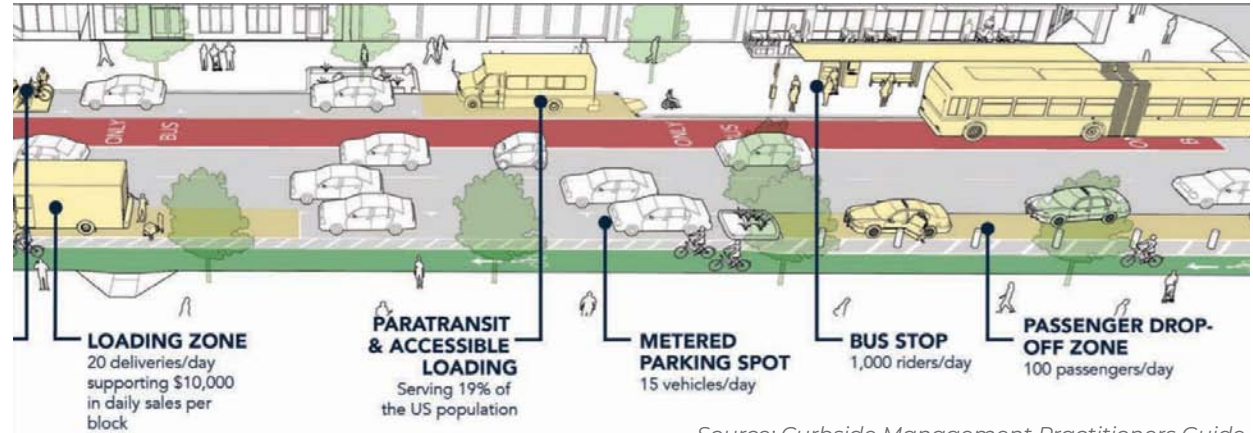
*Planning level estimate based on similar projects

Develop Curbside Management Policies

May 2021

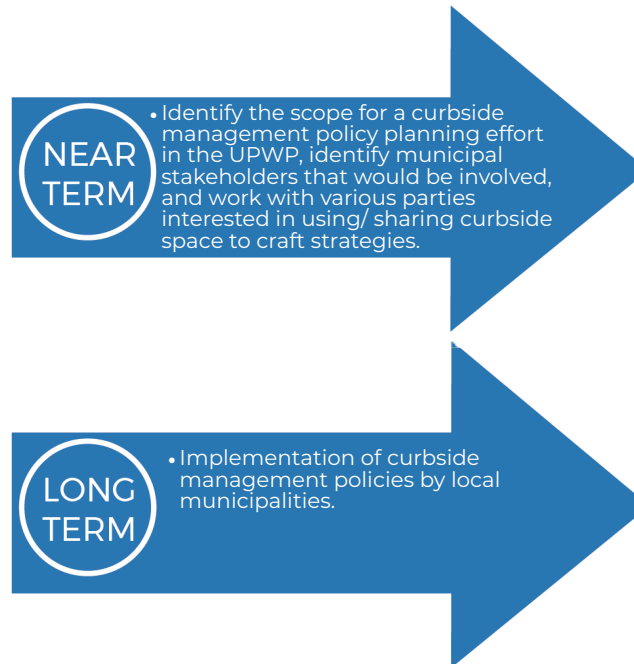
DESCRIPTION

Curbside management policies would be aimed at removing static use of roadway curbsides and transitioning to dynamic use that reflects the demand for curbside space during different times of the day, week, and/or year, recognizing the need to share curbside space with delivery vehicles. The ideal curbside management strategy would involve the use of smart mobility technology that could work in a connected environment with vehicles to relay real-time information about what curbside usage is permitted and where. For instance, a delivery vehicle pulling up to a curb looking to pick up or make a delivery would be alerted as to whether the curb use is active for deliveries or not and can potentially be reserved by said delivery vehicle ahead of time. This technique is similar to real-time parking management strategies used by cities to assist commuters and visitors find parking, only this approach is directed at the freight and logistics industry.



Source: Curbside Management Practitioners Guide, Institute of Transportation Engineers (ITE)

IMPLEMENTATION



LOCATION

Buffalo-Niagara Region, New York



Source: One Region Forward

Create Autonomous Delivery and Micro-Delivery Vehicle Policies

May 2021

DESCRIPTION

Autonomous delivery vehicles are driverless vehicles that pick-up products from source locations (businesses, warehouses, manufactures, etc.) and deliver them to consumers. Micro-delivery techniques reflect the use of non-traditional delivery devices, such as delivery robots and drones that make deliveries directly to consumers, and could be used in connection with a larger delivery vehicles that arrives in a neighborhood and then sets a smaller bot or drone to make the final product delivery to the consumer’s door.

These technologies may also necessitate the need for communal neighborhood drop-off/pick-up zones that residents can use, like a mini P.O. box. This would allow delivery vehicles, robots, and drones to make one stop at a communal location rather than multiple trips throughout a neighborhood. Policies on how these vehicles/ devices may operate on and across streets and sidewalks and where they may “park” will need development. Policies on the operation of package drones similarly need development; for example, should they be restricted to flight paths over existing rights of way, where can they land, and what protections are needed should packages come loose and fall from overhead.

AGENCY PARTNERS



LOCATION

Buffalo-Niagara Region, New York

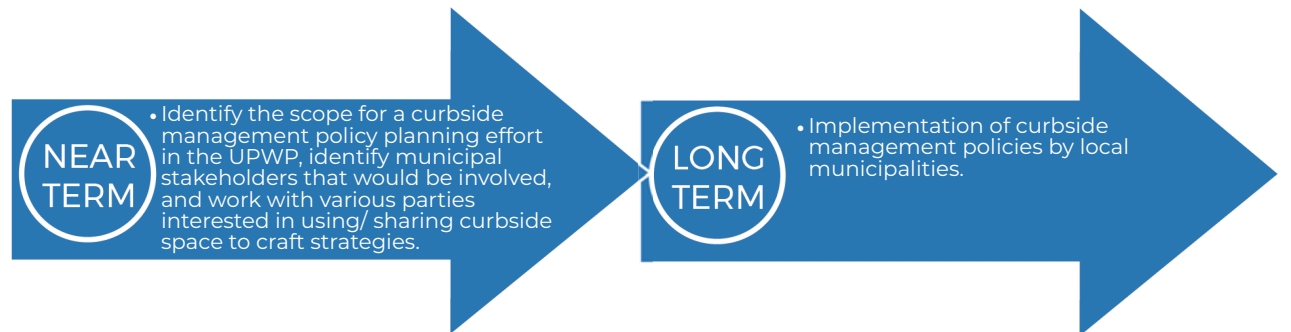


Source: One Region Forward



Examples of Autonomous Delivery Vehicles. Source: Tech TV

IMPLEMENTATION



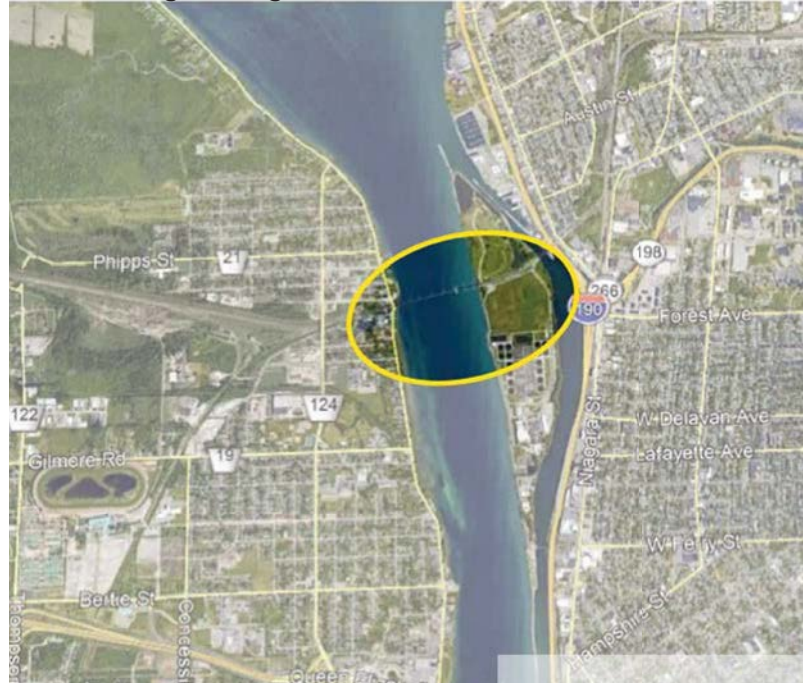
Upgrade International Rail Bridge to State-of-Good-Repair

May 2021

DESCRIPTION

The International Railroad Bridge is the only bridge currently being used for cross-border rail traffic. It is owned by the Canadian National (CN) Railway, which operates train to connect with CSX and NS Yards in the Buffalo-Niagara region. The International Rail Bridge has been identified in documents as needing repairs and improvements, including foundation upgrades, in order to maintain and extend its useful life. While this bridge is owned by a railroad company, it will likely require a bi-national, multi-agency collaboration effort to address improvements, to which this coordination effort should begin soon. If rail rerouting is needed, upgrades would be needed to the Whirlpool Rapids Bridge (see following project).

LOCATION Buffalo-Niagara Region

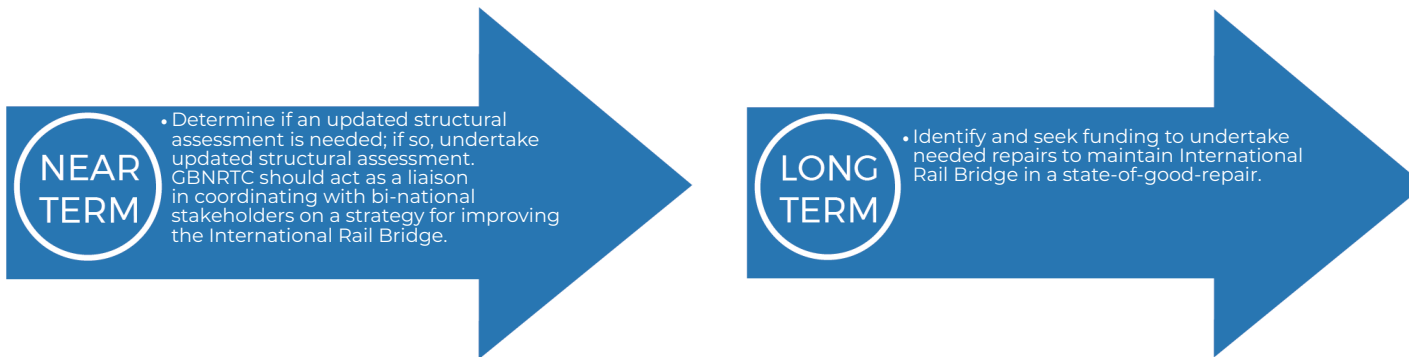


International Rail Bridge

AGENCY PARTNERS



IMPLEMENTATION



Assess Whirlpool Rapids Bridge Improvements

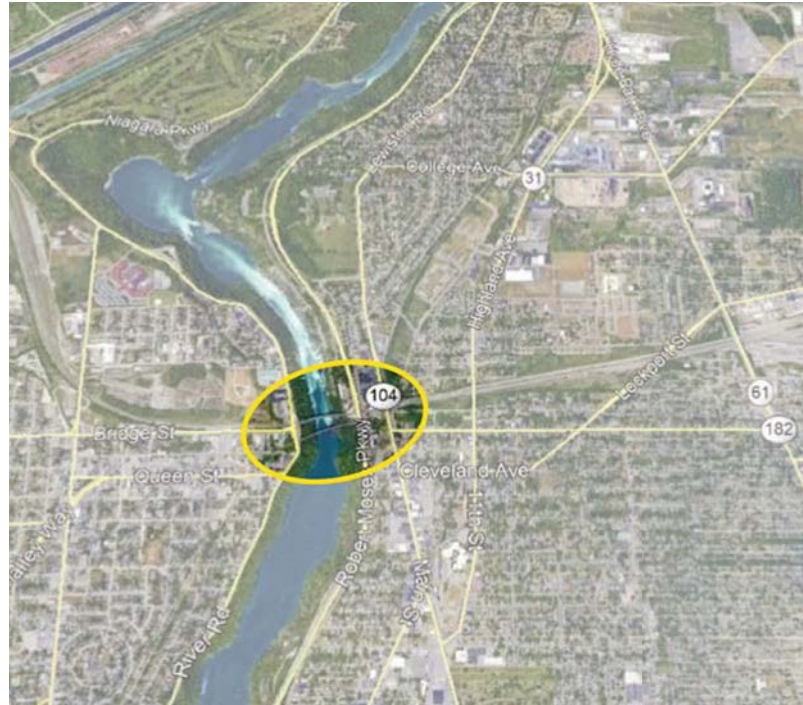
May 2021

DESCRIPTION

The Whirlpool Rapids Bridge is located on the upper portion of the bridge (with vehicular traffic on the lower portion). The rail bridge is down to a single track that runs down the center of the bridge. The bridge is used by Amtrak for its Maple Leaf Service to Toronto and is currently not used for freight rail traffic. Currently, Amtrak trains operate on the bridge at 5mph as a precautionary measure to reduce the vibration impact on the bridge. The Niagara Falls Bridge Commission will soon begin a load rating assessment on the Whirlpool Bridge that may offer additional insight into needed repairs for the bridge if the bridge were to be used for freight rail again, even temporarily to offer a detour route should the International Bridge need to be closed for repairs or reconstruction. Regarding the rail portion of the bridge, there is dispute as to who has maintenance responsibility for improvements, which will need to be resolved.

LOCATION

Niagara Falls, New York



Whirlpool Rapids Bridge

AGENCY PARTNERS



IMPLEMENTATION



Collaborate with the Port of Buffalo on New Market Business Planning

May 2021

BACKGROUND/NEED

The Port of Buffalo is a privately-owned port and has a new general manager that is interested in expanding business opportunities but is not familiar with public-private partnerships related to transportation funding. The 2010 study recommended pursuing a roll-on/roll-off (Ro/Ro) service, which allows trailers used in over-the-road transport to be loaded onto or off of a cargo ship between Buffalo and Detroit and containerized service between Buffalo and either Halifax or Montreal. Further, the Port of Buffalo indicated a need for infrastructure upgrades at the site, including upgrading the lighting system, installing new scales, power upgrades, improvements to the conveyor systems, and installation of break bulk lifting to allow for handling of ship containers.



Port of Buffalo, Source: New Enterprise Stone & Lime Co.

DESCRIPTION

Before any Ro/Ro service is pursued, a more detailed New Market Business Plan should be initiated by the Port of Buffalo, with assistance from the region's interest public and private sectors, to identify if new markets are feasible for the Port and to identify what upgrades to the Port are needed prior to pursuing.

For context, the Port of Cleveland is currently developing a similar Business Plan to establish new container feeder service linking the Port of Cleveland with the Port of Montreal, and potentially other ports on the St. Lawrence Seaway. The Business Plan, under development as of the preparation of this update, indicates a potential for the Port of Cleveland to operate feeder service to allow for international container shipments bound for east coast ports to be brought inland via feeder service and then loaded to rail or truck for final delivery to the Midwest. The Business Plan also indicates that there may be cost savings in shipments due to port congestion, however, a major constraint to this being feasible are the expansions at PANYNJ and Port of Montreal underway that will expand rail lift capacity to allow container to rail service, which is more cost effective than container feeder service. Further, short sea shipments are subject to Harbor Maintenance Taxes, which are not imposed on shipments made by rail or truck, further hindering the financial feasibility.

SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost:

\$350 K

*Planning level estimate based on similar projects

Collaborate with the Port of Buffalo on New Market Business Planning

May 2021

IMPLEMENTATION

LOCATION Lakawanna, New York

NEAR TERM

- GBNRTC should initiate a kick-off with the Port of Buffalo general manager to introduce them to the Metropolitan Planning process, identify opportunities to collaborate on efforts and funding, and to further scope a new market

LONG TERM

- GBNRTC should work with project partners to identify and seek funding opportunities to implement strategies related to the new market business plan.



AGENCY PARTNERS



Develop Buffalo Logistics Complex

Lakeside Commerce Park Cross-Docking Facilities

May 2021

BACKGROUND/NEED

The creation of the International Trade Gateway Organization (ITGO), as recommended in the 2010 Niagara Frontier Urban Area Freight Transportation Study, was an essential step in fostering an improved environment for the freight and logistics industry in the Buffalo-Niagara region.

ITGO has established a strategic relationship under a Memorandum of Understanding (MOU) with the Port Authority of New York/ New Jersey (PANYNJ) to promote the Buffalo-Niagara region as a “strategic international gateway”, creating a relationship based on joint marketing and sharing of resources and data.

DESCRIPTION

The strategic partnership with PANYNJ should continue and, with the anticipated increase in freight trade between the region and PANYNJ expected to increase by 1.6 million tons by 2045, support for the construction of the Buffalo Logistics Complex Cross-Docking Facility should be prioritized.

Therefore, while construction of the Buffalo Logistics Complex Cross-Docking Facility is still a priority, in the near-term, a new site must be identified. Once a new site is identified, the facility should be advanced in the form of securing new development partners, identifying funding and financing opportunities and/or public-private partnerships, and undertaking infrastructure enhancements. The estimated overall cost of the facility when it was to be located at Buffalo Lakeside Commerce Park was \$20.75 million, so similar expenses can be anticipated at another site. The recommendation has the support of the freight and logistics community as well as the agribusiness industry.

SUMMARY

Goals Met:

Federal FAST Act



NYS Freight Plan



WNY REDC Strategic Plan



GBNRTC Moving Forward 2050



Freight Modes Benefited:



Priority:



Estimated Cost: \$20.75M
(includes \$1.5M for rail spur)

*Planning level estimate based on similar projects

Develop Buffalo Logistics Complex

Lakeside Commerce Park Cross-Docking Facilities

May 2021

IMPLEMENTATION

In conformance with ITGO's 2020 priorities, the region should continue to strengthen and enhance ITGO's relationship with PANYNJ through the MOU, while raising the profile of the connection with the WNY state delegation, WNY REDC, and the Governor's office, collaborating with PANYNJ on interaction with both rail lines and ocean carriers, and strengthening relationships with additional contacts at PANYNJ to prepare for upcoming retirements.

With the anticipated increase in freight trade between the region and PANYNJ expected to increase by 1.6 million tons by 2045, support for the construction Buffalo Logistics Complex should be prioritized. This includes support for the construction of a transloading facility at Lakeside Commerce Park in the form of funding and financing opportunities, public-private partnerships, and infrastructure enhancements. Infrastructure needed at the site includes construction of a rail siding, transloading docks, and warehousing facility. It is important to note that a federal INFRA grant proposal will need a sponsor an applicant who can administer the project and organize a(20-40%) non-federal match.

LOCATION

A site at the Lakeside Commerce Park was previously identified and a developer partner announced, however, as of late 2020, the developer has since dropped plans for a Cross-Docking Facility for a solar energy facility due to subsurface contamination of the site. A new site will need to be identified.

AGENCY PARTNERS



NEAR TERM

- Strengthen Relationship with PANYNJ
- Identify new site and new development partners for Buffalo Logistics Complex Cross-Docking Facility
- Work with WNY delegation to support project

LONG TERM

- Apply for funding to leverage development.
- Work with railroads to bring needed improvements to rail yard/spur.

Goals Consistent with

Federal FAST Act

NYS Freight Plan
















WNY REDC Strategic Plan

GBNRTC Moving Forward 2050

Strategy or Project

Mode NYSDOT FCHNS F1 F2 F3 F4 F5 F6 F7 S1 S2 S3 S4 S5 S6 R1 R2 R3 R4 R5 R6 R7 R8 R9 R10 R11 R12 R13 R14 R15 R16 G1 G2 G3 G4 G5 G6 G7 G8 G9

Improve Bethlehem Steel Advanced Manufacturing Infrastructure 

Strategy or Project	Mode	NYSDOT FCHNS	F1	F2	F3	F4	F5	F6	F7	S1	S2	S3	S4	S5	S6	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	G1	G2	G3	G4	G5	G6	G7	G8	G9	
Improve Northern Access		NO	●	●	○	○	○	○	○	●	○	○	○	○	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	○	●	○	○	○	○	○
Improve Southern Access		NO	●	●	○	○	○	○	○	●	○	○	○	○	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	○	●	○	○	○	○	○
Improve Additional Access		NO	●	●	○	○	○	○	○	●	○	○	○	○	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	○	●	○	○	○	○	○
Improve Route 5/ Ridge Road Interchange		NO	●	●	●	○	●	○	○	●	○	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	○	●	○	○	○	○	○	
Repair Niagara County Rural Bridges Improvements																																									
Repair Carmen Road over Golden Hill Creek		NO	●	●	●	○	○	○	○	●	○	●	●	●	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	○	○	○	○	○	○	○	
Repair Johnson Creek Road over Golden Hill Creek		NO	●	●	●	○	○	○	○	●	○	●	●	●	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	○	○	○	○	○	○	○	
Repair Gasport Road over Eighteen Mile Creek		NO	●	●	●	○	○	○	○	●	○	●	●	●	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	○	○	○	○	○	○	○	
Repair Hartland Road over Golden Hill Creek		NO	●	●	●	○	○	○	○	●	○	●	●	●	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	○	○	○	○	○	○	○	
Repair Royalton Center over Mud Creek		NO	●	●	●	○	○	○	○	●	○	●	●	●	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	○	○	○	○	○	○	○	
Repair Ditch Road over Black Creek		NO	●	●	●	○	○	○	○	●	○	●	●	●	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	○	○	○	○	○	○	○	
Repair West Somerset Road over Fish Creek		NO	●	●	●	○	○	○	○	●	○	●	●	●	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	○	○	○	○	○	○	○	
Repair Carmen Road over Johnson Creek		NO	●	●	●	○	○	○	○	●	○	●	●	●	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	○	○	○	○	○	○	○	
Repair Ewings Road over Eighteen Mile		NO	●	●	●	○	○	○	○	●	○	●	●	●	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	○	○	○	○	○	○	○	
Support Skyway Alternatives that Accommodate Freight & Logistics Industry		NO	●	●	○	●	●	○	●	●	●	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	○	●	●	●	●	○	●		

Goals Consistent with

Federal FAST Act

NYS Freight Plan

WNY REDC Strategic Plan

GBNRTC Moving Forward 2050

Strategy or Project	Mode	NYS DOT FCHNS	F1	F2	F3	F4	F5	F6	F7	S1	S2	S3	S4	S5	S6	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	G1	G2	G3	G4	G5	G6	G7	G8	G9	
Widen Transit Road Between Walden Avenue and Gould Avenue		NO	●	●	○	○	○	○	○	●	○	●	●	○	○	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	○	●	○	○	○	●	○
Construct River Road Roundabout at Riverview Drive		NO	●	●	○	○	○	○	○	●	○	●	●	○	○	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	○	●	○	○	○	○	○
Study Rail Spur to WNY Agribusiness Park		NA	●	●	○	○	○	○	●	●	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	○	○	○	○	○	○	○	
Initiate Long-Term Planning for International Rail Crossings																																									
Upgrade to International Rail Bridge to State-of-Good-Repair		NA	●	●	●	○	○	○	●	●	●	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	○	○	○	○	○	○	○	
Assess Whirlpool Rapids Bridge Improvements		NA	●	●	●	○	○	○	●	●	●	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	○	○	○	○	○	○	○	
Upgrade Depew, Lancaster & Western (DL&W) Railroad Line Upgrades																																									
Improve Driveway Access to/from the DL&W Transload Facility		NA	●	●	○	○	○	○	●	●	●	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	○	●	○	○	○	○	○	
Extend Engine House Track		NA	●	●	○	○	○	○	●	●	●	●	●	●	○	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	○	○	○	○	○	○	○	
Improve the DL&W Interchange with Norfolk Southern		NA	●	●	○	○	○	○	●	●	●	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	○	●	○	○	○	○	○	
Replace Structurally Deteriorating Bridge		NA	●	●	○	○	○	○	○	●	●	●	●	●	○	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	○	○	○	○	○	○	○	
Improve Buffalo Southern Railroad (BSOR) Line 1246																																									
Improve Bridge MP 13.94 over North Branch Eighteen Mile Creek		NA	●	●	○	○	○	○	○	●	●	●	●	●	○	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	○	●	○	○	○	○	○	
Improve Bridge MP 15.85 over South Branch Eighteen Mile Creek		NA	●	●	○	○	○	○	○	●	●	●	●	●	○	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	○	●	○	○	○	○	○	

