

# Lackawanna Toll Barrier Relocation Study

## EXECUTIVE SUMMARY



Lackawanna Toll Barrier – Milepost 430.5 NYS Thruway

### **Genesis of the Study:**

Interest has been expressed by local officials for a study to assess the impacts of moving the Lackawanna Toll Barrier westward to some point outside of the primary metropolitan commuting area, as it exists today. As a background, several diverse issues have been raised by officials, including topics such as:

- Tolling on the Thruway in general, and specifically perceived regional benefits from toll-free passage within the metropolitan area.
- Equity within the region, especially regarding which areas of the metropolitan area pay tolls.
- Possibility of toll free access to the Thruway diverting traffic from roads such as Route 5 and Route 20 in the Southtowns.

- Toll free access providing a spur to economic development in the Town of Hamburg.
- Potential to open up land for development that is currently inaccessible due to access management concerns and configuration of the interchange at Exit 57 in Hamburg.

The intent of this study is specifically to study the traffic and public finance ramifications that would occur if the Lackawanna Toll Barrier is to be relocated.

The Greater Buffalo-Niagara Regional Transportation Council (GBNRTC) was approached to conduct the study. GBNRTC is a federally funded, independent regional transportation planning group, with members including the major cities, counties, and transportation agencies in the Buffalo-Niagara Region. The item was included in the Council's work program, with GBNRTC providing the traffic impacts of relocating the Lackawanna Toll Barrier and The New York State Thruway Authority (NYSTA) using the traffic data to subsequently study revenue impacts of the action. At the time, GBNRTC was developing a new model to simulate future traffic in the metropolitan area. The model was later validated by state and federal agencies, providing a single, agreed on, methodology for studying traffic impacts from any proposed plan, project or action in the region.

### **Limitations Imposed by Thruway Authority Bond Resolution**

The New York State Thruway Authority's Bond Resolution prohibits removing tolls from a currently tolled section of the Thruway. With the consent of a majority of the Authority's bondholders the restriction against free passage could be modified. Any amendment would require that a determination to allow an exception at a particular location be based on projections that there would be no net material decrease in Authority revenues.

### **Primary Scenarios Studied:**

In fulfilling the objectives of the work program to study traffic impacts of relocating the Lackawanna Toll Barrier, two separate scenarios were prepared. Figure A shows a location map highlighting the Erie Section of the New York State Thruway, the existing Lackawanna Toll Barrier, and the proposed generalized locations of the Barrier under Scenarios 1 and 2.

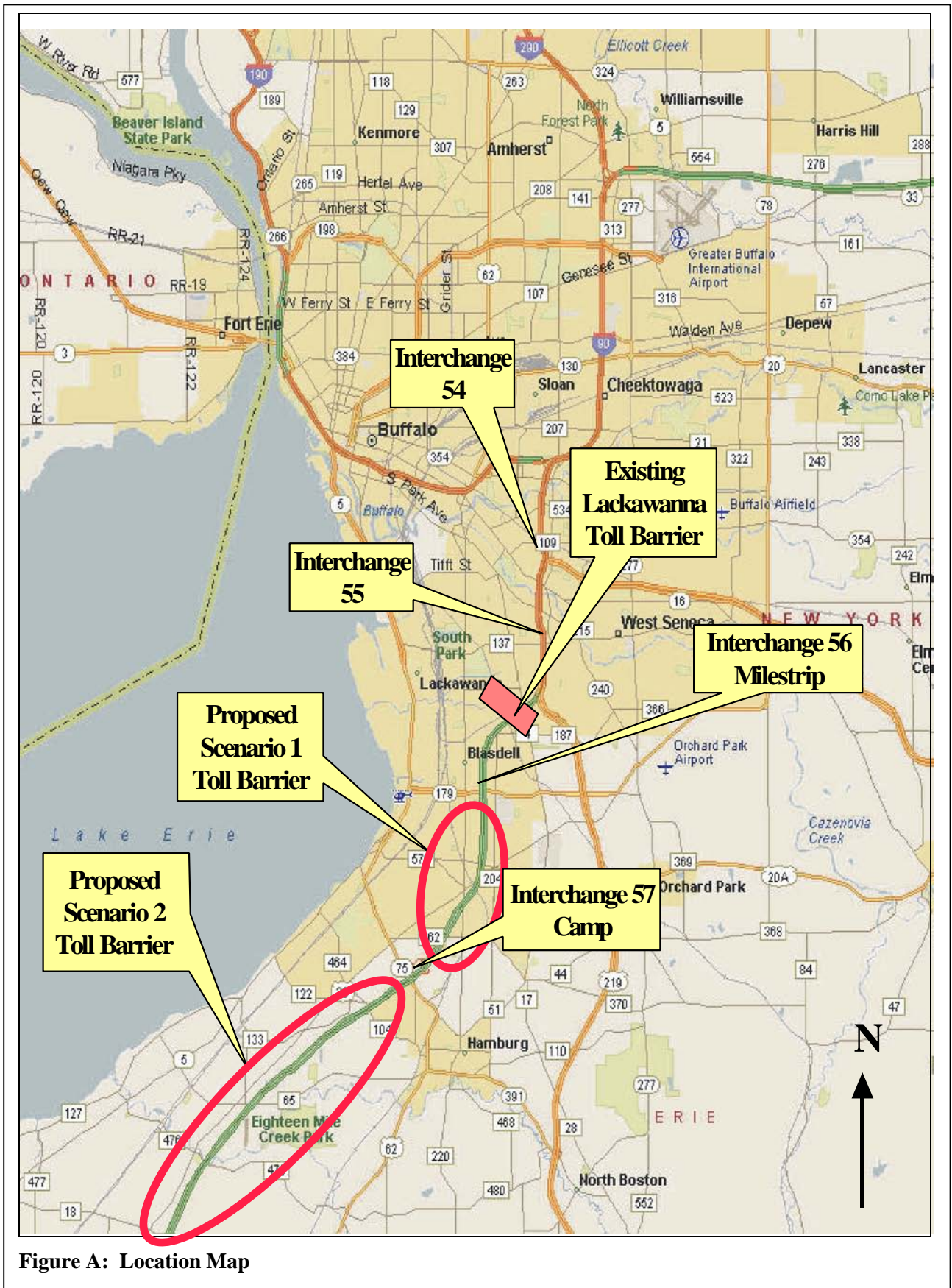


Figure A: Location Map

The scenarios include:

- Scenario 1 - Relocation of the existing Lackawanna barrier to a location between Exit 56 (Milestrip Road) and Exit 57 (Camp Road) on I-90. The result of this move is to expand the “toll free” section of the Thruway, meaning that a patron can drive from the new barrier to the Williamsville Toll Barrier without paying a toll.
- Scenario 2 - Relocation of the existing Lackawanna barrier to a new location somewhere west of Exit 57 at a point between Exit 57 (Camp Road) and Exit 57A (Eden Angola) on I-90. The result of this move is to expand the “toll free” section of the Thruway, meaning that a patron can drive from the new barrier, located west of Exit 57, to the Williamsville Toll Barrier without paying a toll.

### **Tolls:**

The Thruway Authority generally charges tolls on a basis of per mile the motorist travels on that explicitly tolled highway system. Tolls collected within this system and at its per crossing fee barriers generally finance the operation of the entire system, including those portions that the public perceives as “toll free”. The explicitly tolled system for the purpose of this study can be considered as beginning at the Pennsylvania State line and ending at the current Lackawanna Barrier (known as the Erie Section of the Thruway). To use this system, a cash paying motorist must pick up a ticket upon entering and surrender it with payment upon exiting the Thruway.

- **Toll Alternative 1 – Charge the Motorist the Per Mile Traveled on the Explicitly Tolled System.** This method leaves the current Erie Section toll collection methodology as it currently is. Due to very significant net revenue losses (up to \$100 M over 20 years) incurred upon the NYS Thruway Authority, with the aforementioned relocation alternatives, it was dropped from further consideration.
- **Toll Alternative 2 – Charge the Motorist Passing Through the Relocated Barrier (regardless of location) As If They Traveled Through the Existing Lackawanna Barrier.** This alternative increases tolls for any user that passes through the relocated barrier if they did not arrive from Pennsylvania and were destined to pass through the existing Lackawanna Barrier. Other users whom would not experience a toll increase are those whom would enter the Erie Section of the Thruway and exit it, provided that they did not pass through the relocated Lackawanna Barrier.

For those users who enter the Erie Section of the Thruway and pass through the relocated barrier, they would be tolled as if they traveled to the existing Lackawanna Barrier. To illustrate, users entering at Interchange 57 and exiting at Interchange 57A under relocation scenario 2 would experience a toll change from \$.30 to \$.70. Travelers whom would have used the existing Lackawanna Barrier would experience no change in the tolls.

This tolling alternative lead to net operating revenue possibilities that warranted further consideration. Therefore, it was retained and is exclusively discussed further within this executive summary.

**Elements Analyzed in the Study:**

- Traffic models were used to predict changes in traffic both on the Thruway, Route 219, and other major roadways for the immediate (Year 2003), and longer term (Year 2025) timeframes.
- Thruway revenue models predicted changes in Thruway toll revenues as a result of the two scenarios. Changes in Thruway operating costs, primarily salaries and benefits, due to relocating the barriers were calculated and used in net revenue change calculations.
- Costs to demolish existing barrier(s) and construct a new barrier were estimated. Mitigation costs for traffic impacts on local roads, due to changes in traffic patterns, were also estimated.

## **Summary of the Study Results:**

### **Current Traffic:**

Average annual weekday daily traffic on the I-90 between Exit 55 and Exit 56 is 43,000 vehicles per day; between Exits 56 and 57 the daily volume is 37,400 vehicles per day in both directions.

Daily traffic today on both the I-90 and Rt 219 facilities, north of Milestrip Rd (Rt 179), indicate that both facilities operate below capacity. Traffic is split equally between the I-90 and Rt 219 at this point; the I-90 carries 43,000 vehicles per day and Rt. 219 carries 41,600 vehicles per day.

Overall, the study showed that nearly 40% of all vehicles currently using the Lackawanna Toll Barrier either come from or are destined for Exits 56 and 57. This equates to approximately 17,000 vehicles per day of local traffic, indicating the local use nature of traffic on that portion of I-90.

In addition to the capacity concerns on local roadways in the region, accident data must be examined to identify potential areas where increased traffic might worsen the area. An example of a location with this potential is McKinley Parkway between Milestrip Road and Lake Avenue, where traffic is projected to increase 19 percent as a result of Scenario 1. According to an accident study conducted by the GBNRTC, for the years 1996 to 1999, this segment of McKinley Parkway had an accident rate that was 312 percent higher than the statewide average.

### **Traffic Impacts under Scenario 1: (Barrier relocated between Exits 56 and 57)**

Daily traffic increased on the newly toll free section of the Thruway. Locally, daily traffic from Milestrip to Ridge increased by 11% or 4,900 vehicles per day.

Traffic attracted to the Thruway came primarily from Route 219, where traffic volumes between Milestrip and I-90 decreased by 15% or 6,100 vehicles per day.

Local road impacts were pronounced on Milestrip, as there is an interchange for both Route 219 and I-90 in the study area. As traffic shifted from Route 219 to I-90, volumes on Milestrip between Route 62 and the I-90 interchange increased by 11%, and by 7% from the I-90 interchange to McKinley. Conversely, traffic volumes on Milestrip from Abbott to Route 219 decreased by 18%.

Traffic did not divert from Route 5 or Route 20, with volumes on Route 5 remaining approximately the same. Due to changes in circulation patterns, localized 5%-6% daily volume increases were observed on Route 20.

Route 75 (Camp Rd) would continue to operate well within acceptable level of service under each of the scenarios.

Other localized impacts in this scenario include traffic increases of 19% on McKinley between Milestrip and Lake, and an increase of 15% on Route 62 between Route 20 and Big Tree.

**Traffic Impacts under Scenario 2: (Barrier relocated to a location somewhere west of Exit 57, before 57A)**

In this scenario, daily traffic again increased on the Thruway, with I-90 volumes increasing by 10% (3,900 vehicles per day) between Camp and Milestrip, and by 17% (7,100 vehicles per day) from Milestrip to Ridge.

Similarly, traffic was primarily diverted from Route 219, with volumes from Milestrip to I-90 decreasing by 15% or 6,800 vehicles per day.

Local road impacts showed Milestrip again increasing by 10% between Route 62 and I-90 interchange, although the decrease from McKinley to Route 219 was not as noticeable as in Scenario 1.

Route 75 (Camp Road) would experience an approximate 8% (about 2,000 vehicles per day) increase in traffic between Exit 57 and Route 20.

Again, Route 5 traffic showed minimal impact. Traffic on Route 20 increased by 11% (or about 2,500 vehicles per day) from Amsdell to Route 75, and decreased by 11% from Route 20A to Abbott. McKinley between Milestrip and Lake increased by 22%.

**Summary:**

Removing tolls at Exit 56 and Exit 57 would attract additional daily traffic to the Thruway, as expected. The attracted traffic would be primarily diverted from Route 219. Allowing a toll free Thruway for Southtowns oriented traffic did not result in traffic diverting from Route 5 to the Thruway, as envisioned by the community. Traffic patterns changed on Route 179 (Milestrip Road), where users have access to interchanges for both Route 219 and the NYS Thruway. After toll removal, daily volumes on Milestrip east of McKinley decreased, as users shifted to the Thruway, and increased on all segments of Milestrip west of McKinley.

**Revenue Impacts:**

It should be noted that the following only concerns revenue changes that will occur if the second tolling alternative, discussed earlier, is employed. Tolling alternative one was deleted from further consideration.

Revenue impacts were determined for both relocation Scenarios, with the tolls removed being incrementally added to the next westernmost location. In both scenarios, revenue to the Thruway decreased as additional segments became toll free. Revenues decreased by \$480,000 per year in Scenario 1, current year; and by \$750,000 per year in 2025.

In Scenario 2, revenues decreased by \$920,000 per year in the current year and by \$1,430,000 in the year 2025.

<b>Estimated Toll Revenue Impact (Tolling Alternative 2)</b>		
<i>Vehicle Type</i>	<i>Scenario 1 Toll Revenue Change (million of \$'s)</i>	<i>Scenario 2 Toll Revenue Change (millions of \$'s)</i>
<b>2003</b>		
Pass. Cars	-0.44	-0.93
Comm. Veh	-0.04	+0.01
Total	-0.48	-0.92
<b>2025</b>		
Pass. Cars	-0.68	-1.44
Comm. Veh.	-0.07	+0.01
Total	-0.75	-1.43

The impacts of collection costs on revenues were also examined. In this instance, only direct operating costs in terms of collection staffing were considered. Indirect costs such as utilities and maintenance are allocated systemwide and not separately identifiable. In Scenario 1, revenues after collection costs were considered increased by \$230,000 annually in the current year and \$610,000 annually in 2025. Scenario 2

showed an increase in net revenues of \$500,000 annually in the current year and \$1,290,000 annually in 2025.

**Net Revenue Change (\$ millions)**  
**(Tolling Alternative Two)**

<b>Scenario 1</b>			
<i>Year</i>	<i>Toll Revenue</i>	<i>Collection Costs</i>	<i>Net Revenue Change</i>
2003	-\$0.48	- \$0.71	+\$0.23
2025	-\$0.75	-\$1.36***	+\$0.61
2004-2025	-\$13.92	-\$22.33	+\$8.72
<b>Scenario 2</b>			
<i>Year</i>	<i>Toll Revenue</i>	<i>Collection Costs</i>	<i>Net Revenue Change</i>
2003	-\$0.92	- \$1.42	+\$0.50
2025	-\$1.43	-\$2.72***	+\$1.29
2004-2025	-\$26.61	-\$44.66	+\$18.05

\*\*\* Grown at 3% annually

**Summary:**

Revenue losses to the Thruway result primarily from now offering toll free service to travelers originating or destined to Exits 56 and 57 and originating or destined to the Buffalo metro area. All movements through the relocated barrier from west of Exit 57 will pay the entire toll as if they had traveled to the former Lackawanna toll barrier. Revenue losses are more than offset by reduced collection costs in both scenarios, resulting in a net operational revenue gain. Again, other maintenance and operating costs were not considered, and the capital cost of barrier demolition and relocation were not amortized but are separately identified in the capital cost section.

**Capital Costs:**

Demolition cost of existing toll collection facilities at Exits 56 and 57 were estimated, as were construction costs for a new barrier. It should be noted that these capital costs represent minimal design standards that may require revision under the auspices of a detailed engineering effort. They are as follow and do not reflect maintenance cost offset or depreciation of existing facilities:

	<b><u>Scenario 1</u></b>	<b><u>Scenario 2</u></b>
Demolish/Construct New Barrier	\$46.2M	\$47.2M
Right Of Way and Environmental Mitigation	Unknown	Unknown
Other Mitigation (local roads)	\$32.0M	\$48.0M

The Other Mitigation costs estimated were the need to mitigate impacts of new traffic on local and state roads, such as Milestrip. Estimates were prepared for road and intersection improvements in the area. While there would be a need for some future improvements in the area even in the no-build scenario, the barrier relocation may trigger the need to do so sooner than anticipated. To better understand this situation, a more comprehensive analysis of timing and cost of improvements would be required if a barrier relocation and toll removal project were advanced.

**Land Use Implications:**

Local interest has been expressed in the ability to release additional land from relocated barrier areas for economic development purposes. This could involve reconfiguring highway access controls and geometrics with the intent of improving adjacent property potential for additional development. Areas in the vicinity of Exit 56 do not show significant potential for such use. A Land Use Access Management Plan initiated for the Camp Road interchange area suggested that realigned interchange infrastructure could possibly release some land for additional development and provide improved parcel access. Reduced infrastructure could result in long term maintenance cost reductions for the Thruway, but are not identified in this study.

## **Summary:**

Traffic patterns changed as a result of scenarios to relocate the Lackawanna Toll Barrier to either of the two locations to the west. The shift in traffic is primarily from Route 219 to the newly toll free sections of the Thruway. Local roads accessing the barrier-removed interchanges increased in daily traffic, and those segments accessing Route 219 decreased in daily traffic. Traffic reductions on Route 5 and Route 20 did not occur as a result of either scenario. Both scenarios caused traffic on Route 20 between Amsdell and Route 62 to increase.

Toll revenues to the NYS Thruway Authority decreased as more sections were added to the toll free section of the Thruway. With the existing toll collection plan retained a very severe net operating revenue loss was incurred. Under an alternative toll collection plan a loss in gross toll income was still incurred. However, when the cost of collecting tolls at the removed barriers was considered, net operating revenues to the Thruway Authority increased.

While a positive impact on annual operating costs was evident, a major capital investment would be required to demolish the existing barriers and construct a new state of the art barrier at a new location. Given the planning nature of this study, the capital costs provided herein should be considered as a starting point and any number of factors could significantly increase the costs. Depending on the timing of a barrier relocation project, various local roads and/or intersections would have to be upgraded to mitigate the impacts due to the change in traffic patterns. That cost would be attributable to the project.

The Thruway Authority bonding covenants require that capital costs expended from the Authority's revenue stream also be considered in any revenue neutrality analysis. As no capital funds have been allocated to a Lackawanna Toll Barrier relocation project, resolution of the capital cost issue would be of significant concern if a barrier relocation project were to proceed forward.