

Report on the Economic and Traffic Benefits of the Kosciuszko Bridge Project



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Introduction

Completed in 1939, the Kosciuszko Bridge (the Bridge) carries a 1.1-mile segment of the Brooklyn-Queens Expressway (BQE, Interstate 278) from Morgan Avenue in the borough of Brooklyn over Newtown Creek (which forms the border between Brooklyn and Queens) to the Long Island Expressway (LIE, Interstate 495) interchange in the borough of Queens.

Approximately 160,000 vehicles cross the bridge every day. After more than 70 years of service, the Bridge is dangerous and in poor repair, and the federal government and the State of New York have developed a \$800 million plan to replace the Bridge. In addition to improving traffic conditions on the BQE and surrounding streets, the plan will create roughly 14,000¹ jobs.

Current Conditions

The State has tried over the years to maintain the Bridge, spending more than \$60 million during the last two decades.² Nonetheless, the New York State Department of Transportation (NYSDOT) reports that recent inspections have indicated that the structural deficiencies are increasing. Furthermore, the frequent maintenance and repair efforts and their associated lane closures make traffic congestion and diversion problems worse without offering a long-term solution to the structure's underlying problems. Safety problems are exacerbated by poor visual lines, narrow lane widths and inadequate shoulders to accommodate disabled vehicles.

Project Description

The U.S. Department of Transportation Federal Highway Administration (FHWA) and NYSDOT propose to replace the existing bridge in two phases. The first phase, which is expected to commence this fall, calls for two new parallel bridges to be built on the eastbound side of the existing bridge. These bridges would carry six lanes of traffic. When they are complete, new connecting roadway would be built to direct the BQE onto the new bridges. The existing bridge would then be demolished. In phase II a new bridge structure would be built in its place. When phase II is completed, the three new bridges will carry five lanes of eastbound traffic and four lanes of westbound traffic.³

¹Final Environmental Impact Statement (September 2008), Executive Summary
https://www.dot.ny.gov/content/delivery/region11/projects/X72977-Home/X72977-Repository/executive_summary_feis.pdf (p. ES-8)

²Final Environmental Impact Statement (September 2008), Executive Summary,,
https://www.dot.ny.gov/content/delivery/region11/projects/X72977-Home/X72977-Repository/executive_summary_feis.pdf (p. ES-8)

³https://www.dot.ny.gov/content/delivery/region11/projects/X72977-Home/X72977-Repository/executive_summary_feis.pdf (p. ES-2)

Improvements will include additional lanes for merging which will help ease congestion at peak travel times. The new bridge will be approximately 35 feet lower than existing bridge, improving grades and sight lines, and it will have standard lane widths and shoulders⁴. The new bridge would also include a bikeway/walkway on the north side of the bridge.⁵

FHWA and NYSDOT completed a Final Environmental Impact Statement for the Kosciuszko Bridge Project on November 25, 2008 (FEIS). A Record of Decision was issued on March 9, 2009. Design approval was granted by FHWA on March 20, 2009. A Reevaluation Statement was approved by FHWA in June 2011 that addressed environmental impacts due to various structure type alternatives. A Request for Statements of Qualifications was issued this year. Six design-build consortiums expressed interest and four of them were deemed qualified as of May 14, 2013. A Request for Proposals is being sent to those four qualified consortia. Phase I of construction will commence in Fall 2013 and will be completed in 2017. Phase II of the project is expected to commence in Spring 2018, with completion expected Summer 2020.

Economic Benefits of the Kosciuszko Bridge Project

Funding

The Kosciuszko Bridge Project is a federal/state project, with the federal government providing roughly 85% of the funding and the state providing the remaining 15%. Construction of Phase I of the project will cost \$517 million, plus an additional \$12 million for design, of which 90% will be federal including \$428 million from the Interstate Maintenance program and \$32 million from Highway Bridge Rehabilitation and Replacement. The 10% state match will come from the State Dedicated Fund.

Construction of Phase II of the project will cost \$216 million, plus another \$50 million for design. The federal government will provide 80% of the funds for Phase II, including \$80 million from National Highway Performance, \$60 million from Surface Transportation Program - Urban and \$14 million from MAP 21 Highway Safety Improvements. The 20% state match will come from the State Dedicated Fund.

⁴https://www.dot.ny.gov/content/delivery/region11/projects/X72977-Home/X72977-Repository/executive_summary_feis.pdf (p. ES-11)

⁵https://www.dot.ny.gov/content/delivery/region11/projects/X72977-Home/X72977-Repository/executive_summary_feis.pdf (p. ES-2)

Job Creation

According to the FEIS, the Kosciuszko Bridge Project will generate approximately 14,143 jobs over the next 7 years in direct employment.⁶ NYSDOT advises that the project will result in 1,000-1,200 full-time construction jobs and that the remainder will be part time jobs or jobs indirectly created as a result of the project. When construction workers get their paychecks, they use the money to pay rent or the mortgage, buy groceries, doctors bills or for other household spending. These activities generate sales for businesses and help create and maintain jobs for workers throughout the rest of the economy. The Project will generate millions in tax revenue from employees, construction contractors and manufacturers of tracks, parts and other items that will be used in the construction.

Positive economic impacts also include productivity benefits resulting from reduced congestion on the Brooklyn-Queens Expressway.

Traffic Improvements

Current Conditions

The Kosciuszko Bridge is considered one of the worst bottlenecks and most dangerous stretches of highway in New York City. Because of the steep grade of the existing roadway (over 4 percent in some areas) and its excessive length, it is difficult for large trucks on the BQE to maintain speed and for those entering the highway to accelerate. This effect, combined with the inadequate lane widths and substandard entrance lane length forces all traffic to slow down.

The Kosciuszko Bridge has an unacceptably high accident rate – as much as six and a half times the statewide average for similar facilities. Over 90% of the accidents analyzed on the Kosciuszko Bridge were either rear-end or overtaking accidents, which can be attributed to a non-standard vertical stopping sight distance combined with heavy traffic volume (and the resultant driver behavior problems). These two types of accidents are strong indicators of congested conditions where traffic is either being forced to slow down or make abrupt lane changes. Additional contributing non-standard features include inadequate horizontal stopping sight distance, insufficient shoulders, narrow lane widths, and insufficient acceleration/deceleration lanes.

State Condition Rating Continues to Drop

New York State has 17,000 bridges, of which 44% are owned by the state, 50% are owned by municipalities and the rest are owned by state and local authorities, commissions and railroads. State law requires that each of these bridges be investigated at least once every two years. As a

⁶https://www.dot.ny.gov/content/delivery/region11/projects/X72977-Home/X72977-Repository/executive_summary_feis.pdf (p. ES-28)

result of the inspection, a bridge will be rated on a scale of 7 to 1, with 7 applying to a brand new bridge. Any bridge with a rating under 5 is considered deficient. Kosciuszko consistently scores poorly. In 2008, when the Final Environmental Impact Statement was completed, it had a rating of 3.71. Since then, its rating has continued to slide and in its most recent inspection on October 15, 2012, it received a 3.53.

In addition, if an inspector identifies a problem with the bridge, the inspector will issue a flag. "Red" flags are issued for deficiencies involving critical structural components that require prompt evaluation and corrective measures to resolve the flag condition. "Yellow" flags identify less critical conditions that are likely to affect the long-term durability of a bridge and may progress to a more serious condition if left unattended for extended periods. In 2008, in a report on the state's 49 deck truss bridges, of which Kosciuszko is one, the Kosciuszko was the recipient of the highest number of flags – 28 (including 8 red and 20 yellow). NYSDOT advises that the number of flags issued most recently was 49 – 6 red and 43 yellow, suggesting that conditions are continuing to worsen.

Kosciuszko Bridge Among City's Worst

An analysis of current NYSDOT state conditions data reveals that Kosciuszko Bridge is the 8th worst state-owned bridge in the City of New York. Of the top ten worst bridges, Kosciuszko is the most heavily used.

Rank	Listed Name	State Condition Rating	Avg. Daily Ridership
1	87IX OVER ABANDONED SUBWAY (BRONX)	2.83	3,707
2	JCT PROSPECT EXPY & I278 OVER 6TH AVENUE (BROOKLYN)	3.03	5,159
3	.2 MILE N JCT I95 & BRP OVER E TREMONT AVE	3.27	125,879
4	JCT FDR DRIVE & 34TH STREET (NEW YORK)	3.39	136,374
4	.1 MILE N JCT I95 & BRP OVER AMTRAK/CSXT/P&W	3.39	16,354
6	.4 MI N I95 + BRONX RIVER PKWY OVER MORRIS PARK AVE	3.44	106,551
7	JCT I95 + I278	3.46	3,000
8	KOSCIUSZKO BRIDGE (BROOKLYN)	3.53	160,000
9	1 MI NE I278 & I87 OVER BRUCKNER BLVD (BRONX)	3.56	24,321
9	.1MI S JCT I87 & I95	3.56	10,500
11	JCT I95 & I278 OVER BRONX RIVER	3.63	104,698

Poor Design Leads to Delays and Collisions

Originally designed to incorporate the needs of maritime traffic on Newtown Creek, the Bridge features a steep grade (as much as 4 percent in some areas). The sharp slant of the road blocks sight lines for drivers (e.g. how far ahead they can see) and slows traffic. In addition, because

the 8 lane road narrows to 6 lanes over the bridge, traffic lanes must converge before the bridge, leading to traffic delays and increasing the likelihood of collisions.

Accident rates along the Kosciuszko Bridge and its approaches are five to 30 times the statewide average. In addition to poor sight lines and steep grade, the road has short entrance and exit ramps and inadequate or no shoulders. Improving operating conditions and reducing congestion is expected to reduce many of the accidents that result from stop-and-go conditions. By providing shoulders, the new bridge will also reduce the likelihood that disabled vehicles will block travel lanes. The local precinct advises that there is an accident on bridge, on average, more than once every two weeks. This year, to date, there have been 17 accidents, approximately 33% higher than 2012.

Vehicle Delay

Traffic jams are frequent and commuters experience inordinate delays. NYSDOT reports that commuters experience approximately 705 hours of unnecessary traffic delay per year during the morning commute and approximately 816 hours of delay per year during the evening commute.

Commuting time

New York City residents have the longest commute time in the nation among large cities, according to American Community Survey data released by the U.S. Census Bureau⁷. New Yorkers take an average of 38.4 minutes to get to work each day, more than five minutes longer than Chicagoans, who face the next longest commute of 32.7 minutes.⁸ That's an average of about one full week a year getting to work. Of the 231 counties ranked in the American Community Survey, four of New York City's five boroughs — Bronx (41.8 minutes), Queens (41.4), Richmond (Staten Island) (41.2) and Kings (Brooklyn) (39.9) — have the longest commute times in the nation, far exceeding those of other metropolitan areas. And, while New York City's boroughs have the dubious distinction of being the worst, other counties in the New York metropolitan area have similar problems, such as Nassau on Long Island (34.1) and Monmouth in New Jersey (32.4). Fixing the bottleneck at the Kosciuszko Bridge should reduce commuting times for commuters who take the Brooklyn-Queens Expressway to work.

Long commutes can discourage potential employers from locating in a particular region. Employers are concerned that long commutes can prevent them from attracting and retaining the best employees, plus they are aware that studies show employees who spend huge chunks of their day commuting are less productive and creative on the job. Reducing work travel in the most heavily congested, highest-value commercial corridor in the nation, would greatly enhance New

⁷http://www.census.gov/Press-Release/www/releases/archives/american_community_survey_acs/001695.html

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York City's ability to compete for talent with other regions that may offer better climate, lower stress or other quality of life advantages. By improving commutes, the Kosciuszko Bridge Project will help New York attract and retain employers.

Traffic Improvements from Project

The Kosciuszko Bridge Project is expected to lead to significant traffic improvements. By eliminating the steep grade, the project will increase visibility for drivers. By adding shoulders, it will be easier to move disabled vehicles out of the roadway, reducing delay time in case of accidents. By widening and improving the bridge and its access ramps, the project will reduce the need for lanes to merge, enabling traffic to move more smoothly. Taken together, these improvements will result in reduced commuting times, lower accident rates and higher speeds. The new bridge is expected to reduce delays to 235 hours of delay per year in the morning commute and 206 hours of delay per year in the evening commute.⁹

Community Benefits from the Kosciuszko Bridge Project

New Parkland

The Kosciuszko Bridge Project creates more than 3.7 acres of new parkland on the north side of the BQE in Brooklyn near the Meeker Avenue/Morgan Avenue exit ramp and in Queens between 54th Avenue and 54th Drive.¹⁰ This would nearly triple the amount of available parkland in the immediate area.¹¹ There will also be boat launch for personal watercraft (canoe, kayak, etc.) on both the Brooklyn and Queens sides of Newtown Creek.¹² Specific plans for the new park space will be developed in the design phase of the project.

Opportunities for Women in Construction

NYS DOT is partnering with the nonprofit NEW (Nontraditional Employment for Women) NYC to offer both training and jobs in carpentry, iron work, electrical work and eco-friendly

⁹https://www.dot.ny.gov/content/delivery/region11/projects/X72977-Home/X72977-Repository/executive_summary_feis.pdf (p. ES-28)

¹⁰https://www.dot.ny.gov/content/delivery/region11/projects/X72977-Home/X72977-Repository/executive_summary_feis.pdf (p. ES-3)

¹¹https://www.dot.ny.gov/content/delivery/region11/projects/X72977-Home/X72977-Repository/chapter%206_feis.pdf (p. VI-13)

¹²https://www.dot.ny.gov/content/delivery/region11/projects/X72977-Home/X72977-Repository/chapter%205_feis.pdf (p. V-10)

construction.¹³ Dozens of women will receive the training they need from NEW NYC to find employment on the Kosciuszko Bridge Project.

Archaeological Research

Historians are looking at the Kosciuszko Bridge project with particular interest¹⁴, hoping that excavations will add to our knowledge of pre-European and early colonial settlements near the Newtown Creek. The State Historical Preservation Office considers area around Newtown Creek to be "archeologically sensitive" for early Native American sites. A Native American tribe called the Mespeatches (which gave Maspeth its name) used to live in the area around Newtown Creek, making this area a likely site for archeological discoveries. Two Queens blocks are reportedly particularly likely to reveal interesting material: 43rd Street between 55th Avenue and 54th Drive and between 54th Avenue and 54th Road.

On the Brooklyn side, the rich clay soil made it an attractive site for potters, and there were a number of prominent pottery works along the creek in Greenpoint. There are high hopes that clay pipes, pot shards and other remnants of the old potting industry may surface. The Newtown Historical Society and the Greater Astoria Historical Society are eagerly awaiting any new treasures the project reveals.

Conclusion

The Kosciuszko Bridge Project will make an important contributions to New York City's job prospects as it is under construction, and will continue deliver economic dividends long after it is completed. By improving commuting times, it will have immediate positive benefits.

¹³<http://www.dnainfo.com/new-york/20130315/greenpoint/state-seeks-female-hard-hats-rebuild-kosciuszko-bridge#ixzz2RQp0q3TD>

¹⁴<http://www.dnainfo.com/new-york/20130207/long-island-city/kosciuszko-bridge-renovation-could-unearth-native-american-artifacts>