

## **EXECUTIVE SUMMARY**

The Maine Turnpike Authority's (MTA) Enabling Legislation in its Legislative Findings (23 M.R.S.A. §1961) makes the following findings of fact: the economic and social wellbeing of the citizens of the State requires that the transportation system be developed in a comprehensive manner and depends upon the *safety, efficiency, and modern functional state of the turnpike*. This is the MTA's guiding principle as it relates to the York Toll Plaza.

The Maine Turnpike York Toll Plaza has served beyond its useful and intended life. It is processing more than three times the traffic it did when it opened in 1969 and is suffering from numerous operational and structural deficiencies and continues to be a safety concern. The MTA decided to comprehensively evaluate the existing plaza issues and investigate how to most effectively move forward with repairs and/or replacement in keeping with the MTA's responsibility to operate a safe, efficient and modern southern (York) toll plaza. This has been accomplished through a series of studies that form the Phase I report.

The Phase 1 report is organized into four Parts to align itself with the progression of the overall project and steps completed to date.

1. Part 1 includes an introduction along with a brief background of the York Toll Plaza and a summary of the existing plaza conditions.
2. Part 2 is the Existing Site Evaluation (ESE), dated June 16, 2009 and accepted by the MTA on September 9, 2009. The ESE highlights the project's history, including public participation and coordination with the Maine Legislature, it documents the Basic Project Purpose as required by U.S. Army Corps of Engineers (USACE), provides a full analysis of the physical and operational deficiencies of the existing toll plaza, and documents rehabilitation and reconstruction options ranging from a 'do-nothing' option to a variety of upgrade options at the existing location.
3. Part 3 is the Alternate Site Evaluation (ASE). The ASE documents the application of basic engineering criteria to identify alternate toll plaza sites.
4. Part 4 is the comparative screening of the recommendations from the ESE in Part 2 with the recommendations from the ASE in Part 3. Part 4 also contains the final recommendation for concluding the Phase 1 report to the USACE, which is a shortlist of options and/or alternates recommended to be carried into Phase 2 of USACE's Highway Methodology Process.

### Part 1 – Introduction

Situated seven miles from the New Hampshire border on I-95, the York Toll Plaza is a gateway to the state and serves as the anchor for the toll structure and provides the ability for equity in the toll system. The York Toll Plaza contributes approximately \$36 million in revenue each year to the Maine Turnpike budget. In this capacity it is a vital element of the turnpike infrastructure system.

The York Toll Plaza began as a temporary 11-lane structure constructed on the Maine Turnpike in York, Maine in 1969 as part of the continuation of Interstate 95 and the construction of the Piscataqua River Bridge. Numerous maintenance and rehabilitation projects have been undertaken to improve the capacity of the plaza, to cope with its aging components, and to provide safety for both the traveling public and toll staff. However, the ongoing maintenance and rehabilitation projects can no longer effectively keep up with the York Toll Plaza's deterioration; its life expectancy has been exceeded and it is no longer able to provide adequate safety for staff or the millions of vehicles that pass through it each year, nor is it able to provide for efficient traffic operations.

There are a number of operational issues related to the plaza's location that seriously affect safety of patrons and staff, and require attention:

- 1) The plaza is located 500-700 feet from the Exit 7 Interchange causing additional merging and weaving of traffic within the plaza limits. This also leads to an inefficient use of toll lanes, causing traffic back-ups before the plaza has reached capacity volumes.
- 2) The plaza is on a horizontal curve. Southbound traffic tends to drift to the outside of the curve, reducing utilization of all tollbooths, i.e. left side lanes become over-utilized and right side lanes underutilized. The curve also blocks sight to all southbound lanes/booths until an approaching vehicle is approximately 1,500 feet away. This does not allow adequate time to make efficient lane choice decisions and prompts sudden and unsafe lane changes.
- 3) The plaza is at the base of a hill. This creates a safety concern due to the potential of heavy vehicles losing their brakes and striking the plaza or stopped traffic, drainage issues and pavement "shoving" leading to excess rutting and the potential for hydroplaning. The hill also leads to heavy engine braking noise southbound and heavy acceleration noise northbound as commercial vehicles negotiate the only truck climbing lane on the Turnpike.
- 4) Last, the plaza is approximately 2,200 feet north of the Chases Pond Road Bridge. This bridge essentially hides the merging on-ramp traffic from view of northbound travelers, and reduces visibility of backed-up traffic at toll booths. A driver's ability to adequately comprehend (and react to) roadway signage is also compromised due to a need to sign for both the toll plaza and the interchange within a very short distance. The proximity of the toll plaza and interchange requires double the number of signs at less than desirable spacing.

All four of these characteristics; nearby interchange, roadway curve, bottom of a hill and nearby bridge; contribute to increased crashes and decreased operational efficiency. In fact, it has led to the south side of the toll plaza, either the northbound or southbound lanes, or both, to be classified as High Crash Locations for the last 10 years by the Maine Department of Transportation.

In addition to these location related deficiencies, there are numerous infrastructure deficiencies that also compromise the safety of staff and motorists:

- 1) The original tollbooth structure was designed in the 1960s and is deficient by today's standards including insufficient space for toll collector activities and tolling equipment as well as very narrow travel lanes.
- 2) Current standards for toll booths incorporate a double concrete bumper to provide safety for the toll collector and driver by redirecting any mis-steered vehicle back into a lane versus striking a toll booth. The York Toll Plaza's single bumper design does not adequately protect staff or turnpike patrons as the existing bumpers have almost completely disappeared due to sinking into the poor soil.
- 3) The toll collectors' access tunnel beneath the booths is in poor condition and in need of rehabilitation. The tunnel is too narrow due to addition of tolling electronics, communication lines and modern utilities. The concrete tunnel experiences significant water infiltration due to its age, location, deterioration and the many toll utility penetrations.
- 4) The structural supports for the existing canopy are at capacity and cannot feasibly handle the required additional signing including the more modern signs' size and weight.
- 5) The original plaza was built in an area with poor soil conditions, mainly consisting of compressible clay. Due to these soil conditions, the plaza tunnel, booths and canopy were constructed on a pile foundation, similar to bridge abutments, to prevent settlement of the structure. However, the roadway approaches to the plaza are supported by layers of base and subbase material. As a result, the approaches (and bumpers) have continued to settle as the clay soil consolidates and the booths and canopy do not. The noticeable slope approaching and leaving the plaza is a result of the roadway settling away from the pile-supported plaza.

The age of the plaza, the outmoded conditions of the existing tollbooths, canopy, tunnel, and the poor soil conditions all contribute to the overall poor condition and performance of the plaza. These deficiencies contribute to classifying the existing infrastructure as functionally obsolete. It is the cumulative impacts of all these conditions that prevent a cost effective rehabilitative solution for this plaza. Rehabilitation not being viable, replacement becomes the prime consideration.

## Part 2 - Existing Site Evaluation

This section documents the development of a range of replacement options to determine if a feasible replacement solution exists at or in close proximity to the existing plaza. The evaluation also includes establishing a baseline for comparing this range of options which includes the following criteria:

- 1) Engineering design guidelines,
- 2) Basic Project Purpose
- 3) Toll collection strategies
- 4) Safety
- 5) Capacity and plaza sizing

The evaluation of the existing York Toll Plaza confirmed the need for modernization. A few key findings from the initial existing site evaluation include:

- 1) The existing York Toll Plaza location does not meet nationally accepted design guidelines for mainline toll plazas.
- 2) The existing plaza location and operation does not meet the Basic Project Purpose; i.e. from the USACE, "...to replace/rehabilitate the existing barrier toll plaza on the Maine Turnpike at York, Maine, incorporating Highway Speed Tolling, (now known as Open Road Tolling) and addressing settling/subsidence and facilities deficiencies, safety deficiencies and existing and projected traffic volumes."
- 3) The MTA had previously researched various tolling strategies with the goal of identifying a more efficient and safer means of tolling. In July 2006, the MTA reconfirmed in conjunction with this study, the tolling technology that best serves the MTA at the York Toll Plaza is Open Road Tolling (ORT). ORT provides for a separation of E-ZPass and cash patrons which increases safety and efficiency by allowing E-ZPass patrons to pay their toll electronically while driving through the tolling facility at normal highway speeds of 55-65 mph in lanes separate from the cash booth areas. ORT is the most practicable toll collection strategy based on the operating characteristics and user demographics at the York Toll Plaza.
- 4) The existing York Toll Plaza has experienced a significant number of crashes and has been classified as a High Crash Location by the MaineDOT for the last ten years. Of particular note is the influence the interchange ramps have on the number of crashes on the south side of the plaza as compared to the north side of the plaza.
- 5) Today, the York Toll Plaza processes over 16 million vehicles per year, up from 5 million vehicles in 1970. With total traffic expected to grow approximately 1.7% per year over the next 20 years, improvements are needed to efficiently and safely process this ever increasing and changing traffic.

The existing facility evaluation, in conjunction with the plaza's crash history, confirm that the York Toll Plaza is operationally inefficient, structurally deficient, and is located such that the existing conditions compromise overall staff and patron safety. To determine the most effective course of action that addresses immediate and future needs, eight build options plus the no-build option were developed and comprehensively evaluated. These options varied from a "No Build" option, to building newly configured ramps for the York interchange, to relocating the interchange, to realigning the mainline of the Turnpike itself. The results of the comprehensive evaluation was to dismiss six of the nine options, as those six options did not meet the project's purpose, did not fully meet basic engineering guidelines, resulted in extensive environmental, social impacts and monetary impacts or some combination of these.

*Option 1: No Build (Maintenance Only)*

Option 1 does not satisfy any of York Toll Plaza's safety or operational needs, present or future. This option leaves the plaza requiring extensive and costly ongoing maintenance. **This Option is required by the permitting agencies to be carried forward for further consideration.**

*Option 2: Infrastructure Upgrade*

Option 2 addresses only the structural deficiencies of the existing infrastructure. This option does not address the location related deficiencies, does not meet current industry design guidelines, does not address many safety or operational issues for Turnpike patrons and staff, and does not meet the basic project purpose. The layout carries anticipated impacts of 0 home displacements, 1.5 acres of right-of-way, and 11 acres of wetlands. **This Option is recommended to be dismissed from further consideration.**

*Option 3: Upgrade Existing Site with Conventional Tolling and Separate Ramp Lanes*

Option 3 upgrades the infrastructure, addresses some of the traffic flow inefficiency, but does not address the safety and operational concerns associated with the current plaza location. This option does not meet the current basic design guidelines or the basic project purpose. The layout carries anticipated impacts of 0 home displacements, 6.3 acres of right-of-way, and 17.6 acres of wetlands. **This Option is recommended to be dismissed from further consideration.**

*Option 4A: Upgrade Existing Site with Open Road Tolling and Separate Ramp Lanes*

Option 4A implements open road tolling, improves traffic capacity and ETC processing time but fails to address some of the safety concerns associated with the current plaza location. The addition of dedicated ramp toll lanes does remove the merge and weave conditions between mainline and ramp traffic but creates potentially confusing traffic signage. This option does not meet three of the four current basic design guidelines. The layout carries anticipated impacts of 0 home displacements, 8.1 acres of right-of-way, and 28 acres of wetlands. **Option 4A, while not meeting all the MTA goals; does address some of the major safety issues and has comparatively reasonable impacts and cost, and is therefore recommended to be carried forward for further consideration and comparison to other locations.**

*Option 4B: Upgrade Existing Site with Open Road Tolling without Separate Ramp Lanes*

Option 4B marginally improves traffic capacity and ETC processing time but fails to address all traffic safety concerns associated with the current plaza location. This option does not meet the four basic design guidelines, does not allow for the full benefits of Open Road Tolling, and does not meet the basic project purpose. Given the magnitude of home, right-of-way and environmental impacts of the other existing site alternatives, Option 4B offers the next closest layout to Option 4A to meeting design guidelines, MTA goals and project purpose and reduced cost and impacts. **Therefore Option 4B is recommended to be carried forward for further consideration and comparison to other locations.**

*Option 5: Relocate Plaza to Alternate Location with Highway Speed Tolling*

As noted, Option 5 is a placeholder representing a summary of alternate locations. Following are a few key findings from preliminary research. Option 5 will result in a toll plaza that 1) operates safely for both Turnpike patrons and staff, 2) provides adequate capacity for current and future traffic demands, 3) meets today's industry standards for plaza location and infrastructure needs, and 4) implements modern technology to efficiently process Turnpike traffic with open road tolling lanes. With a cost estimated at between \$34 million and \$41 million, this Option is the most cost effective way to meet York Toll Plaza's safety and operational needs and will allow the York Toll Plaza to be a prominent "gateway" to the State of Maine. This option meets the Maine Turnpike Authority's objective of a safe and efficient modern toll plaza and meets the basic project purpose. (Given these early findings and as noted below, it was recommended at the conclusion of the Existing Site Evaluation that the research into an alternative site evaluation continue.)

*Option 6: Upgrade Existing Site with Open Road Tolling, East Side Mainline Realignment, and Relocate Interchange*

Option 6 will provide an Open Road Tolling facility that generally meets the basic engineering criteria and improves safety and plaza operations however, the s-curves in the horizontal alignment north of the plaza are not desirable. The layout carries anticipated impacts of 89 home displacements, 202 acres of right-of-way, and 57 acres of wetlands. **This Option is recommended to be dismissed from further consideration.**

*Option 7: Relocate Plaza to West with Open Road Tolling, West Side Mainline Realignment, and Relocate Interchange*

Option 7 will provide an Open Road Tolling facility that meets the basic engineering criteria and improves safety and plaza operations. However, the layout carries anticipated impacts of up to 21 home displacements, 106 acres of right-of-way, and 62 acres of wetlands. **This Option is recommended to be dismissed from further consideration.**

*Option 8: Relocate Plaza to South with Open Road Tolling and Reconfigure Interchange*

Option 8 will provide an Open Road Tolling facility that generally meets the basic engineering criteria and improves safety and plaza operations. The layout carries anticipated impacts of up to 7 home displacements, 17.7 acres of right-of-way and 52 acres of wetlands. **This Option is recommended to be dismissed from further consideration.**

*Option 9: Relocate Plaza to South with Open Road Tolling and Relocate Interchange*

Option 9 will provide an Open Road Tolling facility that generally meets the basic engineering criteria and improves safety and plaza operations. The layout carries

anticipated impacts of up to 7 home displacements, 19.7 acres of right-of-way, and 43.7 acres of wetlands. **This Option is recommended to be dismissed from further consideration.**

**The recommendation of the Existing Site Evaluation is to:**

- 1) Continue to evaluate Option 1,
- 2) Continue to evaluate Options 4A and 4B and
- 3) Resume the evaluation of Option 5 i.e. alternative locations.

**Part 3 – Alternative Site Evaluation**

The Existing Site Evaluation produced no options at the existing location that fully met the Basic Project Purpose without excessive environmental and social impacts and excessive costs. Therefore, following the Existing Site Evaluation, it was clear that the investigation into replacement of the York Toll Plaza would need to extend beyond the immediate area surrounding the existing plaza. The Alternate Site Evaluation portion of this report documents the investigation and findings of new, potential locations for the replacement of the York Toll Plaza.

New candidate locations were identified by considering the same basic design criteria as was used for the Existing Site Evaluation. Additionally, the impacts of these new plaza locations on both social and environmental resources were estimated using the same data sets and methodology as in the ESE. This evaluation considered the following set of variables in the identification and screening process:

- 1) The Engineering Constraints,
- 2) Environmental Resources Constraints,
- 3) Community Resource Constraints.

The initial identification of new plaza locations was based on a refined plaza footprint and the basic engineering guidelines. Horizontal and vertical geometry of the existing turnpike; i.e. locations on horizontal tangents and at vertical high points, were sought as well as locations with adequate physical separation from bridge overpasses and interchanges. The study area was reviewed and locations with engineering constraints (for example, bridges, curves, and interchanges) were mapped as out-of-bound zones. The refined narrower and shorter plaza footprint was then superimposed in between these out-of-bound areas to develop a list of candidate sites. In total, 16 alternate locations were identified that met the basic design criteria for toll plaza location.

The next step was to quantify the natural resource impacts by mapping the study area with 2003 aerial photography and the Maine Office of Geographic Information Systems (Maine OGIS) Data Catalog for: hydric soils, National Wetland Inventory (NWI) wetlands, floodplains, streams, and rivers. Resources exist throughout the Study Corridor to such a degree that no location would be totally unconstrained by them. However, some areas are less constrained by

these resources than others. Density of development is also an important consideration. Planning personnel for the towns of York, Ogunquit, and Wells were consulted to document and confirm existing, planned, and potential future development within the Study Area. By considering engineering criteria along with mapped social and environmental resource information, a full range of candidate plaza locations were identified with potential respective impacts.

In total, 16 alternate locations were identified that could be considered for new toll plaza locations with respect to the basic design criteria. The 16 alternate locations along with the two options at the existing plaza location, with their respective environmental and social constraint mapping, represent the Phase I study alternatives following the U.S. Army Corps of Engineers Highway Methodology and were evaluated in the final Part of the Phase 1 screening process; a comparative screening.

#### Part 4 – Comparative Screening

The final step of the Phase 1 assessment is a comparative site screening of the remaining existing site options and alternate sites. The goal of the screening is to develop a shortlist of alternatives, when compared with others meet the Basic Project Purpose, are less environmentally damaging, and are more practicable than the other potential alternatives. The resulting shortlist of options and/or sites will then be recommended for further evaluation as part of Phase II of the Highway Methodology.

The three options from the Existing Site Evaluation (the no-build option and existing plaza upgrades Options 4A and 4B) and the 16 locations from the Alternative Site Evaluation that satisfied the initial location screening based upon basic design criteria are reviewed against a series of natural and social resources and constraint maps. The following resources and factors are some of those considered in the site screening along with the engineering location considerations. They are not presented in any particular order of importance or weight in the evaluations.

- Right-of-way
- Potential home displacements
- Proximity to homes and subdivisions
- National Wetland Inventory
- Wetland Soils (i.e., hydric soils)
- Streams
- FEMA 100 year Floodplains

However, a directive received from the MTA was that no homes would be displaced. Capturing the full breadth of screening variables for each of these alternatives requires considerable text. A few key findings from the screening include the following. The study corridor was broken into manageable sections based on identifiable out-of-bound features; mostly bridge structures, and are reported here based on these features.

*Spruce Creek to Chases Pond Road; Mile Marker 2.2 to 6.8 – Kittery & York*

Location 4.5 does not meet all the basic design criteria due to the presence of a horizontal curve, and has extensive wetland impacts including coastal wetlands, and is in close proximity to higher density residential development. Location 5.4 has similar natural resource impacts involving coastal wetlands, but meets the basic design criteria. Both locations would impact the state police truck inspection and weigh stations and would require replacement of those operations as well as building the new toll plaza. Therefore, because these alternate locations are not practicable, and considering that other alternates are less environmentally damaging and satisfy the tolling strategy, both **Location 4.5 and 5.4 are not recommended to be carried forward for further evaluation.**

*Existing Location Mile Marker 7.3 – York (Option 4A and Option 4B)*

Located at the low point of a hill and on a horizontal curve, *Location 7.3*, (upgrade Options 4A and 4B) is in close proximity to Chases Pond Road - Exit 7 Interchange. These options do not accommodate a toll plaza that satisfies the basic design criteria, (too close to an interchange, inadequate sight distance, and at the bottom of a steep hill) and would have the greatest wetland and floodplain impacts compared with other potential alternate locations. Of the two options near the existing toll plaza location, Option 4A is better from an operational perspective than Option 4B as it partially meets one of the basic design criteria. Therefore, at Location 7.3 – **Option 4A is recommended to be carried forward for further evaluation and Option 4B is recommended to be dismissed from further evaluation.**

*Chases Pond Road to Mountain Road; Mile Marker 6.8 to 10.6 – York*

Seven vertical high points, *Locations 8.1, 8.5, 8.6, 8.7, 8.8, 9.1, and 9.9*, are located along this tangent section of roadway. All seven of these locations meet the basic design criteria except for Location 8.1, which would require an excessive vertical approach grade.

Locations 8.1, 8.6, 8.7, 8.8, and 9.1 would displace no homes.

Location 8.1 is more environmentally damaging than other potential locations, has an unacceptable vertical grade and is **not recommended to be carried forward for further evaluation.**

Location 8.5 has the highest right-of-way and home displacements in this section and is **not recommended to be carried forward for further evaluation.**

Locations 8.6, 8.7, and 8.8, are located within approximately 1,000 feet of each other. They are less environmentally damaging than most other alternates in the Study Area and would have no home displacements. For purposes of this screening, **Location 8.7 is named as representative of these three locations and is recommended to be carried forward for further evaluation.**

Location 9.1's wetland, right-of-way, and proximity impacts to homes are all in the low range of the alternates. In addition, Location 9.1 has no home displacements. Therefore, **Location 9.1 is recommended to be carried forward for further evaluation.**

Location 9.9 would displace two homes, is in closer proximity to more residences and has the highest wetland impacts among the seven potential locations evaluated in this section. Therefore, Location 9.9 is **not recommended to be carried forward for further evaluation.**

**Summarizing the Chases Pond Road to Mountain Road findings; Locations 8.7 and 9.1 are recommended to be carried forward for further evaluation.**

*Mountain Road to Clay Hill Road; Mile Marker 10.6 to 11.9 – York*

Two vertical high points, *Locations 11.3 and 11.4*, are located along this tangent section of roadway. Both locations have the highest number of homes within 1,000 feet of the Maine Turnpike. Location 11.3 has the highest number of potential home displacements. These locations would also have much higher wetland impacts compared with many other locations, and greater right-of-way requirements. **Based upon home displacements and environmental impacts both of these locations, 11.3 and 11.4, are not recommended to be carried forward for further evaluation.**

*Clay Hill Road to North Berwick Road; Mile Marker 11.9 to 13.8 – York & Ogunquit*

One vertical high point, *Location 13.2*, is located along this tangent section of roadway. Location 13.2 would displace two homes. While environmental impacts are low and similar to other available alternates, the right-of-way impacts are nearly 60% higher than most others. Given these impacts, **Location 13.2 is not recommended to be carried forward for further evaluation.**

*North Berwick Road to Captain Thomas Road; Mile Marker 13.8 to 14.8 – Ogunquit*

This section of roadway has numerous environmental and social constraints including being on a curved horizontal alignment with no vertical high points. **Therefore, this section would not accommodate a new toll plaza that satisfies design criteria.**

*Captain Thomas Road to Tatnic Road; Mile Marker 14.8 to 15.2 – Ogunquit & Wells*

This section is less than one mile in length with extensive environmental constraints and a crossing of the Ogunquit River. **This section of roadway would not accommodate a new toll plaza that satisfies design criteria.**

*Tatnic Road to Littlefield Road; Mile Marker 15.2 to 17.3 – Wells*

Three vertical high points, *Locations 15.8, 16.5, and 16.9*, are located along this tangent section of roadway. Locations 15.8 and 16.5 would have no displacements of homes, but

would rank in the highest range of nearby homes when compared to other alternatives with no home impacts.

There has been previous consideration of constructing a new interchange on the Maine Turnpike between the York and Wells exits for providing improved access to the Ogunquit region. These previous studies have indicated that a potential connection from the Maine Turnpike with a new interchange would be in the vicinity of the Tatnic Road overpass. The construction of a new toll plaza in the vicinity of the Tatnic Road overpass would make future construction of an interchange in this area not practicable due to recommended engineering spacing constraints between interchanges and mainline toll plazas.

**Therefore Locations 15.8 and 16.5 should be dismissed from further consideration because there are other alternatives that are less environmentally damaging and are not candidate locations for a future interchange location. Location 16.9 is also not recommended to be advanced for further study because it too is more environmentally damaging than other new location alternatives.**

#### *Littlefield Road to Wells Interchange Mile Marker 17.3 to 19.3 – Wells*

One vertical high point, *Location 17.7*, exists north of Littlefield Road and south of the single horizontal curve along this section of roadway. Location 17.7 does not completely satisfy the separation from an interchange engineering criteria, or the horizontal alignment criteria. Location 17.7 does have significant right-of-way impacts, in fact, the highest of the 17 sites. Furthermore, this location is more environmentally damaging than other potential locations. **Based upon not completely meeting the basic design criteria, the significant right-of-way impacts, and environmental damage, Location 17.7 is determined to be not practicable and is not recommended to be carried forward for further evaluation.**

### **Phase 1 Recommendation**

The accumulation of these studies and evaluations form the Phase I Report. In summary, constructing a new plaza, with open road tolling, at a location *other than* the existing plaza appears to be the most prudent direction for addressing existing safety and operational issues and future needs of a Southern (York) Toll Plaza and gives the Maine Turnpike Authority a sound investment in a facility that will provide the public with a safe, efficient, and modern toll plaza today and into the future. The options were evaluated based on:

- 1) Avoidance of impacts to the natural environment.
- 2) Avoidance of impacts to the built environment.
- 3) The design shall be fiscally responsible such that costs are weighed against the benefits realized.
- 4) The plaza shall have safer operations for both Turnpike staff and patrons
- 5) The plaza shall have adequate capacity for current and future traffic demands
- 6) The plaza design shall meet industry guidelines and recommendations for layout and operation

- 7) The plaza shall have the ability to implement a more modern and efficient open road tolling technology.

Investigation at and near the existing toll plaza did not yield an alternative that fully met all of the MTA goals or the Basic Project Purpose for the York Toll Plaza Replacement. However in addition to new (alternative) toll plaza locations, the MTA will carry forward Option 1, the No-Build (maintenance only) option and Option 4A at Location 7.3 which at least partially meets the Basic Project Purpose. Alternates at 8.7 and 9.1 were the two alternate locations found to meet the Basic Project Purpose, met the basic engineering criteria, had minimal environmental impact, and no home displacements.

In summary, from the Draft Phase 1 Report, three locations were found to be viable for advancement and recommended for further study. The three include **locations at mile markers 7.3 (Option 4A), 8.7, and 9.1**. These locations are recommended to be further evaluated and compared with regard to cost, design features, natural resource impacts, community (proximity) effects, permitting, operations and maintenance, utility requirements, and constructability.