

**Maine Turnpike Authority**  
**Ten Year Planning Report**  
**2014-2023**



*Prepared By Maine Turnpike Authority Staff  
December, 2013*

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# Introduction

The Maine Turnpike Authority (MTA) has prepared this Ten Year Planning Report to serve as a long-range planning and policy document that identifies and addresses anticipated needs and priorities for the Maine Turnpike system for the years 2014-2023. This Ten Year Planning Report identifies major transportation projects and initiatives that the MTA intends to advance over the next 10 years to support its transportation mission.

The MTA developed this Ten Year Planning Report to provide important project and initiative information to the communities through which the Maine Turnpike travels and transportation partners such as the Maine Department of Transportation, Metropolitan Planning Organizations (MPO's), Regional Councils, Economic Development Districts, and other stakeholders who rely on the Maine Turnpike to bring people, goods, and services safely and reliably.

In addition to this Ten Year Planning Report, the MTA also prepares an Annual Operation and Maintenance Report, 4 Year Capital Investment Plan, a periodic Safety and Capacity Study, and a 30 Year Reserve Maintenance and Capital Plan. Collectively, these documents, along with established Maine Turnpike Policies, guide the MTA and help establish priorities for operating and maintaining the Maine Turnpike.

This report primarily identifies the long-term capital & maintenance projects planned to address identified transportation needs, but also includes transportation demand management and transportation system management initiatives, as well as anticipated planning studies and community outreach activities.

## Purpose

This Ten Year Planning Report is intended to be a policy and planning tool, not only for the Maine Turnpike Authority, but also for the Maine Department of Transportation (MaineDOT), the regional councils, MPOs, and communities that are served by the Turnpike.

This Ten Year Planning Report will discuss what the Authority anticipates are future needs and investments and what strategies will be used to meet these needs.

This report was produced according to the requirements set forth in the Sensible Transportation Policy Act (STPA). In 1991, the Sensible Transportation Policy Act 23 M.R.S.A. § 73 was passed by a citizens initiated referendum, essentially to require early public involvement in statewide transportation planning. The STPA required the MaineDOT, in coordination with the MTA and other pertinent state agencies, to establish a rule to implement the policy.

This Ten Year planning report will discuss what the Authority anticipates are future needs and investments and what strategies will be used to meet these needs.

# Mission of the Maine Turnpike Authority

The Maine Turnpike Authority and its employees will continue to be national leaders in the user fee highway travel and significant contributors to Maine's transportation system. The Authority's primary function is to operate and maintain a toll express highway through its short and long term capital improvement plans.



The Maine Turnpike Authority's goals and objectives are as follows:

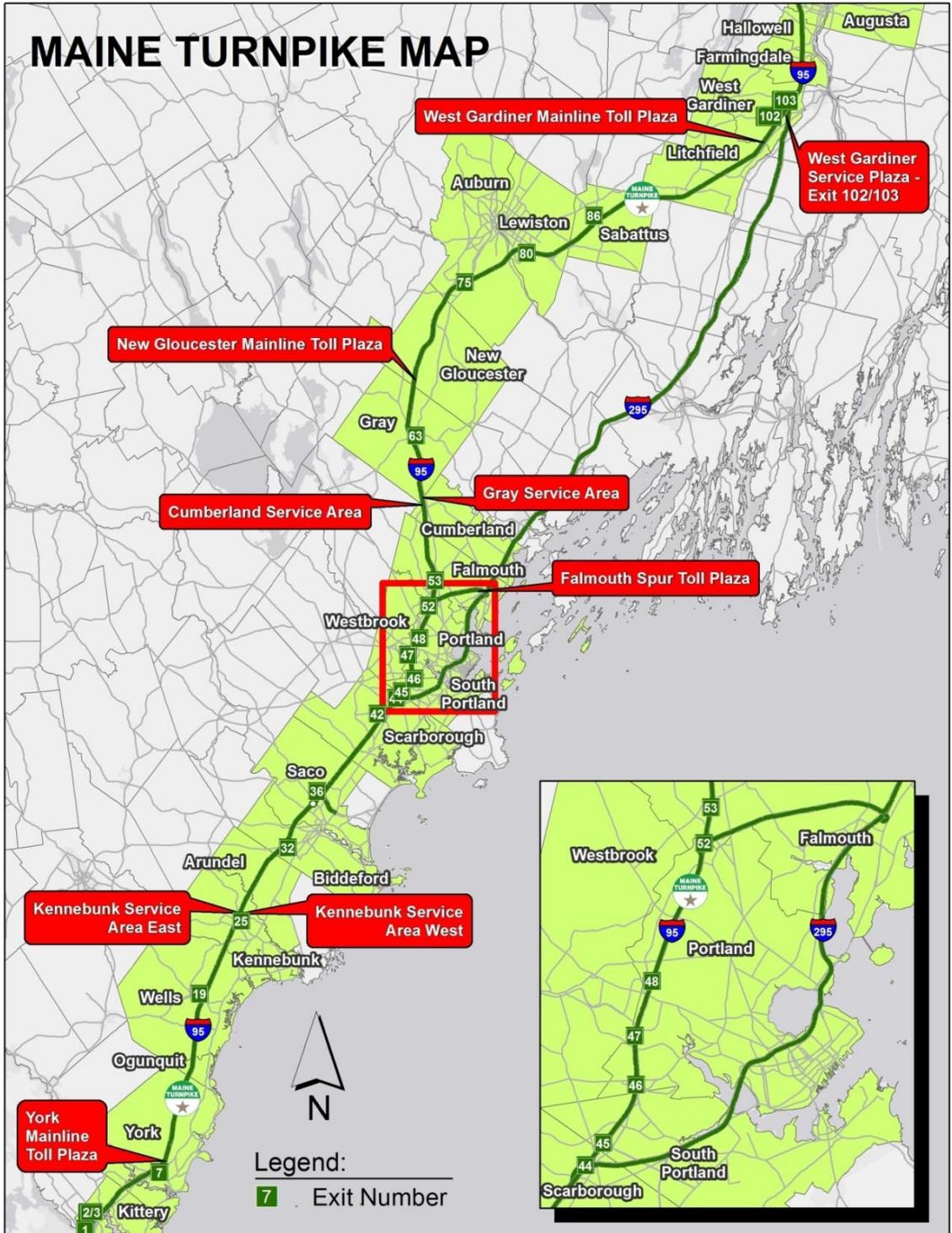
- To manage a top quality highway serving Maine, providing the link between the Maine Department of Transportation and the rest of the United States and Eastern Canada.
- To seek innovative ways to improve service, building on our customer responsive tradition.
- To affect traffic movement that will encourage commerce and emphasize safety.
- To provide excellent maintenance on a daily and long term basis.
- To involve the talents and experience of our employees.
- To use tolls, fees, and the Maine Turnpike Authority's unique revenue bonding capability to build partnerships that will benefit Maine transportation.
- To serve as facilitator for additional corridor needs.
- To assist in implementing corridor improvements that clearly demonstrate benefits relevant to the Maine Turnpike.
- To cooperate with local, regional, state, and federal policies and initiatives.
- To be sensitive to Maine's special environmental heritage.

## Background

The Maine Turnpike is 110 miles of controlled access divided highway that is the primary highway link between Maine and the rest of the United States (see Figure 1). The Maine Turnpike serves commuter and visitor trips and commercial vehicles trips. The Maine Turnpike, a major north-south highway in the state, extends from Kittery to Augusta. From Spruce Creek in Kittery (mile 2.2) to Scarborough (Exit 44) the Turnpike is a 6-lane divided highway. The remaining 65 miles is a 4-lane divided highway. Associated Turnpike facilities are 195 structures (177 bridges and 18 minor spans), 19 interchanges, 19 toll plazas, five service areas, nine maintenance facilities, and an administration building which houses a retail space and a state police barracks. It also includes a four mile spur from the Turnpike mainline to Route 1 and Interstate 295 in Falmouth.

In 2012, just over 60 million trips traveled the turnpike. Because of Maine's geographical location it relies heavily on roadways to move products and services. Eighty-seven percent of all freight in

Figure 1 – Turnpike Map



Maine moves on highways (the national average is sixty-four percent) and the majority of these trips travel all or some of their trip on the Maine Turnpike. In addition to serving the movement of goods the Maine Turnpike is the lifeline of Maine's tourism industry. Tourism is Maine's number one industry, generating over \$530 million in tax revenues and supporting approximately 180,000 jobs. The vast majority of tourists (eighty percent) travel by vehicle, so the importance of the Maine Turnpike to tourism is significant. The Maine Turnpike also serves as a commuter road for people traveling to and from work in the urban areas. Often times these are shorter trips within one of the urban areas served by the Maine Turnpike.



# History of the MTA

In 1941, the Maine State Legislature passed *An Act to Create the Maine Turnpike Authority* and formed a new, independent state agency, charged with constructing a highway from “some point at or near Kittery to some point at or near Fort Kent.” At the time, it was the largest construction project in Maine history. To make it happen, the Maine Turnpike Authority would establish historic firsts in highway administration, finance, engineering, and operations.

The first section of the 45-mile, four-lane divided highway, was opened in 1947. Soon after the original turnpike was completed, it was extended to Augusta and a four mile spur to US Route 1 in Falmouth was built and completed in 1955. The Federal Highway Act of 1956 authorized the construction of the Interstate Highway System and precluded the need to further extend the Turnpike.



The MTA achieved a financing first through the innovative method of leveraging funds using revenue bonds for highway construction. More than 20 million dollars was raised through bonds sold to private and institutional investors. This landmark use of revenue bonds meant that the only collateral pledged to back the debt was the revenue (tolls and concession rentals) produced by the Turnpike and its assets. In this manner, the Turnpike is different from most state agencies who must pledge the full faith and credit of the state (tax funds) to borrow money. The Maine

Turnpike does not receive state or federal tax dollars. It is funded entirely by tolls and rental revenues from concessionaires operating at service plazas along the highway.

The Maine Turnpike is funded entirely by tolls and rental revenues.

The Maine Turnpike Authority was completely debt free in 1982, and while there was no law mandating that the Authority be abolished and the tolls removed, that was clearly the expectation of many Maine people. In 1982, the Maine Legislature began to consider the implications of abolishing the Turnpike and removing the tolls. After much deliberation and negotiating it was determined that the Maine Turnpike Authority would remain in existence in order to collect funds to properly maintain the road to provide money for capital improvements.

During the 1980s and early 1990s traffic on the southern portion of the Maine Turnpike warranted adding a third lane. The resulting environmental and political dynamics of the MTA attempting to widen this portion of the road resulted in the creation of the Sensible Transportation Policy Act (STPA). The STPA created the following guidelines to evaluate transportation alternatives as part of any major transportation decision.

- Minimize the harmful effects of transportation on public health,



air and water quality, land use, and other natural resources.

- Require a full range of reasonable transportation alternatives be evaluated, giving preference to transportation system management options, demand management strategies, improvements to the existing system, and alternative transportation modes.
- Ensure the repair and maintenance of roads and bridges throughout the State
- Meet the diverse transportation needs of the people of the State.
- Incorporate a public participation process.

In the following six years, the MTA undertook a study in accordance with guidelines of the STPA to evaluate all strategies to address growing traffic congestion. The MTA engaged planning experts and hundreds of Maine citizens in a comprehensive review of all feasible strategies. Several projects were developed or expanded in an effort to reduce congestion. These include adding more spaces to Turnpike park & ride lots, funding of the ZOOM Bus and GO Maine.

At the conclusion of the study, it was apparent these alternatives were not enough to reduce traffic congestion on the Turnpike. In 1997, the MTA asked the Legislature to bring the widening question to referendum and Maine voters overwhelmingly approved the project. In 2004 the thirty mile widening project from York to Scarborough was completed. Not only did this project include an extra travel lane it also comprised many new safety improvements such as larger clear zones and more gradual side slopes.

## Recent Changes at the Maine Turnpike Authority

Recent changes have made the MTA more accountable and transparent to our patrons and our bond holders, centered more control on the Board of the MTA and saved money.

As a result of legislative actions in 2011 the MTA has undergone many changes. In January 2011 the Office of Program Evaluation and Government Accountability (OPEGA), released a report that was largely favorable of the MTA but did recommend a number of changes that have since been implemented. These reforms included: competitive contracting for engineering and other services; tighter controls on travel, meal and credit card expenses; a prohibition on using outside lobbyists; a compliance auditing system; internalization of certain engineering functions; and limits on external contributions. The result of these changes has made the MTA more accountable and transparent

to our patrons and our bond holders, centered more control on the Board of the MTA, and saved money.

In addition to the above changes, in the spring of 2011, the MTA worked with the Legislature's Transportation Committee to create an omnibus Maine Turnpike reform bill. The bill implemented the following:

1. It requires the Authority to maintain a compliance auditing system to ensure adherence to improved financial policies and controls and it requires MTA's corporate secretary and

treasurer to report directly to the Turnpike Board. The compliance auditor checks random transactions on the books of the Turnpike and reports its findings every quarter directly and independently to the Board and to the Legislature's Transportation Committee.

2. Since 1982, the Turnpike has been required to contribute funds to MaineDOT in varying amounts that were seldom defined from year to year. The new law requires the Authority to expend annually an amount equal to 5% of the Authority's operating revenues on "department projects" that are subject to agreement between the MTA and MaineDOT. Not only is the amount now defined but the Turnpike retains joint control over how the money is spent. The Turnpike is able to claim credit against this amount for providing park & ride lots, improvements to interchanges and access roads, alternative transportation initiatives, future corridor studies, and the rebuilding of bridges over the Piscataqua River connecting Maine and New Hampshire. This success in defining the Turnpike's financial relationship to the state has helped to solidify the Turnpike's bond rating.
3. The MTA's annual budget presentation to the Legislature must now include a blending of lines from the Revenue and Reserve Maintenance accounts to provide a clear summary of all related operating costs.
4. Terms for the Turnpike's Board of Directors were reduced from seven years to six and the first appointment for a new Executive Director was made subject to legislative confirmation.
5. The Turnpike is now required to purchase most of its goods and services through competitive procurement. Contracts for engineering services must be awarded in ways that will mitigate any advantage accruing to the general engineering consultant required by the Turnpike bond resolutions (both described on page 21).

The above changes have all lead to the turnpike being more transparent to our patrons and the citizens of Maine, and have set the agenda for how the Maine Turnpike Authority will be doing business moving forward.



# Priorities and Funding

The Maine Turnpike Authority has a legal and financial obligation to the bondholders to properly maintain the highway. The MTA is required by its Bond Resolution to “construct, reconstruct, improve, maintain, operate and repair the Turnpike...” and to “operate or cause to be operated the Turnpike properly and in a sound and economical manner....so that at all times the operation of the Turnpike may be properly and advantageously conducted”<sup>1</sup>. It is this obligation that determines the level of investment required to operate and maintain the Turnpike and helps establish priorities for infrastructure improvements and funding levels required to implement these improvements.

## Establishing Priorities

The Maine Turnpike Authority uses several financial and capital planning documents to help direct and identify the priorities for operating and maintaining the Maine Turnpike and determining if adequate funding is available to address these priorities. These documents include:

- 30 Year Reserve Maintenance and Capital Plan. This 30-year document identifies short and long term investments for the Maine Turnpike based on a compilation of all documents identified and compares these investments to the anticipated funding to ensure that debt service coverage ratios and other bondholder required financial tests are achieved.
- Ten Year Planning Report. This transportation planning report identifies longer term infrastructure projects to maintain and improve service to the users of the Maine Turnpike to operate in a safe and efficient manner.
- Safety and Capacity Study. This study, updated approximately every 5 years, identifies anticipated safety and capacity improvements and associated costs over a forecasted 40-year period.
- 4 Year Capital Investment Plan. Using information from the 30-year Reserve Maintenance and Capital worksheets, the Maine Turnpike identifies specific projects to be constructed over the next four years. This Plan is updated annually.
- Operation and Maintenance Annual Report. This report is a summary document of the Annual inspection required by the Bond Resolution, and provides guidance to the MTA on the condition of the Maine Turnpike and provides recommendations concerning maintenance, operation, insurance, and deposits to be made to the annual Capital Improvement and Reserve Maintenance funds and the Operation and Maintenance Budget.
- Maine Turnpike Policies. The Maine Turnpike currently has several policies that help guide policy and public decisions as they relate to a variety of topic areas. Maine Turnpike policies also identify specific Maine Turnpike actions which can determine project or investment priorities from time to time. MTA policies include<sup>2</sup>: Excess Property Disposition Policy, Impact Fee Policy, Interchange Policy, and Noise Policy.

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<sup>1</sup> MTA Bond Resolution, Section 801, “Operation and Maintenance of the Turnpike.”

<sup>2</sup> All MTA policies can be found on the Maine Turnpike Authority website [www.maineturnpike.com](http://www.maineturnpike.com)

Collectively, these documents provide guidance to the MTA on establishing capital, operation and maintenance, and other investment priorities on the Maine Turnpike.

## **Funding**

The Maine Turnpike is operated and maintained with revenue generated primarily from tolls. A small portion of its revenue comes from the lease payments of Turnpike Service Plaza facilities. No federal or state tax dollars are used on the Maine Turnpike.

The Maine Turnpike recently approved a toll increase beginning in November of 2012 in order to meet anticipated 30-year funding requirements to safely operate and maintain the Turnpike. Toll rates were adjusted on average 20% to raise an additional \$21 million dollars in revenue each year. In addition to the toll adjustment, *other operating expense and budget reduction actions were implemented to achieve a long-term funding stream that meets or exceeds required financial tests.*

To meet the challenges of the future, the MTA must continue its recent efforts to accomplish the accelerated construction and maintenance projects that directly impact public safety and highway efficiency. The continuous demands on an aging highway facility require the capital improvements projects to increase capacity and maintain a safe and efficient highway that meets the State's transportation needs for the future. The proposed Program, discussed in the following section, includes items that are essential to increase capacity, improve safety, preserve structural integrity, and provide for the efficient operation of the Maine Turnpike.

The projects identified in this plan, their scopes, their schedules, and their costs are subject to change due to variations in highway conditions, traffic growth, economic factors, and available revenue. The overall cost of the Ten Year Capital Improvement Plan from 2013 to 2022 is estimated to be \$303 million.

<i>Bridge Rehabilitation and Repair</i>	<i>\$124 million</i>
<i>Pavement Rehabilitation and Maintenance</i>	<i>\$ 80 million</i>
<i>Toll Plaza Improvements AET/ORT*</i>	<i>\$ TBD million</i>
<i>Toll System and Civil Upgrades</i>	<i>\$19 million</i>
<i>Modernization and Widening of Mainline</i>	<i>\$ 6.5 million</i>
<i>ITS and Signing</i>	<i>\$ 8.5 million</i>
<i>Interchange Improvements</i>	<i>\$ 28 million</i>
<i>Maintenance</i>	<i>\$ 26 million</i>
<i>Service Plazas/ Facilities</i>	<i>\$ 5 million</i>
<i>Alternative Transportation Modes</i>	<i>\$ 2 million</i>
<i>Environmental Services</i>	<i>\$4 million</i>

*\*Several toll plaza improvements identified in the Ten Year Plan do not have project costs at this time. This includes improvements at York and Gardiner i-295 mainline toll plazas.*

Additional detail on the projects included in the Ten Year Planning Report can be found in the Major Capital Improvement Projects section. Project details include project name, anticipated year of construction, location, work scope, project duration and preliminary construction value.

The MTA uses information from a variety of sources to determine how and where toll money will be spent on the highway. The Authority also garners information from the traveling public, municipal and state officials and also partners with the MaineDOT on many projects and initiatives. The MTA's outreach efforts are discussed in the next section.

## Community Outreach

### Ongoing Outreach

The MTA coordinates regularly with local municipalities on projects along the turnpike. The MTA has adopted a Public Participation Policy which reflects the MTA's longstanding public participation efforts. Consistent with policy objectives, the MTA regularly holds public meetings relating to facility improvements such as bridge projects and interchanges. These meetings may be advertised in local newspapers, the MTA website, and if appropriate, abutters are sent notifications. These meetings are always open to the public to share comments. The MTA coordinates with the host municipality as to the timing, location, and agenda for these meetings.

The MTA staff also holds individual meetings annually with local officials from all the municipalities along the Turnpike corridor. The purpose of these meetings is to discuss any future projects in the region, any outstanding or new issues and/or concerns, and to update the community on any new information regarding the Turnpike as well as get input from the municipalities. These meetings have been very useful and have opened the lines of communication between the municipalities and the Maine Turnpike staff. The MTA staff also attends monthly Metropolitan Planning Organization meetings along the Turnpike corridor. These meetings include the following committees: Portland Area Comprehensive Transportation System (PACTS) Executive, Policy, Planning, Transit, and Technical; Androscoggin Transportation Resource Center (ATRC), Policy and Technical; and Kittery Area Comprehensive Transportation System (KACTS) Policy. These committees give the Turnpike an opportunity to participate with communities along the Turnpike, with respect to regional transportation planning and creation of transportation policy.



## **Partnering with the Maine Department of Transportation**

The MTA and the MaineDOT partner regularly on studies, transportation initiatives, and infrastructure projects that directly or indirectly affect both transportation agencies. This long-standing partnering approach helps to better coordinate transportation decisions throughout the State of Maine, particularly where projects impact the traveling public. An example of this coordination was in 2010, when MaineDOT started a large project on the I-295 corridor in the Portland Area, which presented significant traffic control issues. MaineDOT and the MTA coordinated to inform travelers of the expected delays and to encourage travelers to use the turnpike as an alternative route. The MTA scheduled projects in the Portland area around the I-295 project to avoid construction conflicts. All coordination efforts were shared with the municipalities and the public.

The MTA also partners with the MaineDOT on transportation studies, programs, and projects. Two recent studies are the Central York County Transportation Study and the Gorham East-West Corridor Study. The MTA partners with the MaineDOT on capital improvement projects, such as the Lewiston Interchange and the Auburn Interchange Improvements. The MTA and MaineDOT work closely with local agencies to provide, travel demand management programs. The MTA will continue to look for ways to partner and coordinate with the MaineDOT to improve Maine's overall transportation network.

## **Outreach for this 10 Year Planning Report**

### **Public Meeting**

A public meeting was held on December 17<sup>th</sup> at the Maine Turnpike Authority Administrative building in Portland. At the meeting MTA staff presented a power point on the plan and answered questions. The notes from the meeting can be found in the appendix.

### **FACTS, ATRC, and KACTS Presentations**

On December 6<sup>th</sup>, 2013 MTA staff updated all the statewide MPO's on the 10 Year Planning Report. This included letting them know to find the plan on the MTA's website and how to provide comments. The MPO's were also encouraged to let their members know about the plan and the meeting.

### **Summary of Written Comment**

The Maine Turnpike Authority received 5 email comments on the Plan. One suggested putting up electronic signs before the entrances to the turnpike and suggested more high speed E-ZPass lanes. Another comment was about congestion at the exit 36 ramps and the possibility of adding an exit on the Route 112 overpass. One commenter covered the topics of a second E-ZPass lane in Saco, adding an interchange between Wells and York and looking at alternative sources of income. Another comment was regarding the price of tolls. The issues of toll equity and the importance of freight movement were addressed as well as watershed management planning.

Copies of these comments can be found in the appendix.

## Trends

Many trends external to Maine Turnpike operations affect the MTA. Reduced or stagnant traffic volumes caused by poor weather conditions can impact overall turnpike revenue. Conversely, strong economic development in the state can spur increases in commercial vehicle traffic which can have a positive effect on toll revenues. Finally, trends in technology can influence how patrons pay their tolls and may direct toll system technology decisions.

This section evaluates three important trends of the Maine Turnpike:

- *Traffic*
- *Patron payment*
- *Tolling*

Each of these trends is described in detail below.

### Traffic

The MTA collects and organizes extensive amounts of traffic data Turnpike-wide each year. The data consist of hourly traffic volumes collected by the Authority's traffic count stations, which are located at every on-ramp, off-ramp, and mainline segment of the highway, and are supplemented by data gathered at the toll plazas regarding type of vehicle and type of payment.

Understanding trends in traffic on the Maine Turnpike is important for two reasons:

*To forecast future toll revenue* – knowing the patterns of *average daily traffic*, as well as payment type and type of vehicle, allows the MTA to estimate future revenues.

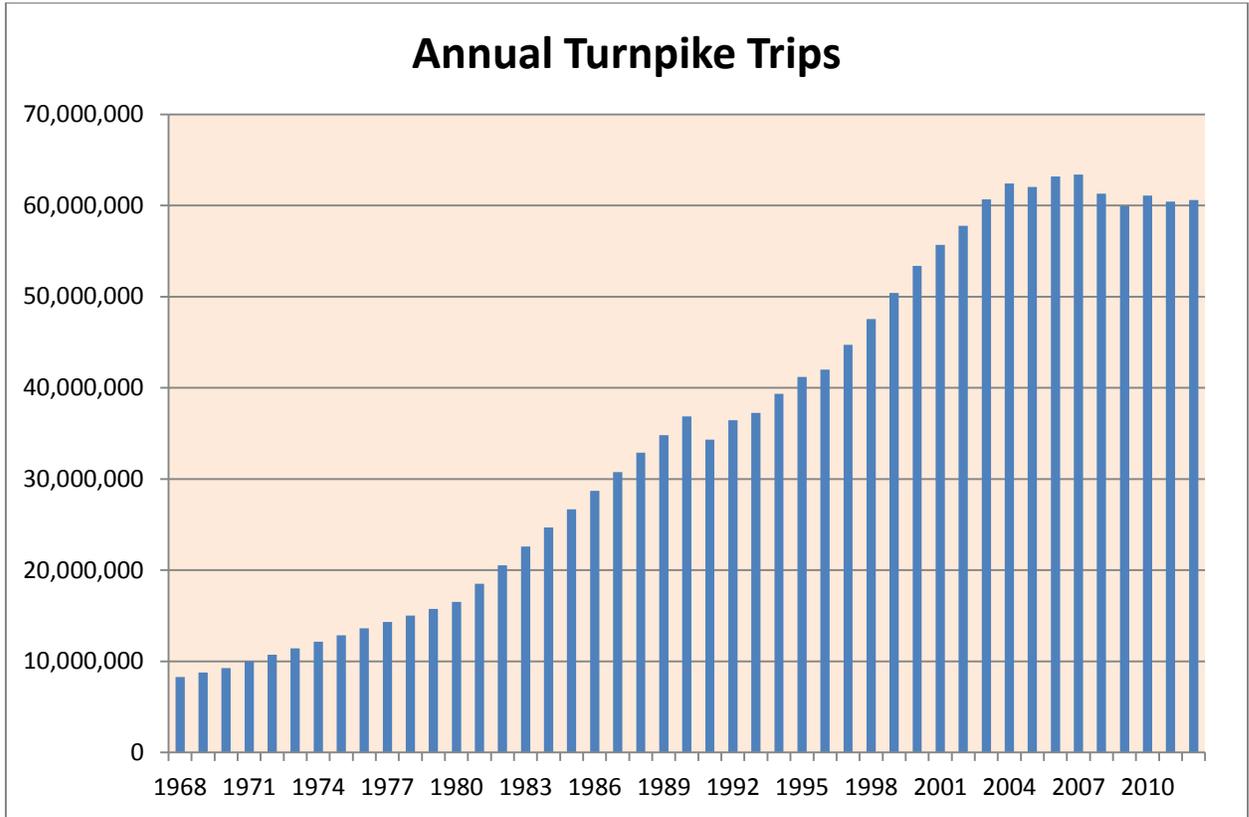
*To estimate the peak hour traffic demand* – knowing the patterns of the *design hour traffic* allows the MTA to plan for needed safety and capacity improvements to the different roadway segments of the Turnpike as well as the toll plazas.

### Annual Turnpike Trips

Historically, Maine Turnpike traffic has experienced steady growth. In 1968, a total of 8.3 million vehicles traveled on the Turnpike. By 2012, this number had risen to 60.6 million – a

seven-fold increase in four decades. Figure 2 illustrates how the number of vehicles on the Turnpike has grown from 1968 through 2012.

**Figure 2 - Maine Turnpike Annual Trips, 1968-2012**



As Figure 2 illustrates, growth in the number of trips has been robust in the past, averaging about 4.6% per year over the past 40 years. However, the rate of growth has fluctuated over time. From 1982 to 1989, annual trips grew at a rate of nearly 8%. Similarly high growth was seen from 1996 through 2004, when trips grew by about 5% per year. However, there have been periods when trips have declined. Annual trips fell from 1990 through 1992, and they have been stagnant since 2008.

#### **Average Annual Daily Traffic**

Annual Average Daily Traffic (AADT) is the total volume of traffic on a highway segment for one year, divided by the number of days in the year. The 2012 AADT was summarized for each

highway segment and interchange ramp along the Turnpike. This AADT data identifies the volume of traffic moving through each mainline segment on an 'average' day of the year; in doing so, it assists future planning by providing a baseline number to be analyzed.

Figure 3 provides a summary of Turnpike AADT for 2012. Each interchange is illustrated by a cluster of four boxes, each representing ramp merging or diverging to and from the mainline. The boxes to the left of the center line represent the southbound ramps; boxes to the right represent the northbound ramps. Boxes between each cluster represent the AADT for the adjacent segment of mainline.

Figure 3 illustrates the following for the year 2012:

- Average total recorded vehicles per day – 165,563
- Northbound vehicles per day – 82,313
- Southbound vehicles per day – 83,250
- Total vehicles for 2012 – 60,596,022
- The mainline segment between the Saco and Scarborough exits carried the heaviest average volume – 67,047 vehicles per day
- The Biddeford and Saco interchanges have heavier traffic volumes to and from the North (Portland area) than to and from the South.
- The Portland/Westbrook, Falmouth, West Falmouth, and Gray interchanges have heavier traffic volumes to and from the South (Portland area) than to and from the North.





## AADT Forecasts

An important element in developing a ten-year plan is estimating the future travel demand for the Turnpike. AADT forecasts for the next ten years were developed as part of the 2012 Safety and Capacity Study and utilized as part of this Report. This in turn is used to estimate future revenues and to determine the extent of the maintenance and improvement programs.



Travel demand and patterns are a function of the location and extent of human activities. More specifically, travel demands are affected by the location and density of housing, employment, shopping opportunities, schools, services, recreational opportunities, etc. Travel demands are also affected by economic factors such as income, car ownership, number of jobs per household, etc. Growth in travel demand is generally correlated to changes in population, employment, land uses, and economic factors.

As previously indicated in Figure 2, there has recently been little to no growth in traffic on the turnpike. It is expected that this flat trend will continue through 2013. Based on information that was gathered, the estimate for baseline traffic levels in 2013 is estimated to be about 3-5% lower than it was in 2008.

Different regions of the Turnpike have varying growth rates.

Different regions of the Turnpike have varying growth rates, with most mainline sections growing an average of 0-2% per year. The overall average peak hour growth rate for the Turnpike between 2000 and 2012 was 1.1%. It was decided that the overall annual growth rate of 1.1% for the Turnpike should be used to estimate future peak hour traffic growth instead of varying growth rates for the different regions of the Turnpike. Recent toll rate adjustments have had varying impacts on traffic growth in the different regions of the Turnpike, and it can be expected that the recent November 2012 toll adjustment will not have similar impacts to the different regions. The assumed growth rate value of 1.1% is comparable to the traffic growth rate used in recent traffic and revenue projections.

## Traffic and the Economy

On a day-to-day basis, Maine Turnpike traffic is closely tied to variables such as the cost of fuel and the weather. However, over the past six years, Turnpike usage on a monthly basis has been more closely correlated with total Maine wage and salary employment. Maine employment and tolled Turnpike transactions both reached their peak at approximately the same time, in late 2007 and early 2008. Similarly, both fell by 4-5% and reached a subsequent low point about two years later. By mid-2012, both measures were trending gradually upward, but neither had reached their highs established over four years earlier.

Other key other economic trends such as growth in Gross Domestic Product and population growth also affect Maine Turnpike traffic. Recent economic trends are consistent with traffic trends which indicate little to no growth over the past several years. Recent economic trends prepared as part of the 2012 toll adjustment, show a stronger national recovery from recession beginning in 2012 and continuing through 2015, after which growth rates slow as the economy shifts back towards its long term growth trend. Maine is not expected to see significant employment growth until 2014, lagging notably behind U.S. growth rates. The same is the case with population growth. Additionally, though oil prices will likely be volatile throughout the forecast period, they are expected to remain relatively high, averaging \$108 per barrel.

## **Patron Payment**

Patrons on the Maine Turnpike pay tolls in one of two ways, by cash or electronically using E-ZPass. This section summarizes the trends in patron payment type, provides insight to cash patrons on the Maine Turnpike through the recently completed cash license plate survey, and discusses current and anticipated tolling trends on the Maine Turnpike.

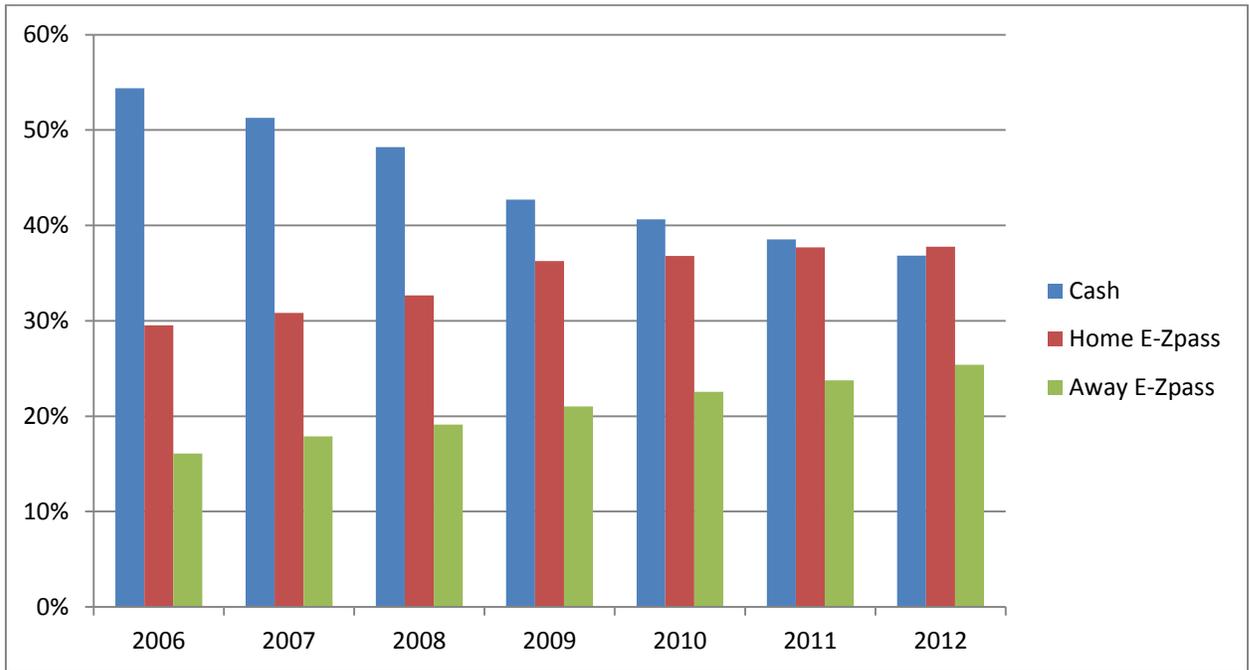
### **Payment Trends**

In February 2005, the MTA converted from its early generation of electronic toll collection technology to E-ZPass, a system that is now accepted on highway, tunnel, and bridge toll facilities across 15 states in the eastern half of the United States.

Turnpike customers from Maine and other states are increasingly embracing E-ZPass. Every year the number of E-ZPass transactions grows while the number of cash transactions declines. Figure 6 shows the E-ZPass share for all revenue transactions for the years 2006-2012.



**Figure 4 – Payment Trends (2006-2012)**



As seen from Figure 4, the continuing trend is fewer cash patrons and more E-ZPass patrons, both in and out of state. The growth of Maine E-ZPass accounts has slowed since 2009, while out of state E-ZPass accounts continue to increase. Cash transactions now account for just more than one-third of all transactions on the Maine Turnpike. This is a marked change since 2007 when about 50% of all transactions were cash. This can be contributed to several factors, including trends in toll technology, reduced cost of E-ZPass transponders, MTA E-ZPass marketing, and discounts in in-state E-ZPass toll rates versus cash toll rates.



Future growth in E-ZPass revenue is anticipated, however, this growth is likely to be modest without any significant change in tolling technology.

However, cash paying patrons continue to be a sizeable portion of Turnpike travelers – about 35% of all transactions. Maine continues to have a higher cash transaction percentage than many other toll agencies in the northeast and nationwide. In an effort to better understand this phenomenon, the MTA initiated a cash patron survey in 2012 to determine where (which state or Canadian province) Maine Turnpike cash customers were originating from. This survey collected license plate information from cash users at selected toll plazas along the Maine Turnpike. This information will help inform the MTA where cash users originate and in turn guide the MTA’s direction on current and future toll system decisions.

## Expansion of the E-Z Discount Plan

As part of the toll adjustment in November 2012, the MTA also created the E-Z Discount Plan for all MTA based E-ZPass users who met specific thresholds for number of trips per month. The original commuter program, established in 1982, required patrons to pre-pay each quarter for specific interchange to interchange fares in return for a minimum of a 50% discount. The new E-Z Discount Plan eliminates the need for the quarterly pre-pay and provides up to a 50% discount for patrons who use the Maine Turnpike frequently. Discounts are taken automatically at the end of each month and the program is open to all in-state E-ZPass users.

## Tolling Trends

Moving forward, the MTA will continue to look for innovative ideas and improvements to tolling that reduces congestion and vehicle emissions, improves safety, is fiscally prudent, promotes the use of E-ZPass, and is consistent with trends in toll technology around the country. Current tolling initiatives recently implemented or under consideration by the MTA include:

Conversion to ORT. In April of 2013, the MTA converted the existing mainline toll plaza in New Gloucester to an Open Road Tolling (ORT) facility. This ORT facility allows vehicles equipped with E-ZPass to bypass cash lanes and travel at highway speeds, thus eliminating the need for thousands of vehicles each day to travel through traditional cash toll lanes or to slow down in traditional E-ZPass lanes. Additional mainline and interchange toll plazas are under evaluation by the MTA for conversion to ORT.



Replacement of the existing cash toll system. The MTA is currently underway with the replacement of the existing cash toll system. The current system, installed in 2006, is outdated and needs to be replaced. Additionally, replacement parts are no longer available and the MTA will use recycled lane controllers until such time as the system is fully replaced. This work is anticipated to be completed by the end of 2015.

Evaluation of the next generation of toll collection. Tied very closely to the replacement of the existing cash toll system, the MTA has begun to evaluate other possible toll collection methods at mainline and interchange toll plazas including All Electronic Tolling (AET) and Open Road Tolling (ORT). This evaluation will consider both individual toll plaza locations as well as a system wide approach.

# Transportation System and Infrastructure

The demands placed on the Turnpike facilities are enormous. The roadway, bridges, interchanges, toll plaza, service areas and maintenance areas are subjected to increasing stress due to age, heavy levels of traffic, and the demands of the harsh Maine climate. To ensure the sound condition and effective operation of the Turnpike, the MTA funds and implements an aggressive maintenance and improvement program.

The MTA, as part of its contract with the bondholders called the “General Turnpike Revenue Bond Resolution”, must employ a General Engineering Consultant (GEC) to perform certain duties. This is required to assure the bondholders that the highway is properly maintained and their investment is protected. Among the duties of the GEC is the performance of a visual inspection of the entire Maine Turnpike each year, typically during the period of May through July. This inspection covers all portions of the Turnpike including:

- pavement
- cut sections and embankments
- bridges
- roadway lighting
- drainage structures and ditches
- signs and pavement markings
- interchanges (including toll plazas, utility buildings, ramps and equipment)
- service areas
- maintenance areas
- other roadway structures and features



The inspection is performed by teams who are comprised of structural and highway engineers and, if needed, specialists are enlisted for other types of structures and features such as lighting, heating, electrical systems, and underwater inspection. A summary of the detailed findings of the inspection, as well as an Annual Report, is submitted to the MTA's Executive Director and reviewed for acceptance by the MTA Board. The results of this inspection are the basis for the formulation of the ensuing and future years' Reserve Maintenance and Capital Improvement Program as recommended to the MTA Board by the GEC. The system used to rate the condition of the Turnpike facilities is generally consistent with rating criteria established by the Federal Highway Administration for its roadways and bridges.

The 2013 inspection of Turnpike facilities indicates that the Maine Turnpike continues to operate in a safe and efficient manner and has been maintained in generally good repair, working order, and condition. The inspection found that the Turnpike presents a good appearance through the continued efforts of the Authority's maintenance forces. As noted in the GEC's Annual Report,

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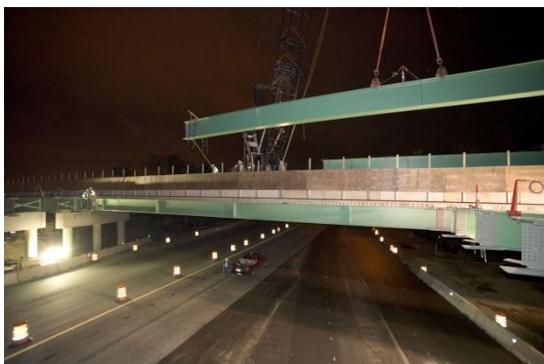
however, a number of the Turnpike's bridge decks, sections of the roadway riding surface, and several support facilities are approaching the end of their structural lifespans, thereby requiring an increased amount of maintenance and rehabilitation.

The projects that are identified in this Ten Year Planning Report are consistent with those that are identified in the GEC's Annual Report. In addition, the following MTA studies and reports provided information that was used to develop the project list.

- 2012 Maine Turnpike Needs Assessment, System wide Traffic Operation and Safety Study
- 2013 Maine Turnpike Authority 30 Year Financial Plan
- 2013 Operations and Maintenance Annual Report
- 4 Year Capital Improvement Plan (2014-2017)

Table 1 summarizes the project list by municipality as well as project type. These are the projects which have been identified as part of the Annual Inspection and can also be found in the 4 Year Capital Improvement Plan. All projects are subject to change in scope and in schedule due to the ongoing demands of the system. The MTA continually inspects, analyzes, and monitors the condition of the Maine Turnpike. This project list and anticipated start dates are ever-changing due to the needs of the infrastructure of the Turnpike, available funding, and maintenance and construction costs. Because of this, some projects may be delayed and some projects may be accelerated. The types of projects that are listed under the municipalities are the following:

Pavement rehabilitation- To maintain pavement quality, the MTA has established a program of planned pavement rehabilitation to ensure roadway safety in the most cost effective manner possible. Studies indicate that pavement rehabilitation costs substantially less when pavement is in good condition than when pavement is allowed to deteriorate to poor condition. The pavement rehabilitation generally consists of the removal of the top layer of pavement on the travel lanes (and shoulders where deemed necessary), cross slope to improve drainage, repair of damaged pavement, sealing of cracks, reconstruction of drainage structures, berm drop-off correction, and overlaying the roadway with new bituminous concrete pavement. Mainline pavement sections are typically rehabilitated every 12-15 years.



Bridge rehabilitation and repair- The MTA has currently identified multiple bridges that will require significant repairs over the next ten years, but not complete rehabilitation. Repair typically involves concrete deck and substructure repair, joint repair or replacement removal and replacement of waterproof membrane and bituminous concrete wearing surface.

(Rehabilitation is more extensive and typically

involves replacement and or widening of the existing concrete deck). In addition either type of project may include raising the bridge to improve the clearance between the bottom of the superstructure and the Turnpike roadway. As part of the annual bridge inspection program, the condition of these structures will be carefully reviewed to determine when the repairs are warranted as well if more comprehensive rehabilitation is warranted.

Interchange improvements- Depending on the needs identified at a specific location, interchange improvements can range from adding additional capacity to complete redesign. The MTA has an existing interchange policy in which the Authority evaluates the need for new interchanges. Existing interchanges are evaluated based on performance and often times in conjunction with another capital improvement project.

Modernization and widening of the Turnpike- The modernization of the Turnpike is an ongoing effort to upgrade the roadway and associated structures to meet current safety and design standards. The reconstruction work involves constructing new bridges with abutments set back to allow for additional future travel lanes, shoulder widening and clear zones, as well as increased vertical clearances. The evaluation of the need for modernization will be ongoing throughout the next 10 years. While a widening of any section of the turnpike is not expected for several years, the beginning stages of this project will be ongoing. Widening the roadway, once it has reached its capacity, will eliminate undue delays to motorists and will, in turn, reduce emissions and improve air quality. The tasks that may be completed within the next 10 years are the following:

- Analyze traffic growth and forecasts to determine when widening will be necessary,
- Monitor traffic volumes and safety data to ensure that the current highway is meeting the needs of patrons
- Beginning to gather information for the permitting process

Maintenance & Service Plaza facility improvements-In general facility improvements include: roof repairs and or replacements on a cycle which maximizes the life to the structures, mechanical and electrical upgrades as needed, such as LED lighting conversions. They also include boiler replacements and upgrades and conversion to natural gas where available.

Toll plaza improvements- The MTA has 19 toll plazas that include tollbooths, canopies, utility buildings, and other structures. The tollbooths and the canopies are rated in fair-to-good condition, while other components, such as the concrete slabs, bumpers, and tunnels are rated in fair condition. Over the past several years repairs in these areas have been made, however, additional repairs to the concrete slabs, bumpers, and the tunnels are needed in the near future. Additional operational improvements such as converting existing cash lane sot full-time E-ZPass lanes as more drivers purchase E-ZPass transponders, adding additional lanes to accommodate growth in traffic or converting slow-speed (10 mph) E-ZPass lanes to highway speed (65 mph) open road tolling lanes are also under review.

Total preliminary Construction Value for Project shown in initial year is for project duration. If additional funds are shown in subsequent years, the project is being built in phases.

\*Projects that may qualify as MTA contribution to MaineDOT.

**12/16/2013**

Year	Mile Marker	Project Name	Municipality	Preliminary Construction Only Value for Project not including the Engineering	Preliminary work scope	Key Code-30 Year Plan Reference	Anticipated Project Duration (Months)	Planning/ Design Years	Estimated Year(s) of Construction
2014	3.1	Cutts Hill Road Underpass	Kittery	\$70,000	Girder strengthening repairs	2300-Bridge Repair	5	2014	2015
	5.2	York River Bridge Repairs	York	\$5,202,542	Pile jacket Repair, pin and hanger repair, construct concrete wearing surface	2300-Bridge Repair	15	2013	2014-2015
	23.3 to 30	Mainline Pavement Rehabilitation	Kennebunk, Arundel	\$5,710,592	Pavement Rehabilitation	2050-Pavement Rehab and Maintenance	4	2013	2014
	25	Mousam River Overpass Repairs	Kennebunk	\$1,269,272	Substructure repairs, deck repairs, membrane, and repave	2300-Bridge Repair	4	2013	2014
	27.2	Kennebunk River Overpass Repairs	Kennebunk/Arundel	\$344,772	Substructure repairs, deck repairs, membrane, and repave	2300-Bridge Repair	4	2013	2014
	33	Saco River Overpass Phase II	Biddeford/Saco	\$3,300,000	Cleaning and painting of original structural steel (Non-widened section)	2020-Bridge Painting	24	2012/2013	2014-2015
	46.7	Stroudwater River Overpass repair	Portland	\$926,681	NB Joint replacement, SB deck repair, membrane and pave	2300-Bridge Repair	4	2013	2014
	47.9	MCRR Overpass	Portland	\$350,000	Joint repair	2300-Bridge Repair	4	2013	2014
	50	Forest Ave Overpass	Portland	\$200,000	Joint repair	2300-Bridge Repair	4	2013	2014
	51.2	Riverside Street Overpass	Portland	\$757,359	Joint repairs, substructure repairs, deck repairs, membrane, and repave	2300-Bridge Repair	4	2013	2014
	53-63	Clearing	Falmouth to Gray	\$300,000	Clearing adjacent to roadway	3600-Clearzone Improvements	4	2013	2014
	57 NB to 59 NB	Mainline Pavement Rehabilitation	Cumberland	\$568,218	Pavement Rehabilitation	2050-Pavement Rehab and Maintenance	2	2013	2014
	62.9	Center Street Bridge Repairs	Gray	\$458,212	Bridge deck repair, membrane and pave, joint and backwall repair	2300-Bridge Repair	3	2013	2014
	78.9	Androscoggin River Overpass	Auburn/Lewiston	On Going See 2013	Superstructure strengthening, deck repairs, membrane, and repave. Project bid in 2013. 2013 RM Deposit budget was \$3 million. Additional funds shown for added work.	2300-Bridge Repair	19	2012-2013	2013-2014
	80.3	Reconstruction of Interchange 80 Ramps*	Lewiston	On Going See 2011/2012	Project public notice given and budgeted for in 2011 & 2012. Now expected to bid in late 2013 or early 2014. Phase I & II of overall Interchange configuration is reconstruction of Interchange Ramps. \$8.2 million carried from 2011/12 RM Deposit budgets.	5030-Lewiston Auburn	18	2012-2014	2013-2015
	82.5	No-name River Concrete Repair	Lewiston	\$318,270	Concrete repair	2300-Bridge Repair	2	2013	2014
	84.3	Lisbon Road Bridge Repairs	Sabattus	\$343,119	Substructure repairs, deck repairs, membrane, and repave	2300-Bridge Repair	3	2013	2014
	91	Ferrin/West Road Bridge rehab/replacement	Litchfield	\$1,300,000	Substructure repairs, improve vertical clearance, new concrete deck (remain as one lane bridge)	2010-Bridge Rehabilitation	11	2013	2014
100.2	West Gardiner Toll Plaza	West Gardiner	To Be Determined	To Be Determined		12	2014-2015	2013-2014	
101.7	Route 126 Bridge Repairs	West Gardiner to Augusta	\$584,869	Substructure repairs, deck repairs, membrane, and repave. Improve vertical clearance. (Coordinate schedule with MaineDOT intersection improvement project)	2300-Bridge Repair	5	2013	2014	
102	Route 126/Interchange 102 Intersection Improvements*	West Gardiner	\$350,000	Intersection Improvements. MaineDOT project. MTA portion of funding shown. Total project estimated at \$1.4 million.	6900-New Service Area Gardiner I-95 OR	5	2013-14	2014-15	

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2014 Continued	102.6 to 109.1	Mainline Pavement Rehabilitation	West Gardiner to Augusta	\$3,693,417	Pavement rehabilitation	2050-Pavement Rehab and Maintenance	4	2013	2014
	106.9	Litchfield Road Bridge Rehab	Hallowell	\$1,373,595	Substructure repairs, new concrete deck	2010-Bridge Rehabilitation	9	2013	2014
	106.94	Vaughan Brook	Hallowell	\$200,000	Concrete repair	2300-Bridge Repair	2	2013	2014
	F1.6	Falmouth Road	Falmouth	\$394,864	Substructure repairs, deck repairs, membrane, and repave	2300-Bridge Repair	4	2014	2014
		Clear zone Improvements & Guardrail	To be determined	\$1,158,168	Guardrail and other work to improve clear zone (ccordinated with paving projects and clearing area)	3600-Clearzone Improvements	4	2013	2014
		Electrical/Mechanical Upgrades and Replacement	Undefined Locations	\$250,000	Possible generator replacements, street lighting upgrades, HVAC system repairs or replacements	2400-Electrical/ Mechanical Upgrades and Replacement	4	2013	2014
		Drainage & Slope Repairs	Undefined	\$270,000	Likely in MM102 to 109 area and MM52 to 63 area	2350-Drain and Slope Repair	4	2013	2014
		Pavement Crack Sealing	Undefined	\$75,000	To be defined Fall 2013 and winter 2014 for repairs in summer 2014	2100-Pavement Crack Sealing	4	2013	2014
		Tunnel Rehab	Undefined	\$150,000	To be defined Fall 2013 and winter 2014 for repairs in summer 2014	3000-Toll Plazas Tunnel Rehabilitation	4	2013	2014
		Toll Systems Improvements	York to Gardiner-Upgrades to 23 Locations will be done in phases	\$6,500,000	Replacement of toll system due to age-Phase II	3150-Toll System Replacement	48	2012-2014	2014-2017
	75	Auburn Intersections- MaineDOT project*	Auburn	See 2012	Reimbursement planned to MaineDOT as part of an agreement for improvements to multiple intersections	5030-Lewiston Auburn	6	2011-2013	2013
		Alternative Transportation Modes*	System Wide	\$188,134		1000-Alternatives Analysis & TDM			
		Signs	System Wide	\$26,373		1120-Signs			
	Environmental Services	System Wide	\$338,840		1320-Environmental Services				

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2015	1.8	Route 1 On-ramp Underpass	Kittery	\$125,000	Substructure and Joint Repair-Owned by MaineDOT. Shown for planning purposes.	2300-Bridge Repair	2	2014	2015
	5.2	York River Bridge Repair	York	See 2014	Pile jacket repair, pin and hanger repair, construct concrete wearing surface	2300-Bridge Repair	15	2013	2014-2015
	9.6	Cape Neddick River	York	\$491,727	Culvert repair	2300-Bridge Repair			
	11.8	Jonias River	York	\$458,945	Culvert repair	2300-Bridge Repair			
	11.9	Clay Hill Road	York	\$347,655	Substructure repairs, deck repairs, membrane, and repave	2300-Bridge Repair	4	2014	2015
	19	Wells Interchange -Turning Lane Addition*	Wells	\$1,000,000	Undefined	3910-Interchange Improvements - Exit 19 - Wells	2	2014	2015
	33	Saco River Overpass Phase II	Biddeford/Saco	See 2014	Cleaning and painting of original structural steel (Non widened section)	2020-Bridge Painting	24	2012/2013	2014-2015
	36	Saco Toll Plaza - add EZPass Lane	Saco	\$1,300,000	Additional lane at toll plaza for added traffic volumes and increased EZPass usage. Coordinate with Toll System conversion project.	3900-Interchange Improvements - Saco	6	2013-2014	2015
	44.9	Interchange 45 Underpass	South Portland	\$640,644	Structural modifications, substructure repairs, deck repairs, membrane, and repave	2300-Bridge Repair	5	2014	2015
	46	Jetport Interchange Pavement Rehabilitation	Portland	\$844,132	Pavement rehabilitation- Coordinated w/ the City of Portland Skyway Drive Project	2050-Pavement Rehab and Maintenance	2	2014	2015
	46.4	Jetport Interchange Underpass	Portland	\$557,397	Substructure repairs, deck repairs, membrane, and repave	2300-Bridge Repair	4	2014	2015
	51.2 to 57	Mainline Pavement Rehabilitation	Falmouth, Cumberland, Gray	\$3,394,535	Pavement rehabilitation to be coordinated with Piscataqua River Bridge rehabilitations	2050-Pavement Rehab and Maintenance	4	2014	2015
	51.6	Exit 52 Toll Plaza	Falmouth	To Be Determined	To Be Determined	TBD	TBD	TBD	
	52	Interchange 52 NB off ramp	Portland	\$200,000	Pavement rehabilitation	2050-Pavement Rehab and Maintenance	1	2014	2015
	55.5	Piscataqua River Bridge #28 rehab	Falmouth	\$3,784,332	Reconstruct 4 structures. Maintain 2 lanes of traffic each direction	2010-Bridge Rehabilitation	15	2012-2014	2015
	56.6	Piscataqua River Bridge #31 rehab	Falmouth			2010-Bridge Rehabilitation			
	63-75	Clearing	Gray, New Gloucester, Auburn	\$300,000	Clearing adjacent to roadway	3600-Clearzone Improvements	4	2014	2015
	68.5 to 74.9	Mainline Pavement Rehabilitation	New Gloucester, Auburn	\$3,745,693	Pavement rehabilitation	2050-Pavement Rehab and Maintenance	4	2014	2015
	71.6	Bald Hill Road	New Gloucester	\$614,004	Substructure repairs, deck repairs, membrane, and repave	2300-Bridge Repair	3	2014	2015
	80.3	Lewiston Interchange Construction Phase III*	Lewiston	\$9,615,998	Phase III & IV of new interchange configuration: Construct new bridge, raise mainline, build final ramps & install traffic signal. Likely bid in 2014.	2010-Bridge Rehabilitation	24	2013-2014	2015-2017
	102	Ramp E Underpass (I-295 Toll Plaza)	West Gardiner	\$1,441,327	Bridge over toll plaza - under review. To be coordinated with north end toll study	2300-Bridge Repair	4	2013-2014	2015
	F3.60	Route 9 Bridge Repairs	Falmouth	\$351,109	Substructure repairs, deck repairs, membrane, and repave	2300-Bridge Repair	4	2014	2015
		Clear zone Improvements & Guardrail	To be determined	\$634,176	Guardrail and other work to improve clear zone	3600-Clearzone Improvements	4	2014	2015
		Roof Replacement	Undefined	\$100,000	To be defined Fall 2014 and winter 2015 for repairs in summer 2015	2450-Roof Replacement	4	2014	2015
		Weather Info/Automatic Vehicle Locators (GPS)	Kittery to Augusta	\$450,000	Installation/implementation of technology in Winter Maintenance operations	6150-Weather Towers/AVL	12	2012-2014	2015-2017
		Drainage & Slope Repairs	Undefined	\$333,000	To be defined Fall 2014 and winter 2015 for repairs in summer 2015	2350-Drain and Slope Repair	4	2014	2015
		Pavement Crack Sealing	Undefined	\$75,000	To be defined Fall 2014 and winter 2015 for repairs in summer 2015	2100-Pavement Crack Sealing	4	2014	2015
		Toll Systems Improvements	York to Gardiner-Upgrades to 23 Locations will be done in phases	\$7,000,000	Replacement of toll system due to age - Phase III	3150-Toll System Replacement	48	2012-2014	2014-2017
	Signs	System Wide	\$26,637		1120-Signs				
	Environmental Services	System Wide	\$348,497		1320-Environmental Services				
	Alternative Transportation Modes*	System Wide	\$190,956		1000-Alternatives Analysis & TDM				

Year	Mile Marker	Project Name	Municipality	Preliminary Construction Only Value for Project not including the Engineering	Preliminary work scope	Key Code-30 Year Plan Reference	Anticipated Project Duration (Months)	Planning/ Design Years	Estimated Year(s) of Construction
2016	44.3	Exit 44 Toll Plaza	Scarborough	To Be Determined	To Be Determined		TBD	TBD	TBD
	57 to 64.4	Mainline Pavement Rehabilitation	Cumberland, Gray	\$3,858,064	Pavement rehabilitation	2050-Pavement Rehab and Maintenance	4	2015	2016
	61.6	Hunts Hill Road Bridge Repair	Gray	\$547,518	Substructure repairs, deck repairs, membrane, and repave	2300-Bridge Repair	3	2015	2016
	63	Interchange 63 Pavement Rehabilitation	Gray	\$869,456	Rehabilitate Pavement Exit 63/coordinate with SB on/off ramp project	2050-Pavement Rehab and Maintenance	2	2013-2015	2016
	63.1	Gray Interchange Improvements*	Gray	\$8,320,000	Construct new Southbound on/off ramps on west side, eliminate existing Interchange Bridge (or rehabilitate existing bridge)	3904-Interchange Improvement Gray	9	2012-2015	2016
	75-83 F 0 to F 3.4	Clearing	Auburn, Lewiston	\$300,000	Clearing adjacent to roadway to be coordinated with Exit 80 Project	3600-Clearzone Improvements	4	2015	2016
			Falmouth			3600-Clearzone Improvements			
	78.9	Androscoggin River Overpass repairs	Auburn/Lewiston	\$2,000,000	Substructure repairs	2300-Bridge Repair	6	2015	2016
	80.3	Lewiston Interchange Construction Phase III*	Lewiston	See 2015	See 2015-Shown for Coordination	2010-Bridge Rehabilitation	24	2013-2014	2015-2017
	99	Lunts Hill Underpass	Litchfield	\$1,383,250	Substructure repairs, improve vertical clearance, new concrete deck	2010-Bridge Rehabilitation	9	2015	2016
	106	Maple Street Underpass	Farmingdale	\$1,350,430	Substructure repairs, new concrete deck	2010-Bridge Rehabilitation	9	2015	2016
	F 0 to F 3.4	Mainline Pavement Rehabilitation	Falmouth	\$2,049,597	Pavement rehabilitation	2050-Pavement Rehab and Maintenance	2	2015	2016
		Clear zone Improvements & Guardrail	Undefined	\$1,275,000	Guardrail and other work to improve clear zone	3600-Clearzone Improvements	4	2015	2016
		Weather Info/Automatic Vehicle Locators (GPS)	Kittery to Augusta	See 2015	Installation/implementation of technology in Winter Maintenance operations	6150-Weather Towers/AVL	12	2012-2014	2015-2017
		Drainage & Slope Repairs	Undefined	\$394,000	To be defined Fall 2015 and winter 2016 for repairs in summer 2016	2350-Drain and Slope Repair	4	2015	2016
		Pavement Crack Sealing	Undefined	\$75,000	To be defined Fall 2015 and winter 2016 for repairs in summer 2016	2100-Pavement Crack Sealing	4	2015	2016
		Toll Systems Improvements	York to Gardiner-Upgrades to 23 locations will be done in phases	\$5,350,000	Replacement of toll system due to age - Phase IV	3150-Toll System Replacement	48	2012-2014	2014-2017
		Signs	System Wide	\$26,903		1120-Signs			
	Environmental Services	System Wide	\$358,430		1320-Environmental Services				
	Alternative Transportation Modes*	System Wide	\$193,820		1000-Alternatives Analysis & TDM				

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2017	0-2	Capacity Constraints*	Kittery	\$3,000,000	Undefined-Ownded By MaineDOT. Shown for Planning Purposes.		TBD	2014-2016	2017
	6.2	Cider Hill Road	York	\$479,005	Substructure repairs, deck repairs, membrane, and repave	2300-Bridge Repair	5	2016	2017
	7.3	York Toll	York	TBD	TBD	6800-Toll Plazas- York Toll			
	44.6	Spring Street	Scarborough	\$421,581	Substructure repairs, deck repairs, membrane, and repave	2300-Bridge Repair	5	2016	2017
	74.9 to 80.8	Mainline Pavement Rehabilitation	Auburn, Lewiston	\$3,663,352	Pavement rehabilitation-to be coordinated with Exit 80 Project	2050-Pavement Rehab and Maintenance	4	2016	2017
	75.3	Exit 75 Overpass Repairs	Auburn	\$542,734	Substructure repairs, deck repairs, membrane, and repave	2300-Bridge Repair	3	2016	2017
	79.4	River Road Overpass Repairs	Lewiston	\$830,888	Substructure repairs, deck repairs, membrane, and repave - Coordinate with Exit 80 Project	2300-Bridge Repair	3	2016	2017
	79.6	Goddard Road Underpass Repairs	Lewiston	\$722,383	Substructure repairs, deck repairs, membrane, and repave - Coordinate with Exit 80 Project	2300-Bridge Repair	3	2016	2017
	80.3	Lewiston Interchange Construction Phase III*	Lewiston	See 2015	See 2015-Shown for Coordination	2010-Bridge Rehabilitation	24	2013-2014	2015-2017
	87.5	Fisher Road Underpass Repairs	Sabattus	\$410,996	Substructure repairs, deck repairs, membrane, and repave	2300-Bridge Repair	5	2016	2017
	90	Maxwell Road	Sabattus	\$1,622,984	Substructure repairs, improve vertical clearance, new concrete deck (remain as one lane bridge)	2010-Bridge Rehabilitation	9	2016	2017
	91.9	Center Street Underpass Repairs	Litchfield	\$402,270	Substructure repairs, deck repairs, membrane, and repave	2300-Bridge Repair	5	2016	2017
	95.1	Small Road	Litchfield	\$1,817,724	Substructure repairs, improve vertical clearance, new concrete deck	2010-Bridge Rehabilitation	9	2016	2017
	98 to 102.6	Mainline Pavement Rehabilitation	Litchfield to West Gardiner	\$2,856,173	Pavement rehabilitation	2050-Pavement Rehab and Maintenance	4	2016	2017
	100-109	Clearing	West Gardiner, Farmingdale, Hallowell, Augusta	\$300,000	Clearing adjacent to roadway	3600-Clearzone Improvements	4	2016	2017
		Clear zone Improvements & Guardrail	Undefined	\$475,000	Guardrail and other work to improve clear zone	3600-Clearzone Improvements	4	2015	2016
		Weather Info/Automatic Vehicle Locators (GPS)	Kittery to Augusta	See 2015	Installation/implementation of technology in Winter Maintenance operations	6150-Weather Towers/AVL	12	2012-2014	2015-2017
		Drainage & Slope Repairs	Undefined	\$405,000	To be defined Fall 2016 and winter 2017 for repairs in summer 2017	2350-Drain and Slope Repair	4	2016	2017
		Pavement Crack Sealing	Undefined	\$100,000	To be defined Fall 2016 and winter 2017 for repairs in summer 2017	2100-Pavement Crack Sealing	4	2016	2017
		Toll Systems Improvements	York to Gardiner-Upgrades to 23 locations will be done in phases	TBD	Replacement of toll system due to age - carry forward from 2013-2016	3150-Toll System Replacement	48	2012-2014	2014-2017
	Signs	System Wide	\$27,172		1120-Signs				
	Environmental Services	System Wide	\$368,645		1320-Environmental Services				
	Alternative Transportation Modes*	System Wide	\$196,727		1000-Alternatives Analysis & TDM				

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2018 Through 2023 South of Portland	0 to 2SB	Add a Lane to Mainline*	Kittery	\$3,500,000	Add a lane to Mainline	3717-Mile 0-2 NB Widening	This area is currently owned by MaineDOT. Shown for planning purposes only.		
	0.6	Dennett Road*	Kittery	\$935,556	Cleaning and Painting of Structural Steel	2020-Bridge Painting			
	0.6	Dennett Road*	Kittery	\$622,577	Bridge Repairs	2300-Bridge Repair			
	1.1	Exit 2*	Kittery	\$4,500,000	Widen Ramp	3910 Interchange Improvements - Exit 2 - Kittery			
	1.4	Route 236*	Kittery	\$1,956,205	Cleaning and Painting of Structural Steel	2020-Bridge Painting			
	1.4	Route 236*	Kittery	\$1,660,492	Bridge Repairs	2300-Bridge Repair			
	1.75	Route 1 Off-Ramp*	Kittery	\$496,766	Cleaning and Painting of Structural Steel	2020-Bridge Painting			
	1.75	Route 1 Off-Ramp*	Kittery	\$516,786	Bridge Repair	2300-Bridge Repair			
	1.8	Route 1 On-Ramp*	Kittery	\$138,423	Bridge Repair	2300-Bridge Repair			
	1.8	Route 1 On-Ramp*	Kittery	\$372,410	Cleaning and Painting of Structural Steel	2020-Bridge Painting			
	2.2	Spruce Creek Bridge*	Kittery	\$691,530	Bridge Repairs	2300-Bridge Repair			
	2.2 to 6.8	Mainline Pavement Rehabilitation	Kittery-York	\$4,966,631	Pavement Rehabilitation	2050-Pavement Rehab and Maintenance			
	3.1	Cutts Road	Kittery	\$588,737	Cleaning and Painting of Structural Steel	2020-Bridge Painting			
	4.8	Beech Ridge Road	York	\$422,375	Bridge Repair	2300-Bridge Repair			
	4.8	Beech Ridge Road	York	\$621,638	Cleaning and Painting of Structural Steel	2020-Bridge Painting			
	7.3	York Toll	York	TBD	TBD	6800-Toll Plazas-York Toll			
	10.6	Mountain Road	York	\$371,320	Bridge Repair	2300-Bridge Repair			
	10.6	Mountain Road	York	\$365,151	Cleaning and Painting of Structural Steel	2020-Bridge Painting			
	11.9	Clay Hill Road	York	\$473,780	Cleaning and Painting of Structural Steel	2020-Bridge Painting			
	13 to 23.3	Mainline Pavement Rehabilitation	Ogunquit-Kennebunk	\$11,454,563	Pavement Rehabilitation	2050-Pavement Rehab and Maintenance			
	13.8	North Berwick	Ogunquit	\$393,890	Bridge Repair	2300-Bridge Repair			
	15.21	Tatnic Road	Wells	\$418,824.65	Bridge Repairs	2300-Bridge Repair			
	17.3	Littlefield Road	Wells	\$409,502	Bridge Repair	2300-Bridge Repair			
	19	B&M Railroad NB & SB	Wells	\$895,350	Cleaning and Painting of Structural Steel	2020-Bridge Painting			
	19	B&M Railroad NB & SB	Wells	\$1,242,123	Bridge Repair	2300-Bridge Repair			
	19.1	Sanford Road NB & SB	Wells	\$711,409	Bridge Repair	2300-Bridge Repair			
	19.3	Wells Interchange NB & SB	Wells	\$453,797	Bridge Repair	2300-Bridge Repair			
	19.9	Burnt Mills	Wells	\$305,549	Bridge Repair	2300-Bridge Repair			
	25.5	Kennebunk & West Gardiner Service Area	Kennebunk	\$5,000,000	Access parking if needed	6900-New Service Area Gardiner I-95 OR 7100-Service Area Modifications			
	25.5	Exit 25 Interchange Paving	Kennebunk	\$950,078	Interchange paving	2050-Pavement Rehab and Maintenance			
	28.3	Limerick Road	Arundel	\$334,256	Bridge Repairs	2300-Bridge Repair			
	31.3	Route 111	Biddeford	\$358,744.18	Bridge Repair	2300-Bridge Repair			
	31.6	Exit 32 Interchange Paving	Biddeford	\$950,078.00	Interchange paving	2050-Pavement Rehab and Maintenance			
	33.4	Boom Road	Saco	\$279,693	Bridge Repair	2300-Bridge Repair			
	35	Old Saco Exit	Saco	\$772,500	Interchange paving	2050-Pavement Rehab and Maintenance			
	35.5 to 44.3	Mainline Pavement Rehabilitation	Saco to Scarborough	\$8,955,963	Pavement Rehabilitation	2050-Pavement Rehab and Maintenance			
	36	Saco Interchange NB & SB On Ramps	Saco	\$4,500,000	Widen Ramp	3900-Interchange Improvements - Saco			
	36	Exit 36 Interchange Paving	Saco	\$1,038,175	Interchange paving	2050-Pavement Rehab and Maintenance			
	42	Two Rod Road	Scarborough	\$264,170	Bridge Repair	2300-Bridge Repair			
	44.01	Gorham Road / RAMP	Scarborough	\$325,160	Cleaning and Painting of Structural Steel	2020-Bridge Painting			
44.3 to 51.2	Mainline Pavement Rehabilitation	Scarborough to Portland	\$4,821,972	Pavement Rehabilitation	2050-Pavement Rehab and Maintenance				
44.3	I-295 SB	Portland	\$3,997,002	Bridge Rehab/Redeck	2010-Bridge Rehabilitation				
44.3	Exit 44 - SB Onramp	Scarborough	\$1,400,000	Widen Ramp	3911-Interchange Improvements - Exit 44 I295				
44.3	I-295 Southbound Underpass Painting	Scarborough	\$924,775	Cleaning and painting of structural steel	2020-Bridge Painting				
44.5	I-295 Payne Road NB & SB	Portland	\$7,528,264	Bridge Rehab/Redeck	2010-Bridge Rehabilitation				
44.5	I-295 Payne Road NB & SB	Scarborough	\$647,402	Cleaning and Painting of Structural Steel	2020-Bridge Painting				
45.4	Running Hill Road	South Portland	\$483,447.22	Bridge Repair	2300-Bridge Repair				

Year	Mile Marker	Project Name	Municipality	Preliminary Construction Only Value for Project not including the Engineering	Preliminary work scope	Key Code-30 Year Plan Reference	Anticipated Project Duration (Months)	Planning/ Design Years	Estimated Year(s) of Construction
2018 Through 2023 Portland North	46.7	Stroudwater River NB & SB	Portland	\$10,855,162	Bridge Rehab & Wide to 3 Lanes each direction	2010-Bridge Rehabilitation			
	47.3	Exit 47 Interchange Paving	Westbrook	\$922,405	Interchange paving	2050-Pavement Rehab and Maintenance			
	47.9	Maine Central Railroad NB & SB	Portland	\$11,246,454	Bridge Rehab/Redeck & Widen to 3 lanes each direction	2010-Bridge Rehabilitation			
	49	Warren Ave. NB & SB	Portland	\$1,017,754	Bridge Repairs	2300-Bridge Repair			
	51.6	Exit 52 Underpass Painting	Portland	\$927,429	Cleaning and painting of structural steel	2020-Bridge Painting			
	52.4	Exit 53 Underpass Painting	Falmouth	\$345,746	Cleaning and painting of structural steel	2020-Bridge Painting			
	58.3	Blackstrap Road	Cumberland	\$401,006	Bridge Repair	2300-Bridge Repair			
	60.8	Eagles Nest Overpass Painting	Gray	\$268,991	Cleaning and painting of structural steel	2020-Bridge Painting			
	61.6	Hunts Hill Road Underpass Painting	Gray	\$324,172	Cleaning and painting of structural steel	2020-Bridge Painting			
	63.3	Route 202	Gray	\$473,018	Bridge Repair	2300-Bridge Repair			
	64.3	Route 26	Gray	\$563,254	Bridge Repair	2300-Bridge Repair			
	64.4 to 68.5	Mainline Pavement Rehabilitation	Gray-New Gloucester	\$2,700,754	Pavement Rehabilitation	2050-Pavement Rehab and Maintenance			
	66.2	Weymouth Road	New Gloucester	\$547,810	Bridge Repair	2300-Bridge Repair			
	67	Add 2 ORT Lanes at New Gloucester Barrier Toll	New Gloucester	TBD	Add 2 Open Road Tolling Lanes to New Gloucester Barrier Toll	6875-New Gloucester Highway Speed			
	68.6	Bennett Road	New Gloucester	\$420,116	Bridge Repairs	2300-Bridge Repair			
	71.1	Royal River NB & SB	New Gloucester	\$621,552	Bridge Repair	2300-Bridge Repair			
	71.1	Royal River NB	New Gloucester	\$264,791	Cleaning and Painting of Structural Steel	2020-Bridge Painting			
	75.8	Danville Corner	Auburn	\$369,869	Bridge Repair	2300-Bridge Repair			
	76.9	Hackett Road	Auburn	\$553,771	Bridge Repair	2300-Bridge Repair			
	78.9	Androscoggin River NB & SB	Auburn & Lewiston	\$10,640,000	Cleaning and Painting of Structural Steel	2020-Bridge Painting			
	80.8	Ferry Road NB & SB	Lewiston	\$538,262	Bridge Repair to be coordinated with Exit 80 Project	2300-Bridge Repair			
	80.8 to 88.6	Mainline Pavement Rehabilitation	Lewiston-Sabattus	\$4,988,368	Pavement Rehabilitation to be coordinated with Exit 80 Project	2050-Pavement Rehab and Maintenance			
	82.7	Webster Road	Lewiston	\$320,170	Bridge Repair	2300-Bridge Repair			
	83.7	Grove Street	Sabattus	\$401,572	Bridge Repair	2300-Bridge Repair			
	86.1	Route 9	Sabattus	\$540,975	Bridge Repair	2300-Bridge Repair			
	86.1	Exit 86 Interchange Paving	Sabattus	\$950,078	Interchange paving	2050-Pavement Rehab and Maintenance			
	89.1	Marsh Road (Bowdoin)	Sabattus	\$396,501	Bridge Repairs	2300-Bridge Repair			
	95.6	Plains Road	Litchfield	\$475,233	Bridge Repair	2300-Bridge Repair			
	102	Exit 102 Interchange Paving	West Gardiner	\$1,038,175	Interchange paving	2050-Pavement Rehab and Maintenance			
	103	Exit 103 Interchange Paving	Gardiner	\$1,038,175	Interchange paving	2050-Pavement Rehab and Maintenance			
103	Gardiner I-295	Gardiner	TBD	TBD	6870-Toll plazas - Gardiner I-95 Toll Plaza 6900-New Service Area Gardiner I-95 OR 7100-Service Area Modifications				
103	West Gardiner & Kennebunk Service Area	Gardiner	See Kennebunk Service Area	Access parking if needed					
103.6	High Street	West Gardiner	\$403,460	Bridge Repair	2300-Bridge Repair				
108.3	Winthrop Rd	Hallowell	\$2,270,132	Bridge Rehab	2010-Bridge Rehabilitation				
F-1.60	Falmouth Road	Falmouth	\$311,00	Bridge Painting	2020-Bridge Painting				

Year	Mile Marker	Project Name	Municipality	Preliminary Construction Only Value for Project not including the Engineering	Preliminary work scope	Key Code-30 Year Plan Reference	Anticipated Project Duration (Months)	Planning/ Design Years	Estimated Year(s) of Construction
2018 Through 2023 System Wide		Drainage & Slope Repairs	Undefined	\$2,594,694	System Wide	2350-Drain and Slope Repair			
		Service Plaza Paving	Undefined	\$2,956,616	System Wide Service Plaza Paving	2050-Pavement Rehab and Maintenance			
		Pavement Crack Sealing	Undefined	\$650,000	System Wide	2100-Pavement Crack Sealing			
		Clearzone Improvements & Guardrail Upgrade	System Wide-TBD	\$17,950,000	Guardrail Upgrades & Clearzone Improvements System Wide	3600-Clearzone Improvements			
		Guide Signs	System Wide	\$2,120,000	Guide Sign Installation	2900-Guidesign Modification			
		Roof Replacement	System Wide	\$100,000	Roof Replacement	2450-Roof Replacement			
		Fiber Optic Network	System Wide	\$5,000,000	System Wide	6100-Fiber Optic Network			
		Electrical/ Mechanical Upgrades and Replacement	System Wide	\$250,000	Electrical/Mechanical Upgrades and Replacement System Wide	2400-Electrical/ Mechanical Upgrades and Replacement			
		Variable Message Signs	System Wide	\$1,000,000	System Wide	6300-Variable Message Signs			
		Signs	System Wide	\$196,000	System Wide	1120-Signs			
		Environmental Services	System Wide	\$2,443,287	System Wide	1320-Environmental Services			
		Alternative Transportation Modes*	System Wide	\$1,243,904	System Wide	1000-Alternatives Analysis & TDM			

# Major Capital Improvement Projects

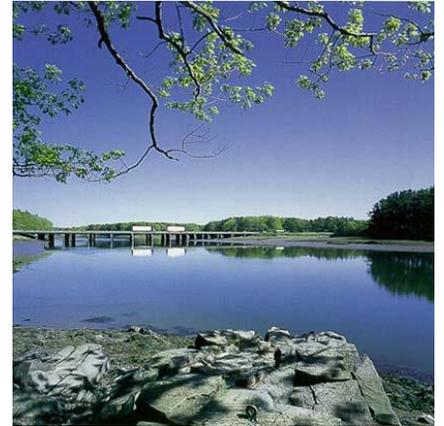
The following identifies the major capital improvement projects anticipated from 2014-2023. These projects are wholly contained in the project list identified in the previous section, but are identified separately due to their size, cost, and level of transportation benefit anticipated.

## **PURCHASE OF THE SOUTHERN END**

In 1995, the MTA purchased the 4.78 mile section highway from the MaineDOT from the York Toll Plaza to Spruce Creek (Mile 2.2) for \$16 million. Under this agreement the MTA maintains this section of interstate highway but is not able to place tolls due to existing federal encumbrances. The remaining 2.2 mile section from the I-95 high level bridge over the Piscataqua River at the New Hampshire line to Spruce Creek is currently under MaineDOT ownership and maintenance.

The MTA and MaineDOT are in discussions for the purchase of this remaining section of I-95 and its associated interchanges by the Maine Turnpike Authority. If purchased, it is anticipated that widening of this section of interstate highway from three lanes to four lanes in each direction may be required in order to accommodate current and future traffic volumes. Project cost – To be determined.

*Anticipated Start Date: 2016.*



## **WELLS**

Based on the results of the 2013 Central York County Connector Study, the need for an additional turning lane at the intersection with Route 9/109 and Wells Interchange (Exit 19) has been identified. This additional turning lane along Route 9/109 will require a more detailed evaluation and coordination with MaineDOT prior to design and implementation. This improvement is designed to address the volume of traffic traveling eastbound in the morning and accessing the Maine Turnpike at Exit 19 in Wells. Project cost - \$1 million.

*Anticipated Start Date: 2015.*

## **SACO TOLL PLAZA**

Growing traffic volumes and increased E-ZPass usage at the Saco Toll Plaza (Exit 36) have necessitated the addition of one additional toll lane. This additional lane will be designated for E-ZPass users only and will provide additional toll plaza capacity for vehicles entering the Maine Turnpike. Project cost - \$1.3 million.

*Anticipated Start Date: 2015.*

## **GRAY INTERCHANGE**

The construction of the Gray Bypass (Route 26A) in 2006 created a change in traffic patterns that altered the operations of Exit 63. Two recent studies completed for the MTA regarding traffic operations at, and adjacent to, Exit 63 confirmed that the best long term solution is to relocate the Exit 63 toll plaza from the east side of the Maine Turnpike to the west side, directly connecting to the Gray Bypass.

Currently the MTA is conducting an alternatives analysis as part of the permitting requirements. The goal is to remove the existing toll plaza on the east side and construct a new toll plaza servicing southbound off and on traffic, immediately west of the Maine Turnpike in the vicinity of the existing park-and-ride lot and connect directly to Routes 4/26A/115/202. The existing park and ride lot will be relocated along the Gray Bypass. This project will also allow for the removal of the existing Gray interchange bridge over the Maine Turnpike which was in need of rehabilitation due to age and condition. The existing northbound on and off ramps on the east side of the turnpike will remain in place. Project cost: \$8.3 million.

*Anticipated Start Date: 2016.*

## **LEWISTON INTERCHANGE**

Based on the results of the 2010 Lewiston-Auburn Downtown Connector Interchange Study, the MTA is currently designing a modernized Lewiston Interchange (Exit 80). This updated design will convert the existing interchange into a Single-Point Urban Interchange (SPUI) to address additional development traffic anticipated adjacent to Exit 80. This SPUI design will channel all left turns traffic movements through one traffic signal along the Alfred E. Plourde Parkway to better accommodate traffic to/from Exit 80 and along Plourde Parkway. This 4 year project is anticipated to be constructed in multiple phases, over several years, beginning with the interchange ramps. Project cost: \$17.5 million.

*Anticipated Start Date: 2014.*

## **TOLL SYSTEM UPGRADES**

The MTA is currently replacing the existing cash toll system at all toll plaza locations. The current system, installed in 2004, is outdated and needs to be replaced. Additionally, replacement parts are no longer available and the MTA will use recycle lane controllers from newly converted plazas until such time as the system is fully replaced. Project cost: \$4.8 million per year.

*Anticipated Start Date: Ongoing through 2018.*

## TOLL PLAZA UPGRADES

In conjunction with the Toll System Upgrades, the MTA is currently upgrading several toll plazas as part of a five-tier process to improve existing toll plaza operations and safety. These upgrades are anticipated to include improvements to the mainline plazas at York, West Gardiner, and Gardiner I-295. A summary of toll plazas included in each tier is below:

### Tier 1 – Toll Plazas conversions completed or in progress

- New Gloucester – converted to ORT in 2013
- Kennebunk NB and SB – under construction
- Scarborough – under construction
- Rand Road – under construction
- Wells – under design. Construction estimated for 2014
- Jetport SB – under design. Construction estimated for 2014
- Riverside/Westbrook – under design. Construction estimated for 2014



### Tier 2 – Major toll plazas conversions under consideration

- West Gardiner mainline
- Falmouth/Exit 52

### Tier 3 – Continuation of side toll plaza conversions

- Biddeford – Construction estimated for 2015
- Saco – Construction estimated for 2015
- Jetport NB – Construction estimated for 2015
- West Falmouth – Construction estimated for 2015

### Tier 4 – Side Toll Plazas deferred due to other pending decisions

- Gray – possible relocation of Gray interchange
- South Portland – possible impact due to Gorham Corridor Study

### Tier 5 – Major toll plazas deferred due to toll system evaluation

- Scarborough/I-295
- Gardiner I-295
- York

Decisions on Tiers 2 through 5 are currently under evaluation by the MTA. A key factor for determining upgrades to major toll plazas will be based on the MTA's decision to move to AET or ORT in the near future.

## System wide

The following identifies the system wide improvement projects anticipated from 2014-2023. These projects are intended to provide benefit from a system wide perspective and are also identified in the project list from the previous section.

### Watershed Management Planning

The MTA has a Stormwater Program Management Plan (SPMP) for the purpose of establishing, implementing, and enforcing a program to reduce the discharge of pollutants from MTA's roadways, drainage areas, and facilities. The goal of the SPMP is to protect water quality and to satisfy water quality requirements of the Clean Water Act. MTA staff participates in a Salt Management Task Force in cooperation with MaineDOT, Maine DEP and other stakeholders, in an effort to minimize the impacts of the use of salt on roadways and parking lots across the state.

### Weatherization Management Planning

The MTA began an energy efficiency/weatherization program seven years ago. The program currently consists of a two pronged approach to saving energy at the MTA.

Energy consumption associated with heating MTA facilities is decreased using a combination of replacing old overhead doors and simply turning down thermostats. Each year between 8-10 old wooden overhead doors are replaced with insulated steel doors.

Electricity is also conserved by replacing old failed electric motors with high efficiency ones, replacing incandescent light fixtures with LED light fixtures, and installing occupancy sensors for lighting in areas of limited personnel use.

*Anticipated Start Date: On-going*

### Traffic Count Stations

To gather accurate and timely traffic data, the MTA began installing traffic count stations at interchanges in 1996. The stations utilize loop detectors placed in each mainline lane and on each entrance and exit ramp to continuously record traffic volume and speed data. The MTA is planning on replacing all mainline count loops system-wide with side fired microwave radar units.



Recently, some of the traffic loops have failed and have been damaged by snow plows, causing gaps in the traffic data. The MTA is investigating whether they should install new loops or possibly upgrade to newer technology. As part of this investigation, side fired microwave radar for traffic counts were installed at Exit 45 and in York. The microwave radar technology is not embedded in the pavement like loops, and may be easier to install and maintain.

*Anticipated Start Date:* On-going

### **Clear Zone Safety Improvements**

The clear zone is the 30 foot area which extends from the edge of the travel way. The MTA is planning to continue the effort to upgrade roadside clear zones north of mile 53 (Falmouth), to current design and safety standards including upgrading guardrail and making sure all sign posts and other obstructions are crash worthy. In addition clearing, rock removal, culvert extensions, removal of some guardrail, and making slopes less steep are being reviewed for some locations.

*Anticipated Start Date:* On-going

### **Guide Signs**

Guide signs provide needed information to Turnpike patrons. The signs are retroreflective which allow them to be visible in the darkness due to their ability to reflect light from vehicle headlights. However, the signs lose their retroreflectivity over time. The MTA has our own sign shop which makes all of the signs along the turnpike.



The guide signs on the Turnpike are expected to lose reflectivity and be nearing the end of the projected lifespan by 2015. All affected guide signs will be replaced in the next ten years.

*Anticipated Start Date:* 2018

## **Travel Demand Management and Transportation System Management**

Travel Demand Management (TDM) is a key tool to reduce single occupancy vehicle (SOV) travel as well as facilitate mobility options. It increases the efficiency of the transportation system through the promotion and facilitation of alternative modes of travel such as ridesharing, vanpooling, transit, bicycling, and walking. The Transportation Systems Management (TSM) approach to congestion mitigation seeks to identify improvements to enhance the capacity of existing system of an operational nature. Through better management and operation of existing transportation facilities, these techniques are designed to improve traffic flow, air quality, and movement of vehicles and goods, as well as enhance system accessibility and safety.

To better serve our customers the MTA actively encourages the use of alternative modes of transportation and partners with local and state agencies including MaineDOT to provide support for commuters, including operation of park & ride lots and support of carpools, vanpools and transit through the ZOOM Turnpike Express and the GO Maine program.

### **ZOOM Turnpike Express**

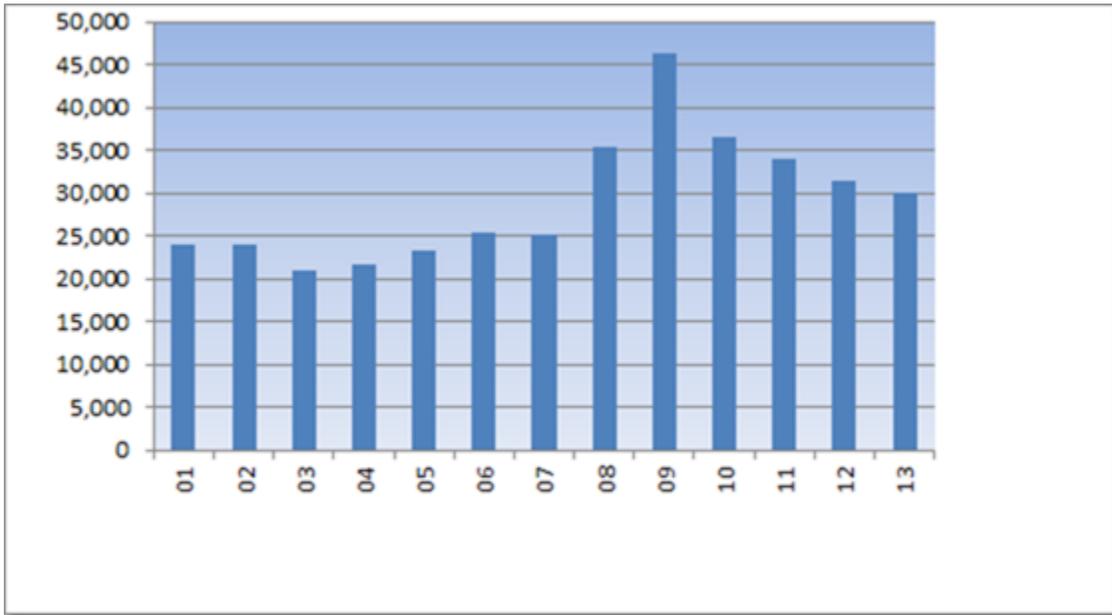
The MTA provides partial funding for the ZOOM Turnpike Express, a commuter bus service operating between Biddeford/Saco and Portland. Currently the MTA and ZOOM have a memorandum of understanding for financial contributions from July 2012 to June 2014. The commuter bus provides an alternative to driving on one of the most heavily traveled commuter routes in the state. The buses pick up commuters at the park and ride lots at exits 32 and 36 of the Maine Turnpike and makes stops downtown Portland in the vicinity of Monument Square and the University of Southern Maine.

Traditionally, the ZOOM bus has served about 155 travelers per weekday – a level that has remained relatively steady since the service began in the summer of 1998. In 2012 the ridership on the ZOOM was 31,488. Figure 8 summarizes annual ZOOM bus ridership since 2001.

As Figure 5 illustrates, ZOOM bus ridership had hovered between 20,000 and 25,000 travelers per year since 2001. Even though usage dipped slightly in 2007, it increased to 35,461 travelers in 2008 (a 42% increase over 2007) and peaked to almost 46,000 travelers in 2009.

In 2012, with aid from the Maine Department of Transportation the Biddeford-Saco-Old Orchard Beach Transit Committee (the operators of ZOOM) purchased two 2008 coach style seating buses to replace their aging buses. In addition to these new buses, the Maine Turnpike Authority agreed to install free Wi-Fi on the commuter service for the passengers and fully fund the Wi-Fi operation. This added benefit has improved the service and allows commuters to get a jump start on their work day as they commute.

Figure 5 – ZOOM Ridership



### GO MAINE Program

In April of 2013 the Maine Turnpike Authority took over the administration of the GO Maine Commuter Program. GO Maine is a statewide program that allows commuters to match up with alternative means of transportation to get to work.

For 10 years the program has been a statewide program funded by the MTA and MaineDOT. In 2012 it was decided the State would no longer subsidize the vanpool portion of the program and a change in the administration of the program could provide some cost savings. The MTA is handling the day to day administration of the program; the MaineDOT is a funding and collaborative partner.

Currently the MTA is managing three main components of the program: Administration,

Rideshare and Technology Services, and Marketing, Education and Outreach. The goal of the program is to have a robust, updated and well-functioning database of commuters who wish to carpool or commute by an alternative means.

In April 2013 the MTA took over the administration of the GO Maine Program.

The program works by allowing commuters to use a database to enter their origin and destination of their commutes as well as times. The database will then generate a match list of potential carpool partners. Contact information is included in the match list and it is up to the commuters to work out the details. GO Maine can also provide information on private vanpools in the state and work with employers on commuting issues.

## Park & Ride Lot Program

The Maine Turnpike Authority has 14 park and ride lots along the corridor. Ten of these are maintained by the MTA, the others by the MaineDOT. When appropriate the two agencies work closely in creating more lots and improving lots.

In 2012 the MTA closed two small lots on Alfred Plourde Parkway in Lewiston as they would be displaced with a newly redesigned Exit 80. The MTA worked with the City of Lewiston and bought an abandoned hotel on Lisbon Street and turned it into a 92 space park and ride lot in a convenient, safe location.



In 2013 the MaineDOT and the MTA did a joint inventory of all the lots in the state. This survey reviewed the condition of 48 lots in the state and a mail back survey was placed on the windshield of parked vehicles. The survey indicated that 51% of the park and ride spaces in Maine were occupied at the time of the study. The MTA lots had a higher usage rate with 56% of the spaces occupied and the non-turnpike lots at a 47% occupancy rate. The majority (87%) of users are commuters, using the lots to rideshare to work. The most common destinations of these commuters were Greater Portland, Bath Iron Works, Augusta, and Portsmouth Naval Shipyard. This joint inventory is another example of how the MTA and MaineDOT collaborate for the betterment of travelers in Maine.

Figure 6 shows the usage over time of the park and ride lots along the turnpike.

**Figure 6 – Park and Ride Use**

Town	Location	Number of Spaces	Year						% Occupied in 2013
			2009	2010	2011	2012	2013		
York	Chases Pond Rd	26	22	15	15	26	20	77%	
Wells	Exit 19, on Rt 109	100	70	27	35	34	39	39%	
Kennebunk	Exit 35, on Rt 35	52	35	21	33	31	35	67%	
Biddeford	Exit 32, on Rt 11	155	108	90	109	90	98	63%	
Saco	Exit 36, on Industrial Park Rd	135	103	95	113	123	117	87%	
Scarborough South	Exit 42, Adjacent to Cabela's	70	23	22	30	26	22	31%	
Portland	Exit 45	111	20	21	37	37	38	34%	
Portland	Exit 46, on Skyway Dr	68	19	27	8	21	17	25%	
Westbrook	Exit 47, on Larrabee Rd	91	47	33	26	48	45	49%	
Falmouth	Exit 53, Adjacent to toll plaza	19	15	12	6	8	8	42%	
Gray	Exit 63, on Rt 202	74	50	82	57	64	72	97%	
Auburn	Exit 75, on Rt 202	137	72	72	94	82	75	54%	
Lewiston*	Exit 80, on Lisbon St	92	51	45	61	85	42	46%	
Gardiner	Exit 102, on Rt 126	54	29	24	24	30	30	55%	

\*New lot replaced two lots in 2012

The Maine Turnpike Authority realizes there is a benefit to encourage the use of alternative transportation, while it does remove paying customers from the turnpike it does help to slow the deterioration of the highway and provides air quality benefits for the region. The Maine Turnpike plans to continue to support the ZOOM bus at the current level of funding and work closely with its operators to see if there are other appropriate opportunities for improvements or partnerships.

With the MTA taking over the administration of the GO Maine program, the MTA is showing its commitment to helping take single occupancy vehicles off the road. The MTA will continue to work with the MaineDOT to determine if there are opportunities to provide for more park and ride lots.



## Conclusion

The Maine Turnpike Authority continues to serve the people and visitors to Maine to provide a vital transportation link to the rest of the US and Canada. We will continue to examine the needs of the turnpike and prioritize our funding accordingly. With these projects we will reach out to our community partners on the corridor as well as the Maine Department of Transportation.

The MTA Continues to value public input and comments and will use these in our plans for upcoming projects and improvements. The MTA also will strive to be on the cutting edge of toll collection technology now and into the future. And the MTA remains a good neighbor to the communities we run through by supporting Transportation Demand Management techniques.

# Appendix

## 10 Year Planning Report Public Meeting

December 17, 2013

In Attendance: Sara Zografos, Steve Tartre, Jon Arey, Dan Morin and Rebecca Grover- Maine Turnpike Authority

Patrick Fennell-Saco

Sara Zografos opened the meeting and reviewed the 10 Year Planning report. This plan is one of the long range planning documents that the MTA uses to identify and address needs and priorities for the Maine Turnpike for the years 2014-2023. The turnpike is 110 miles of controlled access highway and serves a variety of customers. There are 195 bridge structures and 19 interchanges and toll plazas. The MTA uses several financial and capital planning documents to help direct and identify the priorities for operating and maintaining the road and to determine if adequate funding is available to address these priorities.

Sara reviewed a chart showing how MTA funding is spent. The budget for the next 10 years is significantly less than the last update. One area that is currently under study is how the MTA will collect tolls in the future. The MTA will continue to look for innovative ideas and improvements to tolling that reduces congestion and vehicle emissions, improves safety, is fiscally prudent, promotes the use of E-Zpass and is consistent with trends in toll technology around the country. So far the MTA has converted the toll plaza in New Gloucester to an Open Road Tolling system and is currently replacing the cash toll system. And the Authority is undertaking an evaluation of the next generation of toll collection.

Projects that are included in the plan are things such as: Bridge Repair, Pavement Rehabilitation, Interchange Improvements, Modernization and Widening Maintenance and Service Plaza Improvements and Toll Plaza Improvements.

Some of the major capital improvement projects are improvements to the Wells interchange and the Saco interchange. A configuration of the Gray and Lewiston interchanges.

The MTA also funds travel demand management programs such as the Zoom turnpike express bus, the GO Maine program and park and ride lots. Funding for these programs is also contained in the 10 Year Planning Report.

Sara then opened the meeting up to questions and comments.

Patrick Fennell of Saco stated that he thought this was a meeting regarding a new Saco-Scarborough interchange from an article he read in the paper. He asked if the highway between these two towns is at capacity.

Sara answered that according to the most recent Safety and Capacity study done by the MTA, there are segments that may need improvements, but the roadway itself has enough capacity for the traffic.

Patrick also said that he thinks the south bound on ramp in Saco is a hard merge area and that it doesn't seem long enough.

Sara thanked him for his comments.

## Public Comments

**Grover, Rebecca J.**

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**From:** Chip Morrison <cmorrison@Androscoggincounty.com>  
**Sent:** Friday, January 03, 2014 2:44 PM  
**To:** Grover, Rebecca J.  
**Subject:** Ten Year Planning Report

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Good Afternoon Rebecca,

I am writing to comment on the draft Ten Year Planning Report.

Two things I do not think are well enough covered in the plan:

1. The importance of freight movement. The turnpike is the major freight lifeline for businesses in the L/A area.
2. Addressing the toll equity issue. Year after year we ask MTA to bring tolls/mile into line from various entry points on the highway. And we always are told -- we'll get to it in the future. Unless I missed it, I do not see it included in the report (unless it is alluded to on page 19 at the bottom.)

Thanks for the opportunity to comment.

**Happy New Year!**

**Chip**

Charles A. Morrison, President  
Androscoggin County Chamber of Commerce  
[cmorrison@androscoggincounty.com](mailto:cmorrison@androscoggincounty.com)  
207-783-2249

**Grover, Rebecca J.**

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**From:** Morin, Daniel R.  
**Sent:** Sunday, December 29, 2013 1:03 PM  
**To:** Grover, Rebecca J.; Zografos, Sara D.; Courtney, Erin T.  
**Subject:** Fwd: maineturnpike.com contact form

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Dan

Sent from my iPhone

Begin forwarded message:

**From:** <krekw@aol.com>  
**Date:** December 29, 2013 at 12:44:32 PM EST  
**To:** <csullivan@maineturnpike.com>, <dmorin@maineturnpike.com>  
**Subject:** maineturnpike.com contact form

Record ID:

Date Submitted: 12/29/2013 12:44:06 PM

First Name King

Last Name Weinstein

Email Address [krekw@aol.com](mailto:krekw@aol.com)

Phone Number (207) 332-7544

Inquiry Draft 10-Year Plan Comments

Comments  
Comments; there needs to be a very soon reopening of the closed North Bound Saco Exit on a E2 Pass only basis and a south bound extension West. Look at traffic in the am or pm backed up for several miles. Secondly, there is no plan for an exit to serve any area between Wells and York. In busy summer weeks, there is no other access North/South. Traffic is backed up both directions; there is no way to get away from the coast in an emergency from Ogunquit area; this does not even relate to commuting public or economic development. Lastly there should be additional information on alternative sources of income such as advertising, marketing, working with economic development or tourism organizations. Need to take another look on a long term basis.

**Grover, Rebecca J.**

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**From:** Morin, Daniel R.  
**Sent:** Wednesday, December 18, 2013 8:25 PM  
**To:** Zografos, Sara D.; Grover, Rebecca J.  
**Cc:** Courtney, Erin T.  
**Subject:** 10-Year Planning Report input

See below.

Dan

Sent from my iPhone

Begin forwarded message:

**From:** <dguillereault1@maine.rr.com>  
**Date:** December 18, 2013 at 8:06:53 PM EST  
**To:** <esullivan@maineturnpike.com>, <dmorin@maineturnpike.com>  
**Subject:** maineturnpike.com contact form

Record ID:

Date  
Submitted: 12/18/2013 8:06:48 PM  
First Name Dana  
Last Name Guillereault  
Email  
Address [dguillereault1@maine.rr.com](mailto:dguillereault1@maine.rr.com)  
Phone  
Number (207) 229-4546  
Inquiry Draft 10-Year Plan Comments

Comments I forwarded my comments the other day to Erin Courtney/Peter Mills about the traffic issues/congestion at the Exit 36 on ramp/northbound. I would also like to add my comments that think that the extra toll booth lane and also adding an extra lane, so that there are 2 lanes to merge onto I-95 North from the Saco exit would certainly help with traffic, but I think adding a new toll booth and exit on the Route 112 overpass of I-95 would also help to reduce traffic at the current exit 36. Since the Saco to Scarborough is the busiest stretch of the turnpike I believe that these projects should be moved to the top of the priority list and started before 2015.

**Grover, Rebecca J.**

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**From:** Morin, Daniel R.  
**Sent:** Friday, December 20, 2013 1:38 PM  
**To:** Grover, Rebecca J.  
**Subject:** FW: maineturnpike.com contact form

Here it is. Thanks

**From:** [kjs423@hotmail.com](mailto:kjs423@hotmail.com) [<mailto:kjs423@hotmail.com>]  
**Sent:** Thursday, December 19, 2013 8:40 AM  
**To:** Courtney, Erin T.; Morin, Daniel R.  
**Subject:** maineturnpike.com contact form

Record ID:

Date Submitted: 12/19/2013 8:39:51 AM

First Name Cathleen

Last Name Litwin

Email Address [kjs423@hotmail.com](mailto:kjs423@hotmail.com)

Phone Number (207) 850-9050

Inquiry Draft 10-Year Plan Comments

Comments How about putting up electronic signs at the entrances to the turnpike to inform motorists about accidents or severe road conditions BEFORE entering the turnpike. That would give motorists a chance to seek alternative routes. Also, have a 2 lane dedicated e-z pass lane only,(like N.H. does on Rte 95), where you can go 65 mph. Having to slow to 10 mph through the tollbooth defeats the whole purpose of e-z pass. Thank you

**Grover, Rebecca J.**

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**From:** Morin, Daniel R.  
**Sent:** Friday, January 03, 2014 1:48 PM  
**To:** Grover, Rebecca J.; Zografos, Sara D.; Courtney, Erin T.  
**Subject:** Fwd: maineturnpike.com contact form

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Dan

Sent from my iPhone

Begin forwarded message:

**From:** <jearly@lewistonmaine.gov>  
**Date:** January 3, 2014 at 1:27:13 PM EST  
**To:** <esullivan@maineturnpike.com>, <dmorin@maineturnpike.com>  
**Subject:** maineturnpike.com contact form

Record ID:

Date Submitted: 1/3/2014 1:26:43 PM

First Name Justin

Last Name Early

Email Address [jearly@lewistonmaine.gov](mailto:jearly@lewistonmaine.gov)

Phone Number (207) 513-3003

Inquiry Draft 10-Year Plan Comments

Comments As the City of Lewiston's Stormwater Manager, I was glad to see the 10-Year Plan address watershed management planning. Approximately 4 miles of the turnpike is located within Hart Brook, an EPA classified urban impaired stream. One of the major contributing factors to the stream's impairment is high chloride levels. If not already doing so, I would request that the MTA research alternatives to Sodium Chloride (Magnesium/Calcium Chloride, Calcium Magnesium Acetate, Potassium Acetate, etc...) that are less harmful to stream water quality.

**Grover, Rebecca J.**

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**From:** Courtney, Erin T.  
**Sent:** Tuesday, January 07, 2014 1:45 PM  
**To:** Grover, Rebecca J.  
**Subject:** FW: maineturnpike.com contact form

**From:** [cislands32@yahoo.com](mailto:cislands32@yahoo.com) [<mailto:cislands32@yahoo.com>]  
**Sent:** Saturday, December 21, 2013 8:31 AM  
**To:** Courtney, Erin T.; Morin, Daniel R.  
**Subject:** maineturnpike.com contact form

Record ID:

Date Submitted: 12/21/2013 8:30:43 AM

First Name richard

Last Name earle

Email Address [cislands32@yahoo.com](mailto:cislands32@yahoo.com)

Phone Number (207) 432-2257

Inquiry Draft 10-Year Plan Comments

Comments I am a person that lives within a mile from the turnpike. It is always a question is it worth driving the pike or riding the back roads. I wish it was easier like when I had the 1 price unlimited trips pass. It would save me gas and time. So many times I by pass the York toll for that crazy price it charges me for a short drive to Wells. Help a struggling Mainer live in Maine.