Reinventing the New Jersey Turnpike’s Maintenance Facilities

Maintenance District Upgrades on the Garden State Parkway and New Jersey Turnpike

June 1, 2015

Presented by:

Robert Fischer, P.E.
Chief Engineer
New Jersey Turnpike Authority
Woodbridge, NJ
New Jersey Turnpike and Garden State Parkway System
NJ Turnpike – Timeline of Growth

1952
• Original Turnpike system completed

1956
• NHTC completed
• PHFTE completed
• 3’ Lane Widening, Exit 4 to 13 and Exit 35 to 38 completed

1964
• Exit 17 and Exit 16E/18E completed

1966
• Exit 8A completed

1969
• Exit 9 to 10 Widening completed
• Exit 7A completed

1970
• Exit 10 to 14 Widening completed
• Westerly Alignment completed

1974
• Exit 9 to 10 Widening completed
• Exit 7A completed

1982
• Exit 13A completed

1992
• I-95 Extension added to NJ Turnpike system

1996
• Exit 8A to 9 Widening completed
• Exit 11 to 14 Widening completed

2005
• Exit 15X completed

2014
• Exit 6 to 9 Widening completed

Then...

118 total miles
516 lane miles

...Now

148 total miles
Over 1,300 lane miles
Garden State Parkway – Timeline of Growth

1954
- Original Parkway system completed

1966
- Milepost 96 to 160 Widening completed

1975
- Express Roadways completed

1987
- Milepost 98 to 103 Widening completed

2015
- Milepost 48 to 63 Widening completed (anticipated)

2017
- Milepost 35 to 48 Widening completed (anticipated)

Then…

1954
163 total miles
652 lane miles

1957
- New York Thruway connection completed

1966
- Milepost 124 to 129 Widening completed

1972
- Milepost 124 to 129 Widening completed

1983
- Milepost 91 to 98 Widening completed

2011
- Milepost 63 to 80 Widening completed

2015
- Milepost 48 to 63 Widening completed (anticipated)

…Now

193 total miles
Over 1,200 lane miles
Facilities Improvement Program – Maintenance District Scope of Work

- Replace and / or Rehabilitate Multi-Use Buildings
- Repair or Replace Salt Domes with Salt Sheds
- Sitework Improvements
- Bring facilities to a state of good repair and extend useful life of facilities over the next 50 years
- The Facilities Improvement Program is part of the Authority’s overall $7 billion Capital Improvements Program.
Schedule for Upcoming Contracts

- Maintenance Districts (12 to 15 months per site, 20 to 24 months per contract)

<table>
<thead>
<tr>
<th>Maintenance Districts</th>
<th>2012 Q1 Q2 Q3 Q4</th>
<th>2013 Q1 Q2 Q3 Q4</th>
<th>2014 Q1 Q2 Q3 Q4</th>
<th>2015 Q1 Q2 Q3 Q4</th>
<th>2016 Q1 Q2 Q3 Q4</th>
<th>2017 Q1 Q2 Q3 Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master Planning/Programming</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Turnpike Maintenance District 3 (Crosswicks)
– Existing Site
Turnpike Maintenance District 3 (Crosswicks) - Proposed Site Improvements

- Prop. Salt Shed
- Prop. Fuel Pumps
- Prop. Multi-Use Bldg.
- Prop. Fresh Water Rinse for Deicing Equipment
- Prop. Brine Facility
- New Jersey Turnpike SW Roadway
- Exist. Multi-Use Bldg.
- Exist. Fuel Facilities
- Exist. Salt Dome
- Exist. Brine Facility
- Existing Weather Tower (to remain)
- New Jersey Turnpike SW Roadway
- Relocated Exist. Landscape Shed
- Prop. Gated Yard
- TMD3 - Crosswicks

Not to Scale
Parkway Maintenance District 1 (Swainton)
– Existing Site
Parkway Maintenance District 1 (Swainton) - Proposed Site Improvements
Existing Multi-Use Buildings
Existing Multi-Use Buildings
Existing Multi-Use Buildings
Multi-Use Building – Conceptual Prototype
Multi-Use Building – Conceptual Prototype

- ROOF
- SECOND FLOOR
- ADMIN EXPANSION
- FIRST FLOOR

- Wash Bay
- Garage
- Mechanical
- Circulation
- Office
- Sleeping
Multi-Use Building – First Floor Plan
Multi-Use Building – First Floor Rendering
Multi-Use Building – Second Floor Rendering
New Multi-Use Building under construction

- Building Exterior (TMD8 – Secaucus)
New Multi-Use Building under construction

Metal Roof Decking Installation (TMD8 – Secaucus)

Wash Bay Pits Installation (TMD8 – Secaucus)
Multi-Use Building – Precast Concrete Panels
Wash Bays
Existing Salt Domes
Existing Salt Domes
New Salt Shed Design

- Rectangular design replaces previous dome units
- Increased salt storage capacity
- Improved stacking and loading operations
- Exterior vehicle canopies to protect and extend equipment life
SUMMARY

- Lane miles increased from original construction of 1200 lane miles to 2500 lane miles today.

- The age of the Maintenance Facilities is over 60 years without any appreciable renovation.

- Time has come to replace the aging obsolete Maintenance Facilities with modern efficient durable structures to meet the demands of the next 50 years.
Reinventing the New Jersey Turnpike’s Maintenance Facilities

Maintenance District Upgrades on the Garden State Parkway and New Jersey Turnpike

June 1, 2015

Presented by:

Robert Fischer, P.E.
Chief Engineer
New Jersey Turnpike Authority
Woodbridge, NJ