

Lehigh Valley Transportation Study

SUBJECT: PA 33 Preservation SR 22-Belfast

COUNTY..... Northampton	FED.-AID SYSTEM..... On-NHS
S.R./SEC. 33/07M	DECADE OF INVESTMENT No
A.D.T..... 25,463	CAPITAL BUDGET Yes
TRUCK A.D.T. 2,801 (11%)	DETOUR LENGTHN/A
MPMS NUMBER..... 12178	EST LET DATE..... 7/12/2018
LENGTH4.64 miles	OPEN TO TRAFFIC..... 10/30/2019

DESCRIPTION/LOCATION:

The State Route 33, Section 07M project will perform pavement preservation activities and potential slope correction on State Route 33 from the Tatamy Exit Interchange (State Route 1002) to the Belfast Exit Interchange (State Route 1012) in Palmer, Bushkill, & Plainfield Townships and Stockertown Borough, Northampton County. This project will address the roadway's poor International Roughness Index (IRI) and structural distresses.

REQUEST:

Approve the addition of the Construction phase to the 2017 LVTS TIP in the amount of \$4,500,000.

TOTAL ESTIMATED COST:

Funding	PE	FD	UTL	ROW	CON	Total
Federal	\$0	\$640,000	\$0	\$200,000	\$0	\$840,000
State	\$25,000	\$160,000	\$0	\$50,000	\$4,500,000	\$4,735,000
Local	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$25,000	\$800,000	\$0	\$250,000	\$4,500,000	\$5,575,000

REQUESTED COST: CONSTRUCTION

Funding	Programmed	Request	Net Change
Federal	\$0	\$0	\$0
State (581)	\$0	\$4,500,000	\$4,500,000
Local	\$0	\$0	\$0
Total	\$0	\$4,500,000	\$4,500,000

DISCUSSION:

1. The average northbound IRI for the project is 139, while the average westbound IRI is slightly better at 118. Of the 12 total roadway segments in Section 07M, 5 segments have IRI values greater than 150 and 2 segments have IRI values over 200. The average Overall Pavement Index (OPI) for the northbound section is 84, while the OPI for the southbound section is 81.
2. After multiple seasons of patching by their department forces, Northampton County Maintenance made requests for this section to be addressed. The project was originally planned for late Fall 2014. The original project scope included milling of bituminous

pavement down to the existing concrete, concrete patching, and joint cleaning and sealing, which was to be followed by a 4 ½ inch bituminous overlay, as per Publication 242 guidelines. A field view in early 2015 confirmed the need for this work. The road showed reflective cracking through the overlay at the concrete joints, longitudinal separation between lanes, and some faulting of the original slabs or past patches.

3. Due to low bid savings within the region, funding has now become available for this project. The section has been re-scoped and the patching percentage has been increased to account for additional deterioration. The project will provide pavement preservation activities (milling, resurfacing, and concrete patching) and potential cross slope correction in travel lanes, passing lanes, and shoulders.
4. The slabs require patching of the 10 inches of concrete during the milling and resurfacing operations. The project will include cleaning and sealing of the remaining longitudinal and transverse joints unaffected by the patching. The bituminous overlay will be sawed and sealed, with incentives included for longitudinal joint density, ride quality, and Percentage Within Tolerance (PWT) specifications.
5. The Construction cost estimate is \$4,500,000, which includes Inspection and Maintenance & Protection of Traffic (MPT) activities.
6. The projected life for the resurfacing and patching ranges from 8 to 15 years. The proposed treatments will address the immediate distresses and provide maintenance cycles to maintain the condition of the road going forward.

FUNDING SOURCES:

1. The largest funding source for this project is excess state highway funds (581) from low bid savings on the Construction phase of the Cedar Crest Boulevard over Little Cedar Creek project (MPMS# 79088). Additional funding is available from the alignment of state highway funds (581) per anticipated need on the Utility phase of the PA 100 Reconstruction project (MPMS# 102311), the Final Design, Utility, and Right of Way phases of the 309 & Tilghman Interchange Reconstruction project (MPMS# 96432), the Final Design phase of the Cementon Bridge project (MPMS# 11413), and the Final Design and Right of Way phases of the Route 248 Realignment project (MPMS# 86853). All project phases being cash flowed are fully funded on the 2019 Draft TIP.

OPTIONS:

1. Approve the request as submitted and fund the Construction phase from the current TIP.
2. Deny the request and defer funding until the 2019 TIP.

RECOMMENDATION:

Option 1

PA 33 Preservation SR 22-Belfast: Photos



**Southbound Travel Lane
Typical Pavement Condition**



**Northbound Travel Lane
Typical Pavement Condition**

PA 33 Preservation SR 22-Belfast: Photos (Cont.)



**Southbound – County Repairs
Longitudinal Joint Patch and Transverse Joint Spray Patching**



**Northbound – County Repairs
Longitudinal Joint Patch, Transverse Cracks,
and Transverse Joint Spray Patching**