SCENARIO C01
WIDEN I-78 TO 6 LANES

This scenario studies the effects of widening I-78 to six lanes from Route 309 in Lehigh County to the New Jersey border.
Scenario C01
Widen Interstate 78 to 6 Lanes

LEGEND
\[\text{\textcolor{red}{\textbullet}}\] Widen To Six Lanes
Date: 12/99

Prepared by: Lehigh Valley Planning Commission
SCENARIO C01: MEASURES OF EFFECTIVENESS RELATING TO PROJECT NEEDS

Improve Safety on U.S. Route 22

The premise of this scenario is that by shifting traffic from the heavily traveled U.S. Route 22 corridor to the widened I-78, the motorists remaining on U.S. Route 22 will have the freedom to navigate their vehicles to safety in case of a crash or incident ahead. However, the results of the travel demand model run show that there is an insignificant reduction in the amount of travel demand for the U.S. Route 22 corridor. Furthermore, the interchanges will not be upgraded in the U.S. Route 22 corridor, meaning geometric deficiencies will still exist therefore, no relief is expected in alleviating crashes. Therefore, safety is not improved with the widening of I-78.

IMPACT: Neutral

Reduce Congestion on U.S. Route 22

Comparing the 2020 TIP base year with six-lanes on I-78, the level of travel occurring under desirable traffic conditions of LOS A through C in the afternoon peak hour has improved by 6 percent and a reduction of 3 percent is achieved in the breakdown traffic conditions of LOS E and F on U.S. Route 22.

IMPACT: Marginal

Recommended improvements must not increase congestion on regional road network

The level of travel occurring under desirable traffic conditions of LOS A through C in the afternoon peak hour has improved by 6 percent and a reduction of 2 percent is achieved in the breakdown traffic conditions of LOS E and F in the Lehigh Valley region.

IMPACT: Positive
### Reduce Impacts of incidents on U.S. Route 22 traffic flow

**Source of Delay**  
**Route 22 - PM Peak Hour**

<table>
<thead>
<tr>
<th>Source of Delay</th>
<th>2020 Base</th>
<th>Scenario C01</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congestion</td>
<td>0.69</td>
<td>0.60</td>
<td>13.04%</td>
</tr>
<tr>
<td>Crashes</td>
<td>0.31</td>
<td>0.28</td>
<td>9.68%</td>
</tr>
<tr>
<td>Other</td>
<td>0.13</td>
<td>0.11</td>
<td>15.38%</td>
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<tr>
<td>Total Delay</td>
<td>1.13</td>
<td>0.99</td>
<td>12.39%</td>
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</table>

*Annual Delay Measured in Millions of Hours*

The source of delay due to various types of incidents is used to gauge the progression of traffic on U.S. Route 22 and is measured in millions of hours per year under this scenario. Annual delay caused by congestion has decreased by 13 percent on U.S. Route 22, delay due to crashes has also decreased by 10 percent, and delay due to breakdowns decreased 15 percent on U.S. Route 22.

Total delay due to all incidents on U.S. Route 22 has been reduced by 12 percent from the “no-build” condition.

**IMPACT: Positive**

### Support Land Use and Redevelopment Goals of Regional Comprehensive Plan

The improvement of I-78 gives motorists an easier access to and from south Bethlehem. Goals such as economic development and constructing highways and bridge improvements that are compatible with the built and natural environments are met with this scenario. It encourages urban redevelopment of facilities within the cities by improving a major arterial that will provide safe and efficient access and movement of traffic to and from these major traffic generators. Upgrading an existing facility refrains from introducing a road that requires new alignment.

**IMPACT: Positive**

### FINDINGS/CONCLUSIONS

The intent of providing more capacity on Interstate 78 was that it would be more attractive to the motorists and would cause shifts in their travel patterns from U.S. Route 22 to I-78. However, the data indicates that this is not the case. The improvement helps I-78 and some surrounding roads, but does not alter traffic demands on U.S. Route 22. Therefore, this scenario does not adequately meet all needs of this project.