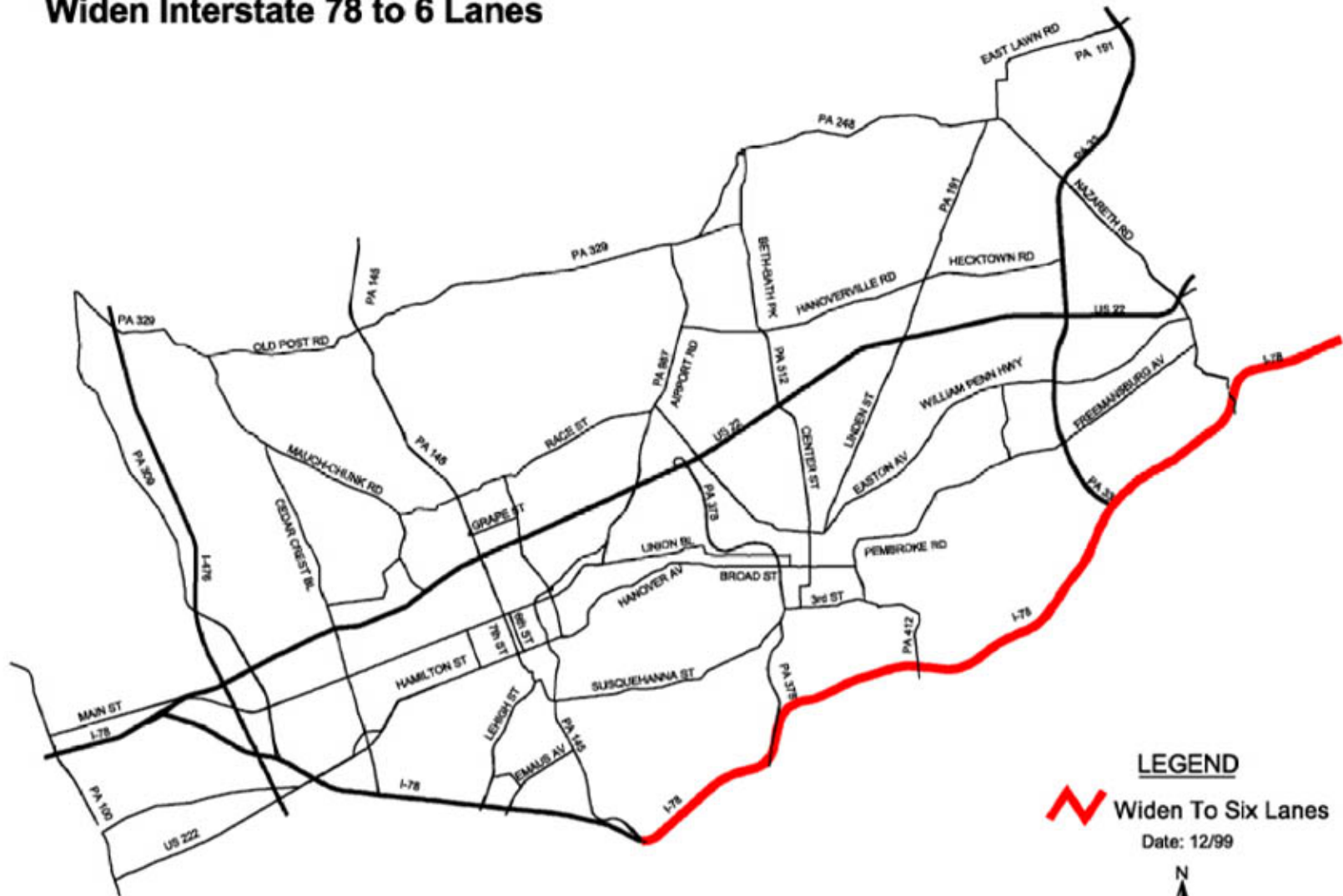


**SCENARIO C01**  
**WIDEN I-78 TO 6 LANES**

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**  
Widen To Six Lanes  
Date: 12/99



Prepared by: Lehigh Valley Planning Commission

# SCENARIO C01: MEASURES OF EFFECTIVENESS RELATING TO PROJECT NEEDS

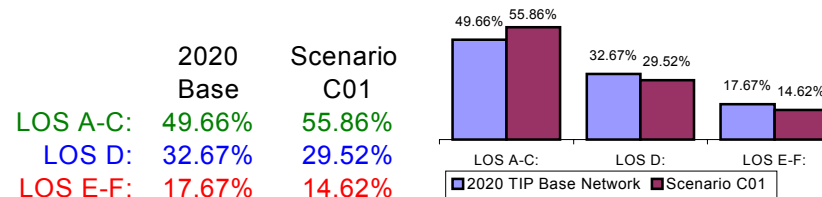
## Improve Safety on U.S. Route 22

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

**Percent of Vehicle Miles of Travel (VMT) by Level Of Service (LOS)  
Route 22- PM Peak Hour**

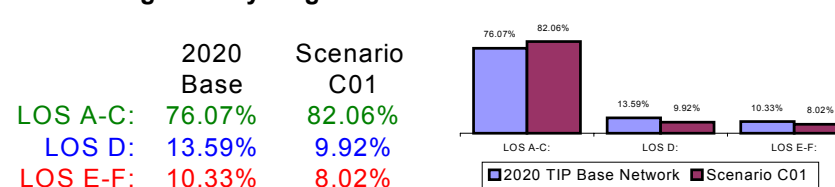


- Comparing the 2020 TIP base year with six-lanes on I-78, the level of travel occurring under desirable traffic conditions of LOS A through C in the afternoon peak hour has improved by 6 percent and a reduction of 3 percent is achieved in the breakdown traffic conditions of LOS E and F on U.S. Route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

**IMPACT: Marginal**

## Recommended improvements must not increase congestion on regional road network

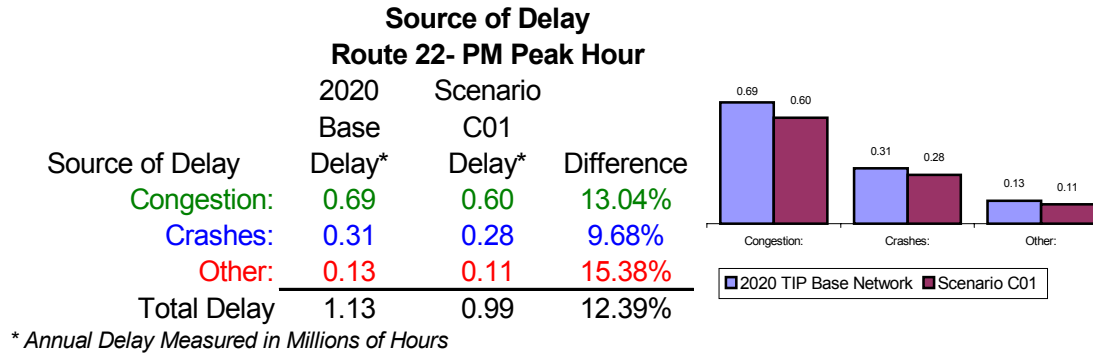
**Percent of Vehicle Miles of Travel (VMT) by Level Of Service (LOS)  
All Lehigh Valley Region Roads - PM Peak Hour**



- 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**



- 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.