

# TRAFFIC ANALYSES FOR ALTERNATIVES RETAINED FOR DETAILED EVALUATION

## Comparison of Traffic Volumes and Analyses for Retained Alternatives



US 301 Project Development Traffic Forecasts and Analyses  
2003 Existing, 2030 Projections

Roadway Segment	2003 Existing	2030 Projections					
		No-Build	Yellow	Purple+SPUR	Brown	Green+SPUR	
SR 896 at US 301	1000	1000	1000	1000	1000	1000	
SR 299 at US 301	1000	1000	1000	1000	1000	1000	
SR 15 at US 301	1000	1000	1000	1000	1000	1000	



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- 53 key intersections, interchanges and roadway segments (including the locations listed on the panel to the left) were analyzed in both the AM and PM peak hours to determine Level of Service (LOS)
- What is Level of Service (LOS)?
  - A grading system for evaluating traffic operations
  - Grades range from LOS A (best) to LOS F (worst)
  - Influenced by traffic volumes, truck percentages, roadway characteristics, traffic signals, etc.

Summary of Traffic Analyses for 50+ Key Intersections, Interchanges, and Roadway Segments throughout the Study Area

	2030					
	No-Build	No-Build	Yellow	Purple+SPUR	Brown	Green+SPUR
LOS A-D (Acceptable)	75%	43%	63%	64%	64%	66%
LOS E	15%	24%	21%	18%	18%	20%
LOS F (Failing)	10%	33%	16%	18%	18%	14%



### EXISTING CONDITIONS (2003)

- 75% of key locations operate "acceptably" (LOS A-D)
- 15% are approaching failure (LOS E)
- The remaining 10% are already failing (LOS F)

### NO BUILD ALTERNATIVE (2030)

- Projected volumes will exceed the capacity of US 301, causing traffic to increase on several other nearby roads
- Twice as many locations will approach or exceed capacity;
  - 24% will be approaching failure (LOS E)
  - 33% will fail (LOS F)



### YELLOW ALTERNATIVE (2030)

- Operations are improved from the No-Build Alternative
- Does not reduce traffic volumes on the north-south roadways
- Similar level of traffic reduction as the other Retained Alternatives on the east-west roadways as well as other alternatives
- Carries the lowest volume on new US 301 north of Middletown

### PURPLE, BROWN and GREEN ALTERNATIVES (2030)



- All three alternatives have similar traffic volumes and similar operational results
- All three alternatives result in a substantial reduction of traffic on existing US 301
- Compared to the other Retained Alternatives, Green carries the highest volume of traffic on new US 301 between SR 896 and SR 1

## Safety Analysis

### Accidents - Existing Roadways

- Traffic Safety is a component of Purpose and Need (see Display Board #3)
- Accident predictions were made for each alternative
- The number of future accidents was estimated for four (4) existing roads based on existing accident rates and existing and future traffic volumes:

- US 301
- SR 896
- SR 299
- SR 15



- Since traffic volumes on these 4 roadways are reduced by each of the build alternatives, it follows that each of the build alternatives would be expected to reduce the number of accidents on existing roads compared to the No-Build Alternative
- The Yellow Alternative is projected to have the least reduction in traffic volumes on these 4 roadways and, therefore, would be expected to result in a lower reduction in accidents than the other 3 build alternatives

### Accident Rates - Entire Study Area

- Accident rates were developed for each alternative, including the new roadway alignments:
  - Future accident rates for existing roads were based on existing accident rates and future traffic volumes
  - Future accident rates for the new alignments were based on statewide average rates for similar facilities
- Since the statewide average accident rate for freeway-type facilities with interchanges (i.e., New US 301) is lower than the statewide average accident rate for two lane arterials with intersections and traffic signals (existing 301), the Build Alternatives are all expected to reduce the overall accident rate in the study area compared to the No-Build Alternative

### Results:

- All of the build alternatives are expected to have lower overall accident rates than the No-Build Alternative in 2030
- All of the build alternatives are expected to have lower overall accident rates in 2030 than we are experiencing today (2003)