

Phone: Fax:  
E-mail:

### Operational Analysis

Analyst:  
Agency or Company: Stantec  
Date Performed: 11/8/2016  
Analysis Time Period: 8:00AM-9:00AM  
Freeway/Direction: I-85 Northbound  
From/To: Frontage Rd to Blacksburg Hwy  
Jurisdiction: SCDOT  
Analysis Year: 2040 Build Conditions  
Description:

### Flow Inputs and Adjustments

Volume, V	2331	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	620	v
Trucks and buses	30	%
Recreational vehicles	0	%
Terrain type:	Rolling	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	2.5	
Recreational vehicle PCE, ER	2.0	
Heavy vehicle adjustment, fHV	0.690	
Driver population factor, fp	1.00	
Flow rate, vp	1199	pc/h/ln

### Speed Inputs and Adjustments

Lane width	11.3	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	1.17	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	1.9	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	3.7	mi/h
Free-flow speed, FFS	69.8	mi/h

### LOS and Performance Measures

Flow rate, vp	1199	pc/h/ln
Free-flow speed, FFS	69.8	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	3	
Density, D	17.1	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.