

HCS2000: Two-Lane Highways Release 4.1d

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 Two-Way Two-Lane Highway Segment Analysis

Analyst Steve Brinck
 Agency/Co. Parsons Brinckerhoff
 Date Performed 08/21/03
 Analysis Time Period
 Highway Jamison Rd
 From/To
 Jurisdiction
 Analysis Year 2003
 Description

 Input Data

Highway class	Class 1					
Shoulder width	0.5	ft	Peak-hour factor, PHF	0.95		
Lane width	10.0	ft	% Trucks and buses	2	%	
Segment length	3.2	mi	% Recreational vehicles	4	%	
Terrain type	Rolling		% No-passing zones	100	%	
Grade: Length		mi	Access points/mi	17	/mi	
Up/down		%				
Two-way hourly volume, v	314	veh/h				
Directional split	70 / 30	%				

 Average Travel Speed

Grade adjustment factor, fG	0.71	
PCE for trucks, ET	2.5	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.967	
Two-way flow rate, (note-1) vp	481	pc/h
Highest directional split proportion (note-2)	337	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	35	mi/h
Observed volume, Vf	0	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	-	mi/h
Adj. for lane and shoulder width, fLS	-	mi/h
Adj. for access points, fA	-	mi/h
Free-flow speed, FFS	35.0	mi/h
Adjustment for no-passing zones, fnp	4.3	mi/h
Average travel speed, ATS	27.0	mi/h

 Percent Time-Spent-Following

Jamison.txt

Grade adjustment factor, fg	0.77	
PCE for trucks, ET	1.8	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fhv	0.984	
Two-way flow rate,(note-1) vp	436	pc/h
Highest directional split proportion (note-2)	305	
Base percent time-spent-following, BPTSF	31.8	%
Adj.for directional distribution and no-passing zones, fd/np	22.8	
Percent time-spent-following, PTSF	54.6	%

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.15	
Peak 15-min vehicle-miles of travel, VMT15	266	veh-mi
Peak-hour vehicle-miles of travel, VMT60	1011	veh-mi
Peak 15-min total travel time, TT15	9.8	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.