

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:
Agency/Co.:
Date performed: 02/11/2016
Analysis time period:
Freeway/dir or travel: D1
Junction: cierre
Jurisdiction:
Analysis Year:
Description:

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	90.0	km/h
Volume on freeway	2530	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	90.0	km/h
Volume on ramp	2107	vph
Length of first accel/decel lane	450	m
Length of second accel/decel lane		m

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		m

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent
Volume, V (vph)	2530	2107	vph
Peak-hour factor, PHF	0.80	0.80	
Peak 15-min volume, v15	791	658	v
Trucks and buses	5	5	%

Recreational vehicles	0	0			%
Terrain type:	Level	Level	Level		
Grade	0.00	%	0.00	%	%
Length	0.00	km	0.00	km	km
Trucks and buses PCE, ET		1.5	1.5		
Recreational vehicle PCE, ER		1.2	1.2		
Heavy vehicle adjustment, fHV		0.976	0.976		
Driver population factor, fP	1.00		1.00		
Flow rate, vp	3242		2700		pcph

Estimation of V12 Diverge Areas

$L = 0.00$ (Equation 25-8 or 25-9)

EQ

$P = 1.000$ Using Equation 0

FD

$v_{12} = v_R + (v_F - v_R) P = 3242$ pcph

12 R F R FD

Capacity Checks

	Actual	Maximum	LOS F?
$v_{12} = v_R$	3242	4500	No
$v_{12} = v_F$	3242	4400	No
$v_{12} = v_F - v_R$	542	4500	No
v_R	2700	2200	Yes

Level of Service Determination (if not F)

Density, $D = 2.642 + 0.0053 v_{12} - 0.0183 L = 11.6$ pc/km/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, S	$D = 0.406$
Space mean speed in ramp influence area, S	$S = 81$ km/h
Space mean speed in outer lanes, S	$S = N/A$ km/h
Space mean speed for all vehicles, S	$S = 80.7$ km/h
