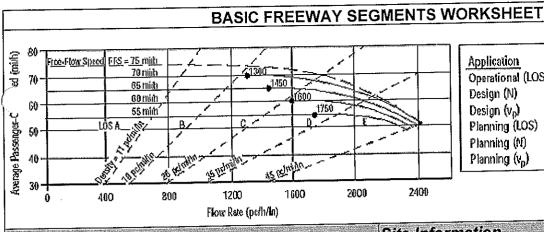
APPENDIX C

YEAR 2014 NO BUILD

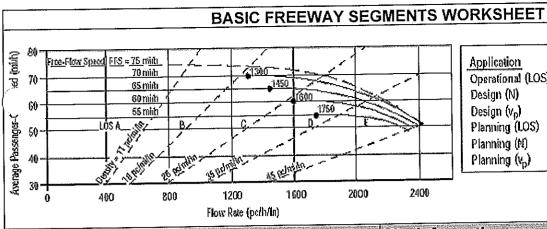
BASIC FREEWAY SEGMENTS

1-595



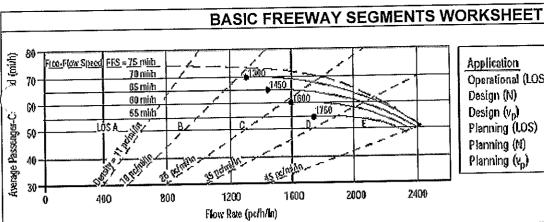
Application_	Input	Output
Operational (LOS)	FFS, N, v _D	LOS, S, D
Design (N)	FFS, LOS, v _o	N, S, D
Design (v _o)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _o)	FFS, LOS, N	v _p , S, D

30 400 800	1200 10	100 200	0 2400		
	Flow Rate (pc/h/lin)				
General Information		41.5	Site Informati		LINE LEGE
Analyst	YLM		Highway/Direction	of Travel EASTBC	OUND I-595
Agency or Company	RSH 9/7/04		From/To Jurisdiction		
Date Performed Analysis Time Period	9/7/04 AM		Analysis Year	2014 NC	BUILD
Project Description WEST O	F SW 136TH AVE				
☑ Oper.(LOS)		200 200 200 200 200 200 200 200 200 200	Des.(N)	I.∄ Pla	nning Data
Flow Inputs			D. I. I.I	r. PHF 0.95	
√olume, V	6087 veh/h		Peak-Hour Facto %Trucks and Bus	1	
AADT	veh/day			0	
Peak-Hr Prop. of AADT, K			%RVs, P _R	u Level	
Peak-Hr Direction Prop, D	le lle		General Terrain: Grade % I	_ength mi	
DDHV = AADT x K x D Driver type adjustment	veh/h 1.00		= :	Down %	
Calculate Flow Adjustm	The state of the s		elistik in 12 septim bara peter	Period Application 15	e western to some state of the so
Saleulate Bloom au journ	1.00		E _R	1.2	
E	1.5		$f_{HV} = 1/[1+P_T(E_T - 1)]$) + P _R (E _R - 1)] 0.976	
E _T			Calc Speed A	The second secon	
Speed Inputs	12.0	ft		0.0	mi/h
ane Width	6.0	ft	f _{LW}		mi/h
Rt-Shoulder Lat. Clearance		I/mi	f _{LC}	0.0	
Interchange Density	0.91	1/1111	f _{ID}	2.1	mi/h
Number of Lanes, N	4		f _N	1.5	mi/h
FFS (measured)		mi/h	FFS	66.4	mi/h
Base free-flow Speed, BFFS	70.0	mi/h			
LOS and Performance	Measures	1000	Design (N)		<u> </u>
Operational (LOS)			Design (N)		
v _p = (V or DDHV) / (PHF x N >	x f x		Design LOS	o / mile . No. f	
f)	1642	pc/h/ln	$v_p = (V \text{ or DDHV})$	') / (PHF x N x f _{HV} x	pc/h
'p'	66.1	mi/h	f _p)		. ! #-
S	24.9	pc/mi/ln	S		mi/h
$D = v_p / S$		ролили	D = v _p / S		pc/mi/ln
LOS	С		Required Numb	er of Lanes, N	
Glossary	The same Meanings		Factor Local	ion	
N - Number of lanes	S - Speed		E _p - Exhibits23-	8 23-10	f _{LW} - Exhibit 23-4
- Hourly volume	D - Density		E _T - Exhibits 23		f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow s	speed	1 '		f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free		f _p - Page 23-12		f _{ID} - Exhibit 23-7
DDHV - Directional design ho		- -	LOS, S, FFS, v	- Exhibits 23-2, 23-3	ID - EXHIBIT 25-7
ייסט uectional design no	Jul Volume	<u></u>			



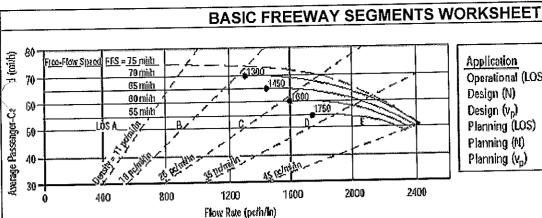
Application .	_Input_	Output
Operational (LOS)	FFS, N, v _D	LOS, S, D
Design (N)	FFS, LOS, V _D	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

30 + 3x	1200 1	1600	2800	2400		
.,,,	Flow Rate (pc/h/lin)					
General Information				Site Information		
Analyst	YLM			Highway/Direction of Travel	EASTBOU	ND 1-595
Agency or Company	RSH 9/7/04			From/To Jurisdiction		
Date Performed Analysis Time Period	9///04 PM			Analysis Year	2014 NO E	BUILD
Project Description WEST OF	SW 136TH AVE					
✓ Oper.(LOS)			□ D	es.(N)	☐ Planr	ning Data
Flow Inputs				- L. BUE	0.05	
Volume, V	4815 veh/h			Peak-Hour Factor, PHF	0.95 5	
AADT	veh/day			%Trucks and Buses, P _T		
Peak-Hr Prop. of AADT, K				%RVs, P _R	0 Lev e l	
Peak-Hr Direction Prop, D	e e la lla			General Terrain: Grade % Length	mi	
DDHV = AADT x K x D Driver type adjustment	veh/h 1.00			Up/Down %		
Calculate Flow Adjustm	AND DESCRIPTION OF THE PROPERTY OF THE PROPERT				and the second	
<u> Janouliatoa koaraataj etamo</u>	1.00			E _R	1.2	
E	1.5			$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
E _T Speed Inputs				Calc Speed Adj and FF	S	
_ane Width	12.0	ft			0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft		f _{LW}		mi/h
	0.91	I/mi		f _{LC}	0.0	
Interchange Density	4	177111		f _{ID}	2.1	mi/h
Number of Lanes, N	4	mi/h		f _N	1.5	mi/h
FFS (measured)	 0			FFS	66.4	mi/h
Base free-flow Speed, BFFS	70.0	mi/h		B 1 - 41		
LOS and Performance I	Neasures			Design (N) Design (N)		
Operational (LOS)				Design LOS		
$v_p = (V \text{ or DDHV}) / (PHF \times N \times N)$	f _{HV} X	B. A.	_	$v_n = (V \text{ or DDHV}) / (PHF \times N)$	x f x	
£ \	^{.HV} 1299	pc/h/li	1		, HA V	pc/h
^լ թ) Տ	66.4	mi/h		f _p)		mi/h
D = v _p / S	19.6	pc/mi/	/in	S		pc/mi/ln
LOS	C	'		$D = v_p / S$		ролнил
LOO	<u> </u>			Required Number of Lanes, N	۷	
Glossary				Factor Location		
N - Number of lanes	S - Speed			E _R - Exhibits23-8, 23-10		f _{LW} - Exhibit 23-4
Hourly volume	D - Density			E _T - Exhibits 23-8, 23-10, 23-	11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow	speed		f _p - Page 23-12		f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base fre	e-flow sp	eed	LOS, S, FFS, v _p - Exhibits 23	-2. 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design ho	ur volume			[LOG, G, 1 G, v _p - Exhibits 20	-, 20 O	יוט בייייבייים טוי



Application .	Input_	Output
Operational (LOS)	FFS, N, v _b	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, O
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S. D

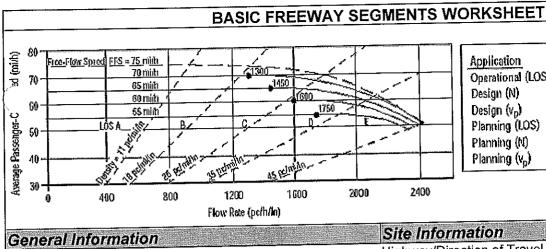
0 400 800	1200 16 Filow Rate (path/lin)	90 2000	2404)		
A second	•		Site Information		
General Information Analyst	YM	100	Highway/Direction of Travel	EASTBOUN	ID
Agency or Company	RSH		From/To		
Date Performed	9/7/04		Jurisdiction	2014 NO BI	III D
Analysis Time Period	AM Peak Hour		Analysis Year	2014 NO B	JILD
Project Description EB 595 E	AST OF 195		(A.1)	I Planni	na Data
☑ Oper.(LOS)		<u> </u>	es.(N)	1 Tiaiiiii	ng Data
Flow Inputs			Peak-Hour Factor, PHF	0.95	
/olume, V	6516 veh/h			5	
AADT	veh/day		%Trucks and Buses, P _T		
Peak-Hr Prop. of AADT, K			%RVs, P _R	0	
Peak-Hr Direction Prop, D			General Terrain:	Level mi	
DDHV = AADT x K x D	veh/h		Grade % Length Up/Down %	1111	
Driver type adjustment	1.00		Op/DOWIT 78		
Calculate Flow Adjustm				1.2	
	1.00		E _R		
E _T	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
Speed Inputs	Parties of Dealers		Calc Speed Adj and FF	<u>S</u>	THE REPORT OF THE PARTY OF
_ane Width	12.0	ft	f _{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f _{LC}	0.0	mi/h
interchange Density	0.91	I/mi	f _{ID}	2.1	mi/h
Number of Lanes, N	4			1.5	mi/h
FFS (measured)		mi/h	f _N	66.4	mi/h
Base free-flow Speed, BFFS	70.0	mi/h	FFS	00.4	
LOS and Performance I	Measures		Design (N)	Superior Sup	
			Design (N)		
<u>Operational (LOS)</u>			Design LOS		
$v_p = (V \text{ or DDHV}) / (PHF x N x)$	< f _{HV} X 1758	pc/h/ln	$v_{\rm p} = (V \text{ or DDHV}) / (PHF \times N)$	x f _{HV} x	n a lh
f _p)	1700	50,1	f _p)	•••	pc/h
S	65.4	mi/h			mi/h
D = v _p / S	26.9	pc/mi/ln	S		pc/mi/ln
F	D	•	$D = v_p / S$		реливли
LOS			Required Number of Lanes,	N	
Glossary	organism (m. 1865) (m. 1865) Control of the Control		Factor Location		
N - Number of lanes	S - Speed		E _P - Exhibits23-8, 23-10	i	f _{LW} - Exhibit 23-4
- Hourly volume	D - Density		$E_{\rm T}$ - Exhibits 23-8, 23-10, 23		f _{LC} - Exhibit 23-5
F1	FFS - Free-flow s	speed	1 •	1 1	f _N - Exhibit 23-6
P	BFFS - Base free		f _p - Page 23-12		
LOS - Level of service		, nott opeca	LOS, S, FFS, v _p - Exhibits 23	3-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design ho	ur volume				



Application_	Input_	Output
Operational (LOS)	FFS, N, v _D	LOS, S, D
Design (N)	FFS, LOS, V _D	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (fl)	FFS, LOS, AADT	N, S, D
Planning (v _D)	FFS, LOS, N	v _p , S, D

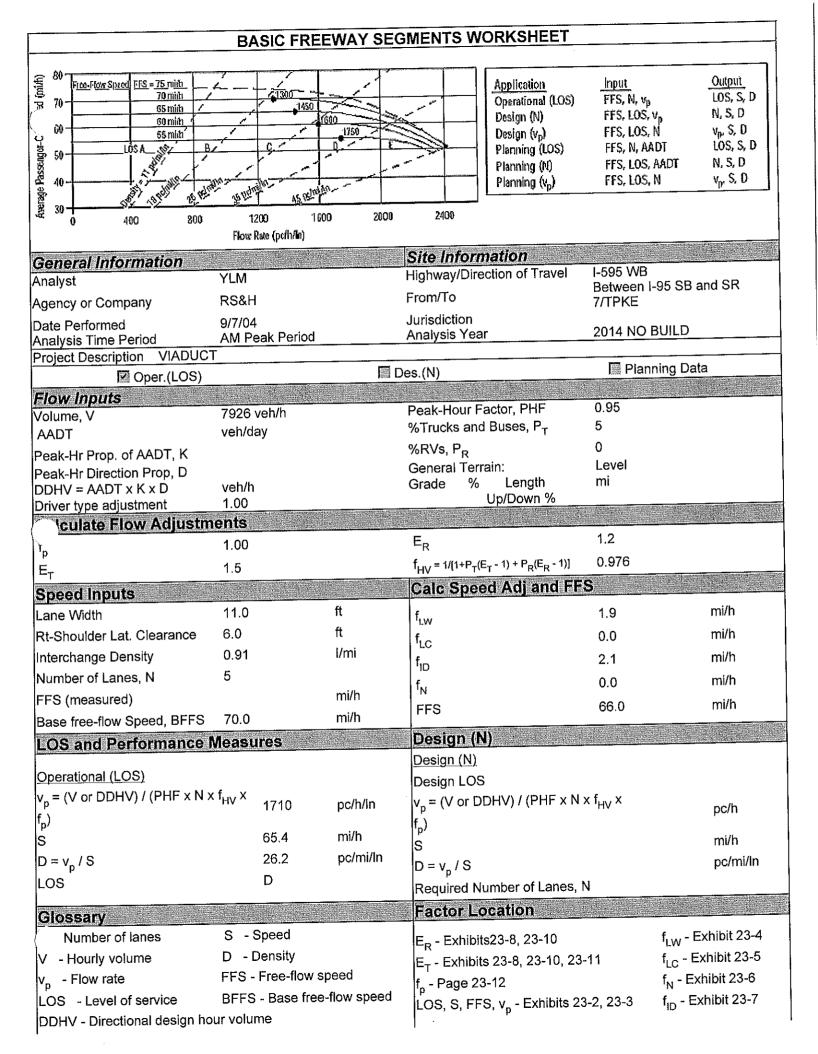
0 400 800	1200 Flow Rate (potin/lin)	1600 20	100	2400		
General Information	100		Site	e Information		Conference Consider the
nalyst	YM			way/Direction of Travel	EASTBOU	IND
agency or Company	RSH			n/To		
Date Performed	9/7/04			sdiction lysis Year	2014 NO E	BUILD
Analysis Time Period	PM Peak Hour AST OF 195		Alia	1900 1001		
	A31 OI 195		Des.(I	V)	Plani	ning Data
· ☑ Oper.(LOS) Flow Inputs	and Constitution (Inch					
/olume, V	4601 veh/h		Pea	k-Hour Factor, PHF	0.95	
AADT	veh/day		%Т	rucks and Buses, P _T	5	
Peak-Hr Prop. of AADT, K	, ,		%R	Vs, P _R	0	
Peak-Hr Direction Prop, D				neral Terrain:	Level	
DDHV = AADT x K x D	veh/h		Gra		mi	
Oriver type adjustment	1.00	74.000 agr	A grown is on the printing pages of the first	Up/Down %		
Calculate Flow Adjustm	ents					
	1.00		ER		1.2	
E _T	1.5		f	$= 1/[1+P_{T}(E_{T}-1)+P_{R}(E_{R}-1)]$	0.976	
⊢⊤ Speed Inputs				Ic Speed Adj and Fi	S	Carlo Sagaran Sagaran
ane Width	12.0	ft			0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f _{LV}		0.0	mi/h
	0.91	l/mi	f _{LC}			mi/h
nterchange Density	4		f _{lD}		2.1	
Number of Lanes, N	4	mi/h	f _N		1.5	mi/h
FFS (measured)			FF	:S	66.4	mi/h
Base free-flow Speed, BFFS	70.0	mi/h				
LOS and Performance I	Vieasures	s - 11 - 1119 -		sign (N)		
Operational (LOS)				sign (N)		
•	, f v			sign LOS		
v _p = (V or DDHV) / (PHF x N x	1241 1241	pc/h/ln	, ,	= (V or DDHV) / (PHF x N	X THV X	pc/h
f _p)	00.4	mi/h	f _p)			
S	66.4		s			mi/h
D = v _p / S	18.7	pc/mi/ln	, D:	= v _p / S		pc/mi/ln
LOS	С		Re	quired Number of Lanes,	N	
Glossary	STATE OF THE STATE OF THE		Fa	ictor Location		
N - Number of lanes	S - Speed			, - Exhibits23-8, 23-10		f _{LW} - Exhibit 23-4
- Hourly volume	D - Density			L	2_11	f _{LC} - Exhibit 23-5
•	FFS - Free-flow	speed		- Exhibits 23-8, 23-10, 23	J~ I	f _N - Exhibit 23-6
v _p - Flow rate	BFFS - Base fr			- Page 23-12		N - EXHIBIT 23-0
LOS - Level of service		ea-liow shee		OS, S, FFS, v _p - Exhibits 2	23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design ho	ur volume					

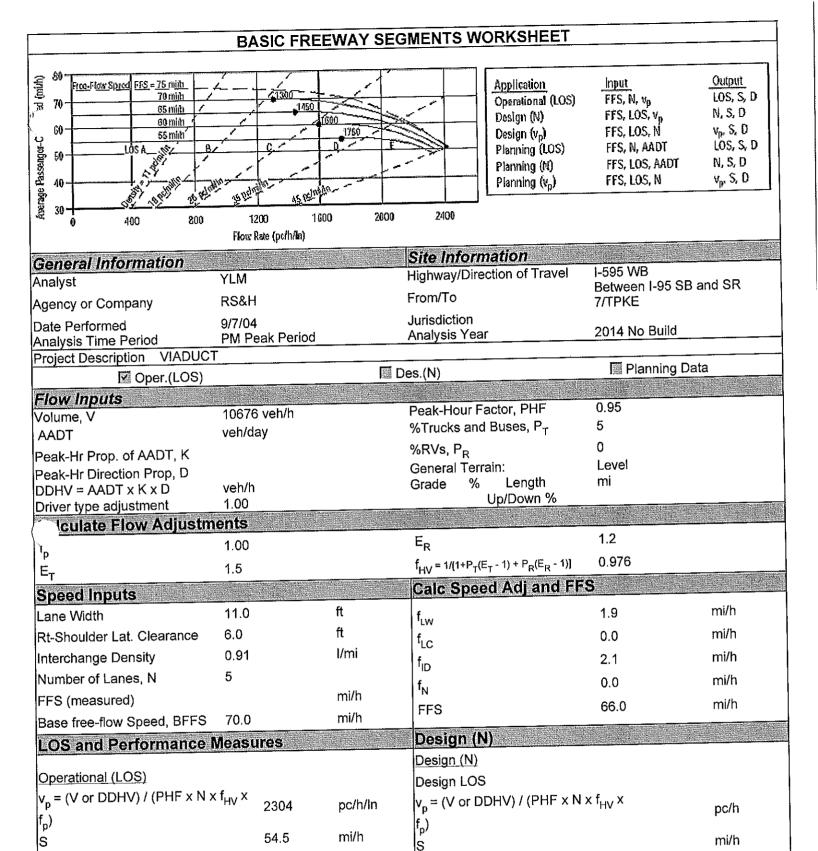
BASIC FREEWAY SEGMENTS WORKSHEET ed (mith) Output Input F<u>ree-</u>Flow Spaced FIS = 75 minh Application | LOS, S, D 70 milh Operational (LOS) FFS, N, vn 70 65 mich N, S, D FFS, LOS, Vn Design (N) 60 min v_n, S, D 60 FFS, LOS, N Design (v_n) 55 milh (werage Passenger-C LOS, S, D FFS, N. AADT Planning (LOS) 50 N. S. D FFS, LOS, AADT Planning (N) v_p, S, D Planning (v_n) FFS, LOS, N 40 30 2000 2400 1600 1200 Flow Rate (pc/h/ln) Site Information General Information WESTBOUND Highway/Direction of Travel YLMAnalyst From/To **RSH** Agency or Company Jurisdiction 9/7/04 Date Performed 2014 NO BUILD Analysis Year AM Peak Hour Analysis Time Period WB 595 EAST OF SB 95 OFF RAMP Project Description 🔚 Planning Data Des.(N) Oper.(LOS) Flow Inputs 0.95 Peak-Hour Factor, PHF 4910 veh/h Volume, V %Trucks and Buses, P_T 5 veh/day **AADT** 0 %RVs, PR Peak-Hr Prop. of AADT, K Level General Terrain: Peak-Hr Direction Prop. D mi Length Grade veh/h $DDHV = AADT \times K \times D$ Up/Down % 1.00 Driver type adjustment Calculate Flow Adjustments 1.2 E_{R} 1.00 0.976 $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ 1.5 E_{T} Calc Speed Adj and FFS Speed Inputs ft mi/h 0.0 12.0 Lane Width f_{lw} ft 6.0 mi/h Rt-Shoulder Lat. Clearance 0.0 f_{LC} 1/mi 0.91 Interchange Density mi/h 2.1 f_{in} Number of Lanes, N mi/h 1.5 f_N mi/h FFS (measured) 66.4 mi/h **FFS** mi/h Base free-flow Speed, BFFS 70.0 Design (N) LOS and Performance Measures Design (N) Operational (LOS) Design LOS $v_p = (V \text{ or DDHV}) / (PHF x N x f_{HV} x)$ $v_p = (V \text{ or DDHV}) / (PHF x N x f_{HV} x)$ pc/h/in 1324 pc/h f_p f_p mi/h 66.4 mi/h S pc/mi/ln 19.9 pc/mi/ln $D = v_p / S$ $D = v_p / S$ C LOS Required Number of Lanes, N Factor Location Glossary f_{LW} - Exhibit 23-4 N - Number of lanes S - Speed E_P - Exhibits23-8, 23-10 f_{LC} - Exhibit 23-5 D - Density E_T - Exhibits 23-8, 23-10, 23-11 - Hourly volume FFS - Free-flow speed f_N - Exhibit 23-6 v_n - Flow rate f_p - Page 23-12 BFFS - Base free-flow speed f_{ID} - Exhibit 23-7 LOS - Level of service LOS, S, FFS, v_p - Exhibits 23-2, 23-3 DDHV - Directional design hour volume



Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _D	N, S, D
Design (v _p)	FFS, LOS, N	v _o , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _o)	FFS, LOS, N	ν _p , S, D

Site Information	i 400 800	1200 160 Flow Rete (pc/h/lin)	00 2000	2400		
Naralyst YLM Highway/Direction of Travel Prom/To Jurisdiction Analysis Time Period PM Peak Hour Analysis Time Period PM Peak Hour Analysis Year 2014 NO BUILD	Conoral Information			Site Information		
Second Performed Perform		YLM			WESTBOU	ND
Date Performed 977/04 70 70 70 70 70 70 70		RSH				
Project Description WB 995 EAST OF SB 95 OFF RAMP Project Description WB 995 EAST OF SB 95 OFF RAMP	Date Performed				2014 NO B	UILD
Flow Inputs Flow Inputs	Analysis Time Period	PM Peak Hour	E DAMD	Allalysis real	<u> ZOTTINO D</u>	
		-AST OF SB 95 OF	F RAIVIE	oc (N)	□ Plann	ing Data
## AADT Veh/day Veh/da				7es.(N)		
Volume, V Veh/day Veh	-low Inputs	CACO yoh/h		Peak-Hour Factor, PHF	0.95	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					5	
Peak-Hr Prop. of AADI, K		ven/day		·	0	
Peak-Hr Direction Prop. D Driver type adjustment 1.00 E T 1.00 E T 1.5 E T 1.6 E T 1.6 E T 1.7 E T 1.7 E T 1.7 E T 1.8 E T 1.9 E T 1.00 E T T T T T T T T T T T T T T T T T	·			• •	-	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		unda/la				
Calculate Flow Adjustments 1.00 $E_{T} $						
	paleulate Flow Aujustin			En	1.2	-
Speed Inputs 12.0 ft ft ft ft ft ft ft f	×				0.976	
Lose Width 12.0 ft ft $_{LW}$ 0.0 mi/h Rt-Shoulder Lat. Clearance 6.0 ft ft Interchange Density 0.91 l/mi $_{LC}$ $_{ID}$ 1.5 mi/h Number of Lanes, N 4 mi/h FFS (measured) mi/h $_{ID}$ 1.5 mi/h FFS (measured) Masse free-flow Speed, BFFS 70.0 mi/h $_{ID}$ 2.1 mi/h $_{ID}$ 1.5 mi/h FFS (measured) Design (N) Design LOS $_{ID}$ Design LOS $_{ID}$ $_{I$		1.5			and the second s	
Rt-Shoulder Lat. Clearance 6.0 ft Interchange Density 0.91 l/mi f_{LC} 0.0 mi/h Interchange Density 0.92 l/mi f_{LC} 0.93 l/mi f_{LC} 0.94 l/mi f_{LC} 0.94 l/mi f_{LC} 0.95 l				Carc Speed Auf and 11		: //-
Interchange Density 0.91 I/mi f_{ID} 2.1 mi/h Number of Lanes, N 4 mi/h FFS (measured) mi/h Base free-flow Speed, BFFS 70.0 mi/h FFS 66.4 mi/h FFS 66.	Lane Width			f _{LW}	0.0	
Interchange Density 0.91 I/ml Number of Lanes, N 4	Rt-Shoulder Lat. Clearance	6.0		f _{LC}	0.0	mi/h
Number of Lanes, N 4 $protect{FFS}$ (measured) $protect{Mini/h}$ $protect{FFS}$ (measured) $protect{Mini/h}$ $protect{FFS}$ $protect{Mini/h}$ $protect{FFS}$ $protect{Mini/h}$ $protect{FFS}$ $protect{Mini/h}$	Interchange Density	0.91	I/mi		2.1	mi/h
FFS (measured) Base free-flow Speed, BFFS 70.0 mi/h LOS and Performance Measures Operational (LOS) $v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_{PV} \times$	Number of Lanes, N	4			1.5	mi/h
Base free-flow Speed, BFFS 70.0 mi/h LOS and Performance Measures Operational (LOS) $V_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_{PV} \times f_{PV$	FFS (measured)		mi/h		66.4	mi/h
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Base free-flow Speed, BFFS	70.0	mi/h	FFO	VV	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	LOS and Performance	Vieasures		Design (N)		Section of the sectio
$\begin{array}{llllllllllllllllllllllllllllllllllll$				Design (N)		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		_		Design LOS		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	v _p = (V or DDHV) / (PHF x N x	.f _{HV} X 1745	pc/h/ln	$v_n = (V \text{ or DDHV}) / (PHF \times N)$	x f _{HV} x	nc/h
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	f _p)	,,	į.	f_)		ролі
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		65.5	mi/h			mi/h
Elos D Required Number of Lanes, N Required Number of Lanes, N Required Number of Lanes, N Factor Location		26.6	pc/mi/ln]		pc/mi/ln
	F	D		F	N	ı
N - Number of lanes S - Speed E_R - Exhibits 23-8, 23-10 f_{LW} - Exhibit 23-4 Hourly volume D - Density F_T - Exhibits 23-8, 23-10, 23-11 f_{LC} - Exhibit 23-5 f_D - Page 23-12 f_D - Exhibit 23-6 LOS - Level of service BFFS - Base free-flow speed					IV.	
Hourly volume D - Density E_T - Exhibits 23-8, 23-10, 23-11 f_{LC} - Exhibit 23-5 f_p - Page 23-12 f_N - Exhibit 23-6 LOS - Level of service BFFS - Base free-flow speed	Giossary			Factor Location		
Hourly volume D - Density E_T - Exhibits 23-8, 23-10, 23-11 f_{LC} - Exhibit 23-5 f_p - Page 23-12 f_N - Exhibit 23-6 LOS - Level of service BFFS - Base free-flow speed	N - Number of lanes	S - Speed		E _B - Exhibits23-8, 23-10		f _{LW} - Exhibit 23-4
v_p - Flow rate FFS - Free-flow speed f_p - Page 23-12 f_N - Exhibit 23-6 LOS - Level of service BFFS - Base free-flow speed LOS, S, FFS, v_p - Exhibits 23-2, 23-3 f_{ID} - Exhibit 23-7	Hourly volume	D - Density			-11	f _{LC} - Exhibit 23-5
LOS - Level of service BFFS - Base free-flow speed $\frac{r_p}{LOS}$, S, FFS, v_p - Exhibits 23-2, 23-3 f_{ID} - Exhibit 23-7	Ĺ _, ·	FFS - Free-flow s	speed	• •	•	f Exhibit 23-6
[LOS, S, FPS, V _n * Extinue 20 2, 20 0 1]	l h				2 2 2 2 2	
			, "	LOS, S, FFS, V _p - Exhibits 2.	o-Z, Zo-S	ID - LAMOR 20-1





LOS	E	Required Number of Lanes, N	
Glossary		Factor Location	The property and the spring the property of
Number of lanes	S - Speed	E _R - Exhibits23-8, 23-10	f _{LW} - Exhibit 23-4
V - Hourly volume		E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate		f _p - Page 23-12	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design h	our volume	μ , , , , , μ	

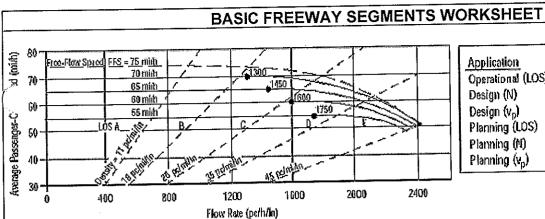
 $D = v_n / S$

pc/mi/ln

pc/mi/ln

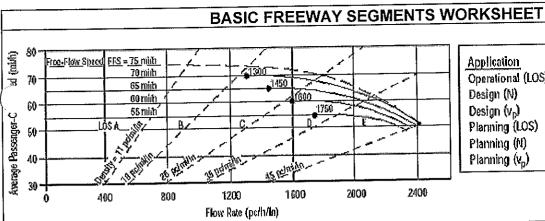
42.3

 $D = v_0 / S$



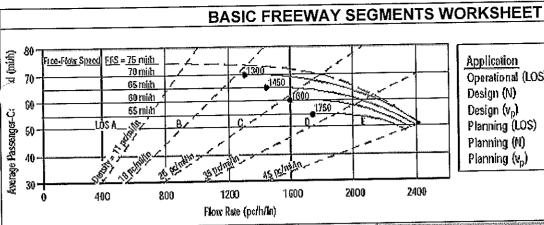
Application	Input_	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	ν _p . S. O
Planning (LOS)	FFS, N, AADT	LÖŞ, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

# 30 do 200	1200	1000 2000	2400		
	Flow Rate (perh <i>i</i> lin)				
General Information			Site Information		PRINCES BEAUTIFUL STREET
Analyst	YLM		Highway/Direction of T	ravel WESTBC	OUND
Agency or Company	RSH		From/To Jurisdiction		
Date Performed Analysis Time Period	9/7/04 AM		Analysis Year	2014 NO	BUILD
Project Description WB 595	BETWEEN DAVI	E OFF RAMP	AND UNIVERSITY OFF	RAMP	
☑ Oper.(LOS)			Des.(N)	☐ Plar	ning Data
Flow Inputs	and programme		Company of the second second		
Volume, V	8362 veh/h		Peak-Hour Factor, PH		
AADT	veh/day		%Trucks and Buses, F	•	
Peak-Hr Prop. of AADT, K			%RVs, P _R	0	
Peak-Hr Direction Prop, D			General Terrain: Grade % Lengt	Level h mi	
DDHV = AADT x K x D	veh/h		Grade % Lengt Up/Down		_
Driver type adjustment	1.00		CP/ DOM	rang arabanya da arabanya sa	12.002.000.000.000.000.000.000
Calculate Flow Adjustm	1,00		E _R	1.2	
-			f _{HV} = 1/[1+P _T (E _T - 1) + P _R (l	E _p - 1)] 0.976	
E _T	1.5		Calc Speed Adj a	R 7-	
Speed Inputs					://-
Lane Width	12.0	ft	f _{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f _{LC}	0.0	mi/h
Interchange Density	0.91	I/mi	f _{ID}	2.1	mi/h
Number of Lanes, N	4		f _N	1.5	mi/h
FFS (measured)		mi/h	FFS	66.4	mi/h
Base free-flow Speed, BFFS	70.0	mi/h		· · · · · · · · · · · · · · · · · · ·	e de la companya de
LOS and Performance I	Measures		Design (N)		
0 (" (" 00")			Design (N)		
Operational (LOS)	. .		Design LOS	_	
$V_p = (V \text{ or DDHV}) / (PHF \times N)$	^{к т} ну ^х 2256	pc/h/ln	$v_p = (V \text{ or DDHV}) / (P$	HF x N x f _{HV} x	pc/h
f _p)	=0.0		f _p)		•
S	56.3	mi/h	S		mi/h
$D = v_p / S$	40.1	pc/mi/ln	$D = v_p / S$		pc/mi/ln
LOS	E		Required Number of	Lanes, N	
Glossary			Factor Location		
N - Number of lanes	S - Speed			10	f _{LW} - Exhibit 23-4
Hourly volume	D - Density		E _R - Exhibits23-8, 23		f Evhibit 23.5
· -	FFS - Free-flow	sneed	E _T - Exhibits 23-8, 23	3-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate			f _p - Page 23-12		f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base fre	ee-now speed	LOS, S, FFS, v _p - Ex	hibits 23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design ho	our volume				



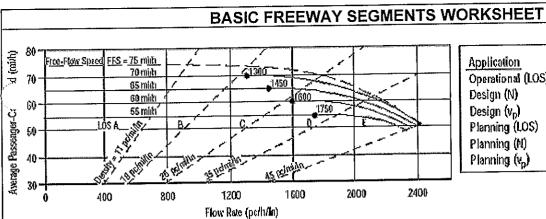
Application	Input	Output
Operational (LOS)	FFS, N, v ₀	LOS, S, D
Design (N)	ffs, los, v _d	N, S, D
Design (v _p)	FFS, LOS, N	ν _ρ , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (ft)	FFS, LOS, AADT	N, S, D
Planning (v _D)	FFS, LOS, N	v _p , S, D

30 400 200	1200 160	00 2000	2400		
	Flow Rate (pulh/lin)		1		
General Information			Site Information	WESTBOL	IND
Analyst _	YLM		Highway/Direction of Travel From/To	VVESTBOO	JND
Agency or Company Date Performed	RSH 9/7/04		Jurisdiction		
Includio Timo Period	PM		Analysis Year	2014 NO	BUILD
Project Description WB 595 E	BETWEEN DAVIE	OFF RAMP A	ND UNIVERSITY OFF RAMP		
☑ Oper.(LOS)		■ D	es.(N)	l Plani	ning Data
Flow Inputs	or Property and the			- 0.05	
/olume, V	10310 veh/h		Peak-Hour Factor, PHF	0.95	
AADT	veh/day		%Trucks and Buses, P _T	5	
Peak-Hr Prop. of AADT, K			%RVs, P _R	0	
Peak-Hr Direction Prop, D			General Terrain:	Level	
DDHV = AADT x K x D	veh/h		Grade % Length Up/Down %	mi	
Oriver type adjustment	1.00		Op. Down 7.		
Calculate Flow Adjustm	ents 1.00		E _R	1.2	
·_			$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
ET	1.5			Character and Company of the Company	
Speed Inputs			Calc Speed Adj and FF	J	
_ane Width	12.0	ft	f _{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f _{LC}	0.0	mi/h
nterchange Density	0.91	I/mi	f _{ID}	2.1	mi/h
Number of Lanes, N	4		l l	1.5	mi/h
FFS (measured)		mi/h	f _N	66.4	mi/h
Base free-flow Speed, BFFS	70.0	mi/h	FFS	00.4	111111
LOS and Performance N	/leasures		Design (N)		
			Design (N)		
<u>Operational (LOS)</u>			Design LOS		
$v_p = (V \text{ or DDHV}) / (PHF x N x)$	f _{HV} x 2781	pc/h/ln	$v_p = (V \text{ or DDHV}) / (PHF \times N)$	x f _{HV} X	no/h
F _p)	2,01	P • · · · · · · ·	f')	• • • • • • • • • • • • • • • • • • • •	pc/h
s S		mi/h	'p' S		mi/h
$D = v_p / S$		pc/mi/ln			pc/mi/ln
Los	F		D = v _p / S Required Number of Lanes, N	J	I.
Glossary			Factor Location		
N - Number of lanes	S - Speed		E _R - Exhibits23-8, 23-10		f _{LW} - Exhibit 23-4
Hourly volume	D - Density		E _T - Exhibits 23-8, 23-10, 23-	-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow s	peed	f _p - Page 23-12		f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free	-flow speed	I OS S EES V - Evhibite 29	1-2 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design hou	ur volume		LOS, S, FFS, v _p - Exhibits 23	· _, _0-0	(ID =



		A.,
Application	<u>Input</u>	Output_
Operational (LOS)	FFS, N, v _D	LOS, S, D
Design (N)	FFS, LOS, V _D	N, S, D
Design (v _p)	FFS, LOS, N	ν _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

o 400 800	1200 160 Filow Rate (polh/lin))() 2000 	24(4)		
General Information			Site Information		
Analyst	YLM		Highway/Direction of Travel	WESTBO	UND I-595
Agency or Company	RSH		From/To Jurisdiction		
Date Performed	9/7/04		Analysis Year	2014 NO	BUILD
Analysis Time Period	AM F SW 136TH AVE		7 mary old 1 dai		
Project Description WEST O	0W 100111710L		Pes.(N)	🔚 Plan	ning Data
Flow Inputs					
Volume, V	4894 veh/h		Peak-Hour Factor, PHF	0.95	
AADT	veh/day		%Trucks and Buses, P _T	5	
Peak-Hr Prop. of AADT, K	·		%RVs, P _R	0	
Peak-Hr Direction Prop, D			General Terrain:	Level	
DDHV = AADT x K x D	veh/h		Grade % Length	mi	
Driver type adjustment	1.00		Up/Down %		
Calculate Flow Adjustm	ents		AND THE RESERVE AND THE PARTY OF THE PARTY O		
	1.00		E _R	1.2	
E _T	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
Speed Inputs			Calc Speed Adj and FF	S	Careful in 1957 (Dodg) 1960 (1973) 1978 - Paris III (1974)
Lane Width	12.0	ft	f _{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f _{LC}	0.0	mi/h
Interchange Density	0.91	I/mi		2.1	mi/h
Number of Lanes, N	4		f _{ID}	1.5	mi/h
FFS (measured)		mi/h	f _N		
Base free-flow Speed, BFFS	70.0	mi/h	FFS	66.4	mi/h
LOS and Performance I	Vieasures		Design (N)		
			Design (N)		
Operational (LOS)			Design LOS		
$v_p = (V \text{ or DDHV}) / (PHF \times N \times N)$	c f _{HV} X 1320	pc/h/ln	$v_p = (V \text{ or DDHV}) / (PHF x N)$	x f _{HV} x	na/h
(f _p)	,020	μο	$ f_p\rangle$		pc/h
S	66.4	mi/h	S		mi/h
D = v _p / S	19.9	pc/mi/ln	1		pc/mi/ln
LOS	С		$D = v_p / S$.1	po///
	11/2		Required Number of Lanes, I	V	
Glossary			Factor Location		
N - Number of lanes	S - Speed		E _R - Exhibits23-8, 23-10		f _{LW} - Exhibit 23-4
- Hourly volume	D - Density		E _T - Exhibits 23-8, 23-10, 23	-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow s	peed	f _n - Page 23-12		f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free	-flow speed		1_ 0_01_1	f _{ID} - Exhibit 23-7
DDHV - Directional design ho		•	LOS, S, FFS, v _p - Exhibits 23	J-∠, ∠J - J	ID - EVIIIon 50 ,
DDITY - Directional design no	w. (v.m				



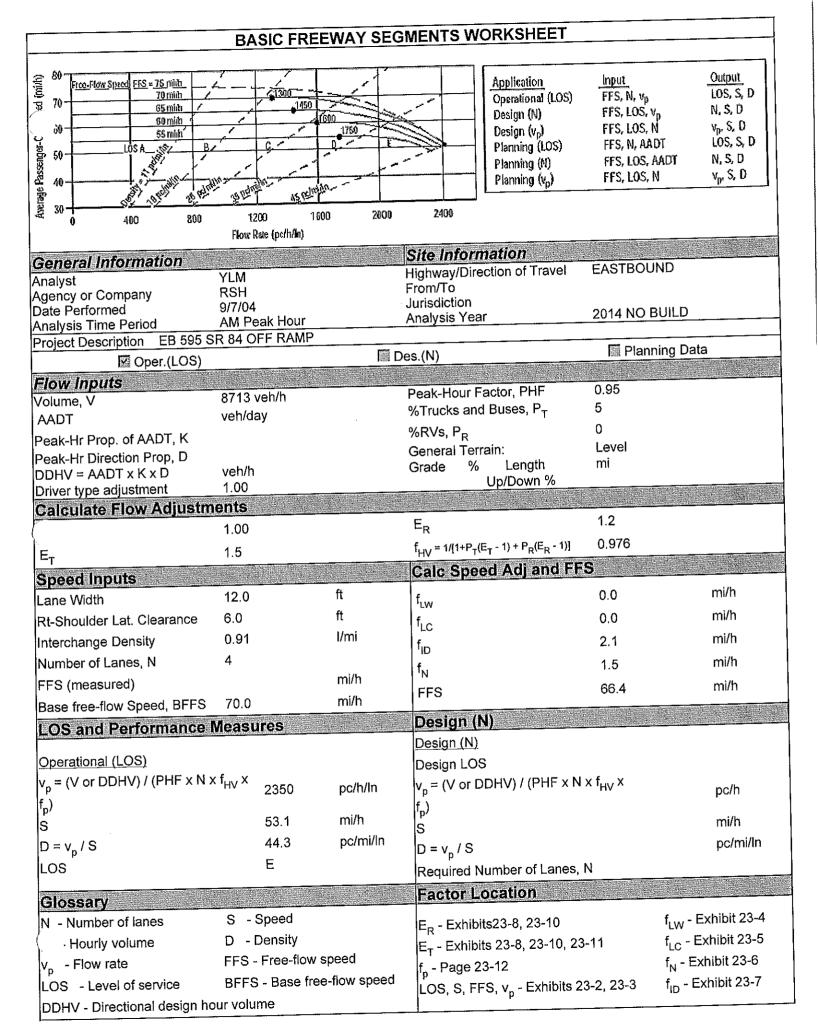
Application	Inp <u>ut</u>	Output
Operational (LOS)	FFS, N, V _D	LOS, S, D
Design (N)	FFS, LOS, v _o	N, S, D
Design (v _p)	FFS, LOS, N	ν _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S. D

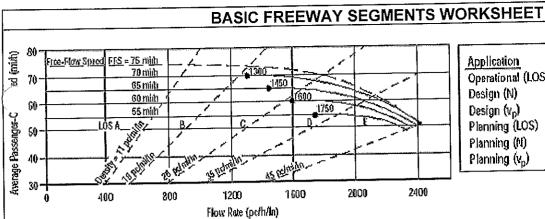
400 800 800			2000	2400		
	Flow Rate (pc/h/lin)					
General Information				Site Information Highway/Direction of Travel	WESTRO	UND 1-595
Analyst	YLM RSH			From/To	VVLOTBO	0,12,100
Agency or Company Date Performed	9/7/04			Jurisdiction		man e 1 + 1 - 1000.
Analysis Time Period	PM			Analysis Year	2014 NO	BUILD
Project Description WEST (OF SW 136TH AV				DI	-i Doto
☑ Oper.(LOS)			ΠD	es.(N)	I Plan	ning Data
Flow Inputs				District Control DIST	0.95	
Volume, V	6295 veh/h			Peak-Hour Factor, PHF	0.95 5	
AADT	veh/day			%Trucks and Buses, P _T		
Peak-Hr Prop. of AADT, K				%RVs, P _R	0	
Peak-Hr Direction Prop, D	1. 11-			General Terrain: Grade % Length	Level mi	
DDHV = AADT x K x D	veh/h 1.00			Up/Down %	1111	
Driver type adjustment Calculate Flow Adjustr	CONTRACTOR					
Galetiate Flow Atliced	1.00			E _R	1.2	
.	1.5			$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
E _T	1.0			Calc Speed Adj and FF	AND THE RESERVE OF THE SAME OF	
Speed Inputs	4.5.0	r.		Cale Space Ao and a		• 11
Lane Width	12.0	ft		f _{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft		f _{LC}	0.0	mi/h
Interchange Density	0.91	I/mi		f _{ID}	2.1	mi/h
Number of Lanes, N	4			f _N	1.5	mi/h
FFS (measured)		mi/h			66.4	mi/h
Base free-flow Speed, BFFS	70.0	mi/h		FFS	00.4	11.00.1
LOS and Performance	Measures			Design (N)		Arrest P. Chief Live S. Phoese
				Design (N)		
Operational (LOS)				Design LOS		
$v_p = (V \text{ or DDHV}) / (PHF x N)$	х т _{НV} х 1698	pc/h/ln		$v_p = (V \text{ or DDHV}) / (PHF \times N)$	x f _{HV} x	pc/h
f _p)				lf')		ролі
S	65.8	mi/h		S		mi/h
$D = v_p / S$	25.8	pc/mi/lı	n	$D = V_p / S$		pc/mi/ln
LOS	С			Required Number of Lanes, N	١	
				Factor Location		
Glossary	S - Speed					
N - Number of lanes	•			E _R - Exhibits23-8, 23-10		f _{LW} - Exhibit 23-4
Hourly volume	D - Density			E _T - Exhibits 23-8, 23-10, 23-	11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flov			f _n - Page 23-12		f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base fr	ee-flow spe	ed	LOS, S, FFS, v _p - Exhibits 23	-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design h	our volume			, -, -, -, -, -, -, -, -, -, -, -, -		

RAMPS AND RAMP JUNCTIONS

		RAME	S AND			IONS W	ORK	(SHEE	T				
General Infor				Site	e Inforn					CTPO	LIMD		
Analyst		YLM	• · · • · · · · · · · · · · · · · · · ·				10100	טאט					
Agency or Cor		RSH				ction sdiction							
Date Performe		9/7/04	,,,,,,,,						20	14 NO	BUILD		
Analysis Time	Period	AM Peak	Hour	· masan		lysis Yea		<u></u>	20	14110	DOILD		\dashv
Project Descri	ption EB	595 TO SE	₹ 7 OFF	RAMP	DIVER	<u> </u>							
Inputs		Terrain Le	uol								Downstre	am Adi	
Upstream Adj	Kamp	renam Le	VEI								Ramp		
∏ Yes □	On										☑ Yes	☐ On	
⊠ No □	Off										I No =	☑ Off 1276	ft
L _{up} = ft			= 6	0.0 mph	 .	s		45.0	mph		L _{down} =	679	"
	h/h	Ü				es, L _A , L _I			•		VD =	veh/h	l
1	h/h				IIIOW IAII	63, LA, L	<u>D' " F</u>	<u>۲۰۰۱</u> /					
Conversion t		der Base C	onditii	ons		T I					v=V/PHF		MAD ALL STREET
(pc/h)	V (Veh/hr)	PHF	Ter	rain	Truck	%Rv		f _{HV}	-	f _p	f _{HV} f _p		
Freeway	9929	0.95	Le	vel	5	0	<u> </u>			.00	10713		
Ramp	1216	0.95	Le	vel	2	0	0.	990_	1	.00	1293		
UpStream											700		
DownStream	679	0.95 Level 2				0	0.	990		.00	722		
	Me	erge Areas	Address of the Park of the Par		an and the			COLUMN TO SERVICE STATE	<u>Dive</u>	rge Area	as		
Estimation o	fv_{12}			100		Estimati	ion	of V ₁₂					
		= V _F (P _{FM})						V.	12 = \	√ _R + (√ _F	$-V_R)P_{FD}$		
L _{EQ} = (Equal	12					L _{EQ} = (E	qua	ition 25	-8 or	25-9)			
			5\			P _{ED} =0.436 using Equation (Exhibit 25-11)							
P _{FM} = using E	quanon (EXHIBIT 20-	J)			V ₁₂ = 5400 pc/h							
V ₁₂ = pc/h	TOTAL STATE OF THE					V ₁₂ = 5400 pc/h Capacity Checks							
Capacity Ch				100	CCO T	Capacit	رس ہو	Actu	ച	Mayi	imum	LOS F	7
	Actual	Maxir	num	LOS) F ?	\/ -\/		1071			200	Yes	
V _{FO}		See Exh	ibit 25-		-	V _{FI} =V _F	-						
*FO						V ₁₂		5400)	440	0:All	Yes	
		4600	λ-Δ II			$V_{FO} = V_{R}$	F -	9420)	92	00	Yes	
V _{R12}		4000	II		;	$\frac{V_{R}}{V_{R}}$		129	3	21	00	No	
Level of Ser	vice Deter	mination (if not F	3		Levelo	f Se	rvice L)eter	minatio	n (if not F)	
$D_{R} = 5.475$					7 L.						, - 0.000		
"	c/ mi /ln)	* R 7 0.001	· 12	0.000_	⁷ – д	D _R =	•	.4 (pc/				_	
1 ''	xhibit 25-4)				LOS=	F(Exhibit	25-4	.)			
Speed Estin		/				Speed	Esti	mation					
						D _s =				25-19)			
,	oit 25-19)					1 "		•		chibit 25	-19)		
1 .,	າ (Exhibit 2					S ₀ =		•		xhibit 25			
,	າ (Exhibit 2					"		•	•				
S= mpł	າ (Exhibit 2	25-14)				S = 55.7 mph (Exhibit 25-15)				V			

RAMPS AND RAMP JUNCTIONS WORKSHEET												
General Infor				Site	e Inform							
Analyst		YLM				- · · · - · · · · · · · · · · · · · · ·				OUND		
Agency or Cor		RSH			June	sdiction						Ì
Date Performe		9/7/04							O BUILD			
Analysis Time	Period	PM Peak	Hour	DAMD			· · · · · · · · · · · · · · · · · · ·	- <u></u>	20111	10 00		
Project Descri	ption EB	595 IO SE	(/ OFF	RAWP	DIVER	JL						
<i>Inputs</i> Upstream Adj	Ramp	Terrain Le	vel	N .						Downstre Ramp	am Adj	
🖪 Yes 🗐	On									₩ Yes	I∭ On	ļ
 ⊠ No	Off									□ No	✓ Off	
										L _{down} =	1276	ft
L _{up} = ft		S		0.0 mph			FR =		nph	VD =	858 veh/h	
1	h/h				how lan	es, L _A , L _I	_{D'} V _{R'} V	(_f)			VCII/II	100
Conversion t	o pc/h Uni	der Base C	onditio	ons					<u> </u>	v=V/PHF		
(pc/h)	V (Veh/hr)	PHF		rain	Truck	%Rv	f _H		f _p	$f_{HV} f_p$		
Freeway	7493	0.95	Lev	vel	5	0	0.97	76	1.00	8085		
Ramp	958	0.95	Lev	vel	2	0	0.99	90	1.00	1019		
UpStream	OEO	0.95	Le	امر	2	0	0.99	90	1.00	912		
DownStream		erge Areas	<u> </u>	vei	<u> </u>		0.0		Diverge A	reas		
-	CARL CONTRACTOR OF THE PARTY OF	alge Aleas				Estimat	ion of	AND DESCRIPTION OF THE PERSON NAMED AND DESCRIPTION OF THE PERSON	-			
Estimation o		-V (P.)							, = V _p +	(V _F - V _R)P _{FD}		
L _{EQ} = (Equa	-	= V _F (P _{FM}) r 25-3)	!			L _{EQ} = (Equation 25-8 or 25-9)						
P _{FM} = using E	fountion (Exhibit 25-	5)			P _{FD} =0.436 using Equation (Exhibit 25-11)						
$V_{12} = pc/h$,			V ₁₂ = 4100 pc/h						04-8-44300000000000000000000000000000000
Capacity Ch	ecks					Capacit	y Che	cks			6.60	 -
Ourage St.	Actual	Maxir	num	LOS	8 F?			Actua	al M	laximum	LOS F	?
		See Ext	nihit 25-			V _{Fi} =V _i	F	8085	·	9200	No	
V _{FO}		7	_			V ₁₂		4100		1400:All	No	
		4600	D:All			V _{FO} = V V _R	' _F -	7066	3	9200	No	
V _{R12}			•			V _R		1019		2100	No	
Level of Ser	vice Deter	mination (if not F	j).		Level o				ition (if not		
$D_{\rm p} = 5.475$	+ 0.00734	v _P + 0.00	78 V ₁₂ -	0.0062	7 L _A		D _R =	4.252	2 + 0.008	6 V ₁₂ - 0.000	09 L _D	
'`	oc/ mi /ln)	,,				D _R =	37.3	(pc/ r	ni /ln)			
1 1	Exhibit 25-4	!)				LOS=		xhibit	25-4)			
Speed Estin	nation					Speed						
	bit 25-19)					D _s =			hibit 25-1			
9 '	h (Exhibit 2	25-19)				S _R =		-	(Exhibit			
'\	h (Exhibit 2					S ₀ =			າ (Exhibit			
, ,	h (Exhibit 2					S =	57.1	mph	(Exhibit	25-15)		



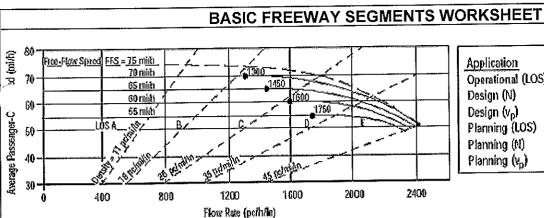


Application_	_Input_	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, V _D	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LÖŞ, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

. 0 400 800	1200 100	.0 2000	2100		
	Flow Rate (pc/h/lin)				
General Information			Site Information	EAGTROL	INID
Analyst	YLM		Highway/Direction of Travel	EASTBOU	טאני
Agency or Company	RSH		From/To		
Date Performed	9/7/04		Jurisdiction	2014 NO E	BUILD
Analysis Time Period	PM Peak Hour		Analysis Year	2011110	
Project Description EB 595 S	R 84 OFF RAMP		/A IS	□ Plant	ning Data
☑ Oper.(LOS)		I D	es.(N)	1 1 1 14111	This back
Flow Inputs	0505 1.4		Peak-Hour Factor, PHF	0.95	
Volume, V	6535 veh/h		%Trucks and Buses, P _T	5	
AADT	veh/day		•		
Peak-Hr Prop. of AADT, K			%RVs, P _R	0	
Peak-Hr Direction Prop, D			General Terrain:	Level	
DDHV = AADT x K x D	veh/h		Grade % Length	mi	
Driver type adjustment	1.00		Up/Down %		
Calculate Flow Adjustm	ents				
,	1.00		E _R	1.2	
E _T	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	A STATE OF THE STA
Speed Inputs			Calc Speed Adj and FF	S	Later the second process
Lane Width	12.0	ft	f _{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f _{LC}	0.0	mi/h
Interchange Density	0.91	I/mi		2.1	mi/h
Number of Lanes, N	4		f _{ID}	1.5	mi/h
FFS (measured)		mi/h	f _N		
Base free-flow Speed, BFFS	70.0	mi/h	FFS	66.4	mi/h
LOS and Performance			Design (N)		
EQ25 alles a destructions	<u> </u>		Design (N)		
Operational (LOS)			Design LOS		
$v_p = (V \text{ or DDHV}) / (PHF \times N \times$	f _{HV} X	pc/h/ln	$v_p = (V \text{ or DDHV}) / (PHF \times N)$	x f _{uv} x	
f _p)	1763	ролин	F	ПΨ	pc/h
	65.4	mi/h	$ f_p $		uni/h
S			S		mi/h
D = v _p / S	27.0	pc/mi/ln	$D = v_p / S$		pc/mi/ln
LOS	D		Required Number of Lanes,	N	
Glossary			Factor Location		er (transferies) (1964) (1974) Cara Brachel (1974) (1974)
N - Number of lanes	S - Speed				f _{LW} - Exhibit 23-4
	·		E _R - Exhibits23-8, 23-10		LW = EVIIIDIC 20-4
Hourly volume	D - Density		E _T - Exhibits 23-8, 23-10, 23	-11	f _{LC} - Exhibit 23-5
v _p <i>-</i> Flow rate	FFS - Free-flow sp	peea	f _p - Page 23-12		f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-	-flow speed	LOS, S, FFS, v _p - Exhibits 23	3-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design ho	ur volume		[200, 0, 1, 10, 1 _p	•	

		RAME	S AND				ORKSHEE	T				
General Infor	mation			Site	e Inforn							
Analyst		YLM			eway/Dir of Travel EASTBO ction				שאטי			
Agency or Cor		RSH				sdiction						
Date Performe		9/7/04 AM Peak	Llour			alysis Yea	r	20	14 NO	BUILD		
Analysis Time Project Descri	Period otion TUI	ANDIKE OF	JRAME	P TO 59		alycio i co	<u> </u>				-	
Inputs	טנוטוו דטו	KINF IKE OI	4 1 (7 (1911)	1000	0.00							
01	_	Terrain Le	vel							Downstrea	am Adj	
Upstream Adj	Ramp									Ramp	-	
☐ Yes ☐	On									Yes No	☑ On ☐ Off	
☑ No	Off									L _{down} =	1750	ft
L _{up} = ft		s	= 6	0.0 mph)	S	FR = 45.0	mph		VD =	1015	
	h/h					ies, L _A , L _I		<u></u> .			veh/h	
Conversion t		der Base C	onditio	ons						T		
(pc/h)	V (Veh/hr)	PHF		rain	Truck	%Rv	f_{HV}		f _p	v=V/PHF f _{HV} f _p		
Freeway	8034	0.95	Lev	/el	5	0	0.976	1	.00	8668		
Ramp	1950	0.95	Lev		2	0	0.990	,	1.00	2073		
UpStream	1000	0.00										
DownStream	1015	0.95	Le	/el	2	0	0.990		1.00	1079		
		erge Areas	·					Dive	rge Are	as		
Estimation o	f V ₁₀					Estimat	on of V ₁₂			A Company		
		= V _F (P _{FM})					V	12 =	V _R + (V _F	- V _R)P _{FD}		
L _{EQ} = (Equat	,					L _{EO} = (E	quation 25	5-8 o	r 25-9)			
P _{FM} = 0.600			nihit 25-	5)		P _{FD} = using Equation (Exhibit 25-11)						
1		ation (EA	IIDIC EO	•,		V ₁₂ = pc/h						
V ₁₂ = 5200						Capacity Checks						
Capacity Ch		Maxir	num	LOS	F?	le albanari	Actı		Max	imum	LOS F	?
	Actual	IVIGAII	Hum			\/ =\/			1	chibit 25-		
V _{FO}	10741	690	0	Ye	s	V _{FI} =V	F			14		
						V ₁₂			<u> </u>	00:All		
	7070	4600	n: A II	Υe).c	$V_{FO} = V$ V_{R}	F -		l .	xhibit 25- 14		
V _{R12}	7273	4000	J./\!	'	,5	V _R			See Ex	hibit 25-3		
Level of Ser	Van Datat	mination /	if not F	<u> </u>			f Service	Dete	rminatio	on (if not F)	
D _R = 5.475					7 L.					V ₁₂ - 0.0009		
'`	7 0.00734 3.2 (pc/ m		- 12		А	D _R =	(pc/ mi /ln					
'`	**					LOS=	(Exhibit 2					
	(Exhibit 25	J-4)				1	Estimation					
Speed Estin		- 45°				D _s =	(Exhibit 2)			
1 9	8 (Exibit 2					S _R =	mph (Ex					
13	•	xhibit 25-1				1 ''	mph (Ex					
0		hibit 25-19)				S ₀ =	• •					
S= mph	ו (Exhibit 2					S =	mph (Ex		20-10)			V
TM			Convright	@ 2000 U	niversity o	f Florida, All	Rights Reser	vea				٧,

RSH Street Stre			RAME	S AND	RAMP	JUNCT	CTIONS WORKSHEET						
Agency or Company RSH Junction Junscicition Junscicition Analysis Time Period PM Peak Hour Analysis Year 2014 NO BUILD	General Infort	mation			Site			of Traval		STRO	HND		<u> </u>
See Exhibit 25-1 See Exhibit 25-3 See Exhibit 25-4 See Exhibit 25-3 See Exhibi	Analyst							orrave		3160	OND		
PM Peak Hour PM													
Terrain Level				Llaur				ar.	20	14 NO	BUILD		
### D1					 	Alle	119313 100			1110			
Downstream Adj Ramp	Annual Control of the	otion lur	пріке Оп-н	amp									
Yes On	01		Terrain Le	vel							Downstrea	am Adj	
No	Upstream Adj	Ramp										₩ On	
$ \begin{array}{ c c c c c } \hline \mathbb{F} & \text{No} & \boxed{\bullet} & \text{Off} \\ \hline L_{up} = & \text{ft} & S_{FF} = 60.0 \text{ mph} & S_{FR} = 45.0 \text{ mph} \\ \hline VU = & \text{veh/h} & \text{Sketch (show lanes, L}_{A}, L_{D}, V_{R}, V_{I}) \\ \hline \hline \textbf{Conversion to pc/h Under Base Conditions} \\ \hline \textbf{(pc/h)} & V_{\text{Veh/hr}} & \text{PHF} & \text{Terrain} & \text{Truck} & \% \text{Rv} & \textbf{f}_{\text{HV}} & \textbf{f}_{p} & \begin{matrix} \text{v=V/PHF} \\ \textbf{f}_{\text{HV}}, \textbf{f}_{p} \end{matrix} \\ \hline \textbf{Freeway} & 5677 & 0.95 & \text{Level} & 5 & 0 & 0.976 & 1.00 & 6125 \\ \hline \textbf{Ramp} & 1510 & 0.95 & \text{Level} & 2 & 0 & 0.990 & 1.00 & 1605 \\ \hline \textbf{UpStream} & & & & & & & & \\ \hline \textbf{DownStream} & 754 & 0.95 & \text{Level} & 2 & 0 & 0.990 & 1.00 & 802 \\ \hline \textbf{DownStream} & 754 & 0.95 & \text{Level} & 2 & 0 & 0.990 & 1.00 & 802 \\ \hline \textbf{Merge Areas} & & & & & & & \\ \hline \textbf{Estimation of v_{12}} & & & & & \\ \hline \textbf{V}_{12} = \textbf{V}_{F} (P_{FM}) & & & & & & \\ \hline \textbf{V}_{12} = \textbf{V}_{F} (P_{FM}) & & & & & \\ \hline \textbf{V}_{22} = \textbf{V}_{F} (P_{FM}) & & & & & \\ \hline \textbf{V}_{12} = 3674 & \text{pc/h} & & & & \\ \hline \textbf{Capacity Checks} & & & & & \\ \hline \textbf{Capacity Checks} & & & & & \\ \hline \textbf{V}_{FD} & & & & & & \\ \hline \textbf{V}_{FD} & & & & & & \\ \hline \textbf{V}_{R12} & & 5279 & 4600 \text{:All} & \text{Yes} & & & \\ \hline \textbf{V}_{PO} & & & & & & \\ \hline \textbf{V}_{R12} & & 5279 & 4600 \text{:All} & & \\ \hline \textbf{V}_{R2} & & & & & \\ \hline \textbf{V}_{R12} & & & & & \\ \hline \textbf{See Exhibit 25-3} & & & \\ \hline \textbf{Level of Service Determination (if not F)} & & & \\ \hline \textbf{D}_{R} = 4.09 (\text{pc/ mi /in}) & & & \\ \hline \textbf{LoS} = & & & & & \\ \hline \textbf{F} (\text{Exhibit 25-4}) & & & \\ \hline \textbf{COP} & \text{F} (\text{Imit}) & \text{COP} & \text{Imit} \\ \hline \textbf{N}_{CS} = & (\text{Exhibit 25-4}) & & \\ \hline \textbf{N}_{CS} = & (\text{Exhibit 25-4}) & & \\ \hline \textbf{N}_{COP} & \text{Imit} \\ \hline N$	☐ Yes ☐	On											
S F 60.0 mph S F 45.0 mph VD 754 Veh/h Veh/hr Sketch (show lanes, L L L L Veh/hr Veh/hr Sketch (show lanes, L L L L Veh/hr Veh/hr Sketch (show lanes, L L L Veh/hr	☑ No ☐	Off											ft
Visual	L _{un} = ft		S	-r = 6º	0,0 mph		45.0						
Freeway 5677 0.95 Level 5 0 0.976 1.00 6125	l .	h/h								in the second	. –	veh/h	
Freeway 5677 0.95 Level 5 0 0.976 1.00 6125	Conversion t	o pc/h Un	der Base (Conditio	ons -		,				L-V/DUE		
Freeway 5677 0.95		V				Truck	%Rv	f _{HV}		fp	i		
Ramp	Freeway		0.95	5	0	0.976	1	.00	6125				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$						ļ	0	0.990	1	.00	1605		
DownStream 754 0.95 Level 2 0 0.990 1.00 802		1010	0.00										
		754	0.95	Lev	/el	2	0	0.990	1	.00	802		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Downstream					l			Dive	rge Area	as _		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Estimation o		- 9				Estimat	ion of v ₁₂					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			= V _c (P _{cM})					V	' ₁₂ = \	/ _R + (V _F	- V _R)P _{FD}		ļ
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	 	-					L _{EO} = (E	equation 25	5-8 or	25-9)			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$				vihit 25.	5)						25-11)		
	1		מנוטוז (באו	IIDR ZO-	. ,		i ,						
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$, <u> </u>							and the second control of the second control					
$\begin{array}{ c c c c c c } \hline V_{FO} & 7730 & 6900 & Yes & \hline & V_{FI}=V_F & See Exhibit 25-\\ \hline V_{R12} & 5279 & 4600:All & Yes & \hline & V_{FO}=V_F-\\ \hline V_{R} & See Exhibit 25-\\ \hline & V_R & See Exhibit 25-\\ \hline & V_R & See Exhibit 25-3 \\ \hline \hline & V_R & See Exhibit 25-3 \\ \hline & V_R & See Exhibit 25-4 \\ \hline & V_R & See Exhibit 25-4$	Capacity Che		Mayir		109	: F2	Calagran		ıal	Max	imum	LOS F	?
$\begin{array}{ c c c c c c c } \hline V_{FO} & 7730 & 6900 & Yes & \hline V_{12} & 4400:All & \hline \\ \hline V_{R12} & 5279 & 4600:All & Yes & \hline V_{R} & See Exhibit 25-\\ \hline V_{R} & See Exhibit 25-3 & \hline \\ \hline \hline \textit{Level of Service Determination (if not F)} & \textit{Level of Service Determination (if not F)}\\ \hline D_{R} = 5.475 + 0.00734 v_{R} + 0.0078 V_{12} - 0.00627 L_{A} & D_{R} = 4.252 + 0.0086 V_{12} - 0.0009 L_{D} \\ \hline D_{R} = & 40.9 (\text{pc/ mi /ln}) & D_{R} = & (\text{pc/ mi /ln}) \\ \hline LOS = & F (\text{Exhibit 25-4}) & \text{LoS} = & (\text{Exhibit 25-4}) \\ \hline \end{array}$		Actual	IVIAXII	Hum		, , ,				See Ex	hibit 25-		
$\begin{array}{ c c c c c c c c } \hline V_{R12} & 5279 & 4600 : All & Yes & V_{FO} = V_F - & See Exhibit 25 - 14 \\ \hline V_{R12} & 5279 & 4600 : All & Yes & V_R & See Exhibit 25 - 3 \\ \hline \hline \textit{Level of Service Determination (if not F)} & \textit{Level of Service Determination (if not F)} \\ \hline D_R = 5.475 + 0.00734 \text{ V}_R + 0.0078 \text{ V}_{12} - 0.00627 \text{ L}_A \\ \hline D_R = & 40.9 \text{ (pc/ mi /ln)} \\ \hline LOS = & F \text{ (Exhibit 25-4)} \\ \hline \end{array}$	V _{EO}	7730	690	0	Ye	s		F					
$\begin{array}{ c c c c c c c c } V_{R12} & 5279 & 4600 : All & Yes & V_R & 14 \\ \hline V_R & See Exhibit 25-3 \\ \hline \textbf{\textit{Level of Service Determination (if not F)}} & \textbf{\textit{Level of Service Determination (if not F)}} \\ D_R = 5.475 + 0.00734 \text{ v}_R + 0.0078 \text{ V}_{12} - 0.00627 \text{ L}_A \\ D_R = & 40.9 \text{ (pc/ mi /ln)} \\ LOS = & F \text{ (Exhibit 25-4)} & D_R = & (pc/ mi /ln) \\ LOS = & (Exhibit 25-4) & CS = & (Exhibit 25-4) \\ \hline \end{array}$				·				,				··	-
V _R See Exhibit 25-3 V _R See Exhibit 25-3		E270	460() 1- Δ II	٧۵	10		F -					
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	V _{R12}	5219	4000	,,, (II		.0				See Ex	hibit 25-3		
$D_R = 5.475 + 0.00734 \text{ v}_R + 0.0078 \text{ V}_{12} - 0.00627 \text{ L}_A$ $D_R = 40.9 \text{ (pc/ mi /ln)}$ $D_R = 6.475 + 0.0086 \text{ V}_{12} - 0.0009 \text{ L}_D$ $D_R = 6.4252 + 0.0086 \text{ V}_{12} - 0.0009 \text{ L}_D$ $D_R = 6.4252 + 0.0086 \text{ V}_{12} - 0.0009 \text{ L}_D$ $D_R = 6.4252 + 0.0086 \text{ V}_{12} - 0.0009 \text{ L}_D$ $D_R = 6.4252 + 0.0086 \text{ V}_{12} - 0.0009 \text{ L}_D$ $D_R = 6.4252 + 0.0086 \text{ V}_{12} - 0.0009 \text{ L}_D$ $D_R = 6.4252 + 0.0086 \text{ V}_{12} - 0.0009 \text{ L}_D$ $D_R = 6.4252 + 0.0086 \text{ V}_{12} - 0.0009 \text{ L}_D$ $D_R = 6.4252 + 0.0086 \text{ V}_{12} - 0.0009 \text{ L}_D$ $D_R = 6.4252 + 0.0086 \text{ V}_{12} - 0.0009 \text{ L}_D$ $D_R = 6.4252 + 0.0086 \text{ V}_{12} - 0.0009 \text{ L}_D$ $D_R = 6.4252 + 0.0086 \text{ V}_{12} - 0.0009 \text{ L}_D$	Level of Sec	vice Deter	mination (lf not F	j		Level o						
$D_R = 40.9 \text{ (pc/ mi /ln)}$ $D_R = (pc/ mi /ln)$						7 L ₄		$D_{R} = 4.28$	52 + 0).0086 \	/ ₁₂ - 0.0009	9 L _D	
LOS = F (Exhibit 25-4) LOS = (Exhibit 25-4)	1 ''			12		D ₀ =	(pc/ mi /ln)					
ILUS - I' (EXIIDIL 20-4)	1 '`	**	1	**									
Chood Pelimation			Speed Estimation										
D = (Exhibit 25-19)		Speed Estimation											
W _S = 1.0 4 (Exibit 25-19)	1 5		"	•)5_1Q\							
S _R = 41.7 (Tipli (Exhibit 25-19)	1 ''						1 ''	•					
S ₀ = mph (Exhibit 25-19)	$s_0 = N/A$	mph (Ex	hibit 25-19)				S ₀ =	• •					
S ₀ = N/A D (EXIIDIL 20-19)		7 mph (Ex	chibit 25-14)						25-15) 			
S ₀ = N/A [[[D]] (EXIIIDIL 20-19)	1 0	•					s =	mph (Ex	hibit 2	25-15)			
S ₀		<u> </u>			0.0000.11	mirroroller o	f Elorida All	Rights Reser	ved				Ve



Application	<u>Input</u>	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _D	N, S, D
Design (v _p)	FFS, LOS, N	ν _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

0 400 800	1200 14 Flow Rate (pcfh/lin)	600 ZUUU	Z4LA)		
General Information	Mark State of the Commence of		Site Information		
Analyst	YLM		Highway/Direction of Travel	EASTBOL	DND
Agency or Company	RSH 0/7/04		From/To Jurisdiction		
Date Performed	9/7/04 AM Peak Hour		Analysis Year	2014 NO	BUILD
Analysis Time Period Project Description EB 595 \$	SR7ON-Ramp				
☐ Oper.(LOS)			es.(N)	∏ Plan	ning Data
Flow Inputs					200 (100 P) (100 P)
/olume, V	10999 veh/h		Peak-Hour Factor, PHF	0.95	
AADT	veh/day		%Trucks and Buses, P _T	5	
Peak-Hr Prop. of AADT, K			%RVs, P _R	0	
Peak-Hr Direction Prop, D			General Terrain:	Level	
$DDHV = AADT \times K \times D$	veh/h		Grade % Length	mi	
Driver type adjustment	1.00		Up/Down %		
Calculate Flow Adjustm	ients <u> </u>		reference (Care in 165) d'arms — perfores		
	1.00		E _R	1.2	
E _T	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
Speed Inputs			Calc Speed Adj and FF	S	
ane Width	12.0	ft	f _{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f _{LC}	0.0	mi/h
Interchange Density	0.91	I/mi	1	2.1	mi/h
Number of Lanes, N	4		f _{ID}	1.5	mi/h
FFS (measured)		mi/h	f _N		
Base free-flow Speed, BFFS	70.0	mi/h	FFS	66.4	mi/h
LOS and Performance	Measures		Design (N)		
0 (1/3 00)			Design (N)		
Operational (LOS)			Design LOS		
$v_p = (V \text{ or DDHV}) / (PHF \times N)$	^{ст} ну х 2967	pc/h/ln	$v_p = (V \text{ or DDHV}) / (PHF \times N)$	x f _{HV} x	pc/h
f _p)		·	f_p)		рслі
S		mi/h	S		mi/h
D = v _p / S		pc/mi/ln			pc/mi/ln
LOS	F		$D = v_p / S$.1	ролин
			Required Number of Lanes, I	V	
Glossary			Factor Location		
N - Number of lanes	S - Speed		E _R - Exhibits23-8, 23-10		f _{LW} - Exhibit 23-4
Hourly volume	D - Density		E _T - Exhibits 23-8, 23-10, 23-	-11	f _{LC} - Exhibit 23-5
v _n - Flow rate	FFS - Free-flow s	speed	1 .	. •	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free	e-flow speed	f _p - Page 23-12		f _{ID} - Exhibit 23-7
DDHV - Directional design ho			LOS, S, FFS, v _p - Exhibits 23	o-∠, ∠o-o	ID - EVHIDIT 59-1
יוקר - אווקריויסוום - אווקר					

BASIC FREEWAY SEGMENTS WORKSHEET (duin) Output Free-Flow Speed FFS = 75 milh Application Input 70 mistr LOS, S, D Operational (LOS) FFS, N, vo 70 3 1450 65 min N, S, D FFS, LOS, Vn Design (N) 60 midt v_p, S, D 60 FFS, LOS, N Design (v_p) 55 mlih Axerage Passenger-C LÖŞ, S, D Planning (LOS) FFS, N, AADT 50 N, S, D Planning (N) FFS, LOS, AADT v_p, S, D FFS, LOS, N Planning (v.) 40 30 -2400 2000 1600 1200 200 Flow Rate (pc/h/ln) Site Information General Information Highway/Direction of Travel EASTBOUND YLM Analvst From/To **RSH** Agency or Company Jurisdiction Date Performed 9/7/04 2014 NO BUILD Analysis Year PM Peak Hour Analysis Time Period Project Description EB 595 SR 7 ON RAMP Planning Data Des.(N) Oper.(LOS) Flow Inputs 0.95 Peak-Hour Factor, PHF 7941 veh/h Volume, V %Trucks and Buses, P_⊤ 5 veh/day AADT 0 %RVs, PR Peak-Hr Prop. of AADT, K Level General Terrain: Peak-Hr Direction Prop, D Grade % Length mi veh/h $DDHV = AADT \times K \times D$ Up/Down % 1.00 Driver type adjustment Calculate Flow Adjustments 1.2 ER 1.00 0.976 $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ 1.5 E_{T} Calc Speed Adi and FFS Speed Inputs ft mi/h 12.0 0.0 Lane Width f_{LW} ft Rt-Shoulder Lat. Clearance 6.0 mi/h 0.0 f_{LC} I/mi 0.91 Interchange Density mi/h 2.1 f_{iD} Number of Lanes, N 4 mi/h 1.5 f_N mi/h FFS (measured) mi/h 66.4 FFS mi/h 70.0 Base free-flow Speed, BFFS Design (N) LOS and Performance Measures Design (N) Operational (LOS) Design LOS $v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times V)$ $v_n = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times V)$ 2142 pc/h/ln pc/h $|f_p|$ f_p) mi/h 59.4 S mi/h S 36.0 pc/mi/ln $D = v_p / S$ pc/mi/ln $D = v_D / S$ Ε LOS Required Number of Lanes, N

Glossary		Factor Location	The Control of the County of the
N - Number of lanes Hourly volume	D - Density	E _R - Exhibits23-8, 23-10 E _T - Exhibits 23-8, 23-10, 23-11	f _{LW} - Exhibit 23-4 f _{LC} - Exhibit 23-5
v _p - Flow rate LOS - Level of service	FFS - Free-flow speed BFFS - Base free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6
DDHV - Directional design		LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7

		RAMI	S ANI			CTIONS WORKSHEET						
General Infor	mation	Maji et e-il-i		Site	e Inform		- f TI	۱۸	(FCTDC	ALIMID		
Analyst		YLM				•	of Travel	VV	ESTBC	טאטע		
Agency or Cor		RSH				ction						1
Date Performe		9/7/04	د ۱۸ مارد	ma		sdiction alysis Yea	ar .	20)14 NO	BUILD		
Analysis Time		AM Peal					41		71-7110	<u> </u>		
Project Descri	ption SK	84 UN KA	WIP IO	AAD 292	IVILINO	ь			10.00			
<i>Inputs</i> 01		Terrain Le	vel							Downstrea	am Adj	
Upstream Adj	Ramp									Ramp		
☐ Yes ☐	On									☑ Yes ☑ No	☑ On ☑ Off	
™ No	Off									i i		_
						down					1243	"
$L_{up} = ft$		S	, .	0.0 mph			FR = 45.0) mph	1	VD =	1121 veh/h	
1	h/h	A CONTROL OF THE PROPERTY OF T			now ian	ies, L _A , L	D ^{, v} R ^{, v} f/					
Conversion t		der Base (Conditi	ons		<u> </u>	<u> </u>	T		v=V/PHF		
(pc/h)	V (Veh/hr)	PHF	Te	rrain	Truck	%Rv	f _{HV}		fp	f _{HV} f _p		
Freeway	5020	0.95	Le	vel	5	0	0.976		1.00	5416		
Ramp	810	0.95	Le	vel	2	0	0.990		1.00	861		
UpStream									4.00	4400		
DownStream	1121	0.95	Le	vel	2	0	0.990		1.00	1192		
	Me	erge Areas						Dive	erge Area	is		13434
Estimation o	f V ₁₂					Estimat	ion of v ₁₂					
	V ₁₂	= V _F (P _{FM})					\	/ ₁₂ =	V _R + (V _F	- V _R)P _{FD}		
L _{EQ} = (Equat	tion 25-2 o	r 25-3)				$L_{EQ} = (E$	quation 2	5-8 o	r 25-9)			
P _{FM} = 0.185			nibit 25-	-5)		$ P_{FD} = u$	sing Equa	tion (Exhibit 2	5-11)		
V ₁₂ = 999 p		•		•		$V_{12} = pc$	c/h					
Capacity Ch	The latest and the la					Capacity Checks						
Gapaging Com	Actual	Maxir	num	Los	F?		Act	ual		mum	LOS F	<u>?</u>
						V _{FI} =V _I	_			hibit 25- 4		
V _{FO}	6277	920	0	No)	V ₁₂				0:All		
						$V_{FO} = V$	' _F -		See Ex	hibit 25-		
V _{R12}	1860	4600):All	No	,	V_{R}			1	4		
*R12	1000					V _R			See Ex	nibit 25-3		
Level of Ser	vice Deter	mination (if not F)		Levelo	f Service	Dete	rminatio	n (if not F)	
D _R = 5.475					7 L _A		$D_{R} = 4.2$	52 +	0.0086 V	1 ₁₂ - 0.0009	9 L _D	
'`	7.7 (pc/ mi				D _R =	(pc/ mi /lr	1)					
'`	(Exhibit 25			LOS= (Exhibit 25-4)								
Speed Estin	The second secon	,				Speed Estimation						
	19 (Exibit 2	25-19)				D _s = (Exhibit 25-19)						
1 ~	•	hibit 25-19)			S _R = mph (Exhibit 25-19)						
1 '	•	nibit 25-19)				s _o =	mph (Ex	hibit	25-19)			
1 -		hibit 25-19)				s=	mph (Ex					
3- 54.0	, mpn (Ex	111DIL 20-14				1-						1/0

RAMPS AND RAMP JUNCTIONS WORKSHEET										
General Infor	mation			Sit	e Inforr			MEGTO		
Analyst		YLM				-	of Travel	WESTB	טמטכ	
Agency or Cor		RSH				ction				
Date Performe		9/7/04				isdiction		0044 NC	ע וווום ע	
Analysis Time	Period	PM Peal				alysis Yea	ar	2014 NC	DUILD	
Project Descri	ption SR	84 ON RA	MP IC	VVB 595	MERG	iE				
Inputs		Terrain Le	vel							
01 Upstream Adj	Ramp	TOTAL ES	• • •						Downstre Ramp	am Adj
☐ Yes ☐	On								☑ Yes	図 On
☑ No	Off								I≣ No	I Off
7000	0								L _{down} =	1243 ft
L _{up} = ft		S		60.0 mph			S _{FR} = 45.0	mph	VD =	860 veh/h
1	h/h				now lar	ies, L _A , L	D' R' Vf/			
Conversion t	o pc/h Un	der Base C	Conditi	ons			l	<u> </u>	v=V/PHF	
(pc/h)	V (Veh/hr)	PHF	Те	rrain	Truck	%Rv	f _{HV}	f _p	f _{HV} f _p	
Freeway	6984	0.95	Le	vel	5	0	0.976	1.00	7535	
Ramp	1045	0.95	Le	vel	2	0	0.990	1.00	1111	
UpStream			,,,,,,							
DownStream		0.95	Le	vel	2	0	0.990	1.00	914	<u></u>
	Me	erge Areas						Diverge Are	as	
Estimation o	f v ₁₂					Estimat	ion of v ₁₂		30,000	
	V ₁₂ :	=V _F (P _{FM})					٧	$_{12} = V_R + (V_F)$	V _R)P _{FD}	
L _{EQ} = (Equat	ion 25-2 o	25-3)				L _{EO} = (E	quation 25	-8 or 25-9)		
P _{FM} = 0.153			ibit 25	-5)		P _{ED} = u	sing Equat	ion (Exhibit 2	25-11)	
V ₁₂ = 1155		-		,		V ₁₂ = po				
Capacity Che							y Checks			
Capacity on	Actual	Maxir	num	LOS	F?		Actu	al Max	imum	LOS F?
	7,0,00					V _{FI} =V _F			hibit 25-	
V _{FO}	8646	920	0	No	,		-		14	
						V ₁₂		440	00:All	
						$V_{FO} = V$	F -	4	chibit 25-	
V _{R12}	2266	4600	:All	No)	V_R			14	
						V _R		See Ex	hibit 25-3	
Level of Sen	ice Deteri	mination (i	f not F)		Level or	f Service D	eterminatio	n (if not F)
$D_{\rm R} = 5.475$					' L _A			2 + 0.0086 \		
1 '`		• • •	14		A	D _R =	(pc/ mi /ln)			
$D_R = 20.8 \text{ (pc/ mi /ln)}$ $LOS = C \text{ (Exhibit 25-4)}$ $D_R = \text{ (pc/ mi /ln)}$ $LOS = \text{ (Exhibit 25-4)}$										
Speed Estim	1	7-7)					stimation			
And the second s	VII.	E 40)				1	(Exhibit 25			
1 9	2 (Exibit 2	•				"	•	ibit 25-19)		
1 ''	•	hibit 25-19))			1 ''	•	nbit 25-19) nibit 25-19)		
1 0		nibit 25-19)				S ₀ =	•			
s = 49.5	mph (Ex	hibit 25-14))			S =	mpn (Ext	ibit 25-15)		

		RAMP	S AND	RAMP	JUNCT	IONS W	ORKSHE	T			
General Infor				Site	Inform		of Traval	WESTB	OLIND	<u></u>	K1956
\nalyst		YLM				eway/Dirk ction	of Travel	AAEQID	JUND		
Agency or Co	, ,	RSH				sdiction					
ate Performe		9/7/04	Volum	moe		lysis Yea	ır	2014 NO	BUILD		
Analysis Time		AM Peak 7 SB ON R									
Project Descri	iption SK	1 OD ON N	VIAIL I	O WB O	00 (412)	(02					
<i>nputs</i>)1		Terrain Le	vel		***************************************			-	Downstre Ramp	am Adj	
Jpstream Adj	Ramp								,	🖸 On	
🛮 Yes 🗔	On								☑ Yes		
Ø Na ■	Off								I≣ No	☐ Off	٠.
☑ No									L _{down} =	1283	π
_ _{up} = ft		s	_{FF} = 6	0.0 mph	 I	S	_{FR} = 45.0) mph	VD =	536 veh/h	
Vu≔ ve	eh/h					es, L _A , L _I	$_{\rm D}$, $\rm V_{\rm R}$, $\rm V_{\rm f}$)			VEIIIII	- Introde
Conversion	· · · · · · · · · · · · · · · · · · ·	der Base C	onditio	ons							
	V				Truck	%Rv	f _{HV}	fp	v=V/PHF		
(pc/h)	(Veh/hr)	PHF	rer	rain	HUCK	701 \V			f _{HV} f _p		
Freeway	5830	0.95	Lev	vel _	5	0	0.976	1.00	6290		
Ramp	1121	0.95	Lev	vel	2	0	0.990	1.00	1192		
UpStream							0.000	1.00	570		
DownStream		0.95	Le	vel	2	0	0.990	1.00 Diverge Are			
**************************************	Me	erge Areas				F- 11 - 1		Diverge Air	Gas		
Estimation of	of v ₁₂					Esumat	ion of V ₁₂		D		
	V ₁₂ :	= V _F (P _{FM})						$V_{12} = V_{R} + (V_{R})$	F - VR)FFD		
L _{EQ} = (Equa	ition 25-2 oi	r 25-3)						5-8 or 25-9)			
P _{FM} = 0.143			ribit 25-	-5)		1 '		ition (Exhibit	25-11)		
V ₁₂ = 900 ₁						$V_{12} = p_0$	c/h				
Capacity Ch						Capacit	y Checks				
	Actual	Maxir	num	LOS	F?		Act		ximum	LOS F?	
						V _{FI} =V	F	See	Exhibit 25-		
V _{FO}	7482	920	0	No	כ		<u> </u>	44	100:All		
						V ₁₂	, _ _				
						V _{FO} = V	F -	See E	Exhibit 25-		
V _{R12}	2092	4600):All	No.	0	V _R					
						V_R			xhibit 25-3		4 (52200
Level of Sei	vice Deter	mination (if not F	9		Levelo	f Service	Determinat	ion (if not l	5)	
$D_D = 5.475$	+ 0.00734	v _R + 0.007	78 V ₁₂ -	0.0062	7 L _A		$D_{R} = 4.2$	52 + 0.0086	V ₁₂ - 0.000	9 L _D	
1	9.4 (pc/ mi					D _R =	(pc/ mi /li	٦)			
'`	3 (Exhibit 2					LOS=	(Exhibit 2	25-4)			
Speed Estir	,	- 1/				Speed	Estimatio	n			
		05 40\				D _s =	(Exhibit 2				
1	26 (Exibit 2		.			S _R =	•	khibit 25-19)			
1 ''	1 mph (Ex					S ₀ =	•	khibit 25-19)			
	A mph (Exi					S =	• •	xhibit 25-15)			
s= 51.	9 mph (E)	chibit 25-14	.)			3 -	inhii (⊆	- TO)			

The second second		RAMP	S AND	RAMP.	JUNCT	IONS WO	RKSHEE	T			
eneral Inform		YLM		Site	<i>Inform</i> Free		of Travel	WES	STBC	OUND	
inalyst igency or Con		Y LIVI RSH			June						
ate Performe		9/7/04				sdiction				D D.	
nalveis Time	Period	PM Peak	Volun	nes		lysis Yea	<u>r</u>	201	4 NO	BUILD	
Project Descrip	otion SR	7 SB ON R	AMP T	O WB 59	95 MER	GE					
nputs	<u> </u>	Terrain Lev	اما								الم ۸ ما:
)1 Jpstream Adj l	1	Terrain Lev	, Ci							Downstrea Ramp	
☑ Yes	On									Yes Yes	🗷 On
MARIOS 1508										I∭ No	Off
☑ No	Off									L _{down} =	1283
- _{up} = ft		s	FF = 6	0.0 mph		S	_{FR} = 45.0	mph		VD =	679 veh/h
	h/h					es, L _A , L	$_{\rm D}$, $_{\rm R}$, $_{\rm f}$)				V CITTI
Conversion t		der Base C	onditio	ons				,		L-VIDUE	
		PHF		rain	Truck	%Rv	f _{HV}		f _p	v=V/PHF f _{HV} f _p	
(pc/h)	(Veh/hr)		<u> </u>				0.976	1.0	<u>.</u>	8663	
Freeway	8029	0.95	Lev		5	0	0.970	1.0		914	
Ramp	860	0.95	Lev	/ei	_2		0.330	<u> </u>			
UpStream_	679	0.95	Lev	vel	2	0	0.990	1.0	00	722	
	1 (11.77)										
DownStream								Diverg	je Are	as	
	Me	erge Areas				Estimat	ion of v ₁₂				
	Me f V ₁₂	erge Areas	1 () () () () () () () () () (Estimat				as V _R)P _{FD}	
Estimation o	Me of V ₁₂ V ₁₂ :	erge Areas = V _F (P _{FM})	1 () () () () () () () () () (L _{EQ} = (E	V Equation 2	v ₁₂ = V _i 5-8 or 2	_R + (V _F 25-9)	V _R)P _{FD}	
Estimation o	Me V ₁₂ V ₁₂ : tion 25-2 or	erge Areas = V _F (P _{FM}) r 25-3)	en ve Av			L _{EQ} = (E	V	v ₁₂ = V _i 5-8 or 2	_R + (V _F 25-9)	V _R)P _{FD}	
<i>Estimation o</i> L _{EQ} = (Equat P _{FM} = 0.178	Me V ₁₂ V ₁₂ tion 25-2 or using Equ	erge Areas = V _F (P _{FM}) r 25-3)	en ve Av			L _{EQ} = (E	V Equation 29 Ising Equa	v ₁₂ = V _i 5-8 or 2	_R + (V _F 25-9)	V _R)P _{FD}	
Estimation o $L_{EQ} = (Equat)$ $P_{FM} = 0.178$ $V_{12} = 1541$	Me V ₁₂ V ₁₂ tion 25-2 or using Equ pc/h	erge Areas = V _F (P _{FM}) r 25-3)	en ve Av			L _{EQ} = (E P _{FD} = u V ₁₂ = p	Veguation 25 sing Equa c/h c/y Checks	V ₁₂ = V ₁ 5-8 or 2 tion (Ex	₃ + (V _f 25-9) xhibit 2	V _R)P _{FD} 25-11)	
<i>Estimation o</i> L _{EQ} = (Equat P _{FM} = 0.178	Me V ₁₂ V ₁₂ tion 25-2 or using Equ pc/h	erge Areas = V _F (P _{FM}) r 25-3) ation (Exh	nibit 25-			L _{EQ} = (E P _{FD} = u V ₁₂ = p	V Equation 29 Ising Equa c/h	V ₁₂ = V _I 5-8 or 2 tion (Ex	+ (V _F 25-9) xhibit 2	V _R)P _{FD} 25-11) cimum	LOS F7
Estimation o $L_{EQ} = (Equat)$ $P_{FM} = 0.178$ $V_{12} = 1541$	Me V ₁₂ tion 25-2 or using Equ pc/h ecks Actual	erge Areas = V _F (P _{FM}) r 25-3) ation (Exh	nibit 25-	5) LOS	5 F?	L _{EQ} = (E P _{FD} = u V ₁₂ = p	Equation 25 sing Equa c/h y Checks Act	V ₁₂ = V _I 5-8 or 2 tion (Ex	R + (V _F 25-9) xhibit 2 Max See Ex	V _R)P _{FD} 25-11)	LOS F7
Estimation o $L_{EQ} = (Equat)$ $P_{FM} = 0.178$ $V_{12} = 1541$	Me V ₁₂ V ₁₂ tion 25-2 or using Equ pc/h ecks	erge Areas = V _F (P _{FM}) r 25-3) ation (Exh	nibit 25-	-5)	5 F?	L _{EQ} = (E P _{FD} = U V ₁₂ = p Capacit V _{FI} =V	Equation 25 sing Equa c/h y Checks Act	V ₁₂ = V _I 5-8 or 2 tion (Ex	+ (V _F 25-9) xhibit 2 Max See Ex	= - V _R)P _{FD} 25-11) dimum xhibit 25-	LOS F7
Estimation o L _{EQ} = (Equal P _{FM} = 0.178 V ₁₂ = 1541 Capacity Ch	Me V ₁₂ tion 25-2 or using Equ pc/h ecks Actual	erge Areas = V _F (P _{FM}) r 25-3) ation (Exh	nibit 25-	5) LOS	5 F?	$L_{EQ} = (E_{PFD} = U_{12} = p_{FD})$ $Capacit$ $V_{Fi} = V_{12}$	Equation 28 sing Equa c/h y Checks Acti	1 ₁₂ = V _F 5-8 or 2 tion (Ex	Max See Ex	cimum xhibit 25-14 xhibit 25-	LOS F7
Estimation o L _{EQ} = (Equate P _{FM} = 0.178 V ₁₂ = 1541 Capacity Ch	tion 25-2 or using Equ pc/h ecks Actual	erge Areas V _F (P _{FM}) r 25-3) ation (Exh	nibit 25- mum	5) LOS	5 F?	L _{EQ} = (E P _{FD} = U V ₁₂ = p Capacit V _{FI} =V	Equation 28 sing Equa c/h y Checks Acti	1 ₁₂ = V _F 5-8 or 2 tion (Ex	Max See Ex	= - V _R)P _{FD} 25-11) kimum xhibit 25- 14 00:All	LOS F7
Estimation o L _{EQ} = (Equal P _{FM} = 0.178 V ₁₂ = 1541 Capacity Ch	Me V ₁₂ tion 25-2 or using Equ pc/h ecks Actual	erge Areas = V _F (P _{FM}) r 25-3) ation (Exh	nibit 25- mum	LOS	5 F?	$L_{EQ} = (E_{P_{FD}} = U_{V_{12}} = p_{E}_{V_{12}}$ $V_{Fi} = V_{V_{12}}$ $V_{Fi} = V_{V_{12}}$ $V_{FO} = V_{V_{R}}$ V_{R}	Equation 28 sing Equa c/h Ey Checks Acti	1 ₁₂ = V _F 5-8 or 2 tion (Ex	A+ (V _F 25-9) xhibit 2 Max See Ex 440 See Ex	cimum xhibit 25-14	
Estimation o $L_{EQ} = (Equal)$ $P_{FM} = 0.178$ $V_{12} = 1541$ $Capacity Chi V_{FO} V_{R12}$	tion 25-2 or using Equ pc/h ecks Actual 9577	erge Areas V _F (P _{FM}) r 25-3) ation (Exh	nibit 25- mum 00	LOS Ye	5 F?	$L_{EQ} = (E_{P_{FD}} = U_{V_{12}} = p_{E}_{V_{12}}$ $V_{Fi} = V_{V_{12}}$ $V_{Fi} = V_{V_{12}}$ $V_{FO} = V_{V_{R}}$ V_{R}	Equation 25 sing Equation 25 sing Equation 25 structure of Service	1 ₁₂ = V _F 5-8 or 2 tion (Ex	Max See Ex See Ex	cimum xhibit 25- 14 00:All xhibit 25- 14 chibit 25- 14	5)
Estimation o L _{EQ} = (Equate P _{FM} = 0.178 V ₁₂ = 1541 Capacity Cheevel of Service Control of Service Cont	tion 25-2 or using Equipolin Actual 9577	erge Areas = V _F (P _{FM}) r 25-3) ation (Exh Maxim 920 4600	nibit 25- mum 00 0:All	LOS Ye	s F?	$L_{EQ} = (E_{P_{FD}} = U_{V_{12}} = p_{E}_{V_{12}}$ $Capacit$ $V_{Fi} = V_{V_{12}}$ $V_{FO} = V_{V_{R}}$ V_{R}	Equation 25 sing Equation 25 sing Equation 25 structure of Service	1 ₁₂ = V _F 5-8 or 2 tion (Ex	Max See Ex See Ex	cimum xhibit 25- 14 00:All xhibit 25- 14	5)
Estimation o L _{EQ} = (Equal P _{FM} = 0.178 V ₁₂ = 1541 Capacity Che V _{FO} V _{R12} Level of Ser D _R = 5.475	Me if v ₁₂ V ₁₂ tion 25-2 or using Equ pc/h ecks Actual 9577 2455 v/ce Deter + 0.00734	erge Areas = V _F (P _{FM}) r 25-3) ation (Exh Maxim 920 4600 winination (v _R + 0.007	nibit 25- mum 00 0:All	LOS Ye	s F?	$L_{EQ} = (E_{P_{FD}} = U_{V_{12}} = p_{E}_{V_{12}}$ $Capacit$ $V_{Fi} = V_{V_{12}}$ $V_{FO} = V_{V_{R}}$ V_{R}	Equation 25 sing Equation 25 sing Equation 25 structure of Service	1 ₁₂ = V _F 5-8 or 2 tion (Example 1) ual (S) Determ	Max See Ex See Ex	cimum xhibit 25- 14 00:All xhibit 25- 14 chibit 25- 14	5)
Estimation o $L_{EQ} = (Equal)$ $P_{FM} = 0.178$ $V_{12} = 1541$ Capacity Characteristics V_{FO} V_{R12} $Level of Ser$ $D_{R} = 5.475$ $D_{R} = 25$	Me f v ₁₂ V ₁₂ tion 25-2 or using Equ pc/h ecks Actual 9577 2455 v/ce Deter + 0.00734 2.3 (pc/ m	erge Areas V _F (P _{FM}) r 25-3) ation (Exh Maxir 920 4600 mination (v _R + 0.007	nibit 25- mum 00 0:All	LOS Ye	s F?	L _{EQ} = (E P _{FD} = U V ₁₂ = pr Capacit V _{FI} =V V ₁₂ V _{FO} = V V _R Level C	Equation 25 sing Equa c/h Ey Checks Acti F Of Service D _R = 4.2	2/12 = V _F 5-8 or 2 tion (Ex ual 5 5 5 5 5 5 5 5 5 5	Max See Ex See Ex	cimum xhibit 25- 14 00:All xhibit 25- 14 chibit 25- 14	5)
Estimation o $L_{EQ} = (Equation = 0.178)$ $V_{12} = 1541$ Capacity Cho V_{FO} V_{R12} $Level of Ser$ $D_{R} = 5.475$ $D_{R} = 25$ $LOS = F$	Me if V ₁₂ V ₁₂ tion 25-2 or using Equ pc/h ecks	erge Areas V _F (P _{FM}) r 25-3) ation (Exh Maxir 920 4600 mination (v _R + 0.007	nibit 25- mum 00 0:All	LOS Ye	s F?	$L_{EQ} = (E P_{FD} = U V_{12} = P P_{FD} = U V_{12} = P P_{FD} = V V_{12} = V V_{FO} =$	Equation 25 sing Equati	12 = V _F 5-8 or 2 tion (Ex ual (S) Detern 52 + 0.	Max See Ex See Ex	cimum xhibit 25- 14 00:All xhibit 25- 14 chibit 25- 14	5)
Estimation of $L_{EQ} = (Equal)$ $P_{FM} = 0.178$ $V_{12} = 1541$ Capacity Chi V_{FO} V_{R12} Level of Ser D _R = 5.475 $D_R = 25$ $LOS = F$ Speed Estim	Me if v ₁₂ V ₁₂ tion 25-2 or using Equ pc/h ecks	erge Areas V _F (P _{FM}) r 25-3) ation (Exh Maxir 920 4600 mination (v _R + 0.007 i /ln) 5-4)	nibit 25- mum 00 0:All	LOS Ye	s F?	$L_{EQ} = (E P_{FD} = U V_{12} = P P_{FD} = U V_{12} = P P_{FD} = V V_{12} = V V_{FO} =$	Equation 25 sing Equati	2/12 = V _F 5-8 or 2 tion (Ex ual 5 Detern 52 + 0.	Max See Ex See Ex	cimum xhibit 25- 14 00:All xhibit 25- 14 chibit 25- 14	5)
Estimation of L_{EQ} = (Equal P _{FM} = 0.178 V_{12} = 1541 Capacity Children V _{FO} V_{R12} $Level of Ser DR = 5.475 DR = 25 LOS = F Speed Estin MS = 0.33$	Me if V ₁₂ V ₁₂ tion 25-2 or using Equ pc/h ecks Actual 9577 2455 vice Deter + 0.00734 2.3 (pc/ m (Exhibit 25) nation 39 (Exibit 25)	erge Areas = V _F (P _{FM}) r 25-3) ation (Exh Maxim 920 4600 (Exh Maxim 920 4600 (Exh Maxim 920 4600 (Exh Maxim 920 4600 (Exh Maxim 920 4600 (Exh Maxim 920 4600 (Exh Maxim 920 4600 (Exh Maxim 920 4600 (Exh Maxim 920 4600 (Exh Maxim 920 4600 (Exh Maxim 920 4600 (Exh Maxim 920 4600 (Exh Maxim 920 4600 (Exh Maxim 920 4600 (Exh Maxim 920 4600 (Exh Maxim 920 4600 (Exh Maxim 920 4600 (Exh Maxim 920 4600 (Exh Maxim 920 4600 (Exh Maxim 920 4600 (Exh Maxim 920 4600 (Exh Maxim 920 4600 (Exh Maxim 920 4600 (Exh Maxim 920 4600 (Exh Maxim 920 4600 (Exh Maxim 920 4600 (Exh Maxim 920 (Exh Maxim	mum 00 0:All 1:If not F	LOS Ye	s F?	L _{EQ} = (E P _{FD} = U V ₁₂ = pr Capacit V _{F1} =V V ₁₂ V _{F0} = V V _R Level C D _R = LOS=	Equation 25 sing Equati	2/ ₁₂ = V _F 5-8 or 2 tion (Example 1) ual (S) Determ 52 + 0.	Max See Ex See Ex Gee Ex Mination	cimum xhibit 25- 14 00:All xhibit 25- 14 chibit 25- 14	5)
Estimation of $L_{EQ} = (Equatorial Equatorial Equator$	Me if v ₁₂ V ₁₂ tion 25-2 or using Equ pc/h ecks	### Perge Areas #### Perge Areas ##### Perge Areas ##### Perge Areas ###################################	nibit 25- mum 00 0:All 66 not 678 V ₁₂ -	LOS Ye	s F?	$L_{EQ} = (E_{P_{FD}} = U_{V_{12}} = p_{P_{FD}} = U_{V_{12}}$ $V_{FI} = V_{V_{12}}$ $V_{FO} = V_{V_{R}}$ V_{R} $Level = U_{S}$ $D_{R} = U_{S}$ $LOS = U_{S}$ $D_{S} = U_{S}$	Equation 25 sing Equation 25 service D _R = 4.2 (pc/ mi /lr (Exhibit 25 stimation (Exh	25-8 or 25 tion (Example 25 tion (Exampl	Max See Ex See Ex 10086	cimum xhibit 25- 14 00:All xhibit 25- 14 chibit 25- 14	5)

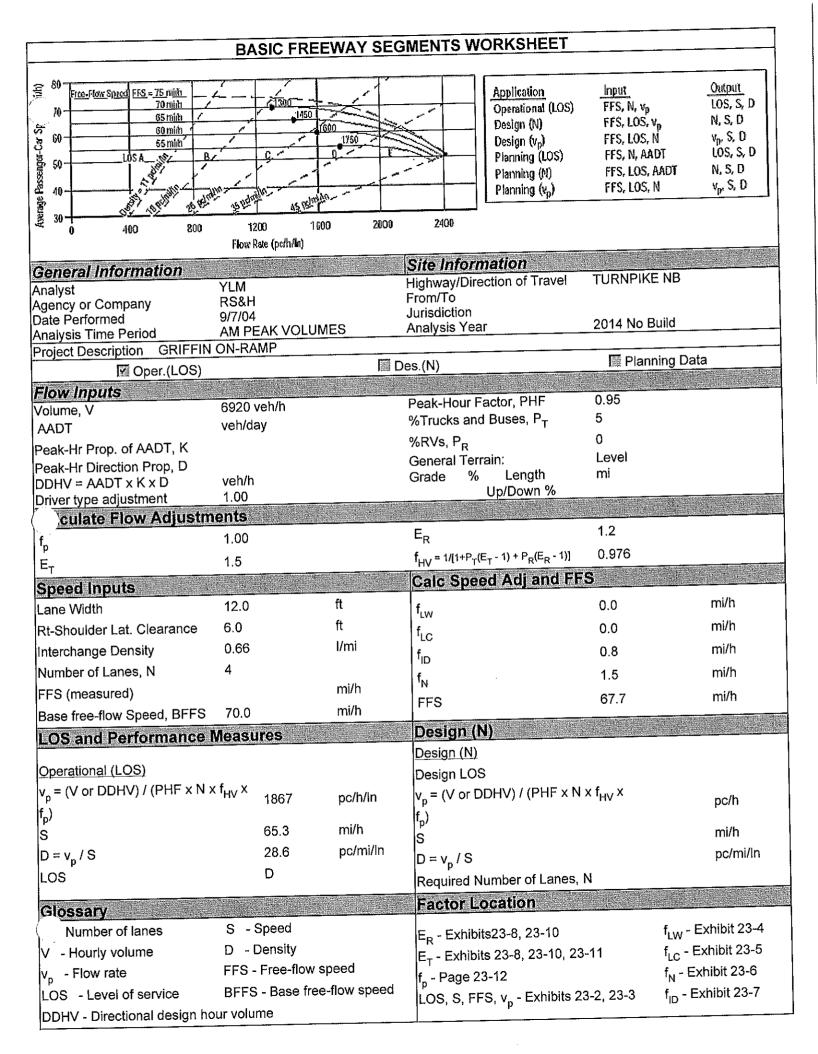
	<u></u>	RAME	S AND	RAMP	IONS W	ORKSHEE	T			
General Infor	mation			Site	e Inforn		· ·		OLIND	
Analyst		YLM					of Travel	WESTE	OUND	
Agency or Co		RSH				ction				
Date Performe		9/7/04		_		sdiction		2014 N	O BUILD	
Analysis Time	Period	AM Peak				alysis Year 2014 NO BUILD				
Project Descri	ption SR	7NB ON R	AMP I	O MR 2	95 IVIER	GE				100,000
<i>Inputs</i> 01		Terrain Le	vel		-				Downstrea	am Adj
Upstream Adj	Ramp								Ramp	
☐ Yes ☐	On								☑ Yes	☑ On
 ⊠No ≣	Off								I No −	□ Off 1895 ft
_									Ldown =	
L _{up} = ft		S		0.0 mph			FR = 45.0	mph	VD =	2200 veh/h
1	eh/h				how lan	es, L _A , L	D,VR,Vf)			
Conversion	to pc/h Un	der Base C	Conditi	ons					v=V/PHF	
(pc/h)	V (Veh/hr)	PHF		rain	Truck	%Rv	f _{HV}	f _p	f _{HV} f _p	
Freeway	6951	0.95	Le	vel	5	0	0.976	1.00	7500	
Ramp	536	0.95	Le		2	0	0.990	1.00	570	
UpStream		0.00								
DownStream	2200	0.95	Le	vel	2	0	0.990	1.00	2339	
		erge Areas						Diverge Ar	eas	
Estimation c	of Vac	A.				Estimat	ion of v ₁₂			
		= V _F (P _{FM})					٧	12 = V _R + (V _F - V _R)P _{FD}	
- /Equa		• • • • • • • • • • • • • • • • • • • •				L _{EO} = (E	quation 25	-8 or 25-9)		
L _{EQ} = (Equa			ibit 25	5)				ion (Exhibi		
P _{FM} = 0.221		alion (⊏xi	IIDIL 20.	· J)		$V_{12} = p_0$		•	,	
V ₁₂ = 1657						.1	y Checks			
Capacity Ch				LOS	: 52	Sapacit	Actu	ial Ma	eximum	LOS F?
	Actual	Maxir	num	100	, , ,				Exhibit 25-	
	8070	920	n	No	2	V _{FI} =V	F		14	
V _{FO}	0070	020				V ₁₂		4	400:All	
						V _{FO} = V	F-	See	Exhibit 25-	
V _{R12}	2227	4600):All	No.	0	V_R			14	
						V_R			xhibit 25-3	
Level of Ser	vice Deter	mination (if not F)		Level o			ion (if not i	
$D_R = 5.475$	+ 0.00734	v _R + 0.007	78 V ₁₂ -	0.0062	7 L _A	-	$D_{R} = 4.25$	52 + 0.0086	5 V ₁₂ - 0.000	9 L _D
'`	0.7 (pc/ m					D _R =	(pc/ mi /ln)		
'`	Exhibit 2					LOS=	(Exhibit 2	5-4)		
Speed Estin		- '/				Speed	Estimation			
			$D_s = (Exhibit 25-19)$							
1 0	30 (Exibit 2		١			S _R = mph (Exhibit 25-19)				
'`		(hibit 25-19				S ₀ = mph (Exhibit 25-19)				
V		hibit 25-19)				$S_0 = \text{mph (Exhibit 25-19)}$ S = mph (Exhibit 25-15)				
s= 50.	ម mpn (Ex	chibit 25-14)				Dights Passa			\

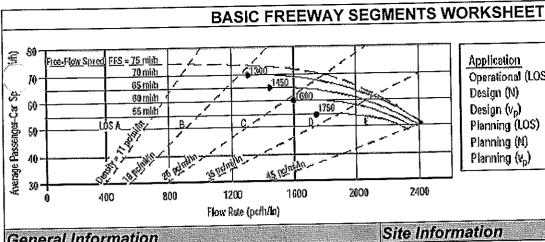
	RAMPS AND RAMP JUNCTIONS WORKSHEET Site Information											
General Inform				Site		n ation eway/Dir (of Trav	el M	ESTB(OUND		
Analyst		YLM RSH				ction	or mar	O1 44		J J –		
Agency or Con Date Performe		9/7/04				sdiction						
Analysis Time	=-	PM Peak	Volun	nes	Ana	lysis Yea	r	20)14 NC	BUILD		_
Project Descrip		7NB ON R	AMP TO	WB 59	35 MER	GE						
Inputs										T T		
01 Upstream Adj		Terrain Le	/el							Downstrea Ramp	am Adj	
Yes										☑ Yes	🖾 On	
im les im										I≣ No	☐ Off	
⊠ No □	Off									L _{down} =	1895	ft
L _{up} = ft		S	cc = 6	0.0 mph		S	FR = 4	15.0 mpl	1	VD =	2687 veh/h	
	h/h					es, L _A , L	$_{D},V_{R},V$,)			venn	
Conversion to		ior Rase (A Section	12	
Gonversiona	<i>ν</i>				Truck	%Rv	f _H		f _p	v=V/PHF		Ì
(pc/h)	(Veh/hr)	PHF	ıer	rain	Truck	701 \V				f _{HV} f _p		
Freeway	8889	0.95	Lev	/el	5	0	0.97		1.00	9591		
Ramp	679	0.95	Le	/el	2	0	0.99	0	1.00	722_		
UpStream							0.00	<u>. </u>	1.00	2857		\dashv
DownStream		0.95	Lev	/el	2	0	0.99		erge Are			
	1000	erge Areas				Estimat	ion of		orgo / iii	<u> </u>		
Estimation o						Estimat	, o, r, o,		V + (V	' _F - V _R)P _{FD}		
		= V _F (P _{FM})				=	<u>- 81</u> -			F KY FD		
L _{EQ} = (Equat	tion 25-2 o	25-3)				$L_{EQ} = (E$:quatio	n 25-6 C	/Evbibit	OE 44\		
$P_{FM} = 0.202$	using Equ	ation (Ext	ribit 25-	5)		$P_{FD} = u$		quation	(Exmon	20-11)		
V ₁₂ = 1936	pc/h					$V_{12} = p_0$						* 2
Capacity Ch	ecks					Capacit		c <i>ks</i> Actual	Ma	ximum	LOS F?	7
	Actual	<u> Maxiı</u>	num	LOS	3 F?			Actual		xhibit 25-	2007.	一
	40040	920	10	Ye	76	V _{FI} =V	F			14		
V _{FO}	10313	920	,0	'	,5	V ₁₂			44	100:All		
						V _{FO} = V	/ _F -		See E	Exhibit 25-		ļ
V _{R12}	2658	460	D:All	N	o	V _R			See E	xhibit 25-3	<u> </u>	
			li mat l	<u> </u>		1 ''	f Serv	ice Dete	erminat	ion (if not l	5)	
JOHO At CAR	vice Deter	mination (11 11UL 1 78 \/ -	<u>/</u> .n nn62	71.	20,0	D _D =	4.252 +	0.0086	V ₁₂ - 0.000	9 L _D	
E 475	+ 0.00734	V R + 0.00	10 12	0,0002	A	D _R =	(pc/ n			, _		
$D_{R} = 5.475$						JPR .	(100,					
$D_{R} = 5.475$ $D_{R} = 24$	4.0 (pc/ m					108=	(Eyhii	oit 25-41				
$D_{R} = 5.475$ $D_{R} = 24$ $LOS = F$	4.0 (pc/ m (Exhibit 25					LOS=	`	oit 25-4) ation		personal de la compositación d		
$D_R = 5.475$ $D_R = 24$ $LOS = F$ Speed Estin	4.0 (pc/ mi (Exhibit 25 nation	5-4)				Speed	Estim	ation				
$D_R = 5.475$ $D_R = 24$ $LOS = F$ Speed Estin $M_S = 0.35$	4.0 (pc/ m (Exhibit 25 nation 50 (Exibit 2	5-4) 25-19)				Speed D _s =	Estim (Exhi	ation bit 25-19	9)			
$D_R = 5.475$ $D_R = 24$ $LOS = F$ Speed Estin $M_S = 0.35$ $S_R = 53.75$	4.0 (pc/ mi (Exhibit 25 nation 50 (Exibit 2 7 mph (Ex	5-4) 25-19) (hibit 25-19				Speed D _s = S _R =	Estim (Exhi mph	a tion bit 25-19 (Exhibit	9) : 25-19)			
$D_R = 5.475$ $D_R = 24$ $LOS = F$ Speed Estin $M_S = 0.35$ $S_R = 53.7$ $S_0 = N/A$	4.0 (pc/ m (Exhibit 25 nation 50 (Exibit 2	5-4) 25-19) khibit 25-19 hibit 25-19)			Speed D _s =	Estima (Exhi mph mph	ation bit 25-19	9) : 25-19) : 25-19)			

		RAMP	S AND	RAMP	JUNCT	IONS W	ORKSHEE	T		
General Infor	mation			Site	<u> Inforn</u>		(7 '	MECTO	OHND	
Analyst		YLM					of Travel	WESTB	עאטט	•
Agency or Cor		RSH				ction				
Date Performe		9/7/04	N / . l			sdiction llysis Yea	or.	2014 No	O BUILD	
Analysis Time	Period	AM Peak	Volur	nes	MERGE	AFTER	RINIVERS		<u> </u>	
Project Descri	ption SR	840N RAIV	IP IO	MD 989	MERGI	- (AL 16)	COMVER			
<i>nputs</i> 01		Terrain Le	vel						Downstre	am Adj
Upstream Adj	Ramp								Ramp	E 0-
□ Yes □	On	i							☑ Yes ☑ No	☑ On ☑ Off
M No □	Off								L _{down} =	2600 ft
L _{up} = ft		s		0.0 mph			s _{FR} = 45.0	mph	VD =	747 veh/h
Vu = ve	h/h		Sk	ketch (s	how lan	es, L _A , L	$_{D}, V_{R}, V_{f})$		The state of the s	
Conversion t		der Base C	onditio	ons					- VIBUE	
(pc/h)	V (Veh/hr)	PHF		rain	Truck	%Rv	f _{HV}	f _p	v=V/PHF f _{HV} f _p	
Freeway	6422	0.95	Lev	vel	5	0	0.976	1.00	6929	
	810	0.95	Le		2	0	0.990	1.00	861	
Ramp UpStream	010	0.00								
DownStream	747	0.95	Le	vel	2	0	0.990	1.00	794	
BOWING COUNTY		erge Areas			<u></u>			Diverge Ar	eas	
Estimation o	No. 100 (1941)					Estimat	ion of v ₁₂		/ V /B	
	V ₁₂	= V _F (P _{FM})						$V_{12} = V_R + (V_R)$		
L _{EQ} = (Equa	tion 25-2 o	r 25-3)						5-8 or 25-9)		
P _{FM} = 0.586			nibit 25-	-5)		$P_{FD} = \iota$	ising Equa	tion (Exhibit	(25-11)	
V ₁₂ = 4060						$V_{12} = p$	c/h			
Capacity Ch	A CONTRACTOR OF THE PARTY OF TH					Capaci	ty Checks			105 =0
	Actual	Maxir	num	LOS	3 F?		Acti		aximum	LOS F?
						V _{FI} =V	,	See I	Exhibit 25-	
V _{FO}	7790	690	0	Ye	s	V ₁₂		4,	400:All	
			<u> </u>			$V_{FO} = V$	/ _F -		Exhibit 25-	
V _{R12}	4921	4600	D:All	Ye	s	V _R			14	<u></u>
				<u> </u>		V_R			xhibit 25-3	
Level of Ser	vice Deter	mination (if not F	7)		Level		Determinal		
$D_R = 5.475$	+ 0.00734	v _R + 0.007	78 V ₁₂ -	0.0062	7 L _A		$D_R = 4.2$	52 + 0.0086	5 V ₁₂ - 0.000	19 L _D
1 ''	1.6 (pc/ m					D _R =	(pc/ mi /lr	1)		
'`	(Exhibit 2					LOS=	(Exhibit 2	5-4)		
Speed Estin	`	/				Speed	Estimatio	n · ·		
	29 (Exibit	25-19\				D _s =	(Exhibit 2	5-19)		
1 ~			ı y			S _R =	mph (Ex	hibit 25-19)		
'	•	xhibit 25-19				S ₀ =		hibit 25-19)		
1 "		hibit 25-19)				S =		hibit 25-15)		
S= 46.	o mpn (E	xhibit 25-14					Il Rights Rese			

		RAME	S AND	RAMP	JUNCT	TONS W	ORKSHEE	T					
General Infor	mation				a Inforn	nation			011115				
Analyst		YLM			Free	eway/Dir	of Travel	WESTB	OUND				
Agency or Cor	npany	RSH				ction							
Date Performe	ed	9/7/04				sdiction		0044516					
Analysis Time	Period	PM Peak	(Volur	nes		ilysis Yea		2014 NO) ROILD				
Project Descri	ption SR	84ON RAN	AP TO V	NB 595	MERG	E (AFTEF	UNIVERS	SITY)					
Inputs													
01 Upstream Adj	1	Terrain Le	vel						Downstre Ramp	am Adj			
,	On								☑ Yes	☑ On			
Frank 1 CG Lember									I No	∭ Off			
⊠ No □	Off								L _{down} =	2600 ft			
L _{up} = ft		S		0.0 mph			FR = 45.0	mph	VD =	920 veh/h			
Vu = ve	h/h		SI	etch (s	how lan	es, L _A , L	_{D'} V _{R'} V _f)						
Conversion t	o pc/h Un	der Base C	Conditio	ons				ve i	Lyous				
(pc/h)	V (Veh/hr)	PHF		rain	Truck	%Rv	f _{HV}	f _p	v=V/PHF f _{HV} f _p				
Freeway	8690	0.95	Lev	/el	5	0	0.976	1.00	9376				
Ramp	651	0.95	Lev		2	0	0.990	1.00	692				
UpStream	001	0.00											
DownStream	920	0.95	Le	/el	2	0	0.990	1.00	978				
Downorcan		erge Areas	1		l			Diverge Are	eas				
Estimation o						Estimat	ion of v ₁₂						
		-V (D)					The second secon	₁₂ = V _R + (V	′ V _P)P _{ED}				
	1 ==	= V _F (P _{FM})	ı			/5			F RY ID				
L _{EQ} = (Equat								i-8 or 25-9)	25 11)				
$P_{FM} = 0.586$	using Equ	ation (Ext	nibit 25-	5)		I		ion (Exhibit	20-11)				
V ₁₂ = 5493	pc/h					$V_{12} = pc$							
Capacity Ch						Capacit	y Checks						
	Actual	Maxir	num	LOS	F?		Actu		ximum	LOS F?			
						V _{FI} =V	_F	See E	xhibit 25-				
V _{FO}	10068	690	00	Ye	s		<u>. </u>	11	00:All				
						$\frac{V_{12}}{V_{FO}} = V$	/ ₋ -		xhibit 25-				
	0405	4000	D. A.II	Ye		V _R			14				
V _{R12}	6185	4600	J:All	16	:5	V _R		See E	xhibit 25-3				
Level of Sen	i Data-	mination (if not E			, , ,	f Service L	Determinati	on (if not F)			
$D_{R} = 5.475$		7 L.			52 + 0.0086								
l " _			- 112		A	D- =	(pc/ mi /ln)					
'`	1.5 (pc/ mi (Exhibit 25					D _R = (pc/ mi /ln) LOS= (Exhibit 25-4)							
Speed Estin				Speed	Estimation								
	M _S = 2.187 (Exibit 25-19)							$D_s = (Exhibit 25-19)$					
-	•		A.			S _R =	mph (Exl	nibit 25-19)					
OR 20.0 Hight (Exhibit 20-19)													
0						ľ	•						
s= 25.9	mph (Ex	(hibit 25-14)			S = mph (Exhibit 25-15)							

TURNPIKE





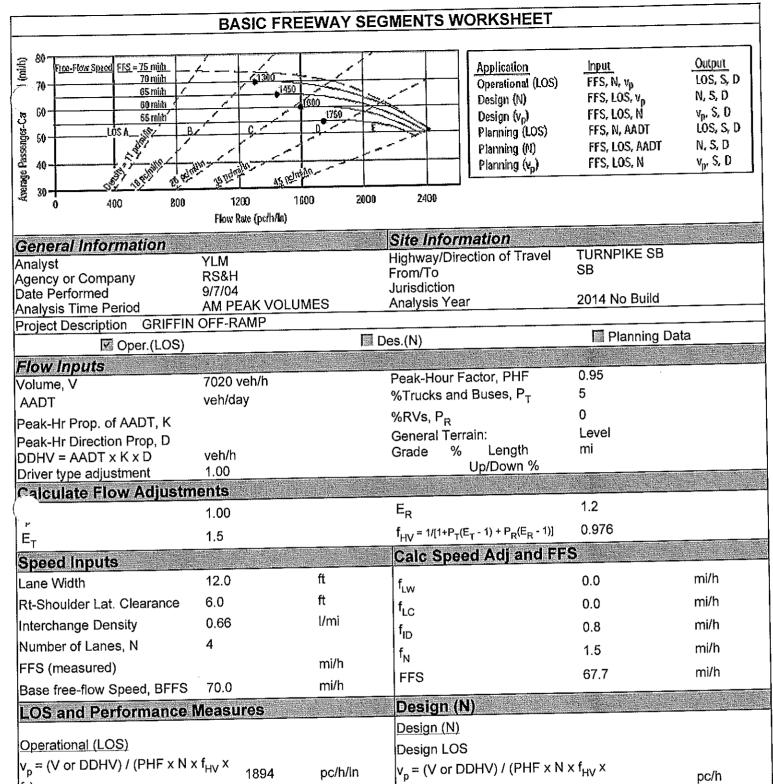
DDHV - Directional design hour volume

Application	<u>Input</u>	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, V _D	N, S, D
Design (v _p)	FFS, LOS, N	ν _ρ , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

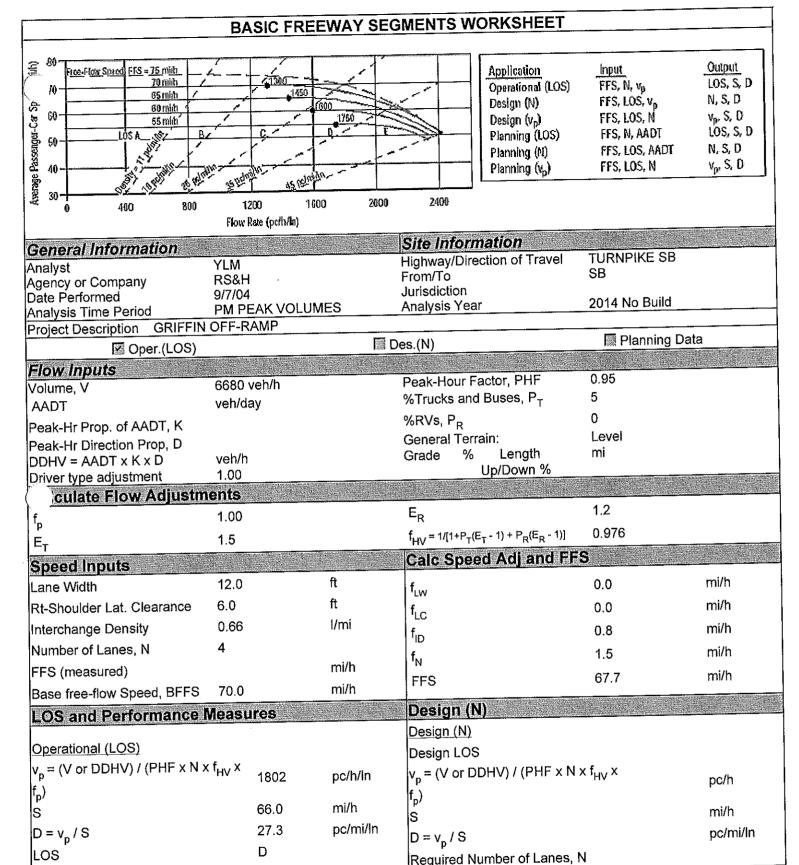
i 400 800	1200 Flow Rate (pc/h/lkn)	1600 2000	2400			
General Information			Site Information			
Analyst	YLM		Highway/Direction of Travel	TURNPIKE	NB	
Agency or Company	RS&H		From/To Jurisdiction	NB		
Date Performed	9/7/04 PM PEAK VOLU	IMES	Analysis Year	2014 No B	uild	
Analysis Time Period Project Description GRIFFIN	ON-RAMP	<u> </u>				
			Des.(N)	Planning Data		
Flow Inputs		1.00	Physical Communication of the State of the S	0.05	in contract the second	
/olume, V	7260 veh/h		Peak-Hour Factor, PHF	0.95		
AADT	veh/day		%Trucks and Buses, P _T	5		
Peak-Hr Prop. of AADT, K			%RVs, P _R	0		
Peak-Hr Direction Prop, D			General Terrain:	Level		
DDHV = AADT x K x D	veh/h		Grade % Length Up/Down %	mi		
Oriver type adjustment	1.00		Philips and the control of the contr			
culate Flow Adjustm			E _R	1.2		
f _p	1.00			0.976		
E _T	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	ALL OF THE PROPERTY OF THE PARTY OF THE PART		
Speed Inputs			Calc Speed Adj and FF			
Lane Width	12.0	ft	f _{LW}	0.0	mi/h	
Rt-Shoulder Lat. Clearance	6.0	ft	f_{LC}	0.0	mi/h	
Interchange Density	0.66	I/mi	f _{ID}	0.8	mi/h	
Number of Lanes, N	4		f _N	1.5	mi/h	
FFS (measured)		mi/h		67.7	mi/h	
Base free-flow Speed, BFFS	70.0	mi/h	FFS			
LOS and Performance	<i>N</i> easures		Design (N)			
			Design (N)			
Operational (LOS)			Design LOS			
$v_p = (V \text{ or DDHV}) / (PHF x N x)$	¹ HV ^X 1958	pc/h/ln	$v_p = (V \text{ or DDHV}) / (PHF \times N)$	x f _{HV} x	pc/h	
f _p)	04.0	mi/h	$f_{\mathbf{p}}$)			
S	64.0		S		mi/h	
D = v _p / S	30.6	pc/mi/ln	$D = v_p / S$		pc/mi/ln	
LOS	D		Required Number of Lanes,	N		
Glossary			Factor Location			
Number of lanes	S - Speed		E _R - Exhibits23-8, 23-10		f _{LW} - Exhibit 23-4	
V - Hourly volume	D - Density		E _T - Exhibits 23-8, 23-10, 23	3-11	f _{LC} - Exhibit 23-5	
v _p - Flow rate	FFS - Free-flow speed					
LOS - Level of service			f _p - Page 23-12	3_2 23_3	f _N - Exhibit 23-6 f _{ID} - Exhibit 23-7	
DDHV - Directional design ho		·	LOS, S, FFS, v _p - Exhibits 2	U-Z, ZU-U	'ID ZAMAR ZO	

		RAME	S AND	RAMP	JUNCT	IONS W	ORKSHE	ET			
General Infor	mation				e Inforn	nation			JRNPIK	ZE ND	
Analyst		YLM				eway/Dir	of Irave	1 (JKNPI	/E IAD	
Agency or Cor		RSH				ction sdiction					
Date Performe		9/7/04	سيام/ ١			ilysis Yea	ır	20)14 No	Build	
Analysis Time		AM Peak 5 ON RAM	VOIUI	GE TO					, , , , , ,		
Project Descri	ption 1-59	5 ON RAIV	IP WEI	GL 10	ND TO	VIII II CE					
<i>Inputs</i> Upstream Adj	Ramp	Terrain			Annual Control of State and Annual Control	Harman VIII-				Downstrea Ramp	am Adj
₩ Yes	On										∫ On
□ No □	Off									□ No	☐ Off
							L _{down} =	ft			
L _{up} = ft	i - Fr						FR = 50	.0 mph	1	VD =	veh/h
1	h/h				show lan	es, L _A , L	$_{D}, V_{R}, V_{f})$				
Conversion t	o pc/h Uni	der Base C	Conditio	ons	· · · · · ·					v=V/PHF	
(pc/h)	V (Veh/hr)	PHF		rain	Truck	%Rv	f _{HV}		f _p	f _{HV} f _p	
Freeway	3920	0.95	Lev	vel	5	0	0.976		1.00	4229	
Ramp	2190	0.95	Le	vel	2	0	0.990		1.00	2328	
UpStream					ļ					<u> </u>	
DownStream		<u> </u>					<u>. </u>	Dive	erge Are	_ as	
	Merge Areas						ion of v	44, 1960 A 44	3,g07,110		
Estimation o	Section of the sectio					LSumat	ion or v		V + (V	- V _R)P _{FD}	
ļ	V ₁₂ :	= V _F (P _{FM})	1						• • • •	= ¯ VR/IFD	
L _{EQ} = (Equat	tion 25-2 o	25-3)					Equation			25.44)	
$P_{FM} = 0.555$	using Equ	ation (Exl	nibit 25-	-5)		P _{FD} = using Equation (Exhibit 25-11)					
V ₁₂ = 2347						$V_{12} = pc/h$					
Capacity Ch						Capacity Checks					
	Actual	Maxii	num	LOS	5 F?		_ <u> A</u>	ctual		kimum khibit 25-	LOS F?
			_	١.,		V _{FI} =V	F			14	
V _{FO}	6557	720	00	N.	0	V ₁₂			440	00:Ali	
						V _{FO} = V	/ _F -		1	xhibit 25-	-
V _{R12}	4675	460	D:All	Υe	es	V _R				14	
INIE.						V _R				chibit 25-3	us.
Level of Ser	vice Deter	mination (if not F)		Level	f Servic	e Dete	rminati	on (if not i	
D _R = 5.475	+ 0.00734	v _R + 0.00	78 V ₁₂ -	0.0062	7 L _A		• • •		0,0086	V ₁₂ - 0.000	19 L _D
D _R = 22.7 (pc/ mi /ln)					D _R =	(pc/ mi	/ln)				
LOS = F (Exhibit 25-4)					LOS=	(Exhibit	25-4)				
Speed Estimation					Speed	Estimat	ion				
***************************************	49 (Exibit 2	25-19)				D _s =	(Exhibi	25-19)		
, J	4 mph (Ex		9)			S _R ≓	mph (Exhibit	25-19)		
1 18	· mph (Ex					s _o =	mph (Exhibit	25-19)		
	t mpn (∈x 4 mph (E)					s =	mph (Exhibit	25-15)		
S= 39.4	4 mpn (⊏/	(111011 20-1-	' <i>)</i>								

		RAME	S AND	RAMP	JUNCT	IONS W	ORKSHEE	T			
General Infor	mation			Site	e Inform		(T	T1	RNPIŁ	CE NR	
Analyst		YLM					of Travel	10	IKNPI	(E ND	
Agency or Co		RSH				ction sdiction					
Date Performe		9/7/04	. Malur	200		ilysis Yea	r	20	14 No	Build	
Analysis Time Project Descri	Period	PM Peak	D MER	GE TO			<u> </u>				
Project Descri Inputs	iption 1-58	JO ON INAIN	II WILLY	OL 10							
Upstream Adj	Ramp	Terrain								Downstrea Ramp	am Adj
□ Yes □	On									🖫 Yes	∭ On
□ No □	Off									I No	Off
					- 50.0	mnh	<u></u>	L _{down} =	ft		
up	op 5 FF = 70.0 mpm						FR = 50.0	прп		VD =	veh/h
•	eh/h				show lan	ies, L _{A'} L _i	⊃, [∨] R, [∨] f)				
Conversion	to pc/h Un	der Base (<u>Condition</u>	ons		I		T		v=V/PHF	
(pc/h)	V (Veh/hr)	PHF	Ter	rain	Truck	·%Rv	f _{HV}		f _p	f _{HV} f _p	
Freeway	4600	0.95	Le	/el	5	0	0.976	.j	.00	4963	
Ramp	2352	0.95	Lev	/el	2	0	0.990	1 1	.00_	2501	
UpStream								 			<u> </u>
DownStream		argo Arone			1	<u> </u>	l	Dive	rge Are	as	
	A CONTRACTOR OF THE PARTY OF TH	erge Areas				Estimat	ion of v ₁₂				
Estimation		- V (D)						' ₄₀ = '	V _D + (V _I	- V _R)P _{FD}	
		= V _F (P _{FM})	1) = (F				(()5	
L _{EQ} = (Equa			" " 05	~ \		L _{EQ} = (Equation 25-8 or 25-9) P _{FD} = using Equation (Exhibit 25-11)					
P _{FM} = 0.555		iation (Exi	nidit 25-	່ວ)		$V_{12} = pc/h$					
$V_{12} = 2754$						15-	y Checks				10 P
Capacity Cl	necks	Mari		109	S F?	Capacii	Act	Jal	Max	imum	LOS F?
	Actual	Maxii	Hulli		<u> </u>	\/ =\/				khibit 25-	
V _{FO}	7464	720	00	Υe	es	V _{FI} =V V ₁₂	F			14 00:All	
				<u></u>		V _{FO} = V	, _		Coo E	xhibit 25-	
				.,			F		1 -	14	
V _{R12}	5255	460	D:All	Y€	∋s	V _R			Coo Ev	hibit 25-3	
						V_R					
Level of Se						Level o	f Service	Dete	rminaue	on (if not i	<i>)</i>
$D_R = 5.475$	5 + 0.00734	v _R + 0.00	78 V ₁₂ -	0.0062	17 L _A		• • •		0.0000	V ₁₂ - 0.000	.a r.D
$D_R = 2$	27.1 (pc/ m	ni /ln)				D _R =	(pc/ mi /lr				
LOS = F	Exhibit 2	5-4)				LOS=	(Exhibit 2				
Speed Estimation							Estimatio				
$M_{\rm S} = 0.7$	78 (Exibit	25-19)				D _s =	(Exhibit 2				
-	•	xhibit 25-19))			S _R =	mph (E)				
1.5	•	hibit 25-19				S ₀ =	mph (E)				
		xhibit 25-1				S =	mph (E)	hibit	25-15)		
<u> </u>			Convrint	t © 2000 L	Jniversity (of Florida, Al	l Rights Rese	rved			



f _p) S D = v _p / S LOS	64.9 mi/l 29.2 pc/l D	ni/ln D = v _p / S Required Number of Lanes, N	mi/h pc/mi/ln
Glossary		Factor Location	
- Number of lanes - Hourly volume - Flow rate LOS - Level of service DDHV - Directional design ho	S - Speed D - Density FFS - Free-flow speed BFFS - Base free-flow sour volume	E _R - Exhibits23-8, 23-10 E _T - Exhibits 23-8, 23-10, 23-11 f_p - Page 23-12 LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f _{LW} - Exhibit 23-4 f _{LC} - Exhibit 23-5 f _N - Exhibit 23-6 f _{ID} - Exhibit 23-7



		rioquirou riantia di di	
Glossary		Factor Location	
Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service DDHV - Directional design	D - Density FFS - Free-flow speed BFFS - Base free-flow speed	E _R - Exhibits23-8, 23-10 E _T - Exhibits 23-8, 23-10, 23-11 f _p - Page 23-12 LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f_{LW} - Exhibit 23-4 f_{LC} - Exhibit 23-5 f_N - Exhibit 23-6 f_{ID} - Exhibit 23-7
DDITY - Directional design	1001 10111110		

MAJOR MERGE AND DIVERGE

Major Diverge Area Analysis

When a two-lane-off-ramp results in a lane drop, it is treated as a major diverge segment. In this case, the entering demand and the departing demand on each exit leg must be checked against the capacity of the approximate entry or departure leg. Equation 25-12 allows the density across all freeway lanes to be estimated for a distance of 1,500 ft upstream of the gore area. This density can be compared with the LOS criteria in Exhibit 24-4 to determine the LOS in the diverge area.

 $D = 0.0109 * (V_F / N)$ (25-12)

D = average density across all freeway lanes for a distance of 1,500 ft upstream of diverge (pc/mi/ln)

V_F = freeway flow rate approaching diverge area (pc/h)

N = number of freeway lanes

Exhibit 25-4. LOS Criteria for Merge and Diverge Areas

LOS	Density (pc/mi/ln)
А	<= 10
В	> 10 - 20
С	> 20 - 28
D	> 28 - 35
Е	> 35
F	Demand exceeds capacity

Determining Flow Rate (pc/h)

```
V_F = V_i / (PHF \times f_{hv} \times f_p)
```

 V_F = flow rate for movement i under base conditions during peak 15 min of hour (pc/h)

V_i = hourly volume for movement i (vph)

PHF = peak-hour factor freeway - 0.95 ramp - 0.95

> f_{hv} = adjustment factor for heavy vehicles freeway - 0.976 ramp - 0.99

 f_p = adjustment factor for drive population freeway - 1.0 ramp - 1.0 **Special Cases**

When a two-lane, right-hand off-ramp has a single deceleration lane and the left-hand ramp lane splits from Lane 1 of the freeway at the gore area, without a deceleration lane, the following formula needs to be used:

$$V_{12} = V_R + (V_F - V_R)(P_{FD})$$

$$V_{12*} = V_{12} / (PHF \times f_{hv} \times f_{p})$$

 V_{12} = hourly volume for movement (vph)

V_{12*} = flow rate for movement under base conditions during peak 15 min of hour (pc/h)

 f_{hv} = adjustment factor for heavy vehicles

freeway - 0.976 ramp - 0.99

 f_p = adjustment factor for drive population

freeway - 1.0 ramp - 1.0

 $D_R = 4.252 + 0.0086V_{12*} - 0.009L_D$ (Eq.25-10)

D_R= density of diverge influence area(pc/mi/ln)

V_{12*}= flow rate entering ramp influence area(pc/h)

L_D= Length of Deceleration Lane (Ft)

HIGHWAY CAPACITY MANUAL ANALYSIS

Major Merge Area Analysis

Where a two-lane on-ramp results in a lane addition, the junction is classified as a major merge area. The Highway Capacity Manual (HCM) analysis is limited to checking capacities on approaching legs and the departing freeway. The capacity of each entering leg and the departing freeway is computed using Exhibit 25-3 (p. 25-4) and Exhibit 25-7 (p. 25-8) in the HCM 2000.

Exhibit 25-3. Approximate Capacity of Ramp Roadways

	Capacit	y (pc/h)
Free Flow Speed of Ramp , S _{fr} (mi.h)	Single-Lane Ramps	Two-Lane Ramps
> 50	2200	4400
> 40 - 50	2100	4100
> 30 - 40	2000	3800
>= 20 - 30	1900	3500
< 20	1800	3200

Exhibit 25-7. Capacity Values for Merge Areas

Freeway Free-Flow	Maximum I Num	Downstream Free ber of Lanes in C	Max. Desirable Flow Entering		
Speed (mi/h)	2	3	4	> 4	Influence Area, V _{r12} (pc/h)
>= 70	4800	7200	9600	2400/ln	4600
65	4700	7050	9400	2350/ln	4600
60	4600	6900	9200	2300/ln	4600
55	4500	6750	9000	2250/ln	4600

Determining Flow Rate (pc/h)

$$v_i = V_i / (PHF \times f_{hv} \times f_p)$$
 (25-1)

v_i = flow rate for movement i under base conditions during peak 15 min of hour (pc/h)

V_i = hourly volume for movement i (vph)

PHF = peak-hour factor freeway - 0.95 ramp - 0.95

 f_{hv} = adjustment factor for heavy vehicles freeway - 0.976 ramp - 0.99

 f_p = adjustment factor for drive population freeway - 1.0 ramp - 1.0

MERGE ANALYSIS

A1.1) NB I-95 On-Ramp to EB I-595 (AM)

Approaching Freeway Volume:

$$fhv = 0.976$$

$$fp = 1.00$$

$$vi = 4008 (pc/h)$$

Ramp Volume:

$$PHF = 0.95$$

$$fhv = 0.99$$

$$fp = 1.00$$

$$vi = 1347 (pc/h)$$

Departing Freeway Volume:

$$Vi = 4,983$$

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

A1.2) NB I-95 On-Ramp to EB I-595 (PM)

Approaching Freeway Volume:

$$Vi = 2,323$$

$$fhv = 0.976$$

$$fp = 1.00$$

Ramp Volume:

$$PHF = 0.95$$

$$fhv = 0.99$$

$$fp = 1.00$$

$$vi = 1094 (pc/h)$$

Departing Freeway Volume:

$$Vi = 3.352$$

$$fhv = 0.976$$

$$fp = 1.00$$

A2.1) NB I-95 On-Ramp to WB I-595 (AM)

Approaching Freeway Volume:

$$Vi = 2,588$$

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

$$vi = 2791 (pc/h)$$

Ramp Volume:

$$PHF = 0.95$$

$$fhv = 0.99$$

$$fp = 1.00$$

Departing Freeway Volume:

$$Vi = 5,183$$

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

$$vi = 5590 (pc/h)$$

A2.2) NB I-95 On-Ramp to WB I-595 (PM)

Approaching Freeway Volume:

$$Vi = 3,959$$
 PHF = 0.95

$$PHF = 0.95$$
 fhv = 0.976

$$fp = 1.00$$

Ramp Volume:

$$Vi = 3,250$$

$$PHF = 0.95$$

$$fhv = 0.99$$

$$fhv = 0.99$$
 $fp = 1.00$

$$vi = 3456 (pc/h)$$

Departing Freeway Volume:

$$Vi = 7,209$$

$$PHF = 0.95$$

$$fhv = 0.976$$
 $fp = 1.00$

$$fp = 1.00$$

A 3.1) SB I-95 On-Ramp to WB I-595 (AM)

Approaching Freeway Volume:

$$Vi = 5.183$$

$$PHF = 0.95$$

$$fhv = 0.976$$

fhv =
$$0.976$$
 fp = 1.00

$$vi = 5,590 (pc/h)$$

Ramp Volume:

$$Vi = 2,743$$

$$PHF = 0.95$$

$$fhv = 0.99$$
 $fp = 1.00$

$$fp = 1.0$$

$$vi = 2,917 (pc/h)$$

Departing Freeway Volume:

$$Vi = 7,926$$

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

A 3.2) SB I-95 On-Ramp to WB I-595 (PM)

Approaching Freeway Volume:

$$PHF = 0.95$$

$$fhv = 0.976$$
 $fp = 1.00$

$$fp = 1.00$$

vi =

Ramp Volume:

$$Vi = 3,467$$

$$fhv = 0.99$$

$$fp = 1.00$$

vi =

A 4.1) I-595 On-Ramp to SB Turnpike (AM)

Departing Freeway Volume:

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

$$vi = 11,514 (pc/h)$$

Approaching Freeway Volume:

$$Vi = 4.360$$

$$PHF = 0.95$$

$$fhv = 0.976$$
 $fp = 1.00$

$$p = 1.00$$

Ramp Volume:

$$Vi = 2,660$$

$$PHF = 0.95$$

$$fhv = 0.99$$

$$fp = 1.00$$

Departing Freeway Volume:

$$Vi = 7.020$$

$$PHF = 0.95$$

$$fhv = 0.976$$
 $fp = 1.00$

$$fp = 1.00$$

A4.2) I-595 On-Ramp to SB Turnpike (PM)

Approaching Freeway Volume:

$$Vi = 3,680$$

$$fhv = 0.976$$

$$fp = 1.00$$

vi =

Ramp Volume:

$$PHF = 0.95$$

$$fhv = 0.99$$

$$fhv = 0.99$$
 $fp = 1.00$

vi =

Departing Freeway Volume:

$$Vi = 6,680$$

$$fhv = 0.976$$

$$fp = 1.00$$

vi =

DIVERGE ANALYSIS

B 1.1 EB I-595 Off-Ramp to NB I-95 (AM)

$$V_i = 10,999$$
 PHF = 0.95 fhv = 0.976 fp = 1.00 $V_F = 11,863$ (pc/h)

N = 4

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 32.33 > 28 - 35 Exhibit 25-4 gives LOS as D in the diverge area.

Level of Service = D

B 1.2 EB I-595 Off-Ramp to NB I-95 (PM)

$$V_i = 7.941$$
 PHF = 0.95 fhv = 0.976 fp = 1.00 $V_F = 8.564$ (pc/h)

N = 4

Therefore
$$D = 23.34$$
 pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 23.34 > 20 - 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 2.1 EB I-595 Off-Ramp to SB I-95 (AM)

$$V_i = 7,166$$
 PHF = 0.95 fhv = 0.976 fp = 1.00 $V_F = 7,729$ (pc/h)

N = 3

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 28.08 > 28 - 5 Exhibit 25-4 gives LOS as D in the diverge area.

Level of Service = D

B 2.2 EB I-595 Off-Ramp to SB I-95 (PM)

$$Vi = 4,993$$
 PHF = 0.95

$$fhv = 0.976$$

$$fp = 1.00$$

$$V_F = 5,385 \text{ (pc/h)}$$

N = 3

Therefore

D = 19.57

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 19.57 > 10 - 20 Exhibit 25-4 gives LOS as B in the diverge area.

Level of Service = B

B 3.I WB I-595 Off-Ramp to SB I-95 (AM)

PHF = 0.95

fhv = 0.976

fp = 1.00

 $V_{\rm F} = 5296 \, (pc/h)$

N = 4

Therefore

D= 14.43

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 14.43>10-20 Exhibit 25-4 gives LOS as B in the diverge area.

Level of Service = B

B 3.2 WB I-595 Off-Ramp to SB I-95 (PM)

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

 $V_F =$

6977 (pc/h)

N = 4

Therefore

D= 19.01

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 19.01> 10 -20 Exhibit 25-4 gives LOS as B in the diverge area.

Level of Service = B

B 4.1 WB I-595 Off-Ramp NB I-95 (AM)

V_F =

PHF = 0.95

4215 (pc/h)

fhv = 0.976

fp = 1.00

N = 3

Therefore

D= 15.31

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 15.31> 10-20 Exhibit 25-4 gives LOS as B in the diverge area.

Level of Service = B

B 4.2 WB I-595 Off-Ramp NB I-95 (PM)

$$Vi = 5,176$$

PHF = 0.95

fhv = 0.976

fp = 1.00

 $V_F =$

5582 (pc/h)

N = 3

Therefore

D= 20.28

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 20.28> 20- 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 5.1 WB I-595 Off-Ramp SR7/TURNPIKE (AM)

PHF = 0.95

fhv = 0.976

fp = 1.00

V_F =

8548 (pc/h)

N = 5

Therefore

D= 18.64

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 18.64> 10-20 Exhibit 25-4 gives LOS as B in the diverge area.

Level of Service = B

B 5.2 WB I-595 Off-Ramp SR7/TURNPIKE (PM)

PHF = 0.95

fhv = 0.976

fp = 1.00

 $V_F =$

11514 (pc/h)

N = 5

Therefore

D = 25.10

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 25.10> 20- 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 6.1 WB I-595 Off-Ramp University Drive (AM)

Vi= 8,362

PHF = 0.95

fhv = 0.976

fp = 1.00

 $V_F =$

9019 (pc/h)

N = 4

Therefore

D= 24.58

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 24.58> 20- 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 6.2 WB I-595 Off-Ramp University Drive (PM)

Vi= 10,310

PHF = 0.95

fhv = 0.976

fp = 1.00

 $V_{\rm F} = 11119 \, (pc/h)$

N = 4

Therefore

D= 30.30 pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 30.3> 28- 35 Exhibit 25-4 gives LOS as D in the diverge area.

Level of Service = D

B 7.1 NB Turnpike Off-Ramp I-595 (AM)

Vi= 6,920

PHF = 0.95

fhv = 0.976

fp = 1.00

 $V_{\rm F} = 7463 \, (pc/h)$

N = 4

Therefore

D= 20.34

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 20.34> 20- 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 7.2 NB Turnpike Off-Ramp I-595 (PM)

V_F =

$$fhv = 0.976$$

$$fp = 1.00$$

N = 4

Therefore

D= 21.34

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 21.34> 20-28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 8.1 SB Turnpike Off-Ramp I-595 (AM)

$$V_F = 7.210$$

$$fhv = 0.976$$

$$fp = 1.00$$

Pfd = 0.45

$$V_{12} = V_R + (V_F - V_R)(P_{FD})$$

$$V_R = 2850$$

$$L_{D=}$$

2000

$$D = 30.88$$

pc/mi/ln

 V_{12} = 5189.819

Therefore

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 30.88> 28-35 Exhibit 25-4 gives LOS as D in the diverge area.

Level of Service = D

B 8.2 SB Turnpike Off-Ramp I-595 (PM)

$$V_F = 6,440$$

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

Pfd = 0.45

$$V_{12} = V_R + (V_F - V_R)(P_{FD})$$

D = 27.21

pc/mi/ln

Therefore

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 22,09> 20-28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

WEAVING

			FREEWA	Y WEAL	<u>/ING WOR</u>		7 mm mars / M. J. Aug 11/20/20/20 19 4 19 19 29 19 19 19 19 19 19 19 19 19 19 19 19 19			
General	Informat	ion			Site Info	rmation			5 (4)	
Date Perforn	ncy/Company RS&H				Freeway/Dir of Weaving Seg Jurisdiction Analysis Yea	Location		EB en SW 136 and Flamingo NO BUILD		
Inputs Freeway free-flow speed, SFF (mi/h) 60 Weaving number of lanes, N 5 Weaving seg length, L (ft) 650 Terrain Lev				el	Volume ratio Weaving ratio	Weaving type Volume ratio, VR Weaving ratio, R			A 0.35 0.38	
Convers	ions to p	c/h Unde	er Base C	onditio			T	ı	ı	
(pc/h)	٧	PHF	Truck %	RV %	E _T	E _R	fHV	fp	V	
Vo1	5060	0.95	5	0	1.5	1.2	0.976	1.00	5459	
Vo2	0	0.95	2	0	1.5	1.2	0.990	1.00	0	
Vw1	1689	0.95	2	0	1.5	1.2	0.990	1.00	1795	
Vw2	1027	0.95	2	0	1.5	1.2	0.990	1.00	1091	
Vw				2886	Vnw				5459	
V								electronic de la minima	8345	
Weaving	g and No	n-Weavir	ig Speeds	3				0.00		
	-		Unconstr				Constrained			
		Weaving	j (i = w)	Non-Wea	aving (i = nw)		ng (i = w)	Non-Weaving (= nw)		
a (Exhibit 24 b (Exhibit 24							.15 .00		.00	

b (Exhibit 24-6) 1.30 0.97 c (Exhibit 24-6) 0.75 0.80 d (Exhibit 24-6) 5.05 0.79 Weaving intensity factor, Wi Weaving and non-weaving 42.96 23.26

speeds, Si (mi/h) Number of lanes required for unconstrained operation, Nw Maximum number of lanes, Nw (max)

2.05 1.40

If Nw < Nw(max) unconstrained operation

if Nw > Nw (max) constrained operation

I I I I I I I I I I I I I I I I I I I	
Weaving Segment Speed, Densi	ity, Level of Service, and Capacity
Weaving segment speed, S (mi/h)	33.23
Weaving segment density, D (pc/mi/ln)	50.22
Level of service, LOS	F
Capacity of base condition, c _b (pc/h)	8465
Capacity as a 15-minute flow rate, c (veh/h)	8259
Capacity as a full-hour volume, c _h (veh/h)	7846

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".
 b. Capacity constrained by basic freeway capacity.
 c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

		F	REEWA	Y WEAV	ING WOR	KSHEET			
General	Informat	TR. V. H			Site Info	a verdentation actions are tax from recommended for the			
Analyst Agency/Com Date Perforr Analysis Tim	npany ned	YLM RS&H 9/7/04 PM			Weaving Seg Location BETV Jurisdiction			EASTBOUND VEEN SW136AVE AND IINGO	
Alialysis Illi	ic i cilou	and the second second of the s		manufacture (Addison a construction)	Analysis Yea	ſ	2014 r	IO BUILD	
Inputs Freeway free-flow speed, SFF (mi/h) Weaving number of lanes, N Weaving seg length, L (ft) Terrain			60 5 650 Leve	el	Volume ratio,	Weaving type Volume ratio, VR Weaving ratio, R		A 0.35 0.39	
	sions to p	c/h Unde	r Base C	ondition	ns .				
(pc/h)	V	PHF	Truck %	RV %	E _T	ER	fHV	fр	V
Vo1	3974	0.95	5	0	1.5	1.2	0.976	1.00	4287
Vo2	0	0.90	0	0	1.5	1.2	1.000	1.00	0
Vw1	1337	0.95	2	0	1.5	1.2	0.990	1.00	1421
Vw2	841	0.95	2	0	1.5	1.2	0.990	1.00	894
Vw	011	0.00		2315	Vnw				4287
V							di Grafficia		6602
	a and No	n-Weavin	a Speeds						
VVEAVIII	g allu itoi	B=10 CCV III	Unconstr				Cons	trained	
		Weaving			ving (i = nw)	Weavir	ng (i = w)	Non-Wea	ving (= nw)
a (Exhibit 24	1-6)						15		00
b (Exhibit 24							00		00
c (Exhibit 24		<u> </u>				0.97 0.80		1.30 0.75	
d (Exhibit 24 Weaving intens							.06 0.59		
Weaving and no						24.89		46.46	
speeds, Si (mi/l	1)	farunaanatrair	and approxima	Muz	1.99				
Maximum n	umber of lanes	for unconstraii s, Nw (max) /(max) uncons			1.40	ጃ if Nw > Nv	v (max) consti	ained operati	on
					f Service,	and Cap	pacity		
	gment speed,			35.63					
Weaving se	gment density	, D (pc/mi/ln)		37.06	***				
Level of ser				Е					
	base condition			8465	··				·
		low rate, c (vel		8259					
Capacity as	a full-hour vol	lume, c _h (veh/t	1)	7846					
b. Capacity cor c. Capacity occ d. Three-lane T e. Four-lane Ty f. Capacity con g. Five-lane Ty	estrained by basic fi rurs under constrair type A segments do pe A segments do strained by maximu pe A segments do a	reeway capacity. ned operating cond o not operate well at not operate well at um allowable weavi not operate well at y of operate well at y	itions. It volume ratios gre volume ratios grea ng flow rate: 2,800 volume ratios grea olume ratios great	eater than 0.45. I ater than 0.35. Po pc/h (Type A), 4 der than 0.20. Po er than 0.80. Po	Poor operations and oor operations and 4,000 (Type B), 3,50 oor operations and so or operations and so or operations and so	I some local queu some local queuir 00 (Type C). some local queuiro ome local queuiro	ing are expected in ng are expected in ng are expected in ng are expected in s	n such cases. such cases. such cases. uch cases.	
li. Type C weay	ing segments do no	ot operate well at vo	nume rados greate	r (nan 0.50. Pod	or operations and so	ine iocai queuing	are expected in at	vii cascs.	

		and the second s	<u>FREEWA</u>	Y WEAV	ING WOR	store constructory common man man construction for				
Genera	<u>l Informat</u>	ion			Site Info	rmation		6.000		
Date Perfor	nalyst YLM gency/Company RS&H ate Performed 9/7/04 nalysis Time Period AM			1	I * *		I-595 EASTBOUND BETWEEN FLAMINGO AND HIATUS 2014 NO BUILD			
Inputs										
Freeway free-flow speed, SFF (mi/h) 60 Weaving number of lanes, N 4 Weaving seg length, L (ft) 1100 Terrain Leve				Weaving type Volume ratio, VR Weaving ratio, R			A 0.24 0.21			
Conver	sions to p	c/h Unde	er Base C	ondition	ıs				1	
(pc/h)	V	PHF	Truck %	RV %	ĺΕ _τ	ER	fHV	fp	v	
Vo1	6319	0.95	5	0	1.5	1.2	0.976	1.00	6817	
Vo2	0	0.90	0	0	1.5	1.2	1.000	1.00	0	
Vw1	1630	0.95	2	0	1.5	1.2	0.990	1.00	1732	
Vw2	430	0.95	2	0	1.5	1,2	0.990	1.00	457	
Vw				2189	Vnw				6817	
V						11			9006	
	ig and No	n-Weavin	a Speeds	3						
			Unconstr				Cons	trained		
		Weaving	(i = w)	Non-Wea	ving (i = nw)	Weavir	ıg (i ≍ w)	Non-Weaving (= nw)		
a (Exhibit 2	24-6)						15		0.00	
b (Exhibit 2							<u>00</u> 97	4.00 1.30		
c (Exhibit 2							80		75	
d (Exhibit 2 Weaving inten				1			72	·	57	
Weaving and r speeds, Si (mi	non-weaving						.59		.84	
Number of Maximum r	lanes required number of lanes	s, Nw (max)			1.45 1.40	Zi if Niur ≤ kh	v (max) consti	ginad operati	on	
	☐ If Nw < Nw							ameu operau	UII	
			Density,	38.97	f Service,	allu Odl	iauity			
Weaving segment speed, S (mi/h) Weaving segment density, D (pc/mi/ln)				57.77						
Level of service, LOS				F		<u></u>	····			
	f base condition	n, c _h (pc/h)	, , , , , , , , , , , , , , , , , , ,	7134						
			h/h)	6960	AMARIAN III I					
Capacity as a 15-minute flow rate, c (veh/h)				0040						

a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions". a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions" b. Capacity constrained by basic freeway capacity.
c. Capacity occurs under constrained operating conditions.
d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
ii. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

6612

Capacity as a full-hour volume, c_h (veh/h)

		F	REEWA	Y WEAV	ING WOR	KSHEE [*]	A CONTRACTOR CONTRACTOR AND ADDRESS OF A CONTRACTOR AND AD	autorio de Salonia de Caración de Cara	
General	Informat	ion			Site Info	rmation			
A m alivak		YLM			Freeway/Dir of Travel		I-595 EASTBOUND BETWEEN FLAMINGO AND HIATUS		
Agency/Company RS&F Date Performed 9/7/04		RS&H			Weaving Seg	Location			
		9/7/04			Jurisdiction		HATO		
Analysis Tim	e Period	PM			Analysis Yea	.	2014 1	NO BUILD	
nputs									
Freeway free	e-flow speed, S		60		Weaving type)		Α	
	mber of lanes,	N	4 110	1	Volume ratio,	VR		0.2	
vveaving seg Terrain	g length, L (ft)		Leve		Weaving ratio), R		0.2	.1
	sions to p	c/h Unde	r Base C	ondition	ıs				
(pc/h)	V	PHF	Truck %	RV %	Ε _T	ER	fHV	fp	٧
Vo1	4971	0.95	5	0	1.5	1.2	0.976	1.00	5363
Vo2	0	0.90	0	0	1.5	1.2	1.000	1.00	0
Vw1	1289	0.95	2	0	1.5	1.2	0.990	1.00	1370
Vw2	340	0.95	2	0	1.5	1.2	0.990	1.00	361
Vw		1		1731	Vnw				5363
V						a Calming			7094
-	n and No	n-Weavin	a Speeds						E.
			Unconstr				Constrained		
		Weaving	(i = w)		ving (i = nw)	Weavi	ng (i = w)	Non-Wea	ving (= nw)
a (Exhibit 2	1-6)	0.15		ļ	.00				·
b (Exhibit 24-6) 2.20				.00					
c (Exhibit 24-6) 0.97 d (Exhibit 24-6) 0.80		1.30 0.75							
d (Exhibit 24 Weaving intens		1.27			.73				
Weaving and n	on-weaving	37.0			3.83				
speeds, Si (mi/l	1)	for unconstrain			1.40	<u> </u>		<u> </u>	

Number of lanes required for unconstrained operation, Nw Maximum number of lanes, Nw (max)

1.40

If Nw < Nw(max) unconstrained operation

if Nw > Nw (max) constrained operation

, Level of Service, and Capacity
41.96
42.27
E
7128
6954
6606

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions". la. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions' b. Capacity constrained by basic freeway capacity.

 c. Capacity occurs under constrained operating conditions.

 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.

 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.

 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).

 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.

 h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.

 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

			REEWA	Y WEAV	ING WOR	armone annual fall of Adaptive Annual response			
General	Informati	ion			Site Info	rmation			
Analyst Agency/Com Date Perform		YLM RS&H 9/7/04			Freeway/Dir of Travel Weaving Seg Location		I-595 EASTBOUND BETWEEN HIATUS AND NO HILL		
	Analysis Time Period AM				Jurisdiction Analysis Yea	ır	2014 NO BUILD		water was a
Inputs					<u> </u>				
Weaving nun Weaving seg Terrain	Veaving number of lanes, N 4 Veaving seg length, L (ft) 1 Terrain L		60 4 1030 Leve	DWASOUU ROU R		A 0.18 0.44			
Convers	ions to p	c/h Unde	r Base C	ondition	IS .		I man		T
(pc/h)	٧	PHF	Truck %	RV %	E _T	E _R _	fHV	fp	٧
Vo1	7077	0.95	5	0	1.5	1.2	0.976	1.00	7635
Vo2	0	0.90	0	0	1.5	1.2	1.000	1.00	0
Vw1	872	0.95	2	0	1.5	1.2	0.990	1.00	927
Vw2	680	0.95	2	0	1.5	1.2	0.990	1.00	722
Vw				1649	Vnw				7635
V									9284
-	and No	n-Weavin	a Speeds						STATE OF STREET
1			Unconstr				Cons	trained	
		Weaving	(i = w)	Non-Weaving (i = nw)		Weaving (i = w)		Non-Weaving (= nw)	
a (Exhibit 24		0.18			.00	<u> </u>			
b (Exhibit 24		2.20		ļ	.00	<u> </u>			
c (Exhibit 24	' 	0.97			.30 .75				
d (Exhibit 24 Weaving intensit		1.54			.88		· • • • • • • • • • • • • • • • • • • •		
Weaving and no	n-weaving	34.7			I.61				
) anes required umber of lanes	for unconstrai			1.18 1.40	<u>)</u>		1	1 100 47 11
1	☑ If Nw < Nw	· · · · · · · · · · · · · · · · · · ·		THE CONTRACTOR STREET, SALES AND ADDRESS OF THE CONTRACTOR OF THE			w (max) const	rained operat	ion
Weaving	g Segmei	nt Speed,	Density,		f Service.	, and Ca _l	pacity		
	gment speed,			40.19					
	gment density,	, D (pc/mi/ln)	··	57.75					
Level of serv				F 7470	<u></u>				
	base condition		- n- \	7476					
	a 15-minute fl			7294					
Capacity as	a full-hour vol	ume, c _h (veh/i	<u>"</u>	6929					

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".
- b. Capacity constrained by basic freeway capacity.
- D. Capacity constrained by basic freeway capacity.

 C. Capacity occurs under constrained operating conditions.

 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.

 E. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.

 F. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).

 F. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.

 Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.

 Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

			REFWA'	Y WFAV	ING WOR	KSHEET	-		
General	Informati		IXLLIVA	1 41 - 7 3 3	Site Info	The second secon	and a Section		
Analyst Agency/Con Date Perforr	Analyst YLM Agency/Company RS&H Date Performed 9/7/04 Analysis Time Period PM				Weaving Seg Location BET' HILL Jurisdiction			EASTBOUND WEEN HIATUS AND NOB	
Inputs				The state of the s					
Freeway free-flow speed, SFF (mi/h) Weaving number of lanes, N Weaving seg length, L (ft) Terrain		60 4 1030 Leve	Volume ratio, Weaving ratio		atio, VR		A 0.18 0.43		
	sions to p	c/h Unde	r Base C	ondition	S				
(pc/h)	V	PHF	Truck %	RV %	E _T	ER	fHV	fp	٧
Vo1	5550	0.95	5	0	1.5	1.2	0.976	1.00	5988
Vo2	0	0.90	0	0	1.5	1.2	1.000	1.00	0
Vw1	710	0.95	2	0	1,5	1.2	0.990	1.00	754
Vw2	540	0.95	2	0	1.5	1.2	0.990	1.00	574
Vw				1328	Vnw				5988
V		1,457,450,000,000,000							7316
	n and Noi	n-Weavin	a Speeds						
Weaving and Non-Weaving Speeds Unconstra						Cons	trained		
Weaving (i = w)			ving (i = nw)	Weavir	ng (i = w)	Non-Wea	ving (= nw)		
a (Exhibit 2		0.15			00				
b (Exhibit 2		2.20			00				
c (Exhibit 2		0.97			75				
d (Exhibit 2- Weaving intens		1.23			65				
Weaving and n	on-weaving	37.4	·		.24				
speeds, Si (mi/	n) anes required				1.16	<u> </u>			·
	umber of lanes		ied operation	, 1414	1.40				
	☑ If Nw < Nw	(max) uncons	trained operal	ion			v (max) consti	rained operat	ion
Weavin	g Segmei	nt Speed,	Density,	Level o	f Service,	and Cap	pacity		
Weaving se	gment speed,	S (mi/h)		43.59					
	gment density	, D (pc/mi/ln)		41.96			 		
Level of ser		/ #.3		E		-		·	
	base condition		n \	7452					
	a 15-minute fl			7270					
7400 Share 1990	a full-hour vol	ume, c _h (ven/r	y	6906					
b. Capacity cor c. Capacity occ d. Three-lane 1 e. Four-lane Ty f. Capacity con g. Five-lane Ty	ments longer than instrained by basic frurs under constraint type A segments do right and the segments do right and the segments do right and the segments do right as segments do right as segments do not segment and the segments do not segment and the se	eeway capacity. led operating cond onot operate well a mot operate well at mallowable weavi tot operate well at to	itions. It volume ratios gre volume ratios gre ng flow rate: 2,800 volume ratios grea	eater than 0.45. F ater than 0.35. Po) pc/h (Type A), 4 ater than 0.20. Po er than 0.80. Po	Poor operations and nor operations and 1,000 (Type B), 3,50 nor operations and so	d some local queu some local queui 00 (Type C). some local queuin ome local queuin	ing are expected in s	n such cases. such cases. such cases. such cases.	
i. Type C weav rM	ing segments do no	t operate well at vi	oume ratios greate Copyright © 20	er than 0.50. Poo 003 University	of Florida, All F	ime iocar queuing Rights Reserve	d expected in s	uon oases.	147111

	AALL MENTENNET VANDEN DE NETTON ET BORRON DE		FREEWA	Y WEAV	ING WOF	A STATE OF THE STA			
General	Informat	ion .			Site Info	ite Information			
Analyst Agency/Con		YLM RS&H			1	Freeway/Dir of Travel Weaving Seg Location		I-595 EASTBOUND BETWEEN NOB HILL AND IS	
Date Performed 9/7/04 Analysis Time Period AM				Jurisdiction Analysis Yea	ır	2014 NO BUILD			
Inputs		100							
Weaving number of lanes, N 4 Weaving seg length, L (ft) 1 Terrain L		60 4 100 Levi	IWESVING (SIIO R		, VR	A 0.22 0.40			
Conver:	sions to p	c/h Unde	r Base C	ondition	19				
(pc/h)	V	PHF	Truck %	RV %	E _T	ER	fHV	fp	V
Vo1	6947	0.95	5	0	1.5	1.2	0.976	1.00	7495
Vo2	0	0.90	0	0	1.5	1.2	1.000	1.00	0
Vw1	1223	0.95	2	0	1.5	1.2	0.990	1.00	1300
Vw2	810	0.95	2	0	1.5	1.2	0.990	1.00	861
Vw		<u> </u>		2161	Vnw			1	7495
V						J			9656
*	」 g and Noı	n-Weavin	n Speeds						
NA ACIENALII	g and no		Unconstr		•		Cons	trained	
		Weaving				Weavir	ing (i = w) Non-Weaving (ving (= nw)
a (Exhibit 24	1-6)	0.15			.00				
b (Exhibit 24	1-6)	2.20			.00				
c (Exhibit 24		0.97		·}	.30				
d (Exhibit 24		0.80		·	.75				
Weaving intensi Weaving and no	·	1.78			.10				
speeds, Si (mi/l	1)	32.9			3.78			<u> </u>	
	anes required t		ned operation,	, Nw	1.37 1.40				
	umber of lanes If Nw < Nw	(max) uncons		A STATE OF THE STA	I		v (max) constr	ained operati	on
		······································	Density,	·	f Service,	and Cap	acity		
Weaving segment speed, S (mi/h)			37.31						
	gment density,	D (pc/mi/ln)		64.70 F					
Level of ser		o (nall-)		ł					
	base condition	, , , , , , , , , , , , , , , , , , ,	11.3	7160			••••		***
				6985				. <u></u> .	
Capacity as a 15-minute flow rate, c (veh/h) Capacity as a full-hour volume, c _h (veh/h)			1	6636					

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions". b. Capacity constrained by basic freeway capacity.

- b. Capacity constrained by basic freeway capacity.
 c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

			FREEWA	Y WEAV	ING WOF	KSHEE	Γ	Account a region of the control of t		
Genera	l Informat	ion			Site Information					
Date Perfo	y/Company RS&H				Freeway/Dir of Travel Weaving Seg Location Jurisdiction Analysis Year		I-595 EASTBOUND BETWEEN NOB HILL AND IS 2014 NO BUILD			
Inputs					,			9.00		
Freeway free-flow speed, SFF (mi/h) Weaving number of lanes, N Weaving seg length, L (ft) Terrain		4 100	60 4 1000 Level		Weaving type Volume ratio, VR Weaving ratio, R		A 0.23 0.39			
Conve	rsions to p	c/h Und	er Base C	onditio	าร					
(pc/h)	٧	PHF	Truck %	RV %	E _T	ER	fHV	fp	V	
Vo1	5440	0.95	5	0	1.5	1.2	0.976	1.00	5869	
Vo2	0	0.90	0	0	1.5	1.2	1.000	1.00	0	
Vw1	997	0.95	2	0	1.5	1.2	0.990	1.00	1059	
Vw2	650	0.95	2	0	1.5	1.2	0.990	1.00	691	
Vw		1		1750	Vnw			6.00550	5869	
V			a property and				3 S 940		7619	
Weavir	ng and No	n-Weavir	ig Speeds	3						
			Unconstr	ained			Cons	trained		

	Uncon	strained	Constrained			
	Weaving (i = w)	Non-Weaving (i = nw)	Weaving (i = w)	Non-Weaving (= nw)		
a (Exhibit 24-6)	0.15	0.00				
b (Exhibit 24-6)	2.20	4.00				
c (Exhibit 24-6)	0.97	1.30				
d (Exhibit 24-6)	0.80	0.75				
Weaving intensity factor, Wi	1.43	0.83				
Weaving and non-weaving speeds, Si (mi/h)	35.58	42.38				

Number of lanes required for unconstrained operation, Nw 1.40 Maximum number of lanes, Nw (max)

If Nw < Nw(max) unconstrained operation

if Nw > Nw (max) constrained operation

, Level of Service, and Capacity
40.60
46.92
F
7123
6949
6602

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions". a. Weaving segments longer than 2500 ft, are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions b. Capacity constrained by basic freeway capacity.

 c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

			FREEWA	Y WEAV	ING WOR				
Genera	l Informat	ion			Site Info	rmation			
A 1 k		YLM			Freeway/Dir	of Travel	EASTBOUND I-595		
Analyst Agency/Co	mpany	RS&H			Weaving Seg	Location	PINE ISLAND AND UNIVERSITY		
Date Performed 9/7/04				Jurisdiction		ONIVERSITI			
Analysis Time Period AM				Analysis Yea	r	2014 1	NO BUILD		
Inputs				基基金					
Freeway free-flow speed, SFF (mi/h) 60			Weaving type			Α			
Weaving number of lanes, N 4 Weaving seg length, L (ft) 500		4 500		Volume ratio,			0.3 0.4		
Terrain	•		Leve		Weaving ratio	o, K		0,5	IU
Convei	sions to p	oc/h Unde	r Base C	<u>ondition</u>	1S			I .	T T
(pc/h)	V	PHF	Truck %	RV %	E _T	E _R	fHV	fp	V
Vo1	6330	0.95	5	0	1.5	1.2	0.976	1.00	6829
Vo2	0	0.95	2	0	1.5	1.2	0.990	1.00	0
Vw1	1840	0.95	2	0	1.5	1.2	0.990	1.00	1956
Vw2	1492	0.95	2	0	1.5	1.2	0.990	1.00	1586
Vw				3542	Vnw				6829
V			Anna ann an						10371
Weavir	ng and No	n-Weavin			e de la companya		-331		
			Unconstr			1 147 1		trained	ving (= nw)
· ·		Weaving	(i = w)	Non-Wea	ving (i = nw)		ng (i = w) 15	· · · · · · · · · · · · · · · · · · ·	00 – 11w)
a (Exhibit 2 b (Exhibit 2		<u> </u>					00		00
c (Exhibit 2		<u> </u>					97		30
d (Exhibit 2							80		75
•	sity factor, Wi					9.	48	 	.68
Weaving and speeds, Si (m	Neaving and non-weaving speeds. Si (mith)				19	.77	33	3.66	
Number of	lanes required	for unconstrai	ned operation	, Nw	1.68				
Maximum	number of lanes				1.40	if Nhar > Nh	v (max) const	rained onerat	ion
	☐ If Nw < Nw						The second secon	rameu operat	IVII
	ng Segme		Density,	27.15	a Service,	anu ca	Jacity		
	egment speed,			95.51					
Weaving segment density, D (pc/mi/ln)			30.01						

1,001,1110,0000,1001,000,1000,1000,1000		
Weaving segment speed, S (mi/h)	27.15	
Weaving segment density, D (pc/mi/ln)	95.51	
Level of service, LOS	F	
Capacity of base condition, c _h (pc/h)	5711	
Capacity as a 15-minute flow rate, c (veh/h)	5572	
Capacity as a full-hour volume, c _h (veh/h)	5293	
	1	

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".
- b. Capacity constrained by basic freeway capacity.
- b. Capacity constrained by basic freeway capacity.
 c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowabte weaving flow rate: 2,800 pc/n (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

•			FREEWA	Y WEAV	ING WOR	KSHEE	T			
General	Informat	ion	645334		Site Info	rmation	3 300 60			
Analyst YLM Agency/Company RS&H Date Performed 9/7/04 Analysis Time Period PM			Freeway/Dir of Weaving Seg L Jurisdiction Analysis Year		J Location	DIME ICLAND AND				
Inputs Freeway free-flow speed, SFF (mi/h) Weaving number of lanes, N Weaving seg length, L (ft) Terrain		60 4 500 Leve	Volume ratio, VR Weaving ratio, R		, VR		A 0.3 0.4			
	sions to p	c/h Unde	r Base C	ondition	IS .					
(pc/h)	V	PHF	Truck %	RV %	E _T	ER	fHV	fp	V	
 Vo1	4759	0.95	5	0	1.5	1.2	0.976	1.00	5134	
Vo2	0	0.95	2	0	1.5	1.2	0.990	1.00	0	
Vw1	1678	0.95	2	0	1.5	1.2	0.990	1.00	1783	
Vw2	1164	0.95	2	0	1.5	1.2	0.990	1.00	1237	
Vw				3020	Vnw				5134	
V									8154	
Weavin	g and No	n-Weavin	g Speeds	3			1000			
***			Unconstr					trained		
		Weaving	(i = w)	Non-Weaving (i = nw)			Weaving (i = w)		Non-Weaving (= nw)	
a (Exhibit 24						<u> </u>	.00	0.00 4.00		
<u>b (Exhibit 24</u> c (Exhibit 24							.97	1.30		
d (Exhibit 24						.}	.80	0.75		

Weaving and non-weaving speeds, Si (mi/h) Number of lanes required for unconstrained operation, Nw Maximum number of lanes, Nw (max)

1.71 1.40

If Nw < Nw(max) unconstrained operation

if Nw > Nw (max) constrained operation

1.34

36.39

7.87

20.64

I I I I I I I I I I I I I I I I I I I	peration (max) conditions operation
Weaving Segment Speed, Densi	ty, Level of Service, and Capacity
Weaving segment speed, S (mi/h)	28.37
Weaving segment density, D (pc/mi/ln)	71.85
Level of service, LOS	F
Capacity of base condition, c _b (pc/h)	5660
Capacity as a 15-minute flow rate, c (veh/h)	5522
Capacity as a full-hour volume, c _h (veh/h)	5246

Notes

Weaving intensity factor, Wi

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".
 b. Capacity constrained by basic freeway capacity.
 c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

		1	REEWA	Y WEAV	ING WOR	KSHEE			
General	Informat	ion			Site Info	rmation			
Analyst Agency/Com Date Perforr Analysis Tim	ned	YLM RSH 9/7/04 AM Pe	ak Hour		Freeway/Dir of Travel Weaving Seg Location Jurisdiction Analysis Year		Eastbound Between University and Da 2014 NO BUILD		
Inputs						and the state of		4.0655	
Weaving number of lanes, N 5 Weaving seg length, L (ft) 23 Terrain Le		2300 Leve	ivveaving ratio		, VR		C 0.32 0.14		
Convers	sions to p	c/h Unde	r Base C	ondition	S				
(pc/h)	V	PHF	Truck %	RV %	E _T	ER	fHV	fр	V
Vo1	7350	0.95	5	0	1.5	1.2	0.976	1.00	7930
Vo2	15	0.95	2	0	1.5	1.2	0.990	1.00	15
Vw1	3004	0.95	2	0	1.5	1.2	0.990	1.00	3193
Vw2	472	0.95	2	0	1.5	1.2	0.990	1.00	501
Vw				3694	Vnw				7945
					,			1717	11639
Veavin	g and No	n-Weavin	a Speeds						
			Unconstr				Const	rained	
		Weaving	(i = w)	Non-Wea	ving (i = nw)	Weavir	ıg (i = w)	Non-Weav	ing (= nw)
a (Exhibit 24		0.08			00				
b (Exhibit 24		2.30		6.00					
c (Exhibit 24		0.80			10				
d (Exhibit 24 Weaving intensi		0.60			60 51				
Weaving intensi					.16				
speeds, Si (mi/h)	44.1							
	anes required umber of lanes	for unconstrair	ied operation,	NW	2.51 3.00				
		ر(max) unconst	rained onerati	on		ः if Nw > Nv	v (max) constr	ained operatio	n
		· · · · · · · · · · · · · · · · · · ·			Service,				
	gment speed,			46.80		WIN SAF			
	gment density.			49.74					
Level of serv		··································		F					
Capacity of	base condition	n, c _h (pc/h)		10184					
Capacity as	a 15-minute fl	ow rate, c (veh	/h)	9936					
		ume, c _h (veh/h		9439					
Notes		11 *							
a. Weaving segi b. Capacity cons c. Capacity occu d. Three-lane Ty e. Four-lane Typ f. Capacity cons g. Five-lane Typ h. Tyne B weavi	strained by basic fr urs under constrain pe A segments do pe A segments do trained by maximu pe A segments do no no segments do no	eeway capacity. ed operating condit not operate well at not operate well at v m allowable weavir not operate well at v ot operate well at v ot operate well at v	ions. volume ratios grevolume ratios grea g flow rate: 2,800 olume ratios greate	ater than 0.45. Poter than 0.35. Popch (Type A), 4, er than 0.20. Popch than 0.80. Popch th	oor operations and or operations and s (000 (Type B), 3,500 or operations and s or operations and so	some local queui ome local queuin O (Type C) ome local queuing me local queuing	ng are expected in g are expected in s g are expected in s are expected in se	such cases. such cases. such cases. such cases.	
المان	ng segments do no		uma rollan arania	than 0 EA Door					

			FREEWA	Y WEAV	ING WOF	RKSHEET				
General	Informat	ion			Site Info	rmation			10.50	
Analyst YLM Agency/Company RSH Date Performed 9/7/04 Analysis Time Period PM Peak Hour					Freeway/Dir of Travel Weaving Seg Location Jurisdiction Analysis Year		Eastbound Between University and D 2014 NO BUILD			
Inputs								HILL TO SERVE TO SERVE		
Freeway free-flow speed, SFF (mi/h) 60 Weaving number of lanes, N 5 Weaving seg length, L (ft) 2300 Terrain Leve			el	Weaving type Volume ratio Weaving ratio	, VR		C 0.3 0.7			
Convers	ions to p	c/h Unde	r Base C	ondition	ış	T		T		
(pc/h)	٧	PHF	Truck %	RV %	E _T	ER	fHV	fp	V	
Vo1	5552	0.95	5	0	1.5	1.2	0.976	1.00	5990	
Vo2	15	0.95	2	0	1.5	1.2	0.990	1.00	15	
Vw1	2406	0.95	2	0	1.5	1.2	0.990	1.00	2557	
Vw2	371	0.95	2	0	1.5	1.2	0.990	1.00	394	
Vw				2951	Vnw				6005	
V				20.02.000					8956	
Weavind	and No	n-Weavin	g Speeds							
	Allega and the second of the s		Unconstr				Cons	trained		
	***	Weaving			ving (i = nw)	Weavir	g (i = w)	Non-Wea	ving (= nw)	
a (Exhibit 24		0.08		0.00						
b (Exhibit 24		2.30 0.80		6.00 1.10						
c (Exhibit 24 d (Exhibit 24		0.60		0.60		·				
Weaving intensit		0.59		0.40						
Weaving and no	n-weaving	46.3	9	50.65						
speeds, Si (mi/h) Number of Is		for unconstrair			2.51					
	imber of lanes		ou oporamon,		3.00					
	ਔ If Nw < Nw	(max) uncons	trained operati	ion		if Nw > Nw	ı (max) constr	ained operati	on	
Weaving	g Segmer	nt Speed,	Density,	Level of	f Service,	and Cap	acity			
	ment speed,			49.16		-				
	ment density,	D (pc/mi/ln)		36.43						
Level of serv				E						
	pase condition			9974						
		ow rate, c (vel		9731						
	a full-hour vol	ume, c _h (veh/h)	9244						
b. Capacity cons c. Capacity occu d. Three-lane Ty e. Four-lane Typ f. Capacity const g. Five-lane Typ h. Type B weavi	trained by basic for rs under constrain pe A segments do e A segments do r rained by maximus e A segments do no no segments do no	eeway capacity. ed operating condi not operate well a not operate well at m allowable weavir ot operate well at v	tions. t volume ratios gre volume ratios grea ng flow rate: 2,800 volume ratios great	ater than 0.45. Poter than 0.35. Popc/h (Type A), 4, ter than 0.20. Poer than 0.80. Poo	as using the proced coor operations and or operations and s ,000 (Type B), 3,50 or operations and s or operations and so	some local queui some local queuin 0 (Type C). ome local queuing me local queuing	ng are expected in g are expected in g are expected in s are expected in si	such cases. such cases. such cases.		

Analyst YM Free Agency/Company RSH Wea Date Performed 9/7/04 Juri Analysis Time Period AM Peak Hour Ana Inputs Freeway free-flow speed, SFF (mi/h) 60 Weaving number of lanes, N 5 Volume	1.5 1 1.5 1 1.5 1 1.5 1 7/nw g (i = nw)	avel	fHV 0.976 0.990 0.990 0.990	ound en Davie and NO BUILD B 0.2 0.4 fp 1.00 1.00 1.00 1.00 trained Non-Wear	v 9146 385 1995 1543 9531 13069	
Agency/Company	Veaving Seg Local urisdiction nalysis Year Veaving type olume ratio, VR veaving ratio, R E T 1.5 1 1.5 1 1.5 1 1.5 1 1.5 1	E _R 1.2 1.2 1.2 1.2	fHV 0.976 0.990 0.990 Cons	en Davie and NO BUILD B 0.2 0.4 fp 1.00 1.00 1.00 1.00	v 9146 385 1995 1543 9531 13069	
Inputs Freeway free-flow speed, SFF (mi/h) 60 Weaving number of lanes, N 5 Vol.	Veaving type folume ratio, VR Veaving ratio, R E T	1.2 1.2 1.2 1.2	0.976 0.990 0.990 0.990	0.2 0.4 fp 1.00 1.00 1.00	v 9146 385 1995 1543 9531 13069	
Freeway free-flow speed, SFF (mi/h) Weaving number of lanes, N Weaving seg length, L (ft) Terrain Conversions to pc/h Under Base Conditions (pc/h) V PHF Truck % RV % Vo1 8477 0.95 5 0 Vv2 363 0.95 2 0 Vw1 1877 0.95 2 0 Vw2 1452 0.95 2 0 Vw2 1452 0.95 2 0 Vw V Weaving (i = w) Non-Weaving (i = w) Non-Weaving (i = w) A (Exhibit 24-6) b (Exhibit 24-6) c (Exhibit 24-6) d (Exhibit 24-6) D.50 Weaving intensity factor, Wi Weaving and non-weaving speeds, S (mi/h) Number of lanes required for unconstrained operation, Nw Maximum number of lanes, Nw (max) If Nw < Nw(max) unconstrained operation Weaving segment speed, S (mi/h) Weaving segment speed, S (mi/h) Weaving segment speed, S (mi/h) Weaving segment density, D (pc/mi/ln) 5 Weaving segment density, D (pc/mi/ln) S Weaving segment density, D (pc/mi/ln)	E T 1.5 1 1.5 1 1.5 1 1.5 1 1.5 1 1.5 1 1.5 1 1.5 1 1.5 1 1.5 1 1.5 1 1.5 1 1.5 1 1.5 1 1.5 1 1.5 1 1.5 1 1.5 1 1.5 1 1.5 1 1 1.5 1 1 1.5 1 1 1 1	1.2 1.2 1.2 1.2	0.976 0.990 0.990 0.990	0.2 0.4 fp 1.00 1.00 1.00	v 9146 385 1995 1543 9531 13069	
Conversions to pc/h Under Base Conditions	1.5 1 1.5 1 1.5 1 1.5 1 1.5 1 1.5 1 7nw	1.2 1.2 1.2 1.2	0.976 0.990 0.990 0.990	1.00 1.00 1.00 1.00	9146 385 1995 1543 9531 13069	
(pc/h) V PHF Truck % RV % Vo1 8477 0.95 5 0 Vo2 363 0.95 2 0 Vw1 1877 0.95 2 0 Vw2 1452 0.95 2 0 Vw 3538 Vnv Weaving (i = w) Non-Weaving (i = w) Weaving (i = w) Non-Weaving (i = w) Non-Weaving (i = w) a (Exhibit 24-6) 0.08 0.00 b (Exhibit 24-6) 0.08 0.00 b (Exhibit 24-6) 0.50 0.50 d (Exhibit 24-6) 0.50 0.50 Meaving intensity factor, Wi 0.76 0.50 Weaving and non-weaving speeds, Si (mi/h) 43.49 48.40 Number of lanes required for unconstrained operation, Nw 1.53 Maximum number of lanes, Nw (max) 3.50 Weaving segment speed, S (mi/h) 46.96 Weaving segment density, D (pc/mi/ln) 55.66	1.5 1 1.5 1 1.5 1 1.5 1 1.5 1 1.5 1 7nw	1.2 1.2 1.2 1.2	0.976 0.990 0.990 0.990	1.00 1.00 1.00 1.00	9146 385 1995 1543 9531 13069	
Vo1	1.5 1 1.5 1 1.5 1 1.5 1 1.5 1 1.5 1 7nw	1.2 1.2 1.2 1.2	0.990 0.990 0.990 Cons	1.00 1.00 1.00	385 1995 1543 9531 13069	
Vo2 363 0.95 2 0 Vw1 1877 0.95 2 0 Vw2 1452 0.95 2 0 Weaving Speeds Unconstrained Weaving (i = w) Non-Weaving (inconstrained) Weaving (i = w) Non-Weaving (inconstrained) b (Exhibit 24-6) 0.08 0.00 b (Exhibit 24-6) 0.70 1.00 d (Exhibit 24-6) 0.50 0.50 Weaving intensity factor, Wi 0.76 0.50 Weaving intensity factor, Wi 0.76 0.50 Weaving and non-weaving speeds, Si (mi/h) 43.49 48.40 Number of lanes required for unconstrained operation, Nw 1.53 Maximum number of lanes, Nw (max) 3.50 Weaving Segment Speed, Density, Level of Set Weaving segment density, D (pc/mi/ln) 55.66	1.5 1 1.5 1 1.5 1 1.5 1 1.5 1 1.5 1 1.5 1	1.2	0.990 0.990 Cons	1.00 1.00	1995 1543 9531 13069	
Vw1 1877 0.95 2 0 Vw2 1452 0.95 2 0 Vw 3538 Vnv Weaving (i = w) Non-Weaving (i = w) Weaving (i = w) Non-Weaving (i = w) a (Exhibit 24-6) 0.08 0.00 b (Exhibit 24-6) 2.20 6.00 c (Exhibit 24-6) 0.50 0.50 d (Exhibit 24-6) 0.50 0.50 Weaving intensity factor, Wi 0.76 0.50 Weaving and non-weaving speeds, Si (mi/h) 43.49 48.40 Number of lanes required for unconstrained operation, Nw 1.53 Maximum number of lanes, Nw (max) 3.50 Weaving Segment Speed, S (mi/h) 46.96 Weaving segment density, D (pc/mi/ln) 55.66	1.5 1 1.5 1 'nw	1.2	0.990 Cons	1.00	1543 9531 13069	
Vw2 1452 0.95 2 0 Weaving and Non-Weaving Speeds Unconstrained Weaving (i = w) Non-Weaving (grade) a (Exhibit 24-6) 0.08 0.00 b (Exhibit 24-6) 2.20 6.00 c (Exhibit 24-6) 0.70 1.00 d (Exhibit 24-6) 0.50 0.50 Weaving intensity factor, Wi 0.76 0.50 Weaving and non-weaving speeds, Si (mi/h) 43.49 48.40 Number of lanes required for unconstrained operation, Nw 1.53 Maximum number of lanes, Nw (max) 3.50 Weaving Segment Speed, Density, Level of Set Weaving segment speed, S (mi/h) 46.96 Weaving segment density, D (pc/mi/ln) 55.66	1.5 1 /nw g (i = nw)	1.2	Cons	trained	9531 13069	
Vw V Weaving and Non-Weaving Speeds Unconstrained Weaving (i = w) Non-Weaving (i = w) Non-Weavi	/nw g (i = nw)	Weaving			13069	
V Weaving and Non-Weaving Speeds Unconstrained Weaving (i = w) Non-Weaving (i	g (i = nw)	Weaving				
Unconstrained Unconstrained Weaving (i = w) Non-Weaving (Weaving				
Unconstrained Weaving (i = w) Non-Weaving (i = w) Non-Wea		Weaving			ving (= nw	
Weaving (i = w) Non-Weaving (i = w)		Weaving			ving (= nw	
a (Exhibit 24-6) 0.08 0.00 b (Exhibit 24-6) 2.20 6.00 c (Exhibit 24-6) 0.70 1.00 d (Exhibit 24-6) 0.50 0.50 Weaving intensity factor, Wi 0.76 0.50 Weaving and non-weaving 43.49 48.40 Number of lanes required for unconstrained operation, Nw Maximum number of lanes, Nw (max) 3.50 If Nw < Nw(max) unconstrained operation Weaving Segment Speed, Density, Level of Set Weaving segment speed, S (mi/h) 46.96 Weaving segment density, D (pc/mi/ln) 55.66						
b (Exhibit 24-6) 2.20 6.00 c (Exhibit 24-6) 0.70 1.00 d (Exhibit 24-6) 0.50 0.50 Weaving intensity factor, Wi 0.76 0.50 Weaving and non-weaving speeds, Si (mi/h) 43.49 48.40 Number of lanes required for unconstrained operation, Nw 1.53 Maximum number of lanes, Nw (max) 3.50 If Nw < Nw(max) unconstrained operation Weaving Segment Speed, Density, Level of Sewaring segment speed, S (mi/h) 46.96 Weaving segment density, D (pc/mi/ln) 55.66						
d (Exhibit 24-6) d (Exhibit 24-6) Weaving intensity factor, Wi 0.76 Weaving and non-weaving speeds, Si (mi/h) Number of lanes required for unconstrained operation, Nw 1.53 Maximum number of lanes, Nw (max) 3.50 If Nw < Nw(max) unconstrained operation Weaving Segment Speed, Density, Level of Sewaring segment speed, S (mi/h) Weaving segment density, D (pc/mi/ln) 55.66		··		I		
Weaving and non-weaving speeds, SI (mi/h) Number of lanes required for unconstrained operation, Nw Maximum number of lanes, Nw (max) If Nw < Nw(max) unconstrained operation Weaving Segment Speed, Density, Level of Sewaving segment speed, S (mi/h) Weaving segment density, D (pc/mi/ln) 55.66						
Weaving and non-weaving speeds, SI (mi/h) Number of lanes required for unconstrained operation, Nw 1.53 Maximum number of lanes, Nw (max) 3.50 If Nw < Nw(max) unconstrained operation Weaving Segment Speed, Density, Level of Sewaving segment speed, S (mi/h) 46.96 Weaving segment density, D (pc/mi/ln) 55.66						
speeds, SI (mi/h) Number of lanes required for unconstrained operation, Nw Maximum number of lanes, Nw (max) If Nw < Nw(max) unconstrained operation Weaving Segment Speed, Density, Level of Se Weaving segment speed, S (mi/h) Weaving segment density, D (pc/mi/ln) 55.66						
Maximum number of lanes, Nw (max) ☐ If Nw < Nw(max) unconstrained operation Weaving Segment Speed, Density, Level of Se Weaving segment speed, S (mi/h) Weaving segment density, D (pc/mi/ln) 55.66						
Weaving Segment Speed, Density, Level of Segment speed, S (mi/h) 46.96 Weaving segment density, D (pc/mi/ln) 55.66	.50	: Alou > Alou /	(may) const	rained operati	ion	
Weaving segment speed, S (mi/h) 46.96 Weaving segment density, D (pc/mi/ln) 55.66			·	rained operati	IOII	
Weaving segment density, D (pc/mi/ln) 55.66	De levil Gestagnin	u cape	torty			
7, 00, 11, 11, 11, 11, 11, 11, 11, 11, 11						
Capacity of base condition, c _h (pc/h) 10568						
Capacity as a 15-minute flow rate, c (veh/h) 10310						
Capacity as a full-hour volume, c _h (veh/h) 9794	·					
Notes						
a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using b. Capacity constrained by basic freeway capacity. c. Capacity occurs under constrained operating conditions. d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operate. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operate, Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operate well at volume ratios greater than 0.80. Poor operate well at volume ratios greater than 0.50. Poor operate well at volume ratios greater than 0.50. Poor operate well at volume ratios greater than 0.50. Poor operate well at volume ratios greater than 0.50. Poor operate well at volume ratios greater than 0.50. Poor operate well at volume ratios greater than 0.50. Poor operate well at volume ratios greater than 0.50. Poor operate well at volume ratios greater than 0.50. Poor operate well at volume ratios greater than 0.50. Poor operate well at volume ratios greater than 0.50. Poor operate well at volume ratios greater than 0.50. Poor operate well at volume ratios greater than 0.50.	operations and some operations and some lo	e local queuing local queuing a pe C). local queuing a	g are expected in are expected in are expected in	in such cases. such cases. such cases. such cases.	and a grant and a second and a	

			<u>FREEWA</u>	Y WEAV	ING WOR	Salah Sida and Property of the Property of the Salah S			
Genera	Informat	ion			Site Info	<u>rmation</u>			
Analyst YM Agency/Company RSH Date Performed 9/7/04 Analysis Time Period PM Peak Hour					Freeway/Dir of Weaving Seg Jurisdiction Analysis Yea	Location	Eastbound Between Davie and Turnpike 2014 NO BUILD		
Inputs									
reeway free-flow speed, SFF (mi/h) 60 Veaving number of lanes, N 5 Veaving seg length, L (ft) 1966 Ferrain Leve		el vveaving ratio, R		B 0.29 0.42					
Conver	sions to p	c/h Unde	r Base C	ondition	S	· · · · · · · · · · · · · · · · · · ·	l .	I	<u> </u>
(pc/h)	V	PHF	Truck %	RV %	E _T	E _R	fhv	fp	٧
Vo1	6343	0.95	5	0	1.5	1.2	0.976	1.00	6843
Vo2	287	0.95	2	0	1.5	1.2	0.990	1.00	305
Vw1	1615	0.95	2	0	1.5	1.2	0.990	1.00	1717
Vw2	1150	0.95	2	0	1.5	1.2	0.990	1.00	1222
Vw				2939	Vnw				7148
V									10087
-	g and No	n-Weavin	a Speeds	3					100
			Unconstr	ained			Constrained		
		Weaving	(i = w)	Non-Weaving (i = nw)		Weaving (i = w)		Non-Weaving (= nw	
a (Exhibit 2		0.0		0.00					
b (Exhibit 2		2.2			.00				
c (Exhibit 2 d (Exhibit 2		0.7		1.00 0.50					
U (EXIIIDIL ∠ Weaving intens		0.6		0.50					
Weaving and n speeds, Si (mi/	on-weaving h)	45.2	?6).15				
Number of	lanes required	for unconstrai	ned operation	, Nw	1.61				
	number of lanes			lian.	3.50 r	if No. > No.	w (max) const	rained onerat	ion
	If Nw < Nw							ranica operat	
	g Segme		Deligity,	48.62	in ordinaline	anu vaj	vaony		
	egment speed, egment density			41.50					
Level of se		, D (Portinuit)		E					
	base condition	ı, c _h (pc/h)		10399					
	s a 15-minute f		h/h)	10145					
	s a full-hour vol			9638		_			
- ababit of		, D. (,	<u> </u>					

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".
- b. Capacity constrained by basic freeway capacity.

- b. Capacity constrained by basic freeway capacity.
 c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

			FREEWA	Y WEA	/ING WOF	RKSHEE	T		
Genera	l Informat				Site Info	WANT THAT THE PROPERTY OF THE			
Analyst YLM Agency/Company RSH Date Performed 9/7/04 Analysis Time Period AM				Freeway/Dir Weaving Seg Jurisdiction Analysis Yea	Betwe	595 WB Between Turnpike and Davie 2014 NO BUILD			
Inputs Freeway fre	e-flow speed	See (mi/h)	60				3 1 200		25 sp. 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Freeway free-flow speed, SFF (mi/h) 60 Weaving number of lanes, N 5 Weaving seg length, L (ft) 1550 Terrain Leve			IMPANING FAILO R		B 0.29 0.35				
Conver	sions to p	oc/h Unde	r Base C	ondition	าร				
(pc/h)	V	PHF	Truck %	RV %	E _T	E _R	fHV	fp	٧
Vo1	6492	0.95	5	0	1.5	1.2	0.976	1.00	7004
Vo2	330	0.95	2	0	1.5	1.2	0.990	1.00	350
Vw1	1870	0.95	2	0	1.5	1.2	0.990	1.00	1988
Vw2	995	0.95	2	0	1.5	1.2	0.990	1.00	1057
Vw				3045	Vnw				7354
V						,			10399
Weavin	g and No	n-Weavin	a Speeds	3					
	Weaving and Non-Weaving Speeds Unconstr							trained	
		Weaving	· · ·				ng (i = w)	Non-Wea	ving (= nw)
a (Exhibit 2		0.08			.00				
b (Exhibit 2 c (Exhibit 2		2.20 0.70		6.00					
d (Exhibit 2		0.70		<u> </u>	.50				
Weaving intens		0.75		}	.49				
Weaving and n speeds, Si (mi/		43.5	 5	48	3.48				
Number of I Maximum n	anes required tumber of lanes	s, Nw (max)	·		1.77 3.50	J			
	☑ If Nw < Nw			the Committee of the Control of the			v (max) consti	ained operati	on
		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Density,	T	f Service,	and Cap	acity		
Weaving segment speed, S (mi/h) Weaving segment density, D (pc/mi/ln)				46.93 44.32					
Level of ser		= (porting)		F					
	base condition	, c _h (pc/h)		10158					
	a 15-minute fle		n/h)	9910					
	a full-hour volu			9414					
• •		<u> </u>		I					

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions". b. Capacity constrained by basic freeway capacity.

- C. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).

- g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases. h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases. j. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

		THE STORY OF STREET, AND STREET, STREE	-REEWA	Y WEAV	<u>/ING WOF</u>	proceedings to compare by Calledon Code, 1 to Calledon				
General	Informat	ion			Site Info	rmation				
Analyst YLM Agency/Company RSH Date Performed 9/7/04 Analysis Time Period PM				Freeway/Dir of Travel Weaving Seg Location Jurisdiction Analysis Year		595 WB Between Turnpike and Davie 2014 NO BUILD				
Inputs										
Freeway free-flow speed, SFF (mi/h) 60 Veaving number of lanes, N 5 Veaving seg length, L (ft) 155 Ferrain Lev			el vveaving ratio, R		B 0.29 0.40					
Convers	ions to p	c/h Unde	r Base C	ondition		T		I .	1	
(pc/h)	V	PHF	Truck %	RV %	E _T	ER	fHV	fp	٧	
Vo1	8158	0.95	5	0	1.5	1.2	0.976	1.00	8802	
Vo2	535	0.95	2	0	1.5	1.2	0.990	1.00	568	
Vw1	2152	0.95	2	0	1.5	1.2	0.990	1.00	2287	
Vw2	1410	0.95	2	0	1,5	1.2	0.990	1.00	1499	
Vw				3786	Vnw				9370	
V						J			13156	
	and Nor	ı-Weavin	a Speeds						0	
Weaving and Non-Weaving Speeds Unconstr						Cons	trained	***************************************		
		Weaving	(i = w)			Weavir	ing (i = w) Non-Weavin		ving (= nw)	
a (Exhibit 24-		0.08		0.00				·		
b (Exhibit 24-		2.20		6.00						
Exhibit 24-		0.70								
d (Exhibit 24- Weaving Intensity		0.50 0.88			.50		w == n ·			
Veaving intensity Veaving and nor				0.61						
speeds, Si (mi/h)		41.62			5.06					
	nes required f mber of lanes	or unconstrain	ed operation,	Nw	1.79 3.50					
	-	max) unconst	rained anerati	ion		if Nhu > Nh	/ (max) constr	ained onerati	ion	
					f Service,			anca operac	OII	
	ment speed, S			44.69		aria vap	uoity			
······································	ment density,			58.88						
_evel of servi				50.00 F						
	ase condition,	c _h (pc/h)		10200	*** ***					
		w rate, c (veh	/h)	9951						
		me, c _h (veh/h		9453						
47		1 11 7				and ale year Artistic supplication				

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions". b. Capacity constrained by basic freeway capacity.

- b. Capacity constrained by basic freeway capacity.
 c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

		<u>.</u>	-DETAIN	VACAV	INC WOD	VCUEET	*			
General I	nformati	MAN CONTROL OF THE PARTY OF THE	REEWA	Y WEAV	ING WOR	A STATE OF THE PROPERTY OF THE PARTY OF THE				
Analyst YLM Agency/Company RS&H Date Performed 9/7/04 Analysis Time Period AM				Freeway/Dir of Travel Weaving Seg Location Jurisdiction Analysis Year		WESTBOUND I-595 UNIVERSITY AND PINE ISLAND 2014 NO BUILD				
Inputs				300000000000000000000000000000000000000						
Freeway free-flow speed, SFF (mi/h) 60 Weaving number of lanes, N 4 Weaving seg length, L (ft) 800 Terrain Leve			el	Weaving type Volume ratio, VR Weaving ratio, R		B 0.28 0.33				
Conversi	ons to p	c/h Unde	r Base C	ondition	ıs	and the state of	95349000	Γ		
(pc/h)	V	PHF	Truck %	RV %	E _T	E _R	fHV	fp	V	
Vo1	5706	0.95	5	0	1.5	1.2	0.976	1.00	6156	
Vo2	0	0.95	2	0	1.5	1.2	0.990	1.00	0	
Vw1	1526	0.95	2	0	1.5	1.2	0.990	1.00	1622	
Vw2	747	0,95	2	0	1.5	1.2	0.990	1.00	794	
√w				2416	Vnw				6156	
V I									8572	
Weaving	and Nor	ı-Weavin	g Speeds							
	Weaving and Non-Weaving Speeds Unconstra			ained				trained		
		Weaving		V\			ng (i = w)	Non-Wea	ving (= nw)	
a (Exhibit 24-6		0.08		0.00				<u> </u>		
b (Exhibit 24-6		2.20 0.70		6.00 1.00						
c (Exhibit 24-6 d (Exhibit 24-6		0.70			.50					
Weaving intensity		1,05			.67					
Weaving and non-		39.4	1	44	1.90					
speeds, Si (mi/h) Number of lan Maximum nun	nber of lanes				1.91 3.50	if Nw > Nv	v (max) constr	ained operati	on	
					f Service,		AND THE RESIDENCE OF THE PARTY	1	na rata da Santa	
				43.20						
Weaving segment speed, S (mi/h) Weaving segment density, D (pc/mi/ln)				49.60						
Level of service	ce, LOS			F						
Capacity of ba		-		7605						
Capacity as a				7420					· · · · · · · · ·	
Capacity as a	full-hour volu	ıme, c _h (veh/h)	7049						

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".
 b. Capacity constrained by basic freeway capacity.
 c. Capacity occurs under constrained operating conditions.
 d. Three-tane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

		F	REEWA	Y WEAV	ING WOR	KSHEE1			
General	Informat	ion			Site Information				
Analyst YLM Agency/Company RS&H Date Performed 9/7/04 Analysis Time Period PM				Freeway/Dir of Travel Weaving Seg Location Jurisdiction Analysis Year		WESTBOUND I-595 UNIVERSITY AND PINE ISLAND 2014 NO BUILD			
Inputs					100000000000000000000000000000000000000			e a production	
Freeway free-flow speed, SFF (mi/h) 60 Weaving number of lanes, N 4 Weaving seg length, L (ft) 800 Terrain Leve			el	Weaving type Volume ratio, VR Weaving ratio, R			B 0.27 0.32		
Convers	sions to p	ic/h Unde	r Base C	ondition) S				i —
(pc/h)	٧	PHF	Truck %	RV %	E _T	E _R	fHV	fp	V
Vo1	7411	0.95	5	0	1.5	1.2	0.976	1.00	7996
Vo2	0	0.95	2	0	1.5	1.2	0.990	1.00	0
Vw1	1930	0.95	2	0	1.5	1.2	0.990	1.00	2051
Vw2	920	0.95	2	0	1.5	1.2	0.990	1.00	978
Vw				3029	Vnw	1			7996
v									11025
Weavin	Weaving and Non-Weaving Speeds								
			Unconstr	ained			Constrained		
		Weaving	(i = w)	Non-Weaving (i = nw)		Weavir	ng (i = w)	Non-Wea	ving (= nw)
a (Exhibit 24		0.08		0.00					
b (Exhibit 24		2.20 0.70		6.00 1.00					····
c (Exhibit 24 d (Exhibit 24		0.70			.50			<u> </u>	
Weaving intens		1.24			.84				
Weaving and no	on-weaving	37.3		42	2.23		····		
Maximum n	anes required umber of lanes	for unconstraii s, Nw (max)	ned operation,		1.94 3.50	if Nw > N	พ (max) const	rained operati	on
Weavin	g Segmei	nt Speed,	Density,	Level o	f Service,	and Cap	pacity		
Weaving Segment Speed, Density, Weaving segment speed, S (mi/h)				40.77					
Weaving segment density, D (pc/mi/ln)				67.60					
Level of ser				F					
	base condition			7656					
	a 15-minute fl		-	7469					<u> </u>
Capacity as a full-hour volume, c _h (veh/h)				7096				man on the second of the secon	

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".
- b. Capacity constrained by basic freeway capacity.
 c. Capacity occurs under constrained operating conditions.
- c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

			REEWA	Y WEAV	ING WOR			The second second		
General	Informati	ion			Site Info	rmation				
	Agency/Company RS&H				Freeway/Dir of Travel Weaving Seg Location Jurisdiction		I-595 WESTBOUND BETWEEN PINE AND NOB HILL			
	Analysis Time Period AM				Analysis Year	r	2014 NO BUILD			
Inputs	_				T					
Weaving nu Weaving se Terrain	reeway free-flow speed, SFF (mi/h) 60 Veaving number of lanes, N 4 Veaving seg length, L (ft) 1080 Ferrain Leve		el veaving ratio, K		A 0.27 0.50					
Conver	sions to p	ic/h Unde	r Base C	onditior	IS			Γ	TELL TELEVISION	
(pc/h)	V	PHF	Truck %	RV %	E _T	E _R _	fHV	fp	V	
Vo1	5445	0.95	5	0	1.5	1.2	0.976	1.00	5874	
Vo2	0	0.90	0	0	1.5	1.2	1.000	1.00	0	
Vw1	1008	0.95	2	0	1.5	1.2	0,990	1.00	1071	
Vw2	1002	0.95	2	0	1.5	1.2	0.990	1.00	1065	
Vw				2136	Vnw		40.00		5874	
V									8010	
Weavin	g and No	n-Weavin	g Speeds	3		1.00				
			Unconstr	ained				strained	· 4 / ·	
		Weaving	(i = w)	Non-Weaving (i = nw) Weaving			ng (i = w) Non-Weaving (= nv 15 0.00			
a (Exhibit 2								.00 4.00		
b (Exhibit 2- c (Exhibit 2-					The state of the s		97	1.30		
d (Exhibit 2							0.80		0.75	
Weaving intens						3.	.51 0.54		.54	
Weaving and n						26	3.08 47.57			
Maximum n	lanes required number of lanes	s, Nw (max)			1.50 1.40				llan.	
	□ If Nw < Nw			and a second of the second of the second of the			w (max) const	rained opera	IIOH	
	g Segmei		Density							
	egment speed,			39.00 51.35						
Weaving se	egment density	, ט (pc/mi/in)	<u></u>	51.30 F						
	base condition	o c. (nc/h)		6965						
1 '	s a 15-minute f	~	h/h)	6795						
	s a full-hour vol			6455						
capacity as	a luli-iloui Voi	MILIO OF (ACIN	7	10700		A STATE OF THE PARTY OF THE PAR				

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions". a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions b. Capacity constrained by basic freeway capacity.
 c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/n (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

			<u>FREEWA</u>	Y WEAV	ING WOF		AAA GAMAAN WAXING MINING MININ	¥	
Genera	<u>l Informat</u>	ion			Site Info	rmation			
Analyst Agency/Cor Date Perfor Analysis Tir	med	YLM RS&H 9/7/04 PM			Freeway/Dir Weaving Seg Jurisdiction Analysis Yea	g Location	BETV	WESTBOUNI VEEN PINE A NO BUILD	
Inputs	i i								
Weaving nu Weaving se Terrain	e-flow speed, amber of lanes, g length, L (ft)	N	60 4 108 Lev	el	Weaving type Volume ratio Weaving ratio	, VR		A 0.2 0.4	
Conver	sions to p	oc/h Unde	r Base C	<u>onditior</u>			T T	T	
(pc/h)	V	PHF	Truck %	RV %	E _T	ER	fHV	fp	٧
Vo1	7038	0.95	5	0	1.5	1.2	0.976	1.00	7593
Vo2	0	0.90	0	0	1.5	1.2	1.000	1.00	0
Vw1	1350	0.95	2	0	1.5	1.2	0.990	1.00	1435
Vw2	1293	0.95	2	0	1.5	1.2	0.990	1.00	1374
Vw				2809	Vnw			945 6 6	7593
V						T			10402
	g and No	n-Weavin	a Speeds	8					
1.54.2.50.1			Unconstr				Cons	strained	
		Weaving			ving (i = nw)	Weavir	ng (i = w)	Non-Wea	ving (= nw)
a (Exhibit 2	4-6)			[15		00
b (Exhibit 2						ļ	00		00
c (Exhibit 2						<u> </u>	97		30
d (Exhibit 2							80 55		75 76
Weaving intens Weaving and n									
speeds, Si (mi/	h)	<u> </u>		<u> </u>		24	.00	43	.41
	anes required umber of lanes		ned operation,	NW	1.58 1.40				
l	umber or lanes If Nw < Nw		trained aperat	ion		ℤif Nu√ > Nu	u (may) const	rained operati	on
		<u>, , , , , , , , , , , , , , , , , , , </u>			f Service,		Commence to Automorphism Service Commence Commen	ramed operati	011
The state of the s	gment speed,		Deliaity,	35.63	i Delvice,	actino accept	out,		
	gment density			72.99					
Level of ser	<u> </u>) /h		F					
	base condition	i, c _h (pc/h)		6944					
	a 15-minute fl		n/h)	6775					
	a full-hour vol			6436					
1 7		, 11,7	,	I			The same against the same		

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".
 b. Capacity constrained by basic freeway capacity.
 c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowabte weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
 ii. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

		F	REEWA	Y WEAV	ING WOR	KSHEET			
General	Informat	ion			Site Info	rmation	101		
Analyst Agency/Com Date Perform Analysis Tim	ned	YLM RS&H 9/7/04 AM			Weaving Seg	Location	BETW HIATU	VESTBOUND EEN NOB HIL S NO BUILD	
Inputs						40.45			
Freeway free Weaving nun Weaving seg Terrain	e-flow speed, S mber of lanes, g length, L (ft)	N	Leve	el	Volume ratio, Weaving ratio	VR		A 0.1 0.3	
Convers	ions to p	c/h Unde	r Base C	ondition				Γ	
(pc/h)	٧	PHF	Truck %	RV %	E _T	ER	fhv	fp	٧
Vo1	5656	0.95	5	0	1.5	1.2	0.976	1.00	6102
Vo2	0	0.90	0	0	1.00	0			
Vw1	791	0.95	Freeway/Dir of Travel Weaving Seg Location Freeway/Dir of Travel Freeway/Dir of Travelow/Dir of Travelow/Dir of Travelow/Dir of Travelow/Dir o					1.00	840
Vw2	513	0.95	2	0	1.5	1.2	0.990	1.00	545
Vw				1385	Vnw				6102
V									7487
	and No	n-Weavin	a Speeds		1				71-2
3.2.2.3.3.3.							Cons	trained	
		Weaving	(i = w)			Weavir	g (i = w)	Non-Weav	/ing (= nw)
a (Exhibit 24				1		<u> </u>			
b (Exhibit 24	Und Weaving (i = w) (hibit 24-6) 0.15 (hibit 24-6) 2.20 (hibit 24-6) 0.97 (hibit 24-6) 0.80								
		·		<u> </u>				<u> </u>	
Weaving intensit									
Weaving and no	n-weaving	 		44	.47				
speeds, Si (mi/h)	nes required i				1.17	<u> </u>			
Maximum nu	imber of lanes	s, Nw (max)	ou operation,						
								ained operati	on
Weaving	g Segmen	nt Speed,	Density,	Level o	f Service,	and Cap	acity		
	gment speed,			42.82					
	gment density,	D (pc/mi/ln)		· · · · · · · · · · · · · · · · · · ·				<u></u>	
Level of serv								····	
	base condition		# 1					- u - u - u - u - u - u - u - u - u - u	
	a tuli-hour voli	ume, c _h (veh/h)	1 6860				115	
b. Capacity cons c. Capacity occu d. Three-lane Ty e. Four-lane Typ f. Capacity cons g. Five-lane Typ	strained by basic from the strained by basic from the strainer of the strained by maximute A segments do not seements do not s	eeway capacity. ed operating condi not operate well a not operate well at m allowable weavi not operate well at v	tions. t volume ratios gre volume ratios grea ng flow rate: 2,800 volume ratios grea volume ratios great	eater than 0.45. Foter than 0.35. Popper than 0.35. Popper than 0.20. Popper than 0.80. Popper than 0.	Poor operations and so or operations and s ,000 (Type B), 3,50 or operations and so operations and so	some local queu some local queuir 0 (Type C). ome local queuin ome local queuin	ing are expected in g are expected in g are expected in a are expected in s	n such cases. such cases. such cases. uch cases.	
ji. Type C weavin TM	ig segments do no	coperate well at vo	Copyright © 20	003 University	of Florida, All R	ights Reserve	d	or, vaccar	

		and the second s	REEWA	Y WEAV	ING WOR				
General	Informat	ion			Site Info	rmation	100		
Analyst Agency/Con		YLM RS&H 9/7/04			Freeway/Dir o			VESTBOUNI EEN NOB HI S	
Date Perfori Analysis Tin		9///04 PM			Jurisdiction Analysis Yea	r	2014 N	IO BUILD	
Inputs					1				
Weaving nu Weaving se Terrain	mber of lanes, g length, L (ft)	N	60 4 100 Leve	el	Weaving type Volume ratio Weaving ratio	, VR		A 0.: 0.:	
Conver	Its		т Base С	ondition	ıs	T	ı —		1
(pc/h)	1		Truck %	RV %	E _T	ER	fHV	fp	V
<u></u>	ay free-flow speed, SFF (mi/h) ng number of lanes, N ng seg length, L (ft) versions to pc/h Under Bas V PHF Truck 7385 0.95 5 0 0.90 0 1003 0.95 2 608 0.95 2 608 0.95 2 weaving and Non-Weaving Speed Weaving (i = w) nibit 24-6) 0.15 nibit 24-6) 0.97 nibit 24-6) 0.80 g intensity factor, Wi 1.64 g and non-weaving 33.96 ver of lanes required for unconstrained open num number of lanes, Nw (max) If Nw < Nw(max) unconstrained open num number of lanes, Nw (max)		5	0	1.5	1.2	0.976	1.00	7968
Vo2	versions to pc/h Under Bas V PHF Truck 7385 0.95 5 0 0.90 0 1003 0.95 2 608 0.95 2 608 0.95 2 wing and Non-Weaving Special Spec			0	1.5	1.2	1.000	1.00	0
Vw1		0.95	2	0	1.5	1.2	0.990	1.00	1066
Vw2		0.95	2	0	1.5	1.2	0.990	1.00	646
Vw	-			1712	Vnw			4.0	7968
V							4.0		9680
*	a and No	n Wesvin	a Speeds	2			Latti e		
AAGGAIII	y and no	 	Unconstr				Cons	trained	
		Weaving			ving (i = nw)	Weavi	ng (i = w)	Non-Wea	aving (= nw)
a (Exhibit 2	4-6)	0.15	5		.00				
b (Exhibit 2	4-6)				.00	ļ			<u></u>
c (Exhibit 2					.30 .75			<u> </u>	
					.75 .95				
	on-weaving				0,69				
Number of	lanes required		ned operation	, Nw	1.18				
					1.40	:¢ N ≤ NI	u (mau) canat	rainad anarai	lion
							w (max) const	allieu opera	1011
	Veaving Segment Speed, Densite eaving segment speed, S (mi/h)				T Service	and Cal	oacity		
				39.31 61.55					
		, ט (pc/m/m) ט (F F					
	aving segment density, D (pc/mi/ln) rel of service, LOS pacity of base condition, c _b (pc/h)								
	pacity of base condition, c _b (pc/h)				·				
	pacity as a 15-minute flow rate, c (veh/h)								
	city as a 15-minute flow rate, c (veh/h) city as a full-hour volume, c _h (veh/h) tes			6906					

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".
 b. Capacity constrained by basic freeway capacity.
 c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

					1110 11100	VOLUETT.	•		
	1.6		REEWA	Y WEAV	ING WOR	Contract of the Contract of th			
Analyst Agency/Com Date Perforn Analysis Tim	ned	YLM RS&H 9/7/04 AM			Freeway/Dir of Weaving Seg Jurisdiction Analysis Yea	of Travel Location	BETW FLAMI	WESTBOUND EEN HIATUS NGO NO BUILD	
Inputs		100 000							
Freeway free Weaving nur Weaving seg Terrain	e-flow speed, S mber of lanes, glength, L (ft)	N	60 4 1050 Leve	el	Weaving type Volume ratio, Weaving ratio	VR		A 0.2 0.3	
Convers	sions to p	c/h Unde	r Base C	ondition	18	l	_	l .	
(pc/h)	٧	PHF	Truck %	RV %	E _T	E _R	fHV	fp	V
Vo1	5078	0.95	5	0	1.5	1.2	0.976	1.00	5478
Vo2	0	0.90	0	0	1.5	1.2	1.000	1.00	0
Vw1	1091	0.95	2	0	1.5	1.2	0.990	1.00	1159
Vw2	536	0.95	2	0	1.5	1.2	0.990	1.00	569
Vw	536 0.95 2 Ving and Non-Weaving Spec			1728	Vnw				5478
V									7206
	n and No	n-Weavin	a Speeds	3					
100000000000000000000000000000000000000			Unconstr					trained	
	_	Weaving	(i = w)		aving (i = nw)	' Weavir	ng (i = w)	Non-Wea	ving (= nw)
a (Exhibit 24	1-6)	0.15			0.00	<u></u>		<u> </u>	
b (Exhibit 24		2.20			1.00	<u>-</u> -		<u> </u>	
c (Exhibit 24		0.97			.30).75	<u> </u>			
d (Exhibit 24 Weaving intensi		0.80).77				
Weaving intensi		36.5			3.32				
speeds, Si (mi/t Number of I Maximum n	n) anes required umber of lanes	for unconstrails, Nw (max)	ned operation	, Nw	1.38 1.40			<u></u>	
	☑ If Nw < Nw	v(max) uncons	trained opera	tion			v (max) const	rained operat	IOU
Weavin	g Segme	nt Speed,	Density.	Level c	of Service.	and Cap	DACITY		
Weaving se	gment speed,	S (mi/h)		41.46					
		, D (pc/mi/ln)		43.45 F			·		
		(n-/h)							
			L (L)	7107 6934					
	aving Segment Speed, Densit ving segment speed, S (mi/h) ving segment density, D (pc/mi/ln) I of service, LOS acity of base condition, c _b (pc/h) acity as a 15-minute flow rate, c (veh/h) acity as a full-hour volume, c _h (veh/h)					······			
Capacity as	a full-hour vo	iume, c _h (veh/i	1)	6587					

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".
 b. Capacity constrained by basic freeway capacity.

- b. Capacity constrained by basic freeway capacity.
 c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
 il. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

			FREEWA			The second secon			
<u>General</u>	Informat	ion			Site Info			VEOTDO! INC	
Analyst		YLM			Freeway/Dir	of Travel		VESTBOUNE EEN HIATUS	
Agency/Com		RS&H			Weaving Seg	Location	FLAMI		·) ((42
Date Perform		9/7/04			Jurisdiction				
Analysis Tim	e Period	PM			Analysis Yea	Γ	2014 N	IO BUILD	
nputs									
	e-flow speed,		60		Weaving type	Э		Α	
	mber of lanes,	N	4 105	n	Volume ratio,	, VR		0.2	
vveaving se Terrain	g length, L (ft)		Leve		Weaving ratio	o, R		0.3	52
	sions to r	oc/h Unde	r Base C	ondition	ıs	ukit e ne			
(pc/h)	V	PHF	Truck %	RV %	E _T	E _R	fHV	fp	V
Vo1	6613	0.95	5	0	1.5	1.2	0.976	1.00	7135
Vo2	0	0.90	0	0	1.5	1.2	1.000	1.00	0
Vw1	1380	0.95	2	0	1.5	1.2	0.990	1.00	1467
Vw2	660	0.95	2	0	1.5	1.2	0.990	1.00	701
Vw	000			2168	Vnw				7135
V									9303
•	a and Na	n-Weavin	a Speeds			1000	1000		7
AAGSAIII	y america	H=MACANIT	Unconstr	ained			Cons	trained	
		Weaving			ving (i = nw)	Weavir	ng (i = w)		ving (= nw)
a (Exhibit 24	1-6)						15		.00
b (Exhibit 24	1-6)						00		.00
c (Exhibit 24	l-6)	ļ					97		.30 .75
d (Exhibit 24							.80 .92		.60
Weaving intens Weaving and no				-		 			6,32
speeds, Si (mi/i	1)					20	5.17	40),UZ
		for unconstrai	ned operation	, Nw	1.41 1.40				
	umber of lane	s, ww (max) v(max) uncons	trained energy	lion	_	if Nw > N	w (max) consti	rained operat	ion
	I IT INW < INV	v(max) uncons	Donoite	Lovele	f Service.			<u> </u>	
vveavin	g Segme gment speed,	o (mi/h)	, Density,	38.73	I Selvice,	and ve	Jaoicy		
	gment speed, gment density			60.04					
Level of ser		, D (po///m///		F					
	base condition	n, c _h (pc/h)		7150					
			h/h)	6976					
	pacity as a 15-minute flow rate, c (veh/h) pacity as a full-hour volume, c _h (veh/h)								
Capacity de	acity as a 15-minute flow rate, c (ven/h) acity as a full-hour volume, c _h (veh/h) tes								

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".
- b. Capacity constrained by basic freeway capacity.
- b. Capacity constrained by basic freeway capacity.
 c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pch (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

		and a second property of the second party of t	-KEEWA	Y WEAV	ING WOR						
Genera	Informat	ion			Site Info						
A L £		YLM			Freeway/Dir o	of Travel	I-595 \		1.014		
Analyst Agency/Cor	nnanv	RS&H			Weaving Seg	Location	Betwe 136th	en Flamingo	and Svv		
Date Perfori		9/7/04			Jurisdiction		13001				
Analysis Tin	ne Period	AM Pe	ak Period		Analysis Year	•	2014 1	NO BUILD			
nnuta					<u> </u>						
Inputs	e-flow speed, S	See (mi/h)	60					В			
	mber of lanes,		4	Weaving type Volume ratio, VR				о.2 0.2	98		
	g length, L (ft)	••	1250	0	Weaving ratio			0.3			
Terrain			Leve			7111					
Conver	sions to p	c/h Unde	r Base C				I	1 -			
(pc/h)	V	PHF	Truck %	RV %	E _T	E _R	fHV	fp	V		
Vo1	4370	0.95	5	0	1.5	1.2	0.976	1.00	4714		
Vo2	0	0.95	2	0	1.5	1.2	0.990	1.00	0		
Vw1	1244	0.95	2	0	1.5	1.2	0.990	1.00	1322		
Vw2					1,5	1.2	0.990	1.00	557		
Vw					Vnw				4714		
V									6593		
	g and No	n-Weavin	a Speeds	3				100			
	<u> </u>		Unconstr				Cons	trained			
		Weaving	(i = w)	Non-Wea	iving (i = nw)	Weavii	ng (i = w)	Non-Wea	ving (= nw)		
a (Exhibit 2	4-6)	0.08	3		.00						
b (Exhibit 2	4-6)	2.20)		.00						
c (Exhibit 2	4-6)	0.70			.00				<u> </u>		
d (Exhibit 2		0.50			0.50						
Weaving intens		0.70		 	1.42						
Weaving and n speeds, Si (mi/		44.3	8	50	0.22			<u> </u>			
Number of	lanes required		ned operation,	, Nw	1.47						
	umber of lanes			_	3.50	tens in a	()		ion		
455.00000000000000000000000000000000000	☑ If Nw < Nw	ı(max) uncons	trained operat	ion			w (max) const	raineo operat	IUH		
			Density,	Level o	t Service,	and Gal	DACITY				
	eaving Segment Speed, Densite aving segment speed, S (mi/h) aving segment density, D (pc/mi/ln)										
	aving segment density, D (pc/mi/ln) rel of service, LOS							<u> </u>			
	el of service, LOS				7984						
	pacity of base condition, c _b (pc/h)							·			
				7789							
Capacity as	pacity as a 15-minute flow rate, c (veh/h) pacity as a full-hour volume, c _h (veh/h)			7400		**************************************					

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, 'Ramps and Ramp Junctions'.

- la. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions b. Capacity constrained by basic freeway capacity.

 c. Capacity occurs under constrained operating conditions.

 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.

 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.

 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).

 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.

 h. Type B weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

o der youngegon glave Marsini - Frida Color	and the second section of the section o		REEWA	<u>Y WEAV</u>	ING WOR				
General	<u>Inform</u> ati	on :			Site Info				
Analyst		YLM			Freeway/Dir	of Travel	1-595 V	VB en Flamingo a	and SW
Agency/Com		RS&H			Weaving Seg	Location	136th	on i taningo	411a O11
Date Perform		9/7/04 DM Do	ak Period		Jurisdiction				
Analysis Tim	e Period	PIVLPE	ak Penou		Analysis Yea	r	2014 N	IO BUILD	
Inputs									
			60 4		Weaving type			В	_
		IN	125	0	Volume ratio,			0.2 0.2	
Terrain			Leve		Weaving ration	υ, κ		0,2	
Convers	ions to p	c/h Unde	r Base C	ondition		-			T T
(pc/h)	V	PHF	Truck %	RV %	E _T	E _R	fHV	fp	V
Vo1	5702	0.95	5	0	1.5	1.2	0.976	1.00	6152
Vo2	0	0.95	2	0	1.5	1.2	0.990	1.00	0
Vw1	ray free-flow speed, SFF (mi/h) ing number of lanes, N ing seg length, L (ft) n versions to pc/h Under Base V PHF Truck (5702 0.95 5 0 0.95 2 1571 0.95 2 1571 0.95 2 593 0.95 2 weaving and Non-Weaving Speed Uncontinued to the second of the seco		2	0	1.5	1.2	0.990	1.00	1670
Vw2	ng number of lanes, N ng seg length, L (ft) versions to pc/h Under Basic V PHF Truck 5702 0.95 5 0 0.95 2 1571 0.95 2 1571 0.95 2 593 0.95 2 weight and Non-Weaving Spending (i = w) nibit 24-6) 0.08 nibit 24-6) 0.70 nibit 24-6) 0.50 g intensity factor, Wi g and non-weaving si (m/h) ver of lanes required for unconstrained operation number of lanes, Nw (max) If Nw < Nw(max) unconstrained operations.		2	0	1.5	1.2	0.990	1.00	630
Vw		19.05	1000	2300	Vnw				6152
V									8452
Weaving	and No	n-Weavin	g Speeds	3					
			Unconstr	ained				trained	
				 	ving (i = nw)	Weavir	ıg (i = w)	Non-Wea	ving (= nw)
a (Exhibit 24				<u> </u>	.00		<u></u>		-
					.00		1		
d (Exhibit 24					.50				
				0	.51				
Weaving and no speeds, Si (mi/h)		42.5	2	48	3.19				
		for unconstrain	ned operation	, Nw	1.45				
					3.50				·
	12.000	<u> </u>					v (max) consti	ained operati	On
			Density,		f Service,	and Cap	acity		
			<u></u>	46.50 45.44					
vveaving seq Level of serv		n (beuniun)		F					
		. c. (pc/h)		8074					
			h/h)	7877					
	city of base condition, c _b (pc/h) Sity as a 15-minute flow rate, c (veh/h) Sity as a full-hour volume, c _h (veh/h)								
- where it an				7483					

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".
- b. Capacity constrained by basic freeway capacity.

- b. Capacity constrained by basic freeway capacity.
 c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

TURNPIKE

90000000 10000 http://		halanna kantan ka Kili Kili Kalanda da Kili	FREEWA'	Y WEA\	ING WOR	AND THE RESIDENCE OF THE PARTY	Γ		
Genera	Informat	ion			Site Info	rmation			
Analyst Agency/Cor Date Perfor Analysis Tin	ned	YLM RS&H 9/7/04 AM			Freeway/Dir Weaving Seg Jurisdiction Analysis Yea	g Location	FROM	NPIKE SB M I-595 No Build	
Inputs	reeway free-flow speed, SFF (mi/h) 45								
Freeway fre Weaving nu	e-flow speed, mber of lanes, g length, L (ft)		45 4 650 Leve)	Weaving type Volume ratio Weaving ratio	, VR		A 0.4 0.4	
Conver	sions to p	c/h Unde	r Base C	ondition)S				
(pc/h)	V	PHF	Truck %	RV %	E _T	ER	fHV	fp	V
Vo1	1440	0.95	2	0	1.5	1.2	0.990	1.00	1530
Vo2	1020	0.95	2	0	1.5	1.2	0.990	1.00	1084
Vw1	1220	0.95	2	0	1.5	1.2	0.990	1.00	1297
Vw2	1170	0.95	2	0	1.5	1.2	0.990	1.00	1243
Vw				2540	Vnw				2614
V									5154
Weavin	and No	n-Weavin	a Speeds						
10.000			Unconstra				Cons	strained	
		Weaving			ving (i = nw)	Weavir	ıg (i = w)	Non-Wea	ving (= nw)
a (Exhibit 24	-6)						15		00
b (Exhibit 24							00		00
c (Exhibit 24						0.			30
d (Exhibit 24 Weaving intensi							80 94		75 85
Weaving and no									.90
speeds, Si (mi/t)			· ·	0.45	20	.90	33	.90
	anes required umber of lanes	for unconstrair	ned operation,	NW	2.15 1.40				
		, rvw (max <i>)</i> (max) unconst	rained oneration	on		if Nw > Nv	v (max) consti	rained operati	on
		· · ·			f Service,	. I I		and operati	
CONTRACTOR AND ADDRESS OF THE PARTY OF THE P	ment speed,			25.94					
	gment density,			49.67					
Level of ser				F					
Capacity of	base condition	, c _b (pc/h)		5635					
		ow rate, c (veh	ı/h)	5579					
		ume, c _h (veh/h		5300					
Notes									

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".
- b. Capacity constrained by basic freeway capacity.
- c. Capacity occurs under constrained operating conditions.
- d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases. e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases. f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).

- g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
- h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.

 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

a		STATE OF THE PARTY	RECAAN	I VVEAV	ING WOR		ı		
General I	ntormat	ion			Site Info	rmation			
Analyst Agency/Comp Date Performe	ed	YLM RS&H 9/7/04			Freeway/Dir of Weaving Seg Jurisdiction Analysis Yea	Location	FRON	IPIKE SB /I I-595 No Build	
Analysis Time	Periou	PM			Allalysis Tea	I	2014		
Inputs					10.6 (19.6)				
Freeway free-t Weaving numb Weaving seg l Terrain	per of lanes, ength, L (ft)	N '	45 4 650 Leve	9	Weaving type Volume ratio, Weaving ratio	, VR		A 0.4 0.4	
Conversi	ons to p	oc/h Unde	r Base C	ondition	IS				
(pc/h)	V	PHF	Truck %	RV %	E _T	ER	fHV	fp	V
Vo1	2100	0.95	2	0	1.5	1.2	0.990	1.00	2232
Vo2	1002	0.95	2	0	1.5	1.2	0.990	1.00	1065
Vw1	1350	0.95	2	0	1.5	1.2	0.990	1.00	1435
Vw2	900	0.95	2	0	1.5	1.2	0.990	1.00	956
Vw				2391	Vnw				3297
v									5688
Weaving	and No	n-Weavin	a Speeds						
			Unconstr		NAME OF THE OWNER OWNER OF THE OWNER OWNE		Cons	trained	
		Weaving	(i = w)	Non-Wea	ving (i = nw)		ng (i = w)		ving (= nw)
a (Exhibit 24-6							0.15		00
b (Exhibit 24-6							00		00
c (Exhibit 24-6	·						97		30
d (Exhibit 24-6							80		75 70
Weaving intensity f Weaving and non-v							87		79
speeds, Si (mi/h)		<u> </u>	1 "	<u> </u>	4.00	20	.96	34	.51
Number of lan Maximum num		for unconstrair	ed operation,	NW	1.96 1.40				
		, ivw (max) (max) unconst	rained onerati	ion		∰ifNw>N∪	v (max) consti	rained operati	on
				***************************************	Service,		5.005,000,000,000,000,000	and operati	
A STANDARD CONTRACTOR OF THE PROPERTY OF THE P				27.14					
	eaving segment speed, S (mi/h) eaving segment density, D (pc/mi/ln)								
	vel of service, LOS								
Capacity of ba	apacity of base condition, c _b (pc/h)								
apacity as a 15-minute flow rate, c (veh/h)				5635 5579					
Capacity as a	apacity as a 10-hilling now rate, c (veh/h)								
		ume, c _h (veh/h)	5300					

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions". b. Capacity constrained by basic freeway capacity.

- b. Capacity constrained by basic freeway capacity.
 c. Capacity occurs under constrained operating conditions.
 d. Three-tane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-tane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

General	Informat	manio e intini de Certario Adriali III di mino de anciena	FREEWA	Y WEAV	/ING WOF Site Info	ALCOHOL SECURIOR COMPANION			
Analyst Agency/Com Date Perforn Analysis Tim	pany ned	YLM RS&H 9/7/04 AM		OCCUPATION OF THE PROPERTY OF	Freeway/Dir Weaving Seç Jurisdiction Analysis Yea	of Travel g Location	TO I-6	IPIKE NB 595 No Build	
Inputs									
Freeway free Weaving nur	e-flow speed, anber of lanes, length, L (ft)		45 4 750 Lev		Weaving type Volume ratio Weaving ratio	, VR		A 0.4 0.3	
Convers	ions to p	oc/h Unde	r Base C	ondition)S				
(pc/h)	٧	PHF	Truck %	RV %	ET	ER	fHV	fp	V
Vo1	1920	0.95	2	0	1.5	1.2	0.990	1.00	2041
Vo2	1120	0.95	2	0	1.5	1.2	0.990	1.00	1190
Vw1	1730	0.95	2	0	1.5	1.2	0.990	1.00	1839
Vw2	1080	0.95	2	0	1.5	1.2	0.990	1.00	1148
 Vw		1		2987	Vnw				3231
V						Į.			6218
Weaving	and No	n-Weavin	a Speeds						
			Unconstr				Cons	trained	
		Weaving	(i = w)	Non-Wea	ving (i = nw)	Weavir	g (i = w)	Non-Wea	ving (= nw)
a (Exhibit 24						0.			00
b (Exhibit 24						4.1	···		00
c (Exhibit 24 d (Exhibit 24	· · · · · · · · · · · · · · · · · · ·					0.			30 75
Weaving intensity						5.		+	94
Weaving and nor	n-weaving						.66		.00
Maximum nu	nes required i mber of lanes	,	•		2.21 1.40	J			
		(max) unconst						ained operati	nc
			Density,	25.64	f Service,	बााव ५वह	acity	- 1	
				60.62					
		- Assimini)		F					**
		, c _h (pc/h)		5765					
		D	ı/h)	5708					
	,			5423			•		
	aving segment speed, S (mi/h) aving segment density, D (pc/mi/ln) al of service, LOS acity of base condition, c _b (pc/h) acity as a 15-minute flow rate, c (veh/h) acity as a full-hour volume, c _h (veh/h)					A TOWN STATE OF THE PARTY OF TH		The second second second	and the second s

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".
- b. Capacity constrained by basic freeway capacity.
- b. Capacity constrained by basic freeway capacity.
 c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

			DECIMAL	/ \A/E A \/	ING WOR	VCHEET			
Genera	Informat	And the second s	REEWA	YVEAV	Site Info				
Analyst Agency/Cor Date Perfor Analysis Tir	npany ned	YLM RS&H 9/7/04 PM			Freeway/Dir of Weaving Seg Jurisdiction Analysis Yea	Location	TO I-5	PIKE NB 95 No Build	
Inputs Freeway fre	e-flow speed, S	SFF (mi/h)	45		Weaving type			A	
	mber of lanes, g length, L (ft)	N	4 750 Leve	el	Volume ratio, Weaving ratio	, VR		0.4 0.4	
Conver	sions to r	oc/h Unde	r Base C	ondition	าร				
(pc/h)	V	PHF	Truck %	RV %	E _T	ER	fHV	fp	٧
Vo1	1490	0.95	2	0	1.5	1.2	0.990	1.00	1584
Vo2	1463	0.95	2	0	1.5	1.2	0.990	1.00	1555
Vw1	1270	0.95	2	0	1.5	1.2	0.990	1.00	1350
Vw2	1197	0.95	2	0	1.5	1.2	0.990	1.00	1272
Vw				2622	Vnw				3139
v									5761
Weavin	g and No	n-Weavin	g Speeds						
			Unconstra					trained	
		Weaving	(i = w)	Non-Wea	aving (i = nw)		ng (i = w)		ving (= nw)
a (Exhibit 2		<u> </u>		<u></u>			15 00		00
b (Exhibit 2		<u> </u>					97		.30
c (Exhibit 2 d (Exhibit 2		<u> </u>					80		75
Weaving intens						4.	64	0.	.80
Weaving and r	on-weaving		· · · · · ·			21	.21	34	.46
	anes required umber of lane:	for unconstrains, Nw (max)	ned operation,	Nw	2.11 1.40				
	∭ If Nw < Nv	v(max) uncons	trained operat	ion			v (max) const	rained operat	ion
Weavin	g Segme	nt Speed,	Density,	Level c	of Service,	and Car	pacity	1.7	1
	gment speed,			26.83					
	gment density	, D (pc/mi/ln)		53.68 F					
Level of se		a (nalh)		5765					
	base condition		- /h)	ļ	· <u> </u>				
		low rate, c (ve		5708 5423	·				
Capacity a	s a ruii-nour vo	lume, c _h (veh/l	1)	1 0420					TWO IS NOT THE OWNER.

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".
- b. Capacity constrained by basic freeway capacity.
- c. Capacity occurs under constrained operating conditions.
- c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

SIGNALIZED INTERSECTIONS

				- 1	HCS.	2000 <u>"</u>	DET	AIL	ED I	REF	POF	₹T	Name of the last	320000000000000000000000000000000000000				
General Infor Analyst ^∼ency or Co	YLM	<u> </u>			(1 g) S			Int Ar	te Inference ersecte ea Ty risdic	tion pe		SR		EB- Pine r areas	Island .	Road		
e Performe Time Period	ed 10/15/04 PM Peak H	our						Ar	alysi	s Ye		Bui	ild	-	2014 No			
		All Assessment		- Avenue				Pr	oject	טו		1 - 3	595	SIMR				
Volume and	Timing Input		T		EB		1		WB			Ť		NB			SB	
			LT	- - T	TH	RT	L.	Г	TH		RT	Ĺ	T	TH	RT	LT	TH	RT
Number of lar	nes, N		1		2	1	0		0		0		0	3	1	2	2	0
Lane group	<u> </u>		L		LT	R			1411-01					T	R	L	T	
Volume, V (vr	oh)		636		418	590								1293	444	868	1699	
% Heavy veh	icles, %HV		2		2	2								2	2	2	2	
Peak-hour fac	ctor, PHF		0.95	5	0.95	0.95								0.95	0.95	0.95	0.95	
	or actuated (A))	P		P	P								Р	P	Р	Р	
Start-up lost t	ime, I,		2.0		2.0	2.0								2.0	2.0	2.0	2.0	
· · · · · · · · · · · · · · · · · · ·	effective green	, e	2.0		2.0	2.0								2.0	2.0	2.0	2.0	
Arrival type, A	Α Τ		3		3	3								3	3	3	3	
Unit extensio	n, UE		3.0		3.0	3.0			İ					3.0	3.0	3.0	3.0	
Filtering/mete	ering, I		1.00	00	1.000	1.00	0							1.000	1.000	1.000	1.000	
Initial unmet o	demand, Q _h		0.0)	0.0	0.0								0.0	0.0	0.0	0.0	
·	J / Bike / RTOR volumes		0		0	50	()					0	0	50			
Lane width			12.0	0	12.0	12.0		-						12.0	12.0	12.0	12.0	ļ
Parking / Gra	ide / Parking	·	N		0	N	^	I			N		N	0	N	N	0	N
Parking mane	euvers, N _m		<u> </u>															
Buses stoppi			0		0	0								0	0	0	0	<u></u>
Min. time for	pedestrians, G	i _p							***									
Phasing	EB Only	0	2		0:	3	ļ	04			On			nru & R1	- G=	07	G =	8
Timing	G = 32.0	G =		_	G =		G = Y =			G = Y =	<i>36.</i>	0	i	= 43.0 = 7	Y=		Y =	
_	Y = 7 Analysis, $T = 0$.	Y =	·		Y =		Υ =			1 -	<u> </u>		1 .			130.0		
	Capacity, Co.)elav	. an	d LO	S Dete	rmina	tion				4.1						
				E	В			\	NB					NB	D.T.	 	SB TH	R
			Т	TH		RT	LT_	↓ T	H	RT		LT	—†"	TH	RT	LT 914	1788	 '`
Adjusted flov		33		774		568		-						1361	999	952	2292	-
Lane group of	capacity, c	43		855		583		+			_			1678	0.42	0.96	0.78	
v/c ratio, X				0.9	 -).36		-			_	<u> </u>		0.81		0.30	0.65	
Total green r				0.2		.00		-						0.33	0.63	46.3	16.4	-
Uniform dela			.6	47.	—— -	0.0		_			_			39.8	12.0	1.000	1.000	+-
gression	factor, PF	1.0	000	1.00	<u>-</u>	.950					_	,		1.000	1.000		0.50	<u> </u>
Delay calibra	ation, k		50	0.5).50								0.50	0.50	0.50		_
Incremental	delay, d ₂	12	2.3	14.	9	0.6		_						4.4	1.3	21.0	2.7	-
Initial queue	delay, d _a		i							ĺ			1					

Control delay	57.8	62.4	0.6			1	44.2	13.3	67.3	19.1	
Lane group LOS	E	E	Α				D	В	E	В	
Approach delay	4	0.6				 ,	36.9			35.4	·
roach LOS		D					D			D	
Intersection delay	3	7.3		X _c =	0.89	Inters	ection LC	os		D	
*				<u> </u>		 <u> </u>				· ·	arsinn 4.1

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					HC	S20	<i>00</i> "	DET	AIL	.ED	REPO	RT						
<i>General Infor</i> Analyst	YLM								Inf	terse		S	Road	VB- Pine r areas	Island	i i i i i i i i i i i i i i i i i i i	<u> </u>	
ncy or Co. ວິດເອ Performe	ed 9/9/04									ea Ty risdic					711 NG	,		
Time Period	PM Peak H	our							1	-	s Year	Е	iuild	g Year 20) 1 4 140	,		
		- I							Pr	oject	ID	1	- 595	SIIVIK				
Volume and 1	iming input		T T		E	R		1		WB		1		NB			SB	
			ī	T	T		RT	LT	-	TH	RT		LT	TH	RT	LT	TH	RT
Number of lan	es, N ₁)	0		0	1		2	1		2	2	0	0	4	1
Lane group								L		LTR	R		L	T			TR	R
Volume, V (vp	h)	•						968	3	621	1181		485	1444			1599	999
% Heavy vehi	cles, %HV							2		2	2		2	2			2	2
Peak-hour fac	tor, PHF							0.9	5	0.95	0.95		0.95	0.95			0.95	0.95
Pretimed (P)	or actuated (A)						P		Р	P		P	P			P	P
Start-up lost ti	me, I ₁							2.0)	2.0	2.0		2.0	2.0			2.0	2.0
Extension of e	effective green	, е						2.0)	2.0	2.0		2.0	2.0			2.0	2.0
Arrival type, A	Т							3		3	3		3	3			3	3
Unit extension	ı, UE							3.0)	3.0	3.0	,	3.0	3.0			3.0	3.0
Filtering/mete	ring, I							1.0	00	1.00	0 1.00	0	1.000	1.000			1.000	1.000
(I unmet d	I unmet demand, Q _b				\top			0.0)	0.0	0.0		0.0	0.0			0.0	0.0
Ped / Bike / R		<u></u> _		0				0		0	50					0	0	50
Lane width							•	12.	0	12.0	12.0)	12.0	12.0			12.0	12.0
Parking / Grad	de / Parking			N			N	N	,	0	N		Ν	0	N	N	0	N
Parking mane	euvers, N _m																	
Buses stoppir	ng, N _B							0		0	0		0	0		_	0	0
Min. time for p	oedestrians, G	e p																
Phasing	WB Only		02			03)4		NB Or			ru & RT = 30.0	G:	<u>07</u>	G =	08
Timing	G = 47.0 $Y = 6$	G = Y =			G = Y =			G = Y =			G = 35 $Y = 7$	J. U		= 50.0 = 5	Y =		Y =	
Duration of A														cle Leng	th, C =	= 130.	0	
Lane Group			l Dela	ау, а	nd L	os E)ete	rmina	tion				11.45				CD.	
			LT		∃B H	RT		LT	\	NB H	RT		т Т	NB TH	RT	LT	SB TH	RT
Adjusted flow	rate, v			- -	11			510		58	596	51		1520			1683	999
Lane group c							7	640	12	00	1583	92	25	1964			1561	999
v/c ratio, X	· · · · · · · · · · · · · · · · · · ·	<u> </u>		-				0.80	1.	47	0.38	0.	55	0.77			1.08	1.00
Total green ra	atio, g/C			 			\dashv	0.36	0.	36	1.00	0	27	0.55			0.23	0.63
orm delay		_						37.2		1.5	0.0	40	0.8	22.6			50.0	24.0
Progression f						1		1.000		000	0.950	1.0	000	1.000			1.000	1.00
Delay calibra				-				0.50	0.	50	0.50	0.	50	0.50	-		0.50	0.50
.,	delay, d ₂			\dashv		 		10.0	21	3.9	0.7	1	.4	3.0			47.1	28.5

Initial queue delay, d ₃					<u> </u>			
Control delay		47.2	255.4	0.7	43.2	25.7	97.1	52.5
Lane group LOS		D	F	А	D	С	F	D
roach delay		1	165.3			30.1	80.5	
Approach LOS			F			С	F	
Intersection delay	99.0	X _c	= 1.05		Interse	ection LOS	F	

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HCS2000™ DETAILED REPORT Site Information General Information SR 84 EB- University Drive Intersection Analyst YLM All other areas Area Type Agency or Co. RSH Jurisdiction e Performed 10/15/04 Opening Year 2014 No. Analysis Year 'i ime Period AM Peak Hour Build I - 595 SIMR Project ID Volume and Timing Input SB NB WB EΒ RT LT TH LT ΤH RT TH RT LT TH RT LT 0 1 2 3 0 3 0 0 0 Number of lanes, N 1 2 1 Т TR L L LTR R Lane group 2100 1187 345 1112 Volume, V (vph) 858 1532 803 2 2 2 2 2 2 % Heavy vehicles, %HV 2 0.95 0.95 0.95 0.95 0.95 Peak-hour factor, PHF 0.95 0.95 P P P P Pretimed (P) or actuated (A) Р P P 2.0 2.0 2.0 2.0 2.0 2.0 2.0 Start-up lost time, I, 2.0 2.0 2.0 2.0 Extension of effective green, e 2.0 2.0 2.0 3 3 3 3 3 3 Arrival type, AT 3 3.0 3.0 3.0 3.0 Unit extension, UE 3.0 3.0 3.0 1.000 1.000 1.000 1.000 1.000 Filtering/metering, I 1.000 1.000 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Initial unmet demand, Q_h 50 0 0 . / Bike / RTOR volumes 0 50 0 0 12.0 12.0 12.0 Lane width 12.0 12.0 12.0 12.0 Ν 0 Ν Ν Ν Ν Parking / Grade / Parking Ν Ν Ν 0 Parking maneuvers, N_m 0 0 0 0 0 0 0 Buses stopping, N_B Min. time for pedestrians, G_p 80 07 04 NS Perm Thru & RT 02 03 **EB** Only Phasing G = G = G = 35.0G = 20.0G = G = G = 57.0G =Timing Y = Y = 6Y = Y = 6Y = 6Y = Y = Y = Cycle Length, C = 130.0 Duration of Analysis, T = 0.25Lane Group Capacity, Control Delay, and LOS Determination. SB NB WB EB TH RT LT RT RT LT TH LT TH LT TH RT 2211 1197 363 1171 Adjusted flow rate, v 452 2460 397 2381 1366 1583 529 Lane group capacity, c 1503 1583 776 0.93 0.76 0.69 0.86 v/c ratio, X 1.64 0.25 0.58 0.15 0.47 0.27 1.00 Total green ratio, g/C 1.00 0.44 0.44 0.0 52.0 32.5 45.1 0.0 Uniform delay, d₁ 27.5 36.5 1.000 1.000 0.9501.000 _Jression factor, PF 0.950 1.000 1.000 0.50 0.50 0.50 0.50 Delay calibration, k 0.50 0.50 0.50 7.1 7.9 7.1 3.4 3.2 289.6 0.4 Incremental delay, d2 Initial queue delay, d₃

Control delay	30.7	326.1	0.4					52.2	3.4	59.1	40.3	
Lane group LOS	С	F	Α					D	A	E	D	
Approach delay	24	16.7	·		_J	·	2	27.6			43.0	
roach LOSپر		F						С		D		
Intersection delay	12	20.2		X _c :	= 1.27		Interse	ection LC	os		F	

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Control delay		79.2	44.8	2.9	48.3	22.0	43.3
Lane group LOS		E	D	Α	D	С	D
Approach delay			34.7	23.1			43.3
proach LOS			С			С	D
Intersection delay	33.7	X _c	= 0.82		Interse	ection LOS	С

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Control delay	45.2	72.4	0.4				40.5	1.8	51.9	25.5	<u></u>
Lane group LOS	D	E	А				D	Α	D	С	
Approach delay	5	52.6				2	24.0			28.4	
ر, vroach LOS		D D					С		С		
Intersection delay	3	3.9		X _c :	= 0.89	Interse	ection LC)S		С	

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Control delay			86.1	40.0	1.2	55.1	21.4	41.3
Lane group LOS			F	D	Α	Ε	С	D
Approach delay			38.9			2	25.9	41.3
roach LOS			D				С	D
Intersection delay	35.1		$X_{c} = 0.86$			Interse	ection LOS	D

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HCS2000™ DETAILED REPORT Site Information General Information Intersection SR 84 EB/136th Avenue YLM Analyst All other areas Area Type ncv or Co. RSH Jurisdiction Performed 10/15/04 Opening Year 2014 No Analysis Year Time Period AM Peak Build 1 - 595 SIMR Project ID Volume and Timing Input SB NB WB EB RT LT TH TH RT LT TH RT LT TH RT LT 0 1 2 2 2 0 0 Number of lanes, N. 2 2 1 0 Т Т L R Т L R Lane group 711 615 499 896 241 Volume, V (vph) 653 1571 2 2 2 2 % Heavy vehicles, %HV 2 2 0.95 0.95 0.950.95 0.95 Peak-hour factor, PHF 0.95 0.95 Р P P P Р P P Pretimed (P) or actuated (A) 2.0 2.0 2.0 2.0 2.0 2.0 2.0 Start-up lost time, I, 2.0 2.0 2.0 2.0 2.0 2.0 Extension of effective green, e 2.0 3 3 3 3 3 3 3 Arrival type, AT 3.0 3.0 3.0 3.0 3.0 Unit extension, UE 3.0 3.0 1.000 1.000 1.000 1.000 1.000 1.000 1.000 Filtering/metering, I 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Initial unmet demand, Q_b 0 50 J / Bike / RTOR volumes 0 50 0 0 12.0 12.0 12.0 12.0 12.0 12.0 Lane width 12.0 Ν 0 Ν Ν Ν Ν Parking / Grade / Parking Ν 0 Ν Ν Parking maneuvers, N_m 0 0 0 0 0 0 Buses stopping, N_B Min. time for pedestrians, G_n 80 07 NB Only SB Only 04 03 **EB** Only 02 Phasing G = G = G = 38.0G = 20.0G = G = G = G = 66.0Timing Y = Y = Y = 5Y = 5Y = Y = Y = Y = 6Cycle Length, C = 140.0 Duration of Analysis, T = 0.25Lane Group Capacity, Control Delay, and LOS Determination SB NB WB EB TH RT RT LT TH TH RT LT RT LT LT TH 748 891 647 525 201 Adjusted flow rate, v 1654 687 962 1040 932 506 1583 Lane group capacity, c 1619 1671 0.78 0.86 0.69 1.04 v/c ratio, X 0.420.990.13 0.27 0.27 0.14 0.66 Total green ratio, g/C 0.47 0.47 1.00 47.1 18.8 45.8 60.0 24.4 36.7 0.0 Uniform delay, d1 1.000 1.000 1.000 1.000 uression factor, PF 0.950 1.000 1.000 0.50 0.50 0.50 0.50 Delay calibration, k 0.50 0.50 0.50 6.2 4.3 50.1 9.1 19.7 0.2 Incremental delay, do 0.8 Initial queue delay, da

Control delay	25.3	56.4	0.2		ļ		110.1	27.9	50.0	53.3	<u></u>
Lane group LOS	С	E	A	-			F	С	D	D	<u></u>
Approach delay	4	43.5			I		58.4			51.8	
roach LOS		D				E		D			
Intersection delay	4	9.6		$X_{\rm c} = 0.93$		Intersection LOS)S		D	

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Control delay		41.9	50.6	2.5	41.4	46.4	61.0	13.7
Lane group LOS		D	D	А	D	D	E	В
Approach delay			25.8		-	45.6	47.2	
roach LOS			С			D	D	
Intersection delay	36.9	X _c	= 0.78		Inters	ection LOS	D	

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General Info	YLM	L ga de					In Ar	te Ini tersec ea Ty irisdic	ре	,	SR 8 All ot	4 EB/136 her areas	th A		e		
Time Period	PM Peak						- 1	nalysi roject	s Year	i	Build	ing Year 5 SIMR	201	4 No			
V F							11	ojeci	ID		1 - 00	J GHWI C					
Volume and	Timing Input			EB		Т	•	WB				NB				SB	
			LT	TH	RT	L	Τ	TH	R	ſ	LT	TH	F	RT	LT	TH	RT
Number of lar	nes, N ₁		2	2	1	()	0	0		0	2		1	2	2	
Lane group			L	T	R							T	1	₹	L	T	
Volume, V (v _l	ph)		681	1206	146							337	5.	45	972	1320	
% Heavy veh	icles, %HV		2	2	2							2		2	2	2	
Peak-hour fac	ctor, PHF		0.95	0.95	0.95							0.95	0.	95	0.95	0.95	
Pretimed (P)	or actuated (A)	P	P	P	\top						P	1	Р	Р	Р	
Start-up lost t	time, I,		2.0	2.0	2.0							2.0	2	.0	2.0	2.0	
	effective greer	n, e	2.0	2.0	2.0							2.0	2	.0	2.0	2.0	
Arrival type, A	AT		3	3	3							3		3	3	3	
Unit extensio			3.0	3.0	3.0	-						3.0	1,	3.0	3.0	3.0	
Filtering/mete			1.000	1.000	1.000	-						1.000	1.	000	1.000	1.000	
Initial unmet			0.0	0.0	0.0							0.0	0	0.0	0.0	0.0	
	RTOR volumes	}	0	0	50)				0	0	1	50			
Lane width			12.0	12.0	12.0	_						12.0	1.	2.0	12.0	12.0	
Parking / Gra	ade / Parking		N	0	N		V	 	Ν	,	N	0		N	N	0	N
Parking man	euvers, N _m																
Buses stoppi			0	0	0							0		0	0_	0	<u> </u>
	pedestrians, G	 } _o	-		<u>.l</u>			.l	l						<u> </u>		
Phasing	EB Only	02)	03			04		NB C	_		SB Only		ļ	07	0:	8
Timing	G = 50.0	G =		G =		G =			G = 1			G = 59.0		G = Y =		G = Y =	
	Y = 6	Y =		Y =		Y =			Y = 5		- 1	Y = 5 Cycle Le	nath				
	Analysis, T = 0. Capacity, Co		olav a	nd LOS	Dete	rmina	ition					Oyolo Es	-				
zane oroup	capacity, oc			<u>"</u> ЕВ				VΒ				NB				SB	
244, 244,		L'			₹T	LT	I	Ή	RT	!	LT_	TH	R		LT	TH	R
Adjusted flov	v rate, v	71	7 12	69 10)1		_			_		355	52		1023	1389	
Lane group o	capacity, c	122	7 12	66 15	83					_		380	80		1448	1494	-
v/c ratio, X		0.5	8 1.0	0.0	06	,				_	·	0.93	0.6		0.71	0.93	-
Total green r	ratio, g/C	0.3	6 0.	36 1.0	00]		_		0.11	0.5		0.42	0.42	ļ
Uniform dela	ıy, d ₁	36.	6 45	i.O O.	0		_					62.0	25		33.4	38.5	-
gression	factor, PF	1.0	00 1.0	0.9	950				· · · · · · · · · · · · · · · · · · ·			1.000	1.0	000	1.000	1.000	-
Delay calibra	ation, k	0.5	0 0.	50 0.	50							0.50	0.8	50	0.50	0.50	
Incremental	delay, d ₂	2.0	25	5.9 0.	.1							32.2	4.	0	2.9	11.6	
	delay, d ₃											1	1		1		

Control delay	38.6	70.9	0.1					94.2	29.4	36.3	50.2	
Lane group LOS	D	E	А		1			F	С	D	D	
Approach delay	5	6.4				1		55.7			44.3	
roach LOS		E						E			D	
Intersection delay	5	0.8		$X_{c} = 0.96$			Intersection LOS			D		

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Control delay		66.4	316.0	0.6	55.6	152.1	101.0	8.2
Lane group LOS		E	F	Α	E	F	F	Α
Approach delay	1_		165.2			39.7	75.6	
roach LOS			F			F	E	
Intersection delay	127.9	X _c	$X_{c} = 1.06$			ection LOS	F	

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HCS2000™ DETAILED REPORT Site Information General Information SR 84 EB- Nob Hill Road Intersection Analyst YLMArea Type All other areas incy or Co. RSH Jurisdiction Performed 10/15/04 Opening Year 2014 No Analysis Year Time Period AM Peak Hour Build 1 - 595 SIMR Project ID Volume and Timing Input SB NB **WB** ΕB RT LT TΗ RT TH TH RT LT TH RT LT LT 2 0 2 1 3 o 0 0 2 1 0 1 Number of lanes, N Τ Т L R L LTLane group 987 1244 719 679 300 Volume, V (vph) 675 1676 2 2 2 2 2 2 % Heavy vehicles, %HV 2 0.95 0.95 0.95 0.95 Peak-hour factor, PHF 0.95 0.95 0.95 Р Р Р Р Р Pretimed (P) or actuated (A) Р P 2.0 2.0 2.0 2.0 2.0 2.0 2.0 Start-up lost time, I, 2.0 2.0 2.0 2.0 2.0 Extension of effective green, e 2.0 2.0 3 3 3 3 3 3 Arrival type, AT 3.0 3.0 3.0 3.0 3.0 Unit extension, UE 3.0 3.0 1.000 1.000 1.000 1.000 1.000 Filtering/metering, I 1.000 1.000 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Initial unmet demand, Qh 0 0 50 0 50 _u / Bike / RTOR volumes 0 12.0 12.0 12.0 12.0 Lane width 12.0 12.0 12.0 Ν 0 Ν Ν 0 Ν Ν Ν Parking / Grade / Parking Ν 0 Ν Parking maneuvers, N_m 0 0 0 0 0 Buses stopping, N_B n Min. time for pedestrians, G. 08 Thru & RT 07 SB Only 04 02 03 Phasing EB Only G = G = 19.3G = G = 42.8G = G = 69.9G = G =Y = Timing Y = 5.5Y = Y = 5.5Y = Y = 5.5Y = Cycle Length, C = 148.5 Duration of Analysis, T = 0.25Lane Group Capacity, Control Delay, and LOS Determination SB NB **WB** EB RT LT TH TH RT RT LT RT LT TH TH LT 1309 1039 757 662 Adjusted flow rate, v 356 2119 263 991 1615 659 1009 1583 Lane group capacity, c 833 1655 1.32 0.64 0.66 1.15 0.17 1.28 v/c ratio, X 0.43 0.46 0.64 0.29 0.13 0.47 1.00 Total green ratio, g/C 0.47 52.8 31.2 16.8 64.6 0.0 39.3 26.0 Uniform delay, d1 1.000 1.000 1.000 1.000 ∍gression factor, PF 0.950 1.000 1.000 0.50 0.50 0.50 0.50 0.50 0.50 0.50 Delay calibration, k 2.0 151.5 3.3 83.8 0.2 1.6 130.9 Incremental delay, d2 Initial queue delay, da

Control delay	27.6	170.2	0.2					148.4	20.1	204.4	33.1	
Lane group LOS	С	F	Α			<u> </u>		F	С	F	С	
Approach delay	13	135.4					8	38.5		128.6		
roach LOS		F						F		F		
Intersection delay	12	122.7			$X_{c} = 1.27$			ection LC		F		

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					HC.	S200	00 ™	DE							\$ 1800 CONTRACTOR AND ADDRESS OF THE PARTY O	part of the			
General Info Analyst Agency or C							Int Ar	lerse ea T	ctio ype		S		WB - No er areas	b Hill R	oad				
(→ Perforr Time Period							Jurisdiction Analysis Year				Build								
				1010 10 10 10 10 10 10 10 10 10 10 10 10			range provided all for the	No. Company	<u>Pr</u>	ojec	t ID		1 -	- 595	SIMR				100
Volume and	l Timing Input				EE))		<u> </u>		WE	<u></u>		Т		NB			SB	
			1	Γ	TH		RT	L	Т	TH		RT	+	LT	TH	RT	LT	TH	RT
Number of la	anes, N ₁		0		0	_	0	1	1	2		1		1	2	0	0	4	1
Lane group							L	-	LTF	?	R		L	T			T	R	
Volume, V (vph)							44	0	120		626		280	1114			1791	456	
% Heavy vehicles, %HV								2	?	2		2		2	2			2	2
Peak-hour fa	actor, PHF							0.9	⊋ 5	0.95	5	0.95		0.95	0.95			0.95	0.95
Pretimed (P) or actuated (A)								F)	Р		Р		Р	P			P	P
Start-up lost time, I ₁								2.	0	2.0		2.0		2.0	2.0		<u> </u>	2.0	2.0
Extension of effective green, e								2.	0	2.0		2.0	2.0		2.0			2.0	2.0
Arrival type, AT								3	3	3		3		3	3	<u> </u>	<u> </u>	3	3
Unit extension, UE								3.	0	3.0)	3.0	3.0		3.0		ļ	3.0	3.0
Filtering/metering, I									000	1.00	00	1.000	0 1.000		1.000	<u> </u>	ļ. <u></u>	1.000	1.000
Initial unmet demand, Q _b								0.	.0	0.0	'	0.0		0.0	0.0	<u> </u>	<u> </u>	0.0	0.0
/ Bike / RTOR volumes			0		<u> </u>			()	0		50		<u>-</u>			0	0	50
Lane width								12	2.0	12.0)	12.0		12.0	12.0	ļ	ļ <u>.</u>	12.0	12.0
Parking / Grade / Parking		٨	!			N	/	V	0		N		N	0	N	N	0	N_	
Parking maneuvers, N _m				<u> </u>			_		ļ. <u>.</u>									0	
Buses stopp								-	0	0		0		0	0			0	
	r pedestrians, G	<u> </u>										-		<u> </u>	ID Only		<u> </u> 07		08
Phasing	WB Only G = 40.0	G =	2			03 G =		G =	04			Thru & RT 3 = 42.0			NB Only = 50.0	G =		G =	
Timing		Y =			Y =			<u>Y</u> =				= 5.5			= 5.5	Y =	<u> </u>	Y =	
Duration of												C	ycle Lenç	gth, C =	148.5				
Lane Grou	o Capacity, Co	ntrol l)ela _]			os D	eter	mine							ND		1	SB	
		Ŧ	<u>E</u> TI	<u>:B</u> H [RT	+	LT	<u>V</u> 	VB H	R	T	L.	T	NB TH	RT	LT	TH	RT	
Adjusted flow rate, v		• •	<u>'</u> '				310	47		40		29		1173			1885	427	
Lane group capacity, c						4	177	88	31	158	33	59	6	2329			1913	933	
v/c ratio, X						70	0.65	0.5	54	0.2	26	0.4	19	0.50			0.99	0.46	
Total green ratio, g/C						0	0.27	0.2	27	1.0	00	0.3	34	0.66			0.28	0.59	
Uniform delay, d ₁						4	8.0	46	.4	0.	0	39	.2	13.1			52.9	17.2	
ression factor, PF						1	.000	1.0	000	0.9	50	1.0	000	1.000			1.000	1.000	
Delay calibration, k						0	0.50	0.8	50	0.5	50	0.5	50	0.50			0.50	0.50	
Incremental delay, d ₂							6.7	2.	4	0.	4	2.	9	0.8		<u> </u>	17.4	1.6	
1	e delay, d ₃			1							1	- 7							

Control delay		54.8	48.8	0.4	42.1	13.9	70.3	18.8
Lane group LOS		D	D	Α	D	В	E	В
Approach delay			33.9	'	1	19.5	60.8	
Jroach LOS			С			В	E	
Intersection delay	42.2	X _c	= 0.70		Interse	ection LOS	D	

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HCS2000™ DETAILED REPORT Site Information General Information SR 84 EB- Nob Hill Road Intersection YLM Analyst Area Type All other areas Agency or Co. RSH Jurisdiction Performed 10/15/04 Opening Year 2014 No Analysis Year ume Period PM Peak Hour Build Project ID 1 - 595 SIMR Volume and Timing Input SB NB **WB** EB TH RT RT LT LT TH TH RT LT TH RT LT 0 2 1 2 0 3 1 2 1 0 0 0 Number of lanes, N, Т T R L LTR Lane group L. 791 1557 1048 451 250 Volume, V (vph) 600 557 2 2 2 2 % Heavy vehicles, %HV 2 2 2 0.95 0.95 0.95 0.95 0.95 Peak-hour factor, PHF 0.95 0.95 Р P Р P P P Р Pretimed (P) or actuated (A) 2.0 2.0 2.0 2.0 2.0 2.0 2.0 Start-up lost time, I, 2.0 2.0 2.0 2.0 Extension of effective green, e 2.0 2.0 2.0 3 3 3 3 3 3 Arrival type, AT 3 3.0 3.0 3.0 3.0 Unit extension, UE 3.0 3.0 3.0 1.000 1.000 1.000 1.000 1.000 Filtering/metering, I 1.000 1.000 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Initial unmet demand, Qh 0 0 50 1/ Bike / RTOR volumes 50 0 0 0 12.0 12.0 12.0 12.0 Lane width 12.0 12.0 12.0 0 Ν Ν Ν Ν 0 Parking / Grade / Parking Ν 0 Ν Ν Ν Parking maneuvers, N_m 0 0 0 0 0 0 Buses stopping, N_R Min. time for pedestrians, G_n 80 Thru & RT 07 04 SB Only 02 03 Phasing EB Only G = G = 39.0G = G = 48.0G = G =G = G = 45.0Timing Y = Y = 5.5Y = Y = 5.5Y = Y = 5.5Y = Cycle Length, C = 148.5 Duration of Analysis, T = 0.25Lane Group Capacity, Control Delay, and LOS Determination SB NB WB EB RT ΤH LT LT TH RT RT LT TH RT LT TH 1639 422 833 1103 Adjusted flow rate, v 211 316 902 2209 1333 954 1111 Lane group capacity, c 536 1056 1583 0.74 0.44 0.75 0.83 v/c ratio, X 0.59 0.85 0.13 0.32 0.62 0.60 0.26 Total green ratio, g/C 1.00 0.30 0.30 44.9 19.6 16.0 51.6 43.9 48.7 0.0 Uniform delay, d₁ 1.000 1.000 1.000 1.000 pression factor, PF 1.000 1.000 0.950 0.50 0.50 0.50 0.50 Delay calibration, k 0.50 0.50 0.50 4.7 2.3 1.5 6.0 Incremental delay, d2 4.7 8.8 0.2 Initial queue delay, da

Control delay	48.6	57.5	0.2					57.6	17.5	49.5	21.9	
Lane group LOS	D	E	A					E	В	D	С	
Approach delay	4	7.1	. J. 			J	4	46.5			31.2	
roach LOS		D						D			С	
Intersection delay	3	9.7		X _c =	= 0.78		Interse	ection L0	os		D	

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HCS2000™ DETAILED REPORT Site Information General Information SR 84 WB - Nob Hill Road Intersection Analyst YLMAll other areas Area Type Agency or Co. RSH Jurisdiction) Performed 10/15/04 Opening Year 2014 No Analysis Year Time Period PM Peak Hour Build 1 - 595 SIMR Project ID Volume and Timing Input SB NB FB WB TH RT LT RT RT LT TH RT LT TH TH LT 1 0 4 0 2 1 1 2 1 0 0 0 Number of lanes, N TR L T R LTR L Lane group 1741 541 1310 1329 338 607 269 Volume, V (vph) 2 2 2 2 2 2 2 % Heavy vehicles, %HV 0.950.95 0.95 0.95 0.95 Peak-hour factor, PHF 0.95 0.95 Р Ρ P Р Pretimed (P) or actuated (A) P Р P 2.0 2.0 2.0 2.0 2.0 2.0 2.0 Start-up lost time, I, 2.0 2.0 2.0 2.0 2.0 2.0 Extension of effective green, e 2.0 3 3 3 3 3 3 3 Arrival type, AT 3.0 3.0 3.0 3.0 3.0 3.0 3.0 Unit extension, UE 1.000 1.000 1.000 1.000 1.000 1.000 1,000 Filtering/metering, I 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Initial unmet demand, Qh 50 0 0 . / Bike / RTOR volumes 50 0 0 0 12.0 12.0 12.0 12.0 12.0 Lane width 12.0 12.0 0 Ν Ν Ν 0 Ν Ν 0 Parking / Grade / Parking Ν Ν Ν Parking maneuvers, N_m 0 0 0 0 0 0 Buses stopping, N_B Min. time for pedestrians, G_n 07 80 NB Only Thru & RT 02 03 04 Phasing WB Only G = G = G = 50.0G = 42.0G = G = 40.0G = G = Timing Y = Y = Y = 5.5Y = 5.5Y = Y = Y = 5.5Y = Cycle Length, C = 148.5 Duration of Analysis, T = 0.25Lane Group Capacity, Control Delay, and LOS Determination SB NB WB EB RT RT LT TH TH TH RT LT TH RT LT LT 1833 517 1379 902 356 Adjusted flow rate, v 428 938 933 1913 2329 477 878 1583 596 Lane group capacity, c 0.55 0.96 0.59 0.90 1.07 0.57 0.60 v/c ratio, X 0.28 0.59 1.00 0.34 0.66 0.27 0.27 Total green ratio, g/C 52.4 18.6 14.3 52.3 54.3 0.0 40.9 Uniform delay, d₁ 1.000 1.000 1.000 1.000 gression factor, PF 1.000 0.950 1.000 0.50 0.50 0.50 0.50 0.50 0.50 0.50 Delay calibration, k 12.8 2.4 1.1 1.5 4.4 22.3 50.3 Incremental delay, do Initial queue delay, da

Control delay		74.5	104.6	1.5	45.3	15.4	65.2	21.0
Lane group LOS		E	F	Α	D	В	E	С
Approach delay			57.9	<u>.l</u>	2	?1.6	55.5	
roach LOS			E			С	E	
Intersection delay	47.1	X _c	= 0.85		Interse	ection LOS	D	

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HCS2000™ DETAILED REPORT Site Information General Information SR 84 EB- Pine Island Road Intersection YLM Analyst All other areas Area Type ^ rency or Co. RSH Jurisdiction e Performed 10/15/04 Opening Year 2014 No Analysis Year Time Period AM Peak Hour Build 1 - 595 SIMR Project ID Volume and Timing Input SB NB WB EB TH RT LT RT LT TH RT LT TH RT LT TH 2 0 2 0 0 3 1 Number of lanes, N 1 2 1 Τ T R L L R Lane group LT1145 1231 1362 674 Volume, V (vph) 802 1240 507 2 2 2 2 % Heavy vehicles, %HV 2 2 2 0.95 0.95 0.95 0.95Peak-hour factor, PHF 0.95 0.95 0.95 P Р Р P Pretimed (P) or actuated (A) P P P 2.0 2.0 2.0 2.0 Start-up lost time, I, 2.0 2.0 2.0 2.0 2.0 2.0 2.0 Extension of effective green, e 2.0 2.0 2.0 3 3 3 3 3 Arrival type, AT 3 3 3.0 3.0 3.0 3.0 Unit extension, UE 3.0 3.0 3.0 1.000 1.000 1.000 1.000 Filtering/metering, I 1.000 1.000 1.000 0.0 0.0 0.0 0.0 Initial unmet demand, Q_b 0.0 0.0 0.0 50 0 0 J / Bike / RTOR volumes 0 0 0 50 12.0 12.0 12.0 12.0 Lane width 12.0 12.0 12.0 0 Ν Ν Ν Ν 0 Parking / Grade / Parking Ν Ν Ν Ν Parking maneuvers, N_m 0 0 0 0 Buses stopping, N_R 0 0 0 Min. time for pedestrians, G, 80 07 Thru & RT SB Only Phasing EB Only 02 03 04 G = 30.0G = G = G = 28.0G =G = G = 53.0G = Timing Y = Y = 7Y = Y = Y = 5Y = Y = 7Y = Cycle Length, C = 130.0 Duration of Analysis, T = 0.25Lane Group Capacity, Control Delay, and LOS Determination SB NB **WB** EB RT LT TH TH RT LT LT TH RT LT TH RT 1296 1205 1434 657 Adjusted flow rate, v 422 1727 481 1719 1171 1096 740 Lane group capacity, c 722 1429 1583 0.75 0.60 1.63 1.22 v/c ratio, X 1.21 0.58 0.30 0.69 0.22 0.48 0.23 Total green ratio, g/C 0.41 0.41 1.00 27.2 51.0 50.0 10.5 0.0 Uniform delay, d₁ 29.9 38.5 1.000 1.000 1.000 gression factor, PF 1.000 0.950 1.000 1.000 0.50 0.50 0.50 0.50 Delay calibration, k 0.50 0.50 0.50 3.1 2.4 288.9 108.8 3.4 100.6 0.5 Incremental delay, do Initial queue delay, da

Control delay	33.4	139.1	0.5					158.8	12.9	339.9	30.3	
Lane group LOS	С	F	A					F	В	F	С	
Approach delay	96	5.8	-l		<u>'</u>	· · · · · · · · · · · · · · · · · · ·	1	13.0			179.5	
roach LOS		F						F			F	
Intersection delay	13	0.1		X _c =	= 1.32		Interse	ection LC)S		F	

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				ŀ	ICS2	000	^{1M} [Software e	-			
General Info Analyst	YLM	18 E							Inters	ectio		S	Road	WB- Pine	e Islar	nd 1		1	
ncy or Co e Perform	ned 10/15/04								Area Juris					er areas	011	do			
Time Period	AM Peak F	lour						1	Analy Proje			Е	Build	ng Year 2 SIMR	014 F	VO			
Volume and	Timing Input	7,010							rioje	CL IL			- 000	Onvire	100			17 F. 1	
<u>voidille alla</u>	arminiê mbar				EB				٧	∕B				NB				SB	
			LT		TH	RT	-	LT	Ţ		RT	_	LT	TH	RT	_	LT	TH_	RT
Number of la	nes, N ₁		0		0	0		1	2) 	1		2	2	0		0	4	1
Lane group								L	LT	R	R		L	T		\perp		TR	R
Volume, V (v	ph)							515	36	3	897		427	1737				1861	644
% Heavy veh	nicles, %HV							2	2	•	2		2	2				2	2
Peak-hour fa	ctor, PHF							0.95	0.9	95	0.95		0.95	0.95				0.95	0.95
Pretimed (P)	or actuated (A	.)						Р	F	,	Р		Р	P				Р	P
Start-up lost	time, I _i							2.0	2.	0	2.0		2.0	2.0				2.0	2.0
Extension of	effective gree	1, e						2.0	2.	0	2.0		2.0	2.0				2.0	2.0
Arrival type,	AT							3	3	}	3		3	3				3	3
Unit extension	n, UE							3.0	3	.0	3.0		3.0	3.0				3.0	3.0
Filtering/met	ering, I							1.000	1.0	000	1.00	o	1.000	1.000				1.000	1.000
ત્રી unmet	demand, Q _h							0.0	0.	0	0.0		0.0	0.0				0.0	0.0
Ped / Bike / I	RTOR volumes	3	0					0	()	50						0	0	50
Lane width						ļ		12.0	12	.0	12.0)	12.0	12.0				12.0	12.0
Parking / Gra	ade / Parking		N			N		N	()	N		N	0	N		N	0	N
Parking man	euvers, N _m						•												
Buses stopp	ing, N _B							0		0	0		0	0				0	0
Min. time for	pedestrians, 0	 															::::::::::::::::::::::::::::::::::::::		
Phasing	WB Only		2		03		T	04			IB Or			ıru & RT		0	7		08
Timing	G = 42.0	G =			} =		ᆜ	3 =			= 35 = 7	.0		= 35.0 = 5	G Y			G = Y =	
	Y = 6 Analysis, T = 0	Y =		Y	<u> </u>			<u> </u>		Y	= /			cle Leng	<u> </u>		130.0		
	Capacity, Co)elav.	ano	LOS	Dete	erm	inatio	n										
				EB					WB	1			-	NB	D.T.		177	SB	RT
Adjusted flov	v rate v	L	.T <u> </u>	TH	R R		 27	T 1	TH 099	44	T in	L [*]		TH 1828	RT	\dashv	LT	TH 1959	625
Lane group	·						57		063	15	-	92		2101				1821	999
v/c ratio, X	Japacity, C						0.4		1.03	0.2		0.4		0.87		\dashv		1.08	0.63
Total green	ratio a/C						0.2		0.32	1.0		0.7		0.59		-	·	0.27	0.63
-		+					35		14.0	0.		39.		22.3		\dashv		47.5	14.6
orm dela Progression	<u>'</u>				_			 	.000			1.0		1.000	• • • • • • • • • • • • • • • • • • • •	\dashv		1.000	1.00
					-		0.5		.000).50	0.8		0.5		0.50		\dashv		0.50	0.50
Delay calibra					_							1.		5.3				44.8	3.0
Incremental	delay, d ₂						2.	0 3	36.7	0.	4	1.	Ų	ن, <i>ن</i>		ļ_		77.0	J

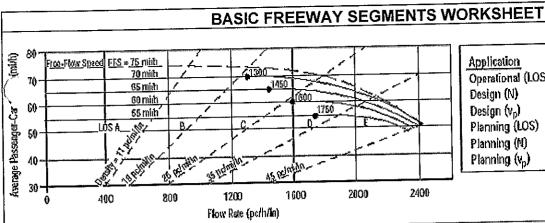
Intersection delay	53.9	X _c	<i>= 0.93</i>		Interse	ection LOS	D	
Approach LOS			D			С	E	
roach delay			54.6		3	30.4	74.2	
Lane group LOS		D	F	Α	D	С	F	В
Control delay		38.0	80.7	0.4	41.8	27.6	92.3	17.6
Initial queue delay, d ₃								<u> </u>

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YEAR 2014 BUILD

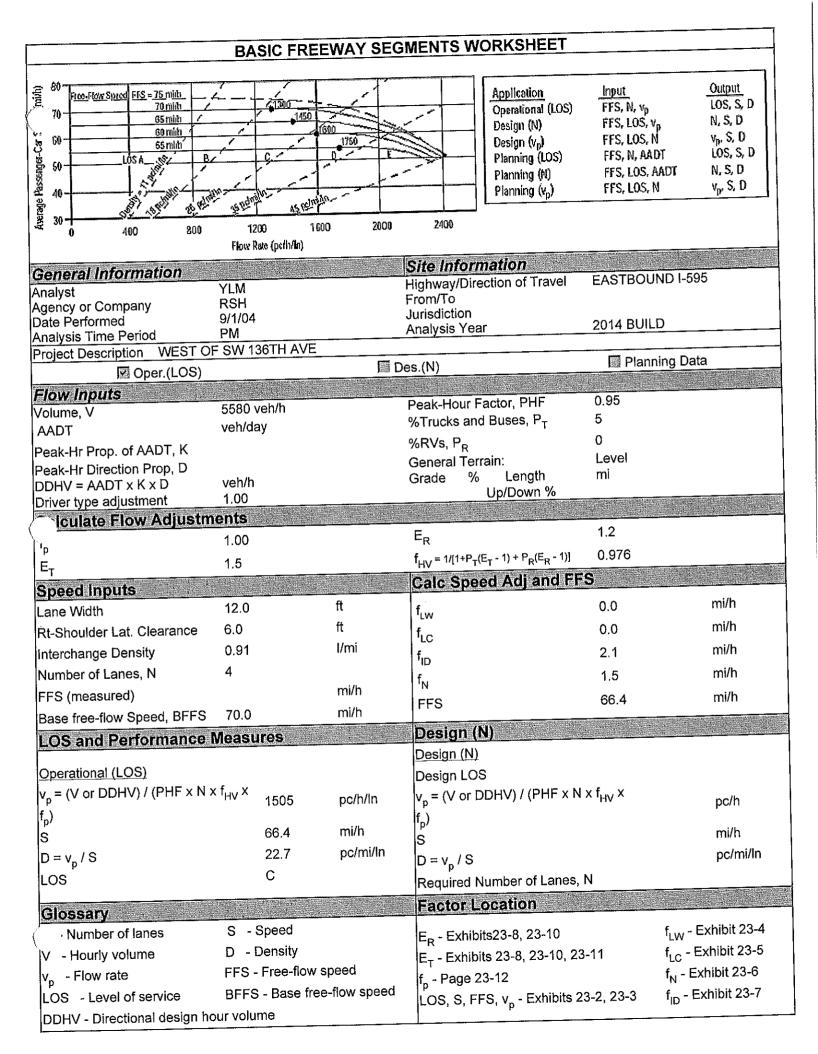
BASIC FREEWAY SEGMENTS

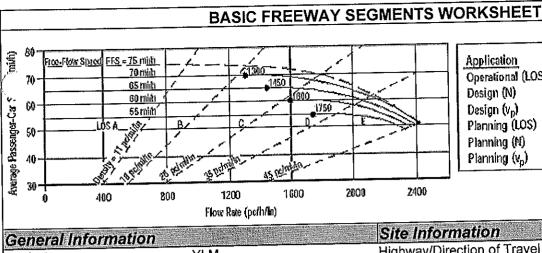
I-595



Application	Input	Output
Operational (LOS)	FFS, N, v _D	LOS, S, D
Design (N)	FFS, LOS, V _D	N, S, D
Design (v _p)	FFS, LOS, N	v _p . S. D
Planning (LOS)	FFS, N, AADT	LÖS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

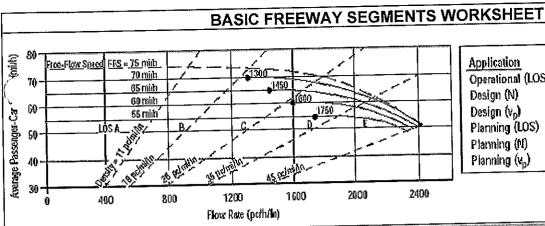
30 100 900	\$100° j	45 CELTO			
30 400 800		1600 2000	2400		
	Flow Rate (porh	(Ala)		100	
General Information			Site Information	FACTROI	UND I-595
nalyst	YLM		Highway/Direction of Travel From/To	EASIBU	0MD 1-999
agency or Company Date Performed	RSH 9/1/04		Jurisdiction		
analysis Time Period	AM		Analysis Year	2014 BUI	LD
Project Description WEST	OF SW 136TH	AVE		Di-	in Data
☑ Oper.(LOS)] []	Des.(N)	I-3 Plan	nning Data
Flow Inputs			D. J. Have Factor DUE	0.95	
/olume, V	6986 veh/h		Peak-Hour Factor, PHF %Trucks and Buses, P _T	5.95	
AADT	veh/day		•	0	
Peak-Hr Prop. of AADT, K			%RVs, P _R General Terrain:	Level	
Peak-Hr Direction Prop, D	veh/h		Grade % Length	mi	
DDHV = AADT x K x D Driver type adjustment	1.00		Up/Down %		
Colculate Flow Adjustr	A THE RESIDENCE OF THE PROPERTY OF THE PROPERT	Property of the second field			
	1.00		E _R	1.2	
'p	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
E _T	1.5		Calc Speed Adj and F	FS	
Speed Inputs	40.0	ft			mi/h
Lane Width	12.0		f _{LW}	0.0	
Rt-Shoulder Lat. Clearance	6.0	ft	f_{LC}	0.0	mi/h
Interchange Density	0.91	l/mi	f _{ID}	2.1	mi/h
Number of Lanes, N	4		f _N	1.5	mi/h
FFS (measured)		mi/h	FFS	66.4	mi/h
Base free-flow Speed, BFFS	70.0	mi/h			
LOS and Performance	Measures		Design (N)		
			Design (N)		
Operational (LOS)	•		Design LOS		
v _p = (V or DDHV) / (PHF x N	х т _{НV} х 1884	pc/h/ln	$v_p = (V \text{ or DDHV}) / (PHF \times N)$	1 x f _{HV} x	pc/h
f _p)		***	f_p)		·
S	64.2		S		mi/h
D = v _p / S	29.4	pc/mi/ln	$D = v_p / S$		pc/mi/ln
Los	D		Required Number of Lanes	, N	
			Factor Location		
Glossary Number of Japas	S - Speed	<u> </u>			f _{LW} - Exhibit 23-4
Number of lanes	D - Densit		E _R - Exhibits23-8, 23-10	0.44	f _{LC} - Exhibit 23-5
v - Hourly volume	FFS - Free-	-	E _T - Exhibits 23-8, 23-10, 2	J-11	LC - EXHIBIT 20-0
v _p - Flow rate			f _p - Page 23-12		f _N - Exhibit 23-6
LOS - Level of service		se free-flow speed	LOS, S, FFS, v _p - Exhibits :	23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design h	our volume				





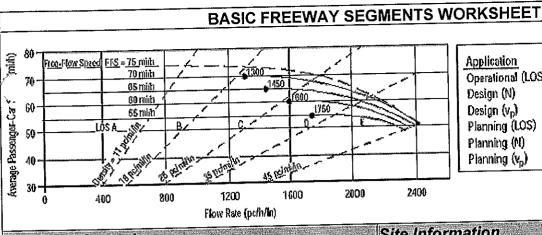
Application	<u>Input</u>	Output
Operational (LOS)	FFS, N, v _o	LOS, S, D
Design (N)	FFS, LOS, v _o	N, S, D
Design (v _p)	FFS, LOS, N	v _p . S. D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

6 400 800	1200 1 Flow Rate (poth/lin)	600 2000	Z400		
	Hors was (benne)		Site Information		Strains on the terms
General Information Analyst Agency or Company	YLM RS&H		Highway/Direction of Travel From/To	I-595 EB Between S	SR 7 On &I-95 Off
Date Performed Analysis Time Period	9/1/04 AM Peak Period		Jurisdiction Analysis Year	2014 BUIL	D
Project Description VIADUCT				—————————————————————————————————————	ning Data
Oper.(LOS)		<u> Ia c</u>	Des.(N)	I Plan	ning Data
Flow Inputs		areas Electrication	Peak-Hour Factor, PHF	0.95	
/olume, V	11066 veh/h		%Trucks and Buses, P _T	5	
AADT	veh/day		•	0	
Peak-Hr Prop. of AADT, K			%RVs, P _R General Terrain:	Level	
Peak-Hr Direction Prop, D DDHV = AADT x K x D	veh/h		Grade % Length	mi	
Driver type adjustment	1.00		Up/Down %		
Iculate Flow Adjustm	ents				
·	1.00		E _R	1.2	
1 _p	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
E _T			Calc Speed Adj and FF	S	
Speed Inputs	12.0	ft		0.0	mi/h
_ane Width	6.0	ft	f _{LW}		mi/h
Rt-Shoulder Lat. Clearance	0.91	1/mi	f _{LC}	0.0	
Interchange Density		<i>3</i> 1111	f _{ID}	2.1	mi/h
Number of Lanes, N	4	mi/h	f _N	1.5	mi/h
FFS (measured)			FFS	66.4	mi/h
Base free-flow Speed, BFFS	70.0	mi/h			
LOS and Performance I	Veasures	<u> </u>	Design (N)		
Operational (LOS)			Design (N)		
v _n = (V or DDHV) / (PHF x N x	(f X		Design LOS	v f v	
۲	1985 °	pc/h/ln	$v_p = (V \text{ or DDHV}) / (PHF \times N)$	X IHV X	pc/h
f _p)		mi/h	[f _p)		mi/h
\$		pc/mi/ln	S		mi/h
D = v _p / S	- -	ролтип	$D = v_p / S$		pc/mi/ln
LOS	F		Required Number of Lanes,	N	
Glossary	reactive sizes their	Process (September)	Factor Location		All Called Total Carter and Carter
Number of lanes	S - Speed		E _R - Exhibits23-8, 23-10		f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density		E _T - Exhibits 23-8, 23-10, 23	I-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow	speed	•	. • •	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base fre		f _p - Page 23-12	3_2 23_3	f _{ID} - Exhibit 23-7
DDHV - Directional design ho		-	LOS, S, FFS, v _p - Exhibits 2	U. Z ₁ ZU-U	.lo



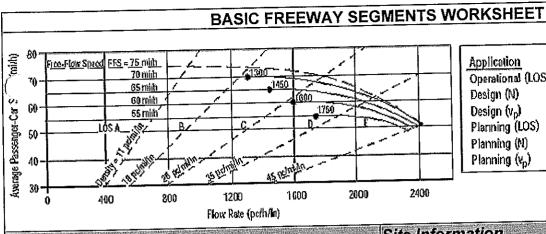
<u>Application</u>	Input	Output
Operational (LOS)	FFS, N, Vp	LOS, S, D
Design (N)	FFS, LOS, Vp	N, S, D
Design (v _p)	FFS, LOS, N	v _o , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

30 400 800	1200 160	0 2000	2400		
	Flow Rate (pc/h/lin)				
Seneral Information			Site Information	I-595 EB	
nalyst Agency or Company	YLM RS&H		Highway/Direction of Travel From/To Jurisdiction	Between S	R 7 On &I-95 Off
Pate Performed Inalysis Time Period	PM Peak Period		Analysis Year	2014 BUIL	D
roject Description VIADUCT	-		(A1)	Plann	ning Data
☑ Oper.(LOS)		I I D	es.(N)	1 % T IGH	
low Inputs	8087 veh/h		Peak-Hour Factor, PHF	0.95	
/olume, V	veh/day		%Trucks and Buses, P _T	5	
AADT	vernuay		%RVs, P _R	0	
Peak-Hr Prop. of AADT, K Peak-Hr Direction Prop, D			General Terrain:	Level	
DDHV = AADT x K x D	veh/h		Grade % Length	mi	
Oriver type adjustment	1.00		Up/Down %		encores constanting to the
Cloulate Flow Adjustm	<u>ents</u>			1.2	
, b	1.00		E _R		
E _T	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
Speed Inputs			Calc Speed Adj and FF	S	
ane Width	12.0	ft	f _{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f _{LC}	0.0	mi/h
Interchange Density	0.91	I/mi	f _{ID}	2.1	mi/h
Number of Lanes, N	4		f _N	1.5	mi/h
FFS (measured)		mi/h	'N FFS	66.4	mi/h
Base free-flow Speed, BFFS	70.0	mi/h		-	
LOS and Performance I	Vieasures		Design (N)		
0			Design (N)		
Operational (LOS)	·f v		Design LOS		
v _p = (V or DDHV) / (PHF x N x	`' ^{HV} ^ 2181	pc/h/ln	$v_p = (V \text{ or DDHV}) / (PHF \times N)$	х т _{НV} х	pc/h
f _p)	58.4	mi/h	f _p)		mi/h
S	37.3	pc/mi/ln	S		
D = v _p / S		ротпин	$D = v_p / S$		pc/mi/ln
LOS	E		Required Number of Lanes,	<u>N</u>	
Glossary	the proportion in the party of		Factor Location		
- Number of lanes	S - Speed		E _R - Exhibits23-8, 23-10		f _{LW} - Exhibit 23-4
v - Hourly volume	D - Density		E _T - Exhibits 23-8, 23-10, 23	-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow s	speed	f _p - Page 23-12		f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free	-flow speed	LOS, S, FFS, v _p - Exhibits 2	3-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design ho	ur volume		[00, 0, 110, v _p = Extillition 2	,	



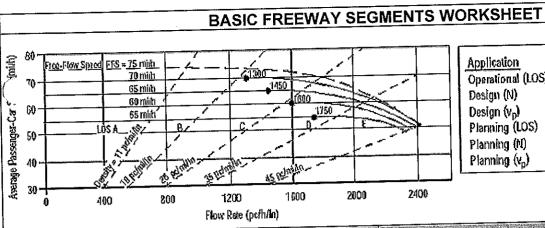
Application	Input	Output
Operational (LOS)	FFS, N, v _o	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _D)	FFS, LOS, N	v _o , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

₹ 30 	100 12	200	1600	2000	2400		
	Flow	Rate (pc/h/lin)			WARRY 1100		
General Information		77			Site Information		
Analyst	YM				Highway/Direction of Travel	EASTBOU EB 595 EA	ND ST OF 195
Agency or Company	RSH	ı			From/To Jurisdiction	LD 330 LA	10, 0, 100
Date Performed Analysis Time Period	9/1/04 AM Pa	eak Hour			Analysis Year	2014 BUIL	D
Project Description I-595							
✓ Oper.(LO				D	es.(N)	☐ Planr	ning Data
Flow Inputs		100				0.05	
Volume, V	6583	veh/h			Peak-Hour Factor, PHF	0.95 5	
AADT	veh/da	ay			%Trucks and Buses, P _T		
Peak-Hr Prop. of AADT, K					%RVs, P _R	0 Level	
Peak-Hr Direction Prop, D					General Terrain: Grade % Length	mi	
DDHV = AADT x K x D	veh/h 1.00				Up/Down %		
Driver type adjustment	Name and Address of the Owner o						
Cloulate Flow Adjus	1.00				E _R	1.2	
¹ p					$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
E _T	1.5				Calc Speed Adj and FF	9:	
Speed Inputs					Cale Speed Adjand in		://-
Lane Width	12.0		ft		f _{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearanc	e 6.0		ft		f _{LC}	0.0	mi/h
Interchange Density	0.91		l/mi		f _{ID}	2.1	mi/h
Number of Lanes, N	4				f _N	1.5	mi/h
FFS (measured)			mi/h	1		66.4	mi/h
Base free-flow Speed, BF	FS 70.0		mi/h	1	FFS	OO1	
LOS and Performan		ıres			Design (N)		
					Design (N)		
Operational (LOS)					Design LOS		
$v_p = (V \text{ or DDHV}) / (PHF x)$	N x f _{HV} x	1776	pc/f	n/ln	$v_p = (V \text{ or DDHV}) / (PHF \times N)$	x f _{HV} x	pc/h
f _p)					f_p)		F 2
S		65.3	mi/l		S		mi/h
D = v _p / S		27.2	pc/ı	mi/ln	$D = v_p / S$		pc/mi/ln
LOS		D			Required Number of Lanes,	N	
					Factor Location		
Glossary Number of lanes	<u> </u>	Speed					f _{LW} - Exhibit 23-4
		Density			E _R - Exhibits23-8, 23-10	1.44	f _{LC} - Exhibit 23-5
V - Hourly volume		- Free-flov	v sneed		E _T - Exhibits 23-8, 23-10, 23)-11	LC - LAMBIL 2000
v _p - Flow rate		- Free-nov S - Base fr		eneed	f _p - Page 23-12		f _N - Exhibit 23-6
LOS - Level of service			CC-IIOW	ap cc u	LOS, S, FFS, v _p - Exhibits 2	3-2, 23-3	f _{ID} - Exhibit 23-7
DDUV Directional design	n nour volu	me					



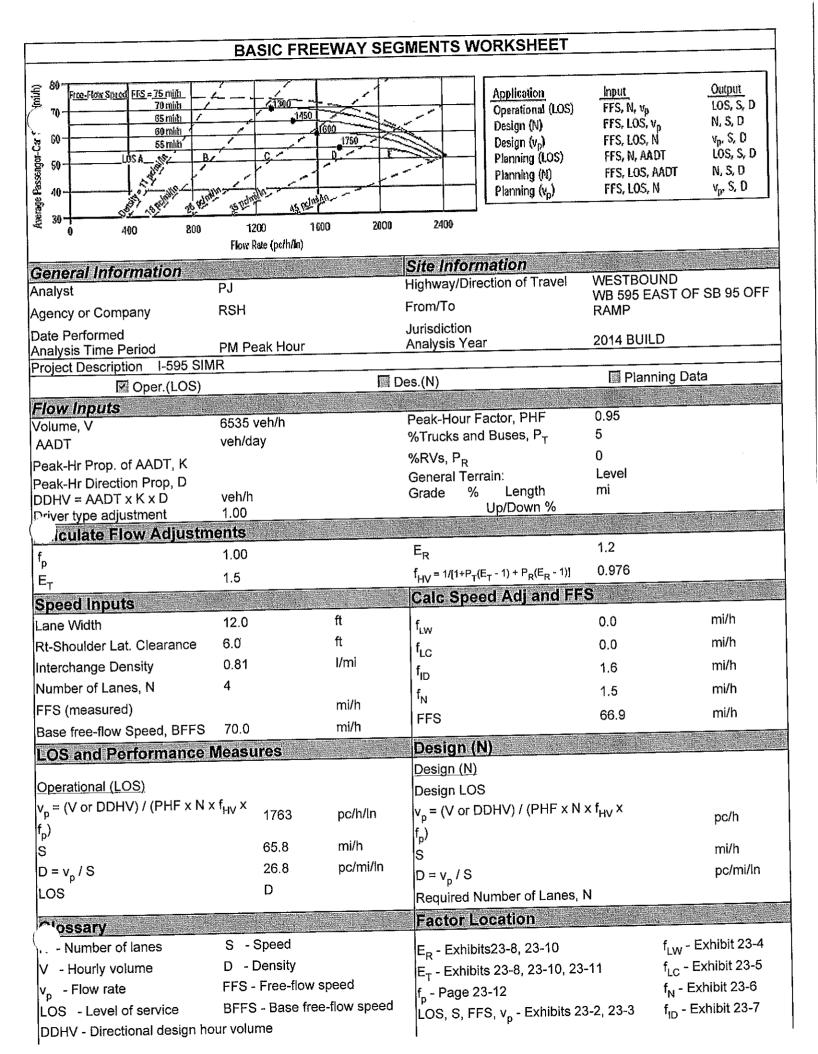
Application .	Input	Output
Operational (LOS)	FFS, N, v _D	LOS, S, D
Design (N)	FFS, LOS, Vp	N, S, D
Design (v _p)	FFS, LOS, N	v _p . S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

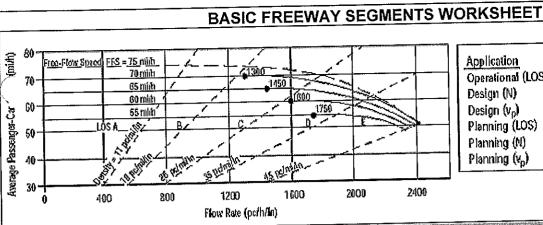
£ 30		100 2000	2400		
	Flow Rate (pulh/lin)				
General Information			Site Information	CACTROL	IND
Analyst	YM	•	Highway/Direction of Travel From/To	EASTBOU	AST OF 195
Agency or Company	RSH		Jurisdiction		
Date Performed Analysis Time Period	PM Peak Hour		Analysis Year	2014 BUII	LD
Project Description I-595 SIA	/IR				
☑ Oper.(LOS)			Des.(N)	<u>I∄ Plan</u>	ning Data
Flow Inputs			E L. DIE	0.95	
/olume, V	4747 veh/h		Peak-Hour Factor, PHF	0.95 5	
AADT	veh/day		%Trucks and Buses, P _T		
Peak-Hr Prop. of AADT, K			%RVs, P _R	0 Level	
Peak-Hr Direction Prop, D			General Terrain: Grade % Length	mi mi	
DDHV = AADT x K x D	veh/h		Up/Down %		
Driver type adjustment	1.00			and the second	
culate Flow Adjustm	1.00		E _R	1.2	
^l p			$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
E _T	1.5		Calc Speed Adj and Fl	The same of the sa	
Speed Inputs			eale obeen well amoun		
Lane Width	12.0	ft	f _{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f _{LC}	0.0	mi/h
Interchange Density	0.91	I/mi	f _{ID}	2.1	mi/h
Number of Lanes, N	4		f _N	1.5	mi/h
FFS (measured)		mi/h	FFS	66.4	mi/h
Base free-flow Speed, BFFS	70.0	mi/h	Fro	00.1	
LOS and Performance	Measures		Design (N)		Electronical partial English
			Design (N)		
Operational (LOS)			Design LOS		
$V_p = (V \text{ or DDHV}) / (PHF x N)$	^{х т} _{НV} х 1280	pc/h/ln	$V_p = (V \text{ or DDHV}) / (PHF \times N)$	l x f _{HV} x	pc/h
f_p)		• • •	$ f_p\rangle$		•
S	66.4	mi/h	s		mi/h
$D = v_p / S$	19.3	pc/mi/ln	$D = v_p / S$		pc/mi/ln
LOS	С		Required Number of Lanes,	N	
Glossary		SIO SIO	Factor Location		
Number of lanes	S - Speed		E Evhibite 22 8 23-10		f _{LW} - Exhibit 23-4
	D - Density		E _R - Exhibits 23-8, 23-10	2 11	f _{LC} - Exhibit 23-5
Y .	FFS - Free-flow	speed	E _T - Exhibits 23-8, 23-10, 2	J-11	f _N - Exhibit 23-6
v _p - Flow rate	BFFS - Base fre		f _p - Page 23-12		IN - EXHIBIT 23-0
LOS - Level of service		o-now apecu	LOS, S, FFS, v _p - Exhibits 2	23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design he	our volume				



Application	<u>Input</u>	<u>Output</u>
Operational (LOS)	FFS, N, v _D	LOS, S, D
Design (N)	FFS, LOS, V _D	N, S, D
Design (v _p)	FFS, LOS, N	ν _p . S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (M)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

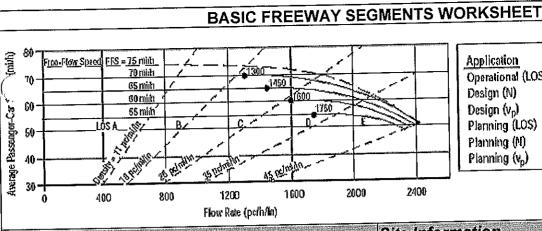
30 400 86	,,	600 2000	2400		
	Filour Rate (pc/h/lin)		Site Information		
eneral Information	PJ		Highway/Direction of Travel	WESTBO	UND
nalyst			From/To		AST OF SB 95 OFF
agency or Company	RSH		Jurisdiction	RAMP	
Date Performed Analysis Time Period	9/1/04 AM Peak Hour		Analysis Year	2014 BUI	_D
Project Description I-595					. 5
☑ Oper.(LOS			Des.(N)	I Plan	ning Data
Flow Inputs	er er er er er er er er er		- DIE	0.05	
/olume, V	5065 veh/h		Peak-Hour Factor, PHF	0.95 5	
AADT	veh/day		%Trucks and Buses, P _T	0	
Peak-Hr Prop. of AADT, K			%RVs, P _R General Terrain:	Level	
Peak-Hr Direction Prop, D	veh/h		Grade % Length	mi	
DDHV = AADT x K x D Priver type adjustment	1.00		Up/Down %		
lculate Flow Adjus	The second secon				
4.2.4.7.00.000 - 1.4.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	1.00		E _R	1.2	
f _p ⊏	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
E _T			Calc Speed Adj and F	The same of the sa	Editor (September 1
Speed Inputs	12.0	ft		0.0	mi/h
Lane Width		ft	f _{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearance	0.81	I/mi	f _{LC}		mi/h
Interchange Density	4	177411	f_{ID}	1.6	
Number of Lanes, N	4	mi/h	f _N	1.5	mi/h
FFS (measured)	- 0 70.0	mi/h	FFS	66.9	mi/h
Base free-flow Speed, BFf	The second secon	(110/1)	Design (N)		
LOS and Performant	e Measures		Design (N)		
Operational (LOS)			Design LOS		
$v_p = (V \text{ or DDHV}) / (PHF x)$	N x f _{HV} x	11- 11-	$v_n = (V \text{ or DDHV}) / (PHF x)$	N x f _m , x	
f_p)	1366	pc/h/ln	i P	HV	pc/h
.p/	66.9	mi/h	f _p)		mi/h
D = v _p / S	20.4	pc/mi/ln	S D=v/S		pc/mi/ln
LOS	С	•	D = V _p / S	: N	r
			Required Number of Lanes	2, 14	
<u></u> ossary			Factor Location		
Number of lanes	S - Speed		E _R - Exhibits23-8, 23-10		f _{LW} - Exhibit 23-4
∨ - Hourly volume	D - Density		E _T - Exhibits 23-8, 23-10, 2	23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow		f _p - Page 23-12		f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base from	ee-flow speed	LOS, S, FFS, v _p - Exhibits	23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design	n hour volume				





Application	Input	Output
Operational (LOS)	FFS, N, v _D	LOS, S, D
Design (N)	FFS, LOS, V _D	N, S, D
Design (v _p)	FFS, LOS, N	ν ₀ . S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

30 400 800	1200 160	0 2000	2400		
() 400 acc	Flow Rate (poin/lin)				
General Information			Site Information		and the state of t
nalyst	YLM		Highway/Direction of Travel	I-595 WB	95 SB and SR
Agency or Company	RS&H		From/To	7/TPKE	
Date Performed			Jurisdiction	2014 BUIL	n
Analysis Time Period	AM Peak Period		Analysis Year	2014 BUIL	
Project Description VIADUC	Τ		es.(N)	Plann	ing Data
☑ Oper.(LOS)		1310	es.(N)		
Flow Inputs	8238 veh/h		Peak-Hour Factor, PHF	0.95	
Volume, V AADT	veh/day		%Trucks and Buses, P _T	5	
Peak-Hr Prop. of AADT, K	10.200		%RVs, P _R	0	
Peak-Hr Direction Prop, D			General Terrain:	Level	
DDHV = AADT x K x D	veh/h		Grade % Length	mi	
Driver type adjustment	1.00		Up/Down %		Company (1871)
culate Flow Adjustn				1.2	
$f_{\mathbf{p}}$	1.00		E _R	0.976	
E _T	1.5	A STATE OF THE STA	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$		
Speed Inputs	14 (17 C 20 K)		Calc Speed Adj and FF	· S	70 180
Lane Width	11.0	ft	f _{LW}	1.9	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f _{LC}	0.0	mi/h
Interchange Density	0.81	I/mi	f _{ID}	1.6	mi/h
Number of Lanes, N	5		f _N	0.0	mi/h
FFS (measured)		mi/h	FFS	66.5	mi/h
Base free-flow Speed, BFFS	70.0	mi/h	Fr3		
LOS and Performance	Measures		Design (N)		
			Design (N)		
Operational (LOS)	u f v		Design LOS	_	
$v_p = (V \text{ or DDHV}) / (PHF \times N)$	^{X T} HV ^X 1778	pc/h/ln	$v_p = (V \text{ or DDHV}) / (PHF \times N)$	x f _{HV} x	pc/h
f _p)	65. 2	mi/h	$f_{\mathbf{p}}$)		1 11-
S	65.3	pc/mi/ln	S		mi/h
$D = v_p / S$	27.2	pomini	$D = v_p / S$		pc/mi/ln
LOS	D		Required Number of Lanes,	N	N. S.
Clossary			Factor Location		
Number of lanes	S - Speed		E _R - Exhibits23-8, 23-10		f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density		E _T - Exhibits 23-8, 23-10, 23	3-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow s	peed	f _p - Page 23-12		f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free	-flow speed	LOS, S, FFS, v _p - Exhibits 2	3-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design h	our volume		[50, 0, 11 0, v _p = 2xiiibito 2		טו



Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, V _D	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

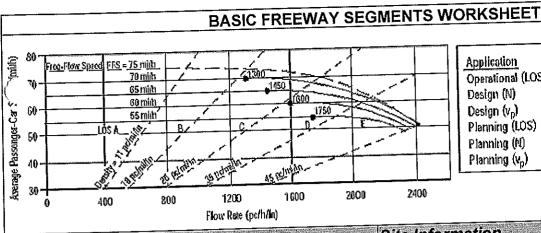
f_{ID} - Exhibit 23-7

LOS, S, FFS, v_p - Exhibits 23-2, 23-3

- LOD
and SR
<u> </u>
· 0
a
mi/h
1111111
pc/h
mi/h
pc/mi/ln
TO A STREET OF THE PARTY OF THE
xhibit 23-4
xhibit 23-5
chibit 23-6
xhibit 23-7
d

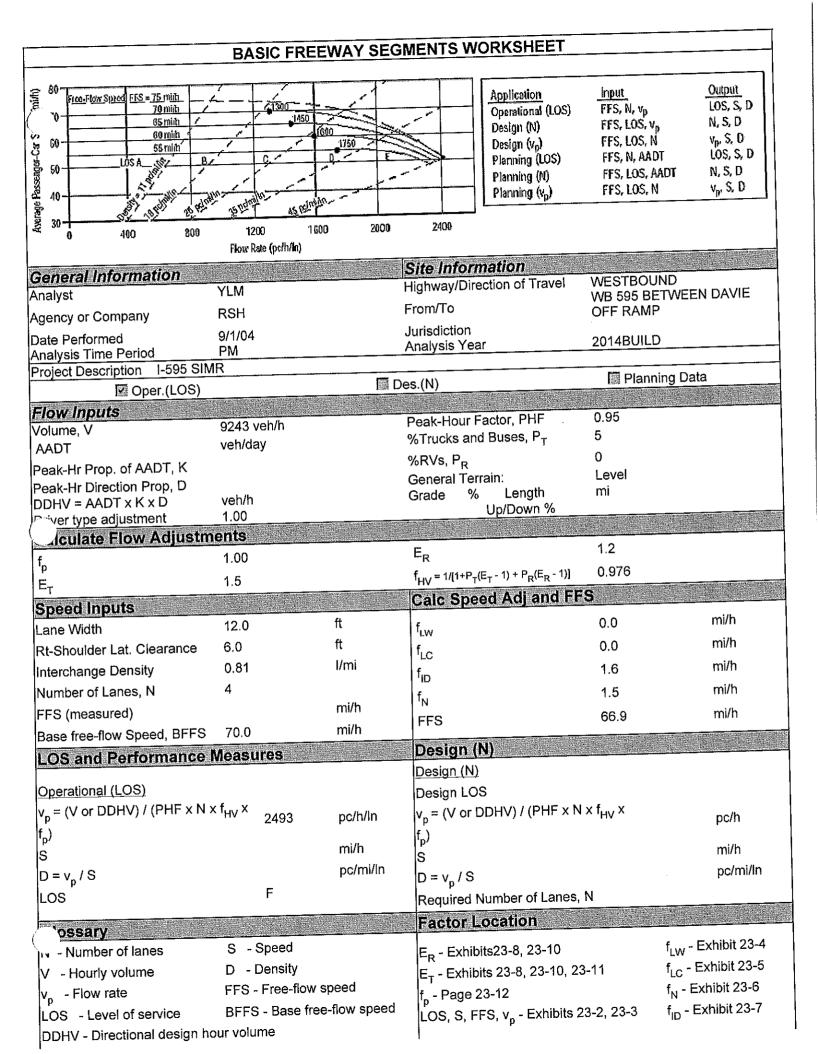
BFFS - Base free-flow speed

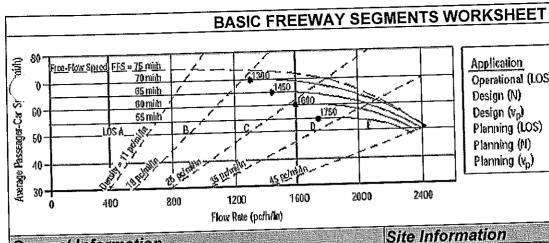
LOS - Level of service



Application	Input_	Output
Operational (LOS)	FFS, N, vp	LOS, S, D
Design (N)	FFS, LOS, V _D	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, O
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D
Planning (v _p)	LL 2' FA2' IA	4h, 0, 10

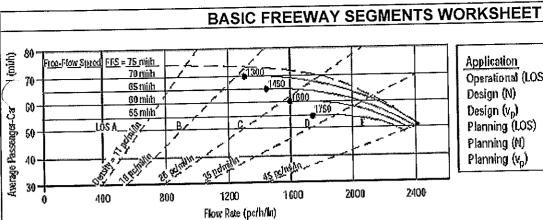
460 800	1200 160 Flow Rate (pc/h/lin)				
General Information	u pellenia		Site Information	WESTBOU	ND
nalyst	YLM		Highway/Direction of Travel	WB 595 BE	TWEEN DAVIE
gency or Company	RSH		From/To	OFF RAMP)
Date Performed	9/1/04		Jurisdiction	2014 BUILI	D
nalysis Time Period	AM		Analysis Year		
Project Description 1-595 SIM	//R		Des.(N)	Plann	ing Data
☑ Oper.(LOS)			7 65.(14)		That would be about the
low Inputs	7307 veh/h		Peak-Hour Factor, PHF	0.95	
/olume, V	veh/day		%Trucks and Buses, P _T	5	
AADT	Verifulay		%RVs, P _R	0	
Peak-Hr Prop. of AADT, K Peak-Hr Direction Prop, D			General Terrain:	Level	
DDHV = AADT x K x D	veh/h		Grade % Length	mi	
Priver type adjustment	1.00		Up/Down %		
iculate Flow Adjustn	nents	2.00		1.2	
f _p	1.00		E _R		
E _T	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
Speed Inputs			Calc Speed Adj and Fl	-8	Commence of the second
Lane Width	12.0	ft	f _{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f _{LC}	0.0	mi/h
Interchange Density	0.81	I/mi	į.	1.6	mi/h
Number of Lanes, N	4		fip	1.5	mi/h
FFS (measured)	·	mi/h	f _N		mi/h
Base free-flow Speed, BFFS	70.0	mi/h	FFS	66.9	
		-45-51 (48)	Design (N)		
LOS and Performance	Measures		Design (N)		
Operational (LOS)			Design LOS		
$v_p = (V \text{ or DDHV}) / (PHF \times N)$	x f _{HV} X 1971	pc/h/ln	$V_p = (V \text{ or DDHV}) / (PHF x N)$	l x f _{HV} X	pc/h
f _p)	1971	ролили	L -		релі
'ρ' S	63.3	mi/h	f _p) S		mi/h
D=v _p /S	31.2	pc/mi/ln	$D = v_p / S$		pc/mi/ln
LOS	D		Required Number of Lanes	. N	
			The state of the s	1	
^'ossary			Factor Location		
- Number of lanes	S - Speed		E _R - Exhibits23-8, 23-10		f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density		E _T - Exhibits 23-8, 23-10, 2	3-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow		f _p - Page 23-12		f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base fre	e-flow speed	LOS, S, FFS, v _p - Exhibits	23-2 23-3	f _{ID} - Exhibit 23-7





Application	Input_	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

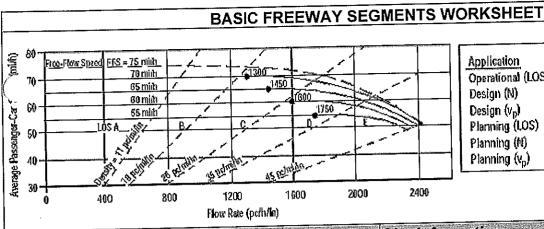
30 400 800	1200	160 0	2000	2400		
	Flow Rate (pc/h/la))		lov I & selfon		
General Information Inalyst	YLM			Site Information Highway/Direction of Travel	WESTBOU WEST OF	JND I-595 SW 136TH AVE
agency or Company Date Performed	RSH 9/1/04			From/To Jurisdiction Analysis Year	2014 BUIL	
nalysis Time Period	_AM			Allalysis Teal		
Project Description I-595 SIM	IR			es.(N)	☐ Planr	ning Data
✓ Oper.(LOS)				/es.(14)		
Flow Inputs	4894 veh/h			Peak-Hour Factor, PHF	0.95	
/olume, V				%Trucks and Buses, P _T	5	
AADT	veh/day			%RVs, P _R	0	
Peak-Hr Prop. of AADT, K				General Terrain:	Level	
Peak-Hr Direction Prop, D	veh/h			Grade % Length	mi	
DDHV = AADT x K x D	1.00			Up/Down %		
Oriver type adjustment culate Flow Adjustm	THE WARREST CONTRACTOR OF THE PARTY OF THE P					
	1.00			E _R	1.2	
[†] p				$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976	
E _T	1.5			Calc Speed Adj and FF	2:	
Speed Inputs				Galc Speed Ausanuss		
Lane Width	12.0	ft		f _{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft		f _{LC}	0.0	mi/h
Interchange Density	0.81	I/mi		f _{ID}	1.6	mi/h
Number of Lanes, N	4				1.5	mi/h
FFS (measured)		mi/h	}	f _N		mi/h
	70.0	mi/h)	FFS	66.9	11111
Base free-flow Speed, BFFS				Design (N)		
LOS and Performance	weasures			Design (N)		
Op <u>erational (LOS)</u>				Design LOS		
v _p = (V or DDHV) / (PHF x N)	x f X			$v_p = (V \text{ or DDHV}) / (PHF \times N)$	l x f x	
F	``HV ^` 1320	pc/ł	n/In	· ·	, v. HA	pc/h
$ f_p $	66.9	mi/l	n	$f_{\mathbf{p}}$)		mi/h
S			mi/ln	S		pc/mi/ln
$D = v_p / S$	19.7	pc/i	11107313	$D = v_p / S$		релили
LOS	С			Required Number of Lanes,	N	****
				Factor Location		te description
Glossary	S - Speed					f _{LW} - Exhibit 23-4
- Number of lanes	•			E _R - Exhibits23-8, 23-10	0.44	f _{LC} - Exhibit 23-5
V - Hourly volume	D - Density	اميد محمط		E _T - Exhibits 23-8, 23-10, 23	J-11	LC - LAHIBIC 20-0
v _p - Flow rate	FFS - Free-fl			f _p - Page 23-12		f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base	free-flow	speed	LOS, S, FFS, v _p - Exhibits 2	23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design ho	our volume			<u> </u>		



Application	Input_	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, V _D	N, S, D
Design (v _p)	FFS, LOS, N	ν _ρ , S, D
Planning (LOS)	ffs, N, Aadt	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _o)	FFS, LOS, N	v _p , S, D

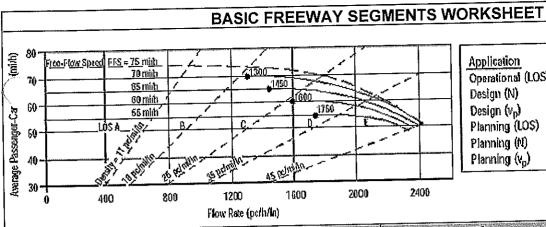
₹ 30 1	400	800	1200	1600	2000	2400		
			Flow Rate (perh/l	n)				
General Info	rmatior	7				Site Information		UND LEGE
\nalyst			YLM	-		Highway/Direction of	Travel WESTBU	UND I-595 SW 136TH AVE
gency or Com	pany		RSH 9/1/04			From/To Jurisdiction	VVLO1 O	544 100 III
oate Performed Analysis Time F			9/1/04 PM			Analysis Year	2014 BUI	LD
roject Descript								
	Ø Oper.(L	OS)			_ □ D	es.(N)	☐ Plan	ning Data
low Inputs				100			0.05	
/olume, V			6302 veh/h			Peak-Hour Factor, P		
AADT			veh/day			%Trucks and Buses	•	
Peak-Hr Prop. o	of AADT,	K				%RVs, P _R	0 Level	
Peak-Hr Directi		D				General Terrain: Grade % Len		
DDHV = AADT			veh/h 1.00			Up/Dov	J	
Driver type adju		vetro	A CONTRACTOR OF THE PROPERTY OF THE PARTY OF					
িব culate Fl	ow Auji	นอนเเ	1.00			E _R	1.2	
P						$f_{HV} = 1/(1+P_T(E_T - 1) + P_T(E_T - 1)$	P _D (E _D - 1)] 0.976	
E _T		Name and Address	1.5				R· R	er yan basar da ang atau
Speed Input	ts					Calc Speed Adj		
₋ane Width			12.0	ft		f _{LW}	0.0	mi/h
Rt-Shoulder La	it. Clearar	nce	6.0	ft		f _{LC}	0.0	mi/h
nterchange De	ensity		0.81	I/m	ni	f _{ID}	1.6	mi/h
Number of Lan	es, N		4			f _N	1.5	mi/h
FFS (measured	d)			mi/	h'		66.9	mì/h
Base free-flow	Speed, B	FFS	70.0	mi/	/h	FFS	00.0	
LOS and Pe			Neasures			Design (N)	Constitution of the Consti	
						Design (N)		
Operational (Lo						Design LOS		
v _p = (V or DDH	IV) / (PHF	x N x	: f _{HV} X 1700	pc	/h/ln	$v_p = (V \text{ or DDHV}) /$	(PHF x N x f _{HV} x	pc/h
f _p)			,,,,,	•		le's		porm
Ś			66.2	mi	/h	' _p , S		mi/h
D = v _p / S			25.7	рс	/mi/ln	$D = v_p / S$		pc/mi/ln
LOS			С			Required Number	of Lanes, N	
						Factor Locatio	The second secon	
Glossary	200					Pagior Foralio		
' - Number of	f lanes		S - Speed			E _R - Exhibits23-8,		f _{LW} - Exhibit 23-4
- Hourly vo			D - Density		_	E _T - Exhibits 23-8,	23-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	:		FFS - Free-fl			f _p - Page 23-12		f _N - Exhibit 23-6
LOS - Level o			BFFS - Base	free-flow	speed	LOS, S, FFS, v _p - I	Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7
			ur volume			, -, -, -, -, -р	·	

RAMPS AND RAMP JUNCTIONS



Application_	Input_	Output
Operational (LOS)	FFS, N, V _D	LOS, S, D
Design (N)	FFS, LOS, V _D	N, S, D
Design (v _D)	FFS, LOS, N	v_0 , S , O
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S. D

30 400 800	1200 160	00 2000	2400		
. 490 BOO	Flow Rate (peth/lin)				
Seneral Information			Site Information		
nalyst	YLM		Highway/Direction of Travel	1-595 EB NOB HILL	ON-RAMP
gency or Company	RSH		From/To Jurisdiction	NOD THEE	014 10 000
Date Performed Analysis Time Period	9/1/04 AM		Analysis Year	2014 BUILI	D
Project Description NOB HIL	L ON -RAMP (LAN	E ADDITION)			
✓ Oper.(LOS)			es.(N)	∏ Plann	ing Data
Flow Inputs				0.05	
/olume, V	8170 veh/h		Peak-Hour Factor, PHF	0.95	
AADT	veh/day		%Trucks and Buses, P _T	5	
Peak-Hr Prop. of AADT, K			%RVs, P _R	0	
Peak-Hr Direction Prop, D			General Terrain: Grade % Length	Level mi	
DDHV = AADT x K x D	veh/h		Grade % Length Up/Down %	1111	
Driver type adjustment	1.00				
Cloulate Flow Adjustm			E _R	1.2	
['] 'p	1.00			0.976	
E _T	1.5	70 mm 1 mm	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$		
Speed Inputs			Calc Speed Adj and FF	5	
Lane Width	12.0	ft	f _{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f _{LC}	0.0	mi/h
Interchange Density	0.91	I/mi	f _{ID}	2.1	mi/h
Number of Lanes, N	4			1.5	mi/h
FFS (measured)		mi/h	f _N		mi/h
Base free-flow Speed, BFFS	70.0	mi/h	FFS	66.4	1111/11
LOS and Performance			Design (N)		
E02 and sentimence	incasa os		Design (N)		
Operational (LOS)			Design LOS		
$v_p = (V \text{ or DDHV}) / (PHF \times N)$	x f _{HV} x 2204	pc/h/ln	$v_p = (V \text{ or DDHV}) / (PHF \times N)$	x f _{HV} x	Un
f _p)	2204	ролин	l b	114	pc/h
S	57.8	mi/h	f _p) S		mi/h
D = v _p / S	38.1	pc/mi/ln			pc/mi/ln
LOS	E		D = V _p / S	N	•
			Required Number of Lanes,	IV	
Glossary	Here are supported to the second seco		Factor Location		
Number of lanes	S - Speed		E _R - Exhibits23-8, 23-10		f _{LW} - Exhibit 23-4
v - Hourly volume	D - Density		E _T - Exhibits 23-8, 23-10, 23	-11	f _{LC} - Exhibit 23-5
v Flow rate	FFS - Free-flow s	speed	f _p - Page 23-12		f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free	e-flow speed	LOS, S, FFS, v_p - Exhibits 23	3-2, 23-3	f _{ID} - Exhibit 23-7
DDUV Directional design ho	our volume		[200, 0, 1, 0, v _p 2xiiisite 2	,	

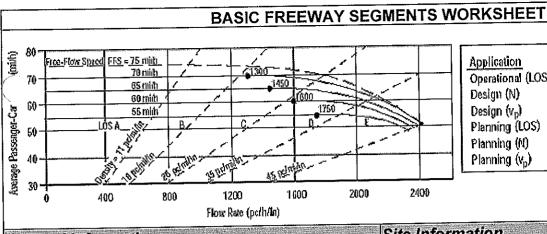


Application	Input	Output
Application	FFS, N, v _D	LOS, S, D
Operational (LOS) Design (N)	FFS, LOS, V _D	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	los, s, d
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _o)	FFS, LOS, N	ν _p , S, D

2 30 400 200	1200 160	00 2000	2400		
a 0 400 800	Flow Rate (pollufin)	2011			
Seneral Information			Site Information	0.000	
nalyst	YLM		Highway/Direction of Travel	1-595 EB	ON DAMP
gency or Company	RSH		From/To	NOR HILL	ON-RAMP
Date Performed	PM		Jurisdiction Analysis Year	2014 BUII	_D
Analysis Time Period Project Description NOB HIL	LON-RAMP (LAN	E ADDITION)			
Oper.(LOS)	L ON TO MA (E)	□ D	es.(N)	Plan	ning Data
Flow Inputs				18 (1977) 18 (1978)	
Volume, V	6365 veh/h		Peak-Hour Factor, PHF	0.95	
AADT	veh/day		%Trucks and Buses, P _T	5	
Peak-Hr Prop. of AADT, K			%RVs, P _R	0	
Peak-Hr Direction Prop, D			General Terrain:	Level	
DDHV = AADT x K x D	veh/h		Grade % Length Up/Down %	mi	
Driver type adjustment	1.00		Oproom 76		
Calculate Flow Adjustm			E	1.2	
` ' p	1.00		E _R	0.976	
E _T	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	The second section of the second section is a second section of the section	
Speed Inputs	talit sanagan a Sala		Calc Speed Adj and FF	5	
Lane Width	12.0	ft	f _{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f _{LC}	0.0	mi/h
Interchange Density	0.91	I/mi	f _{ID}	2.1	mi/h
Number of Lanes, N	4		f _N	1.5	mi/h
FFS (measured)		mi/h		66.4	mi/h
Base free-flow Speed, BFFS	70.0	mi/h	FFS	00.4	
LOS and Performance	Measures		Design (N)		Section of the sectio
			Design (N)		
Operational (LOS)	_		Design LOS		
$v_p = (V \text{ or DDHV}) / (PHF \times N)$	^{X †} HV ^X 1717	pc/h/ln	$v_p = (V \text{ or DDHV}) / (PHF \times N)$	x f _{HV} x	pc/h
f_p)			f_p)		,
S	65.7	mi/h	S		mi/h
D = v _p / S	26.1	pc/mi/ln	$D = v_p / S$		pc/mi/ln
LOS	D		Required Number of Lanes,	N	
Classary			Factor Location		
Glossary · Number of lanes	S - Speed		\$50000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000 \$5000		f _{LW} - Exhibit 23-4
	D - Density		E _R - Exhibits23-8, 23-10	. 11	f _{LC} - Exhibit 23-5
v - Hourly volume	FFS - Free-flow s	sneed	E _T - Exhibits 23-8, 23-10, 23) - T	f Evhibit 22 6
v _p - Flow rate			f _p - Page 23-12		f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free	2-110M Sheen	LOS, S, FFS, v _p - Exhibits 2	3-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design ho	our volume				

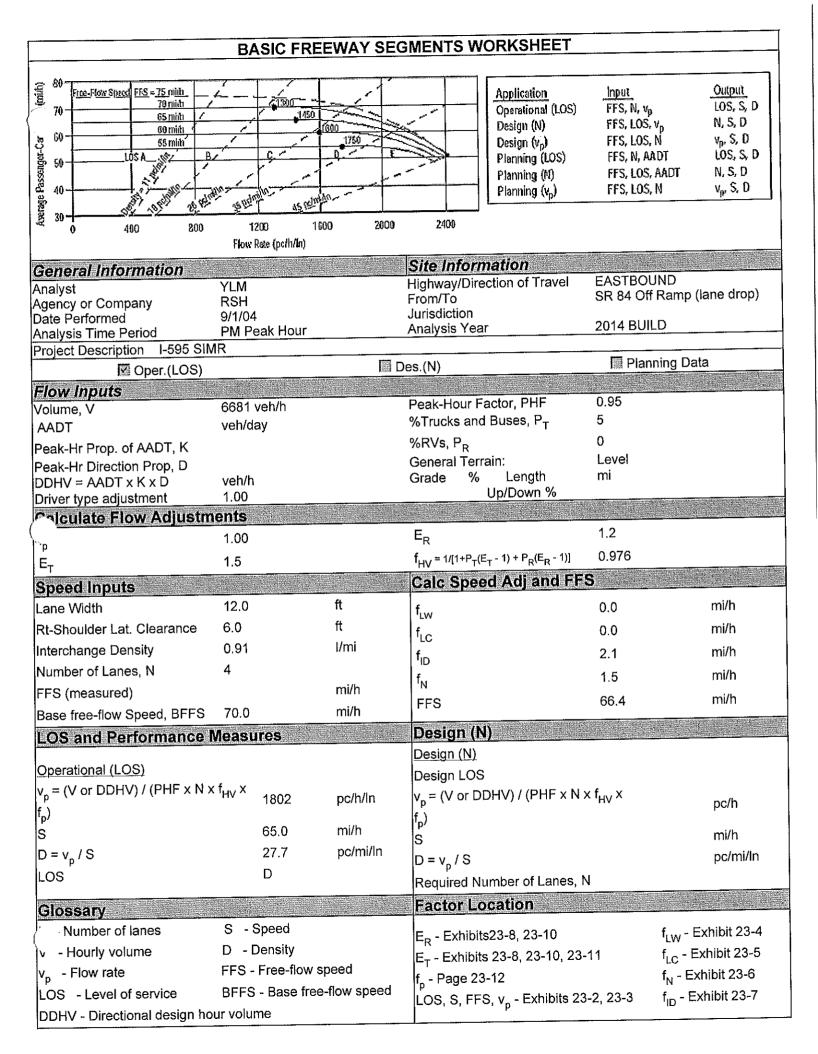
		RAMI	PS ANI				ORKSHEE	T				
General Infor	nation			Sit	e Infori				OTDO			
Analyst		YLM			Fre	eway/Dir	of Travel		STBO	OND OSR 7	OFF	
Agency or Con	npany	RSH			Jur	nction RAMP DI					011	
Date Performe	d	9/1/04				isdiction			–	_		
Analysis Time	Period	AM Peal	k Hou	<u>r</u>	Ana	alysis Yea	ar	20	<u>14BUII</u>	LD		
Project Description I-595 SIMR												
Inputs											A 11	
Upstream Adj	Ramp	Terrain Le	vel							Downstre Ramp	am Adj	
☐ Yes ☐	☐ On								Yes Yes	C On		
M No ■	Off									□ No	☑ Off	
$L_{up} = ft$										L _{down} =	1276	ft
Vu = vet	n/h	S	, ,	80.0 mph ketch (s		S nes, L _A , L	_{FR} = 45.0 _D ,V _R ,V _f)	mph		VD =	679 veh/h	
Conversion to	nc/h Un	der Base C					7			30.00		
	V	·			T	0/ Dv	£		f	v=V/PHF		
(pc/h)	(Veh/hr)	PHF	le	rrain	Truck	%Rv	f _{HV}		f _p	f _{HV} f _p		
Freeway	9996	0.95	Le	vel	5	0	0.976		.00	10785		
Ramp	1216	0.95	Le	vel	2	0	0.990	1 1	.00	1293		
UpStream										700		
DownStream	679	0.95	Le	vel	2	0	0.990		.00	722		
	Market Company of the	erge Areas						Diver	ge Area	IS .		
Estimation of						Estimati	on of v ₁₂			V VD		
		= V _F (P _{FM})								- V _R)P _{FD}		
L _{EQ} = (Equati						L _{EQ} = (Equation 25-8 or 25-9)						
P _{FM} = using E	quation (i	Exhibit 25-	5)			P _{FD} = 0.436 using Equation (Exhibit 25-11)						
V ₁₂ = pc/h						V ₁₂ = 5432 pc/h						NO. OF PROPERTY AND
Capacity Che	cks					Capacit	y Checks					
	Actual	Maxin	num	LOS	F?		Actu		Maxi		LOS F	?
		See Exh	ibit 25-			V _{FI} =V _F	1078	35	92	00	Yes	
V _{FO}		7				V ₁₂	543	2	440	0:All	Yes	
V		4600	·All		•	$V_{FO} = V_{FO}$	949	2	920	00	Yes	
V _{R12}		7000	,, (11		-	V _R	129	3	210	00	No	
11									CONTRACTOR SECURITION	a (if not E	li .	
Layel of Sony	ico Deteri	nination (i	f not F	1		Level of	Service L)eteri	minatioi	I III IIULI		
Level of Serv					'L.	Level of	Service L D _D = 4.25					
D _R = 5.475 +	0.00734				^{'L} A		D _R = 4.25	2 + 0	.0086 V			
$D_{R} = 5.475 + D_{R} = (pc$	0.00734 v / mi /ln)	v _R + 0.007			^{'L} A	D _R =	D _R = 4.25 48.7 (pc/	52 + 0 mi /ln	.0086 V)			
$D_{R} = 5.475 + D_{R} = (pc$ $LOS = (Ex$	0.00734 v / mi /ln) hibit 25-4)	v _R + 0.007			'L _A	D _R = LOS=	D _R = 4.25 48.7 (pc/ F (Exhibit	52 + 0 mi /ln 25-4)	.0086 V)			
$D_R = 5.475 + D_R = (pc)$ $LOS = (Ex)$ Speed Estima	0.00734 v / mi /ln) hibit 25-4) ation	v _R + 0.007			['] L _A	D _R = LOS= Speed E	D _R = 4.25 48.7 (pc/ F (Exhibit stimation	52 + 0 mi /ln 25-4)	.0086 V)			
$D_R = 5.475 + D_R = (pc)$ $LOS = (Ex)$ $Speed Estima$ $M_S = (Ex)$	0.00734 v / mi /ln) thibit 25-4) ation t 25-19)	v _R + 0.007			'L _A	D _R = LOS= Speed E D _s =	D _R = 4.25 48.7 (pc/ F (Exhibit stimation 0.414 (Ex	52 + 0 mi /ln 25-4) xhibit	.0086 V)	₁₂ - 0.0009		W. C.
$D_R = 5.475 + D_R = (pc)$ $LOS = (Ex)$ $Speed Estima$ $M_S = (Exibi)$ $S_R = mph$	0.00734 v / mi /ln) hibit 25-4) ation t 25-19) (Exhibit 2	v _R + 0.007			L _A	D _R = LOS= Speed E D _s = S _R =	D _R = 4.25 48.7 (pc/ F (Exhibit stimation 0.414 (Exhibit 52.5 mpl	62 + 0 mi /ln 25-4) xhibit h (Ex	.0086 V) 25-19) hibit 25-	19)		- W /
$D_R = 5.475 + D_R = (pc)$ $LOS = (Ex)$ $Speed Estima$ $M_S = (Exibi)$ $S_R = mph$ $S_0 = mph$	0.00734 v / mi /ln) thibit 25-4) ation t 25-19)	v _R + 0.007) 5-19) 5-19)			['] L _A	D _R = LOS= Speed E D _s = S _R = S ₀ =	D _R = 4.25 48.7 (pc/ F (Exhibit stimation 0.414 (Ex	62 + 0 mi /ln 25-4) xhibit h (Ex h (Ex	.0086 V) 25-19) hibit 25-	19) 19)		- W. J.

		RAMF	S AND	RAMP	JUNCT	IONS WO	ORK	SHEE	Γ				
General Infor				Site	Inform		of Tr	avel	ΕΔΟ	STBO	LIND		
Analyst		YLM			Free	eway/Dir	01 11	avei			O SR 7	OFF	
Agency or Cor		RSH				ction RAMP D							
Date Performe		9/1/04				sdiction ilysis Yea	r		201	4BUII	D		
Analysis Time	77 0,104 1 1,17 001. 17.					ilysis i ea			201	-,0011			
Project Descri	ption												
<i>Inputs</i> Upstream Adj	Ramp	Terrain Le	vel								Downstre Ramp	am Adj	
□ Yes □	On										☑ Yes	🔚 On	
M No ■	Off										III No	☑ Off	
	ļ									. <u> </u>	L _{down} =	1276	π
L _{up} = ft		S		0.0 mph			,	45.0	mph		VD =	858 veh/h	
1 '	h/h				how lar	es, L _A , L	$_{D^{I}}V_{R}$	V_{f}		-		ven/n	
Conversion t	o pc/h Un	der Base C	Conditio	ons		ı	Г				v=V/PHF		
(pc/h)	V (Veh/hr)	PHF		rain	Truck	%Rv		f _{HV}		f _p	$f_{HV} f_p$		
Freeway	7639	0.95	Lev	/el	5	0_	0.	976	1.0	00	8242		
Ramp	958	0.95	Lev	/el	2	0	0.	990	1.0	00	1019		
UpStream											040		
DownStream	858	0.95	Lev	/el	2_	0	0.	990		00	912		
	M	erge Areas				Diverge Areas Estimation of v ₁₂							
Estimation o	f V ₁₂					Estimat	ion	AND DESCRIPTION OF THE PERSON					
	V ₁₂	= V _F (P _{FM}))								- V _R)P _{FD}		
L _{EQ} = (Equa	tion 25-2 o	r 25-3)				L _{EQ} = (Equation 25-8 or 25-9)							
P _{FM} = using E	Equation (Exhibit 25-	5)			P _{FD} =0.436 using Equation (Exhibit 25-11)							
V ₁₂ = pc/h	•					V ₁₂ = 4168 pc/h					20 454-00-12/2/20		
Capacity Ch	ecks					Capacit	y C						. 1
	Actual		num	LOS	3 F?			Actu			imum_	LOS F	? _
		See Ext	nibit 25-			V _{FI} =V	F	824	2		200	No	
V _{FO}		7	,			V ₁₂		416	8	440	0:All	No_	
						V _{FO} = V	/ _F -	722	3	92	00	No	
V _{R12}		4600	D:All			V _R		101	9	21	00	No	
Level of Ser	vice Dotor	mination (if not F	1		Level o	f Se	rvice L)etern	ninatic	n (if not i	5)	
D _R = 5.475	+ 0 00734	v = + 0.00	78 V.a	0.0062	7 L,						/ ₁₂ - 0.000		
1 ''	oc/ mi /ln)	· R	12		^	D _R =	37	.8 (pc/	mi /ln))			
1 15 "	•	1)				LOS=		Exhibit					
	Exhibit 25-4	"				Speed	,						
Speed Estin						D _s =		390 (E					
١ ٠	bit 25-19)					S _R =		.0 mp					
1 ''	h (Exhibit 2					$S_0 =$.8 mp					
, ,	h (Exhibit 2					S =		.0 mp					
S= mp	h (Exhibit 2	25-14)				5 =	57	u mp	. (EX	HUIL ZC	, 10)		



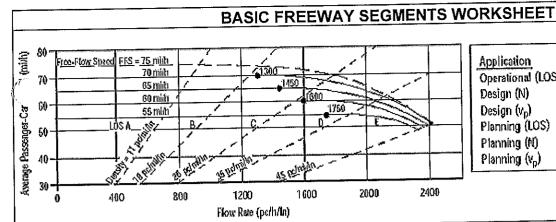
Application	Input	Output
Operational (LOS)	FFS, N, vp	LOS, S, D
Design (N)	FFS, LOS, V _D	N, S, D
Design (v _p)	FFS, LOS, N	ν _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

o 400 800	1200 Flow Rate (pc/h/lin)	1600 2000	2400		
General Information	distribution of the second	9 9 9 9 9 9	Site Information		
Analyst Agency or Company	YLM RSH		Highway/Direction of Travel From/To	EASTBO SR 84 OF	UND FF RAMP (lane drop)
Date Performed Analysis Time Period	9/1/04 AM Peak Hour		Jurisdiction Analysis Year	2014BUIL	_D
Project Description I-595 SIM	IR				· D-I-
🖾 Oper.(LOS)			Des.(N)	I∷ Plar	nning Data
Flow Inputs			Data Hay Sector DUE	0.95	
Volume, V	8780 veh/h		Peak-Hour Factor, PHF %Trucks and Buses, P _T	0.93 5	
AADT	veh/day		•	0	
Peak-Hr Prop. of AADT, K			%RVs, P _R General Terrain:	Level	
Peak-Hr Direction Prop, D	veh/h		General retrain. Grade % Length	mi	
DDHV = AADT x K x D Driver type adjustment	1.00		Up/Down %_		
Colculate Flow Adjustm	AND RESIDENCE OF THE PROPERTY OF THE PARTY O				
`'p	1.00		E _R	1.2	
E _T	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
Speed Inputs			Calc Speed Adj and FF	-8	Per Party of the profes
Lane Width	12.0	ft	f _{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f _{LC}	0.0	mi/h
Interchange Density	0.91	I/mi	f _{ID}	2.1	mi/h
Number of Lanes, N	4		f _N	1.5	mi/h
FFS (measured)		mi/h		66.4	mi/h
Base free-flow Speed, BFFS	70.0	mi/h	FFS	00,4	
LOS and Performance I	Vieasures		Design (N)		
Operational (LOS)			Design (N)		
Operational (LOS)	f v		Design LOS		
$v_p = (V \text{ or DDHV}) / (PHF \times N \times f_p)$	1 'HV ^ 2368	pc/h/ln	$v_p = (V \text{ or DDHV}) / (PHF \times N)$	x t _{HV} x	pc/h
p.		mi/h	f _p)		!.
S / C		pc/mi/ln	S		mi/h
$D = v_p / S$	F	pomini	D = v _p / S		pc/mi/ln
LOS	Г		Required Number of Lanes,	N	
Glossary	Constitution (extendible)		Factor Location		
Number of lanes	S - Speed		E _R - Exhibits23-8, 23-10		f _{LW} - Exhibit 23-4
v - Hourly volume	D - Density		E _T - Exhibits 23-8, 23-10, 23	3-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow	/ speed	1 •		f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base fro	ee-flow speed	f _p - Page 23-12	3_2 23_3	f _{ID} - Exhibit 23-7
DDHV - Directional design ho			LOS, S, FFS, v _p - Exhibits 2	.0-2, 20-0	'ID —//// Za /



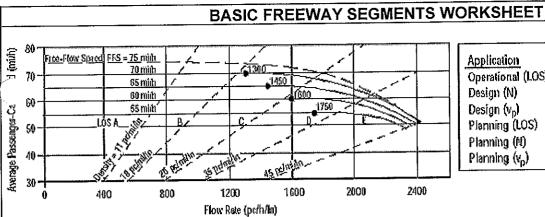
		RAME	S AND				ORKSHEE	T				
General Infor	mation			Site	a Inforn		of Trougal	E/	CTRA	LINID		
, and you			eway/Dir of Travel EASTBC			On-Ramp						
Agency or Cor		RSH				ction sdiction		10	IIIhive	Officially	Р	
Date Performe		9/1/04				sulction Ilysis Yea	r	20	14 BU	ח וו		
Analysis Time		AM Peak	Hour	<u> </u>	Alle	ily SIS T CC	<u> </u>		111 00			
Project Descrip	ption					Maria de la companya						
01		Terrain Le	vel							Downstrea	am Adj	
Upstream Adj	Ramp									Ramp	155 0 -	
⊠ Yes 📓	On									☑ Yes ☑ No	☑ On 圖 Off	
M No □	Off									L _{down} =	1750	
L _{up} = ft		S	, .	0.0 mph			FR = 45.0	mph		VD =	1015 veh/h	
1	h/h				how lan	es, L _A , L	$_{D}, V_{R}, V_{f})$					
Conversion t	o pc/h Un	der Base (Conditio	ons				ľ		L-V/DUE		
(pc/h)	V (Veh/hr)	PHF		rain	Truck	%Rv	f _{HV}		f _p	v=V/PHF f _{HV} f _p		
Freeway	8101	0.95	Lev	vel	5	0	0.976	1	.00	8741		
Ramp	1950	0.95	Lev		2	0	0.990	1	.00	2073		·····
UpStream										1070		
DownStream	1015	0.95	Le	vel	2	0	0.990	<u> </u>	.00	1079	<u></u>	
	Me	erge Areas	- X-2-7000 - X-2-111					Dive	rge Area	as		
Estimation o	f v ₁₂					Estimat	ion of v ₁₂					
	V ₁₂	= V _F (P _{FM})					٧	12 = \	v _R + (v _F	$(-V_R)P_{FD}$		
L _{EQ} ≓ (Equat		• • • • • • • • • • • • • • • • • • • •				L _{EQ} = (E	Equation 25	5-8 or	25-9)			
P _{FM} = 0.600			nibit 25-	·5)		$P_{FD} = u$	sing Equat	ion (Exhibit 2	25-11)		
V ₁₂ = 5244		(===		,		V ₁₂ = po	c/h					
Capacity Che						4 	y Checks					
Capacity Cit	Actual	Maxir	num	LOS	F?		Actu	ıal	Max	imum	LOS F	?
	/ (Olda)	THE A				V _{FI} =V				hibit 25-		
V _{FO}	10814	690	0	Ye	s		F			14 <u> </u> 00:All		
			·			V ₁₂	.					
V	7317	4600	D·AII	Ye	ıs.	$V_{FO} = V_{R}$	F -			thibit 25- 14		
V _{R12}	/31/	4000	J., (III	'	Ü	V _R			See Ex	hibit 25-3		
Level of Sen	vice Deter	mination (if not F)		Level o	f Service L	Deter	minatic	n (if not F)	
$D_{R} = 5.475$					7 L _A		$D_{R} = 4.25$	52 + (/ 8800.0	/ ₁₂ - 0.0009	9 L _D	
1 ''	3.6 (pc/ m				•	D _R =	(pc/ mi /ln	-				
LOS = F	(Exhibit 25	5-4)				LOS=	(Exhibit 25					GHEN
Speed Estim	ation						Estimation					
$M_S = 6.12$	21 (Exibit 2	25-19)				$D_s =$	(Exhibit 2	5-19)				
1 5	•		9)			S _R =	mph (Ext	hibit 2	25-19)			
1 17					$S_0 = mph$ (Exhibit 25-19)							
1 -	I					S = mph (Exhibit 25-15)						
- 111bi	· (EAIIDIL Z		Conveigh	@ 2000 Lle	niversity o	f Florida All	Rights Resen					٧

		DAM	DC AND	DAME	BINC	CLONIC 104	ODKCHEE	Т			1	
Conoral Infor	mation	RAIVI	PS AIN		e Infori	A COMPANY OF A COLUMN PROPERTY OF THE PROPERTY	ORKSHEE	. 1				
						eeway/Dir of Travel EASTBC			OUND	OUND		
1						ction			Turnpike On-Ramp			
Date Performed		T(O)				isdiction						
Analysis Time						alysis Year 2014 BU			UILD			
Project Descri	ption I-59	95 SIMR						AASSA 2515 (AASSA 2515 (A				
Inputs											and a	
01		Terrain Le	vel						Downstre	am Adj		
Upstream Adj	Ramp								Ramp I ⊠ Yes	™ ^-		
🏻 Yes 🖺	On									☑ On ☑ Off		
⊠ No 🕞	Off									1750	_#	
L _{up} = ft							- 45.0	mph	L _{down} =	754		
ир		$S_{FF} = 60.0 \text{ mph}$ $S_{FR} = 45.0 \text{ mph}$ Sketch (show lanes, L_A , L_D , V_R , V_f)							VD =	veh/h		
	h/h						אייאיים					
Conversion t		der Base C	onaiti	ons			<u> </u>		v=V/PHF			
(pc/h)	V (Veh/hr)	PHF	Те	rrain	Truck	%Rv	f _{HV}	f _p	f _{HV} f _p			
Freeway	5823	0.95	Le	vel	5	0	0.976	1.00	6283			
Ramp	1510	0.95	Le	vel	2	0	0.990	1.00	1605			
UpStream												
DownStream	754	0.95	Le	vel	2	0	0.990	1.00	802			
	Me	erge Areas						Diverge Ar	eas			
Estimation o	f V ₁₂			14000		Estimat	ion of v ₁₂	1000				
	V ₁₂ :	= V _F (P _{FM})					V	= V _R + (\	$V_{\rm F} - V_{\rm R}) P_{\rm FD}$			
L _{EQ} = (Equat						L _{EO} = (E	quation 25	-8 or 25-9)				
P _{FM} = 0.600			ihit 25.	-5)				ion (Exhibit	25-11)		İ	
1		ation (Exi	IIDIL 20	-0)		$V_{12} = pc$		(======================================	,			
V ₁₂ = 3769							y Checks					
Capacity Che		Movie	011100	LOS	E2	Capacit	Actu	al Ma	ximum	LOS F?	\exists	
	Actual	Maxir	num	LUS	<u> </u>				xhibit 25-			
V _{FO}	7888	690	0	Ye	s	V _{FI} =V _F	=		14			
FO	7000					V ₁₂		44	IIA:00			
						$V_{FO} = V$	F -	See E	xhibit 25-			
V _{R12}	5374	4600	:All	Ye	s	V _R		Soo E	xhibit 25-3			
	<u> </u>					V_{R}						
Level of Serv	***************************************					Level of			on (if not F			
$D_{R} = 5.475$	+ 0.00734	v _R + 0.007	'8 V ₁₂ -	0.00627	'L _A		$D_{R} = 4.25$	2 + 0.0086	V ₁₂ - 0.000	a r ^D		
$D_R = 41$	1.6 (pc/ mi	/ln)				D _R =	(pc/ mi /ln)					
LOS = F	(Exhibit 25	i-4)				LOS=	(Exhibit 25	-4)				
Speed Estim	`					Speed L	Estimation	100000				
$M_S = 1.090 \text{ (Exibit 25-19)}$ $D_S = \text{ (Exhibit 25-19)}$												
S _R = 40.4 mph (Exhibit 25-19)			S _R = mph (Exhibit 25-19)									
1 11				S ₀ = mph (Exhibit 25-19)								
1 *	• •					S =						
43.0	, mhn (∈x	111011 20-14	<i>!</i>			<u></u>						



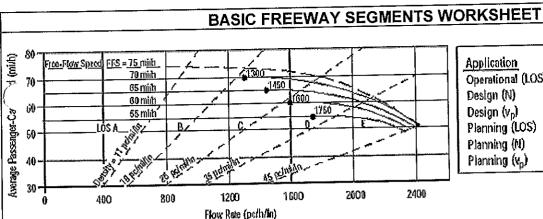
Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, V _n	N, 5, D
Design (v _p)	FFS, LOS, N	ν ₀ , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _o)	FFS, LOS, N	v _p , S. D

~ 0 400 800	1200 Flow Rate (pc/h/ln)	000 Z000	2400		
General Information			Site Information		
nalyst Agency or Company	YLM RSH		Highway/Direction of Travel From/To	Westbound Davie On-F	
Pate Performed Analysis Time Period	9/1/04 AM		Jurisdiction Analysis Year	2034	
roject Description I-595 SI	MR	age c	No. (NI)	■ Plann	ing Data
☑ Oper.(LOS)		la L	Des.(N)	7	
low Inputs	6574 veh/h		Peak-Hour Factor, PHF	0.95	
/olume, V	veh/day		%Trucks and Buses, P _T	5	
AADT	veri/day		%RVs, P _R	0	
Peak-Hr Prop. of AADT, K			General Terrain:	Level	
Peak-Hr Direction Prop, D DDHV = AADT x K x D Driver type adjustment	veh/h 1.00		Grade % Length Up/Down %	mi	
Palculate Flow Adjusti	THE RESERVE AND ADDRESS OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE				
	1.00		E _R	1.2	
<u>h</u>			$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
E _T	1.5		Calc Speed Adj and FF	a communication and a second second second second	
Speed Inputs			Gale speed Au allust		.,
₋ane Width	12.0	ft	f _{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f _{LC}	0.0	mi/h
nterchange Density	0.81	I/mi	f _{ID}	1.6	mi/h
Number of Lanes, N	4		f _N	1.5	mi/h
FFS (measured)		mi/h	i	66.9	mi/h
Base free-flow Speed, BFFS	70.0	mi/h	FFS	00.9	
LOS and Performance	The second section of the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second seco	Service to an expe	Design (N)		
			Design (N)		
Operational (LOS)			Design LOS		
$v_p = (V \text{ or DDHV}) / (PHF x N f_p)$	x f _{HV} x 1773	pc/h/ln	$v_p = (V \text{ or DDHV}) / (PHF \times N)$	x f _{HV} x	pc/h
S	65.7	mi/h	f _p)		mi/h
D = v _p / S	27.0	pc/mi/ln	S		pc/mi/ln
LOS	D	·	$D = v_p / S$		ролили
	_		Required Number of Lanes,	N	
Glossary			Factor Location		1
· - Number of lanes	S - Speed		E _R - Exhibits23-8, 23-10		f _{LW} - Exhibit 23-4
- Hourly volume	D - Density		E _T - Exhibits 23-8, 23-10, 23	-11	f _{LC} - Exhibit 23-5
v ₂ - Flow rate FFS - Free-flow speed			f _p - Page 23-12		f _N - Exhibit 23-6
LOS - Level of service BFFS - Base free-flow speed			3-2, 23-3	f _{ID} - Exhibit 23-7	
DDHV - Directional design h			LOS, S, FFS, v _p - Exhibits 23	J Z, ZO"O	'IU



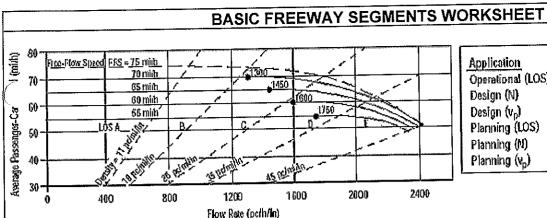
Application	Input	Output
Operational (LOS)	FFS, N, VD	LOS, S, D
Design (N)	FFS, LOS, v _D	N, S, D
Design (v _p)	FFS, LOS, N	ν _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

100 000	Flow Rate (pc/h/ln)				AND THE RESERVE OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERT
General Information			Site Information		
Analyst Agency or Company	YLM RSH 9/1/04		Highway/Direction of Travel From/To Jurisdiction	Westbour Davie On	
Date Performed Analysis Time Period	9/1/04 PM		Analysis Year	2034	
Project Description 1-595 SIM	/IR				
☑ Oper.(LOS)		∏ C	es.(N)	I Plan	ning Data
Flow Inputs				0.05	
Volume, V	8593 veh/h		Peak-Hour Factor, PHF	0.95	
AADT	veh/day		%Trucks and Buses, P _T	5	
Peak-Hr Prop. of AADT, K			%RVs, P _R	0 Loval	
Peak-Hr Direction Prop, D	veh/h		General Terrain: Grade % Length	Level mi	
DDHV = AADT x K x D Driver type adjustment	1.00		Up/Down %		
Calculate Flow Adjustm	and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and t		again an an an agus an an an an an an an an an an an an an		a lateral and the second second second
	1.00		E _R	1.2	
E _T	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
Speed Inputs			Calc Speed Adj and FF	S	
Lane Width	12.0	ft		0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f _{LW}	0.0	mi/h
Interchange Density	0.81	I/mi	f _{LC}	1.6	mi/h
Number of Lanes, N	4		f _{1D}		mi/h
FFS (measured)		mi/h	f _N	1.5	
Base free-flow Speed, BFFS	70.0	mi/h	FFS	66.9	mi/h
LOS and Performance I	Measures		Design (N)		
			Design (N)		
Operational (LOS)	. .		Design LOS		
$v_p = (V \text{ or DDHV}) / (PHF \times N \times N)$	^{(T} HV ^X 2318	pc/h/ln	$v_p = (V \text{ or DDHV}) / (PHF \times N)$	x f _{HV} x	pc/h
f _p)	- 4 -		f _p)		рол I
S	54.5	mi/h	s		mi/h
$D = v_p / S$	42.5	pc/mi/ln	$D = v_p / S$		pc/mi/ln
LOS	E		Required Number of Lanes, N	٨	
Glossary			Factor Location		
N - Number of lanes	S - Speed		E Evhibite 23 8 23-10		f _{LW} - Exhibit 23-4
Hourly volume	D - Density		E _R - Exhibits 23-8, 23-10	.11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow s	peed	E _T - Exhibits 23-8, 23-10, 23-	11	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free		f _p - Page 23-12	-0 03.3	f _{ID} - Exhibit 23-7
DDHV - Directional design ho			LOS, S, FFS, v _p - Exhibits 23		ID - LAMBIE 20-7
					



Application	Input	Output
Operational (LOS)	FFS, N, v _o	LOS, S, D
Design (N)	FFS, LOS, v _D	N, S, D
Design (v _p)	FFS, LOS, N	v _o . S, D
Planning (LOS)	FFS, N, AADT	LÖŞ, Ş, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _o)	FFS, LOS, N	v _p , S, D

30 400 800	1200	1600 20	00 2400			
	Flow Rate (polh/lin)					
Seneral Information			Site Infor		L COE MAID	
Analyst	YLM		Highway/Dir From/To		I-595 WB PINE ISLAN	ND ON-RAMP
Agency or Company	RSH		Jurisdiction			
Date Performed Analysis Time Period	AM		Analysis Ye	ar	2014 BUILE)
Project Description I-595 SIN	/IR					
☑ Oper.(LOS)			Des.(N)		Planni	ng Data
Flow Inputs	THE COURT BY			The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	0.95	
/olume, V	6447 veh/h			, areter, ,	5	
AADT	veh/day			nd Buses, P _T		
Peak-Hr Prop. of AADT, K			%RVs, P _R	·	0 Lovol	
Peak-Hr Direction Prop, D			General Te Grade %		Level mi	
DDHV = AADT x K x D	veh/h 1.00		Glade /	Up/Down %		
Oriver type adjustment	CONTRACTOR OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF					
ুৰ্ culate Flow Adjustm			E _R		1.2	
r	1.00			(E 1) + P (E - 1)]	0.976	
E _T	1.5			(E _T - 1) + P _R (E _R - 1)]		
Speed Inputs	CARLES STATE		Calc Spe	ed Adj and FFS)	
Lane Width	12.0	ft	f _{LW}		0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f _{LC}		0.0	mi/h
Interchange Density	0.81	I/mi	f _{ID}		1.6	mi/h
Number of Lanes, N	4				1.5	mi/h
FFS (measured)		mi/h	f _N			mi/h
Base free-flow Speed, BFFS	70.0	mi/h	FFS		66.9	(111/11
LOS and Performance			Design (N) * * * * same and		
E69.3 SUCESTANDINATION	Measures		Design (N)			 -
Operational (LOS)			Design LO			
$v_p = (V \text{ or DDHV}) / (PHF \times N)$	(f _{HV} X	pc/h/ln		DDHV) / (PHF x N x	fus, X	
f _p)	`` ^{HV}	рстип	(p - (v o) .	30111771 (1.111111111111111111111111111111	ΠV	pc/h
s	65.9	mi/h	'p/			mi/h
	26.4	pc/mi/ln	S D = v (S			pc/mi/ln
D=v _p /S	D	•	$D = V_p / S$., , , , , , , , , , , , , , , , , , ,		ролтип
LOS			1	Number of Lanes, N		
Glossary			Factor L	<u> </u>		
N - Number of lanes	S - Speed		F Exhib	oits23-8, 23-10		f _{LW} - Exhibit 23-4
- Hourly volume	D - Density		1 13	oits 23-8, 23-10, 23-1		f _{LC} - Exhibit 23-5
v - Flow rate	FFS - Free-flow	/ speed	1 '			f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base from		f _p - Page 2			f _{ID} - Exhibit 23-7
DDHV - Directional design ho		,	LOS, S, F	FS, v _p - Exhibits 23-	·∠, ∠ɔ-ɔ	ID - FYLIDIC 20 1
טרעם - הוופטווסוומו design no	out Volume					



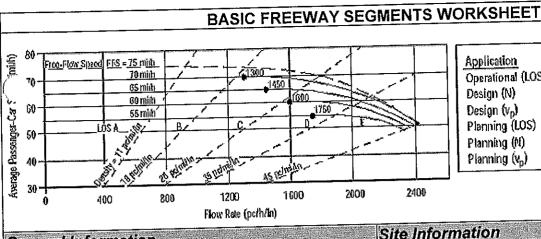
Application	Input	Output
Operational (LOS)	FFS, N, V _D	LOS, S, D
Design (N)	FFS, LOS, V _D	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

0 400 800	Flow Rate (poth/lin)				
General Information			Site Information		
Analyst Agency or Company	YLM RSH		Highway/Direction of Travel From/To	I-595 WB PINE ISLA	AND ON-RAMP
Date Performed Analysis Time Period	9/1/04 PM		Jurisdiction Analysis Year	2014 BUIL	LD
Project Description I-595 SIM	/IR			Plan	ning Data
🔽 Oper.(LOS)			es.(N)	I I Flair	Illing Data
Flow Inputs	2005		Peak-Hour Factor, PHF	0.95	
/olume, V	8395 veh/h		%Trucks and Buses, P _T	5	
AADT	veh/day		%RVs, P _R	0	
Peak-Hr Prop. of AADT, K			General Terrain:	Level	
Peak-Hr Direction Prop, D DDHV = AADT x K x D	veh/h		Grade % Length	mi	
Driver type adjustment	1.00		Up/Down %_		
Calculate Flow Adjustm	ents				
<u> </u>	1.00		E _R	1.2	
E _T	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
Speed Inputs			Calc Speed Adj and FF	S	
ane Width	12.0	ft	f _{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f _{LC}	0.0	mi/h
Interchange Density	0.81	I/mi	f _{ID}	1.6	mi/h
Number of Lanes, N	4		1	1.5	mi/h
FFS (measured)		mi/h	f _N	66.9	mi/h
Base free-flow Speed, BFFS	70.0	mi/h	FFS	8,00	111/11
LOS and Performance I	Measures		Design (N)		Karvella III sapa salah basa
American Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of t			Design (N)		
Operational (LOS)	. #		Design LOS		
v _p = (V or DDHV) / (PHF x N x	^{C I} HV ^X 2264	pc/h/ln	$v_p = (V \text{ or DDHV}) / (PHF \times N)$	x f _{HV} x	pc/h
f _p)	50.0	uai/la	$ \mathbf{f}_{\mathbf{p}} $		·
S	56.3	mi/h	S		mi/h
D = v _p / S	40.2	pc/mi/ln	$D = v_p / S$		pc/mi/ln
LOS	E		Required Number of Lanes,	N	A
Glossary			Factor Location		
' - Number of lanes	S - Speed		E _R - Exhibits23-8, 23-10		f _{LW} - Exhibit 23-4
Hourly volume	D - Density		E _T - Exhibits 23-8, 23-10, 23	-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow s	speed	L ·		f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free	e-flow speed	f _p - Page 23-12	3_2 23_3	f _{ID} - Exhibit 23-7
DDHV - Directional design ho		•	LOS, S, FFS, v _p - Exhibits 23	J-L, LU-U	'ID EXTINCTES !
DDITY - Directional accign no					<u> </u>

TURNPIKE

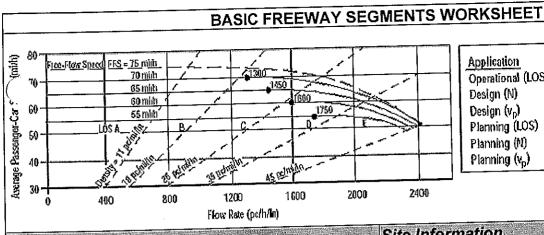
		RAME	S AND				ORKSHEE	T		
General Infor				Site	mation					
Analyst		YLM				eway/Dir of Travel Turnpike			e NB 3 to TPKE	
Agency or Cor		RS&H	4			ction sdiction		1-080 E		
Date Performe		9/20/200 AM	4			alysis Yea	ar	2014 Bl	JILD	
Analysis Time Project Descri						ary 0.0 1 0 c				
Inputs	ption roo	O OMITY					100			
00		Terrain Le	vel		,				Downstrea	am Adi
Upstream Adj	ļ								Ramp	
☑ Yes	On								☐ Yes	☐ On
□ No 🖸	Off								I⊠ No	☑ Off
L _{up} = 16	50 ft							. 1.	L _{down} =	ft
11// (1 ==	00	S	4 *	0.0 mph			S _{FR} = 45.0	mph	VD =	veh/h
Ve	h/h			Contract vone and Market	HOW IAI	ies, L _A , L	Di *Ri *f/			
Conversion t		ler Base C	onditi	ons					v=V/PHF	
(pc/h)	(Veh/hr)	PHF	Te	rrain	Truck	%Rv	f _{HV}	f _p	$f_{HV} f_p$	
Freeway	3950	0.95	Le	vel	2	0	0.990	1.00	4199	
Ramp	1260	0.95	Le	vel	2	0	0.990	1.00	1340	
UpStream	1600	0.95	Le	vel	2	0	0.990	1.00	1701	
DownStream							<u> </u>	<u> </u>		
	Me	rge Areas						Diverge Are	eas	
Estimation o	f V ₁₂	5,600.0				Estimation of V ₁₂				
	V ₁₂ =	: V _F (P _{FM})				$V_{12} = V_R + (V_F - V_R)P_{FD}$				
$L_{EQ} = (Equat$	tion 25-2 or	25-3)				L _{EQ} = (Equation 25-8 or 25-9)				
$P_{FM} = 0.323$	using Equa	ation (Exh	ibit 25	-5)		P _{FD} = using Equation (Exhibit 25-11)				
V ₁₂ = 1356	pc/h					$V_{12} = pc/h$				
Capacity Ch	Samuel and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s					Capacit	y Checks			100 50
	Actual	Maxir	num	LOS	F?		Actu		ximum xhibit 25-	LOS F?
	5539	960	n	l No	,	V _{FI} =V _I	F	366 [14	
V _{FO}	3333					V ₁₂		44	IOO:All	
						' ' '		xhibit 25-		
V _{R12}	2696	4600	IA:C	No)	V _R		C F	14 xhibit 25-3	
					0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	V_R				
Level of Ser						Level o	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s		on (if not F	
$D_{R} = 5.475$	+ 0.00734 \	/ _R + 0.007	′8 V ₁₂ -	- 0.00627	7 L _A	_			V ₁₂ - 0.0009	a r ^D
$D_R = 19$	9.0 (pc/ mi	/ln)				D _R =	(pc/ mi /ln)			
Los = B	(Exhibit 25	-4)				LOS=	(Exhibit 25			
Speed Estim	nation						Estimation			
$M_{\rm S} = 0.28$	30 (Exibit 2	5-19)				D _s =	(Exhibit 25			
MS - 0.260 (EXIDIT 20-15)						S _R = mph (Exhibit 25-19)				
S _R = 62.2 mph (Exhibit 25-19)					1					
1 ''	mph (Exh					S ₀ =	, ,	nibit 25-19) nibit 25-15)		

		RAME	S ANI				ORKSHEE	T			
General Infor	mation				e Inforn	nation			م الحد	MD	
Analyst							of Travel		pike	to TPKE	
Agency or Cor	, ,	RS&H				ction		1-09	0 ED	IU IFKE	
Date Performe		9/20/200	4			sdiction lysis Yea	ar.	201	4 BU	חוו	
Analysis Time		PM_			Ana	ilysis Tea	11	201	7 00		
Project Descri	ption 1-58	15 SIIVIK									
Inputs 00		Terrain Le	vel							Downstrea	am Adj
Upstream Adj	Ramp									Ramp	
Yes 🖺	On									☐ Yes	□ On
□ No ☑	Off									I⊠ No	☑ Off
L _{up} = 16	50 ft									L _{down} =	ft
13	30	S		'0.0 mph			_{FR} = 45.0	mph		VD =	veh/h
13711 ==	h/h		S	ketch (s	how lan	ies, L _A , L	_D ,V _R ,V _f)				
Conversion t	to pc/h Uni	der Base C	onditi	ons							
	V	PHF		rrain	Truck	%Rv	f _{HV}	1	p	v=V/PHF	
(pc/h)	(Veh/hr)	PHF	16	Italii	TIUOK	701 (V			<u> </u>	f _{HV} f _p	
Freeway	4787	0.95	Le	vel	2	0	0.990	1.0		5089	
Ramp	1000	0.95	Le	vel	2	0	0.990	1.0		1063	
UpStream	1330	0.95	Le	vel	2	0	0.990	1.0	00	1414	
DownStream							<u></u>	<u> </u>	_ A	<u> </u>	
	Me	erge Areas						Diverg	e Area	as	**
Estimation o	if V ₁₂	and the				Estimat	ion of v ₁₂				
	V ₁₂ :	= V _F (P _{FM})				ļ	V	₁₂ = V _R	+ (V _F	- V _R)P _{FD}	
L _{EQ} = (Equa						$L_{EO} = (E$	quation 25	-8 or 2	5-9)		
P _{FM} = 0.357			ihit 25	-5)		P _{FD} = using Equation (Exhibit 25-11)					
		ation (Ex	iibit 20	٠,		$V_{12} = pc/h$					
V ₁₂ = 1819	and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s						y Checks				
Capacity Ch	Actual	Maxir	num	Los	F2	lankan.	Actu	al l	Max	imum	LOS F?
	Actual	IVIANII	IIIIII	1		\/ -\/			ee Ex	hibit 25-	
V _{FO}	6152	960	0	l No	,	V _{FI} =V _I	F			14	
FO	0.02		_			V_{12}			440	0:All	
						V _{FO} = V	F -	S		thibit 25-	
V _{R12}	2882	4600):All	l No)	$\frac{V_R}{V_R}$		s		hibit 25-3	
				<u> </u>			f Service L				1
Level of Ser					7.1	Levelo				/ ₁₂ - 0.0009	
$D_{R} = 5.475$	+ 0.00734	v _R + 0.007	′8 V ₁₂ ·	- 0.00627	L _A	_	1.		0000 V	12 - 0,000	, _D
$D_R = 20$	0.6 (pc/ mi	/ln)				D _R =	(pc/ mi /ln)				
LOS = C	(Exhibit 2	5-4)				LOS=	(Exhibit 25			SELECTION OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF T	
Speed Estin	nation					Speed	Estimation				
	92 (Exibit 2	25-19)				D _s =	(Exhibit 25	5-19)			
1 9	8 mph (Ex)			S _R =	mph (Ext	nibit 25	-19)		
1 '	, mph (Exl					s _o =	mph (Ext	nibit 25	-19)		
1 0	i ilipii (⊑xi 9 mph (Ex					s =	mph (Ex				
3- 03.	a mhn (cx	111DIL 20-14	/				Pighte Reserv		- /		Ve



Application .	Input_	<u>Output</u>
Operational (LOS)	FFS, N, Vp	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	ν _ρ , S, O
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

Agency or Company Date Performed Analysis Time Period	Flow Rate (pc/h/ln) YLM RS&H 9/7/04		Site Information		
Analyst Agency or Company Date Performed Analysis Time Period	RS&H		Site Information		
nalyst gency or Company late Performed nalysis Time Period	RS&H			TURNPIKE I	JR
Date Performed			Highway/Direction of Travel From/To	TORNETICE	10
Analysis Time Period			Jurisdiction		
	AM PEAK VOLUM	ES	Analysis Year	2014 BUILD	
	ON-ramp to NB			- Dlannin	na Data
✓ Oper.(LOS)		□ □ □	es.(N)	☐ Plannir	ly Data
Flow Inputs	Margarith and the strongs of the		Peak-Hour Factor, PHF	0.95	
volunic, v	6470 veh/h		%Trucks and Buses, P _T	5	
AADT	veh/day		%RVs, P _R	0	
Peak-Hr Prop. of AADT, K			General Terrain:	Level	
Peak-Hr Direction Prop, D	veh/h		Grade % Length	mi	
DDHV = AADT x K x D Driver type adjustment	1.00		Up/Down %		
	The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon		Page 1922 Page Company Company Design Company	Calcus.	Partie Services
	1.00		E _R	1.2	
¹ p	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
E _T			Calc Speed Adj and FF	S	
Speed Inputs	12.0	ft		0.0	mi/h
Lane Width	6.0	ft	f _{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearance	0.66	I/mi	f _{LC}		mi/h
Interchange Density		171111	f _{ID}	0.8	
Number of Lanes, N	5	nai Ila	f _N	0.0	mi/h
FFS (measured)		mi/h	FFS	69.2	mi/h
Base free-flow Speed, BFFS	70.0	mi/h			A STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STA
LOS and Performance N	<i>l</i> leasures		Design (N)		
Operational (LOS)			Design (N)		
$v_D = (V \text{ or DDHV}) / (PHF \times N \times N)$	f X		Design LOS	vf v	
r ·	'HV ^ 1396	pc/h/ln	$V_p = (V \text{ or DDHV}) / (PHF \times N)$	' 'HV '	pc/h
f _p)	69.2	mi/h	f _p)		mi/h
S	20.2	pc/mi/ln	S		pc/mi/ln
D = v _p / S	20.2 C	Pommin	$D = v_p / S$		ролтип
LOS	·		Required Number of Lanes,	N	
Glossary	Santan edine del 1900.	i magambaga 1841	Factor Location		
Number of lanes	S - Speed		E _R - Exhibits23-8, 23-10	,	_{LW} - Exhibit 23-4
V - Hourly volume	D - Density		E _T - Exhibits 23-8, 23-10, 23	-11	f _{LC} - Exhibit 23-5
v _o - Flow rate	FFS - Free-flow s	peed	f _p - Page 23-12		f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free		I OS S EES V - Evhibite 2		f _{ID} - Exhibit 23-7
DDHV - Directional design hor		-	LOS, S, FFS, v _p - Exhibits 2	·	עוי



Application Operational (LOS) Design (N) Design (v _p)	Input FFS, N, v _p FFS, LOS, v _p FFS, LOS, N	Output LOS, S, D N, S, D v _p , S, D
Planning (LOS) Planning (N) Planning (v _p)	FFS, N, AADT FFS, LOS, AADT FFS, LOS, N	LÖS, S, D N, S, D v _p , S, D

30 1 400 800	1200	1600	2000	2400		
	Flow Rate (pc/h/lin)					
Seneral Information				Site Information	TURNPIKE	NP
nalyst	YLM			Highway/Direction of Travel From/To	TURNPINE	IAD
gency or Company	RS&H 9/7/04			Jurisdiction		_
Date Performed Analysis Time Period	PM PEAK VOL	UMES		Analysis Year	2014 BUILD)
Project Description I-595 WE					DI	na Data
☑ Oper.(LOS)			■D	es.(N)	☐ Planni	ng Data
Flow Inputs	e e e de deserva			D. J. Haus Contor, DUE	0.95	
Volume, V	7307 veh/h			Peak-Hour Factor, PHF %Trucks and Buses, P _T	5	
AADT	veh/day			•	0	
Peak-Hr Prop. of AADT, K				%RVs, P _R General Terrain:	Level	
Peak-Hr Direction Prop, D	veh/h			Grade % Length	mi	
DDHV = AADT x K x D Driver type adjustment	1.00			Up/Down %		
Cloulate Flow Adjustm	THE RESIDENCE OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF T			ertaine Pargiaria (para) de la Compliana de Sala. Salata		
	1.00			E _R	1.2	
'p	1.5			$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
E _T	1.0			Calc Speed Adj and FF	S	
Speed Inputs	42.0	ft		3.23.7/ 3.23.7/ 3.23.2 (A.23.2) (A.23.2)	0.0	mi/h
Lane Width	12.0	ft		f _{LW}		mi/h
Rt-Shoulder Lat. Clearance	6.0	ار I/mi		f _{LC}	0.0	
Interchange Density	0.66	1/(1)1		f _{ID}	0.8	mi/h
Number of Lanes, N	5	141.		f _N	0.0	mi/h
FFS (measured)		mi/h		FFS	69.2	mi/h
Base free-flow Speed, BFFS	70.0	mi/h				
LOS and Performance	<u>Measures</u>			Design (N)		
Oution at (1 OS)				Design (N)		
Operational (LOS)	vf v			Design LOS	v.f. v	
v _p = (V or DDHV) / (PHF x N :	^ ' ^{HV} ^ 1577	pc/h/	'ln	$V_p = (V \text{ or DDHV}) / (PHF \times N)$	x IHV x	pc/h
$f_{\mathbf{p}}$)	68.8	mi/h		f _p)		mi/h
S		pc/m		S		pc/mi/ln
$D = v_p / S$	22.9	ролі	117 11 1	$D = v_p / S$		рс/піліп
LOS	С			Required Number of Lanes,	N	
Glossary				Factor Location		
Number of lanes	S - Speed			E _R - Exhibits23-8, 23-10		f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density			E _T - Exhibits 23-8, 23-10, 23	-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flov	w speed		f _p - Page 23-12		f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base f	ree-flow s	peed	LOS, S, FFS, v _p - Exhibits 2	3-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design he				[200, 0, 110, vp 2, 110, 10 2	, · · -	עוו

		RAM	S AND			IONS W	ORKS	SHEET					
General Infor	mation	V/ 1.4		Sit	e Inforn		of Tro	wol	SB Turnp	ike			
Analyst		YLM				eway/Dir ction	OI II a	avei	Griffin Ro				
Agency or Cor		RSH	. 4			sdiction			Omarrico	•			
Date Performe		9/20/200	4			alysis Yea	ar		2014				
Analysis Time		PM 5 SIMR			71110	alyolo i cc	41		2071				
Project Descri	puon 1-08	NIVIE C											
<i>Inputs</i> Upstream Adj	Ramp	Terrain Le	vel							Downstre Ramp	am Adj		
Yes 🖫	On									∏ Yes	□ On		
□ No □ □	Off									☑ No	☑ Off		
L _{up} = 85								55.0		L _{down} =	ft		
1////	$V_{\rm U} = 2760$ S _{FF} = 70.0 mph						• • •	55.0 m	npn	VD =	veh/h		
ve	ven/n Sketch (snow						_D ,V _R ,\	√ _f)					
Conversion t	o pc/h Un	der Base C	Conditio	ons	7					L-VIDUE			
(pc/h)	V (Veh/hr)	PHF	Ter	rain	Truck	%Rv	f	-tV	f _p	v=V/PHF f _{HV} f _p			
Freeway	3900	0.95	Le	vel	5	0	0.9	76	1.00	4208			
Ramp	550	0.95	Le	vel	2	0	0.9	90	1.00	585			
UpStream	2760	0.95	Le	vel	2	0	0.9	90	1.00	2934			
DownStream										<u> </u>			
	Me	erge Areas						WHAT THE PROPERTY OF THE PARTY	iverge Area	as			
Estimation o	f v ₁₂					Estimat	ion o	100 mars - 100 mars - 100 mars					
	V ₁₂ :	= V _F (P _{FM}))			$V_{12} = V_R + (V_F - V_R)P_{FD}$							
L _{EQ} = (Equat	ion 25-2 o	r 25-3)				L _{EQ} = (Equation 25-8 or 25-9)							
P _{FM} = using E			5)			P _{ED} = 0.436 using Equation (Exhibit 25-11)							
V ₁₂ = pc/h			,			V ₁₂ = 2165 pc/h							
Capacity Ch	ocke					Capacit		HI SANGER OF THE RESERVE OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE					
Capacity Cit	Actual	Maxir	num	LOS	F?			Actua	l Max	mum	LOS F?		
	7100001					V _{FI} =V		4208	96	00	No		
V _{FO}		See Exh			-	V ₁₂		2165		0:All	No		
		4600				$V_{FO} = V$	F -	3623		00	No		
V _{R12}		4000), <u>,</u> ,,,			V_{R}		585	22	00	No		
Level of Sen	vice Deter	mination (if not F)		Level o	f Serv	/ice De	eterminatio	n (if not F)		
	Level of Service Determination (if not F) $D_{R} = 5.475 + 0.00734 \vee_{R} + 0.0078 \vee_{12} - 0.00627 \downarrow_{A}$							= 4.252	+ 0.0086 V	′ ₁₂ - 0.000	9 L _D		
1 ''	N and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second							; (pc/ m	ni /ln)				
1 1	IX							D _R = 21.5 (pc/ mi /ln) LOS= C (Exhibit 25-4)					
									/				
	peed Estimation							Speed Estimation D _s = 0.221 (Exhibit 25-19)					
1 '							, and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second						
1 '` '	າ (Exhibit 2					,							
S ₀ = mph	า (Exhibit 2	!5-19)				S ₀ =		-					
S= mpł	າ (Exhibit 2	25-14)			_	S = 69.5 mph (Exhibit 25-15)							

MAJOR MERGE AND DIVERGE

MERGE ANALYSIS

A1.1) NB I-95 On-Ramp to EB I-595 (AM)

Approaching Freeway Volume:

$$PHF = 0.95$$

fhv =
$$0.976$$
 fp = 1.00

$$fp = 1.00$$

$$vi = 4080 (pc/h)$$

Ramp Volume:

$$fhv = 0.99$$

$$fp = 1.00$$

$$vi = 1347 (pc/h)$$

Departing Freeway Volume:

$$Vi = 5.050$$

$$PHF = 0.95$$

fhv =
$$0.976$$
 fp = 1.00

$$fp = 1.00$$

A1.2) NB I-95 On-Ramp to EB I-595 (PM)

Approaching Freeway Volume:

$$Vi = 2.469$$

$$PHF = 0.95$$

$$fhv = 0.976$$
 $fp = 1.00$

$$fp = 1.00$$

Ramp Volume:

$$PHF = 0.95$$

$$fhv = 0.99$$

$$fp = 1.00$$

Departing Freeway Volume:

$$Vi = 3.498$$

$$PHF = 0.95$$

fhv =
$$0.976$$
 fp = 1.00

$$fp = 1.00$$

$$vi = 3773 (pc/h)$$

A2.1) NB I-95 On-Ramp to WB I-595 (AM)

Approaching Freeway Volume:

$$Vi = 2.743$$

$$fhv = 0.976$$
 $fp = 1.00$

$$fp = 1.00$$

Ramp Volume:

$$PHF = 0.95$$

fhv =
$$0.99$$
 fp = 1.00

$$fp = 1.00$$

Departing Freeway Volume:

$$PHF = 0.95$$

$$fhv = 0.976$$
 $fp = 1.00$

$$fp = 1.00$$

(

A2.2) NB I-95 On-Ramp to WB I-595 (PM)

Approaching Freeway Volume:

$$Vi = 4.025$$

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

vi = 4341 (pc/h)

Ramp Volume:

$$PHF = 0.95$$

$$fhv = 0.99$$

<

$$fp = 1.00$$

vi = 3456 (pc/h)

Departing Freeway Volume:

$$Vi = 7,275$$

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

7846 (pc/h) vi =

A 3.1 Griffin Rd to NB Turnpike (AM)

Approaching Freeway Volume:

$$Vi = 6.320$$

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

6816 (pc/h) vi =

Ramp Volume:

$$V_i = 920$$
 PHF = 0.95

$$fhv = 0.99$$

$$fp = 1.00$$

978 (pc/h) vi =

Departing Freeway Volume:

$$Vi = 7,240$$

$$= 7,240$$
 PHF $= 0.95$

$$fhv = 0.976$$

$$fp = 1.00$$

7808 (pc/h) vi =

A 3.2 Griffin Rd to NB Turnpike (PM)

Approaching Freeway Volume:

$$Vi = 6.780$$

$$PHF = 0.95$$

$$fhv = 0.976$$
 $fp = 1.00$

$$fp = 1.00$$

vi =

7312 (pc/h)

Ramp Volume:

$$PHF = 0.95$$

$$fhv = 0.99$$

$$fp = 1.00$$

vi =

936 (pc/h)

capacity = 4,100

Departing Freeway Volume:

$$Vi = 7,660$$

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

vi =

A4.1) I-595 On-Ramp to SB Turnpike (AM)

Approaching Freeway Volume:

$$Vi = 4.610$$

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

4972 (pc/h) vi =

Ramp Volume:

$$Vi = 2$$
.

$$Vi = 2,750$$
 PHF = 0.95

$$fhv = 0.99$$

$$fp = 1.00$$

vi = 2924 (pc/h)

capacity =

Departing Freeway Volume:

$$Vi = 7,360$$

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

7938 (pc/h) vi =

A4.2) I-595 On-Ramp to SB Turnpike (PM)

Approaching Freeway Volume:

$$Vi = 3,900$$

$$fhv = 0.976$$

$$fp = 1.00$$

vi =

Ramp Volume:

$$Vi = 3,040$$

$$fhv = 0.99$$

$$fp = 1.00$$

vi =

Departing Freeway Volume:

$$Vi = 6,940$$

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

vi =

DIVERGE ANALYSIS

B 1.1 EB I-595 Off-Ramp to NB I-95 (AM)

$$V_i = 11,066$$
 $PHF = 0.95$ $fhv = 0.976$ $fp = 1.00$ $V_F = 11,935$ (pc/h)

N = 4

Therefore D = 32.52 pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 32.52 > 28 - 35 Exhibit 25-4 gives LOS as D in the diverge area.

Level of Service = D

B 1.2 EB I-595 Off-Ramp to NB I-95 (PM)

$$V_i = 8,087$$
 $PHF = 0.95$ $fhv = 0.976$ $fp = 1.00$ $V_F = 8,722 \; (pc/h)$

N = 4

Therefore D = 23.77 pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 23.77 > 20 - 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 2.1 EB I-595 Off-Ramp to SB I-95 (AM)

N = 3

Therefore D = 28.34 pc/mi/in

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 28.34 > 28 - 35 Exhibit 25-4 gives LOS as D in the diverge area.

Level of Service = D

B 2.2 EB I-595 Off-Ramp to SB I-95 (PM)

$$V_i = 5,139$$
 PHF = 0.95 fhv = 0.976 fp = 1.00 $V_F = 5,542$ (pc/h)

N = 3

Therefore D = 20.14 pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 20.14 > 20 - 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B-3.1 EB I-595 Off-Ramp Pine Island Road (AM)

$$Vi= 7,757$$
 PHF = 0.95 fhv = 0.976 fp = 1.00 $V_F = 8366 \text{ (pc/h)}$

N = 4

Therefore D= 22.80 pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 22.80> 20- 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 3.2 EB I-595 Off-Ramp Pine Island Rd (PM)

$$V_i = 6,090$$
 PHF = 0.95 fhv = 0.976 fp = 1.00 $V_F = 6568$ (pc/h)

N = 4

Therefore

D= 17.90

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 17.90 > 10 - 20 Exhibit 25-4 gives LOS as B in the diverge area.

Level of Service = B

B 4.1WB I-595 Off-Ramp to SB I-95 (AM)

Vi= 5,065

PHF = 0.95

fhv = 0.976

fp = 1.00

 $V_F =$

5463 (pc/h)

N = 4

Therefore

D= 14.89

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 14.89> 10-20 Exhibit 25-4 gives LOS as B in the diverge area.

Level of Service = B

B 4.2 WB I-595 Off-Ramp to SB I-95 (PM)

Vi = 6,535

PHF = 0.95

fhv = 0.976

fp = 1.00

 $V_F =$

7048 (pc/h)

N = 4

Therefore

D= 19.21

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 19.21> 10 -20 Exhibit 25-4 gives LOS as B in the diverge area.

Level of Service = B

B 5.1 WB I-595 Off-Ramp NB I-95 (AM)

V_F =

Vi= 4,063

PHF = 0.95

fhv = 0.976

fp = 1.00

.. .

4382 (pc/h)

N = 3

Therefore

D= 15.92

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4

(p.25-5) of the HCM 2000.

For D 15.92> 10-20 Exhibit 25-4 gives LOS as B in the diverge area.

Level of Service = B

B 5.2 WB I-595 Off-Ramp NB I-95 (PM)

$$Vi = 5,242$$

$$fhv = 0.976$$

$$fp = 1.00$$

V_F =

N = 3

Therefore

D= 20.54

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000

For D 20.54> 20-28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 6.1 WB I-595 Off-Ramp SR7/TURNPIKE (AM)

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

 $V_F = 8885 (pc/h)$

N = 5

Therefore

D= 19.37

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 19.37> 10-20 Exhibit 25-4 gives LOS as B in the diverge area.

Level of Service = B

B 6.2 WB I-595 Off-Ramp SR7/TURNPIKE (PM)

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

V_F =

11794 (pc/h)

N = 5

Therefore

D= 25.71

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 25.10> 20-28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 7.1 WB I-595 Off-Ramp University Drive (AM)

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

$$V_F =$$

N = 4

Therefore

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 21.47> 20- 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 7.2 WB I-595 Off-Ramp University Drive (PM)

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

V_F =

9969 (pc/h)

N = 4

Therefore

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 27.16> 20- 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 8.1 WB I-595 Off-Ramp Pine Island Rd (AM)

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

V= =

7090 (pc/h)

N = 4

Therefore

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 19.32> 10- 20 Exhibit 25-4 gives LOS as B in the diverge area.

Level of Service = B

B 8.2 WB I-595 Off-Ramp Pine Island Rd (PM)

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

9268 (pc/h)

N = 4

Therefore

D= 25.25

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 25.25> 20- 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 9.1 WB I-595 Off-Ramp Nob Hill Rd (AM)

PHF = 0.95

fhv = 0.976

fp = 1.00

V_F =

6413 (pc/h)

N = 4

Therefore

D= 17.48

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 17.48> 10- 20 Exhibit 25-4 gives LOS as B in the diverge area.

Level of Service = B

B 9.2 WB I-595 Off-Ramp Nob Hill Rd (PM)

fhv = 0.976

fp = 1.00

 $V_F =$

8411 (pc/h)

N = 4

N = 6

Therefore

D= 22.92

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 22.92> 20- 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 10.1 NB Turnpike Off-Ramp I-595EB (AM)

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

7808 (pc/h)

Therefore

D= 14.19

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 14.19> 10- 20 Exhibit 25-4 gives LOS as B in the diverge area.

Level of Service = B

B 10.2 NB Turnpike Off-Ramp I-595EB (PM)

Vi= 7,660

PHF = 0.95

fhv = 0.976

fp = 1.00

 $V_F =$

8261 (pc/h)

N = 6

Therefore

D= 15.01

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 15.01> 10- 20 Exhibit 25-4 gives LOS as B in the diverge area.

Level of Service = B

B 11.1 NB Turnpike Off-Ramp I-595WB (AM)

Vi = 5,550

PHF = 0.95

fhv = 0.976

fp = 1.00

V_F =

5986 (pc/h)

N = 5

Therefore

D= 13.05

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 13.05> 10- 20 Exhibit 25-4 gives LOS as B in the diverge area.

Level of Service = B

B11.2 NB Turnpike Off-Ramp I-595WB (PM)

Vi= 6.117

PHF = 0.95

fhv = 0.976

fp = 1.00

V_F =

6597 (pc/h)

N = 5

Therefore

D= 14.38

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 14.38> 10- 20 Exhibit 25-4 gives LOS as B in the diverge area.

Level of Service = B

B 12.1 SB Turnpike Off-Ramp I-595 (AM)

Vi= 7,460

PHF = 0.95

fhv = 0.976

fp = 1.00

V_F =

8046 (pc/h)

N = 5

Therefore

D= 17.54

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 17.54> 10- 20 Exhibit 25-4 gives LOS as B in the diverge area.

Level of Service = B

B12.2 SB Turnpike Off-Ramp I-595 (PM)

Vi= 6,660

PHF = 0.95

fhv = 0.976

fp = 1.00

V- =

7183 (pc/h)

N = 5

Therefore

D= 15.66

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 15.66> 10- 20 Exhibit 25-4 gives LOS as B in the diverge area.

Level of Service = B

WEAVING

		F	REEWA	Y WEAV	ING WOR	KSHEET				
General	Informati	The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon			Site Info				e i de la companya de la companya de la companya de la companya de la companya de la companya de la companya d	
Analyst Agency/Com Date Perform Analysis Tim	pany ned	YLM RS&H 9/01/04	l ak Period		Weaving Seg Jurisdiction	Freeway/Dir of Travel Weaving Seg Location Jurisdiction Analysis Year		I-595 EB Between SW 136 and Flaming 2014 BUILD		
Inputs								5.5	figure and	
Freeway free Weaving nun Weaving seg Terrain	reeway free-flow speed, SFF (mi/h) 60 Veaving number of lanes, N 5 Veaving seg length, L (ft) 650				Weaving type Volume ratio, VR Weaving ratio, R		A 0.23 0.43			
Convers	ions to p	c/h Unde	r Base C	<u>ondition</u>	IS .		I	T -		
(pc/h)	V	PHF	Truck %	RV %	E _T	ER	fHV	fp	V	
Vo1	5959	0.95	5	0	1.5	1.2	0.976	1.00	6429	
Vo2	0	0.95	2	0	1.5	1.2	0.990	1.00	0	
Vw1	1027	0.95	2	0	1.5	1.2	0.990	1.00	1091	
Vw2	790	0.95	2	0	1.5	1.2	0.990	1.00	839	
Vw	, , ,	1		1930	Vnw	1.		1000	6429	
V		100							8359	
l ·	g and No	n-Weavin	a Speeds	3						
Modernit	g and to		Unconstr	ained				strained		
		Weaving	(i = w)	Non-Wea	on-Weaving (i = nw) Weavir		ng (i = w)	Non-Weaving (= nw) 0.00		
a (Exhibit 24	4-6)						.15		.00	
b (Exhibit 24							.00		.30	
c (Exhibit 24				<u> </u>).97).80		.75	
d (Exhibit 24							.16		.55	
Weaving intensi Weaving and no						24	1.70	4	7.21	
speeds, Si (mi/l Number of I Maximum n	n) lanes required umber of lane:	s, Nw (max) v(max) uncons	strained opera	tion			w (max) cons	trained opera	tion	
Weavin	a Seame	nt Speed	Density	Level c	f Service	and Ca	pacity	100	40.20	
Weaving se	gment speed,	S (mi/h)		39.00						
Weaving se	gment density	, D (pc/mi/ln)		42.87						
Level of ser			<u></u>	E						
	base condition			8465						
	s a 15-minute f			8259			<u> </u>			
Capacity as a full-hour volume, c _h (veh/h)				7846						

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions". b. Capacity constrained by basic freeway capacity.
 c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

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<u>Seneral</u>	<u>Informati</u>	on			Site Infor		LEGE	ACTROUND	
nalyst		YLM			Freeway/Dir o	Travel	I-595 EASTBOUND BEWTEEN SW136AVE AND		
unalysi Agency/Com	pany	RS&H			Weaving Seg	Location	FLAMINGO		
ate Perform	ed	9/01/04	4		Jurisdiction				
nalysis Tim	e Period	PM			Analysis Year	2014 B	BUILD		
nputs									
	-flow speed, S	SFF (mi/h)	60		Weaving type			Α	
Veaving nur	nber of lanes,	N	5		Volume ratio,			0.1	
/eaving seg length, L (ft) 650			اد	Weaving ratio	, R		0.4	0	
Terrain	ione to n	eth Unde	r Base C		S				
	V	PHF	Truck %	RV %	E _T	E _R	fHV	fp	V
pc/h)	<u> </u>	0.95	5	0	1.5	1.2	0.976	1.00	6630
/o1	6145		0	0	1.5	1.2	1.000	1.00	0
Vo2	0	0.90	2	0	1.5	1.2	0.990	1.00	894
/w1	841	0.95	2	0	1.5	1.2	0.990	1.00	608
Vw2	572	0.95		1502	Vnw	-)	6630
Vw				1002	VIIW			1	8132
V					1.5				
Weavin	g and No	n-Weavir	g Speeds	3			Cons	trained	
Unconstruction (i = w)					ving (i = nw)	Weavi	ng (i = w)		ving (= nw
Weaving (i = w) 0.15			.00	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	31 1				
a (Exhibit 24 b (Exhibit 24		2.2			.00				
c (Exhibit 24		0.9		1.30					
d (Exhibit 2		0.8		0.75					
Weaving intens		1.5	9	0).80			<u> </u>	
Weaving and no	on-weaving	34.	27	4:	2.77				
speeds, Si (mi/i Number of I	anes required	for unconstra	ined operation	, Nw	1.37				
Maximum n	umber of lane:	s, Nw (max)			1.40		()	iralnod oporal	lion
_	If Nw < Nv	v(max) uncon	strained opera	tion			w (max) cons	railleu opera	IIOH
Weavin	g Segme	nt Speed	, Density	, Level c	f Service,	and Ga	pacity		
Weaving se	gment speed,	S (mì/h)		40.90					
	gment density	, D (pc/mi/ln)		39.77 E					
Level of ser									
	base condition		1. //- \	8569					
	a 15-minute f			8360					
Capacity as	a full-hour vo	iume, c _h (veh	m)	7942				in Salah Marad	
Notes			designation	to and divorce o	reas using the proce	dures of Chapter	r 25, "Ramps and	Ramp Junctions*.	
b. Capacity co c. Capacity oc	nstrained by basic t curs under constrai	reeway capacity. ined operating con	ditions.	t then 0.46	Poor operations an	d some local que	nina are expected	l in such cases.	
Id. Three-lane		not operate well a	at volume ratios gir	CALCH FIGHT C.CC.	4 000 (Tuno D) 2 5	OO /Tyme C)	• ,		
e. Four-lane Ty f. Capacity cor g. Five-lane Ty	strained by maxim pe A segments do	um allowable wea not operate well a	orng now rate. 2,00 at volume ratios gre	aler bian v.zv. r	oor operations and oor operations and s	ome local queui	ing are expected i ng are expected in	n such cases. I such cases.	

			·			EET			
		and the best section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section	FREEWA	Y WEAV	ING WOR	\$25,000 TECHNOLOGIC PROGRAMMENT OF STORY AND STORY OF STORY AND STORY OF STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STORY AND STO			
Genera Analyst Agency/Cor Date Perfor Analysis Tir	med	YLM RS&H 9/01/0 AM			Freeway/Dir of Weaving Seg Jurisdiction Analysis Year	of Travel Location	I-595 EASTBOUND BEWTEEN FLAMINGO AND HIATUS 2014 BUILD		
Weaving nu Weaving se Terrain	ee-flow speed, S umber of lanes, eg length, L (ft)	N	60 4 110 Leve	el	Weaving type Volume ratio Weaving ratio	, VR		A 0.2 0.2	
Conver	sions to p	c/h Unde	r Base C	ondition	IS .		,		
(pc/h)	V	PHF	Truck %	RV %	E _T	E _R	fHV	fp	V
Vo1	6319	0.95	5	0	1.5	1.2	0.976	1.00	6817
Vo2	0	0.90	0	0	1.5	1.2	1.000	1.00	0
Vw1	1630	0,95	2	0	1.5	1.2	0.990	1.00	1732
Vw2	430	0.95	2	0	1.5	1.2	0.990	1.00	457
Vw			L	2189	Vnw				6817
V									9006
Weavir	ig and No	n-Weavin	g Speeds	3	846888				
			Unconstr				Cons	trained	
		Weaving	(i = w)	Non-Wea	ving (i = nw)		ng (i = w)		ving (= nw)
a (Exhibit 2	24-6)						15		00
b (Exhibit 2	24-6)						00		00
c (Exhibit 2	24-6)						97		30
d (Exhibit 2							80		75 57
	eaving intensity factor, Wi					72			
Weaving and speeds, Si (mi						25	.59	46	.84
Number of Maximum	lanes required number of lane	s, Nw (max) v(max) uncons	strained opera	tion			w (max) const	rained operat	ion
Weavir	ng Segme	nt Speed	, Density	Level o	f Service,	and Cap	pacity		
	egment speed,			38.97					
	cament density			57 77					

Weaving segment density, D (pc/mi/ln) 57.77 F Level of service, LOS 7134 Capacity of base condition, c_h (pc/h) Capacity as a 15-minute flow rate, c (veh/h) 6960 Capacity as a full-hour volume, c_h (veh/h) 6612

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".
- b. Capacity constrained by basic freeway capacity.
 c. Capacity occurs under constrained operating conditions.
- d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
- e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
- e. Four-lane Type A segments do not operate well at volume ratios greater than 0.30. Poor operations and some local queuing are expected in such cases. f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases. h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases. i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

		F	REEWA	Y WEAV	ING WOR	AA SOUTH OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF TH	•			
General	Informati	on 🗀			Site Info					
Analyst Agency/Com Date Perforr Analysis Tim	ned	YLM RS&H 9/01/04 PM	4		Freeway/Dir of Weaving Seg Jurisdiction Analysis Year	Location	BEWT HIATU	I-595 EASTBOUND BEWTEEN FLAMINGO AND HIATUS 2014BUILD		
Inputs										
Freeway free-flow speed, SFF (mi/h) 60 Weaving number of lanes, N 4 Weaving seg length, L (ft) 1100 Terrain Leve				el	Weaving type Volume ratio, Weaving ratio	VR		A 0.2 0.2		
Convers	sions to p	c/h Unde	r Base C	<u>ondition</u>	IS .	· · · · · · · · · · · · · · · · · · ·		r	<u> </u>	
(pc/h)	V	PHF	Truck %	RV %	E _T	E _R	fhv	fp	V	
Vo1	4971	0.95	5	0	1.5	1.2	0.976	1.00	5363	
Vo2	0	0.90	0	0	1.5	1.2	1.000	1.00	0	
Vw1	1289	0.95	2	0	1.5	1.2	0.990	1.00	1370	
Vw2	340	0.95	2	0	1.5	1.2	0.990	1.00	361	
Vw			1	1731	Vnw				5363	
V						5.00		A STATE OF	7094	
	g and No	n-Weavin	a Speeds	3						
	<u> </u>		Unconstr	ained			Cons	trained		
		Weaving	(i = w)	Non-Wea	Non-Weaving (i = nw)		ng (i = w)	Non-Wea	ving (= nw)	
a (Exhibit 24	4-6)	0.19			0.00					
b (Exhibit 2		2.20			.00					
c (Exhibit 2		0.9			.30 .75					
d (Exhibit 24) Weaving intens		1.2			.73		-			
Weaving and n	on-weaving	37.0			3.83					
speeds, Si (mi/i	h) lanes required				1.40					
Maximum n	umber of lanes If Nw < Nw	s, Nw (max) /(max) uncons	trained opera	tion	1.40		w (max) const	rained operat	ion	
Weavin	g Segmei	nt Speed	Density	Level o	f Service,	and Ca	pacity			
Weaving se	gment speed,	S (mi/h)		41.96			·			
	egment density	, D (pc/mi/ln)		42.27			. <u>. </u>			
Level of ser				E						
	base condition			7128 6954		<u> </u>				
	apacity as a 15-minute flow rate, c (veh/h)									
Capacity as a full-hour volume, c _h (veh/h)				6606						

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions". b. Capacity constrained by basic freeway capacity.
 c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
 ii. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

		The property of the second second second	REEWA	WEAV	NG WOR	VOULE !				
<u>General</u>	Informati	<u>on</u>			Site Infor	mation				
Analyst Agency/Cor Date Perfor Analysis Tir	med	YLM RS&H 7/18/20 AM Pe	003 ak Period		Freeway/Dir o Weaving Seg Jurisdiction Analysis Year		Betwee	I-595 EB Between Hiatus On and Nob Hill 2014 Build		
nputs			100							
reeway free-flow speed, SFF (mi/h) 60 Veaving number of lanes, N 4 Veaving seg length, L (ft) 1030 Verrain Leve				el	Weaving type Volume ratio, VR Weaving ratio, R			B 0.1 0.4		
Conver	sions to p	c/h Unde	r Base C	<u>ondition</u>	S		1 - <u></u>	,		
pc/h)	V	PHF	Truck %	RV %	E _T	ER	fHV	fp	V	
/o1	7077	0.95	5	0	1.5	1.2	0.976	1.00	7635	
/o2	0	0.95	2	0	1.5	1.2	0.990	1.00	0	
√w1	872	0.95	2	0	1.5	1.2	0.990	1.00	927	
/w2	680	0.95	2	0	1.5	1.2	0.990	1.00	722	
/w	000	1		1649	Vnw				7635	
							100000		9284	
V	and Nar	. Woovir	n Sneeds							
Weaving and Non-Weaving Speeds Unconstra				ained			Cons	strained		
		Weaving				Weav	ing (i = w)	Non-Wea	iving (= nw)	
a (Exhibit 2	24-6)	0.0		0,00						
b (Exhibit 2		2.2		6.00						
c (Exhibit 2		0.7			1.00 0.50					
d (Exhibit 2		0.5			.39	 				
Weaving inter Weaving and	nsity factor, Wi				1.08					
sneeds. Si (m	ί/h)	42.		<u> </u>	1.14					
Number of	lanes required number of lanes	for unconstra	ined operation	ı, NW	3.50					
	I If Nov < Nov	/max\ uncon	strained opera	tion			lw (max) cons	trained opera	tion	
Moavie	ng Segmel	nt Speed	Density	. Level o	f Service	and Ca	pacity			
Weaving 9	egment speed,	S (mi/h)		49.34						
	egment density			47.04						
	ervice, LOS			F						
Capacity o	capacity of base condition, c _b (pc/h)									
	as a 15-minute f		eh/h)	8397						
	as a full-hour vol			7977						
a. Weaving s b. Capacity c c. Capacity o d. Three-lane	egments longer than onstrained by basic fi ccurs under constrain type A segments do Type A segments do onstrained by maximu	reeway capacity. ned operating cor o not operate wel	aditions. I at volume ratios g	reater than 0.45.	Poor operations an	d some local qu some local que	euino are expected	d in such cases.		

le. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases. f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases. h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases. i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

		<u> </u>	REEWA	Y WEAV	ING WOR				The second second
General	Informati	on -			Site Info	mation.			
Analyst Agency/Con Date Perforr Analysis Tim	ned	YLM RS&H 9/01/04 PM Pe	1 ak Period		Freeway/Dir of Weaving Seg Jurisdiction Analysis Year	Location	I-595 EB Between Hiatus On and Nob H 2014 Build		
nputs									
Freeway fre Weaving nu Weaving se Terrain	eeway free-flow speed, SFF (mi/h) 60 eaving number of lanes, N 4 eaving seg length, L (ft) 103 crain Lev		el	IVVEAVIIIO IAIIO, IX			B 0.18 0.43		
Conver	sions to p	c/h Unde	r Base C	ondition	S				
(pc/h)	V	PHF	Truck %	RV %	E _T	ER	fhv	fp	٧
Vo1	5550	0.95	5	0	1.5	1.2	0.976	1.00	5988
Vo2	0	0.95	2	0	1.5	1.2	0.990	1.00	0
Vw1	710	0.95	2	0	1.5	1.2	0.990	1.00	754
Vw2	540	0.95	2	0	1.5	1.2	0.990	1.00	574
Vw	010	0.00		1328	Vnw				5988
V W									7316
	g and No	n-Waavin	a Speeds						
Weavill	y and ive	1 AA / BAI	Unconst	ained				trained	
		Weaving	(i = w)	Non-Wea	ving (i = nw)	Weavi	ng (i = w)	Non-Wea	ving (= nw)
a (Exhibit 2	4-6)	0.0		0.00		<u> </u>	<u> </u>	<u> </u>	
b (Exhibit 2		2.2		6.00					
c (Exhibit 2		0.7		1.00 0.50					
d (Exhibit 2 Weaving intens		0.5			.31				
Weaving intensify Weaving and r		44.5		-	3.17				
speeds, Si (mi	h)				1.14				
Number of	lanes required number of lane	ior unconstra s. Nw (max)	ined operation	, 1444	3.50				
Maximum	☑ If Nw < Nv	v(max) uncons	strained opera	tion			lw (max) const	rained operat	tion
Weavir	g Segme	nt Speed	Density	, Level c	f Service	and Ca	<u>pacity</u>		
Weaving s	egment speed,	S (mi/h)		51.37					
Weaving s	egment density	, D (pc/mi/ln)		35.61					
Level of se				<u>E</u>				<u> </u>	
-	Capacity of base condition, c _b (pc/h)			8578					
	s a 15-minute (8369	<u> </u>				<u></u>
Capacity a	s a full-hour vo	lume, c _h (veh/	h)	7951					
Notes						odurge of Charte	r 25 "Ramne and I	*annibnetions	
b. Capacity co c. Capacity od d. Three-lane	nstrained by basic to curs under constrain Type A segments d	treeway capacity. Ined operating con to not operate well	ditions. at volume ratios g	reater than 0.45.	Poor operations and 4,000 (Type B), 3,5	id some local qui I some local que	ening are expected	in such cases.	

- le. Four-tane Type A segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases. f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases. h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases. i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

		F	REEWA'	<u>Y WEAV</u>	ING WOF	RKSHEET				
General	Informati	on	a Egraphic		Site Info	rmation				
Analyst Agency/Con Date Perforr	npany ned	YLM RS&H 9/1/04			Freeway/Dir Weaving Se Jurisdiction Analysis Yea	g Location	I-595 Eastbound Between Plne On/Uni. Off 2014 Build			
nalysis Tim	ne Period	AM			Arialysis real		ZO14 Build			
nputs										
Freeway fre Weaving nu Weaving se	neway free-flow speed, SFF (mi/h) 60 eaving number of lanes, N 4 eaving seg length, L (ft) 500 realn Lev			Weaving typ Volume ratio Weaving rat	o, VR		B 0.3 0.4			
Conver	sions to p	c/h Unde	r Base C	ondition	S				 	
(pc/h)	V	PHF	Truck %	RV %	E _T	ER	fHV	fp	V	
Vo1	6330	0.95	5	0	1.5	1.2	0.976	1.00	6829	
Vo2	0	0.90	2	0	1.5	1.2	0.990	1.00	0	
Vw1	1840	0.95	2	0	1.5	1.2	0.990	1.00	1956	
Vw2	1547	0.95	2	0	1.5	1.2	0.990	1,00	1644	
Vw				3600	Vnw			and the second	6829	
V V									10429	
	g and No	n-Weavin	a Speed:	3					14 5-15	
A ACCOMPLE	Alexino		Unconstr	aine <u>d</u>				trained	1 / = mad	
		Weaving		Non-Weaving (i = nw)		Weav	ing (i = w)	Non-wea	aving (= nw	
a (Exhibit 2		0.08		0.00 6.00						
b (Exhibit 2		2.20 0.70			.00					
c (Exhibit 2 d (Exhibit 2		0.70).50					
Weaving inten		1.69			.38					
Weaving and r	on-weaving	33.5	8	3	5,99			<u> </u>		
Maximum r	lanes required number of lane	s, Nw (max) v(max) uncons	strained opera	tion	3.02 3.50		lw (max) cons	trained opera	ition	
Weavir	g Segme	nt Speed	, Density	, Level o	of Service	a, and Ga	pacity			
Weaving s	egment speed,	S (mi/h)		35.12						
	egment density	/, D (pc/mi/ln)		74.24 F						
Level of service, LOS				6844						
Capacity of base condition, c _b (pc/h)			6677							
	Capacity as a 15-minute flow rate, c (veh/h) Capacity as a full-hour volume, c _h (veh/h)									
	o a full-hourse	dime to impor	111	6343						

- b. Capacity constrained by basic freeway capacity.

 c. Capacity occurs under constrained operating conditions.

 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.

 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.

 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/n (Type A), 4,000 (Type B), 3,500 (Type C).

 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.

 h. Type B weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

			KEEVVA	VALAV	ING WOR	mation				
<u>General l</u>	<u>nformat</u>	on			2)(6) HIIO	mauvn				
nalyst gency/Comp		YLM RS&H 9/1/04			Freeway/Dir o Weaving Seg Jurisdiction		I-595 Eastbound Between Plne On/Uni. Off			
Date Performe Analysis Time		9/1/04 PM			Analysis Year		2014 E	Build		
nputs			-		T T			_		
reeway free-flow speed, SFF (mi/h) 60 Veaving number of lanes, N 4 Veaving seg length, L (ft) 500 Ferrain Leve				Weaving type Volume ratio, Weaving ratio	VR		B 0.3 0.4			
Convers	ons to p	c/h Unde	r Base C	<u>onditior</u>)S		ı			
pc/h)	٧	PHF	Truck %	RV %	E _T	ER	fHV	fp	V	
Vo1	4687	0.95	5	0	1.5	1.2	0.976	1.00	5057	
Vo2	0	0.90	2	0	1.5	1.2	0.990	1.00	0	
Vw1	1678	0.95	2	0	1.5	1.2	0.990	1.00	1783	
Vw2	1286	0.95	2	0	1.5	1.2	0.990	1.00	1367	
/w		and a state	Barrer Park	3150	Vnw		2 (12)	Spanish Co.	5057	
v							a de Composito		8207	
Weaving	and No	n-Weavin	g Speeds	3						
			Unconstr	ained	ained			strained	iving (= nw)	
		Weaving					ng (i = w)	14011-4460	iving (- mv	
a (Exhibit 24-		0.00		0.00 6.00						
b (Exhibit 24-		0.79			1.00					
c (Exhibit 24- d (Exhibit 24-		0.5).50					
Weaving intensity		1.5		1	1.29			<u> </u>		
Weaving and nor	n-weaving	34.8	32	3	6.85					
speeds, Si (mi/h) Number of la	nes required	for unconstrai	ned operation	, Nw	3.15					
Maximum nu	mber of lane	s, Nw (max)			3.50		()	tualmed anara	fion	
Į.	₫ If Nw < Nv	v(max) uncons	trained opera	tion			w (max) cons	trained opera	uon	
Weaving	Segme	nt Speed	, Density	, Level c	of Service	, and Ca	pacity			
Weaving seg				36.04						
		, D (pc/mi/ln)		56.92 F						
Level of serv		n o Inolh)		6609						
Capacity of t			h/h)	6448		<u> </u>				
		flow rate, c (ve lume, c _h (veh <i>l</i>		6126		<u> </u>				
	a mii-nour Vu	MULLIO, OF (ACLI)	''7	1 0120					A CONTRACTOR OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF TH	

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions" b. Capacity constrained by basic freeway capacity.
 c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/n (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

		I	REEWA'	Y WEAV	ING WOR					
Genera	Informati	ion	State State	Parks to a	Site Info	rmation				
Analyst Agency/Cor Date Perfor Analysis Tir	med	PJ RSH 9/1/04 AM Pe	ak Hour		Freeway/Dir o Weaving Seg Jurisdiction Analysis Year	Location	Betwe	Eastbound Between Univer and 2014 BUILD		
Neaving nu	ee-flow speed, S imber of lanes,		60 5		Weaving type			C 0.3		
Terrain	aving seg length, L (ft) 230 rain Lev				Weaving ratio	o, R		0.′	12	
Conver	sions to p	ic/h Unde	r Base C	ondition	<u>is</u>				<u> </u>	
(pc/h)	V	PHF	Truck %	RV %	E _T	ER	fHV	fp	V	
Vo1	7390	0.95	5	0	1.5	1.2	0.976	1.00	7973	
Vo2	15	0.95	2	0	1.5	1.2	0.990	1.00	15	
Vw1	3451	0.95	2	0	1.5	1.2	0.990	1.00	3668	
Vw2	487	0.95	2	0	1.5	1.2	0.990	1.00	517	
Vw				4185	Vnw				7988	
V									12173	
Weavir	ig and No	n-Weavir	g Speed:	3						
<u> </u>		Unconstrained				Constrained			And I - must	
		Weaving	Weaving (i = w) Non-Wea			Weav	ing (i = w)	Non-Wea	iving (= nw)	
a (Exhibit 2	24-6)	0.0			0.00					
b (Exhibit	24-6)	2.3	0	ļ6	3,00	ļ				

Weaving and No		Constrained					
	Uncon	strained					
	Weaving (i = w)	Non-Weaving (i = nw)	Weaving (i = w)	Non-Weaving (= nw)			
a (Exhibit 24-6)	0.08	0.00					
b (Exhibit 24-6)	2,30	6.00					
c (Exhibit 24-6)	0.80	1.10					
d (Exhibit 24-6)	0.60	0.60					
Weaving intensity factor, Wi	0.78	0.60					
Weaving and non-weaving speeds, Si (mi/h)	43.14	46.23					

Number of lanes required for unconstrained operation, Nw Maximum number of lanes, Nw (max)

3.00

If Nw < Nw(max) unconstrained operation

if Nw > Nw (max) constrained operation

If IAM < IAM(III9X) nitroniariquien ob	Clation		
Weaving Segment Speed, Densi	ty, Level of Se	rvice, and Capaci	ty
Weaving segment speed, S (mi/h)	45.12		
Weaving segment density, D (pc/mi/ln)	53.96		
Level of service, LOS	F		
Capacity of base condition, c _b (pc/h)	9726		
Capacity as a 15-minute flow rate, c (veh/h)	9489		
Capacity as a full-hour volume, c _h (veh/h)	9015		arms of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".
- b. Capacity constrained by basic freeway capacity.
- c. Capacity occurs under constrained operating conditions.
- c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

			REEWA	Y WEAV	ING WOR	KSHEET			
General	Informati	on			Site Info	rmation			
Analyst PJ Agency/Company RSH Date Performed 9/1/04 Analysis Time Period PM Peak Hour				Freeway/Dir of Weaving Seg Jurisdiction Analysis Yea	Location	Betwe	Eastbound Between Univers and Davie 2014 BUILD		
Inputs									
Freeway free-flow speed, SFF (mi/h) Weaving number of lanes, N Weaving seg length, L (ft) Terrain		Leve	5 2300 Level		Weaving type Volume ratio, VR Weaving ratio, R		C 0.35 0.12		
Conver	sions to p	c/h Unde	r Base C	ondition	ns	I	1	I .	1
(pc/h)	V	PHF	Truck %	RV %	E _T	E _R	fhv	fp	V
Vo1	5587	0.95	5	0	1.5	1.2	0.976	1.00	6028
Vo2	15	0.95	2	0	1.5	1.2	0.990	1.00	15
Vw1	2725	0.95	2	0	1.5	1.2	0.990	1.00	2897
Vw2	386	0.95	2	0	1.5	1.2	0.990	1.00	410
Vw				3307	Vnw				6043
٧									9350
Weavin	g and No	n-Weavin	g Speeds	3					
			Unconstr			Constrained Weaving (i = w) Non-Weaving (= nw)			
		Weaving			aving (i = nw)	weavi	ng (i = w)	Noti-vveaving (= 11v	
a (Exhibit 2			0.08 2.30		0.00 6.00				
b (Exhibit 2 c (Exhibit 2			0.80		1.10				
d (Exhibit 2		0.60		0.60					
Weaving intensity factor, Wi		0.6	0.64).47				
Weaving and r speeds, Si (mi	non-weaving /h)	45.4	.9	49.01					
Number of	lanes required number of lanes	s, Nw (max)			2.54 3.00	≣ if Nw > N	w (max) consi	trained operal	ion
Weavir	na Seame	nt Speed	Density	Level					
Weaving Segment Speed, Density, Weaving segment speed, S (mi/h)			47.71						
Weaving segment density, D (pc/mi/ln)			39.20					<u> </u>	
Level of service, LOS			E						
Capacity of base condition, c _b (pc/h)			9554	·····			<u></u>		
Capacity as a 15-minute flow rate, c (veh/h)			9321						
Capacity a	s a full-hour vo	lume, c _h (veh/	n)	8855					
Notes									

- b. Capacity constrained by basic freeway capacity.
 c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

		F	REEWA	Y WEAV	NG WOR	KSHEE1				
General	Informati	on		1000000	Site Info	rmation		7.		
Analyst YM Agency/Company RSH Date Performed 9/1/04 Analysis Time Period AM Peak Hour				Freeway/Dir of Weaving Seg I Jurisdiction Analysis Year			oound een Davie and Turnpike BUILD			
nnute										
Inputs Freeway free-flow speed, SFF (mi/h) Weaving number of lanes, N Weaving seg length, L (ft) Terrain 1960 Level		el	Weaving type Volume ratio, VR Weaving ratio, R		and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s	B 0.34 0.41				
Convers	sions to p	c/h Unde	r Base C	ondition	S			 	ı	
(pc/h)	V	PHF	Truck %	RV %	ET	ER	fHV	fp	V	
/o1	8181	0.95	5	0	1.5	1.2	0.976	1.00	8826	
√o2	363	0.95	2	0	1.5	1.2	0.990	1.00	385	
/w1	2660	0.95	2	0	1.5	1.2	0.990	1.00	2828	
Vw2	1815	0.95	2	0	1.5	1.2	0.990	1.00	1929	
VWZ VW	1010	0.00		4757	Vnw				9211	
									13968	
V	g and No	a Woovir	a Speeds	2	Organization					
vveaviii	g ariu ivo	- TVOCIVID	Unconstr	rained			Cons	strained		
		Weaving			Non-Weaving (i = nw)		ng (i = w)	Non-Wea	ving (= nw)	
a (Exhibit 2	4-6)	0.08		0.00						
b (Exhibit 2	4-6)		2.20		6.00					
c (Exhibit 2		0.7		1.00						
d (Exhibit 2		0.5		0.50						
Weaving intens Weaving and n				43.86					·	
speeds. Si (mi/	h)	41.4								
Number of	lanes required number of lane	tor unconstra	ined operation	I, INW	3.50					
	In If Nw < Nv		strained opera	ition		■ if Nw > N	lw (max) cons	trained opera	tion	
Monvie	a Seame	nt Sneed	Density	. Level o	f Service	, and Ca	pacity		1000	
Weaving Segment Speed, Density, Weaving segment speed, S (mi/h)			43.01							
Weaving segment density, D (pc/mi/ln)			64.95							
Level of service, LOS			F							
Capacity of base condition, c _b (pc/h)			10026			<u></u>				
Capacity as a 15-minute flow rate, c (veh/h)			9781							
	s a full-hour vo			9292						
Natas	7									
a. Weaving se b. Capacity co c. Capacity oc	gments longer than instrained by basic curs under constrai Type A segments do type A segments do	reeway capacity. ned operating con o not operate well	iditions. Lat volume ratios g	reater than 0.45. eater than 0.35. F	Poor operations at	nd some local que I some local que	euing are expected	l in such cases.		

e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases. f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C). g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases. h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases. i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

		F	REEWA'	Y WEAVI	NG WOR	KSHEE			
General	Informati	The second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the sect			Site Info	rmation			
Analyst YM Agency/Company RSH Date Performed 9/1/04 Analysis Time Period PM Peak		4		Freeway/Dir of Travel Weaving Seg Location Jurisdiction Analysis Year		Eastbound Between Davie and Turnpike 2014 BUILD			
nnute					1				
Inputs Freeway free-flow speed, SFF (mi/h) Weaving number of lanes, N Weaving seg length, L (ft) Terrain		N	60 5 1960 Level		Weaving type Volume ratio, VR Weaving ratio, R			B 0.35 0.41	
Convers	sions to p	c/h Unde	r Base C	<u>ondition</u>	S			1 10 <u>00 00 00 00 00 00 00 00 00 00 00 00 0</u>	
pc/h)	V	PHF	Truck %	RV %	E _T	E _R	fHV	fp fp	V
/o1	6202	0.95	5	0	1.5	1.2	0.976	1.00	6691
Vo2	287	0.95	2	0	1.5	1.2	0.990	1.00	305
Vw1	2110	0.95	2	0	1.5	1.2	0.990	1.00	2243
Vw2	1437	0.95	2	0	1.5	1.2	0.990	1.00	1527
Vw				3770	Vnw				6996
v						100			10766
•	g and No	n-Weavir	a Speed:	3	1000000				
			Unconst	rained			Constrained Weaving (i = w) Non-Weaving (
		Weaving	j (i = <u>w</u>)	Non-Weaving (i = nw)		Weav	ing (i = w)	Non-wea	wing (- nw
a (Exhibit 24		0.08		0.00 6.00					
b (Exhibit 24			2.20 0.70		.00	 			
c (Exhibit 24 d (Exhibit 24		0.7			.50				
Weaving intens			0.75		.59				
Weaving and n	on-weaving	43.5	52	46	5.46				
Maximum n	lanes required number of lane	s, Nw (max)			1.99 3.50	I∭ if Nw > N	√w (max) cons	trained opera	tion
Mazvin	g Segme	nt Speed	. Density	. Level o	f Service	, and Ca	pacity		5.5
Weaving se	eament speed.	S (mi/h)	i pirangan da katalan d	45.39					
Weaving segment speed, S (mi/h) Weaving segment density, D (pc/mi/ln)			47.44			·			
Level of service, LOS			F						
Capacity of base condition, c _b (pc/h)			9955	<u>-</u>					
Capacity as a 15-minute flow rate, c (veh/h)			9712			<u> </u>			
Capacity as a full-hour volume, c _h (veh/h)			9226						
			77.70						

- c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

		and the second second second second	REEVVA	TANCA	ING WOR				11 57 40 5
Seneral Info	<u>ormati</u>	on			Site Info	mation			
nalyst gency/Company		YLM RSH			Freeway/Dir of Travel Weaving Seg Location		595 WB Between Turnpike and Davie		
ate Performed nalysis Time Per		9/1/04 AM			Jurisdiction Analysis Year	·	2014 BUILD		
nputs									
reeway free-flow speed, SFF (mi/h) Veaving number of lanes, N Veaving seg length, L (ft) Terrain		FF (mi/h) N	60 5 1550 Leve		Weaving type Volume ratio, Weaving ratio	VR		B 0.3 0.3	
Conversion	is to p	c/h Unde	r Base C	ondition	s				I
pc/h)	V	PHF	Truck %	RV %	E _T	E _R _	fhv	fp	٧
	5147	0.95	5	0	1.5	1.2	0.976	1.00	5553
/o2	330	0.95	2	0	1.5	1.2	0.990	1.00	350
	2160	0.95	2	0	1.5	1.2	0.990	1.00	2296
√w2	995	0.95	2	0	1.5	1.2	0.990	1.00	1057
/w	1000]		3353	Vnw			and the second	5903
/		100						100	9256
v Weaving a	nd Nor	n-Weavin	a Speed:	3					
Meanintelia	14 11 0 2		Unconstr	ained				strained	
		Weaving			ving (i = nw)	Weavi	ng (i ≍ w)	Non-Wea	iving (= nw
a (Exhibit 24-6)			0.08		0.00				
b (Exhibit 24-6)		2.20		6.00 1.00		<u>-</u>			<u></u> ,
c (Exhibit 24-6)		0.70			.50				
d (Exhibit 24-6)	146	0.50			1,60				
Weaving intensity fact Weaving and non-wea		43.1		 	6.23				
speeds, Si (mi/h)					2.18	<u> </u>			
Number of lanes Maximum numb	required er of lanes	tor unconstraii s. Nw (max)	neu operation	1, 1444	3.50				
i i i	f Niaz < Nia	/max) uncons	trained opera	tion			lw (max) cons	trained opera	tion
Weaving S	eame	nt Speed.	Density	, Level c	f Service	, and Ca	pacity		
Weaving segme	nt speed,	S (mi/h)		45.06					<u> </u>
Weaving segme				41.08 E					
Level of service	Level of service, LOS					<u> </u>			
Capacity of base condition, c _b (pc/h)			9615						
Capacity as a 1				9380					
Capacity as a fu	ıll-hour vo	lume, c _h (veh/l	n)	8911					
	manufact Commonweal State State								

- d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases. e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases. f. Capacity constrained by maximum allowabte weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C). g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases. h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases. i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

		F	REEWA'	Y WEAV	ING WOR	And the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s				
eneral	Informati	on			Site Info	rmation			*	
nalyst gency/Com ate Perforn	ned	YLM RSH 9/1/04 PM	RSH 9/1/04			Freeway/Dir of Travel Weaving Seg Location Jurisdiction Analysis Year		595 WB Between Turnpike and Davie 2014 BUILD		
*										
reeway free-flow speed, SFF (mi/h) Veaving number of lanes, N Veaving seg length, L (ft) Terrain		N	60 5 155 Leve	əl	Weaving type Volume ratio, Weaving ratio	VR		B 0.3 0.3		
Convers	sions to p	c/h Unde	r Base C	ondition	ıs			T .	<u> </u>	
pc/h)	V	PHF	Truck %	RV %	E _T	E _R	fHV	fp	V	
/o1	6878	0.95	5	0	1.5	1.2	0.976	1.00	7420	
/02	535	0.95	2	0	1.5	1.2	0.990	1.00	568	
/w1	2365	0.95	2	0	1.5	1.2	0.990	1.00	2514	
√w2	1410	0.95	2	0	1.5	1.2	0.990	1.00	1499	
Vw				4013	Vnw				7988	
v									12001	
-	g and No	n-Weavin	g Speed:	3				4-5-6		
ACCURATE			Unconst	rained				strained		
		Weaving	<u> </u>		ving (i = nw)	Weav	ng (i = w)	Non-wea	aving (= nw	
a (Exhibit 2		0,08			0.00					
b (Exhibit 2		0.70	<u> </u>		1.00					
c (Exhibit 2 d (Exhibit 2		0.70).50					
Weaving intens		0.89).69			ļ		
Weaving and n	on-weaving	41.4	5	4	4.61					
speeds, Si (mi/ Number of Maximum r	n) lanes required number of lane	_I for unconstraii s, Nw (max)	ned operation	i, Nw	2.07 3.50	<u> </u>				
	If Nw < Nv	v(max) uncons	trained opera	tion			lw (max) cons	trained opera	tion	
Weavin	g Segme	nt Speed,	Density	, Level o	of Service	, and Ca	pacity			
Weaving se	egment speed,	S (mi/h)		43.50		<u></u>				
	egment density	/, D (pc/mi/ln)		55.17				<u></u>		
Level of se				F						
	f base conditio			9831						
	s a 15-minute			9591	<u> </u>					
	s a full-hour vo	lume, c _h (veh/l	n)	9111						
Capacity a	A STATE OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PAR	NAMES OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNE								

- in three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases. In Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).

 If the constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).

 If the constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).

 If the constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).

 If the constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).

 If the constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).

 If the constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).

 If the constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).

 If the constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).

 If the constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type B), 3,500 (Type C).

 If the constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type B), 3,500 (Type C).

 If the constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type B), 3,500 (Type B), 3,500 (Type C).

 If the constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type B), 3,500 (Type B), 3,500 (Type B), 3,500 (Type B), 3,500 (Type B), 3,500 (Type B), 3,500 (Type B), 3,500 (Type B), 3,500 (Type B), 3,500 (Type B), 3,500 (Type B), 3,500 (Type B), 3,500 (Type B), 3,500 (Type B), 3,500 (Type B), 3,500 (Type B), 3,500 (Type B), 3,500 (Type B), 3,500 (Type B), 3,500 (Type B), 3,500 (Type B), 3,500 (Type B),

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palyst YLM gency/Company RS&H ate Performed 9/1/04 halysis Time Period AM			Freeway/Dir of Travel Weaving Seg Location Jurisdiction Analysis Year		I-595 WB University On-NOb Hill Off 2014 BUILD				
iputs									
reeway free-flow speed, SFF (mi/h) 60 /eaving number of lanes, N 5 /eaving seg length, L (ft) 22		2200 Leve	IVVEAVIIIU I AUG		tio, VR		B 0.32 0.47		
onversion	ons to p	c/h Unde	r Base C	ondition	S	at .	1	ı — — — — — — — — — — — — — — — — — — —	
oc/h)	v	PHF	Truck %	RV %	E _T	ER	fHV	fp	V
01	4040	0.95	5	0	1.5	1.2	0.976	1.00	4358
02	0	0.95	0	0	1.5	1.2	1.000	1.00	0
w1	1008	0.95	2	0	1.5	1.2	0.990	1.00	1071
w2	898	0.95	2	0	1.5	1.2	0.990	1.00	954
	000	0.00		2025	Vnw				4358
<u>'W</u>									6383
	and Nor	ı-Weavin	Unconstr	ained	and the fall or	Constra (i = nw) Weaving (i = w)			ving (= nw)
		Weaving	7 V				ng (1 – w)	14011-1104	villig (
(Exhibit 24-6		0.00		0.00 6.00					
(Exhibit 24-6		2.20 0.70			1.00				
: (Exhibit 24-6 I (Exhibit 24-6		0.70			0.50				
Veaving intensity		0.47		C).28				
Veaving and non-		49.0	8	5	3.93				
Maximum nur ⊠i	nber of lanes	(max) uncons	strained opera	tion				trained operat	ion
<u>Weaving</u>	Segme	nt Speed	Density	, Level C	f Service	, and Ca	Pacity		
Weaving segr	ment speed,	S (mi/h)		52.29 24.41	<u> </u>				
Weaving segment density, D (pc/mi/ln)			C C						
Level of service, LOS Capacity of base condition, c _b (pc/h)			10307						
			10056						
Capacity as a 15-minute flow rate, c (veh/h) Capacity as a full-hour volume, c _h (veh/h)			9553						

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions b. Capacity constrained by basic freeway capacity.

 c. Capacity constrained operating conditions.

 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.

 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.

 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).

 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).

 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.

 h. Type B weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

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General	Informati	on	100		Site Infor	mation			
nalyst Agency/Com Date Perforn Analysis Tim	red	YLM RS&H 9/1/04 PM			Freeway/Dir of Travel Weaving Seg Location Jurisdiction Analysis Year		I-595 WB University On-NOb Hill Off 2014 BUILD		
nputs									
reeway free-flow speed, SFF (mi/h) Veaving number of lanes, N Veaving seg length, L (ft)		60 5 2200 Leve	:l	Weaving type Volume ratio, Weaving ratio	VR		B 0.3 0.4		
Conver	sions to p	c/h Unde	r Base C	ondition	S			-	
(pc/h)	V	PHF	Truck %	RV %	E _T	E _R	fHV	fp	V
Vo1	5323	0.95	5	0	1.5	1.2	0.976	1.00	5743
Vo2	0	0.95	0	0	1.5	1.2	1.000	1.00	0
Vw1	1340	0.95	2	0	1.5	1.2	0.990	1.00	1424
Vw2	1136	0.95	2	0	1.5	1.2	0,990	1.00	1207
Vw				2631	Vnw				5743
v									8374
	n and No	n-Weavin	g Speeds	3					
Weaving and Non-Weaving Speeds Unconstra				ained				trained	iving (= nw
	Weaving (i = w)				ving (i = nw)	Weavi	ng (i = w)	NOII-VVEC	wing (- iiii
a (Exhibit 2	4-6)	0.08			.00	 			
b (Exhibit 2		2.20			.00				
c (Exhibit 2		0.70			.50				
d (Exhibit 2 Weaving inten		0.50		0.37					
Weaving and I	on-weaving	47.0		5	1.55				
speeds, Si (mi Number of Maximum	lanes required number of lane	for unconstrai	ned operation		1.65 3.50	if Nhw > N	lw (max) cons	trained opera	tion
	If Nw < N	v(max) uncons	strained opera	llon	of Sarvice	and Ca	nacity		5.05
Weavir	ig Segme	nt Speed	, Density	50.03	N Gel Alec		toleration and the second		
Weaving s	egment speed	, S (mi/n) v D (nc/mi/ln)		33.47					<u> </u>
	egment density ervice, LOS	y, D (pomnin)		D _					
	f base condition	on, c, (pc/h)		10330					
	s a 15-minute		eh/h)	10078					
	is a full-hour vo			9574			44.13		
						and the second			
a. Weaving s b. Capacity o c. Capacity o d. Three-lane e. Four-lane f. Capacity of	egments longer that onstrained by basic cours under constra Type A segments of Type A segments do onstrained by maxin Type A segments do aving segments do aving segments do	treeway capacity. ained operating con do not operate well o not operate well o not operate well a	ditions. at volume ratios g at volume ratios gr ving flow rate: 2,8 at volume ratios gr	greater than 0.45 reater than 0.35. 00 pc/h (Type A) reater than 0.20.	. Poor operations a Poor operations an , 4,000 (Type B), 3 Poor operations and	nd some local que d some local que ,500 (Type C). d some local que	euing are expected uing are expected uing are expected in	d in such cases. in such cases. in such cases.	•

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<u>General</u>	<u>Informati</u>	on			Site mior	mauon			
\nalyst \gency/Com	oany	YLM			Freeway/Dir of Weaving Seg		I-595 WB Between Nob Hill and Hiatus		
Date Perform Analysis Time		9/1/04 AM			Jurisdiction Analysis Year		2014 B	uild	
nputs					.				
reeway free Weaving nun Weaving seg	reeway free-flow speed, SFF (mi/h) /eaving number of lanes, N /eaving seg length, L (ft)		60 4 1000 Leve		Weaving type Volume ratio, Weaving ratio	VR		B 0.18 0.39	
Terrain	ions to p	c/h l Inde			S			3.736.3	
	\	PHF	Truck %	RV %	E _T	E _R	fHV	fp	٧
(pc/h)		0.95	5	0	1.5	1.2	0.976	1.00	6102
Vo1	5656 0	0.90	0	0	1.5	1.2	1.000	1.00	0
Vo2	791	0,95	2	0	1.5	1.2	0.990	1.00	840
Vw1	513	0.95	2	0	1.5	1.2	0.990	1.00	545
Vw2	313	0.55	1	1385	Vnw				6102
Vw									7487
V	and No	a Moayin	a Sneeds						
weaving	g and ivo	I-AAGGA III	Unconstr	ained			Cons	trained	
		Weaving			iving (i = nw)	Weav	ng (i = w)	Non-Wea	ving (= nw
a (Exhibit 24	-6)	0.08			.00	<u> </u>			
b (Exhibit 24		2.20			.00				
c (Exhibit 24		0.70			1.00 0.50				
d (Exhibit 24		0.50).33	1			
Weaving intensi Weaving and no					2.66				
speeds Si (mi/h	n)	44.1			1.18				
Number of I	anes required umber of lane	tor unconstrai	neo operation	, IAM	3.50				
!	If Niu < Nu	u/may) uncons	trained opera	tion			lw (max) cons	trained opera	tion
Meavin	a Seame	nt Speed	Density	Level c	of Service	, and Ca	pacity		
Weaving se	gment speed,	S (mi/h)		50.84					
Weaving se	gment density	, D (pc/mi/ln)		36.82		<u> </u>			
Level of ser	vice, LOS			E	<u></u>				
	base conditio			8536					
Capacity as	a 15-minute	flow rate, c (ve	h/h)	8328					<u> </u>
Capacity as	s a full-hour vo	olume, c _h (veh	h)	7912					
Notes						duran of Chapte	yr 25 "Damne and	Ramo Junctions*	
a. Weaving see b. Capacity cor c. Capacity occ d. Three-lane e. Four-lane Ty f. Capacity cor g. Five-lane Ty	nstrained by basic curs under constra Lype A segments d ype A segments do nstrained by maxim	rreeway capacity. ined operating con do not operate well o not operate well anum allowable wea o not operate well a	ditions. at volume ratios g it volume ratios gr ving flow rate: 2,80 t volume ratios gre	reater than 0.45. eater than 0.35. to 00 pc/h (Type A), eater than 0.20. f	Poor operations are 4,000 (Type B), 3,4 oor operations and operations and operations and operations and operations and operations and operations and operations and operations and operations and operations and operations and operations and operations and operations and operations and operations and operations and operations and operations and operations and operations and operations and operations and operations and operations and operations and operations are operations and operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operati	nd some local qu d some local que 500 (Type C). I some local que come local que	euing are expected uing are expected in are expected in are expected in are expected in are expected in are expected in are expected in are expected in are expected in are expected in are expected in are expected in are expected in are expected in are expected in are expected in are expected in are expected in are expected in are expected in are expected in a contract the area.	I in such cases. in such cases. in such cases.	

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ieneral Informatic	n			Site Infor	mauon			
nalyst gency/Company	YLM RS&H			Freeway/Dir of Travel Weaving Seg Location		I-595 WB Between Nob Hill and Hiatus		d Hiatus
ate Performed nalysis Time Period	9/1/04 PM			Jurisdiction Analysis Year		2014 Build		
puts				100				
reeway free-flow speed, SFF (mi/h) Veaving number of lanes, N Veaving seg length, L (ft) errain		60 4 1000 Leve	el	Weaving type Volume ratio, Weaving ratio	VR		B 0.1 0.3	
Conversions to po	:/h Unde	r Base C	ondition	IS .			I .	
oc/h) V	PHF	Truck %	RV %	E _T	ER	fHV	fp	V
701 7392	0.95	5	0	1.5	1.2	0.976	1.00	7975
0 0	0.90	0	0	1.5	1.2	1.000	1.00	0
/w1 1003	0.95	2	0	1.5	1.2	0.990	1.00	1066
/w2 608	0.95	2	0	1.5	1.2	0.990	1.00	646
/w			1712	Vnw			100	7975
/			a side of		0.00			9687
N eaving and Non	-Weavin	n Speeds	3					
yeaving and ito.		Unconsti	ained				trained	. /
	Weaving	\				ing (i = w)	Non-wea	ving (= nw)
a (Exhibit 24-6)	0.08	<u></u>		0.00				
(Exhibit 24-6)	2.20	<u> </u>		3.00 1.00				
c (Exhibit 24-6)	0.70).50				
d (Exhibit 24-6)	0.50 0.85),41				
Weaving intensity factor, Wi Weaving and non-weaving	42.0			0.55				
speeds Si (mi/h)	ŀ			1.17			<u> </u>	
Number of lanes required for Maximum number of lanes	or unconstrair . Nw (max)	ied oberation	ı, : • • •	3.50				
150 If Nhu e Nhui	(may) uncons	trained opera	tion			lw (max) cons	trained opera	tion
Weaving Segmen	t Speed.	Density	, Level c	of Service	, and Ca	pacity		
Weaving segment speed, S	S (mi/h)		48.81					
Weaving segment density,	D (pc/mi/ln)		49.62					<u>-</u> .
Level of service, LOS	F							
Capacity of base condition	8599							
Capacity as a 15-minute flow rate, c (veh/h)			8389			<u></u>		
Capacity as a full-hour volume, c _h (veh/h)			7970					
Notes						er 25, "Ramps and		

- Ic. Capacity occurs under constrained operating conditions.

 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.

 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.

 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).

 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.

 h. Type B weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

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		and the second second by the second second	REEWA	VVEAV	ING WOR	mation		100	
ieneral nalyst	<u>Informati</u>	on. YLM			Freeway/Dir o	f Travel	I-595 W BETWE	VESTBOUND EEN HIATUS	AND
gency/Con	npany	RS&H			Weaving Seg Location		FLAMINGO		
ate Perfori	ned	9/1/04			Jurisdiction		2014 B	11111	
nalysis Tin	ne Period	AM ———			Analysis Year		2014 D	IOILD	
nputs					1				
eeway free-flow speed, SFF (mi/h) 60			Weaving type			A 0.2	4		
√eaving nu	eaving number of lanes, N 4 eaving seg length, L (ft) 1056)	Volume ratio, Weaving ratio			0.3		
Forcoin			Leve			711			
Conver	sions to p	c/h Unde	r Base C	<u>onditior</u>	18		6	fp	V
pc/h)	٧	PHF	Truck %	RV %	ET	E _R	fHV		5478
Vo1	5078	0.95	5	0	1.5	1.2	0.976	1.00	0
Vo2	0	0.90	0	0	1.5	1.2	1.000	1.00	1159
Vw1	1091	0.95	2	0	1.5	1.2	0.990	1.00	
Vw2	536	0.95	2	0	1.5	1.2	0,990	1.00	569
Vw				1728	Vnw				5478
V W		11 TO 10 TO 10 TO 10 TO 10 TO 10 TO 10 TO 10 TO 10 TO 10 TO 10 TO 10 TO 10 TO 10 TO 10 TO 10 TO 10 TO 10 TO 10			15 (15 (1) 15 (1)			1	7206
V VALA SVIIV	ig and No	n-Weavin	a Speeds	3					
AAGGAII	iy and ive	<u> </u>	Unconst	rained				strained Non Woo	ving (= nw
		Weaving	(i = w)		Non-Weaving (i = nw)		ng (i = w)	MOII-4469	Millig (- III
a (Exhibit :	24-6)	0.1			0.00		<u> </u>		-
b (Exhibit :		2.20		.1	4.00 1.30				
c (Exhibit		0.9			0.75				<u></u>
d (Exhibit	24-6) nsity factor, Wi	1.3			0.77				
Weaving and		36.5			13.32				
encode Silm	_{i/h)} f lanes required	1 _		1. Nw	1.38				
Number o	number of lane	s. Nw (max)	nou operation	.,	1.40				.t'
1	16 Nhu / Nh	ulmay) uncons	strained opera	ation			lw (max) cons	trained opera	IIION
Weavi	ng Segme	nt Speed	, Density	, Level	of Service	, and Ca	pacity		
Weaving	segment speed	, S (mi/h)		41.46 43.45					
Weaving	Neaving segment density, D (pc/mi/ln)								
	evel of service, LOS								
	Capacity of base condition, c _b (pc/h)						<u> </u>		
Capacity	apacity as a 15-minute flow rate, c (veh/h)			6934 6587					
Conneity	Capacity as a full-hour volume, c _h (veh/h)						750 mm		

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".
 b. Capacity constrained by basic freeway capacity.
 c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/n (Type A), 4,000 (Type B), 3,500 (Type C).
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/n (Type A), 4,000 (Type B), 3,500 (Type C).
 f. Vive-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

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General	Informati	on			Freeway/Dir o	<u>. </u>	1-595 W	VESTBOUND	
nalyst		YLM			1		BETW	EEN HIATUS	AND
gency/Con		RS&H			Weaving Seg Location		FLAMI	NGO	
ate Perforr nalysis Tim		9/1/04 AM			Jurisdiction Analysis Year		2014 B	UILD	
ilialysis i ili	ie i cilou				Allalysis Teal		2011		医内部性丛
nputs		S = (.10-)	60					A	
reeway free-flow speed, SFF (mi/h) 60 /eaving number of lanes, N 4			Weaving type Volume ratio, VR			0.2	:4		
Veaving no Veaving se	eaving seg length, L (ft)			Weaving ratio			0.3	3	
errain			Leve						
<u>conver</u>	4	c/h Unde			E _T	E _R	fHV	fp	v
pc/h)	V	PHF	Truck %	RV %		1.2	0.976	1.00	5478
/01	5078	0.95	5	0	1.5	1.2	1,000	1.00	0
/o2	0	0.90	0	0 -	1.5	1.2	0.990	1.00	1159
/w1	1091	0.95	2	0		1.2	0.990	1.00	569
/w2	536	0.95	2	0	1.5	1,4	0,000	1100	5478
/w				1728	Vnw				7206
V			40.04						
Weavin	g and No	n-Weavin	g Speed:	3		İ	Cons	strained	
		Moguina	Unconstr		Non-Weaving (i = nw)		ng (i = w)		aving (= nw)
- /Fubible 0		Weaving 0.15).00		<u> </u>		
a (Exhibit 2 b (Exhibit 2		2.20			1.00				
c (Exhibit 2		0.97			1,30				
d (Exhibit 2		0.80			0.75				
Weaving inten		1.33			0.77				
Weaving and speeds, Si (mi	/h\	36.5		<u> </u>	3.32		<u></u>		_, <u></u>
Number of	lanes required	for unconstrai	ned operatior	ı, Nw	1.38 1.40				
Maximum	number of lane	es, Nw (max) w(max) uncons	trained oners	ation		if Nw > N	w (max) cons	trained opera	tion
	IN ILIAM < IA	w(max) uncons	Density	level	of Service			Section 1	Section 1
Weaving 6	agment speed	S (mi/h)		41.46					<u> </u>
Weaving s	Veaving segment speed, S (mi/h) Veaving segment density, D (pc/mi/ln)								
Level of se	evel of service, LOS								<u> </u>
	capacity of base condition, c _b (pc/h)								
Capacity a	apacity as a 15-minute flow rate, c (veh/h)			6934_					
	apacity as a full-hour volume, c _h (veh/h)			6587					

a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".

b. Capacity constrained by basic freeway capacity.

c. Capacity occurs under constrained operating conditions.

d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.

e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.

f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).

g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.

g. Five-lane Type A segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.

h. Type B weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

			DEEWAY	/ \ME \\/	ING WOR	KSHEET			
			KEEVVA	VVEAV	Site Info				
<u> Seneral</u>	Informati				Freeway/Dir c			VESTBOUND	
Analyst		YLM			Weaving Seg		BETWEEN HIATUS AND		
Agency/Cor Date Perfor		RS&H 10/30/2	2003		Jurisdiction	Location	FLAMI	NGO	
Analysis Tin		PM			Analysis Year	7	2014 B	UILD	_
									0.000
Inputs	2. heens woll-o	FF (mi/h)	60		Maguing tung		***************************************	A	
Veaving number of lanes, N				Weaving type Volume ratio,			0.2		
Veaving seg length, L (ft) 1050				Weaving ratio			0.3	2	
Terrain _	sions to p	a/h l Inde			S				
	sions to p	PHF	Truck %	RV %	E _T	E _R	f∺∨	fp	V
(pc/h)			5	0	1.5	1.2	0.976	1.00	7142
Vo1	6620	0.95 0.90	0	0	1.5	1.2	1.000	1.00	0
Vo2	0	0.95	2	0	1.5	1.2	0.990	1.00	1467
Vw1	1380		2	0	1.5	1.2	0.990	1.00	701
Vw2	660	0.95		2168	Vnw				7142
Vw	1000			2100	TAIL				9310
<u>V</u>			u Chaada				1100		8
Weavir	ig and Nor	1-vveaviri	Unconstr	eined			Cons	trained	
		Weaving			ving (i = nw)	Weaving (i = w)		Non-Weaving (= nv	
a (Exhibit 2	24-6)	1,00,1113					.15		.00
b (Exhibit 2							.00		.00 .30
c (Exhibit 2	24-6)						.97 .80		.30 .75
d (Exhibit 2							3,92		.60
Weaving inter Weaving and							5.17	46	3.31
speeds. Si (m	i/h)			Nice	1.41		D. 11		
Number of	lanes required number of lanes	for unconstrai	ined operation	, NW	1.41				
Maximum	Inumber of lanes	o(max) uncons	strained opera	tion		国 if Nw > N	lw (max) const	rained operat	tion
Weavi	ng Segme	of Speed	Density	. Level c	f Service	, and Ca	pacity		
Weaving s	segment speed,	S (mi/h)		38.74					
	segment density			60.09					
	Level of service, LOS								
Capacity of	of base condition	n, c _b (pc/h)		7151					

6977

6628

Capacity as a 15-minute flow rate, c (veh/h) Capacity as a full-hour volume, ch (veh/h)

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".

 b. Capacity constrained by basic freeway capacity.
 c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.
 h. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

			REEWA	/ WEAV	NG WOR					
General	Informati	on			Site Info		1.5051	UD.		
Analyst		YLM			Freeway/Dir o	of Travel	I-595 WB Between Flamingo and SW			
Analyst Agency/Com	pany	RS&H			Weaving Seg	Location	136th			
Date Perforn	ned	9/1/04	المالمال المال		Jurisdiction					
Analysis Tim	e Period	AM Pe	ak Period		Analysis Year		2014 E	BUILD		
Inputs										
Freeway free	-flow speed, S	FF (mi/h)	60		Weaving type)		В	_	
Weaving nur	Veaving number of lanes, N 4 Veaving seg length, L (ft) 1250			1	Volume ratio,			0.2 0.3		
weaving seg Terrain	j iengtn, ∟ (it)		Leve		ivveavillo ratio, ix			0.0	U	
Convers	ions to p	c/h Unde	r Base C	ondition	S					
(pc/h)	V	PHF	Truck %	RV %	E _T	ER	fHV	fp	V	
Vo1	4370	0.95	5	0	1.5	1.2	0.976	1.00	4714	
Vo2	0	0.95	2	0	1.5	1.2	0.990	1.00	0	
Vw1	1244	0.95	2	0	1.5	1.2	0.990	1.00	1322	
Vw2	524	0.95	2	0	1.5	1.2	0.990	1.00	557	
Vw2 Vw	J24	0.00		1879	Vnw				4714	
					1				6593	
V	g and Nor	Mogyin	a Snoods							
vveavin	g anu ivoi	I-AAGGAIII	Unconstr	ained			Cons	strained		
		Weaving			ving (i = nw)	Weavi	ng (i = w)	Non-Wea	ving (= nw)	
a (Exhibit 24	1-6)	0.0			.00					
b (Exhibit 2		2.20			.00					
c (Exhibit 24		0.7			.00	<u> </u>				
d (Exhibit 2		0.5			.50 .42					
Weaving intens	· · · · · · · · · · · · · · · · · · ·	0.7).22	-				
speeds. Si (mi/	Weaving and non-weaving 44.38 speeds, Si (mi/h) Number of lanes required for unconstrained operation									
Number of	anes required	for unconstrai	ned operation	, NW	1.47 3.50					
iwaximum n	umber of lanes If Nw < Nw	s, IVW (IIIdX) (may) uncons	strained opera	tion		☐ if Nw > N	w (max) cons	trained operat	ion	
Maccin	a Sonnal	of Speed	Density	Level						
Weaving ea	Weaving Segment Speed, Density, Weaving segment speed, S (mi/h)				48.40					
	Weaving segment speed, 3 (mim) Weaving segment density, D (pc/mi/ln)			34.05					<u> </u>	
	evel of service, LOS				D					

Weaving Segment Speed, Densi	ty, Level of Service, and Capacity
Weaving segment speed, S (mi/h)	48.40
Weaving segment density, D (pc/mi/ln)	34.05
Level of service, LOS	D
Capacity of base condition, c _b (pc/h)	7984
Capacity as a 15-minute flow rate, c (veh/h)	7789
Capacity as a full-hour volume, c _h (veh/h)	7400

Notes

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, Namps and Namp solitions b. Capacity constrained by basic freeway capacity.

 c. Capacity occurs under constrained operating conditions.

 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.

 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.

 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).

 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.

 h. Type B weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

		The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon	-KEEVVA	I VVCAV	ING WOR			15.9	
<u> Seneral</u>	Informat	on			Site Info		L 505 N	vn	
nalyst		YLM			Freeway/Dir o	of Travel	1-595 V		and SW
Malysi Agency/Con	npany	RS&H			Weaving Seg	Location	Between Flamingo and SW 136th		
Date Perforr		9/1/04			Jurisdiction		10081		
Analysis Tim	ne Period	PM Pe	ak Period		Analysis Yea	r	2014 E	BUILD	
nputs	10.00								
reeway free-flow speed, SFF (mi/h) 60					Weaving type	9		В	
leaving number of lanes, N 4			1	Volume ratio,			0.2		
Neaving se Ferrain	14111g 60g 1011gun, = (14)			Weaving ratio	o, R		0.2	47	
Conver	sions to p	c/h Unde			is .				
pc/h)	V	PHF	Truck %	RV %	E _T	E _R	fHV	fp	V
√o1	5709	0.95	5	1	1.5	1.2	0.974	1.00_	6171
Vo2	0	0.95	2	0	1.5	1.2	0.990	1.00	0
Vw1	1571	0.95	2	0	1.5 .	1.2	0.990	1.00	1670
/w2	593	0.95	2	0	1.5	1.2	0.990	1.00	630
/w				2300	Vnw				6171
v			1.00						8471
Weavin	g and No	n-Weavir	g Speeds	3					
			Unconstr					trained	
		Weaving	(i = w)		ving (i = nw)	Weavi	ng (i = w)	Non-Wea	ving (= nw
a (Exhibit 2	4-6)	0.0			.00			<u> </u>	
b (Exhibit 2	4-6)	2.2			.00				
c (Exhibit 2		0.7			.00				
d (Exhibit 2		0.5).50).51				
Weaving intens Weaving and n		0.8			8.19			 	
speeds, Si (mi/	h)	42.5			1.45				
Number of	lanes required number of lane	for unconstra	ined operation	, NW	1.45 3.50				
	If Nw < Nv		strained opera	tion		᠍ if Nw > N	w (max) const	rained opera	tion
Weavin	a Seame	nt Speed	, Density	Level	f Service	, and Ca	oacity		5.5 (9.5)
Weaving se	egment speed,	S (mi/h)		46.51					··
Veaving segment density, D (pc/mi/ln)				45.53					
	evel of service, LOS			F					
Capacity of	Capacity of base condition, c _b (pc/h)								
Capacity as	s a 15-minute f	low rate, c (ve	eh/h)	7866					
		. , .	n. N	7470					

Notes

a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".

7473

Capacity as a full-hour volume, ch (veh/h)

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions" b. Capacity constrained by basic freeway capacity.
 c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

SIGNALIZED INTERSECTIONS

YEAR 2034 REVISED LPA

BASIC FREEWAY SEGMENTS

HCS2000™ DETAILED REPORT Site Information General Information SR 84 EB/136th Avenue Intersection YLM Analyst All other areas Area Type Agency or Co. RSH Jurisdiction te Performed 10/15/04 Analysis Year Opening Year 2014 Build AM Peak ...ne Period 1 - 595 SIMR Project ID . Volume and Timing Input WB NB SB EB LT TH RT TH RT LT TH RT LT TH RT LT 0 2 2 1 2 0 2 a O Number of lanes, N 2 1 T Т L R L Τ R Lane group 711 615 499 896 672 241 Volume, V (vph) 653 2 2 2 2 % Heavy vehicles, %HV 2 2 2 0.95 0.95 0.95 0.95 Peak-hour factor, PHF 0.95 0.95 0.95 Р Ρ Р Р P P P Pretimed (P) or actuated (A) 2.0 2.0 2.0 2.0 2.0 2.0 2.0 Start-up lost time, I, 2.0 2.0 2.0 2.0 20 Extension of effective green, e 2.0 2.0 3 3 3 3 3 3 3 Arrival type, AT 3.0 3.0 3.0 Unit extension, UE 3.0 3.0 3.0 3.0 1.000 1.000 1.000 1.000 1.000 1.000 1.000 Filtering/metering, I 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Initial unmet demand, Q_h 0 50 0 0 50 'd / Bike / RTOR volumes 0 12.0 12.0 120 12.0 12.0 12.0 12.0 Lane width Ν Ν 0 Ν Ν 0 Ν 0 Ν Ν Parking / Grade / Parking Ν Parking maneuvers, N_m 0 0 0 0 0 Buses stopping, N_P Min. time for pedestrians, G_n 08 07 SB Only 04 NB Only 03 EB Only 02 Phasing G = G = G = 35.0G = 44.0G = G = G = G = 45.0**Timing** Y = Y = 5Y = Y = 5Y = Y = Y = 6Y = Cycle Length, C = 140.0 Duration of Analysis, T = 0.25Lane Group Capacity, Control Delay, and LOS Determination SB NB WB EB RT LT TH RT LT TH RT RT LT TH LT TH 525 891 647 748 Adjusted flow rate, v 707 201 687 1114 886 972 1080 Lane group capacity, c 1104 1139 1583 0.67 0.92 0.60 0.59 0.62 0.13 v/c ratio, X 0.62 0.31 0.31 0.25 0.61 1.00 Total green ratio, g/C 0.32 0.32 41.7 23.8 40.5 46.2 0.0 40.3 40.3 Uniform delay, d₁ 1.000 1.000 1.000 1.000 ingression factor, PF 1.000 1.000 0.950 0.50 0.50 0.50 0.50 ⊔elay calibration, k 0.50 0.50 0.50 3.2 2.9 14.6 2.5 2.6 2.5 0.2 Incremental delay, d₂ Initial queue delay, d₃

Control delay	42.9	42.8	0.2					49.1	38.5	43.0	44.9	
Lane group LOS	D	D	A					D	D	D	D	
Approach delay	3	37.5					42.4			44.0		
proach LOS		D					D			D		
Intersection delay	4	1.2		X _c	$X_{c} = 0.83$		Intersection LOS				D	

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HCS2000™ DETAILED REPORT General Information Site Information SR 84 EB/136th Avenue Intersection Analyst YLM All other areas Area Type Agency or Co. RSH Jurisdiction te Performed 10/15/04 Opening Year 2014Build Analysis Year .ne Period PM Peak Project ID I - 595 SIMR Volume and Timing Input SR NB EΒ WB TH RT LT RT LT TH RT LT TH TH RT LT 1 2 2 0 0 0 0 2 2 Number of lanes, N. 2 T L Т R Lane group L T R 1320 972 337 545 441 146 Volume, V (vph) 681 2 2 2 2 % Heavy vehicles, %HV 2 2 2 0.95 0.95 0.95 0.95 Peak-hour factor, PHF 0.95 0.95 0.95 Р Р P P P P Ρ Pretimed (P) or actuated (A) 2.0 2.0 2.0 2.0 2.0 2.0 2.0 Start-up lost time, I, 2.0 2.0 2.0 2.0 Extension of effective green, e 2.0 2.0 2.0 3 3 3 3 3 3 3 Arrival type, AT 3.0 3.0 3.0 3.0 3.0 Unit extension, UE 3.0 3.0 1.000 1.000 1.000 1.000 Filtering/metering, I 1.000 1.000 1.000 0.0 0.0 0.0 0.0 Initial unmet demand, Q_h 0.0 0.0 0.0 0 0 50 and / Bike / RTOR volumes 0 0 50 0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 Lane width 0 Ν Ν 0 Ν Ν Ν 0 Ν Ν Ν Parking / Grade / Parking Parking maneuvers, N_m 0 0 0 0 0 0 0 Buses stopping, N_B Min. time for pedestrians, G_n 80 07 03 04 NB Only SB Only 02 EB Only Phasing G = G = 62.0G =G = 22.0G = G = G = G = 40.0Timing Y = Y = Y = 5Y = Y = 5Y = Y = 6Y = Cycle Length, C = 140.0 Duration of Analysis, T = 0.25Lane Group Capacity, Control Delay, and LOS Determination SB NB WB EB RT LT TH LT RT LT TH RT TH RT TH LT 1023 1389 355 521 464 101 Adjusted flow rate, v 717 1570 557 769 1521 Lane group capacity, c 1013 1583 981 0.64 0.68 0.670.88 v/c ratio, X 0.73 0.46 0.06 0.49 0.44 0.44 0.16 Total green ratio, g/C 0.29 0.29 1.00 30.9 35.7 55.3 27.6 45.1 41.1 0.0 Uniform delay, d₁ 1.000 1.000 1.000 1.000 Progression factor, PF 1.000 1.000 0.9500.50 0.50 0.50 0.50 0.50 بelay calibration, k 0.50 0.50 7.7 5.5 4.8 2.4 4.8 1.5 0.1 Incremental delay, d₂ Initial queue delay, da

49.9	42.6	0.1					60.8	32.4	33.3	43.4	
D	D	Α					E	С	С	D	
4	43.3					43.9				39.1	
	D					D		D		. <u></u> .	
4	1.2	<u>. </u>	$X_c = 0.78$			Intersection LOS				D	
	D 4	D D	D D A 43.3 D	D D A 43.3 D	D D A 43.3 D	D D A 43.3 D	D D A 43.3 D	D D A E 43.3 43.9 D D	D D A E C 43.3	D D A E C C 43.3	D D A E C D D D D D D D D

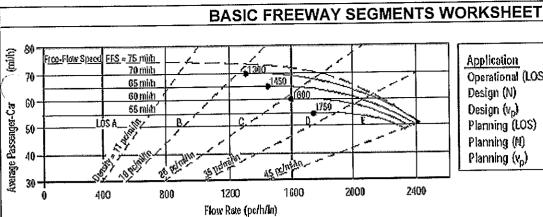
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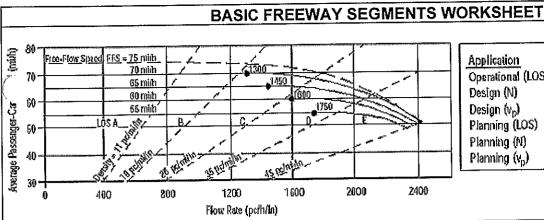
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RAMPS AND RAMP JUNCTIONS



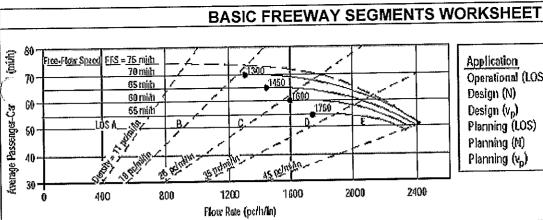
Application	Input	Output
Operational (LOS)	FFS, N, v _D	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v_0 , S, O
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _o)	FFS, LOS, N	v _p , S, D

0 400 200	Elem Dete (poils fin)	30 2000	Live			
	Flow Rate (pc/h/lin)					
General Information			Site Information	EACTRO	UND I-595	
Analyst	YLM		Highway/Direction of Travel From/To	EASTBU	OND 1-989	
Agency or Company Date Performed	RSH		Jurisdiction			
Analysis Time Period	AM		Analysis Year	2034		
	ob Hill Off-ramp (Br	aid)				
Oper.(LOS)			es.(N)	☐ Plan	ning Data	
Flow Inputs			AND THE RESERVE OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF			
Volume, V	5720 veh/h		Peak-Hour Factor, PHF	0.95		
AADT	veh/day		%Trucks and Buses, P _T	5		
Peak-Hr Prop. of AADT, K			%RVs, P _R	0		
Peak-Hr Direction Prop, D			General Terrain:	Level		
$DDHV = AADT \times K \times D$	veh/h		Grade % Length	mi		
Driver type adjustment	1.00		Up/Down %			
Calculate Flow Adjustm			-	1.2		
\	1.00		E _R			
E _T	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976		
Speed Inputs			Calc Speed Adj and FF	S		
Lane Width	12.0	ft	f _{LW}	0.0	mi/h	
Rt-Shoulder Lat. Clearance	6.0	ft	f _{LC}	0.0	mi/h	
Interchange Density	0.69	I/mi	f _{ID}	1.0	mi/h	
Number of Lanes, N	4		1	1.5	mi/h	
FFS (measured)		mi/h	f _N	67.5	mi/h	
Base free-flow Speed, BFFS	70.0	mi/h	FFS	07.0	111111	
LOS and Performance	Measures		Design (N)		100	
			Design (N)			
Operational (LOS)			Design LOS			
$v_p = (V \text{ or DDHV}) / (PHF x N x)$	^{(f} _{HV} X 1543	pc/h/ln	$v_p = (V \text{ or DDHV}) / (PHF \times N)$	x f _{HV} x	o /lo	
$ f_p $, , , ,	 -	f _p)	,	pc/h	
S	67. 4	mi/h	S		mi/h	
$D = v_p / S$	22.9	pc/mi/ln	1		pc/mi/ln	
Los	С		$D = v_p / S$		ролиш	
			Required Number of Lanes, N	V		
Glossary			Factor Location			
Number of lanes	S - Speed		E _R - Exhibits23-8, 23-10		f _{LW} - Exhibit 23-4	
- Hourly volume	D - Density		E _T - Exhibits 23-8, 23-10, 23-	.11	f _{LC} - Exhibit 23-5	
v _p - Flow rate	FFS - Free-flow s	peed	1 .	• •		
LOS - Level of service	BFFS - Base free		f _p - Page 23-12 f _N - Exhibit 23-6			
DDHV - Directional design ho		•	LOS, S, FFS, v _p - Exhibits 23	5-2, 23-3	f _{ID} - Exhibit 23-7	
DDHY - Directional design no	ui roidino			···		



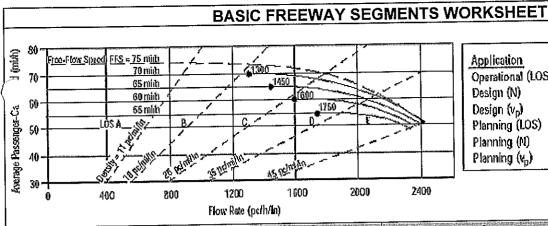
Application	Input	Output
Operational (LOS)	FFS, N, vp	LOS, S, D
Design (N)	FFS, LOS, v _o	N, S, D
Design (v _p)	FFS, LOS, N	ν ₀ . S. O
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (M)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

~ 0 400 800	1200 10 Flow Rate (pc/h/lin)	Q() ZUOU	2400		
	tene toes thanned		Site Information		
General Information	YLM		Highway/Direction of Travel	EASTBOU	JND 1-595
Analyst Agency or Company	RSH		From/To		
Date Performed	8/26/04		Jurisdiction	2024	
Analysis Time Period	PM		Analysis Year	2034	
	ob Hill Off-ramp (Br		(1)	□ Plan	ning Data
Oper.(LOS)		I D	es.(N)	I STIGHT	Img Data
Flow Inputs	8140 veh/h		Peak-Hour Factor, PHF	0.95	
/olume, V AADT	veh/day		%Trucks and Buses, P _T	5	
	veriraay		%RVs, P _R	0	
Peak-Hr Prop. of AADT, K			General Terrain:	Level	
Peak-Hr Direction Prop, D DDHV = AADT x K x D	veh/h		Grade % Length	mi	
Oriver type adjustment	1.00		Up/Down %		
alculate Flow Adjustm	ents	5 Sept. 50	Service of the County County County (County)	194 P. W.	Control of the second
	1.00		E _R	1.2	
E _T	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
Speed Inputs			Calc Speed Adj and FF	S	10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to
ane Width	12.0	ft	f _{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f _{LC}	0.0	mi/h
nterchange Density	0.69	I/mi	Į.	1.0	mi/h
Number of Lanes, N	4		f _{ID}		mi/h
FFS (measured)		mi/h	f _N	1.5	
Base free-flow Speed, BFFS	70.0	mi/h	FFS	67.5	mi/h
LOS and Performance I			Design (N)		
			Design (N)		
Operational (LOS)			Design LOS		
$v_p = (V \text{ or DDHV}) / (PHF x N x)$: f _{HV} x 2196	pc/h/ln	$v_p = (V \text{ or DDHV}) / (PHF \times N)$	x f _{uv} , x	
f _p)	2130	релип	F	п۷	pc/h
5	58.7	mi/h	f _p)		mi/h
D=v _p /S	37.4	pc/mi/ln	S		pc/mi/ln
LOS	E	,	$D = v_p / S$.1	ролнин
			Required Number of Lanes, I	V	
Glossary			Factor Location		
Number of lanes	S - Speed		E _R - Exhibits23-8, 23-10		f _{LW} - Exhibit 23-4
√ - Hourly volume	D - Density		E _T - Exhibits 23-8, 23-10, 23-	-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow s	peed	f _n - Page 23-12	. •	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free	-flow speed	1 F	1-0 03-3	f _{ID} - Exhibit 23-7
DDHV - Directional design ho			LOS, S, FFS, v _p - Exhibits 23	- <u>4,</u> 40-0	ID - EVINDIC 50 1
DI. Collonial doblight no					



Application	Input	Output
Operational (LOS)	FFS, N, v _D	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v_p , S , D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	ν _ρ , S, D

o 400 800	1200 160 Filow Rate (pc/ln/lin)	0 2000	24(A)		MATERIAL STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF
General Information			Site Information	EAGEDOL	IND LEGE
nalyst	YLM		Highway/Direction of Travel From/To	EASTBOL	כפפ-ו חאוי
Agency or Company	RSH 8/24/04		Jurisdiction		
Date Performed Analysis Time Period	AM		Analysis Year	2034	
Project Description FLAMING					
☑ Oper.(LOS)			es.(N)	☐ Plant	ning Data
Flow Inputs				0.05	A Company of the Company
/olume, V	6110 veh/h		Peak-Hour Factor, PHF	0.95	
AADT	veh/day		%Trucks and Buses, P _T	5	
Peak-Hr Prop. of AADT, K			%RVs, P _R	0	
Peak-Hr Direction Prop, D			General Terrain:	Level	
DDHV = AADT x K x D	veh/h		Grade % Length	mi	
Oriver type adjustment	1.00		Up/Down %		
ેવ culate Flow Adjustm			_	1.2	the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon
` `Y	1.00		E _R		
E _T	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
Speed Inputs			Calc Speed Adj and FF	<u>S</u>	
ane Width	12.0	ft	f _{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f _{LC}	0.0	mi/h
nterchange Density	0.69	I/mi	f _{ID}	1.0	mi/h
Number of Lanes, N	4		.	1.5	mi/h
FFS (measured)		mi/h	f _N		mi/h
Base free-flow Speed, BFFS	70.0	mi/h	FFS	67.5	1111/11
LOS and Performance N	Measures		Design (N)		
			Design (N)		
Operational (LOS)			Design LOS		
$v_p = (V \text{ or DDHV}) / (PHF x N x)$	^t HV X 1648	pc/h/ln	$ v_p = (V \text{ or DDHV}) / (PHF \times N)$	x f _{HV} x	pc/h
f _p)		•	f _p)		ролі
S	67.0	mi/h	S S		mi/h
$D = v_p / S$	24.6	pc/mi/ln	$D = V_D / S$		pc/mi/ln
LOS	С		Required Number of Lanes, I	N	F ************************************
			Factor Location		E. Service Property of
Glossary	C Cocod				
Number of lanes	S - Speed		E _R - Exhibits23-8, 23-10		f _{LW} - Exhibit 23-4
 - Hourly volume 	D - Density		E _T - Exhibits 23-8, 23-10, 23-	-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow sp	peed	f _n - Page 23-12		f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-	flow speed	LOS, S, FFS, v _p - Exhibits 23	3-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design hor	ur volume		[COS, O, 11 O, Vp - Exhibits 20	_, _,	יווי – ייי



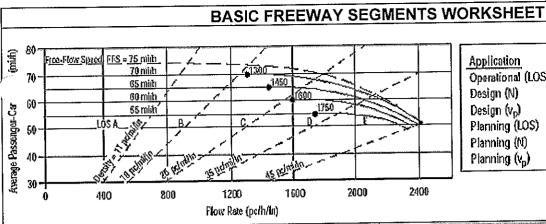
DDHV - Directional design hour volume

Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, V _D	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

o 400 800	1200 16 Flow Rate (pcfh/lin)	(00) 260U	2400					
General Information			Site Information					
Analyst	YLM	King II.	Highway/Direction of Travel	EASTBOL	IND 1-595			
Agency or Company	RSH a/22/04		From/To Jurisdiction					
Date Performed	8/26/04 P M		Analysis Year	2034				
Analysis Time Period Project Description FLAMING								
Oper.(LOS)			es.(N)	Planning Data				
Flow Inputs			a Branco Status Branco Bellinas Arthur Costillana.	0.05	美国特别 (2) 10 (100年)			
/olume, V	8040 veh/h		Peak-Hour Factor, PHF	0.95				
AADT	veh/day		%Trucks and Buses, P _T	5				
Peak-Hr Prop. of AADT, K			%RVs, P _R	0				
Peak-Hr Direction Prop, D			General Terrain:	Level mi				
DDHV = AADT x K x D	veh/h		Grade % Length Up/Down %	[110				
Driver type adjustment	1.00		Ор/ДОМП 78					
Calculate Flow Adjustm	1.00		E _R	1.2				
<u>r</u>			$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976				
E _T	1.5			The same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the sa				
Speed Inputs			Calc Speed Adj and FF	3				
Lane Width	12.0	ft	f _{LW}	0.0	mi/h			
Rt-Shoulder Lat. Clearance	6.0	ft	f _{LC}	0.0	mi/h			
Interchange Density	0.69	I/mi	f _{ID}	1.0	mi/h			
Number of Lanes, N	4		f _N	1.5	mi/h			
FFS (measured)		mi/h		67.5	mi/h			
Base free-flow Speed, BFFS	70.0	mi/h	FFS	67.5	111//11			
LOS and Performance I	Veasures		Design (N)					
Operational (LOS)			Design (N)					
	·f v		Design LOS	_				
$v_p = (V \text{ or DDHV}) / (PHF \times N \times N)$	` ^{'HV} ^ 2169	pc/h/ln	$v_p = (V \text{ or DDHV}) / (PHF \times N)$	x f _{HV} x	pc/h			
f _p)	50.4	:/lo	f_p)		•			
S	59.4	mi/h	s		mi/h			
$D = v_p / S$	36.5	pc/mi/ln	$D = v_p / S$		pc/mi/ln			
LOS	E		Required Number of Lanes, N	٧				
Glossary			Factor Location					
Number of lanes	S - Speed		E _R - Exhibits23-8, 23-10		f _{LW} - Exhibit 23-4			
Hourly volume	D - Density		E _T - Exhibits 23-8, 23-10, 23-	.11	f _{LC} - Exhibit 23-5			
v _p - Flow rate	FFS - Free-flow s	speed	1 7	· 1 1	f _N - Exhibit 23-6			
LOS - Level of service	BFFS - Base free		ib -					
DDHV - Directional design ho			LOS, S, FFS, v _p - Exhibits 23	0-Z, ZU-J	ID - EVIUNG 50-1			

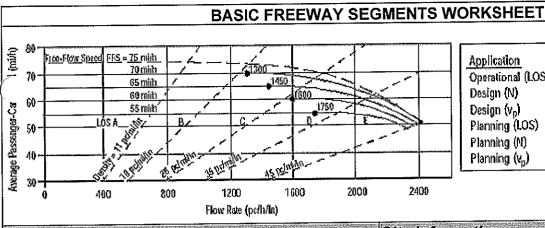
RAMPS AND RAMP JUNCTIONS WORKSHEET												
General Infor	mation			Sit	e Inform		-					
Analyst		YLM				•	of Travel		595EB	N		
Agency or Cor		RS&H				iction		П	atus Ol	N		
Date Performe		9-22-04				isdiction alysis Yea	or	20)34			
Analysis Time		AM			Alla	alysis tea	AI		/J T			
Project Descri	ption											
<i>Inputs</i> Upstream Adj	Ramp	Terrain								Downstre Ramp	am Adj	
☐ Yes ☐	On										∭ On	
I≣ No ■	Off		I≣ No I⊞ Of									
L _{up} = ft			$S_{EE} = 60.0 \text{ mph}$ $S_{ER} = 50.0 \text{ mph}$								ft	
	$S_{FF} = 60.0 \text{ mph}$ veh/h Sketch (show lanes,							11101	,	VD =	veh/h	
1	h/h				now ian	ıсэ, ∟ _А , ∟	D' K' Al					
Conversion t		ger Base (onditi.	ons				Π		v=V/PHF		
(pc/h)	V (Veh/hr)	PHF	Te	rrain	Truck	%Rv	f _{HV}			$f_{HV} f_p$		
Freeway	6110	0.95		vel	5	0	0.976		1.00	6592		
Ramp	1450	0.95	Le	Level		0	0.990	1	.00	1542		
UpStream												
DownStream		erge Areas			<u> </u>			Divo	rge Area	<u> </u>		
		Cotimas	ion of v	אועם	ige Alea	10						
Estimation of v ₁₂ Estimation of v ₁₂										V VD		
	12	= V _F (P _{FM})	l							- V _R)P _{FD}		
L _{EQ} = (Equat	tion 25-2 o	r 25-3)					quation 25					
$P_{FM} = 0.170$	using Equ	ation (Ext	nibit 25	-5)		P _{FD} = using Equation (Exhibit 25-11)						
V ₁₂ = 1121						$V_{12} = pc/h$						
Capacity Ch	A SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECURE OF SECU	100 000 000				Capacity Checks						
	Actual	Maxir	num	LOS	F?		Actu	al		mum	LOS F?	
V _{FO}	8134	920	10	No	,	V _{FI} =V _I	F		See Ext	hibit 25-		
, FO			_			V ₁₂			440	0:All		
						V _{FO} = V	F			hibit 25-		
V _{R12}	2663	4600):All	No)	V _R				nibit 25-3		
						V _R						
Level of Ser						Level o	f Service L					
$D_{R} = 5.475$	+ 0.00734	v _R + 0.007	′8 V ₁₂ -	0.00627	L _A				J.0086 V	₁₂ - 0.000	a r ^D	
$D_R = 2$	1.5 (pc/ mi	/ln)				D _R =	(pc/ mi /ln))				
LOS = C	(Exhibit 2	5-4)				LOS=	(Exhibit 25	5-4)				
Speed Estin						Speed	Estimation)				
7-4-1	2 (Exibit 2	25-19)				D _s =	(Exhibit 25	5-19)				
-	-	hibit 25-19)			S _R =	mph (Ext	nibit 2	25-19)			
	• ,	nibit 25-19)				s ₀ =	mph (Ex					
1 -	•	hibit 25-19)				s=	mph (Ex					

RAMPS AND RAMP JUNCTIONS WORKSHEET											
General Info	ormation			Sit	e Infori				<u> </u>		
Analyst		YLM				-	of Travel		95EB	N.I.	
Agency or C		RS&H				nction		Hia	itus Ol	N	
Date Perform		9-22-04				isdiction		201	n 4		
Analysis Tim		PM			Ana	alysis Yea	ar	203	34		
Project Desc	cription 1-59	95 SIMR									
<i>Inputs</i> Upstream Ad	di Ramn	Terrain								Downstrea	am Adj
·	aj Ramp ≣ On									Ramp I Yes	
											☐ On
⊠ No I	■ Off										I∏ Off ft
L _{up} ≔	ft	S	= 6	60.0 mph	1	S	S _{FR} = 50.0	mph		L _{down} =	
Vu = ∖	veh/h									VD =	veh/h
		day Bana (Sketch (show lanes, L _A , L _D , r Base Conditions								
Conversion		iei base c	JUNUIU	UHS				I		v=V/PHF	
(pc/h)	V (Veh/hr)	PHF	Те	Terrain		%Rv	f _{HV}		f _p	f _{HV} f _p	
Freeway	8040	0.95	Le	vel	5	0	0.976		00	8675	
Ramp	960	0.95	Le	Level		0	0.990	1.	00	1021	
UpStream					ļ						
DownStrea		erge Areas						<u> </u>			
				Diver	ge Area	S					
Estimation	of V ₁₂		,	Estimat	ion of v ₁₂		· ·				
	V ₁₂ :	= V _F (P _{FM})					V	₁₂ = V	_R + (V _F	- V _R)P _{FD}	
L _{EO} = (Equ	ation 25-2 or	25-3)				L _{EQ} = (E	quation 25	-8 or 2	25-9)		
P _{FM} = 0.235			nibit 25	-5)		$P_{ED} = u$	sing Equat	ion (E:	xhibit 2	5-11)	
V ₁₂ = 2040		,		,		$V_{12} = pc/h$					
Capacity C						Capacity Checks					
Separate S	Actual	Maxir	num	Los	F?	A Product Laborated	Actu	al	Maxii	mum	LOS F?
						V _{FI} =V _F			See Ext	nibit 25-	
V _{FO}	9696	920	U	Ye	S	V ₁₂			4400		
						V _{FO} = V	F -	,		nibit 25-	
V _{R12}	3061	4600	:All	No)	V_R	f		1.		
						V _R		S	See Exh	ibit 25-3	
Level of Se	rvice Deteri	mination (i	f not F)		Level of	Service L)etern	inatio	ı (if not F)	
D _R = 5.475	5 + 0.00734	v _R + 0.007	'8 V ₁₂ -	0.00627	L _A		18		0086 V.	₁₂ - 0.0009	L _D
$D_R = 2$	24.8 (pc/ mi	/ln)				D _R =	(pc/ mi /ln)				
LOS =	Exhibit 25	-4)				LOS=	(Exhibit 25				
Speed Esti	mation					Speed B	stimation				
$M_{\rm S} = 0.3$	339 (Exibit 2	5-19)				D _s =	(Exhibit 25	-19)			
-	.9 mph (Ex	hibit 25-19))			S _R =	mph (Exh	ibit 25	i-19)		
1 '	A mph (Exh					S ₀ =	mph (Exh	ibit 25	i-19)		
-	.3 mph (Ex	=)			1 -	mph (Exh				



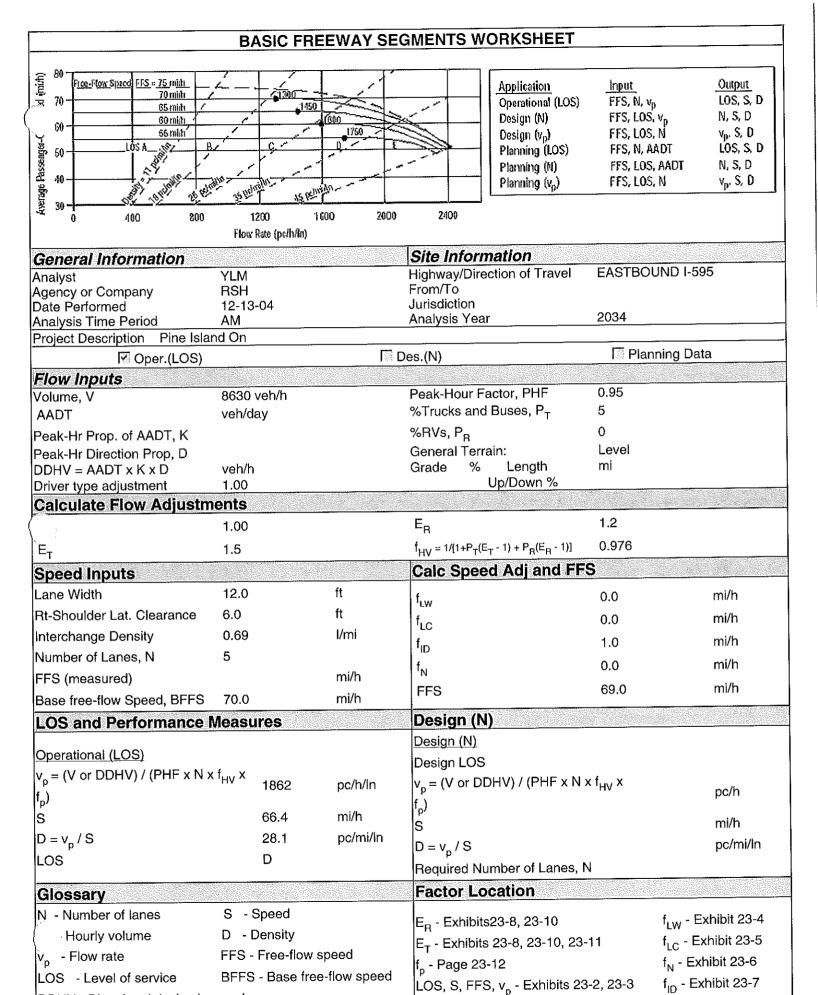
Application	<u>Input</u>	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, V _D	N, S, D
Design (v _p)	FFS, LOS, N	v _o , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

0 400	200 1200 Flow Rate (1600 peth/la)	2000	24(4)		
General Information				Site Information	EASTRO	JND I-595
Analyst	YLM RSH			Highway/Direction of Travel From/To	ENSTRUC	חארו ו-1
Agency or Company Date Performed	8/24/04			Jurisdiction		
Analysis Time Period	AM			Analysis Year	2034	
Project Description N	OB HILL ON				63 DI	wing Data
☑ Oper.(LOS)		J D	es.(N)	I Plan	ning Data
Flow Inputs				Peak-Hour Factor, PHF	0.95	31 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Volume, V	6200 veh	'n		%Trucks and Buses, P _T	5	
AADT	veh/day			•	0	
Peak-Hr Prop. of AADT				%RVs, P _R	Level	
Peak-Hr Direction Prop	, D veh/h			General Terrain: Grade % Length	mi	
DDHV = AADT x K x D Driver type adjustment	1.00			Up/Down %		
Calculate Flow Ad	A CONTRACTOR OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY O	1				
	1.00			E _R	1.2	
E _T	1.5			$f_{HV} = 1/[1 + P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
Speed Inputs				Calc Speed Adj and FF	S	
Lane Width	12.0	ft		f _{LW}	0.0	mi/h
Rt-Shoulder Lat. Cleara	ance 6.0	ft			0.0	mi/h
Interchange Density	0.69	l/mi		f _{LC}	1.0	mi/h
Number of Lanes, N	4			f _{ID}	1.5	mi/h
FFS (measured)		mi/h		f _N		mi/h
Base free-flow Speed,	BFFS 70.0	mi/h		FFS	67.5	1111/11
LOS and Perform	ance Measures			Design (N)		
				Design (N)		
Operational (LOS)	EvMvf v			Design LOS		
$v_p = (V \text{ or DDHV}) / (PH$	16 TXIN X 1HV X	72 pc/h/l	n	$v_p = (V \text{ or DDHV}) / (PHF \times N)$	x f _{HV} x	pc/h
(f _p)		,,		f_p)		F
S	66			s		mi/h
$D = v_p / S$	25	.0 pc/mi	/ln	$D = v_p / S$		pc/mi/ln
LOS	С			Required Number of Lanes,	N	
Glossary	To the South Constitute of		ikes is	Factor Location		
Number of lanes	S - Spe	ed		E Evhibite23_8 23_10		f _{LW} - Exhibit 23-4
√ - Hourly volume	D - Dens			E _R - Exhibits 23-8, 23-10	11	f _{LC} - Exhibit 23-5
v _p - Flow rate		e-flow speed		E _T - Exhibits 23-8, 23-10, 23	-11	f _N - Exhibit 23-6
LOS - Level of service		ase free-flow sp	eed	f _p - Page 23-12	2 2 2 2	
DDHV - Directional de		- ŗ		LOS, S, FFS, v _p - Exhibits 2	J-2, 2J-J	f _{ID} - Exhibit 23-7
DDITY - Directional de	Jigii ilogi volulilo					

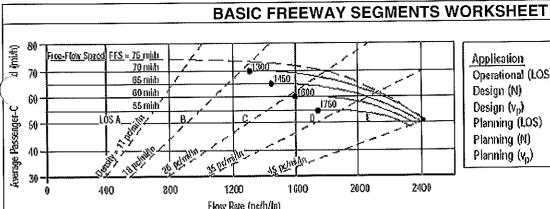


Application	Input	Output
Operational (LOS)	FFS, N, v _D	LOS, S, D
Design (N)	FFS, LOS, V _D	N, S, D
Design (v _o)	FFS, LOS, N	v _p . S. D
Planning (LOS)	FFS, N, AADT	LÔS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

0	400 8	00 1200 Flow Rate (160 0 octh/la)	2000	2400		
General In	formation		r····		Site Information		
Analyst	Kel B H I SI M SI M SI	YLM			Highway/Direction of Travel	EASTBO	UND 1-595
Agency or Co	mpany	RSH			From/To		
Date Perform		8/26/04			Jurisdiction	2034	
Analysis Time		PM			Analysis Year	2004	
Project Descr	Oper.(LOS	HILL ON			Pes.(N)	☐ Plar	nning Data
Flow Input	AND THE RESIDENCE OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY	"		, and a	110 Comments - 120 120 120 120 120 120 120 120 120 120		OF THE STREET, WE SEED IN
Volume, V		7240 veh	/h		Peak-Hour Factor, PHF	0.95	
AADT		veh/day			%Trucks and Buses, P _T	5	
Peak-Hr Prop	of AADT. K	-			%RVs, P _R	0	
Peak-Hr Direc					General Terrain:	Level	
DDHV = AAD		veh/h			Grade % Length	mi	
Driver type ac	djustment	1.00			Up/Down %		
Ca <u>lculate</u> I	Flow Adjus	tments			terroritism of Marine III and the applications		
۲		1.00			E _R	1.2	
E _T		1.5			$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
Speed Inpl	uts				Calc Speed Adj and FF	S	arthur and the state of the
Lane Width		12.0	ft		f _{LW}	0.0	mi/h
Rt-Shoulder L	_at. Clearance	6.0	ft		f _{LC}	0.0	mi/h
Interchange I	Density	0.69	I/n	ni	f _{ID}	1.0	mi/h
Number of La	ines, N	4			i "	1.5	mi/h
FFS (measur	ed)		mi	i/h	f _N		·mi/h
Base free-flov	w Speed, BFF	S 70.0	mi	i/h	FFS	67.5	1111/11
LOS and F	erformanc	e Measures	; Children Estab		Design (N)		
Onerstiens! (1.06)				Design (N)		
Operational (Nuf v			Design LOS		
"	HV) / (PHF x l	19:	53 pc	:/h/ln	$v_p = (V \text{ or DDHV}) / (PHF \times N)$	x f _{HV} x	pc/h
f _p)			_		f _p)		pom
S		64.			s		mi/h
$D = v_p / S$		30.	.5 pc	:/mi/ln	$D = v_p / S$		pc/mi/ln
LOS		D			Required Number of Lanes, I	٧	·
Glossary					Factor Location		
Number	of lanes	S - Spee	ed			7.77.77.77	f Evhibit 22_1
- Hourly v		D - Dens			E _R - Exhibits23-8, 23-10	4.4	f _{LW} - Exhibit 23-4
			e-flow speed	H	E _T - Exhibits 23-8, 23-10, 23-	·11	f _{LC} - Exhibit 23-5
l b			ase free-flow		f _p - Page 23-12		f _N - Exhibit 23-6
LOS - Level			336 HGC-HOW	apcea	LOS, S, FFS, v _p - Exhibits 23	3-2, 23-3	f _{ID} - Exhibit 23-7
DDHA - Ditec	ctional design	nour volume					

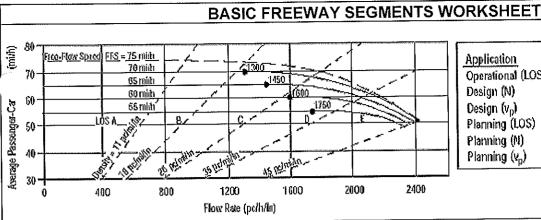


DDHV - Directional design hour volume



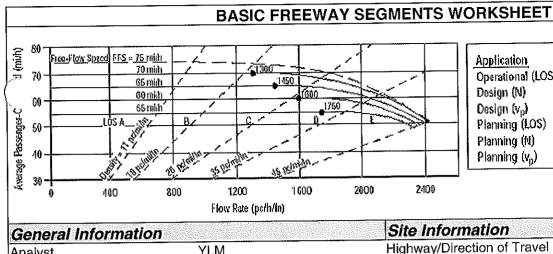
Application	<u>Input</u>	Output
Operational (LOS)	FFS, N, v _D	LOS, S, D
Design (N)	FFS, LOS, v _o	N, S, D
Design (v _p)	FFS, LOS, N	v _p . S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p . S, D

0 400 200	1200 100 Flow Rate (pc/h/fn)	00 Z0U0	2400		
General Information			Site Information		
Analyst	YLM		Highway/Direction of Travel	EASTBOL	JND I-595
Agency or Company	RSH		From/To Jurisdiction		
Date Performed Analysis Time Period	12-13-04 PM		Analysis Year	2034	
Project Description Pine Islan		210.ft	7 thanyono Tour		
Oper.(LOS)		II C	Des.(N)	∏ Plan	ning Data
Flow Inputs					
Volume, V	9070 veh/h		Peak-Hour Factor, PHF	0.95	
AADT	veh/day		%Trucks and Buses, P _T	5	
Peak-Hr Prop. of AADT, K			%RVs, P _R	0	
Peak-Hr Direction Prop, D			General Terrain:	Level	
$DDHV = AADT \times K \times D$	veh/h		Grade % Length	mi	
Driver type adjustment	1.00		Up/Down %		
Calculate Flow Adjustm					
	1.00		E _R	1.2	
E _T	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
Speed Inputs			Calc Speed Adj and FF	S	
Lane Width	12.0	ft	f _{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f _{LC}	0.0	mi/h
Interchange Density	0.69	I/mi	f _{ID}	1.0	mi/h
Number of Lanes, N	5			0.0	mi/h
FFS (measured)		mi/h	f _N	69.0	mi/h
Base free-flow Speed, BFFS	70.0	mi/h	FFS	09.0	111/11
LOS and Performance I	Measures		Design (N)		
One retional (LOC)			Design (N)		
Operational (LOS)	. .		Design LOS		
$v_p = (V \text{ or DDHV}) / (PHF x N x)$	1957 X	pc/h/ln	$v_0 = (V \text{ or DDHV}) / (PHF \times N)$	x f _{HV} x	pc/h
f _p)		·	$ f_p $		ролт
S	65.0	mi/h	S		mi/h
$D = v_p / S$	30.1	pc/mi/ln	$D = v_p / S$		pc/mi/ln
Los	D		Required Number of Lanes, I	V	μ
Glossary			Factor Location		
N - Number of lanes	S - Speed				f Eybibit 00 4
Hourly volume	D - Density		E _R - Exhibits23-8, 23-10		f _{LW} - Exhibit 23-4
1	FFS - Free-flow s	need	E _T - Exhibits 23-8, 23-10, 23-	-11	f _{LC} - Exhibit 23-5
v _p - Flow rate		-	f _p - Page 23-12		f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free	-now speed	LOS, S, FFS, v _p - Exhibits 23	3-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design ho	ur volume				



Application	hput	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _o	N, S, D
Design (v _D)	FFS, LOS, N	v _o . S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

	Flow Rate (pc/h/ln)				
General Information			Site Information		
Analyst Agency or Company Date Performed	YLM RSH 12-13-04		Highway/Direction of Travel From/To Jurisdiction	EASTBO	UND I-595
Analysis Time Period	AM		Analysis Year	2034	
Project Description Davie Off	f				
🖾 Oper.(LOS)		I □ D	es.(N)	l Plar	nning Data
Flow Inputs			E L DIII	0.05	
Volume, V	8630 veh/h		Peak-Hour Factor, PHF %Trucks and Buses, P _T	0.95 5	
AADT	veh/day		•		
Peak-Hr Prop. of AADT, K			%RVs, P _R	0 Level	
Peak-Hr Direction Prop, D DDHV = AADT x K x D	veh/h		General Terrain: Grade % Length	mi	
Driver type adjustment	1.00		Up/Down %		
Calculate Flow Adjustm					
	1.00		E _R	1.2	
Γρ E _T	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
Speed Inputs			Calc Speed Adj and FF	S	
Lane Width	12.0	ft			mi/h
	6.0	ft	f _{LW}	0.0	
Rt-Shoulder Lat. Clearance		l/mi	f _{LC}	0.0	mi/h
Interchange Density	0.69	<i>1</i> /1111	f _{ID}	1.0	mi/h
Number of Lanes, N	5		f _N	0.0	mi/h
FFS (measured)		mi/h	FFS	69.0	mi/h
Base free-flow Speed, BFFS	70.0	mi/h			
LOS and Performance I	Measures		Design (N)		
Operational (LOS)			Design (N)		
$v_n = (V \text{ or DDHV}) / (PHF \times N \times N)$	(fun X		Design LOS		
-	1862	pc/h/ln	$v_p = (V \text{ or DDHV}) / (PHF \times N)$	x τ _{HV} x	pc/h
f _p) IS	66.4	mi/h	$ f_p\rangle$		- 4
$D = v_p / S$	28.1	pc/mi/ln	S		mi/h
'	D	pomini	$D = v_p / S$		pc/mi/ln
LOS			Required Number of Lanes, I	V	
Glossary			Factor Location		
Number of lanes	S - Speed		E _R - Exhibits23-8, 23-10		f _{LW} - Exhibit 23-4
v - Hourly volume	D - Density		E _T - Exhibits 23-8, 23-10, 23-	-11	f _{LC} - Exhibit 23-5
v _n - Flow rate	FFS - Free-flow s	peed	1 '		f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free	e-flow speed	f _p - Page 23-12	3-2 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design ho	ur volume		LOS, S, FFS, v _p - Exhibits 23		'ID EXHIBITED !
ļ					



Application	Input	Output
Operational (LOS)	FFS, N, v _D	LOS, S, D
Design (N)	FFS, LOS, V _D	N, S, D
Design (v _p)	FFS, LOS, N	v _p . S. D
Planning (LOS)	FFS, N, AADT	LOS, S. D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p . S, D

. 0 160 800	Flow Rate (pc/h/ln)	00 2000	2-100		
Canaral Information			Site Information		
General Information Analyst Agency or Company	YLM RSH		Highway/Direction of Travel From/To	EASTBOL	JND I-595
Date Performed Analysis Time Period	12-13-04 PM		Jurisdiction Analysis Year	2034	
Project Description Davie Off			/A D	—————————————————————————————————————	ning Data
I Oper.(LOS)		J L	es.(N)	J Plati	iling Data
Flow Inputs	0070		Peak-Hour Factor, PHF	0.95	
/olume, V AADT	9070 veh/h veh/day		%Trucks and Buses, P_T	5	
Peak-Hr Prop. of AADT, K			%RVs, P _R	0	
Peak-Hr Direction Prop, D DDHV = AADT x K x D	veh/h		General Terrain: Grade % Length Up/Down %	Level mi	
Oriver type adjustment	1.00		Op/Down 70		
Calculate Flow Adjustm			F	1,2	
N.	1.00		E _R		
Ē _T	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
Speed Inputs			Calc Speed Adj and FF	<u>S</u>	
Lane Width	12.0	ft	f _{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f _{LC}	0.0	mi/h
Interchange Density	0.69	I/mi	f _{ID}	1.0	mi/h
Number of Lanes, N	5			0.0	mi/h
FFS (measured)		mi/h	f _N		mi/h
Base free-flow Speed, BFFS	70.0	mi/h	FFS	69.0	[11]/[1
LOS and Performance	Measures		Design (N)		
			Design (N)		
Operational (LOS)			Design LOS		
$V_p = (V \text{ or DDHV}) / (PHF x N x)$	^{c f} HV X 1957	pc/h/ln	$V_p = (V \text{ or DDHV}) / (PHF \times N)$	x f _{HV} x	pc/h
f _p)			$ f_p\rangle$		ролі
S	65.0	mi/h	S		mi/h
$D = v_p / S$	30.1	pc/mi/ln	$D = v_p / S$		pc/mi/ln
LOS	D		Required Number of Lanes,	N	
Glossary			Factor Location		
N - Number of lanes	S - Speed		E _R - Exhibits23-8, 23-10		f _{LW} - Exhibit 23-4
Hourly volume	D - Density		E _T - Exhibits 23-8, 23-10, 23	-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow s	peed	' ·		f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free	-flow speed	f _p - Page 23-12	2 2 2 2 2	f _{ID} - Exhibit 23-7
DDHV - Directional design ho		•	LOS, S, FFS, v _p - Exhibits 20	o-∠, ∠ ⊍- ⊍	ID - EXHIDIT 20-7

RAMPS AND RAMP JUNCTIONS WORKSHEET											
General Infor	mation			Sit	e Inform						
Analyst		YLM			eway/Dir of Travel I-595 EE				f Damn		
Agency or Co		RS&H				nction SR 84 C			3 64 UI	i-Ramp	
Date Performe		8/24/04				sdiction		20	124		
Analysis Time		<u>AM</u>			Ana	alysis Yea	ar)34		
Project Descri	ption										
<i>Inputs</i> Upstream Adj	Ramp	Terrain								Downstrea	am Adj
ļ '	On									Ramp	
										I Yes I No	□ On □ Off
□ No □	Off									L _{down} =	ft
L _{up} = ft	1	S	_{FF} = 6	0.0 mph)	S	FR = 45.0) mph		VD =	veh/h
Vu = ve	h/h		Sł	ketch (s	how lan	es, L _A , L	$_{D^{I}}V_{R}^{I},V_{f}^{I})$, 0, 1, 1, 1
Conversion t	o pc/h Uni	der Base C	ondition	ons							
(pc/h)	V (Veh/hr)	PHF		rain	Truck	%Rv	f _{HV}		f _p	v=V/PHF f _{HV} f _p	
Freeway	7210	0.95	Le	/el	5	0	0.976	1	.00	7779	
Ramp	1620	0.95	Lev	/el	2	0	0.990	1	.00	1722	
UpStream											
DownStream											
	Me	erge Areas						Dive	rge Area	S	
Estimation o	f V ₁₂					Estimat	ion of v ₁₂				
	V ₁₂ :	= V _F (P _{FM})				1	1	/ ₁₂ = \	∨ _R + (∨ _F	-V _R)P _{FD}	
L _{EQ} = (Equat	 tion 25-2 or	25-3)				L _{EQ} = (Equation 25-8 or 25-9)					
P _{FM} = using E			5)			P _{FD} = 0.436 using Equation (Exhibit 25-11)					
V ₁₂ = pc/h			,			$V_{12} = 4363 \text{ pc/h}$					
	cale					1 44	y Checks				
Capacity Ch	Actual	Maxir	num	LOS	F?	I had a market	Act	ual	Maxi	mum	LOS F?
	Actual					V _{FI} =V _F			92	00	No
V _{FO}		See Exh	IDIT 25-			V ₁₂	436		4400		No
						V _{FO} = V			920		No
V _{R12}		4600	:All		-	$\frac{V_R}{V_R}$	172	22	210	00	No
				1						n (if not F	
Level of Ser					7 I	LOVE, O	*****			12 - 0.0009	
$D_{R} = 5.475$		v _R + 0.007	0 V ₁₂ -	0.00021	-A	D -	11			12	U
$D_R = (pc/ mi / ln)$					''	40.9 (pc		-			
LOS = (E	xhibit 25-4)				.1	E (Exhibi)		
Speed Estim	ation					1	Estimatio				
$M_S = (Exit)$	oit 25-19)					1 "	0.453 (E				
1 0	i (Exhibit 2	5-19)				S _R =	51.8 mp	h (Ex	khibit 25-	19)	
I	າ (Exhibit 2					$ S_0 $	63.1 mp	h (Ex	khibit 25-	19)	
1 *	າ (Exhibit 2 າ (Exhibit 2					S = 56.2 mph (Exhibit 25-15)					

RAMPS AND RAMP JUNCTIONS WORKSHEET											
General Infor	mation			Sit	e Inform						
Analyst		YLM				eway/Dir of Travel I-595 EB				f Damn	
Agency or Cor		RS&H				ection SR 84 C			4 Oi	I-Mailip	
Date Performe		8/26/04				sdiction alysis Yea	or	2034			
Analysis Time		PM			Allo	ilysis i ea	31 	2004			
Project Descri	ption										
<i>Inputs</i> Upstream Adj	Ramp	Terrain								Downstrea Ramp	am Adj
□ Yes □	On									☐ Yes	I≣ On
□ No □	Off									I No	™ Off
L = ft										L _{down} ≔	ft
L _{up} = ft		S		0.0 mph			_{FR} = 45.0	mpn		VD =	veh/h
Vu= ve	h/h		SI	ketch (s	how lan	es, L _A , L	$_{D'}V_{R'}V_{f}V$		on which a principle of		
Conversion t	o pc/h Un	der Base 0	Conditio	ons	1			T T		LAVIDUE	
(pc/h)	V (Veh/hr)	PHF		rain	Truck	%Rv	f _{HV}	f _p		v=V/PHF f _{HV} f _p	
Freeway	6900	0.95	Lev	/el	5	0	0.976	1.00		7445	
Ramp	1560	0.95	Lev	/el	2	0	0.990	1.00)	1659_	
UpStream											
DownStream		<u> </u>	<u> </u>		<u> </u>			Divorge	Aroc		
	**************************************	erge Areas						Diverge	Alea	15	
Estimation o	f V ₁₂					Estimat	ion of v ₁₂			W VB	
	V ₁₂	= V _F (P _{FM}))					12 11	•	- V _R)P _{FD}	
L _{EQ} = (Equat	ion 25-2 o	r 25-3)				L _{EQ} = (E	quation 25	5-8 or 25	-9)		
P _{FM} = using E			5)			$P_{FD} = 0.4$	436 usin	g Equati	on (E	xhibit 25-1	1)
V ₁₂ = pc/h						V ₁₂ = 4182 pc/h					
Capacity Ch	ecks					Capacit	y Checks				
	Actual	Maxir	num	LOS	F?		Actu	ıal	Maxi	mum	LOS F?
		See Exh	ibit 25-			V _{FI} =V _I	744	5	92	.00 _	No
V _{FO}		7	. 1			V ₁₂	418	2	440	0:All	No
V _{R12}		4600):All			$V_{FO} = V_F - V_R$ 5780		6	920	00	No
K12						V_R	165		210		No
Level of Sen	vice Deter	mination (if not F)		Level o	f Service I				
$D_R = 5.475$					7 L _A		$D_{R} = 4.25$	52 + 0.00)86 V	12 - 0.0009	L _D
$D_{R} = (pc/mi/ln)$					D _R =	39.3 (pc/	mi /ln)				
1 ''	xhibit 25-4	.)					E (Exhibit			THE RESIDENCE OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF	4
Speed Estim	ation	iones				Speed i	Estimation	1			
	oit 25-19)					$D_s =$	0.447 (E	xhibit 25	-19)		
1 *	(Exhibit 2	25-19)				S _R =	51.9 mp	h (Exhib	it 25-	·19)	
I	າ (Exhibit 2 າ (Exhibit 2					1 .	63.4 mp	h (Exhib	it 25-	-19)	
	ו (Exhibit 2 ו (Exhibit 2					s =	56.4 mp				

RAMPS AND RAMP JUNCTIONS WORKSHEET													
General Information Site Information													
Analyst						eway/Dir	avel		1595EB				
Agency or Co	RSH	•				ke and SR7 On							
Date Perform	V V .				sdiction				4				
Analysis Time	AM	alysis Year 2034				+							
Project Description													
<i>Inputs</i> Upstream Ad	j Ramp	Terrain						Downstream Adj Ramp					
☐ Yes ☐										☐ Yes	I≣ On		
■ No ■ Off											No L _{down} =	☐ Off	
L _{up} = f	<u>t</u>	0 - 000 mmh					S _{ER} = 50.0 mph					ft	
	n h /h	3	$S_{FF} = 60.0 \text{ mph}$ $S_{FR} = 50.0 \text{ mph}$ Sketch (show lanes, L_{A} , L_{D} , V_{R} , V_{f})								VD =	veh/h	
	eh/h							es, L _A , L _D , V _R , V _f)					
Conversion		der Base (Conditi	ons							v=V/PHF		
(pc/h)	V (Veh/hr)	PHF	Te	rrain	Truck	%Rv	<u> </u>	HV	f,		f _{HV} f _p		
Freeway	9590	0.95	Le	vel	5	0	0.9	76	1.0		10347		
Ramp	1220	0.95	Level		2	0	0.9	90	1.0	00 1297			
UpStream											ļ		
DownStream					<u> </u>	mt A							
		erge Areas				Diverge Areas							
1.4						Estimation of v ₁₂							
	1	= V _F (P _{FM})				$V_{12} = V_R + (V_F - V_R)P_{FD}$							
L _{EQ} = (Equation 25-2 or 25-3)						L _{EQ} = (Equation 25-8 or 25-9)							
P _{FM} = using Equation (Exhibit 25-5)						P _{FD} = 0.436 using Equation (Exhibit 25-11)							
V ₁₂ = pc/h						V ₁₂ = 4341 pc/h							
Capacity Checks						Capacity Checks							
	Actual	Maxir	num	LOS	F?			Actu			mum	LOS F?	
V _{FO}		See Exhibit 25-				$V_{FI} = V_F$ 8278 V_{12} 4341		3	9200		No		
								4341		4400:All		No	
V _{R12}		4600:All				$V_{FO} = V_{F} - V_{R}$		6981		9200		No	
*R12					}	V _R		1297		2100		No	
Level of Sei	vice Deter	mination (f not F)		Level of Service Determination (if not F)							
Level of Service Determination (if not F) D _R = 5.475 + 0.00734 v _R + 0.0078 V ₁₂ - 0.00627 L _A						D _R = 4.252 + 0.0086 V ₁₂ - 0.0009 L _D							
$D_{R} = (pc/mi/ln)$						D _R = 41.6 (pc/ mi /ln)							
-R (F-1-1-1-1)						LOS= E (Exhibit 25-4)							
Speed Estimation							Speed Estimation						
							$D_{\rm s} = 0.350$ (Exhibit 25-19)						
							S _R = 53.7 mph (Exhibit 25-19)						
S _R = mph (Exhibit 25-19)							$S_0 = 62.0 \text{ mph (Exhibit 25-19)}$						
S ₀ = mph (Exhibit 25-19)							,						
S= mph (Exhibit 25-14)							S = 57.4 mph (Exhibit 25-15)						

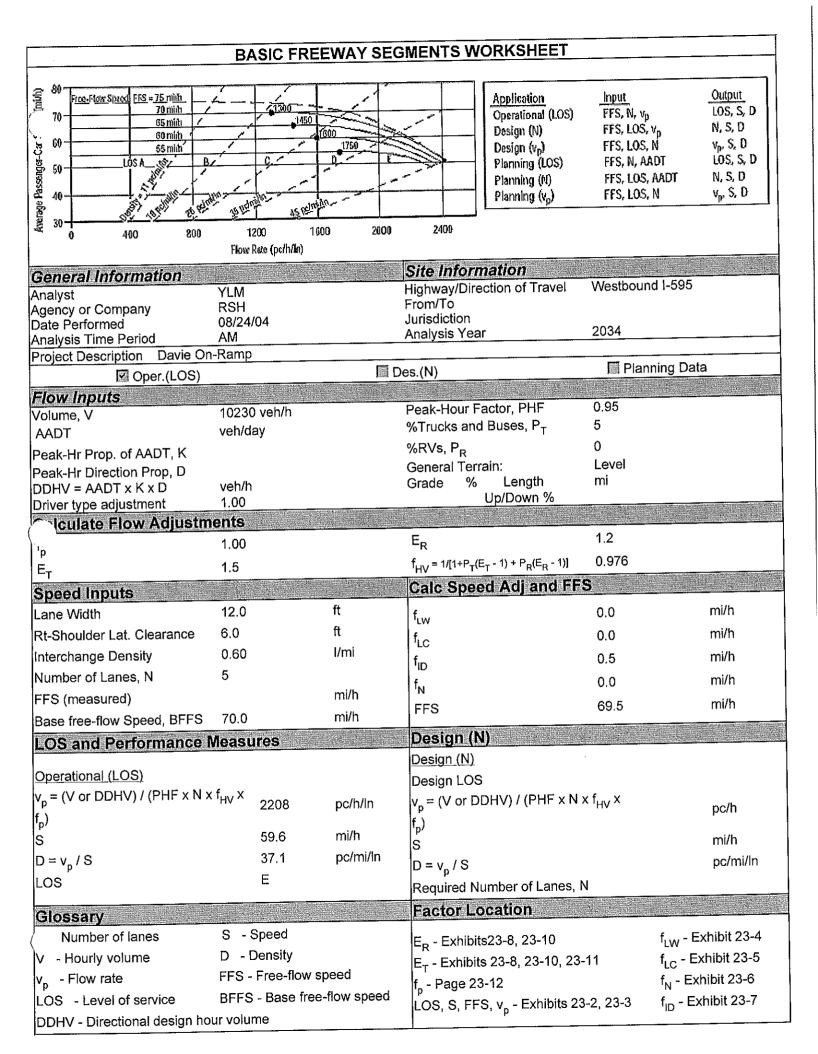
RAMPS AND RAMP JUNCTIONS WORKSHEET													
General Information Site Information													
Analyst						~	of Travel		1595EB				
Agency or Co		11011							Tpke and SR7 On				
Date Performe	O ZZ O I				sdiction			224					
Analysis Time		PM			Ana	alysis Year 2034							
Project Description I-595 SIMR													
Inputs		Terrain								Downstream Adj			
Upstream Adj	T GIT AIT						Ramp						
☐ Yes ☐	On							☐ Yes	I On │				
I≣ No I≣	Off										☐ Off		
L _{up} = ft	$_{p}$ = ft S_{FF} = 60.0 mph						_{FR} = 50.0		L _{down} =	ft			
Vu = ve	h/h			es, L _A , L _D ,V _R ,V _t)				VD =	veh/h				
Conversion t		dar Daca (non iai	, ,,,,,	<u>אייט</u>						
Conversion	<u>o peri≅uri</u> V	uer Dase c					_			v=V/PHF			
(pc/h)	(Veh/hr)	PHF	Teri		Truck	%Rv	f _{HV}		f _p	f _{HV} f _p			
Freeway	5340	0.95	Level		5	0	0.976	·ļ	.00 5762				
Ramp	1360	0.95	Level		2	0	0.990	1.	1.00 144				
UpStream							<u></u>	-					
DownStream	1]	Diverge Areas							
	ALCOHOL: NAME OF THE OWNER, OF THE OWNER, OF THE OWNER, OF THE OWNER, OF THE OWNER, OWNER, OWNER, OWNER, OWNER,	erge Areas				The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon							
Estimation of v ₁₂						Estimation of V ₁₂							
	V ₁₂	= V _F (P _{FM})				$V_{12} = V_R + (V_F - V_R)P_{FD}$							
L _{EQ} = (Equation 25-2 or 25-3)						L _{EQ} = (Equation 25-8 or 25-9)							
P _{FM} = using Equation (Exhibit 25-5)						P _{FD} =0.436 using Equation (Exhibit 25-11)							
V ₁₂ = pc/h		!				$V_{12} = 29$	51 pc/h						
Capacity Ch	ecks					Capacit	y Checks	Section 1					
	Actual	Maxir	num	LOS	F?		Actu	al	Maxi	mum	LOS F?		
		See Exh				V _{FI} =V _F	489	8	9200		No		
V _{FO}		7			V ₁₂	295	1	4400:All		No			
V _{R12}		4600	4600:All			$V_{FO} = V$ V_{R}	^{F -} 345	2	9200		No		
K12						V_R		1446		00	No		
Level of Service Determination (if not F) Level of Service Determination (if not F)													
$D_R = 5.475 + 0.00734 \text{ v}_R + 0.0078 \text{ V}_{12} - 0.00627 \text{ L}_A$ $D_R = 4.252 + 0.0086 \text{ V}_{12} - 0.0009 \text{ L}_D$									9 L _D				
D _R = (pc/ mi /ln)						D _R = 29.6 (pc/ mi /ln)							
LOS = (Exhibit 25-4)							LOS= D (Exhibit 25-4)						
Speed Estimation							Speed Estimation						
M _S = (Exibit 25-19)							$D_s = 0.363$ (Exhibit 25-19)						
S _R = mph (Exhibit 25-19)							S _R = 53.5 mph (Exhibit 25-19)						
S ₀ = mph (Exhibit 25-19)							S ₀ = 65.8 mph (Exhibit 25-19)						
S ₀ = mpn (Exhibit 25-19) S= mph (Exhibit 25-14)						S = 57.8 mph (Exhibit 25-15)							
lo- mbr	ı (⊏XIIIDIT Z		0 - 07.0 HIPH (EXHIBIT 25-10)										

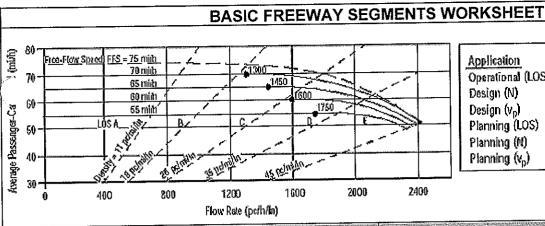
		RAM	S AND			IONS W	ORK	SHEET				
General Infor	mation	. //		Site	e Inforn		of Tr	avol	I-595	\//P		
Analyst		YLM				eway/Dir	OF IT	avei	1-080	V V D		
Agency or Cor		RS&H				ction sdiction						
Date Performe		8/24/04				sulction Ilysis Yea	ar.		2034			
Analysis Time		AM Off Davis			Alla	ilysis i ec			200-			
Project Descri	ption CD	Off-Ramp										·
<i>Inputs</i> Upstream Adj	Ramp	Terrain								Ŀ	Downstrea Ramp	am Adj
I Yes ■	On										Yes	On
□ No □	Off										■ No	Off
L _{up} = ft		S	= 6	0.0 mph		S		1 0.0	mph		L _{down} =	ft
	h/h		• •			es, L _A , L	,				VD =	veh/h
		Jar Doco (1011	951 A1	יא יע	1/				
Conversion t		ger base c	, OH WILL)IIS							v=V/PHF	
(pc/h)	V (Veh/hr)	PHF		rain	Truck						f _{HV} f _p	
Freeway	4290	0.95	Lev		5	0 0.976 1.00 4629						
Ramp	750	0.95	Lev	vel	2	0 0.990 1.00 797						
UpStream					. <u> </u>							
DownStream		<u> </u>					l		Diverge .	Area	L	
		erge Areas				Estimat	ion o		31V 8. g 6	1		
Estimation o	The second second second					Lammat	0,1 0		= V +	(\/_	- V _R)P _{FD}	
		= V _F (P _{FM})				- /-					*R7" FD	
L _{EQ} = (Equat						L _{EQ} = (E					Substance A	:4\
P _{FM} = using E	equation (Exhibit 25-	5)			1 -			Equation	on (⊏	xhibit 25-1	1)
V ₁₂ = pc/h						$V_{12} = 31$						
Capacity Ch	ecks					Capacit	y Ch					LOS F?
	Actual	Maxir	num	LOS	F?			Actua	<u> </u>		mum	
		See Exh	ibit 25-			V _{FI} =V _I	=	4629			00	No
V _{FO}	1	7				V ₁₂		3125		440	0:All	No
		4006	N. A.II			$V_{FO} = V$ V_{R}	F"	3832	2	690	00	No
V _{R12}		4600):All			$\frac{V_{R}}{V_{R}}$		797		21	00	No
Level of Sen	vice Deter	mination (if not F	7	-	Level o	f Ser	vice D	etermin	atio	n (if not F)
$D_{\rm p} = 5.475$					7 L,		D _R	= 4.252	2 + 0.00	86 V	12 - 0.0009) L _D
'`	c/ mi /ln)	· R	12			D _R =	17.6	3 (pc/ r	ni /ln)			
1,	xhibit 25-4)				1 ''		xhibit				
Speed Estim		,				Speed	Estin	nation			in the second	
						D _s =			hibit 25-	19)		
1 3 ,	oit 25-19)	E 40)				S _R =		•	ı (Exhibi		·19)	
1 '`	(Exhibit 2					S ₀ =		•	· (Exhibi			
"	(Exhibit 2					S =		-	ı (Exhibi			
S= mph) (Exhibit 2	5-14)				JO	01.4	- IIIbi	r (ryinni	. 20	10)	

		RAMI	S ANI			TIONS W	ORK	SHEE	T						
General Infor	mation			Sit	e Inform		- 6 T-	1	1 50	IE WD					
Analyst		YLM				eway/Dir	OT IT	avei	1-08	5 WB					
Agency or Cor		RS&H				iction isdiction]			
Date Performe		8/26/04			_	isaiction alysis Yea	or.		203	ı.A		İ			
Analysis Time		PM Off Parray			Alla	alysis i ea	аI		200		<u> </u>				
Project Descri	ption CD	Off-Ramp													
<i>Inputs</i> Upstream Adj	Ramp	Terrain								I .	Downstrea Ramp	am Adj			
Yes	On									ĺ	∏ Yes	I∏ On			
□ No □	Off										I No	l Off			
L _{up} = ft			= 6	30 0 mph				50.0	mph		L _{down} =	ft			
Vu = ve	FF 00.0 111p11								·		VD =	veh/h			
i e	onversion to pc/h Under Base Conditions								A D R V						
Conversion		Jer Dase C	, ON GIRE	UII3						_	v=V/PHF				
(pc/h)	V (Veh/hr)	PHF		rrain	Truck	%Rv		HV			f _{HV} f _p				
Freeway	Freeway 4850 0.95 Level 5						0 0.976 1.00 5233								
Ramp	1001137						0 0.990 1.00 2307								
UpStream					<u> </u>										
DownStream		\					l		Diver	e Area	<u> </u>				
	- W. C. C. C. C. C. C. C. C. C. C. C. C. C.	erge Areas				Estimat	lon o	SOCTO SECURITION	Directo	,07,1100					
Estimation o	Secretary of the second	= V _F (P _{FM})						Market Committee	= V.	. + (V _E	- V _R)P _{FD}				
- (Faunt	,					L _{EQ} = (E	duat			•	IV ID				
L _{EQ} = (Equat			E\			1					xhibit 25-1	11)			
P _{FM} = using E	quation (EXHIDIL 25-	3)			1 ' -			Lque	111011 (L.	MIIIDR 20	.,			
V ₁₂ = pc/h						$V_{12} = 38$		V. av. inc. vo. var. av. av. av. av. av. av. av. av. av. av							
Capacity Che				1.00	<u> </u>	Capacit	y GII	Actu	- I	Maxir	num [LOS F?			
	Actual	Maxin		LOS	· F ?	\/ -\/		5233		690		No			
V _{FO}		See Exh	ibit 25-		-	V _{FI} =V _F	=								
- 40		/				V ₁₂		3837		4400):All	No			
V		4600	ı·All		į	$V_{FO} = V$ V_{R}	F -	2926	3	690	00	No			
V _{R12}						V_{R}		2307		210		Yes			
Level of Sen	rice Deteri	nination (i	f not F)		Level of					ı (if not F				
D _R = 5.475					L _A						₁₂ - 0.0009) L _D			
$D_R = (pert)$	c/ mi /ln)					D _R =	23.8	3 (pc/ 1	mi /ln)						
1 ''	xhibit 25-4)				LOS=	F (E	xhibit	25-4)						
Speed Estim				50 100 100 100		Speed I	Estin	nation							
	oit 25-19)					°		41 (Ex							
S _R = mph	(Exhibit 2	5-19)				S _R = 52.1 mph (Exhibit 25-19)									
	(Exhibit 2					S ₀ = 64.3 mph (Exhibit 25-19)									
, ,	(Exhibit 2					s = 54.8 mph (Exhibit 25-15)									

		RAMI	S AN	DRAMP	JUNC	TIONS W	ORKSHE	T				
General Infor	mation			- contact of terrorism	e Inform	nation			-OC 1475			
Analyst		YLM				•	of Travel	1-5	595 WE	5		
Agency or Co		RS&H				iction isdiction						
Date Performe		9/20/04				alysis Yea	ar	20)34			
Analysis Time Project Descri		AM S S R ON				aly 313 1 Cc			, , , , , , , , , , , , , , , , , , , 			
Inputs	iption_ i-ac	JOB OIL										
00		Terrain Le	vel				-			Downstrea	am Adi	
Upstream Adj	·									Ramp		
☑ Yes 🔽	On									☐ Yes	∭ On	
□ No □	Off									I⊠ No	☐ Off	
L _{up} = 14	80 ft									L _{down} =	ft	
1871	290 eh/h	S		30.0 mph ketch (s		S es, L _A , L	s _{FR} = 60.0 _D ,V _R ,V _f)	mph		VD =	veh/h	
Conversion 1		der Base (<u> </u>					
	V					0/ 5	_		£	v=V/PHF		
(pc/h)	(Veh/hr)	PHF	Te	rrain	Truck	%Rv	f _{HV}	<u> </u>	f _p	f _{HV} f _p		
Freeway	4830	0.95	Le	vel	5	0 0.976 1.00 52				5211		
Ramp	2180	0.95	Le	vel	2	0	0.990	1	.00	2318		
UpStream	1290	0.90	Le	vel	2	0	0.990	11	.00_	1448		
DownStream						Diverge Areas						
	Me	erge Areas					_	Dive	rge Area	as		
Estimation o	f v ₁₂					Estimat	ion of v ₁₂					
	V ₁₂	= V _F (P _{FM})							• • • • •	-V _R)P _{FD}		
L _{EQ} = (Equa	tion 25-2 o	r 25-3)				$L_{EQ} = (E$	quation 2	5-8 or	25-9)			
$P_{FM} = 0.209$			ibit 25	-5)		$P_{FD} = u$	sing Equa	tion (Exhibit 2	5-11)		
V ₁₂ = 850 p		•				$V_{12} = pc$	c/h					
Capacity Ch						Capacit	y Checks					
	Actual	Maxir	num	LOS	F?		Actı	ıal		imum	LOS F?	
					1	V _{FI} =V _i	F			hibit 25- 4		
V _{FO}	6383	920	U	No)	V ₁₂			-	0:All		
			· -			V _{FO} = V	F-			hibit 25-		
V _{R12}	3168	4600	:All	No)	V_	<u> </u>			14 nibit 25-3		
		and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s				V _R						
Level of Ser					, ,	Levelo				n (if not F)		
$D_{R} = 5.475$		• •	8 V ₁₂ -	0.00627	LA).0000 V	' ₁₂ - 0.0009	, ₋ D	
$D_R = 10$	0.9 (pc/ mi	/ln)				D _R =	(pc/ mi /ln	-				
LOS = B	(Exhibit 25	5-4)					(Exhibit 2					
Speed Estin	nation						Estimatio					
$M_{\rm S} = 0.06$	66 (Exibit 2	!5-19)				D _s =	(Exhibit 2					
~	B mph (Ex	hibit 25-19)			S _R =	mph (Ex	nibit 2	25-19)			
1 '''		nibit 25-19)				S ₀ =	mph (Ex	nibit 2	25-19)			
1 -	• •	hibit 25-14)			s =	mph (Ex	hibit 2	25-15)			
ļ							Diable Deces	rod .			Ve	

		RAMI	S AN	D RAMP	JUNC	TIONS W	ORKSHEE	T				
General Infor	mation				e Infor	nation						
Analyst		YLM				-	of Travel	I-595 V	VB			
Agency or Cor		RS&H				ction				1		
Date Performe		9/20/04				isdiction		0004				
Analysis Time		PM			Ana	alysis Yea	ar	2034				
Project Descri	ption 1-98	SB ON										
Inputs		Terrain Le	vel									
00 Upstream Adj	Ramp	Terraiir Ec	VCI						Downstre Ramp	am Adj		
🖾 Yes 🖾	On								I≣ Yes	ि On		
□ No □	Off								⊠ No	☐ Off		
L _{up} = 14	80 ft								L _{down} =	ft		
11//11 = ' ' '	50 h/h	S		80.0 mph ketch (s		S es, L _a , L	s _{FR} = 60.0 5.V5.V6)	mph	VD =	veh/h		
1		dae Dans C				-, - <u>A</u> , -	יא יע					
Conversion t		der Base C	<u>:onaju</u>	OIIS					v=V/PHF			
(pc/h)	V (Veh/hr)	PHF	Te	rrain	Truck	%Rv	f _{HV}	f _p	f _{HV} f _p			
Freeway	5830	0.95	Le	vel	5	0	0.976	1.00	6290			
Ramp	3320	0.95	Le	vel	2	0	0.990	1.00	3530			
UpStream	3150	0.90	Le	vel	2	0	0.990	1.00	3535			
DownStream						Divorgo Arons						
		erge Areas	J1 (925)					Diverge A	reas			
Estimation o	f V ₁₂			4455		Estimat	ion of v ₁₂	12000000	Sales and Sales			
	V ₁₂ :	= V _F (P _{FM})					٧	₁₂ = V _R + ($V_F - V_R)P_{FD}$			
L _{EQ} = (Equat	ion 25-2 oi	25-3)				L _{EO} = (E	quation 25	-8 or 25-9)				
P _{FM} = 0.209			ibit 25	-5)			sing Equat					
V ₁₂ = 999 p				-,		$V_{12} = pc$						
Capacity Che					1	<u> </u>	y Checks					
Capacity Cit	Actual	Maxin	านทา	LOS	F?		Actu	al Ma	aximum	LOS F?		
						V _{FI} =V _E			Exhibit 25- 14			
V _{FO}	8311	920	U	No)	V ₁₂		4	400:All			
						V _{FO} = V	F -	See	Exhibit 25-			
V _{R12}	4529	4600	:All	No)	V _R			14			
						V _R			xhibit 25-3			
Level of Sen	rice Deteri	mination (i	f not F)		Levelo	f Service L)etermina:	ion (if not F)		
$D_R = 5.475$	+ 0.00734	v _R + 0.007	8 V ₁₂ -	0.00627	'L _A		$D_{R} = 4.25$	2 + 0.0086	S V ₁₂ - 0.0009) L _D		
$D_R = 2^{\circ}$	1.0 (pc/ mi	/ln)				D _R =	(pc/ mi /ln)					
'`	(Exhibit 25	•				LOS=	(Exhibit 25	- 4)				
Speed Estim		,				Speed I	stimation					
	34 (Exibit 2	5-19)	200			D _s =	(Exhibit 25					
1 -	•	hibit 25-19)				S _R =	mph (Exh	ibit 25-19)				
	mph (Ext					S ₀ =	mph (Exh	ibit 25-19)				
1 *		hibit 25-14)				s =	mph (Exh					
J	,b., (1	1			Ve		





Application	Input	<u>Output</u>
Operational (LOS)	FFS, N, Vp	LOS, S, D
Design (N)	FFS, LOS, V _D	N, S, D
Design (v _p)	FFS, LOS, N	ν ₀ , S, O
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (U)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	ν _ρ , S, D

J 450 000	Flow Rate (pc/h/ln)				
General Information			Site Information		
Analyst	YLM		Highway/Direction of Travel From/To	Westbour	id I-595
Agency or Company Date Performed	RSH 08/26/04		Jurisdiction		
Analysis Time Period	PM		Analysis Year	2034	
Project Description Davie Or	n-Ramp	<u></u> ,			
☑ Oper.(LOS)		■D	es.(N)	I ! Plan	ning Data
Flow Inputs			E L DIE	0.05	
Volume, V	9350 veh/h		Peak-Hour Factor, PHF %Trucks and Buses, P _T	0.95 5	
AADT	veh/day		,		
Peak-Hr Prop. of AADT, K			%RVs, P _R	0 Level	
Peak-Hr Direction Prop, D	veh/h		General Terrain: Grade % Length	mi	
DDHV = AADT x K x D Driver type adjustment	1.00		Up/Down %		
Calculate Flow Adjustm	THE RESERVE AND ADDRESS OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE				
	1.00		E _R	1.2	
E _T	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976	
The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon			Calc Speed Adj and FF	S	
Speed Inputs Lane Width	12.0	ft		0.0	mi/h
	6.0	ft	f _{LW}		
Rt-Shoulder Lat. Clearance		1/mi	f _{LC}	0.0	mi/h
Interchange Density	0.60	174111	f _{ID}	0.5	mi/h
Number of Lanes, N	5	://-	f _N	0.0	mi/h
FFS (measured)		mi/h	FFS	69.5	mi/h
Base free-flow Speed, BFFS	70.0	mi/h			
LOS and Performance I	Measures		Design (N)		
Operational (LOS)			Design (N)		
$v_p = (V \text{ or DDHV}) / (PHF \times N \times N)$	c f x		Design LOS	•	
1 5	`' ^{HV} ^ 2018	pc/h/ln	$v_p = (V \text{ or DDHV}) / (PHF \times N)$	x I _{HV} X	pc/h
f _p)	64.2	mi/h	$ f_p $		
S	31.5	pc/mi/ln	S		mi/h
$D = v_p / S$		релили	$D = v_p / S$		pc/mi/ln
LOS	D		Required Number of Lanes, N	١	
Glossary			Factor Location		
' - Number of lanes	S - Speed		E Evhibite 23 8 23-10		f _{LW} - Exhibit 23-4
- Hourly volume	D - Density		E _R - Exhibits 23-8, 23-10	11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow s	peed	E _T - Exhibits 23-8, 23-10, 23-	11	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free		f _p - Page 23-12	0.000	
DDHV - Directional design ho		-1	LOS, S, FFS, v _p - Exhibits 23	-2, 23-3	f _{ID} - Exhibit 23-7
DDDV - Directional design no	at volume				

	man constant to the second	RAMI	PS AND			<u> </u>	ORKSH	=ET						
General Infor	mation		1, 23	Sit	e Inform		of Trace	, I	595 WB					
Analyst		YLM				eway/Dir	or rrave			ff-Ramp				
Agency or Co	•	RS&H				ction isdiction		П	iatus U	n-i tamp				
Date Performe		8/24/04				alysis Yea	or	21	034					
Analysis Time		AM			Ana	alysis rea	al		JJ-4					
Project Descri	ption LP/	1												
<i>Inputs</i> Upstream Adj	Ramp	Terrain								Downstre	am Adj			
∏ Yes 🖫	On								:	Ramp ∭ Yes	∭ On			
■ No ■	Off									I No	I≣ Off			
										L _{down} =	ft			
L _{up} = ft		0.0 mph	1	S	FR = 45	.0 mpł	1	VD =	veh/h					
Vu = ve	h/h	ketch (s	how lan	ies, L _A , L	$_{D}$, V_{R} , V_{f})			\vD -	Ven/11					
Conversion t	o oc/h Un													
	V		Tarrele	0/ Du	f		f	v=V/PHF						
(pc/h)	(Veh/hr)	rrain	Truck	%Rv f _{HV}			f _p	f _{HV} f _p						
Freeway	5	0	0.976		1.00	10638								
Ramp	2	0 0.990 1.00 893												
UpStream														
DownStream						Diverge Areas								
######################################	Me	erge Areas						CONTRACTOR OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE	erge Area	15				
Estimation o	fv ₁₂					Estimat	ion ot v	Company of the Company of the Company						
	V ₁₂ :	= V _F (P _{FM})						16-	,	- V _R)P _{FD}				
L _{EQ} = (Equa	tion 25-2 oi	25-3)				$L_{EQ} = (E$	quation	25-8 o	r 25-9)					
P _{FM} = using E			5)			$P_{FD} = 0.4$	436 us	ing Eq	uation (E	xhibit 25-	11)			
V ₁₂ = pc/h	•					$V_{12} = 42$	214 pc/	า						
Capacity Ch	ecks					Capacit								
<u> </u>	Actual	Maxir	num	LOS	F?			ctual	Maxi	mum	LOS F?			
		See Exh				V _{FI} =V _I	- 85	11	92	:00	No			
V _{FO}		7	IDIL 20-		ļ	V ₁₂		14	440	0:All	No			
V _{R12}		4600);All			V _{FO} = V V _R	F - 76	318	920	00	No			
* R12					ļ	V _R	8	93	21	00	No			
Level of Ser	vice Deter	mination (f not F)		Level o	f Servic	Dete	rminatio	n (if not F)			
$D_{R} = 5.475$					7 L _A		D _R = 4.	252 +	0.0086 V	12 - 0.000	9 L _D			
1 ''	c/ mi /ln)	N	12		•	D _R = 38.7 (pc/ mi /ln)								
, , ,	xhibit 25-4	١				LOS= E (Exhibit 25-4)								
· · · · · · · · · · · · · · · · · · ·		/				Speed Estimation								
Speed Estin							0.378		t 25-19)					
1 5	oit 25-19)	E 40)				°				-19)				
1 ''	າ (Exhibit 2					,								
1 '	າ (Exhibit 2					, ,								
S= mpł	າ (Exhibit 2	5-14)				S = 57.0 mph (Exhibit 25-15)								

	· ·	RAMI	<u>'S AND</u>			TIONS W	UKKSH	EEI				
General Infor	mation	V/L N //	-	Sit	e Inforn	<i>nation</i> eway/Dir	of Trave	ا اد	595 WB			
Analyst		YLM				eway/Dir ction	oi iiave		iatus Of			
Agency or Cor		RS&H				sdiction		1.1	iatas O	, ramp		
Date Performe		8/26/04 PM				alysis Yea	ar	20	034			
Analysis Time Project Descri					7 (110	y 0.0 1 00						
Inputs	ption Liv	1										
Upstream Adj	Ramp	Terrain								Downstre Ramp	am Adj	
∏ Yes ☐	On									☐ Yes	III On	
□ No □	Off								!	I No	I∭ Off	
L _{up} = ft		s	= 6	0.0 mph	1	S	_{FR} = 4	5.0 mpł	<u> </u>	L _{down} =	ft	
Vu = ve	h/h			ies, L _A , L				VD =	veh/h			
		and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s	-	100, E _A , E	Di · Ri · H							
Conversion t		Jer Base C	onaiu	UIIS			_			v=V/PHF		
(pc/h)	V (Veh/hr)	PHF		rain	Truck	%Rv	f _{HV}		f _p	f _{HV} f _p 7930		
Freeway	7350	0.95	vel	5	0.0,0							
Ramp	1670	0.95	vel	2	0 0.990 1.00 1775							
UpStream												
DownStream	1.4						<u> </u>	Dive	erge Area	<u> </u>		
	THE RESERVE AND ADDRESS OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE	erge Areas				Estimat	ion of v	Seed Vision Control of the	31g0 / 1100			
Estimation o						Latinat			V _R + (V _F	- V \P		
		= V _F (P _{FM})							.,	R' FD		
L _{EQ} = (Equat						$L_{EQ} = (E$					445	
P _{FM} = using E	iquation (Exhibit 25-	5)			'-			uation (E	xhibit 25-	11)	
V ₁₂ = pc/h						$V_{12} = 37$	- Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Comm	THE RESERVE TO SERVE THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY				
Capacity Che	ecks					Capacit					10050	
	Actual	Maxir	num	LOS	F?			ctual	Maxi		LOS F?	
		See Exh	ibit 25-			V _{FI} =V _F	= 6	344	92	00	No	
V _{FO}		7				V_{12}	3.	767	440	O:All	No	
V		4600	· Δ I			V _{FO} = V V _R	F - 4	569	920	00	No	
V _{R12}		1 4000	.7 111			V _R	1	775	210		No	
Level of Sen	rice Deter	mination (f not F	j .		Level o				n (if not F		
D _R = 5.475					7 L _A	•	$D_R = 4$.252 +	0.0086 V	₁₂ - 0.000	9 L _D	
'`	c/ mi /ln)	11	'			D _R =	34.8 (oc/ mi /l	n)			
1 "	xhibit 25-4	١				LOS=	D (Exh					
Speed Estim)				Speed Estimation						
						$D_s = 0.458$ (Exhibit 25-19)						
1 '	it 25-19)											
, ,	(Exhibit 2					S _R =		•				
	ı (Exhibit 2					S ₀ =		•	xhibit 25-			
S= mph	ı (Exhibit 2	5-14)				S =	S = 56.3 mph (Exhibit 25-15)					

	V	RAM	PS AN		A. TORR. T. CO. WAS COMMON TO STATE	TIONS W	ORK	SHEE	<u>T</u>			
General Info	rmation			Sit	e Infori					0514/0		
Analyst		YLM				eway/Dir	of Ti	ravel	1-5	95WB		
Agency or Co		RS&H				nction						
Date Perform		8/24/04				isdiction			00	NO 4		
Analysis Time		AM			Ana	alysis Ye	ar		20	34		
Project Descr	<u>iption Hia</u>	tus On										
Inputs		Terrain									Downstr	apm Adi
Upstream Adj		Tellalli									Downstre Ramp	ain Auj
Yes 🖪	On										Yes	∭ On
■ No	Off										I No =	∭ Off ft
L _{up} = ft		S	_{EE} = (60.0 mph	<u></u>	S	S _{FR} =	45.0	mph		L _{down} =	
Vu = ve	eh/h		nes, L _A , L	$_{\rm D}$, $V_{\rm R}$	V_{f}			VD =	veh/h			
Conversion			<u>D</u>		5							
	Total	0/ D.	ĺ .			f	v=V/PHF					
(pc/h)	V (Veh/hr) 7530	Truck	%Rv		f _{HV}			f _{HV} f _p				
Freeway	5	0	ļ	976		.00	8124					
Ramp	2	0	0.9	990	<u> </u>	.00	861					
UpStream							<u> </u> 					
DownStream							l		Diva	rge Area		
	Mark State of the Control	erge Areas				Estimat	lan c		DIVE	ige Aica	3	
Estimation of	CATALOG AND THE PROPERTY OF THE PARTY OF THE	V (D)				Commu	ion c	AND DESCRIPTION OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON	<u> </u>	/ + \\/	- V _R)P _{FD}	
	1	= V _F (P _{FM})	l					•	-		" VR/" FD	
L _{EQ} = (Equa						$L_{EQ} = (E$					44	
$P_{FM} = 0.160$	using Equa	ation (Exh	nibit 25	-5)		$P_{FD} = u$	sing	Equation	on (E	Exhibit 25	5-11)	
V ₁₂ = 1298	pc/h					$V_{12} = pc$	c/h					
Capacity Ch	ecks					Capacit	y Ch	ecks				
	Actual	Maxir	num	LOS	F?			Actua	al	Maxir		LOS F?
V _{FO}	8985	920	Λ	No	,	V _{F1} =V _I	=			See Exh		
*FO	0000	020		, , ,		V ₁₂				4400):All	
						V _{FO} = V	F -			See Exh		
V _{R12}	2159	4600	:All	No)	V _R				See Exh		
	A CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR					V _R						
Level of Ser						Level o		•			(if not l	
$D_R = 5.475$	+ 0.00734	v _R + 0.007	'8 V ₁₂ -	0.00627	'L _A		18		2 + 0	0.0086 V ₁	_{.2} - 0.000	ia r ^D
$D_R = 20$	0.7 (pc/ mi	/ln)				D _R =	(pc/	mi /ln)				
LOS = C	(Exhibit 25	5-4)				LOS=		ibit 25-	-4)			1
Speed Estin	nation					Speed I						
$M_{\rm S} = 0.33$	37 (Exibit 2	5-19)				$D_s = (Exhibit 25-19)$						
-	mph (Ex)			S _R = mph (Exhibit 25-19)						
'`	mph (Exh					S ₀ = mph (Exhibit 25-19)						
_	3 mph (Ex)			S = mph (Exhibit 25-15)						

		RAM	PS ANI	RAMP	JUNC	TIONS W	ORKSHEE	:T_			
General Infor	mation			Sit	e Infort			•	=0 = 1445		
Analyst		YLM				•	of Travel	-:	595WB		
Agency or Co	• -	RS&H				ction					
Date Performe	∍d	8/26/04				isdiction		_	204		
Analysis Time		PM			Ana	alysis Yea	ar		034		
Project Descri	ption Hia	tus On						7			
Inputs	(alektrijs da hazaria	T								D (A -1:
Upstream Adj		Terrain								Downstre Ramp	am Adj
🖫 Yes 🔚	On								:	☐ Yes	☑ On
■ No	Off									I≣ No □ -	© Off ft
L _{up} = ft		S	_{EE} = 6	0.0 mph	1	s	_{FR} = 45.0	mph	1	L _{down} =	
Vu = ve	h/h					ies, L _A , L	$_{D_{1}}V_{R_{1}}V_{f}$			VD =	veh/h
Conversion t	o pc/h Un	der Base (
(pc/h)	V (Veh/hr)	PHF		rain	Truck	%Rv	f _{HV}		f_p	v=V/PHF f _{HV} f _p	:
Freeway	3310	0.95	Le	vel	5	0	0.976		1.00	3571	
Ramp	460	0.95	Le		2	0	0.990	•	1.00	489	
UpStream		0.00									
DownStream											
		erge Areas						Dive	erge Area	S	
Estimation o	f V ₁₂					Estimat	ion of v ₁₂				
	25 1 To 1 To 1 To 1 To 1 To 1 To 1 To 1 T	= V _F (P _{FM})					٧	12 =	V _R + (V _F	- V _R)P _{FD}	
L _{EQ} = (Equal	,					L _{EO} = (E	quation 25	-8 o	r 25-9)		
*			SILIH DE	E١			sing Equat			5-11)	
$P_{FM} = 0.206$		auon (⊏xi	IIDIL 20°	· • • • • • • • • • • • • • • • • • • •		. –		, ,,		,	
$V_{12} = 736 p$			Water St.			V ₁₂ = po	manual tax magnitude operations				
Capacity Ch	,			1.00		Capacit	y Checks		Movi	mum T	LOS F?
	Actual	Maxir	num	LOS	F?		Actu	aı	Maxi See Exi		LOST
	4000			NIa	_	$V_{FI} = V_{F}$	-		1		
V _{FO}	4060	920	U	No	,	V ₁₂			440	D:All	
	4005			K1		V _{FO} = V	F -		See Exl	nibit 25- 4	
V _{R12}	1225	4600);All	No	,	$\frac{V_R}{V_R}$			See Exh	ibit 25-3	
Level of Sen	vice Deter	mination (if not F				Service L)etei	minatio	n (if not i	
D _R = 5.475	A CONTRACTOR OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF TH	- Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Cont			7 L.		$D_{p} = 4.25$				
1 ''	3.6 (pc/ mi	• •	- 12		A	D _R =	(pc/ mi /ln)			16	
1 '`	(Exhibit 25					'`	(Exhibit 25				
		· • · ·				J	stimation				
Speed Estim							(Exhibit 25				
1 0	6 (Exibit 2	-				D _s =	,				
$ S_R = 54.3$	B mph (Ex	hibit 25-19)			1 ''	mph (Ext				
$S_0 = N/A$	mph (Exh	nibit 25-19)				S ₀ =	mph (Ext				
1 7) mph (Ex	hibit 25-14)			S =	mph (Ext	ibit 2	25-15)		
<u> </u>							D. 14. D				\/e

TURNPIKE

		RAMI	S AND			IONS W	ORKS	HEET				
General Infor	mation			Sit	e Inform		·		CD Town	- mileo		
Analyst _		YLM				eway/Dir	of Ira	vei	SB Turi Griffin F			
Agency or Co		RSH				ction sdiction			Giiiiii i	\u		
Date Performe		9/15/200	4			alysis Yea	ar		2034			
Analysis Time Project Descri		AM 5 SIMR			7 1110	aryolo 100	41		<u> </u>			
Inputs	ption 1-3a	O OHVII C										
Upstream Adj	Ramp	Terrain Le	vel							Downstre Ramp	eam Adj	
	On									∏ Yes	∭ On	
■ No 🗵	Off									₩ No	☑ Off	
L _{up} = 85	O ft									L _{down} =	ft	
11/11 =	30	S	• •	'0.0 mph			FR =		nph	VD =	veh/h	
Ve	h/h				how lan	es, L _A , L _I	$_{\rm D}$, $\rm V_{R}$, $\rm V$	(_f)				
Conversion t	o pc/h Uni	der Base C	onditi	ons						L-V/DUE		
(pc/h)	V (Veh/hr)	PHF	Tei	rain	Truck	%Rv f _{HV} f _p		v=V/PHF f _{HV} f _p				
Freeway	6860	0.95	Le	vel	5	0 0.976 1.00 0 0.990 1.00			7402			
Ramp	880	0.95	Le	vel	2	0	0.99	90	936			
UpStream	3930	0.95	Le	vel	2	0 0.990 1.00 4178						
DownStream						Diverge Areas						
	<u>Me</u>	erge Areas	.,					MANAGEMENT OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE	overge Ar	eas		
Estimation o	f v ₁₂					Estimati	on or					
	V ₁₂ =	= V _F (P _{FM})							- '`	/ _F - V _R)P _{FD}	:	
L _{EQ} = (Equat	tion 25-2 or	25-3)							3 or 25-9)			
P _{FM} = using E	Equation (Exhibit 25-	5)			$P_{FD} = 0.4$	436	using	Equation	(Exhibit 25-	11)	
V ₁₂ = pc/h						$V_{12} = 37$	′55 p	c/h				
Capacity Ch	ecks					Capacit	y Che	cks			nter in contract	
	Actual	Maxir	num	LOS	F?			Actua		ximum	LOS F?	
		See Exh	ibit 25-			V _{FI} =V _F	:	7402		9600	No	
V _{FO}	Į.	7				V ₁₂	:	3755	44	100:All	No	
\/		4600	ı·ΔII			$V_{FO} = V_{R}$	F (6466	9	600	No	
V _{R12}		7000	,,, ,,,		ľ	V _R	\dashv	936	2	200	No	
							Feany			ion (if not i		
Level of Ser					7 1	Level O				V ₁₂ - 0.000		
$D_{R} = 5.475$		v _R + 0.007	o v ₁₂ -	0.00027	LA	_	• • •			12 51505	ט ביי	
$D_{R} = (pc/ mi / ln)$ $LOS = (Exhibit 25-4)$ $LOS = E (Exhibit 25-4)$												
` ·	xhibit 25-4)	A Section of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the l						(5-4)			
Speed Estin	ation					Speed I						
$M_S = (Exit)$	oit 25-19)					"		•	nibit 25-19			
S _R = mpł	ı (Exhibit 2	5-19)				1 ''		•	(Exhibit 2			
1 '	10 70 0											
1 -	(Exhibit 2					S =	67.8	mph	(Exhibit 2	25-15)		
L							S	OCODIO	J	-	Ve	

		RAMI	S AND				ORKSHEE	T					
General Infor	mation			Sit	e Inform		- (T	- CD	Turns	iko			
Analyst		YLM					of Travel		Turnp fin Ro				
Agency or Cor		RSH	. 4			ction sdiction		Gili	1111110				
Date Performe		9/15/200 PM	'4			alysis Yea	ar	203	4				
Analysis Time Project Descri					7 11 10	ary or or oc	<u>'</u>						
Inputs	ption 1-oc	O OHVII C											
Upstream Adj	Ramp	Terrain Le	vel							Downstrea Ramp	am Adj		
	On									∏ Yes	☐ On		
III No IIII	Off									☑ No	☑ Off		
L _{up} = 85	0 ft									L _{down} =	ft		
11/// =	50 h/h	S		0.0 mph		$S_{FR} = 55.0 \text{ mph}$ lanes, L_A , L_D , V_R , V_f)							
					now lai	162, LA, L	D' K' V f/						
Conversion t		ger Base (onditi(วกร						v=V/PHF			
(pc/h)	V (Veh/hr)	PHF	Ter	rain	Truck	%Rv	f _{HV}		f _p	f _{HV} f _p			
Freeway	6380	0.95	Le	vel	5	0 0.976 1.00				6884			
Ramp	1000	0.95	Le	vel	2	0 0.990 1.00 106							
UpStream	3150	0.95	Le	vel	2	0 0.990 1.00 3349							
DownStream						Diverge Areas							
		erge Areas				-		Diverg	je Alea	15			
Estimation o	f v ₁₂					Esumau	ion of v ₁₂			V VD			
	V ₁₂ :	=V _F (P _{FM})						12 .	•	-V _R)P _{FD}			
L _{EQ} = (Equat	ion 25-2 o	r 25-3)				1	quation 25						
P _{FM} = using E	equation (Exhibit 25-	5)			$P_{FD} = 0.4$	436 usin	g Equa	ation (E	xhibit 25-1	1)		
V ₁₂ = pc/h						$V_{12} = 36$	01 pc/h						
Capacity Ch	ecks					Capacit	y Checks						
	Actual	Maxir	num	LOS	F?		Actu		Maxi		LOS F?		
		See Exh	ibit 25-			V _{FI} =V _F	688	4	96	00	No		
V _{FO}	1	7			Ī	V ₁₂	360	1_	440	0:All	No		
		4600) · A II			V _{FO} = V V _R	^{F -} 582	1	96	00	No		
V _{R12}		4000	<i></i>			V _R	106	3	22	00	No		
Level of Ser	vice Deter	mination (if not F)		Level o	l Service L)etern	inatio	n (if not F)		
$D_{p} = 5.475$					7 L _A		$D_{R} = 4.25$	62 + 0.0	0086 V	1 ₂ - 0.0009) L _D		
1 1	c/ mi /ln)	K	12			D _R =	33.9 (pc/	mi /ln)					
1 ''	xhibit 25-4)				'`	D (Exhibit						
Speed Estin						Speed I	Estimation)					
	oit 25-19)					D _s =	0.264 (E	xhibit 2	25-19)				
1 -		5 10)				1 -	62.6 mp	h (Exh	ibit 25-	·19)			
1 ''	1 (Exhibit 2					S _n =	74.3 mp						
, ,	(Exhibit 2					1	•	•					
S= mpt	າ (Exhibit 2	:5-14)				S = 67.7 mph (Exhibit 25-15)							

MAJOR MERGE AND DIVERGE

Major Diverge Area Analysis

When a two-lane-off-ramp results in a lane drop, it is treated as a major diverge segment. In this case, the entering demand and the departing demand on each exit leg must be checked against the capacity of the approximate entry or departure leg. Equation 25-12 allows the density across all freeway lanes to be estimated for a distance of 1,500 ft upstream of the gore area. This density can be compared with the LOS criteria in Exhibit 24-4 to determine the LOS in the diverge area.

 $D = 0.0109 * (V_F / N)$ (25-12)

D = average density across all freeway lanes for a distance of 1,500 ft upstream of diverge (pc/mi/ln)

V_F = freeway flow rate approaching diverge area (pc/h)

N = number of freeway lanes

Exhibit 25-4. LOS Criteria for Merge and Diverge Areas

LOS	Density (pc/mi/ln)				
A	<= 10				
В	> 10 - 20				
С	> 20 - 28				
D	> 28 - 35				
E	> 35				
F	Demand exceeds capacit				

Determining Flow Rate (pc/h)

```
V_F = V_i / (PHF \times f_{hv} \times f_p)
```

 V_F = flow rate for movement i under base conditions during peak 15 min of hour (pc/h)

 V_i = hourly volume for movement i (vph)

PHF = peak-hour factor freeway - 0.95 ramp - 0.95

 f_{hv} = adjustment factor for heavy vehicles freeway - 0.976 ramp - 0.99

 f_p = adjustment factor for drive population freeway - 1.0 ramp - 1.0

Special Cases

When a two-lane, right-hand off-ramp has a single deceleration lane and the left-hand ramp lane splits from Lane 1 of the freeway at the gore area, without a deceleration lane, the following formula needs to be used:

 $V_{12} = V_R + (V_{F^-}V_R)(P_{FD})$

$$V_{12*} = V_{12} / (PHF \times f_{hv} \times f_{p})$$

 V_{12} = hourly volume for movement (vph)

 V_{12^*} = flow rate for movement under base conditions during peak 15 min of hour (pc/h)

PHF = peak-hour factor freeway - 0.95 ramp - 0.95

 f_{hv} = adjustment factor for heavy vehicles freeway - 0.976 ramp - 0.99

 f_p = adjustment factor for drive population freeway - 1.0 ramp - 1.0

 $D_R = 4.252 + 0.0086V_{12^*} - 0.009L_D$ (Eq.25-10)

D_R= density of diverge influence area(pc/mi/ln)

V₁₂-= flow rate entering ramp influence area(pc/h)

L_D= Length of Deceleration Lane (Ft)

HIGHWAY CAPACITY MANUAL ANALYSIS

Major Merge Area Analysis

Where a two-lane on-ramp results in a lane addition, the junction is classified as a major merge area. The Highway Capacity Manual (HCM) analysis is limited to checking capacities on approaching legs and the departing freeway. The capacity of each entering leg and the departing freeway is computed using Exhibit 25-3 (p. 25-4) and Exhibit 25-7 (p. 25-8) in the HCM 2000.

Exhibit 25-3. Approximate Capacity of Ramp Roadways

	Capacity	y (pc/h)
Free Flow Speed of Ramp , S _{fr} (mi.h)	Single-Lane Ramps	Two-Lane Ramps
> 50	2200	4400
> 40 - 50	2100	4100
> 30 - 40	2000	3800
>= 20 - 30	1900	3500
< 20	1800	3200

Exhibit 25-7. Capacity Values for Merge Areas

Freeway	Maximum I	Downstream Free ber of Lanes in O	way Flow, v (p	oc/h)	Max. Desirable Flow Entering
Speed (mi/h)	2	3	4	> 4	Influence Area, V _{r12} (pc/h)
	4800	7200	9600	2400/ln	4600
>= 70		7050	9400	2350/in	4600
65	4700		9200	2300/ln	4600
60	4600	6900		2250/in	4600
55	4500	6750	9000	2250/111	1

Determining Flow Rate (pc/h)

$$v_i = V_i / (PHF \times f_{hv} \times f_p)$$
 (25-1)

 v_{l} = flow rate for movement i under base conditions during peak 15 min of hour (pc/h)

V_i = hourly volume for movement i (vph)

PHF = peak-hour factor freeway - 0.95 ramp - 0.95

 $f_{\rm hv}$ = adjustment factor for heavy vehicles freeway - 0.976 ramp - 0.99

 f_p = adjustment factor for drive population freeway - 1.0 ramp - 1.0

MERGE ANALYSIS

A 1.1 NB I-95 On-Ramp to EB I-595 (AM)

Approaching Freeway Volume:

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

$$vi = 5.748 (p$$

Ramp Volume:

$$Vi = 2,220$$

$$PHF = 0.95$$

$$fhv = 0.99$$

$$fp = 1.00$$

Departing Freeway Volume:

$$Vi = 7,550$$

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

A 1.2 NB I-95 On-Ramp to EB I-595 (PM)

Approaching Freeway Volume:

$$Vi = 4,080$$

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

Ramp Volume:

$$Vi = 1.900$$

$$PHF = 0.95$$

$$fhv = 0.99$$

$$fp = 1.00$$

capacity
$$= 4,100$$

Departing Freeway Volume:

$$Vi = 5,980$$

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

A 2.1 University On-Ramp to EB I-595 (AM)

Approaching Freeway Volume:

$$Vi = 7.360$$

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

Ramp Volume:

$$Vi = 4.870$$

$$PHF = 0.95$$

$$fhv = 0.99$$
 $fp = 1.00$

$$fp = 1.00$$

Departing Freeway Volume:

$$Vi = 12,230$$

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

A 2.2 University On-Ramp to EB 1-595 (PM)

Approaching Freeway Volume:

$$Vi = 7,900$$

$$PHF = 0.95$$

$$fhv = 0.976$$
 $fp = 1.00$

$$fp = 1.00$$

Ramp Volume:

$$Vi = 4,120$$

$$PHF = 0.95$$

$$fhv = 0.99$$
 $fp = 1.00$

$$fp = 1.00$$

vi =

Departing Freeway Volume:

$$Vi = 12,020$$

$$PHF = 0.95$$

fhv =
$$0.976$$
 fp = 1.00

$$fp = 1.00$$

A 3.1 NB I-95 On-Ramp to WB I-595 (AM)

Approaching Freeway Volume:

$$Vi = 3.540$$

$$fhv = 0.976$$

$$fp = 1.00$$

Ramp Volume:

$$Vi = 1,290$$

$$PHF = 0.95$$

$$fhv = 0.99$$

$$fp = 1.00$$

Departing Freeway Volume:

$$Vi = 4.830$$

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

A 3.2 NB I-95 On-Ramp to WB I-595 (PM)

Approaching Freeway Volume:

$$Vi = 2,680$$

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

Ramp Volume:

$$PHF = 0.95$$

$$fhv = 0.99$$

$$fp = 1.00$$

Departing Freeway Volume:

$$Vi = 5,830$$

$$PHF = 0.95$$

$$fhv = 0.976$$
 $fp = 1.00$

$$fp = 1.00$$

A 4.1 Pine Island On-Ramp to WB I-595 (AM)

Approaching Freeway Volume:

$$Vi = 7.770$$

$$fhv = 0.976$$
 $fp = 1.00$

$$fp = 1.00$$

Ramp Volume:

$$Vi = 2.090$$

$$V_i = 2.090$$
 PHF = 0.95

$$fhv = 0.99$$
 $fp = 1.00$

$$fp = 1.00$$

$$vi = 2,222 (pc/h)$$

Departing Freeway Volume:

$$PHF = 0.95$$

fhv =
$$0.976$$
 fp = 1.00

$$fp = 1.00$$

A 4.2 Pine Island On-Ramp to WB I-595 (PM)

Approaching Freeway Volume:

$$Vi = 4.850$$

$$fhv = 0.976$$

$$fp = 1.00$$

Ramp Volume:

$$Vi = 2,500$$

$$PHF = 0.95$$

$$fhv = 0.99$$
 $fp = 1.00$

$$fp = 1.00$$

Departing Freeway Volume:

$$PHF = 0.95$$

$$fhv = 0.976$$
 $fp = 1.00$

$$fp = 1.00$$

A5.1 I-595 On-Ramp to SB Turnpike (AM)

Approaching Freeway Volume:

$$Vi = 5.980$$

$$PHF = 0.95$$

fhv =
$$0.976$$
 fp = 1.00

$$tp = 1.00$$

vi =

Ramp Volume:

$$Vi = 4,600$$

$$PHF = 0.95$$

$$fhv = 0.99$$
 $fp = 1.00$

$$fp = 1.00$$

vi =

Departing Freeway Volume:

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fhv = 0.976$$
 $fp = 1.00$

11411 (pc/h) vi =

A5.2 I-595 On-Ramp to SB Turnpike (PM)

Approaching Freeway Volume:

$$Vi = 5.380$$

$$PHF = 0.95$$

fhv =
$$0.976$$
 fp = 1.00

$$fp = 1.00$$

5802 (pc/h) vi =

capacity = 9,600

Ramp Volume:

$$Vi = 4,620$$

$$PHF = 0.95$$

$$fhv = 0.99$$

$$fp = 1.00$$

4912 (pc/h) vi =

capacity = 6,600 <

< capacity = 14,400

Departing Freeway Volume:

$$Vi = 10,000$$

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

vi = 10785 (pc/h)

capacity = 14,400<

A 6.1 Griffin Rd to NB Turnpike (AM)

Approaching Freeway Volume:

$$Vi = 8.930$$

$$PHF = 0.95$$

$$fhv = 0.976$$
 $fp = 1.00$

$$fp = 1.00$$

vi = 9631 (pc/h) capacity = 9,600

Ramp Volume:

$$PHF = 0.95$$

$$fhv = 0.99$$

$$fp = 1.00$$

vi = 1765 (pc/h)

capacity = 4,100

Departing Freeway Volume:

$$Vi = 10,590$$

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

vi = 11421 (pc/h)

< capacity = 14,400

A 6.2 Griffin Rd to NB Turnpike (PM)

Approaching Freeway Volume:

$$thv = 0.976$$

$$fhv = 0.976$$
 $fp = 1.00$

12500 (pc/h) vi=

capacity = 9,600

Ramp Volume:

$$Vi = 1,460$$

$$PHF = 0.95$$

$$fhv = 0.99$$

$$fp = 1.00$$

vi = 1552 (pc/h)

capacity = 4,100 <

Departing Freeway Volume:

$$Vi = 13.050$$

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

$$vi = 14075 (pc/h)$$

fhv = 0.976

DIVERGE ANALYSIS

B 1.1 WB I-595 Off-Ramp to SB I-95 (AM)

$$V_{\rm E} = 8,423 \; (pc/h)$$

fp = 1.00

N = 4

Therefore

D = 22.95

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 22.95 > 20 - 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 1.2 WB I-595 Off-Ramp to SB I-95 (PM)

$$V_i = 8,370$$
 PHF = 0.95 fhv = 0.976 fp = 1.00
 $V_E = 9,027$ (pc/h)

N = 4

Therefore

D = 24.60

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 24.6 > 20 - 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 2.1 WB I-595 Off-Ramp NB I-95 (AM)

$$V_i = 5.860$$
 PHF = 0.95 fnv = 0.976 fp = 1.00 $V_F = 6.320$ (pc/h)

N = 4

Therefore

D = 17.22

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 17.22 > 10 - 20 Exhibit 25-4 gives LOS as B in the diverge area.

Level of Service = B

B 2.2 WB I-595 Off-Ramp NB I-95 (PM)

V_F =

$$Vi = 6,560$$

$$fhv = 0.976$$

$$fp = 1.00$$

Therefore

N = 4

$$D = 19.28$$

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 19.28 > 10 - 20 Exhibit 25-4 gives LOS as B in the diverge area.

Level of Service = B

B 3.1 WB I-595 Off-Ramp University Drive (AM)

$$Vi = 10,180$$

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

V_F =

N = 5

Therefore

$$D = 23.93$$

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 23.93 > 20 - 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 3.2 WB I-595 Off-Ramp University Drive (PM)

$$Vi = 8.440$$

$$fhv = 0.976$$

$$fp = 1.00$$

N = 5

Therefore

D= 19.84

V_F =

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 19.84 > 10 - 20 Exhibit 25-4 gives LOS as B in the diverge area.

Level of Service = B

B 4.1 WB I-595 Off-Ramp Pine Island Road (AM)

$$Vi = 10,230$$

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

$$V_F = 11,033 \text{ (pc/h)}$$

N = 5

Therefore

D = 24.05

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 24.05 > 20 - 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 4.2 WB I-595 Off-Ramp Pine Island Road (PM)

$$Vi = 9,350$$
 PHF = 0.95
 $V_E = 10,084$ (pc/h)

V_F =

fhv = 0.976

fp = 1.00

fp = 1.00

fp = 1.00

N =5

Therefore

D = 21.98

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 21.98 > 20 - 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 5.1 WB I-595 Off-Ramp Flamingo Road (AM)

9,728 (pc/h)

N = 5

Therefore

D = 21.21

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

fhv = 0.976

For D = 21.21 > 20 - 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 5.2 WB I-595 Off-Ramp Flamingo Road (PM)

6,126 (pc/h) V_F = N = 5

Therefore

D = 13.35

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 13.35 > 10 - 20 Exhibit 25-4 gives LOS as B in the diverge area.

Level of Service = B

B 6.1 EB I-595 Off-Ramp Pine Island Road (AM)

Vi= 7.560

PHF = 0.95

fhv = 0.976

fp = 1.00

V_E =

8154 (pc/h)

N = 4

Therefore

D= 22.22

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 22.22> 20- 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 6.2 EB I-595 Off-Ramp Pine Island Rd (PM)

Vi= 9,000

PHF = 0.95

fhv = 0.976

fp = 1.00

V= =

9707 (pc/h)

N = 4

Therefore

D = 26.45

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D 26.45> 20- 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 7.1 EB I-595 CD/Turnpike Off-Ramp (AM)

Vi = 12,230

PHF = 0.95

fhv = 0.976

fp = 1.00

13,190 (pc/h)

N = 6

Therefore

D = 23.96

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p,25-5) of the HCM 2000.

fhv = 0.976

For D = 23.96 > 20 - 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 7.2 EB I-595 CD/Turnpike Off-Ramp (PM)

 $V_{\rm r} = 12,964 \, (pc/h)$

fp = 1.00

V_F = 12,904 (

N = 6

Therefore

D = 23.55

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 23.55 > 20 - 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 8.1 EB I-595 Off-Ramp NB I-95 (AM)

Vi = 10,810

PHF = 0.95

fhv = 0.976

fp = 1.00

 $V_F = 11,659 \text{ (pc/h)}$

N = 5

Therefore

D = 25.42

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 25.42 > 20 - 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 8.2 EB I-595 Off-Ramp NB I-95 (PM)

Vi = 6.700

PHF = 0.95

fhv = 0.976

fp = 1.00

 $V_F =$

7,226 (pc/h)

N = 5

Therefore

D = 15.75

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 15.75 > 10 - 20 Exhibit 25-4 gives LOS as B in the diverge area.

Level of Service = B

B 9.1 EB I-595 Off-Ramp to SB I-95 (AM)

 $V_F =$

$$Vi = 8,280$$

$$fhv = 0.976$$

$$fp = 1.00$$

N = 4

Therefore

D = 24.33

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 24.33 > 20 - 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 9.2 EB I-595 Off-Ramp to SB I-95 (PM)

$$Vi = 5,700$$

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

 $V_F =$

N = 4

Therefore

D = 16.75

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 16.75 > 10 - 20 Exhibit 25-4 gives LOS as B in the diverge area.

Level of Service = B

B 10.1 NB Turnpike Off-Ramp I-595 EB (AM)

V_F =

$$Vi = 10,590$$

$$fhv = 0.976$$

$$fp = 1.00$$

N = 6

Therefore

D = 20.75

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 20.75 > 20 - 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 10.2 NB Turnpike Off-Ramp I-595 EB (PM)

$$Vi = 13,050$$

$$PHF = 0.95$$

$$fhv = 0.976$$

$$fp = 1.00$$

$$V_F = 14,075 \text{ (pc/h)}$$

N = 6

Therefore

D = 25.57

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 25.57 > 20 - 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 11.1 NB Turnpike Off-Ramp I-595 WB (AM)

Vi = 8,200

PHF = 0.95

fhv = 0.976

fp = 1.00

 $V_F = 8,844 \text{ (pc/h)}$

N = 5

Therefore

D = 19.28

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 19.28 > 10 - 20 Exhibit 25-4 gives LOS as B in the diverge area.

Level of Service = B

B 11.2 NB Turnpike Off-Ramp I-595 WB (PM)

Vi = 10,190

PHF = 0.95

fhv = 0.976

fp = 1.00

 $V_F = 10,990 (pc/h)$

N = 5

Therefore

D = 23.96

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 23.96 > 20 - 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 12.1 SB Turnpike Off-Ramp I-595 (AM)

V_F =

Vi = 10,790

PHF = 0.95

fhv = 0.976

fp = 1.00

N = 5

11,637 (pc/h)

Therefore

D = 25.37

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 25.37 > 20 - 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

B 12.2 SB Turnpike Off-Ramp I-595 (PM)

Vi = 9,530

PHF = 0.95 **10,278 (pc/h)** fhv = 0.976

fp = 1.00

N = 5

Therefore

D = 22.41

pc/mi/ln

To determine the LOS in the diverge area, the above calculated density is compared with Exhibit 25-4 (p.25-5) of the HCM 2000.

For D = 22.41 > 20 - 28 Exhibit 25-4 gives LOS as C in the diverge area.

Level of Service = C

WEAVING

			LECANY	IAALWA	ING WOR	ara and a removed and a defined special control special and a finite special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special special s			
General I	nformati	on			Site Information				
Analyst Agency/Comp Date Performe	ed	YLM RS&H 9-22-0	4 ak Period		Freeway/Dir of Travel Weaving Seg Location Jurisdiction		I-595 EB Between SW 136th Ave and Flami		
Analys is Time	renou	AWITO	ak i ciloa		Analysis Yea	r	2034		
nputs Freeway free-flow speed, SFF (mi/h) 60 Veaving number of lanes, N 5 Veaving seg length, L (ft) 1500 Ferrain Leve		el	Weaving type Volume ratio, VR Weaving ratio, R		B 0.33 0.41				
Convers	ons to p	c/h Unde	r Base C	ondition	ıs	r			
(pc/h)	٧	PHF	Truck %	RV %	E _T	E _R	fhv	fp	٧
Vo1	4740	0.95	5	0	1.5	1.2	0.976	1.00	5114
Vo2	0	0.90	0	0	1.5	1.2	1.000	1.00	0
Vw1	1420	0.95	2	0	1.5	1.2	0.990	1.00	1509
Vw2	980	0.95	2	0	1.5	1.2	0.990	1.00	1041
Vw	000			2550	Vnw				5114
V						1			7664
	and Nor	Weavin	g Speeds						
ryeaving	and ito	- IVOG III	Unconstr	ained	ined			trained	
		Weaving	(i = w)	Non-Wea	ving (i = nw)	Weavir	ng (i = w) Non-Weaving (=		ving (= nw)
a (Exhibit 24-	6)	0.0			.00				
b (Exhibit 24-		2.2			.00				
c (Exhibit 24-		0.70			.50				
d (Exhibit 24-		0.5			1.44				
Weaving intensity Weaving and non		45.1	***************************************		9.64				
speeds, Si (mi/h)	nes required t	ı for unconstrai	ned operation	<u> </u>	1.97 3.50				
Į.	If Nw < Nw	(max) uncons	trained operat	ion	_		w (max) consti	rained operat	ion
Weaving	Seamer	nt Speed	Density,	Levelo	f Service,	and Car	pacity		
Weaving segment speed, S (mi/h)				48.04					
Weaving segment density, D (pc/mi/ln)				31.91					
Level of service, LOS				D					
	ase condition			9815					
Capacity as a				9576					
Capacity as a 15-minute flow rate, c (veh/h) Capacity as a full-hour volume, c _h (veh/h)				9097					

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".
- b. Capacity constrained by basic freeway capacity.
- b. Capacity constrained by basic freeway capacity.
 c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

		and the second second second	REEWA'	<u>Y WEAV</u>	ING WOR				
Genera	l Informat	ion			Site Information				
Analyst Agency/Cor		YLM RS&H 9-22-0	4		Freeway/Dir of Weaving Seg		I-595 EB Between SW 136th Ave and Flami		
Date Perfor Analysis Tir			ak Period		Jurisdiction Analysis Year				
Inputs					T				
Freeway free-flow speed, SFF (mi/h) 60 Neaving number of lanes, N 5 Neaving seg length, L (ft) 1500 Ferrain Level Conversions to pc/h Under Base Co				el	Weaving type Volume ratio, VR Weaving ratio, R			B 0.2 0.4	
Conver	sions to p	c/h Unde	r Base C	ondition	IS				I
(pc/h)	V	PHF	Truck %	RV %	E _T	E _R	fhv	fp	٧
Vo1	7230	0.95	5	0	1.5	1.2	0.976	1.00	7800
Vo2	0	0.90	0	0	1.5	1.2	1.000	1.00	0
/w1	1320	0.95	2	0	1.5	1.2	0,990	1.00	1403
Vw2	910	0.95	2	0	1.5	1.2	0.990	1.00	967
Vw)		2370	Vnw	100			7800
V							Access of the second		10170
Weavin	ig and No	n-Weavin	g Speeds	3		100			
			Unconstr	ained		_	Constrained		
		Weaving			ving (i = nw)	Weaving (i = w)		Non-Weaving (= nw)	
a (Exhibit 2		0.0			.00				
b (Exhibit 2		2.2			.00				
c (Exhibit 2		0.7			.50				
d (Exhibit 2 Weaving inten		0.6			1.37				
Weaving and r	non-weaving	44.8			1.52				
speeds, Si (mi	/h) Ianes required	·		. Nw	1.42	<u> </u>			
Maximum I	number of lane:	s, Nw (max)			3.50	≣ if Nw > N	w (max) const	rained operat	ion
	If Nw < Nw ng Segme	v(max) uncon	strained opera	Lovela					
	egment speed,		MenionA	49.78	A POWER TO A LONG A				
	egment speed, egment density			40.86					
	ervice, LOS) r (boumin)		E					
	f base condition	n, c _h (pc/h)		10632					
	s a 15-minute f		h/h)	10373					
- apaony a			II. \	0054					

a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions". b. Capacity constrained by basic freeway capacity.

9854

Capacity as a full-hour volume, ch (veh/h)

c. Capacity occurs under constrained operating conditions.

c. Capacity occurs under constrained operating conditions.
d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20, 4,000 poor operations and some local queuing are expected in such cases.
h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

			FREEWA'	Y WEAV	ING WOR	KSHEET				
Genera	l Informat	ion	115 TO 15 TO		Site Information					
Analyst Agency/Co. Date Perfor Analysis Ti	med	YLM RS&H 9-22-0 AM	4		Freeway/Dir of Weaving Seg Jurisdiction Analysis Yea	Location		I-595 EB Between Pine Island/Davie Off 2034		
Inputs		1					5 5 500			
Freeway free-flow speed, SFF (mi/h) 60 Weaving number of lanes, N 5 Weaving seg length, L (ft) 2200 Terrain Level			el	Weaving type Volume ratio Weaving ratio	, VR		A 0.43 0.34			
Conver	sions to p	oc/h Unde	r Base C	onditior	is	T T	Γ	·	 	
(pc/h)	V	PHF	Truck %	RV %	E _T	E _R	fHV	fp	٧	
Vo1	4930	0.95	5	0	1.5	1.2	0.976	1.00	5319	
Vo2	0	0.95	0	0	1.5	1.2	1.000	1.00	0	
Vw1	2430	0.95	2	0	1.5	1.2	0.990	1.00	2583	
Vw2	1270	0.95	2	0	1.5	1.2	0.990	1.00	1350	
Vw		1		3933	Vnw				5319	
V								1. 1.	9252	
Weavir	ig and No	n-Weavin	a Speeds	3						
3.000-			Unconstr		Constrained					
		Weaving	(i = w)	Non-Wea	aving (i = nw)		Weaving (i = w)		Non-Weaving (= nw)	
a (Exhibit 2							15		00 00	
b (Exhibit 2		<u> </u>					.00 .97		30	
c (Exhibit 2		<u> </u>				·	.80		75	
d (Exhibit 2 Weaving inten							.39	0.	45	
Weaving and	non-weaving					29	0.76	49	.39	
speeds, Si (m Number of Maximum	in) lanes required number of lane If Nw < Nv	s, Nw (max)			2.74 1.40	_i If Nw > N	w (max) const	rained operat	ion	
Mosvie	ng Segme								200	
	egment speed,			38.58			And the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s			
	egment density			47.97						
	ervice, LOS			F		······································				
	f base condition	n, c _b (pc/h)		10344						
Capacity a	s a 15-minute f	low rate, c (ve	h/h)	10092						
				0507						

a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".

9587

Capacity as a full-hour volume, ch (veh/h)

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, Romp's and Romp's than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, Romp's and Romp's than 2500 ft. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

		F	REEWA'	Y WEAV	ING WOR				
General	Informat	ion			Site Info	rmation			
Analyst YLM Agency/Company RS&H Date Performed 9-22-04 Analysis Time Period PM				Freeway/Dir of Travel 1-595 E Weaving Seg Location Betwee Jurisdiction Analysis Year 2034			Ben Pine Island/Davie Off		
Inputs		100							
Freeway free-flow speed, SFF (mi/h) Weaving number of lanes, N Weaving seg length, L (ft) Terrain		60 5 2200 Leve	el	Volume ratio, Weaving ratio	Weaving type Volume ratio, VR Weaving ratio, R		A 0.33 0.39		
Convers	ions to p	oc/h Unde	r Base C	ondition)S		i e	<u> </u>	T
(pc/h)	V	PHF	Truck %	RV %	E _T	E _R	fhv	fp_	V
Vo1	6070	0.95	5	0	1.5	1.2	0.976	1.00	6549
Vo2	0	0.95	0	0	1.5	1.2	1.000	1.00	0
Vw1	1830	0,95	2	0	1.5	1.2	0.990	1.00	1945
Vw2	1170	0.95	2	0	1.5	1.2	0.990	1.00	1243
Vw	1170			3188	Vnw				6549
V									9737
•	g and No	n Moavin	a Speeds	energy or the energy					
vveaviii	g alle ne		Unconstr	ained			Cons	trained	
		Weaving			ving (i = nw)	Weavi	ng (i = w)	Non-Wea	ving (= nw)
a (Exhibit 2	1-6)	710001113	1:			0	.15		.00
b (Exhibit 2							.00		.00
c (Exhibit 2						<u> </u>	.97		.30
d (Exhibit 2							.80		.75
Weaving intensity factor, Wi					2.15			0.37	
Weaving and n speeds, Si (mi/	١)					30	0.90	5′	1.62
Number of	anes required	for unconstrai	ned operation	, Nw	2.33 1.40				
	umber of lane			15		≅ is Nhar ≤ Ni	u (may) const	rained oneral	ion
	☐ If Nw < Nv	v(max) uncons	trained opera	tion	of Service.		w (max) const	ramed opera	IOH

1 THE CHICAGO BEIGGE OF	
Weaving Segment Speed, Densi	ty, Level of Service, and Capacity
Weaving segment speed, S (mi/h)	42.33
Weaving segment density, D (pc/mi/ln)	46.01
Level of service, LOS	F
Capacity of base condition, c _b (pc/h)	10344
Capacity as a 15-minute flow rate, c (veh/h)	10092
Capacity as a full-hour volume, ch (veh/h)	9587

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".
 b. Capacity constrained by basic freeway capacity.
 c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

			REEWA	<u>Y WEAV</u>	ING WOR	en et la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya del companya de la companya del companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la c				
<u>General</u>	Informat	ion			Site Information					
Analyst Agency/Con Date Perforr Analysis Tim	ned	YLM RSH 12/9/04 AM	1		Freeway/Dir of Weaving Seg Jurisdiction Analysis Year	Location	595 WB Between Turnpike and Davie 2034			
Inputs										
Freeway free-flow speed, SFF (mi/h) 60 Weaving number of lanes, N 5 Weaving seg length, L (ft) 1400 Terrain Leve		el	IVVASVING FATIO			B 0.08 0.00				
Conver	sions to p	c/h Unde	r Base C	ondition	1				T	
(pc/h)	V	PHF	Truck %	RV %	Ε _T	ER	fHV	fp	<u>v</u>	
Vo1	6215	0.95	5	0	1.5	1.2	0.976	1.00	6705	
Vo2	3485	0.95	2	0	1.5	1.2	0.990	1.00	3705	
Vw1	795	0.95	2	0	1.5	1.2	0.990	1.00	845	
Vw2	0	0.95	2	0	1.5	1.2	0.990	1.00	0	
Vw		,		845	Vnw				10410	
V									11255	
Weavin	g and No	n-Weavin	a Speeds	3				1000		
			Unconstr				Cons	trained		
		Weaving	(i = w)		Non-Weaving (i = nw)		Weaving (i = w)		Non-Weaving (= nw)	
a (Exhibit 2		0.08			00		· · · · · · · · · · · · · · · · · · ·			
b (Exhibit 2		2.20			.00					
c (Exhibit 2		0.70		-i	00 50			<u> </u>		
d (Exhibit 24 Weaving intens		0.56			. <u>19</u>					
Weaving and n	on-weaving	47.1			⁷ .17				ULAN.	
	n) anes required umber of lanes	for unconstrai		<u> </u>	0.62 3.50	<u> </u>		<u> </u>		
	If Nw < Nw		trained operat	tion		if Nw > N	w (max) consti	rained operat	tion	
					f Service,		and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s			
	gment speed,			56.27						
Weaving segment density, D (pc/mi/ln)				40.01						
	Level of service, LOS			E		***			<i>a</i>	
Capacity of base condition, c _b (pc/h)			11498		Marin .	Lut				
				11218			··	·		
			10657							

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, Kamps and Kamp Sunctions b. Capacity constrained by basic freeway capacity.

 c. Capacity occurs under constrained operating conditions.
 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

			REEWA	Y WEAV	ING WOR	KSHEET				
Genera	l Informat	ion			Site Information					
Analyst YLM Agency/Company RSH Date Performed 12/9/04 Analysis Time Period PM				Freeway/Dir of Weaving Seg Jurisdiction Analysis Year	Location	595 WB Between Turnpike and Davie 2034				
Inputs Freeway fre	ee-flow speed,	SFF (mi/h)	60		We aving tupe		3,000,000,000	В		
Weaving number of lanes, N Weaving seg length, L (ft) Terrain		5 140 Lev		Weaving type Volume ratio, Weaving ratio	VR	14 MOVING VI.	0.1 0.0			
Conver	sions to p	oc/h Unde	r Base C	ondition	S	6656	200		,	
(pc/h)	V	PHF	Truck %	RV %	E _T	ER	fhv	fp	٧	
Vo1	455	0.95	5	0	1.5	1.2	0.976	1.00	490	
Vo2	3680	0.95	2	0	1.5	1.2	0.990	1.00	3912	
Vw1	695	0.95	2	0	1.5	1.2	0.990	1.00	738	
Vw2	0	0.95	2	0	1.5	1.2	0.990	1.00	0	
Vw				738	Vnw				4402	
 V						,			5140	
Weavir	g and No	n-Weavin	a Speeds	3						
			Unconstr				Cons	strained		
		Weaving	(i = w)		ving (i = nw)	Weavi	ng (i = w)	Non-Wea	ving (= nw	
a (Exhibit 2		0.08			.00	-				
b (Exhibit 2		2.20		6.00						
c (Exhibit 24-6) 0.70		1.00				-				
d (Exhibit 2 Weaving inten		0.50			0.50 0.12			-		
Weaving and I	non-weaving	51.5	www).53	-				
speeds, Si (mi Number of	m) Ianes required	for unconstrai	ned operation	. Nw	1.05			J		

Number of lanes required for unconstrained operation, Nw Maximum number of lanes, Nw (max)

3.50

If Nw < Nw(max) unconstrained operation

if Nw > Nw (max) constrained operation

ty, Level of Service, and Capacity
58.23
17.65
В
11209
10936
10389

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".
- b. Capacity constrained by basic freeway capacity.
- c. Capacity occurs under constrained operating conditions.
- d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
- e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Four operations and some local queuing are expected in such cases. f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases. h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.

- i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

_			KEEWA	T WEAV	ING WOR				
<u> Seneral</u>	Informati	on			Site inioi	mauom			
Analyst YLM Agency/Company RS&H Date Performed 9-22-04 Analysis Time Period AM			Freeway/Dir of Travel Weaving Seg Location Jurisdiction Analysis Year		I-595 WB University On-NOb Hill Off 2034				
nputs		Part distri							
Freeway free-flow speed, SFF (mi/h) 65 Neaving number of lanes, N 5 Neaving seg length, L (ft) 220 Ferrain Lev			Weaving type Volume ratio, Weaving ratio	VR .		B 0.23 0.40			
	sions to p	c/h Unde	r Base C	ondition	S			ı	T
(pc/h)	V	PHF	Truck %	RV %	E _T	ER	fHV	fp	٧
Vo1	6930	0.95	5	0	1.5	1.2	0.976	1.00	7477
Vo2	0	0.95	0	0	1.5	1.2	1.000	1.00	0
Vw1	1240	0.95	2	0	1.5	1.2	0.990	1.00	1318
Vw2	840	0.95	2	0	1.5	1.2	0.990	1.00	893
Vw.	*	1		2211	Vnw				7477
V W						1000		4,50	9688
	a and No	n-Weavin	a Speeds						
Weaving and Non-Weaving Speeds Unconstra				ained			Cons	trained	
		Weaving			ving (i = nw)	Weavi	ng (i = w)	Non-Wea	ving (= nw)
a (Exhibit 24	1-6)	0.08			.00				
b (Exhibit 24		2.20	<u> </u>		.00				
c (Exhibit 24		0.70			.00 .50				
d (Exhibit 2		0.50			.28				
Weaving intens Weaving and no		50.8			7.85				
speeds. Si (mi/l	1)				1.13		·		· · · · · · · · · · · · · · · · · · ·
Number of I	anes required umber of lanes	tor unconstrail	ned operation,	INW	3.50				
	If Nw < Nw		trained operat	ion		if Nw > N	w (max) const	rained operat	ion
Waayin	n Seame	nt Speed.	Density.	Levelo	f Service,	and Ca	pacity		
Weaving se	gment speed,	S (mi/h)		56.07					
	gment density			34.56					
Level of ser				D				<u> </u>	<u> </u>
Capacity of	base condition	n, c _b (pc/h)		11546				<u> </u>	
Capacity as	a 15-minute f	low rate, c (ve	h/h)	11264	·				
Capacity as	a full-hour vol	ume, c _h (veh/l	1)	10701					
Notes							00 110	Jamp lunations*	
b. Capacity cor c. Capacity occ d. Three-lane 1 e. Four-lane Ty f. Capacity con g. Five-lane Ty	nstrained by basic to turs under constrain type A segments do type A segments do strained by maximu pe A segments do	reeway capacity. ned operating cond o not operate well a mot operate well a m allowable weav	itions. at volume ratios gre volume ratios gre ing flow rate: 2,800 volume ratios grea	eater than 0.45. ater than 0.35. F) pc/h (Type A), ater than 0.20. P	Peas using the proce Peor operations and 4,000 (Type B), 3,51 oor operations and soor operations are operations and soor operations and soor operations and soor operations are operations and soor operations and soor operations are operations and soor operations and soor operations are operations and soor operations and soor operations are operations and soor operations and soor operations are operations and soor operations are operations and soor operations are operations and soor operations are operations and soor operations are operations and soor operations are operations are operations are operations are operations and soor operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are operations are	d some local que some local queu 00 (Type C), some local queui ome local queuir	uing are expected ing are expected in ng are expected in a are expected in	in such cases. n such cases. n such cases. such cases.	

	 -		DEEMA	✓ \ME	ING WOR	KSHFFI	•			
General	Informati	The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon	REEWA	IVVEAV	Site Info	AND A SECURITION OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPER				
Analyst Agency/Com Date Perform Analysis Tim	ied	YLM RS&H 9-22-0 PM	4		Freeway/Dir of Travel Weaving Seg Location Jurisdiction Analysis Year		I-595 WB University On-NOb Hill Off 2034			
Inputs									The second	
Freeway free-flow speed, SFF (mi/h) Weaving number of lanes, N Weaving seg length, L (ft) Terrain			65 5 2200 Leve	el	Weaving type Volume ratio, VR Weaving ratio, R		B 0.47 0.27			
Convers	ions to p	c/h Unde	r Base C	onditio	าร		ra ne name	I	I	
(pc/h)	٧	PHF	Truck %	RV %	E _T	ER	fHV	fp	V	
Vo1	3890	0.95	5	0	1.5	1.2	0.976	1.00	4197	
Vo2	0	0.95	0	0	1.5	1.2	1.000	1.00	0	
Vw1	2560	0.95	2	0	1.5	1.2	0.990	1.00	2721	
Vw2	960	0.95	2	0	1.5	1.2	0.990	1.00	1020	
Vw			a de la companya de la companya de la companya de la companya de la companya de la companya de la companya de	3741	Vnw				4197	
V									7938	
	and No	n-Weavin	a Speeds			555				
heveve and		Unconstrained					Constrained			
		Weaving (i = w)		Non-Weaving (i = nw)		Weaving (i = w)		Non-Wea	Non-Weaving (= nw)	
a (Exhibit 24-6)		0,08		0.00		<u> </u>				
b (Exhibit 24-6)		2.20		6.00 1.00				<u> </u>		
c (Exhibit 24-6)		0.70 0.50		0.50		<u> </u>				
d (Exhibit 24-6) Weaving intensity factor, Wi		0.69		0.69						
Weaving and non-weaving		47.47		47.61			"			
Maximum nu	anes required umber of lanes	for unconstrains, Nw (max)	ned operation,	Nw	2.60 3.50	if Nu > N	w (max) const	rained operat	ion	
	Y ITNW < NW	(max) uncons	rained operat	Lovel	of Service			aniou oporui		
vveaving	j segmei	c/mi/h\	Deliaity,	47.54	NEGOT AIRE	- alius va				
Weaving segment speed, S (mi/h) Weaving segment density, D (pc/mi/ln)				33.39						
Level of service, LOS				D						
Capacity of base condition, c _b (pc/h)				8574						
Capacity as a 15-minute flow rate, c (veh/h)			8365							
Capacity as a full-hour volume, c _h (veh/h)				7947						

- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".
- b. Capacity constrained by basic freeway capacity.

- b. Capacity constrained by basic freeway capacity.

 c. Capacity occurs under constrained operating conditions.

 d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.

 e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.

 f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).

 g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.

 h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.

 i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

SIGNALIZED INTERSECTIONS