

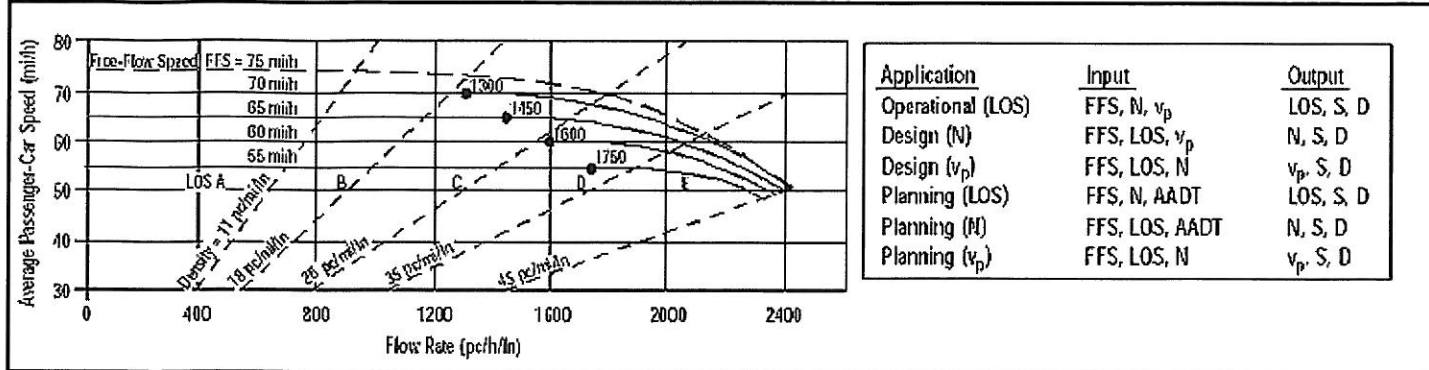
## **APPENDIX G**

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Interim Year (2029) I-75 Mainline HCS Analysis Summary Sheets



**BASIC FREEWAY SEGMENTS WORKSHEET**



**General Information** | **Site Information**

Analyst	AL	Highway/Direction of Travel	I-75
Agency or Company	AIM ENGINEERING	From/To	E OF SR 29
Date Performed	3/8/2012	Jurisdiction	
Analysis Time Period	AM	Analysis Year	2029 NO-BUILD

Project Description EVERGLADES IJR

Oper.(LOS)       Des.(N)       Planning Data

**Flow Inputs**

Volume, V	1813	veh/h	Peak-Hour Factor, PHF	0.95
AADT		veh/day	%Trucks and Buses, P <sub>T</sub>	6
Peak-Hr Prop. of AADT, K			%RVs, P <sub>R</sub>	0
Peak-Hr Direction Prop, D			General Terrain:	Level
DDHV = AADT x K x D		veh/h	Grade % Length	mi
Driver type adjustment	0.90		Up/Down %	

**Calculate Flow Adjustments**

f <sub>p</sub>	0.90	E <sub>R</sub>	1.2
E <sub>T</sub>	1.5	f <sub>HV</sub> = 1/(1+P <sub>T</sub> (E <sub>T</sub> - 1) + P <sub>R</sub> (E <sub>R</sub> - 1))	0.971

**Speed Inputs** | **Calc Speed Adj and FFS**

Lane Width	12.0	ft	f <sub>LW</sub>	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f <sub>LC</sub>	0.0	mi/h
Interchange Density	0.50	l/mi	f <sub>ID</sub>	0.0	mi/h
Number of Lanes, N	2		f <sub>N</sub>	0.0	mi/h
FFS (measured)		mi/h	FFS	75.0	mi/h
Base free-flow Speed, BFFS	75.0	mi/h			

**LOS and Performance Measures** | **Design (N)**

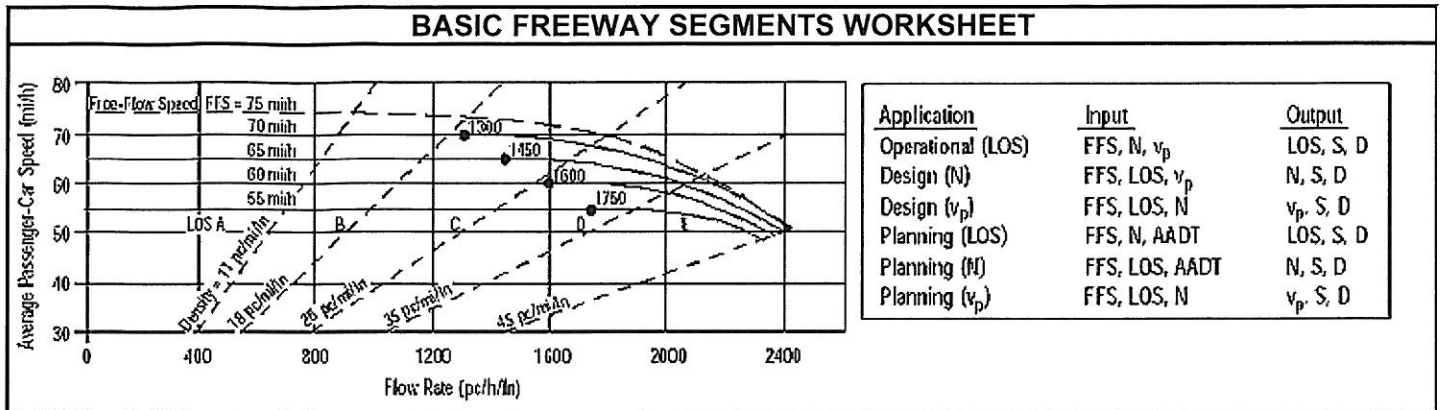
<b>Operational (LOS)</b>		<b>Design (N)</b>	
v <sub>p</sub> = (V or DDHV) / (PHF x N x f <sub>HV</sub> x f <sub>p</sub> )	1092	Design LOS	
S	75.0	v <sub>p</sub> = (V or DDHV) / (PHF x N x f <sub>HV</sub> x f <sub>p</sub> )	pc/h
D = v <sub>p</sub> / S	14.6	S	mi/h
LOS	B	D = v <sub>p</sub> / S	pc/mi/ln
		Required Number of Lanes, N	

**Glossary** | **Factor Location**

N - Number of lanes	S - Speed	E <sub>R</sub> - Exhibits 23-8, 23-10	f <sub>LW</sub> - Exhibit 23-4
V - Hourly volume	D - Density	E <sub>T</sub> - Exhibits 23-8, 23-10, 23-11	f <sub>LC</sub> - Exhibit 23-5
v <sub>p</sub> - Flow rate	FFS - Free-flow speed	f <sub>p</sub> - Page 23-12	f <sub>N</sub> - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v <sub>p</sub> - Exhibits 23-2, 23-3	f <sub>ID</sub> - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET																								
<p>The graph plots Average Passenger-Car Speed (mi/h) on the y-axis (30 to 80) against Flow Rate (pc/h/ln) on the x-axis (0 to 2400). It shows several curves representing different density levels: 11 pc/mi/ln, 18 pc/mi/ln, 25 pc/mi/ln, 35 pc/mi/ln, and 45 pc/mi/ln. Points on the curves are labeled with flow rates: 1300, 1450, 1600, and 1750. A horizontal line at 50 mi/h is labeled 'LOS A'. A table in the top right corner lists application types and their corresponding input and output parameters.</p>		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, <math>v_p</math></td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, <math>v_p</math></td> <td>N, S, D</td> </tr> <tr> <td>Design (<math>v_p</math>)</td> <td>FFS, LOS, N</td> <td><math>v_p</math>, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (<math>v_p</math>)</td> <td>FFS, LOS, N</td> <td><math>v_p</math>, S, D</td> </tr> </tbody> </table>		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
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																						
<b>General Information</b>		<b>Site Information</b>																						
Analyst	AL	Highway/Direction of Travel	I-75																					
Agency or Company	AIM ENGINEERING	From/To	SR 29/SR 951																					
Date Performed	3/8/2012	Jurisdiction																						
Analysis Time Period	AM	Analysis Year	2029 NO-BUILD																					
Project Description EVERGLADES IJR																								
<input type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
<b>Flow Inputs</b>																								
Volume, V	1996	veh/h	Peak-Hour Factor, PHF																					
AADT		veh/day	%Trucks and Buses, $P_T$																					
Peak-Hr Prop. of AADT, K			%RVs, $P_R$																					
Peak-Hr Direction Prop, D			General Terrain:																					
DDHV = AADT x K x D		veh/h	Grade % Length																					
Driver type adjustment	0.90		Up/Down %																					
<b>Calculate Flow Adjustments</b>																								
$f_p$	0.90	$E_R$	1.2																					
$E_T$	1.5	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.971																					
<b>Speed Inputs</b>		<b>Calc Speed Adj and FFS</b>																						
Lane Width	12.0	ft	$f_{LW}$																					
Rt-Shoulder Lat. Clearance	6.0	ft	$f_{LC}$																					
Interchange Density	0.50	l/mi	$f_{ID}$																					
Number of Lanes, N	2		$f_N$																					
FFS (measured)		mi/h	FFS																					
Base free-flow Speed, BFFS	75.0	mi/h	75.0																					
<b>LOS and Performance Measures</b>		<b>Design (N)</b>																						
<b>Operational (LOS)</b>		<b>Design (N)</b>																						
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1202	pc/h/ln	Design LOS																					
S	75.0	mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$																					
$D = v_p / S$	16.0	pc/mi/ln	S																					
LOS	B		$D = v_p / S$																					
			Required Number of Lanes, N																					
<b>Glossary</b>		<b>Factor Location</b>																						
N - Number of lanes	S - Speed	$E_R$ - Exhibits 23-8, 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 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																					
DDHV - Directional design hour volume																								

<b>BASIC FREEWAY SEGMENTS WORKSHEET</b>																								
	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Application</th> <th style="text-align: left;">Input</th> <th style="text-align: left;">Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, <math>v_p</math></td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, <math>v_p</math></td> <td>N, S, D</td> </tr> <tr> <td>Design (<math>v_p</math>)</td> <td>FFS, LOS, N</td> <td><math>v_p</math>, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (<math>v_p</math>)</td> <td>FFS, LOS, N</td> <td><math>v_p</math>, S, D</td> </tr> </tbody> </table>			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
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																						
<b>General Information</b>		<b>Site Information</b>																						
Analyst	AL	Highway/Direction of Travel	I-75																					
Agency or Company	AIM ENGINEERING	From/To	SR 951/GG PKWY																					
Date Performed	3/6/2012	Jurisdiction																						
Analysis Time Period	AM	Analysis Year	2029 NO-BUILD																					
Project Description EVERGLADES IJR																								
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
<b>Flow Inputs</b>																								
Volume, V	4196	veh/h	Peak-Hour Factor, PHF																					
AADT		veh/day	%Trucks and Buses, $P_T$																					
Peak-Hr Prop. of AADT, K			%RVs, $P_R$																					
Peak-Hr Direction Prop, D			General Terrain:																					
DDHV = AADT x K x D		veh/h	Grade %    Length																					
Driver type adjustment	1.00		Up/Down %																					
<b>Calculate Flow Adjustments</b>																								
$f_p$	1.00	$E_R$	1.2																					
$E_T$	1.5	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.971																					
<b>Speed Inputs</b>		<b>Calc Speed Adj and FFS</b>																						
Lane Width	12.0	ft	$f_{LW}$																					
Rt-Shoulder Lat. Clearance	6.0	ft	$f_{LC}$																					
Interchange Density	0.50	l/mi	$f_{ID}$																					
Number of Lanes, N	3		$f_N$																					
FFS (measured)		mi/h	FFS																					
Base free-flow Speed, BFFS	75.0	mi/h	72.0																					
<b>LOS and Performance Measures</b>		<b>Design (N)</b>																						
<u>Operational (LOS)</u>		<u>Design (N)</u>																						
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1516	pc/h/ln	Design LOS																					
S	71.6	mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$																					
$D = v_p / S$	21.2	pc/mi/ln	S																					
LOS	C		$D = v_p / S$																					
		Required Number of Lanes, N																						
<b>Glossary</b>		<b>Factor Location</b>																						
N - Number of lanes	S - Speed	$E_R$ - Exhibits 23-8, 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 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																					
DDHV - Directional design hour volume																								



General Information		Site Information	
Analyst	AL	Highway/Direction of Travel	I-75
Agency or Company	AIM ENGINEERING	From/To	N OF GG PKWY
Date Performed	3/6/2012	Jurisdiction	
Analysis Time Period	AM	Analysis Year	2029 NO-BUILD

Project Description EVERGLADES IJR

Oper.(LOS)                       Des.(N)                       Planning Data

#### Flow Inputs

Volume, V	5305	veh/h	Peak-Hour Factor, PHF	0.95
AADT		veh/day	% Trucks and Buses, $P_T$	6
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 Adjustments

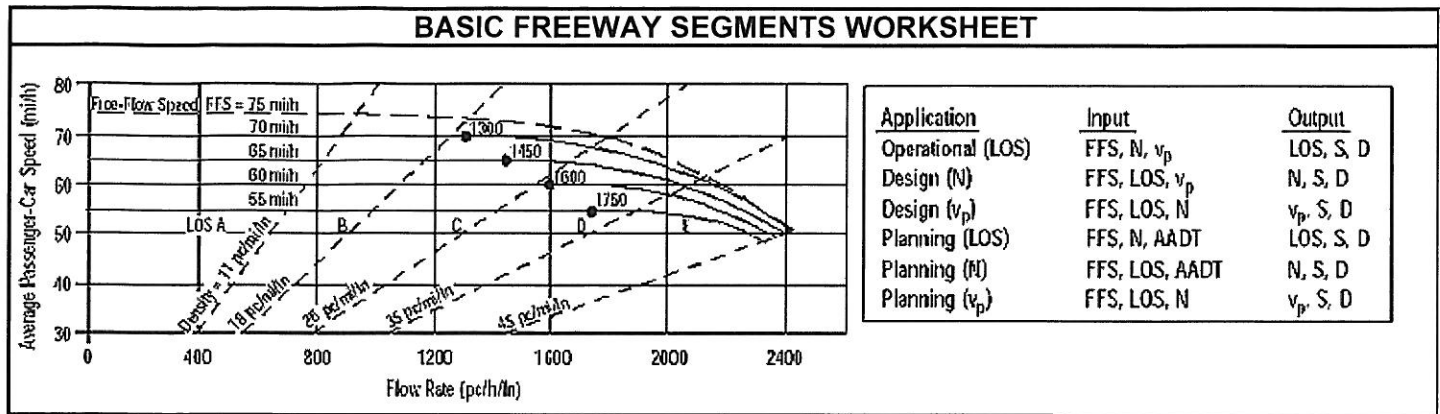
$f_p$	1.00	$E_R$	1.2
$E_T$	1.5	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.971

Speed Inputs		Calc Speed 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	0.50	l/mi	$f_{ID}$	0.0	mi/h
Number of Lanes, N	3		$f_N$	3.0	mi/h
FFS (measured)		mi/h	FFS	72.0	mi/h
Base free-flow Speed, BFFS	75.0	mi/h			

LOS and Performance Measures		Design (N)	
<b>Operational (LOS)</b>		<b>Design (N)</b>	
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1917	Design LOS	
S	67.4	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
$D = v_p / S$	28.4	S	mi/h
LOS	D	$D = v_p / S$	pc/mi/ln
		Required Number of Lanes, N	

Glossary		Factor Location	
N - Number of lanes	S - Speed	$E_R$ - Exhibits 23-8, 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 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
DDHV - Directional design hour volume			





General Information		Site Information	
Analyst	AL	Highway/Direction of Travel	I-75
Agency or Company	AIM ENGINEERING	From/To	E OF SR 29
Date Performed	3/8/2012	Jurisdiction	
Analysis Time Period	AM	Analysis Year	2029 EVERGLADES

Project Description **EVERGLADES IJR**

Oper.(LOS)     
  Des.(N)     
  Planning Data

#### Flow Inputs

Volume, V	1813	veh/h	Peak-Hour Factor, PHF	0.95
AADT		veh/day	% Trucks and Buses, P <sub>T</sub>	6
Peak-Hr Prop. of AADT, K			% RVs, P <sub>R</sub>	0
Peak-Hr Direction Prop, D			General Terrain:	Level
DDHV = AADT x K x D		veh/h	Grade % Length	mi
Driver type adjustment	0.90		Up/Down %	

#### Calculate Flow Adjustments

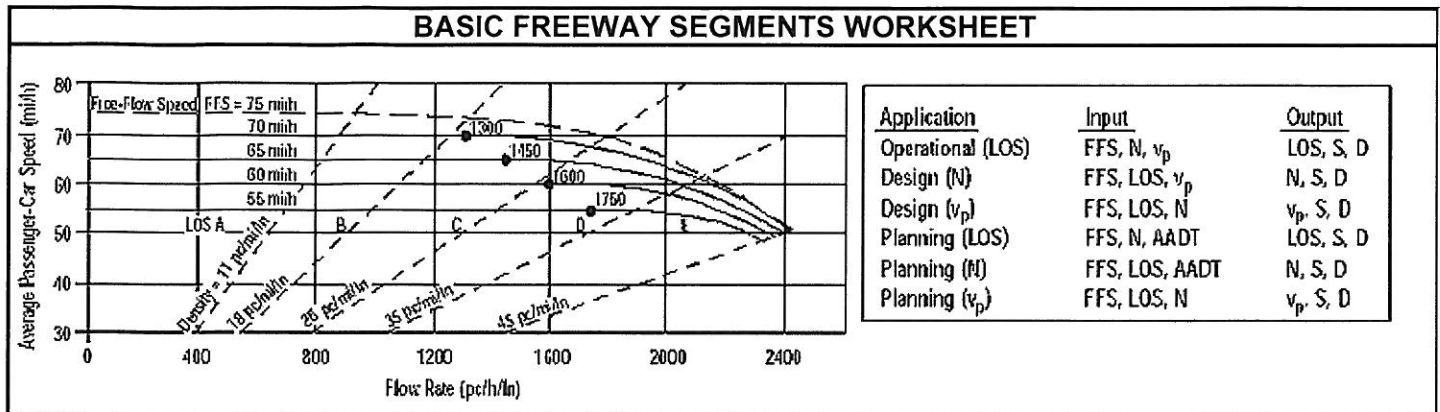
f <sub>p</sub>	0.90	E <sub>R</sub>	1.2
E <sub>T</sub>	1.5	f <sub>HV</sub> = 1/[1+P <sub>T</sub> (E <sub>T</sub> - 1) + P <sub>R</sub> (E <sub>R</sub> - 1)]	0.971

Speed Inputs		Calc Speed Adj and FFS			
Lane Width	12.0	ft	f <sub>LW</sub>	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f <sub>LC</sub>	0.0	mi/h
Interchange Density	0.50	l/mi	f <sub>ID</sub>	0.0	mi/h
Number of Lanes, N	2		f <sub>N</sub>	0.0	mi/h
FFS (measured)		mi/h	FFS	75.0	mi/h
Base free-flow Speed, BFFS	75.0	mi/h			

LOS and Performance Measures	Design (N)
Operational (LOS)	Design (N)
v <sub>p</sub> = (V or DDHV) / (PHF x N x f <sub>HV</sub> x f <sub>p</sub> )	Design LOS
S	v <sub>p</sub> = (V or DDHV) / (PHF x N x f <sub>HV</sub> x f <sub>p</sub> )
D = v <sub>p</sub> / S	S
LOS	D = v <sub>p</sub> / S
	Required Number of Lanes, N

Glossary	Factor Location
N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v <sub>p</sub> - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	
	E <sub>R</sub> - Exhibits 23-8, 23-10
	f <sub>LW</sub> - Exhibit 23-4
	E <sub>T</sub> - Exhibits 23-8, 23-10, 23-11
	f <sub>LC</sub> - Exhibit 23-5
	f <sub>p</sub> - Page 23-12
	f <sub>N</sub> - Exhibit 23-6
	LOS, S, FFS, v <sub>p</sub> - Exhibits 23-2, 23-3
	f <sub>ID</sub> - Exhibit 23-7





General Information		Site Information	
Analyst	AL	Highway/Direction of Travel	I-75
Agency or Company	AIM ENGINEERING	From/To	SR 29/ EVERGLADES BLVD
Date Performed	3/8/2012	Jurisdiction	
Analysis Time Period	AM	Analysis Year	2029 EVERGLADES

Project Description EVERGLADES IJR

Oper.(LOS)                       Des.(N)                       Planning Data

#### Flow Inputs

Volume, V	2070	veh/h	Peak-Hour Factor, PHF	0.95
AADT		veh/day	%Trucks and Buses, $P_T$	6
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	0.90		Up/Down %	

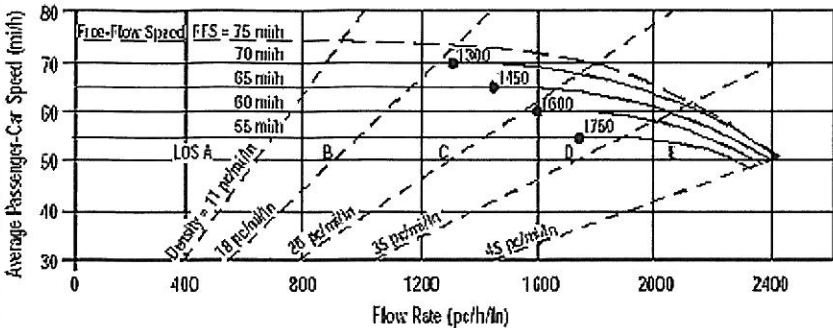
#### Calculate Flow Adjustments

$f_p$	0.90	$E_R$	1.2
$E_T$	1.5	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.971

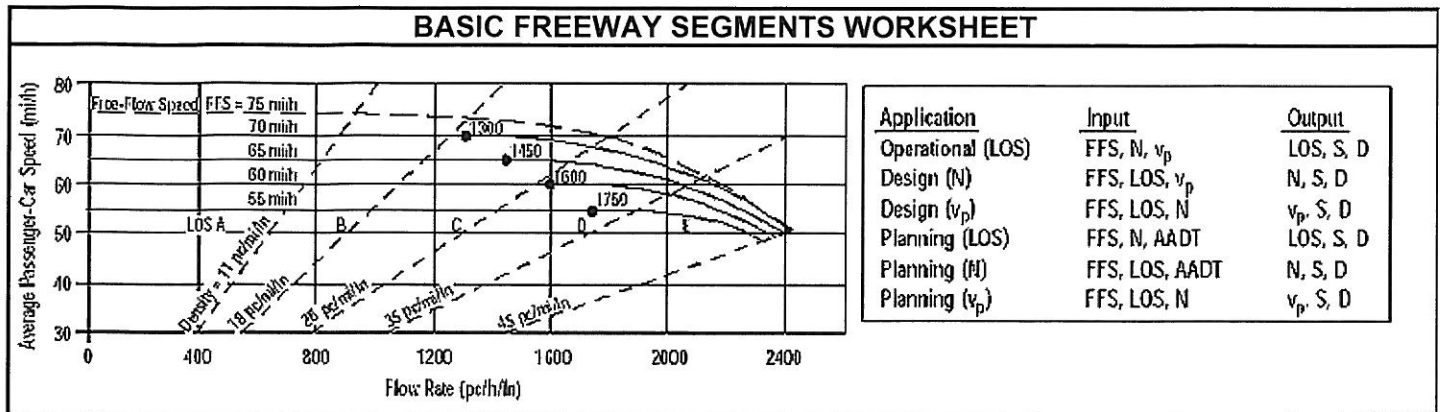
Speed Inputs		Calc Speed Adj and FFS			
Lane Width	12.0	ft	$f_{LW}$	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	$f_{LC}$	0.0	mi/h
Interchange Density	0.50	l/mi	$f_{ID}$	0.0	mi/h
Number of Lanes, N	2		$f_N$	0.0	mi/h
FFS (measured)		mi/h	FFS	75.0	mi/h
Base free-flow Speed, BFFS	75.0	mi/h			

LOS and Performance Measures		Design (N)	
<b>Operational (LOS)</b>		<b>Design (N)</b>	
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1247	Design LOS	
S	75.0	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
$D = v_p / S$	16.6	S	mi/h
LOS	B	$D = v_p / S$	pc/mi/ln
		Required Number of Lanes, N	

Glossary		Factor Location	
N - Number of lanes	S - Speed	$E_R$ - Exhibits 23-8, 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 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
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET																						
 <p>The graph plots Average Passenger-Car Speed (mi/h) on the y-axis (30 to 80) against Flow Rate (pc/h/ln) on the x-axis (0 to 2400). It shows several curves: a solid line for Free-Flow Speed (FFS) at 75 mi/h, dashed lines for Level of Service (LOS) A through F, and dashed lines for density (11, 18, 25, 35, 45 pc/mi/ln). Data points are plotted at flow rates of 1300, 1450, 1600, and 1750 pc/h/ln.</p>	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, <math>v_p</math></td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, <math>v_p</math></td> <td>N, S, D</td> </tr> <tr> <td>Design (<math>v_p</math>)</td> <td>FFS, LOS, N</td> <td><math>v_p</math>, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (<math>v_p</math>)</td> <td>FFS, LOS, N</td> <td><math>v_p</math>, S, D</td> </tr> </tbody> </table>	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
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																				
<b>General Information</b>			<b>Site Information</b>																			
Analyst	AL	Highway/Direction of Travel	I-75																			
Agency or Company	AIM ENGINEERING	From/To	EVERGLADES BLVD/SR 951																			
Date Performed	3/6/2012	Jurisdiction																				
Analysis Time Period	AM	Analysis Year	2029 EVERGLADES																			
Project Description EVERGLADES IJR																						
<input type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)		<input type="checkbox"/> Planning Data																		
<b>Flow Inputs</b>																						
Volume, V	3293	veh/h	Peak-Hour Factor, PHF	0.95																		
AADT		veh/day	%Trucks and Buses, $P_T$	6																		
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 %																			
<b>Calculate Flow Adjustments</b>																						
$f_p$	1.00		$E_R$	1.2																		
$E_T$	1.5		$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.971																		
<b>Speed Inputs</b>			<b>Calc Speed Adj and FFS</b>																			
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	0.50	l/mi	$f_{ID}$	0.0	mi/h																	
Number of Lanes, N	2		$f_N$	0.0	mi/h																	
FFS (measured)		mi/h	FFS	75.0	mi/h																	
Base free-flow Speed, BFFS	75.0	mi/h																				
<b>LOS and Performance Measures</b>			<b>Design (N)</b>																			
<u>Operational (LOS)</u>			<u>Design (N)</u>																			
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1785	pc/h/ln	Design LOS																			
S	71.3	mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$																			
$D = v_p / S$	25.0	pc/mi/ln	S																			
LOS	C		$D = v_p / S$																			
			Required Number of Lanes, N																			
<b>Glossary</b>			<b>Factor Location</b>																			
N - Number of lanes	S - Speed		$E_R$ - Exhibits 23-8, 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 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																	
DDHV - Directional design hour volume																						

BASIC FREEWAY SEGMENTS WORKSHEET																								
		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, v<sub>p</sub></td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v<sub>p</sub></td> <td>N, S, D</td> </tr> <tr> <td>Design (v<sub>p</sub>)</td> <td>FFS, LOS, N</td> <td>v<sub>p</sub>, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (v<sub>p</sub>)</td> <td>FFS, LOS, N</td> <td>v<sub>p</sub>, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N, v <sub>p</sub>	LOS, S, D	Design (N)	FFS, LOS, v <sub>p</sub>	N, S, D	Design (v <sub>p</sub> )	FFS, LOS, N	v <sub>p</sub> , S, D	Planning (LOS)	FFS, N, AADT	LOS, S, D	Planning (N)	FFS, LOS, AADT	N, S, D	Planning (v <sub>p</sub> )	FFS, LOS, N	v <sub>p</sub> , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N, v <sub>p</sub>	LOS, S, D																						
Design (N)	FFS, LOS, v <sub>p</sub>	N, S, D																						
Design (v <sub>p</sub> )	FFS, LOS, N	v <sub>p</sub> , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (N)	FFS, LOS, AADT	N, S, D																						
Planning (v <sub>p</sub> )	FFS, LOS, N	v <sub>p</sub> , S, D																						
<b>General Information</b>		<b>Site Information</b>																						
Analyst	AL	Highway/Direction of Travel	I-75																					
Agency or Company	AIM ENGINEERING	From/To	SR 951/GG PKWY																					
Date Performed	3/6/2012	Jurisdiction																						
Analysis Time Period	AM	Analysis Year	2029 EVERGLADES																					
Project Description EVERGLADES IJR																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
<b>Flow Inputs</b>																								
Volume, V	4727	veh/h	Peak-Hour Factor, PHF																					
AADT		veh/day	%Trucks and Buses, P <sub>T</sub>																					
Peak-Hr Prop. of AADT, K			%RVs, P <sub>R</sub>																					
Peak-Hr Direction Prop, D			General Terrain:																					
DDHV = AADT x K x D		veh/h	Grade % Length																					
Driver type adjustment	1.00		Up/Down %																					
<b>Calculate Flow Adjustments</b>																								
f <sub>p</sub>	1.00	E <sub>R</sub>	1.2																					
E <sub>T</sub>	1.5	f <sub>HV</sub> = 1/[1+P <sub>T</sub> (E <sub>T</sub> - 1) + P <sub>R</sub> (E <sub>R</sub> - 1)]	0.971																					
<b>Speed Inputs</b>		<b>Calc Speed Adj and FFS</b>																						
Lane Width	12.0	ft	f <sub>LW</sub>																					
Rt-Shoulder Lat. Clearance	6.0	ft	f <sub>LC</sub>																					
Interchange Density	0.50	l/mi	f <sub>ID</sub>																					
Number of Lanes, N	3		f <sub>N</sub>																					
FFS (measured)		mi/h	FFS																					
Base free-flow Speed, BFFS	75.0	mi/h																						
<b>LOS and Performance Measures</b>		<b>Design (N)</b>																						
<b>Operational (LOS)</b>		<b>Design (N)</b>																						
v <sub>p</sub> = (V or DDHV) / (PHF x N x f <sub>HV</sub> x f <sub>p</sub> )	1708	pc/h/ln	Design LOS																					
S	70.2	mi/h	v <sub>p</sub> = (V or DDHV) / (PHF x N x f <sub>HV</sub> x f <sub>p</sub> )																					
D = v <sub>p</sub> / S	24.3	pc/mi/ln	S																					
LOS	C		D = v <sub>p</sub> / S																					
			Required Number of Lanes, N																					
<b>Glossary</b>		<b>Factor Location</b>																						
N - Number of lanes	S - Speed	E <sub>R</sub> - Exhibits 23-8, 23-10	f <sub>LW</sub> - Exhibit 23-4																					
V - Hourly volume	D - Density	E <sub>T</sub> - Exhibits 23-8, 23-10, 23-11	f <sub>LC</sub> - Exhibit 23-5																					
v <sub>p</sub> - Flow rate	FFS - Free-flow speed	f <sub>p</sub> - Page 23-12	f <sub>N</sub> - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v <sub>p</sub> - Exhibits 23-2, 23-3	f <sub>ID</sub> - Exhibit 23-7																					
DDHV - Directional design hour volume																								



General Information		Site Information	
Analyst	AL	Highway/Direction of Travel	I-75
Agency or Company	AIM ENGINEERING	From/To	N OF GG PKWY
Date Performed	3/6/2012	Jurisdiction	
Analysis Time Period	AM	Analysis Year	2029 EVERGLADES

Project Description EVERGLADES IJR

Oper.(LOS)     
  Des.(N)     
  Planning Data

#### Flow Inputs

Volume, V	5526	veh/h	Peak-Hour Factor, PHF	0.95
AADT		veh/day	%Trucks and Buses, $P_T$	6
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 Adjustments

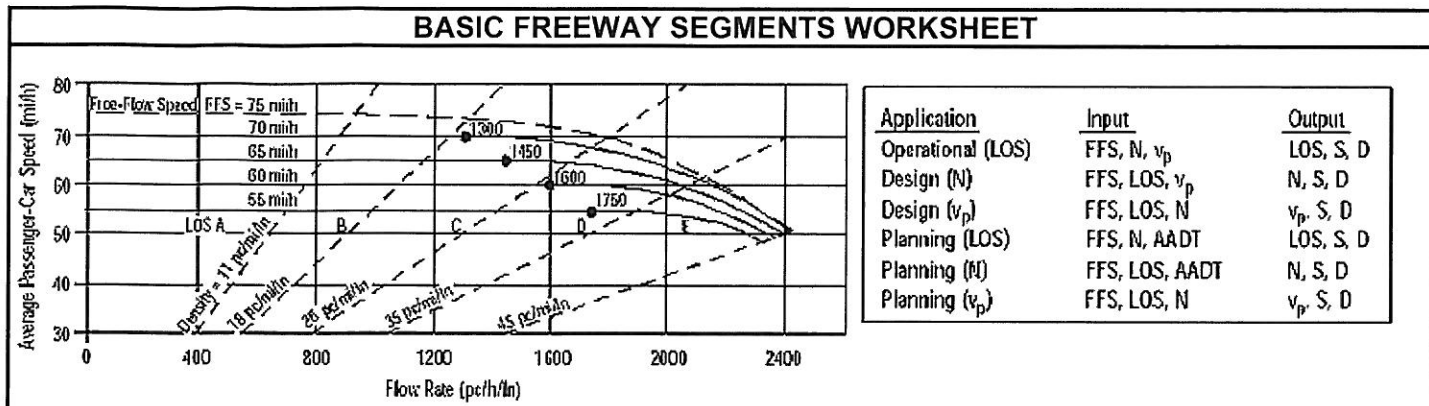
$f_p$	1.00	$E_R$	1.2
$E_T$	1.5	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.971

Speed Inputs		Calc Speed 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	0.50	l/mi	$f_{ID}$	0.0	mi/h
Number of Lanes, N	3		$f_N$	3.0	mi/h
FFS (measured)		mi/h	FFS	72.0	mi/h
Base free-flow Speed, BFFS	75.0	mi/h			

LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1997	Design LOS	
S	65.8	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
$D = v_p / S$	30.3	S	mi/h
LOS	D	$D = v_p / S$	pc/mi/ln
		Required Number of Lanes, N	

Glossary		Factor Location	
N - Number of lanes	S - Speed	$E_R$ - Exhibits 23-8, 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 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
DDHV - Directional design hour volume			





General Information		Site Information	
Analyst	AL	Highway/Direction of Travel	I-75
Agency or Company	AIM ENGINEERING	From/To	E OF SR 29
Date Performed	3/8/2012	Jurisdiction	
Analysis Time Period	AM	Analysis Year	2029 DESOTO

Project Description EVERGLADES IJR

Oper.(LOS)                     
  Des.(N)                     
  Planning Data

#### Flow Inputs

Volume, V	1813	veh/h	Peak-Hour Factor, PHF	0.95
AADT		veh/day	%Trucks and Buses, $P_T$	6
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	0.90		Up/Down %	

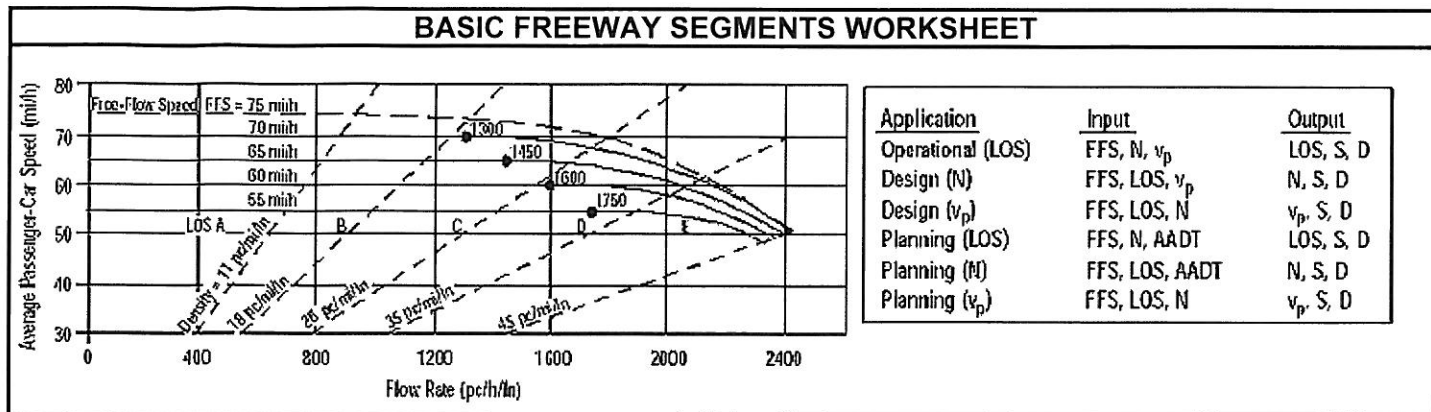
#### Calculate Flow Adjustments

$f_p$	0.90	$E_R$	1.2
$E_T$	1.5	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.971

Speed Inputs		Calc Speed 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	0.50	l/mi	$f_{ID}$	0.0	mi/h
Number of Lanes, N	2		$f_N$	0.0	mi/h
FFS (measured)		mi/h	FFS	75.0	mi/h
Base free-flow Speed, BFFS	75.0	mi/h			

LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1092	Design LOS	
S	75.0	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
$D = v_p / S$	14.6	S	mi/h
LOS	B	$D = v_p / S$	pc/mi/ln
		Required Number of Lanes, N	

Glossary		Factor Location	
N - Number of lanes	S - Speed	$E_R$ - Exhibits 23-8, 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 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
DDHV - Directional design hour volume			



General Information		Site Information	
Analyst	AL	Highway/Direction of Travel	I-75
Agency or Company	AIM ENGINEERING	From/To	SR 29/DESOTO BLVD
Date Performed	3/8/2012	Jurisdiction	
Analysis Time Period	AM	Analysis Year	2029 DESOTO

Project Description EVERGLADES IJR

Oper.(LOS)     
  Des.(N)     
  Planning Data

#### Flow Inputs

Volume, V	2106	veh/h	Peak-Hour Factor, PHF	0.95
AADT		veh/day	%Trucks and Buses, $P_T$	6
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	0.90		Up/Down %	

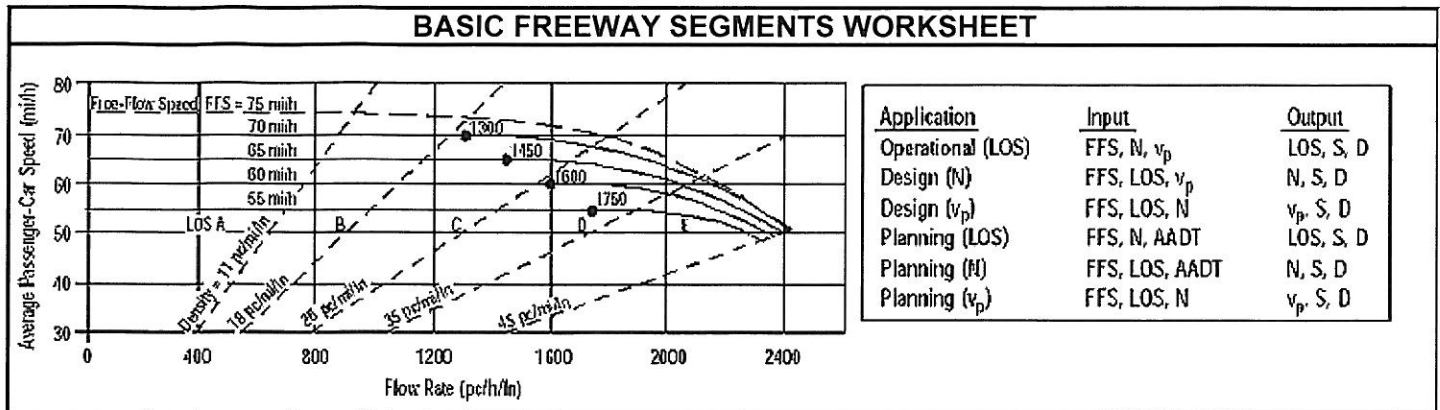
#### Calculate Flow Adjustments

$f_p$	0.90	$E_R$	1.2
$E_T$	1.5	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.971

Speed Inputs		Calc Speed 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	0.50	l/mi	$f_{ID}$	0.0	mi/h
Number of Lanes, N	2		$f_N$	0.0	mi/h
FFS (measured)		mi/h	FFS	75.0	mi/h
Base free-flow Speed, BFFS	75.0	mi/h			

LOS and Performance Measures	Design (N)
Operational (LOS)	Design (N)
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	Design LOS
S	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$
$D = v_p / S$	S
LOS	$D = v_p / S$
	Required Number of Lanes, N

Glossary	Factor Location
N - Number of lanes	$E_R$ - Exhibits 23-8, 23-10
V - Hourly volume	$E_T$ - Exhibits 23-8, 23-10, 23-11
$v_p$ - Flow rate	$f_p$ - Page 23-12
LOS - Level of service	LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3
DDHV - Directional design hour volume	
S - Speed	$f_{LW}$ - Exhibit 23-4
D - Density	$f_{LC}$ - Exhibit 23-5
FFS - Free-flow speed	$f_N$ - Exhibit 23-6
BFFS - Base free-flow speed	$f_{ID}$ - Exhibit 23-7



General Information		Site Information	
Analyst	AL	Highway/Direction of Travel	I-75
Agency or Company	AIM ENGINEERING	From/To	DESOTO BLVD/SR 951
Date Performed	3/6/2012	Jurisdiction	
Analysis Time Period	AM	Analysis Year	2029 DESOTO

Project Description EVERGLADES IJR

Oper.(LOS)                       Des.(N)                       Planning Data

#### Flow Inputs

Volume, V	3055	veh/h	Peak-Hour Factor, PHF	0.95
AADT		veh/day	%Trucks and Buses, $P_T$	6
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 Adjustments

$f_p$	1.00	$E_R$	1.2
$E_T$	1.5	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.971

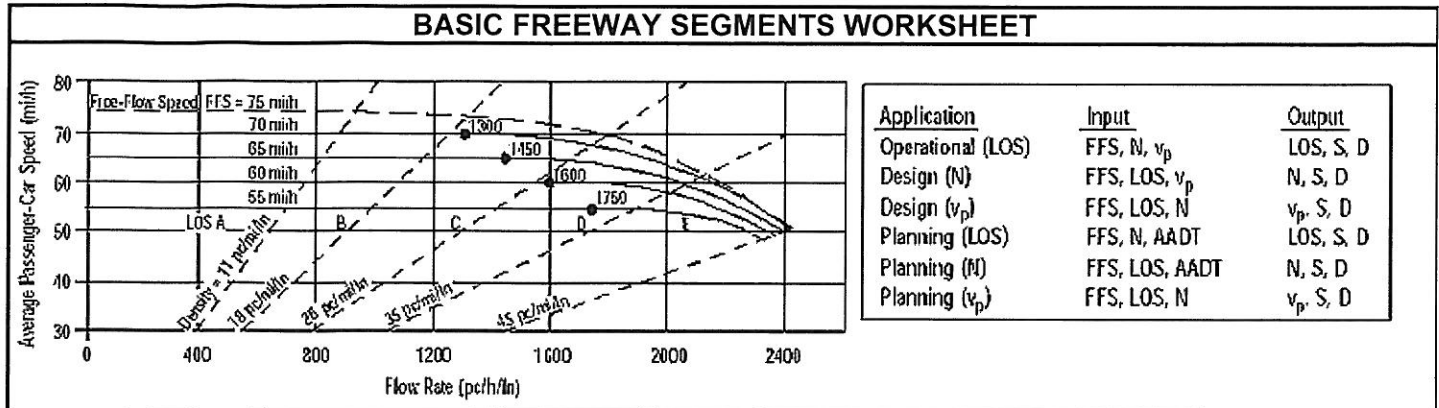
Speed Inputs		Calc Speed Adj and FFS			
Lane Width	12.0	ft	$f_{LW}$	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	$f_{LC}$	0.0	mi/h
Interchange Density	0.50	l/mi	$f_{ID}$	0.0	mi/h
Number of Lanes, N	2		$f_N$	0.0	mi/h
FFS (measured)		mi/h	FFS	75.0	mi/h
Base free-flow Speed, BFFS	75.0	mi/h			

LOS and Performance Measures		Design (N)	
<u>Operational (LOS)</u>		<u>Design (N)</u>	
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1656	Design LOS	
S	72.9	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
$D = v_p / S$	22.7	S	mi/h
LOS	C	$D = v_p / S$	pc/mi/ln
		Required Number of Lanes, N	

Glossary		Factor Location	
N - Number of lanes	S - Speed	$E_R$ - Exhibits 23-8, 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 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
DDHV - Directional design hour volume			



BASIC FREEWAY SEGMENTS WORKSHEET																								
<p>The graph plots Average Passenger-Car Speed (mi/h) on the y-axis (30 to 80) against Flow Rate (pc/h/ln) on the x-axis (0 to 2400). It shows several curves for different Free-Flow Speeds (FFS): 75 mi/h, 70 mi/h, 65 mi/h, 60 mi/h, and 55 mi/h. Dashed lines represent density levels: 11 pc/mi/ln, 18 pc/mi/ln, 25 pc/mi/ln, 35 pc/mi/ln, and 45 pc/mi/ln. Points on the curves are labeled with flow rates: 1300, 1450, 1600, and 1750. The graph is divided into regions A, B, C, and D.</p>		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, <math>v_p</math></td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, <math>v_p</math></td> <td>N, S, D</td> </tr> <tr> <td>Design (<math>v_p</math>)</td> <td>FFS, LOS, N</td> <td><math>v_p</math>, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (<math>v_p</math>)</td> <td>FFS, LOS, N</td> <td><math>v_p</math>, S, D</td> </tr> </tbody> </table>		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
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																						
<b>General Information</b>		<b>Site Information</b>																						
Analyst	AL	Highway/Direction of Travel	I-75																					
Agency or Company	AIM ENGINEERING	From/To	SR 951/GG PKWY																					
Date Performed	3/6/2012	Jurisdiction																						
Analysis Time Period	AM	Analysis Year	2029 DESOTO																					
Project Description EVERGLADES IJR																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
<b>Flow Inputs</b>																								
Volume, V	4588	veh/h	Peak-Hour Factor, PHF																					
AADT		veh/day	%Trucks and Buses, $P_T$																					
Peak-Hr Prop. of AADT, K			%RVs, $P_R$																					
Peak-Hr Direction Prop, D			General Terrain:																					
DDHV = AADT x K x D		veh/h	Grade % Length																					
Driver type adjustment	1.00		Up/Down %																					
<b>Calculate Flow Adjustments</b>																								
$f_p$	1.00		$E_R$																					
$E_T$	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$																					
<b>Speed Inputs</b>		<b>Calc Speed Adj and FFS</b>																						
Lane Width	12.0	ft	$f_{LW}$																					
Rt-Shoulder Lat. Clearance	6.0	ft	$f_{LC}$																					
Interchange Density	0.50	l/mi	$f_{ID}$																					
Number of Lanes, N	3		$f_N$																					
FFS (measured)		mi/h	FFS																					
Base free-flow Speed, BFFS	75.0	mi/h																						
<b>LOS and Performance Measures</b>		<b>Design (N)</b>																						
<b>Operational (LOS)</b>		<b>Design (N)</b>																						
$v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$	1658	pc/h/ln	Design LOS																					
S	70.7	mi/h	$v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$																					
$D = v_p / S$	23.5	pc/mi/ln	S																					
LOS	C		$D = v_p / S$																					
		Required Number of Lanes, N																						
<b>Glossary</b>		<b>Factor Location</b>																						
N - Number of lanes	S - Speed	$E_R$ - Exhibits 23-8, 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 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																					
DDHV - Directional design hour volume																								



General Information		Site Information	
Analyst	AL	Highway/Direction of Travel	I-75
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Analysis Time Period	AM	Analysis Year	2029 DESOTO
Project Description EVERGLADES IJR			

Oper.(LOS)                       Des.(N)                       Planning Data

#### Flow Inputs

Volume, V	5422	veh/h	Peak-Hour Factor, PHF	0.95
AADT		veh/day	%Trucks and Buses, $P_T$	6
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 Adjustments

$f_p$	1.00	$E_R$	1.2
$E_T$	1.5	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.971

Speed Inputs		Calc Speed 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	0.50	l/mi	$f_{ID}$	0.0	mi/h
Number of Lanes, N	3		$f_N$	3.0	mi/h
FFS (measured)		mi/h	FFS	72.0	mi/h
Base free-flow Speed, BFFS	75.0	mi/h			

LOS and Performance Measures	Design (N)
Operational (LOS)	Design (N)
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	Design LOS
S	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$
D = $v_p / S$	S
LOS	D = $v_p / S$
	Required Number of Lanes, N

Glossary		Factor Location	
N - Number of lanes	S - Speed	$E_R$ - Exhibits 23-8, 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 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
DDHV - Directional design hour volume			