

**BIOGAS RENEWABLE GENERATION PROJECT  
FINAL INITIAL STUDY / MITIGATED NEGATIVE DECLARATION**

Appendix I Traffic Analysis  
March 9, 2018

## **Appendix I TRAFFIC ANALYSIS**

### **TRAFFIC ANALYSIS EXHIBIT 1**



# ALL-WAY STOP CONTROL ANALYSIS

General Information		Site Information	
Analyst	DJI	Intersection	SR 134 WB RAMPS/FIGUEROA ST
Agency/Co.	STANTEC	Jurisdiction	CITY OF LOS ANGELES
Date Performed	4/18/2016	Analysis Year	EXISTING (2016)
Analysis Time Period	AM PEAK HOUR		

Project ID 2057123300

East/West Street: SR 134 WB RAMPS

North/South Street: FIGUEROA ST

## Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
	L	T	R	L	T	R
Movement						
Volume (veh/h)	0	0	0	261	0	21
%Thrus Left Lane						

Approach	Northbound			Southbound		
	L	T	R	L	T	R
Movement						
Volume (veh/h)	0	29	743	5	7	0
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration			L	R	T	R	L	T
PHF			0.92	0.92	0.92	0.92	0.92	0.92
Flow Rate (veh/h)			283	22	31	807	5	7
% Heavy Vehicles			4	4	4	4	4	4
No. Lanes	0		2		2		2	
Geometry Group			1		5		5	
Duration, T			0.25					

## Saturation Headway Adjustment Worksheet

Prop. Left-Turns			1.0	0.0	0.0	0.0	1.0	0.0
Prop. Right-Turns			0.0	1.0	0.0	1.0	0.0	0.0
Prop. Heavy Vehicle			0.0	0.0	0.0	0.0	0.0	0.0
hLT-adj			0.2	0.2	0.5	0.5	0.5	0.5
hRT-adj			-0.6	-0.6	-0.7	-0.7	-0.7	-0.7
hHV-adj			1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed			0.3	-0.5	0.1	-0.6	0.6	0.1

## Departure Headway and Service Time

hd, initial value (s)			3.20	3.20	3.20	3.20	3.20	3.20
x, initial			0.25	0.02	0.03	0.72	0.00	0.01
hd, final value (s)			6.00	5.21	5.55	4.84	6.94	6.43
x, final value			0.47	0.03	0.05	1.09	0.01	0.01
Move-up time, m (s)			2.0		2.3		2.3	
Service Time, t <sub>s</sub> (s)			4.0	3.2	3.2	2.5	4.6	4.1

## Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)			533	272	281	807	255	257
Delay (s/veh)			14.24	8.38	8.53	79.19	9.71	9.21
LOS			B	A	A	F	A	A
Approach: Delay (s/veh)			13.81		76.57		9.42	
LOS			B		F		A	
Intersection Delay (s/veh)	59.30							
Intersection LOS	F							

# ALL-WAY STOP CONTROL ANALYSIS

General Information		Site Information	
Analyst	DJI	Intersection	SR 134 WB RAMPS/FIGUEROA ST
Agency/Co.	STANTEC	Jurisdiction	CITY OF LOS ANGELES
Date Performed	4/18/2016	Analysis Year	EXISTING (2016)
Analysis Time Period	PM PEAK HOUR		

Project ID 2057123300  
 East/West Street: SR 134 WB RAMPS      North/South Street: FIGUEROA ST

## Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
	L	T	R	L	T	R
Movement						
Volume (veh/h)	0	0	0	275	0	11
%Thrus Left Lane						

Approach	Northbound			Southbound		
	L	T	R	L	T	R
Movement						
Volume (veh/h)	0	13	504	18	20	0
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration			L	R	T	R	L	T
PHF			0.92	0.92	0.92	0.92	0.92	0.92
Flow Rate (veh/h)			298	11	14	547	19	21
% Heavy Vehicles			4	4	4	4	4	4
No. Lanes	0		2		2		2	
Geometry Group			1		5		5	
Duration, T			0.25					

## Saturation Headway Adjustment Worksheet

Prop. Left-Turns			1.0	0.0	0.0	0.0	1.0	0.0
Prop. Right-Turns			0.0	1.0	0.0	1.0	0.0	0.0
Prop. Heavy Vehicle			0.0	0.0	0.0	0.0	0.0	0.0
hLT-adj			0.2	0.2	0.5	0.5	0.5	0.5
hRT-adj			-0.6	-0.6	-0.7	-0.7	-0.7	-0.7
hHV-adj			1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed			0.3	-0.5	0.1	-0.6	0.6	0.1

## Departure Headway and Service Time

hd, initial value (s)			3.20	3.20	3.20	3.20	3.20	3.20
x, initial			0.26	0.01	0.01	0.49	0.02	0.02
hd, final value (s)			5.60	4.81	5.55	4.85	6.64	6.14
x, final value			0.46	0.01	0.02	0.74	0.04	0.04
Move-up time, m (s)			2.0		2.3		2.3	
Service Time, t <sub>s</sub> (s)			3.6	2.8	3.3	2.5	4.3	3.8

## Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)			548	261	264	731	269	271
Delay (s/veh)			13.36	7.88	8.37	19.81	9.59	9.07
LOS			B	A	A	C	A	A
Approach: Delay (s/veh)			13.17		19.52		9.31	
LOS			B		C		A	
Intersection Delay (s/veh)	16.91							
Intersection LOS	C							

# ALL-WAY STOP CONTROL ANALYSIS

General Information		Site Information	
Analyst	DJI	Intersection	SR 134 WB RAMPS/FIGUEROA ST
Agency/Co.	STANTEC	Jurisdiction	CITY OF LOS ANGELES
Date Performed	4/18/2016	Analysis Year	EXISTING + PROJECT CONDITIONS
Analysis Time Period	AM PEAK HOUR		

Project ID 2057123300

East/West Street: SR 134 WB RAMPS

North/South Street: FIGUEROA ST

## Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
	L	T	R	L	T	R
Movement						
Volume (veh/h)	0	0	0	261	0	40
%Thrus Left Lane						

Approach	Northbound			Southbound		
	L	T	R	L	T	R
Movement						
Volume (veh/h)	0	52	743	5	7	0
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration			L	R	T	R	L	T
PHF			0.92	0.92	0.92	0.92	0.92	0.92
Flow Rate (veh/h)			283	43	56	807	5	7
% Heavy Vehicles			4	4	4	4	4	4
No. Lanes	0		2		2		2	
Geometry Group			1		5		5	
Duration, T			0.25					

## Saturation Headway Adjustment Worksheet

Prop. Left-Turns			1.0	0.0	0.0	0.0	1.0	0.0
Prop. Right-Turns			0.0	1.0	0.0	1.0	0.0	0.0
Prop. Heavy Vehicle			0.0	0.0	0.0	0.0	0.0	0.0
hLT-adj			0.2	0.2	0.5	0.5	0.5	0.5
hRT-adj			-0.6	-0.6	-0.7	-0.7	-0.7	-0.7
hHV-adj			1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed			0.3	-0.5	0.1	-0.6	0.6	0.1

## Departure Headway and Service Time

hd, initial value (s)			3.20	3.20	3.20	3.20	3.20	3.20
x, initial			0.25	0.04	0.05	0.72	0.00	0.01
hd, final value (s)			6.00	5.21	5.59	4.89	7.01	6.51
x, final value			0.47	0.06	0.09	1.10	0.01	0.01
Move-up time, m (s)			2.0		2.3		2.3	
Service Time, t <sub>s</sub> (s)			4.0	3.2	3.3	2.6	4.7	4.2

## Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)			533	293	306	807	255	257
Delay (s/veh)			14.24	8.55	8.82	82.62	9.78	9.29
LOS			B	A	A	F	A	A
Approach: Delay (s/veh)			13.49		77.83		9.49	
LOS			B		F		A	
Intersection Delay (s/veh)	59.68							
Intersection LOS	F							

# ALL-WAY STOP CONTROL ANALYSIS

General Information		Site Information	
Analyst	DJL	Intersection	SR 134 WB RAMPS/FIGUEROA ST
Agency/Co.	STANTEC	Jurisdiction	CITY OF LOS ANGELES
Date Performed	4/18/2016	Analysis Year	EXISTING + PROJECT CONDITIONS
Analysis Time Period	PM PEAK HOUR		

Project ID 2057123300

East/West Street: SR 134 WB RAMPS

North/South Street: FIGUEROA ST

## Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
	L	T	R	L	T	R
Movement						
Volume (veh/h)	0	0	0	275	0	11
%Thrus Left Lane						

Approach	Northbound			Southbound		
	L	T	R	L	T	R
Movement						
Volume (veh/h)	0	13	504	37	43	0
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration			L	R	T	R	L	T
PHF			0.92	0.92	0.92	0.92	0.92	0.92
Flow Rate (veh/h)			298	11	14	547	40	46
% Heavy Vehicles			4	4	4	4	4	4
No. Lanes	0		2		2		2	
Geometry Group			1		5		5	
Duration, T			0.25					

## Saturation Headway Adjustment Worksheet

Prop. Left-Turns			1.0	0.0	0.0	0.0	1.0	0.0
Prop. Right-Turns			0.0	1.0	0.0	1.0	0.0	0.0
Prop. Heavy Vehicle			0.0	0.0	0.0	0.0	0.0	0.0
hLT-adj			0.2	0.2	0.5	0.5	0.5	0.5
hRT-adj			-0.6	-0.6	-0.7	-0.7	-0.7	-0.7
hHV-adj			1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed			0.3	-0.5	0.1	-0.6	0.6	0.1

## Departure Headway and Service Time

hd, initial value (s)			3.20	3.20	3.20	3.20	3.20	3.20
x, initial			0.26	0.01	0.01	0.49	0.04	0.04
hd, final value (s)			5.74	4.95	5.64	4.94	6.69	6.18
x, final value			0.48	0.02	0.02	0.75	0.07	0.08
Move-up time, m (s)			2.0		2.3		2.3	
Service Time, t <sub>s</sub> (s)			3.7	2.9	3.3	2.6	4.4	3.9

## Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)			548	261	264	718	290	296
Delay (s/veh)			13.83	8.02	8.47	20.91	9.92	9.41
LOS			B	A	A	C	A	A
Approach: Delay (s/veh)			13.63		20.60		9.65	
LOS			B		C		A	
Intersection Delay (s/veh)	17.36							
Intersection LOS	C							

# LADOT Bureau of Planning and Land Use Development

## Critical Movement Analysis using Circular 212 Method

INTERSECTION: <b>S.R. 134 EB Ramps &amp; N. Figueoa St</b>	2010, COUNT			2016, EXISTING				2016, WITH PROJECT				2016, WITH TRAFFIC MITIGATION							
Signal System*: 1 Phases: 2 N-S Opposed: N E-W Opposed: N RTOR reduction: 0%				*Signal System: 1: Standard Signal 2: ATSAC 3: ATSAC with ATCS				Project: Scholl Canyon IS MND				Signal System*: 1 Phases: 2 N-S Opposed: N E-W Opposed: N RTOR reduction: 0%							
Analysis Date: 6/6/2016								In Out Total AM 42 0 42 PM 0 42 42											
AM Peak: 7:30 AM				+ 0.0%															
	Counts		Lane	Ambient		+ = Total		Lane		+ Total		Lane		Adjuste		Total		Lane	
	Volume	Lanes	Volume	Growth	Related	Volume	Lanes	Volume	Project	Volume	Lanes	Volume	d	Volume	Lanes	Volume			
Northbound	Left	0	0	0		0	0	0		0	0	0		0	0	0			
	Left-Thru	0	0	0		0	0	0		0	0	0		0	0	0			
	Thru	696	1	696	0	696	1	696	4	700	1	700		700	1	700			
	Thru-Right	0	0	0	0	0	0	0		0	0	0		0	0	0			
	Right	524	1	524	0	524	1	524		524	1	524		524	1	524			
Left-Thru-Rt	0	0	0	0	0	0	0		0	0	0		0	0	0				
Southbound	Left	57	1	57	0	57	1	57		57	1	57		57	1	57			
	Left-Thru	0	0	0	0	0	0	0		0	0	0		0	0	0			
	Thru	276	2	138	0	276	2	138		276	2	138		276	2	138			
	Thru-Right	0	0	0	0	0	0	0		0	0	0		0	0	0			
	Right	0	0	0	0	0	0	0		0	0	0		0	0	0			
Left-Thru-Rt	0	0	0	0	0	0	0		0	0	0		0	0	0				
Eastbound	Left	0	0	0	0	0	0	0		0	0	0		0	0	0			
	Left-Thru	0	0	0	0	0	0	0		0	0	0		0	0	0			
	Thru	0	0	0	0	0	0	0		0	0	0		0	0	0			
	Thru-Right	0	0	0	0	0	0	0		0	0	0		0	0	0			
	Right	0	0	0	0	0	0	0		0	0	0		0	0	0			
Left-Thru-Rt	0	0	0	0	0	0	0		0	0	0		0	0	0				
Westbound	Left	557	1	306	0	557	1	306		557	1	306		557	1	306			
	Left-Thru	0	0	0	0	0	0	0		0	0	0		0	0	0			
	Thru	0	0	0	0	0	0	0		0	0	0		0	0	0			
	Thru-Right	0	0	0	0	0	0	0		0	0	0		0	0	0			
	Right	47	0	0	0	47	0	0	19	66	0	0		66	0	0			
Left-Thru-Rt	0	1	298	0	0	1	298		0	1	317		0	1	317				
Critical Volumes:	North-South: 753 East-West: 306 Total: 1059			North-South: 753 East-West: 306 Total: 1059				North-South: 757 East-West: 317 Total: 1074				North-South: 757 East-West: 317 Total: 1074							
Volume/capacity (v/c) ratio:	0.706			0.706				0.716				0.716							
v/c less ATSAC adjustment:	0.706			0.706				0.716				0.716							
Level of Service (LOS):	<b>C</b>			<b>C</b>				<b>C</b>				<b>C</b>							

### PROJECT IMPACT

Filename: Z:\work other BC's, or no WO number\2057123300\_Scholl Canyon\LOS\LOS Calculator 3.3\_new.xls  
Developed 2005-2006 by Ken Aitchison

Change in v/c due to project:	0.010 //c after mitigation:	0.010
Significantly impacted?	NO Fully mitigated?	N/A


















HCM 2010 Signalized Intersection Summary  
4: Figueroa St & SR 134 EB Ramps

AM Peak Hour  
Existing Conditions

Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Volume (veh/h)	557	47	696	524	57	276		
Number	3	18	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1827	1900	1827	1827	1827	1827		
Adj Flow Rate, veh/h	653	0	757	570	62	300		
Adj No. of Lanes	2	1	1	1	1	2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	4	0	4	4	4	4		
Cap, veh/h	916	425	1029	875	259	1956		
Arrive On Green	0.26	0.00	0.56	0.56	0.56	0.56		
Sat Flow, veh/h	3480	1615	1827	1553	403	3563		
Grp Volume(v), veh/h	653	0	757	570	62	300		
Grp Sat Flow(s),veh/h/ln	1740	1615	1827	1553	403	1736		
Q Serve(g_s), s	7.9	0.0	14.3	11.7	6.2	1.9		
Cycle Q Clear(g_c), s	7.9	0.0	14.3	11.7	20.5	1.9		
Prop In Lane	1.00	1.00		1.00	1.00			
Lane Grp Cap(c), veh/h	916	425	1029	875	259	1956		
V/C Ratio(X)	0.71	0.00	0.74	0.65	0.24	0.15		
Avail Cap(c_a), veh/h	1960	910	1029	875	259	1956		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	15.4	0.0	7.5	7.0	15.2	4.8		
Incr Delay (d2), s/veh	1.0	0.0	4.7	3.8	2.2	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.9	0.0	8.3	5.8	0.8	1.0		
LnGrp Delay(d),s/veh	16.5	0.0	12.2	10.7	17.3	5.0		
LnGrp LOS	B		B	B	B	A		
Approach Vol, veh/h	653		1327			362		
Approach Delay, s/veh	16.5		11.6			7.1		
Approach LOS	B		B			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		30.0				30.0		16.2
Change Period (Y+Rc), s		4.0				4.0		4.0
Max Green Setting (Gmax), s		26.0				26.0		26.0
Max Q Clear Time (g_c+I1), s		16.3				22.5		9.9
Green Ext Time (p_c), s		6.7				2.8		2.3
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay			12.2					
HCM 2010 LOS			B					
<b>Notes</b>								
User approved volume balancing among the lanes for turning movement.								















HCM 2010 Signalized Intersection Summary  
 4: Figueroa St & SR 134 EB Ramps

PM Peak Hour  
 Existing Conditions

								
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations	 					 		
Volume (veh/h)	702	73	613	345	44	465		
Number	3	18	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1827	1900	1827	1827	1827	1827		
Adj Flow Rate, veh/h	837	0	666	375	48	505		
Adj No. of Lanes	2	1	1	1	1	2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	4	0	4	4	4	4		
Cap, veh/h	1043	484	1010	858	289	1919		
Arrive On Green	0.30	0.00	0.55	0.55	0.55	0.55		
Sat Flow, veh/h	3480	1615	1827	1553	529	3563		
Grp Volume(v), veh/h	837	0	666	375	48	505		
Grp Sat Flow(s),veh/h/ln	1740	1615	1827	1553	529	1736		
Q Serve(g_s), s	12.0	0.0	13.9	7.7	3.8	4.1		
Cycle Q Clear(g_c), s	12.0	0.0	13.9	7.7	17.7	4.1		
Prop In Lane	1.00	1.00		1.00	1.00			
Lane Grp Cap(c), veh/h	1043	484	1010	858	289	1919		
V/C Ratio(X)	0.80	0.00	0.66	0.44	0.17	0.26		
Avail Cap(c_a), veh/h	1411	655	1010	858	289	1919		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	17.5	0.0	8.5	7.2	14.8	6.4		
Incr Delay (d2), s/veh	2.5	0.0	3.4	1.6	1.2	0.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.1	0.0	7.8	3.6	0.6	2.1		
LnGrp Delay(d),s/veh	20.0	0.0	11.9	8.8	16.0	6.7		
LnGrp LOS	B		B	A	B	A		
Approach Vol, veh/h	837		1041			553		
Approach Delay, s/veh	20.0		10.8			7.5		
Approach LOS	B		B			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		34.0				34.0		20.3
Change Period (Y+Rc), s		4.0				4.0		4.0
Max Green Setting (Gmax), s		30.0				30.0		22.0
Max Q Clear Time (g_c+I1), s		15.9				19.7		14.0
Green Ext Time (p_c), s		8.3				6.6		2.2
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay			13.2					
HCM 2010 LOS			B					
<b>Notes</b>								
User approved volume balancing among the lanes for turning movement.								














HCM 2010 Signalized Intersection Summary  
 4: Figueroa St & SR 134 EB Ramps

AM Peak Hour  
 Existing + Project Conditions

									
Movement	WBL	WBR	NBT	NBR	SBL	SBT			
Lane Configurations	 						 		
Volume (veh/h)	557	66	700	524	57	276			
Number	3	18	2	12	1	6			
Initial Q (Qb), veh	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00				
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1827	1900	1827	1827	1827	1827			
Adj Flow Rate, veh/h	672	0	761	570	62	300			
Adj No. of Lanes	2	1	1	1	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	0	4	4	4	4			
Cap, veh/h	935	434	1021	868	253	1941			
Arrive On Green	0.27	0.00	0.56	0.56	0.56	0.56			
Sat Flow, veh/h	3480	1615	1827	1553	402	3563			
Grp Volume(v), veh/h	672	0	761	570	62	300			
Grp Sat Flow(s),veh/h/ln	1740	1615	1827	1553	402	1736			
Q Serve(g_s), s	8.1	0.0	14.6	11.9	6.4	1.9			
Cycle Q Clear(g_c), s	8.1	0.0	14.6	11.9	21.0	1.9			
Prop In Lane	1.00	1.00		1.00	1.00				
Lane Grp Cap(c), veh/h	935	434	1021	868	253	1941			
V/C Ratio(X)	0.72	0.00	0.74	0.66	0.25	0.15			
Avail Cap(c_a), veh/h	1946	903	1021	868	253	1941			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	15.4	0.0	7.7	7.1	15.7	4.9			
Incr Delay (d2), s/veh	1.1	0.0	4.9	3.9	2.3	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.0	0.0	8.6	5.8	0.9	1.0			
LnGrp Delay(d),s/veh	16.5	0.0	12.7	11.0	18.0	5.1			
LnGrp LOS	B		B	B	B	A			
Approach Vol, veh/h	672		1331			362			
Approach Delay, s/veh	16.5		12.0			7.3			
Approach LOS	B		B			A			
Timer	1	2	3	4	5	6	7	8	
Assigned Phs		2				6		8	
Phs Duration (G+Y+Rc), s		30.0				30.0		16.5	
Change Period (Y+Rc), s		4.0				4.0		4.0	
Max Green Setting (Gmax), s		26.0				26.0		26.0	
Max Q Clear Time (g_c+I1), s		16.6				23.0		10.1	
Green Ext Time (p_c), s		6.5				2.4		2.4	
<b>Intersection Summary</b>									
HCM 2010 Ctrl Delay			12.5						
HCM 2010 LOS			B						
<b>Notes</b>									
User approved volume balancing among the lanes for turning movement.									

HCM 2010 Signalized Intersection Summary  
 4: Figueroa St & SR 134 EB Ramps

PM Peak Hour  
 Existing + Project Conditions

								
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations	 					 		
Volume (veh/h)	702	73	613	345	63	469		
Number	3	18	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1827	1900	1827	1827	1827	1827		
Adj Flow Rate, veh/h	837	0	666	375	68	510		
Adj No. of Lanes	2	1	1	1	1	2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	4	0	4	4	4	4		
Cap, veh/h	1043	484	1010	858	289	1919		
Arrive On Green	0.30	0.00	0.55	0.55	0.55	0.55		
Sat Flow, veh/h	3480	1615	1827	1553	529	3563		
Grp Volume(v), veh/h	837	0	666	375	68	510		
Grp Sat Flow(s),veh/h/ln	1740	1615	1827	1553	529	1736		
Q Serve(g_s), s	12.0	0.0	13.9	7.7	5.6	4.2		
Cycle Q Clear(g_c), s	12.0	0.0	13.9	7.7	19.6	4.2		
Prop In Lane	1.00	1.00		1.00	1.00			
Lane Grp Cap(c), veh/h	1043	484	1010	858	289	1919		
V/C Ratio(X)	0.80	0.00	0.66	0.44	0.23	0.27		
Avail Cap(c_a), veh/h	1411	655	1010	858	289	1919		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	17.5	0.0	8.5	7.2	15.4	6.4		
Incr Delay (d2), s/veh	2.5	0.0	3.4	1.6	1.9	0.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.1	0.0	7.8	3.6	1.0	2.1		
LnGrp Delay(d),s/veh	20.0	0.0	11.9	8.8	17.3	6.7		
LnGrp LOS	B		B	A	B	A		
Approach Vol, veh/h	837		1041			578		
Approach Delay, s/veh	20.0		10.8			8.0		
Approach LOS	B		B			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		34.0				34.0		20.3
Change Period (Y+Rc), s		4.0				4.0		4.0
Max Green Setting (Gmax), s		30.0				30.0		22.0
Max Q Clear Time (g_c+I1), s		15.9				21.6		14.0
Green Ext Time (p_c), s		8.5				5.8		2.2
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay			13.3					
HCM 2010 LOS			B					
<b>Notes</b>								
User approved volume balancing among the lanes for turning movement.								

# LADOT Bureau of Planning and Land Use Development

## Critical Movement Analysis using Circular 212 Method

INTERSECTION: <b>S.R. 134 EB Ramps &amp; N. Figueoa St</b>	2010, COUNT			2016, EXISTING					2016, WITH PROJECT				2016, WITH TRAFFIC MITIGATION											
Analysis Date: 6/6/2016	Signal System*: 1	Phases: 2	N-S Opposed: N	E-W Opposed: N	RTOR reduction: 0%	*Signal System: 1: Standard Signal 2: ATSAC 3: ATSAC with ATCS	Signal System*: 1	Phases: 2	N-S Opposed: N	E-W Opposed: N	RTOR reduction: 0%	Project: Scholl Canyon IS MND	In	Out	Total	Signal System*: 1	Phases: 2	N-S Opposed: N	E-W Opposed: N	RTOR reduction: 0%				
PM Peak: 4:45 PM	Counts	Lane	Ambient + Related	= Total	Lane	Project	Total	Lane	Project	Total	Lane	d	Total	Lane	Volume	Volume	Lanes	Volume	Volume	Lanes	Volume			
	Volume	Lanes	Volume	Volume	Lanes	Volume	Volume	Lanes	Volume	Volume	Lanes	Volume	Volume	Lanes	Volume	Volume	Lanes	Volume	Volume	Lanes	Volume			
Northbound	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	Left-Thru																							
	Thru	613	1	613	0	613	1	613	613	1	613	613	1	613	613	1	613	613	1	613	613			
	Thru-Right																							
	Right	345	1	345	0	345	1	345	345	1	345	345	1	345	345	1	345	345	1	345	345			
Left-Thru-Rt																								
Southbound	Left	44	1	44	0	44	1	44	19	63	1	63	19	63	1	63	1	63	19	63	1			
	Left-Thru																							
	Thru	465	2	233	0	465	2	233	4	469	2	235	4	469	2	235	4	469	2	235	4			
	Thru-Right																							
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Left-Thru-Rt																								
Eastbound	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	Left-Thru																							
	Thru	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	Thru-Right																							
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Left-Thru-Rt																								
Westbound	Left	702	1	386	0	702	1	386	0	702	1	386	0	702	1	386	0	702	1	386	0			
	Left-Thru																							
	Thru	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	Thru-Right																							
	Right	73	0	0	0	73	0	0	73	0	0	73	0	0	73	0	0	73	0	0	73			
Left-Thru-Rt																								
Critical Volumes:	North-South: 657	East-West: 389	Total: 1046	Volume/capacity (v/c) ratio: 0.697	v/c less ATSAC adjustment: 0.697	Level of Service (LOS): <b>B</b>	North-South: 657	East-West: 389	Total: 1046	Volume/capacity (v/c) ratio: 0.697	v/c less ATSAC adjustment: 0.697	Level of Service (LOS): <b>B</b>	North-South: 676	East-West: 389	Total: 1065	Volume/capacity (v/c) ratio: 0.710	v/c less ATSAC adjustment: 0.710	Level of Service (LOS): <b>C</b>	North-South: 676	East-West: 389	Total: 1065	Volume/capacity (v/c) ratio: 0.710	v/c less ATSAC adjustment: 0.710	Level of Service (LOS): <b>C</b>

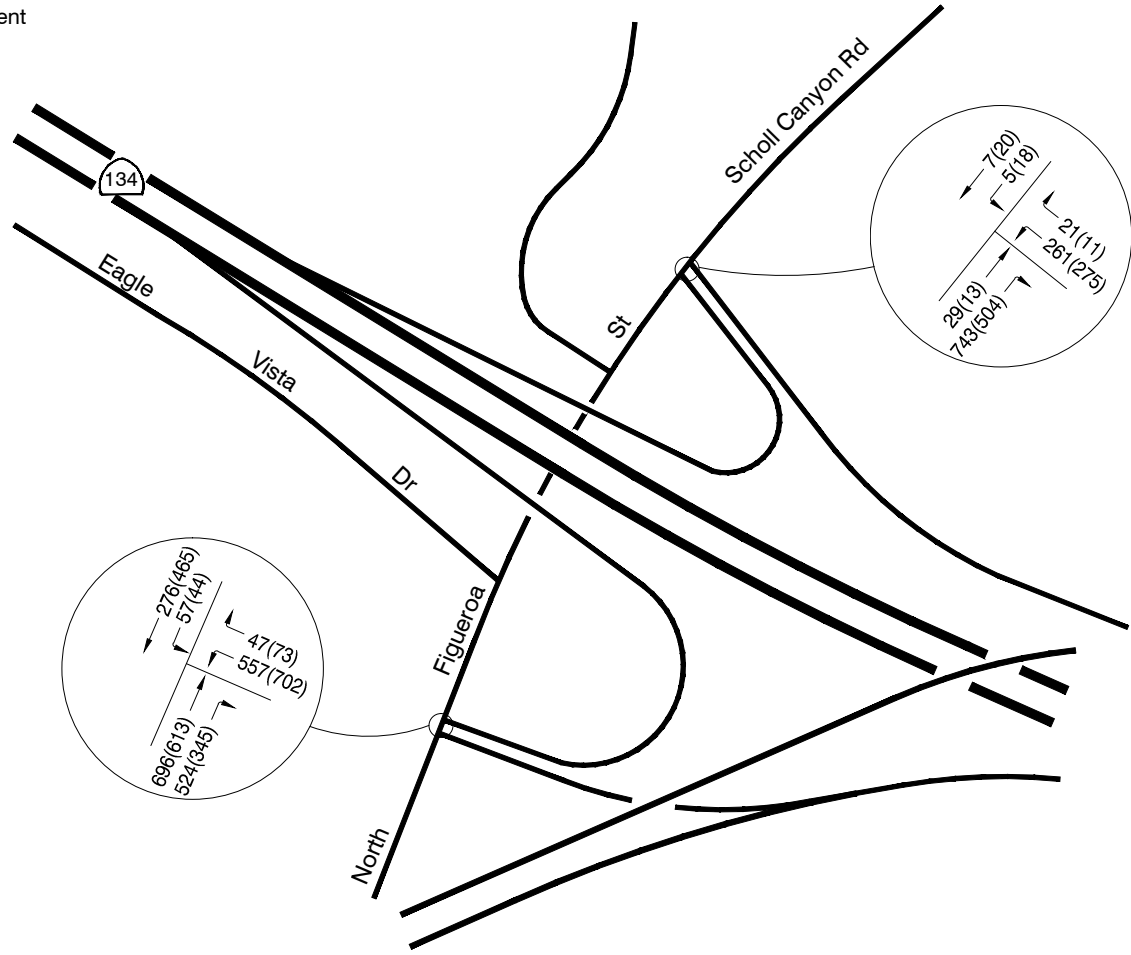
### PROJECT IMPACT

Filename: Z:\work\other BC's, or no WO number\2057123300\_Scholl Canyon\LOS\LOS Calculator 3 3\_new.xls  
 Developed 2005-2006 by Ken Aitchison

Change in v/c due to project: 0.013 /c after mitigation: 0.013  
 Significantly impacted? NO Fully mitigated? N/A

**LEGEND**

- XX(XX) - AM(PM) Peak Hour Volume
- ↔ - Traffic Movement



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**EXHIBIT** □  
 EXISTING AM AND PM  
 PEAK HOUR VOLUMES

**BIOGAS RENEWABLE GENERATION PROJECT  
FINAL INITIAL STUDY / MITIGATED NEGATIVE DECLARATION**

Appendix I Traffic Analysis  
March 9, 2018

**I.2 TRAFFIC ANALYSIS EXHIBIT 2**



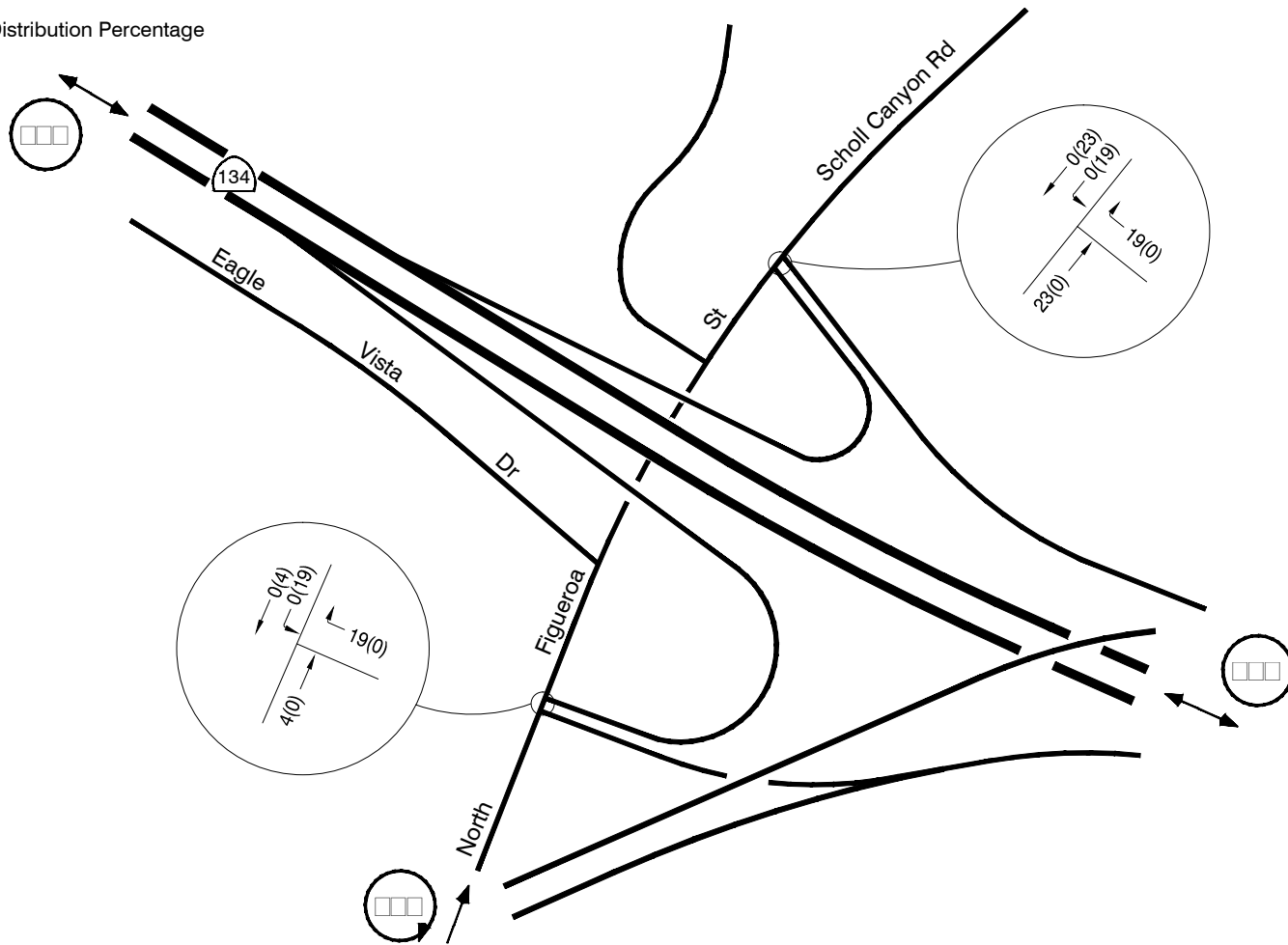


**LEGEND**

XX(XX) - AM(PM) Peak Hour Volume

↑ - Traffic Movement

⊞ - Trip Distribution Percentage



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**EXHIBIT** ⊞  
**PROJECT AM AND PM  
 PEAK HOUR VOLUMES**




**BIOGAS RENEWABLE GENERATION PROJECT  
FINAL INITIAL STUDY / MITIGATED NEGATIVE DECLARATION**

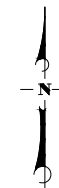
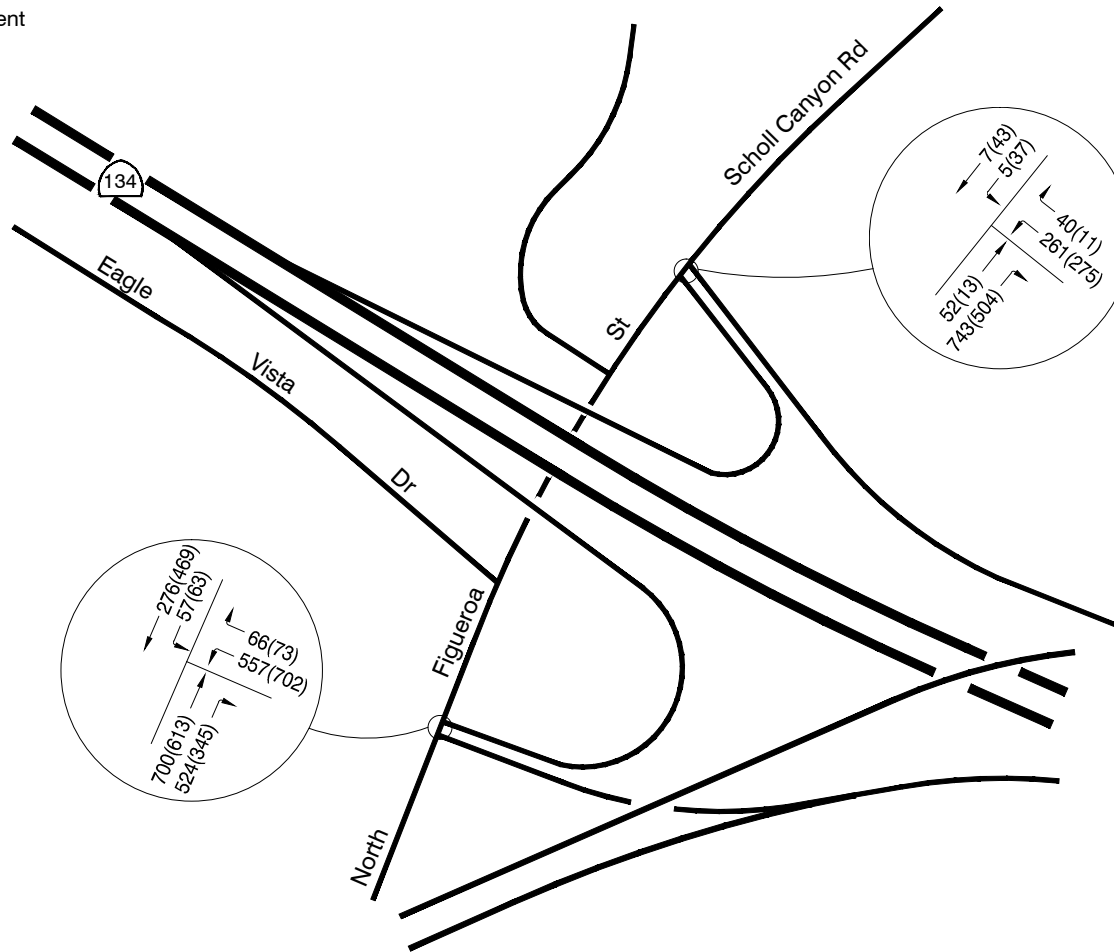
Appendix I Traffic Analysis  
March 9, 2018

**I.3 TRAFFIC ANALYSIS EXHIBIT 3**



**LEGEND**

- XX(XX) - AM(PM) Peak Hour Volume
-  - Traffic Movement



N.T.S.



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**EXHIBIT 3**  
 EXISTING + PROJECT  
 AM AND PM PEAK HOUR VOLUMES

