Attachment A

Level of Service Definitions for Signalized Intersections (ICU Method)

LEVEL OF SERVICE DEFINITIONS FOR SIGNALIZED INTERSECTIONS

Level of Service	Volume/Capacity Ratio	Definition
A	0.000 - 0.600	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.
B	0.601 - 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701 - 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801 - 0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901 - 1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	>1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

Source: Transportation Research Board.

Attachment B

Intersection Level of Service Worksheets

Project Title: 8767 Wilshire Blvd TIA
Intersection: 1. Robertson Blvd/Clifton Way
Description: 2013 Cumulative Base Conditions

Date/Time: AM PEAK HOUR (7:30-8:30)

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	31	0	0.000	N-S(1):	0.354 *
	TH	2.00	927	3,200	0.306	N-S(2):	0.338
	LT	0.00	20	1,600	0.013 *	E-W(1):	0.147
Westbound	RT	0.00	61	0	0.000	E-W(2):	0.172 *
	TH	1.00	143	1,600	0.153 *		
	LT	0.00	41	1,600	0.026	V/C:	0.526
Northbound	RT	0.00	71	0	0.000	Lost Time:	0.100
	TH	2.00	1,019	3,200	0.341 *	ITS:	0.000
	LT	1.00	51	1,600	0.032		
Eastbound	RT	0.00	92	0	0.000	ICU:	0.626
	TH	1.00	71	1,600	0.121		
	LT	0.00	31	1,600	0.019 *	LOS:	B

Date/Time: PM PEAK HOUR (5:00-6:00)

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	41	0	0.000	N-S(1):	0.379
	TH	2.00	1,218	3,200	0.408 *	N-S(2):	0.456 *
	LT	0.00	46	1,600	0.029	E-W(1):	0.291 *
Westbound	RT	0.00	56	0	0.000	E-W(2):	0.169
	TH	1.00	122	1,600	0.146		
	LT	0.00	56	1,600	0.035 *	V/C:	0.747
Northbound	RT	0.00	117	0	0.000	Lost Time:	0.100
	TH	2.00	1,004	3,200	0.350	ITS:	0.000
	LT	1.00	77	1,600	0.048 *		
Eastbound	RT	0.00	133	0	0.000	ICU:	0.847
	TH	1.00	240	1,600	0.256 *		
	LT	0.00	36	1,600	0.023	LOS:	D

Date/Time: Mid-Day PEAK HOUR (12:00-1:00)

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	58	0	0.000	N-S(1):	0.297
	TH	2.00	871	3,200	0.305 *	N-S(2):	0.344 *
	LT	0.00	46	1,600	0.029	E-W(1):	0.165 *
Westbound	RT	0.00	70	0	0.000	E-W(2):	0.150
	TH	1.00	84	1,600	0.130		
	LT	0.00	54	1,600	0.034 *	V/C:	0.509
Northbound	RT	0.00	100	0	0.000	Lost Time:	0.100
	TH	2.00	757	3,200	0.268	ITS:	0.000
	LT	1.00	63	1,600	0.039 *		
Eastbound	RT	0.00	96	0	0.000	ICU:	0.609
	TH	1.00	81	1,600	0.131 *		
	LT	0.00	32	1,600	0.020	LOS:	B

* - Denotes critical movement

Project Title: 8767 Wilshire Blvd TIA
Intersection: 2. Robertson Blvd/Wilshire Blvd
Description: 2013 Cumulative Base Conditions

Date/Time: AM PEAK HOUR (7:30-8:30)

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C
Southbound	RT	0.00	112	0	0.000
	TH	2.00	830	3,200	0.294 *
	LT	1.00	107	1,600	0.067
Westbound	RT	0.00	87	0	0.000
	TH	3.00	2,813	4,800	0.604 *
	LT	1.00	102	1,600	0.064
Northbound	RT	0.00	153	0	0.000
	TH	2.00	973	3,200	0.352
	LT	1.00	219	1,600	0.137 *
Eastbound	RT	0.00	122	0	0.000
	TH	3.00	1,716	4,800	0.383
	LT	1.00	117	1,600	0.073 *

ICU ANALYSIS	
N-S(1):	0.419
N-S(2):	0.431 *
E-W(1):	0.447
E-W(2):	0.677 *
V/C:	1.108
Lost Time:	0.100
ITS:	0.000
ICU:	1.208
LOS:	F

Date/Time: PM PEAK HOUR (5:00-6:00)

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C
Southbound	RT	0.00	102	0	0.000
	TH	2.00	1167	3,200	0.397 *
	LT	1.00	92	1,600	0.058
Westbound	RT	0.00	66	0	0.000
	TH	3.00	2136	4,800	0.459
	LT	1.00	168	1,600	0.105 *
Northbound	RT	0.00	138	0	0.000
	TH	2.00	1004	3,200	0.357
	LT	1.00	209	1,600	0.131 *
Eastbound	RT	0.00	199	0	0.000
	TH	3.00	2595	4,800	0.582 *
	LT	1.00	148	1,600	0.093

ICU ANALYSIS	
N-S(1):	0.415
N-S(2):	0.528 *
E-W(1):	0.687 *
E-W(2):	0.552
V/C:	1.215
Lost Time:	0.100
ITS:	0.000
ICU:	1.315
LOS:	F

Date/Time: Mid-Day PEAK HOUR (12:00-1:00)

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C
Southbound	RT	0.00	95	0	0.000
	TH	2.00	765	3,200	0.269 *
	LT	1.00	74	1,600	0.046
Westbound	RT	0.00	95	0	0.000
	TH	3.00	1,227	4,800	0.275
	LT	1.00	108	1,600	0.068 *
Northbound	RT	0.00	120	0	0.000
	TH	2.00	641	3,200	0.238
	LT	1.00	192	1,600	0.120 *
Eastbound	RT	0.00	195	0	0.000
	TH	3.00	1,579	4,800	0.370 *
	LT	1.00	136	1,600	0.085

ICU ANALYSIS	
N-S(1):	0.284
N-S(2):	0.389 *
E-W(1):	0.438 *
E-W(2):	0.360
V/C:	0.827
Lost Time:	0.100
ITS:	0.000
ICU:	0.927
LOS:	E

* - Denotes critical movement

Project Title: 8767 Wilshire Blvd TIA
Intersection: 1. Robertson Blvd/Clifton Way
Description: 2013 Cumulative Plus Project Conditions - Alt 1

Date/Time: AM PEAK HOUR (7:30-8:30)

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	31	0	0.000	N-S(1):	0.357 *
	TH	2.00	933	3,200	0.308	N-S(2):	0.341
	LT	0.00	20	1,600	0.013 *	E-W(1):	0.145
Westbound	RT	0.00	61	0	0.000	E-W(2):	0.172 *
	TH	1.00	143	1,600	0.153 *		
	LT	0.00	41	1,600	0.026	V/C:	0.529
Northbound	RT	0.00	77	0	0.000	Lost Time:	0.100
	TH	2.00	1,025	3,200	0.344 *	ITS:	0.000
	LT	1.00	53	1,600	0.033		
Eastbound	RT	0.00	91	0	0.000	ICU:	0.629
	TH	1.00	68	1,600	0.119		
	LT	0.00	31	1,600	0.019 *	LOS:	B

Date/Time: PM PEAK HOUR (5:00-6:00)

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	41	0	0.000	N-S(1):	0.402
	TH	2.00	1,224	3,200	0.410 *	N-S(2):	0.468 *
	LT	0.00	46	1,600	0.029	E-W(1):	0.289 *
Westbound	RT	0.00	56	0	0.000	E-W(2):	0.169
	TH	1.00	122	1,600	0.146		
	LT	0.00	56	1,600	0.035 *	V/C:	0.757
Northbound	RT	0.00	157	0	0.000	Lost Time:	0.100
	TH	2.00	1,035	3,200	0.373	ITS:	0.000
	LT	1.00	93	1,600	0.058 *		
Eastbound	RT	0.00	131	0	0.000	ICU:	0.857
	TH	1.00	239	1,600	0.254 *		
	LT	0.00	36	1,600	0.023	LOS:	D

Date/Time: Mid-Day PEAK HOUR (12:00-1:00)

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	58	0	0.000	N-S(1):	0.319
	TH	2.00	880	3,200	0.308 *	N-S(2):	0.357 *
	LT	0.00	46	1,600	0.029	E-W(1):	0.165 *
Westbound	RT	0.00	70	0	0.000	E-W(2):	0.150
	TH	1.00	84	1,600	0.130		
	LT	0.00	54	1,600	0.034 *	V/C:	0.522
Northbound	RT	0.00	139	0	0.000	Lost Time:	0.100
	TH	2.00	788	3,200	0.290	ITS:	0.000
	LT	1.00	79	1,600	0.049 *		
Eastbound	RT	0.00	96	0	0.000	ICU:	0.622
	TH	1.00	81	1,600	0.131 *		
	LT	0.00	32	1,600	0.020	LOS:	B

* - Denotes critical movement

Project Title: 8767 Wilshire Blvd TIA
Intersection: 2. Robertson Blvd/Wilshire Blvd
Description: 2013 Cumulative Plus Project Conditions - Alt 1

Date/Time: AM PEAK HOUR (7:30-8:30)

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	112	0	0.000	N-S(1):	0.425
	TH	2.00	830	3,200	0.294 *	N-S(2):	0.431 *
	LT	1.00	107	1,600	0.067	E-W(1):	0.451
Westbound	RT	0.00	128	0	0.000	E-W(2):	0.703 *
	TH	3.00	2,808	4,800	0.612 *		
	LT	1.00	108	1,600	0.068	V/C:	1.134
Northbound	RT	0.00	153	0	0.000	Lost Time:	0.100
	TH	2.00	991	3,200	0.358	ITS:	0.000
	LT	1.00	219	1,600	0.137 *		
Eastbound	RT	0.00	122	0	0.000	ICU:	1.234
	TH	3.00	1,716	4,800	0.383		
	LT	1.00	145	1,600	0.091 *	LOS:	F

Date/Time: PM PEAK HOUR (5:00-6:00)

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	102	0	0.000	N-S(1):	0.420
	TH	2.00	1,167	3,200	0.397 *	N-S(2):	0.528 *
	LT	1.00	92	1,600	0.058	E-W(1):	0.704 *
Westbound	RT	0.00	99	0	0.000	E-W(2):	0.563
	TH	3.00	2,159	4,800	0.470		
	LT	1.00	188	1,600	0.118 *	V/C:	1.232
Northbound	RT	0.00	138	0	0.000	Lost Time:	0.100
	TH	2.00	1,021	3,200	0.362	ITS:	0.000
	LT	1.00	209	1,600	0.131 *		
Eastbound	RT	0.00	199	0	0.000	ICU:	1.332
	TH	3.00	2,615	4,800	0.586 *		
	LT	1.00	148	1,600	0.093	LOS:	F

Date/Time: Mid-Day PEAK HOUR (12:00-1:00)

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	95	0	0.000	N-S(1):	0.284
	TH	2.00	765	3,200	0.269 *	N-S(2):	0.389 *
	LT	1.00	74	1,600	0.046	E-W(1):	0.453 *
Westbound	RT	0.00	148	0	0.000	E-W(2):	0.432
	TH	3.00	1,274	4,800	0.296		
	LT	1.00	132	1,600	0.083 *	V/C:	0.842
Northbound	RT	0.00	120	0	0.000	Lost Time:	0.100
	TH	2.00	641	3,200	0.238	ITS:	0.000
	LT	1.00	192	1,600	0.120 *		
Eastbound	RT	0.00	195	0	0.000	ICU:	0.942
	TH	3.00	1,579	4,800	0.370 *		
	LT	1.00	218	1,600	0.136	LOS:	E

* - Denotes critical movement

Project Title: 8767 Wilshire Blvd TIA
Intersection: 2. Robertson Blvd/Wilshire Blvd
Description: 2013 Cumulative Plus Project Alt 1 with Mitigation Conditions

Date/Time: AM PEAK HOUR (7:30-8:30)

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	112	0	0.000	N-S(1):	0.425
	TH	2.00	830	3,200	0.294 *	N-S(2):	0.431 *
	LT	1.00	107	1,600	0.067	E-W(1):	0.451
Westbound	RT	1.00	128	1,600	0.047	E-W(2):	0.676 *
	TH	3.00	2,808	4,800	0.585 *		
	LT	1.00	108	1,600	0.068	V/C:	1.107
Northbound	RT	0.00	153	0	0.000	Lost Time:	0.100
	TH	2.00	991	3,200	0.358	ITS:	0.000
	LT	1.00	219	1,600	0.137 *		
Eastbound	RT	0.00	122	0	0.000	ICU:	1.207
	TH	3.00	1,716	4,800	0.383		
	LT	1.00	145	1,600	0.091 *	LOS:	F

Date/Time: PM PEAK HOUR (5:00-6:00)

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	102	0	0.000	N-S(1):	0.420
	TH	2.00	1,167	3,200	0.397 *	N-S(2):	0.528 *
	LT	1.00	92	1,600	0.058	E-W(1):	0.704 *
Westbound	RT	1.00	99	1,600	0.033	E-W(2):	0.543
	TH	3.00	2,159	4,800	0.450		
	LT	1.00	188	1,600	0.118 *	V/C:	1.232
Northbound	RT	0.00	138	0	0.000	Lost Time:	0.100
	TH	2.00	1,021	3,200	0.362	ITS:	0.000
	LT	1.00	209	1,600	0.131 *		
Eastbound	RT	0.00	199	0	0.000	ICU:	1.332
	TH	3.00	2,615	4,800	0.586 *		
	LT	1.00	148	1,600	0.093	LOS:	F

Date/Time: Mid-Day PEAK HOUR (12:00-1:00)

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	95	0	0.000	N-S(1):	0.284
	TH	2.00	765	3,200	0.269 *	N-S(2):	0.389 *
	LT	1.00	74	1,600	0.046	E-W(1):	0.453 *
Westbound	RT	1.00	148	1,600	0.069	E-W(2):	0.401
	TH	3.00	1,274	4,800	0.265		
	LT	1.00	132	1,600	0.083 *	V/C:	0.842
Northbound	RT	0.00	120	0	0.000	Lost Time:	0.100
	TH	2.00	641	3,200	0.238	ITS:	0.000
	LT	1.00	192	1,600	0.120 *		
Eastbound	RT	0.00	195	0	0.000	ICU:	0.942
	TH	3.00	1,579	4,800	0.370 *		
	LT	1.00	218	1,600	0.136	LOS:	E

* - Denotes critical movement

Project Title: 8767 Wilshire Blvd TIA
Intersection: 1. Robertson Blvd/Clifton Way
Description: 2013 Cumulative Plus Project Alt 2 Conditions

Date/Time: AM PEAK HOUR (7:30-8:30)

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	31	0	0.000	N-S(1):	0.357 *
	TH	2.00	934	3,200	0.308	N-S(2):	0.341
	LT	0.00	20	1,600	0.013 *	E-W(1):	0.145
Westbound	RT	0.00	61	0	0.000	E-W(2):	0.172 *
	TH	1.00	143	1,600	0.153 *		
	LT	0.00	41	1,600	0.026	V/C:	0.529
Northbound	RT	0.00	76	0	0.000	Lost Time:	0.100
	TH	2.00	1,025	3,200	0.344 *	ITS:	0.000
	LT	1.00	52	1,600	0.033		
Eastbound	RT	0.00	91	0	0.000	ICU:	0.629
	TH	1.00	68	1,600	0.119		
	LT	0.00	31	1,600	0.019 *	LOS:	B

Date/Time: PM PEAK HOUR (5:00-6:00)

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	41	0	0.000	N-S(1):	0.401
	TH	2.00	1,224	3,200	0.410 *	N-S(2):	0.468 *
	LT	0.00	46	1,600	0.029	E-W(1):	0.289 *
Westbound	RT	0.00	56	0	0.000	E-W(2):	0.169
	TH	1.00	122	1,600	0.146		
	LT	0.00	56	1,600	0.035 *	V/C:	0.757
Northbound	RT	0.00	156	0	0.000	Lost Time:	0.100
	TH	2.00	1,035	3,200	0.372	ITS:	0.000
	LT	1.00	92	1,600	0.058 *		
Eastbound	RT	0.00	131	0	0.000	ICU:	0.857
	TH	1.00	239	1,600	0.254 *		
	LT	0.00	36	1,600	0.023	LOS:	D

Date/Time: Mid-Day PEAK HOUR (12:00-1:00)

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	58	0	0.000	N-S(1):	0.318
	TH	2.00	880	3,200	0.308 *	N-S(2):	0.357 *
	LT	0.00	46	1,600	0.029	E-W(1):	0.165 *
Westbound	RT	0.00	70	0	0.000	E-W(2):	0.150
	TH	1.00	84	1,600	0.130		
	LT	0.00	54	1,600	0.034 *	V/C:	0.522
Northbound	RT	0.00	137	0	0.000	Lost Time:	0.100
	TH	2.00	787	3,200	0.289	ITS:	0.000
	LT	1.00	78	1,600	0.049 *		
Eastbound	RT	0.00	96	0	0.000	ICU:	0.622
	TH	1.00	81	1,600	0.131 *		
	LT	0.00	32	1,600	0.020	LOS:	B

* - Denotes critical movement

Project Title: 8767 Wilshire Blvd TIA
Intersection: 2. Robertson Blvd/Wilshire Blvd
Description: 2013 Cumulative Plus Project Alt 2 Conditions

Date/Time: AM PEAK HOUR (7:30-8:30)

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	112	0	0.000	N-S(1):	0.425
	TH	2.00	830	3,200	0.294 *	N-S(2):	0.431 *
	LT	1.00	107	1,600	0.067	E-W(1):	0.451
Westbound	RT	0.00	125	0	0.000	E-W(2):	0.702 *
	TH	3.00	2,809	4,800	0.611 *		
	LT	1.00	108	1,600	0.068	V/C:	1.133
Northbound	RT	0.00	153	0	0.000	Lost Time:	0.100
	TH	2.00	992	3,200	0.358	ITS:	0.000
	LT	1.00	219	1,600	0.137 *		
Eastbound	RT	0.00	122	0	0.000	ICU:	1.233
	TH	3.00	1,716	4,800	0.383		
	LT	1.00	146	1,600	0.091 *	LOS:	F

Date/Time: PM PEAK HOUR (5:00-6:00)

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	102	0	0.000	N-S(1):	0.420
	TH	2.00	1,167	3,200	0.397 *	N-S(2):	0.528 *
	LT	1.00	92	1,600	0.058	E-W(1):	0.704 *
Westbound	RT	0.00	98	0	0.000	E-W(2):	0.563
	TH	3.00	2,159	4,800	0.470		
	LT	1.00	188	1,600	0.118 *	V/C:	1.232
Northbound	RT	0.00	138	0	0.000	Lost Time:	0.100
	TH	2.00	1,020	3,200	0.362	ITS:	0.000
	LT	1.00	209	1,600	0.131 *		
Eastbound	RT	0.00	199	0	0.000	ICU:	1.332
	TH	3.00	2,613	4,800	0.586 *		
	LT	1.00	148	1,600	0.093	LOS:	F

Date/Time: Mid-Day PEAK HOUR (12:00-1:00)

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	95	0	0.000	N-S(1):	0.284
	TH	2.00	765	3,200	0.269 *	N-S(2):	0.389 *
	LT	1.00	74	1,600	0.046	E-W(1):	0.452 *
Westbound	RT	0.00	146	0	0.000	E-W(2):	0.431
	TH	3.00	1,272	4,800	0.295		
	LT	1.00	131	1,600	0.082 *	V/C:	0.841
Northbound	RT	0.00	120	0	0.000	Lost Time:	0.100
	TH	2.00	641	3,200	0.238	ITS:	0.000
	LT	1.00	192	1,600	0.120 *		
Eastbound	RT	0.00	195	0	0.000	ICU:	0.941
	TH	3.00	1,579	4,800	0.370 *		
	LT	1.00	218	1,600	0.136	LOS:	E

* - Denotes critical movement

Project Title: 8767 Wilshire Blvd TIA
Intersection: 2. Robertson Blvd/Wilshire Blvd
Description: 2013 Cumulative Plus Project Alt 2with Mitigation Conditions

Date/Time: AM PEAK HOUR (7:30-8:30)

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	112	0	0.000	N-S(1):	0.425
	TH	2.00	830	3,200	0.294 *	N-S(2):	0.431 *
	LT	1.00	107	1,600	0.067	E-W(1):	0.451
Westbound	RT	1.00	125	1,600	0.045	E-W(2):	0.676 *
	TH	3.00	2,809	4,800	0.585 *		
	LT	1.00	108	1,600	0.068	V/C:	1.107
Northbound	RT	0.00	153	0	0.000	Lost Time:	0.100
	TH	2.00	992	3,200	0.358	ITS:	0.000
	LT	1.00	219	1,600	0.137 *		
Eastbound	RT	0.00	122	0	0.000	ICU:	1.207
	TH	3.00	1,716	4,800	0.383		
	LT	1.00	146	1,600	0.091 *	LOS:	F

Date/Time: PM PEAK HOUR (5:00-6:00)

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	102	0	0.000	N-S(1):	0.420
	TH	2.00	1,167	3,200	0.397 *	N-S(2):	0.528 *
	LT	1.00	92	1,600	0.058	E-W(1):	0.704 *
Westbound	RT	1.00	98	1,600	0.033	E-W(2):	0.543
	TH	3.00	2,159	4,800	0.450		
	LT	1.00	188	1,600	0.118 *	V/C:	1.232
Northbound	RT	0.00	138	0	0.000	Lost Time:	0.100
	TH	2.00	1,020	3,200	0.362	ITS:	0.000
	LT	1.00	209	1,600	0.131 *		
Eastbound	RT	0.00	199	0	0.000	ICU:	1.332
	TH	3.00	2,613	4,800	0.586 *		
	LT	1.00	148	1,600	0.093	LOS:	F

Date/Time: Mid-Day PEAK HOUR (12:00-1:00)

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	95	0	0.000	N-S(1):	0.284
	TH	2.00	765	3,200	0.269 *	N-S(2):	0.389 *
	LT	1.00	74	1,600	0.046	E-W(1):	0.452 *
Westbound	RT	1.00	146	1,600	0.068	E-W(2):	0.401
	TH	3.00	1,272	4,800	0.265		
	LT	1.00	131	1,600	0.082 *	V/C:	0.841
Northbound	RT	0.00	120	0	0.000	Lost Time:	0.100
	TH	2.00	641	3,200	0.238	ITS:	0.000
	LT	1.00	192	1,600	0.120 *		
Eastbound	RT	0.00	195	0	0.000	ICU:	0.941
	TH	3.00	1,579	4,800	0.370 *		
	LT	1.00	218	1,600	0.136	LOS:	E

* - Denotes critical movement

Attachment C

List of Cumulative Projects

City of Beverly Hills Cumulative Projects list

Updated December 26 -2012

PROJ	ADDRESS	ITE CODE	SIZE	UNITS	ADT TOTAL	AM IN	AM OUT	PM IN	PM OUT	WK MD IN	WK MD OUT	WKEND IN	WKEND OUT	WKEND TOTAL
2	257 N. Canon Dr.	440	388.000	SEATS	440	54	8	10	50	10	50	9	8	16
2	257 N. Canon Dr.	820	14.000	TSF	602	8	6	25	27	25	27	35	33	68
2	267N.Canon dr.	820	10.000	TSF	436	6	4	18	20	18	20	20	20	40
2	267 N. Canon Dr.	710R	4.000	TSF	44	5	1	1	5	1	5	2	2	4
5	469 N. Crescent Dr.	441	500.000	SEATS	11200	0	0	50	50	50	50	50	50	100
5	469 N. Crescent Dr.	536	150.000	STU	372	72	47	11	15	34	49	0	0	0
5	469 N. Crescent Dr.	536	60.000	STU	149	29	19	4	6	14	19	0	0	0
5	469 N. Crescent Dr.	732	34.000	TSF	3678	142	131	189	182	254	244	110	90	200
6	9936 Durant Dr.	230	13.000	DU	76	2	4	5	2	4	2	3	3	6
7	309-325 S. Elm Dr.	230	7.000	DU	41	0	3	2	1	2	1	2	2	3
8	156-168 N. La Peer Dr.	230	10.000	DU	59	1	4	4	2	3	2	3	2	5
9	450-60 N.Palm Dr.	230	35.000	DU	205	3	12	12	6	12	7	9	7	16
10	432 N. Oakhurst Dr.	230	34.000	DU	200	3	12	12	6	11	6	9	7	16
13	9900 Santa Monica Blvd.	710E	119.000	TSF	1309	162	22	30	147	36	176	89	78	168
14	121 San Vicente Blvd.	720	35.000	TSF	1265	68	18	35	95	62	93	72	55	127
16	207 S. Robertson Blvd.	710E	2.100	TSF	23	3	0	0	3	14	67	0	0	0
17	121 Spalding Dr.	710E	18.800	TSF	207	25	4	5	23	17	83	3	4	7
19	8767 Wilshire Blvd.		60.856	TSF	670	83	12	15	75	15	75	13	12	25
19	8767 Wilshire Blvd.		11.260	TSF	1642	26	16	71	77	71	77	109	100	209
19	8767 Wilshire Blvd.		3.000	TSF	381	18	17	20	13	31	25	38	22	60
20	9200 Wilshire Blvd.	230	53.000	DU	311	4	20	19	9	18	10	13	12	25
20	9200 Wilshire Blvd.	820E	8.400	TSF	1357	22	14	59	63	59	63	90	83	173
20	9200 Wilshire Blvd.	931	5.600	TSF	504	2	2	28	14	1	1	36	25	61
21	9230 Wilshire Blvd.	841	150.300	TSF	3000	64	44	41	76	184	225	41	41	82
23	9817 Wilshire Blvd.	710E	73.300	TSF	806	100	13	50	50	27	134	15	15	30
24	9844 Wilshire Blvd.	931	5.043	TSF	454	2	2	25	12	1	1	32	22	55
24	9844 Wilshire Blvd.	821E	95.000	TSF	6568	93	59	290	315	290	315	435	402	837
25	9876 Wilshire Blvd.	310	-46.000	RMS	376	16	10	14	13	-16	-12	14	13	27
25	9876 Wilshire Blvd.	230	110.000	DU	645	8	41	39	19	37	21	28	24	52
25	9876 Wilshire Blvd.	931	5.000	TSF	450	2	2	25	12	1	1	32	22	54
25	9876 Wilshire Blvd.	820E	5.000	TSF	969	16	10	42	45	42	45	64	59	123
26	9900 Wilshire Blvd.	820R-2	220.000	TSF	2495	-9	0	112	106	112	106	187	167	352
26	9900 Wilshire Blvd.	232-1	235.000	DU	834	21	45	42	35	61	29	26	45	68
26	9900 Wilshire Blvd.	820R-1	11.656	TSF	501	7	5	21	23	21	23	30	28	58
26	9900 Wilshire Blvd.	932-1	4.200	TSF	534	25	23	28	18	43	36	53	31	84

Celebrating 25 Years

environmental planners

Memorandum

TO: Kathy Javor
GEK Construction Inc.

FROM: Sam Silverman, Senior Environmental Scientist
Terry A. Hayes Associates LLC

DATE: June 23, 2009

RE: 8767 Wilshire Boulevard Medical Office Project
Supplemental Air Quality Impact Analysis

Terry A. Hayes Associates LLC previously completed an Air Quality and Noise Impact Report (Impact Report) for the 8767 Wilshire Boulevard Office Building Project (proposed project). The Impact Report analyzed the proposed project as a 75,116-square-foot building with a mix of general office and retail/restaurant/coffee shop uses. The proposed project was approved by the City of Beverly Hills but the Applicant has now proposed to change the occupancy from general office to medical office. The revised project would include 54,900 square feet of medical office use, 4,696 square feet of general office use, 11,404 square feet of retail use, 3,000 square feet of restaurant use, and 1,116 square feet of pharmacy use. The revised project would increase the average daily trips that were assumed in the Impact Report. The following Supplemental Air Quality Impact Analysis (Supplemental Analysis) updates the operational emissions analysis in the Impact Report. Construction assumptions would not change from those analyzed in the Impact Report. As with the Impact Report, operational emissions impacts addressed in this Supplemental Analysis would remain less than significant.

SUMMARY OF ANALYSIS

Construction Emissions. The construction assumptions of the proposed project have not changed from those used in the Impact Report, and therefore, construction emissions have not been re-addressed in this Supplemental Analysis. Emissions from construction activity are anticipated to be less than significant.

Terry A. Hayes Associates LLC
8522 National Boulevard, Suite102
Culver City, CA 90232
310 839 4200 fax 310 839 4201
w e b t a h a . c o m

Operational Emissions. The anticipated net daily trips have approximately doubled from 1,522 weekday and 857 weekend trips in the Impact Report to 3,017 weekday and 1,476 weekend trips in the Supplemental Analysis. Even though daily trips have doubled, no changes in operational emissions impacts have been made. In addition, the change in uses from the Impact Report to the Supplemental Analysis has not caused operational emissions to exceed significance thresholds. Operational emissions are anticipated to be less than significant.

Cumulative Operational Emissions. The revised project would reduce the number of employees and associated employment vehicle miles traveled from assumptions used in the Impact Report. As with the Impact Report, the Supplemental Analysis finds that the cumulative impacts associated with operation of the proposed project would result in a less-than-significant impact.

BACKGROUND

The South Coast Air Quality Management District (SCAQMD) monitors air quality within the project area, and has established significance thresholds for the following pollutants of concern: carbon monoxide (CO), ozone (O_3), nitrogen oxides (NO_X), sulfur oxides (SO_X), particulate matter 2.5 microns or less in diameter ($PM_{2.5}$), particulate matter ten microns or less in diameter (PM_{10}), and volatile organic compounds (VOC).

OPERATIONAL SIGNIFICANCE THRESHOLDS

The proposed project would have a significant impact if:

- Daily operational emissions were to exceed SCAQMD operational emissions thresholds for VOC, NO_X, CO, SO_X, $PM_{2.5}$, or PM_{10}, as presented in **Table 1**;
- Project-related traffic causes CO concentrations at study intersections to violate the California Ambient Air Quality Standards (CAAQS) for either the one- or eight-hour period. The CAAQS for the one- and eight-hour periods are 20 parts per million (ppm) and 9.0 ppm, respectively. If CO concentrations currently exceed the CAAQS, then an incremental increase of 1.0 ppm over "no project" conditions for the one-hour period would be considered a significant impact. An incremental increase of 0.45 ppm over the "no project" conditions for the eight-hour period would be considered significant;[1]
- The proposed project would generate significant emissions of toxic air contaminants (TACs);
- The proposed project would create an odor nuisance;
- The proposed project would not be consistent with the Air Quality Management Plan (AQMP); and/or
- The proposed project would not comply with regional and local greenhouse gas regulations and policies.

[1]Consistent with the SCAQMD Regulation XIII definition of a significant impact.

TABLE 1: SCAQMD DAILY OPERATIONAL EMISSIONS THRESHOLDS	
Criteria Pollutant	**Pounds Per Day**
Volatile Organic Compounds (VOC)	55
Nitrogen Oxides (NO_X)	55
Carbon Monoxide (CO)	550
Sulfur Oxides (SO_X)	150
Fine Particulates ($PM_{2.5}$)	55
Particulates (PM_{10})	150
SOURCE: SCAQMD, 2009.	

OPERATIONAL EMISSIONS IMPACT ANALYSIS

Regional Operational Emissions

Long-term project emissions would be generated by mobile sources and area sources, such as natural gas combustion. Motor vehicles that access the project site would be the predominate source of long-term project emissions. According to the traffic report, the proposed project would generate 3,017 weekday daily vehicle trips, and 1,476 weekend daily vehicle trips.[2]

Mobile and area source emissions were estimated using URBEMIS2007. Weekday and weekend operational emissions are shown in **Tables 2** and **3**, respectively. These emissions are higher than previously presented in the Impact Report. Regional weekday and weekend operational emissions would not exceed SCAQMD significance thresholds, and would result in a less-than-significant impact.

TABLE 2: ESTIMATED DAILY OPERATIONS EMISSIONS - WEEKDAY						
	Pounds per Day					
Emission Source	**VOC**	**NO_X**	**CO**	**SO_X**	**$PM_{2.5}$**	**PM_{10}**
Mobile Sources	27	42	303	<1	9	48
Area Sources /a/	<1	<1	<1	<1	<1	<1
Total Emissions	*27*	*42*	*303*	*<1*	*9*	*48*
SCAQMD Threshold	**55**	**55**	**550**	**150**	**55**	**150**
Exceed Threshold?	No	No	No	No	No	No
/a/ Area sources include emissions from natural gas combustion and consumer product (e.g., aerosol sprays). **SOURCE:** TAHA, 2009 (Appendix A).						

[2]RAJU Associates, *8767 Wilshire Boulevard Medical Office Project Supplemental Updated Traffic Impact Analysis*, June 15, 2009.

TABLE 3: ESTIMATED DAILY OPERATIONS EMISSIONS - WEEKEND						
	Pounds per Day					
Emission Source	**VOC**	**NO_X**	**CO**	**SO_X**	**$PM_{2.5}$**	**PM_{10}**
Mobile Sources	13	20	147	<1	5	23
Area Sources /a/	<1	1	<1	<1	<1	<1
Total Emissions	*13*	*21*	*147*	*<1*	*5*	*23*
SCAQMD Threshold	**55**	**55**	**550**	**150**	**55**	**150**
Exceed Threshold?	No	No	No	No	No	No

/a/ Area sources include emissions from natural gas combustion and consumer product (e.g., aerosol sprays).
SOURCE: TAHA, 2009 (Appendix A).

Comparison to Impact Report

While daily operational emissions would be increased by approximately 120 percent from those analyzed in the Impact Report, the proposed project would remain a less-than significant regional operational emissions impact.

CO Hotspot Analysis

Future CO concentrations are expected to be lower than existing conditions due to stringent State and federal mandates for lowering vehicle emissions. Although traffic volumes would be higher in the future both without and with the implementation of the proposed project, CO emissions from mobile sources are expected to be much lower due to technological advances in vehicle emissions systems, as well as from normal turnover in the vehicle fleet. Accordingly, increases in traffic volumes are expected to be offset by increases in cleaner-running cars as a percentage of the entire vehicle fleet on the road.[3]

The State one- and eight-hour CO standards may potentially be exceeded at congested intersections with high traffic volumes. An exceedance of the State CO standards at an intersection is referred to as a CO hotspot. The SCAQMD recommends a CO hotspot evaluation of potential localized CO impacts when volume-to-capacity (V/C) ratios are increased by two percent at intersections with a level of service (LOS) of D or worse. SCAQMD also recommends a CO hotspot evaluation when an intersection decreases in LOS by one level beginning when LOS changes from C to D.

Based on the traffic study, the selected weekday intersections are as follows:

- La Peer Drive/Wilshire Boulevard - AM Peak Hour
- Robertson Boulevard/Wilshire Boulevard - AM Peak Hour
- Robertson Boulevard/Clifton Way - PM Peak Hour

Based on the traffic study, the selected weekend intersections are as follows:

- Doheny Drive/Wilshire Boulevard

[3]Consistent with California Air Resources Board's (CARB) vehicle emissions inventory.

- Robertson Boulevard/Wilshire Boulevard
- La Cienega Boulevard/Wilshire Boulevard

The United States Environmental Protection Agency (USEPA) CAL3QHC micro-scale dispersion model was used to calculate CO concentrations for future "no project" and "project" conditions. Weekday and weekend CO concentrations at the analyzed intersections are shown for the AM and PM peak hours in **Tables 4** and **5**, respectively. Weekday one-hour CO concentrations under "project" conditions would range from approximately 6 to 7 ppm at worst-case sidewalk receptors. Eight-hour CO concentrations under "project" conditions would range from approximately 3.5 to 4.3 ppm. Weekend one-hour CO concentrations under "project" conditions would be approximately 7 ppm at worst-case sidewalk receptors. Eight-hour CO concentrations under "project" conditions would range from approximately 4.0 to 4.2 ppm. The State one- and eight-hour standards of 20 and 9.0 ppm, respectively, would not be exceeded at the analyzed intersections. These emissions are higher than previously presented in the Impact Report. Localized CO concentrations would result in a less-than-significant impact.

TABLE 4: CARBON MONOXIDE CONCENTRATIONS - WEEKDAY /a/

	1-hour (parts per million)			8-hour (parts per million)		
Intersection	**Existing**	**No Project**	**Project**	**Existing**	**No Project**	**Project**
La Peer Drive/Wilshire Boulevard	7	7	7	4.2	4.0	4.0
Robertson Boulevard/Wilshire Boulevard	8	7	7	4.5	4.2	4.3
Robertson Boulevard/Clifton Way	6	6	6	3.6	3.3	3.5
State Standard	20			9.0		

/a/ Existing concentrations include one- and eight-hour ambient concentrations of 5 and 2.7 ppm, respectively. No Project and Project concentrations include one- and eight-hour ambient concentrations of 4 and 2.4 ppm, respectively.
SOURCE: TAHA, 2009 (Appendix B).

TABLE 5: CARBON MONOXIDE CONCENTRATIONS - WEEKEND /a/

	1-hour (parts per million)			8-hour (parts per million)		
Intersection	**Existing**	**No Project**	**Project**	**Existing**	**No Project**	**Project**
Doheny Drive/Wilshire Boulevard	7	7	7	4.1	4.1	4.1
Robertson Boulevard/Wilshire Boulevard	7	7	7	3.9	4.0	4.0
La Cienega Boulevard/Wilshire Boulevard	7	7	7	4.2	4.2	4.2
State Standard	20			9.0		

/a/ Existing concentrations include one- and eight-hour ambient concentrations of 5 and 2.7 ppm, respectively. No Project and Project concentrations include one- and eight-hour ambient concentrations of 4 and 2.4 ppm, respectively.
SOURCE: TAHA, 2009 (Appendix B).

Comparison to Impact Report

While CO concentrations would be increased by approximately eight percent from those analyzed in the Impact Report, CO emissions would remain a less-than significant impact.

Toxic Air Contaminant Impacts

The SCAQMD recommends that health risk assessments be conducted for substantial sources of diesel particulate emissions (e.g., truck stops and warehouse distribution facilities) and has provided guidance for analyzing mobile source diesel emissions. The proposed project would be a mixed-use development (medical and general offices, retail, pharmacy and restaurant uses) on the project site. These mixed uses are not anticipated to generate a substantial number of daily truck trips. The medical uses on the project site are not anticipated to be unique laboratory uses or other potential sources of TAC emissions. However, it should be noted that some medical uses (e.g., dentist's offices) are known emitters of aerosols and other gases containing TACs. Each specific medical use would have to comply with any regulations prescribed by the Building Codes of the State of California and City of Beverly Hills. Operation of the proposed project would result in a less-than-significant TAC emissions impact.

Typical sources of acutely and chronically hazardous TACs include industrial manufacturing processes and automotive repair facilities. The proposed project would not include any of these potential sources, although minimal emissions may result from the use of consumer products (e.g., aerosol sprays). Operation of the proposed project would result in a less-than-significant TAC emissions impact.

Comparison to Impact Report

While the proposed uses of the project site have changed significantly from those analyzed in the Impact Report, the proposed medical uses are not anticipated to be unique laboratory uses or other potential sources of high volume TAC emissions. In addition, any medical uses would be required to comply with any regulations prescribed by the State of California and City of Beverly Hills. As with the Impact Report, the Supplemental Analysis finds that the proposed project would remain a less-than-significant operational TAC emissions impact.

Odor Impacts

According to the SCAQMD CEQA *Air Quality Handbook*, land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies and fiberglass molding. The project site would be a mixed-use development (medical and general offices, retail, pharmacy and restaurant uses) and not land uses that are typically associated with odor complaints. The medical uses on the project site are not anticipated to be unique laboratory uses or other potential sources of disruptive odor emissions. On-site trash receptacles would have the potential to create adverse odors. Trash receptacles would be located and maintained in a manner that promotes odor control and no adverse odor impacts are anticipated from these types of land uses. Therefore, the proposed project would not result in activities that create objectionable odors. The proposed project would result in a less-than-significant operational odor impact.

Comparison to Impact Report

While the proposed uses of the project site have changed significantly from those analyzed in the Impact Report, the proposed medical uses are not anticipated to be unique laboratory uses or other potential

sources of disruptive odors. As with the Impact Report, the Supplemental Analysis finds that the proposed project would remain a less-than-significant operational odor impact.

Consistency with the Air Quality Management Plan

The proposed project would be consistent with the Air Quality Management Plan (AQMP) as operational activity would not conflict or obstruct implementation of the AQMP. Regional operational emissions would not exceed SCAQMD significance thresholds. In addition, localized CO emissions would not exceed State one- and eight-hour standards. Operation of the proposed project would result in a less-than-significant impact.

Comparison to Impact Report

As with the Impact Report, the Supplemental Analysis finds that the proposed project would be consistent with the AQMP. Operation of the proposed project would remain a less-than-significant impact.

CUMULATIVE OPERATIONAL EMISSIONS IMPACT ANALYSIS

Global Climate Change

Generally, an individual project cannot generate enough greenhouse gas (GHG) emissions to influence global climate change because it is the increased accumulation of GHGs which may result in global climate change. However, an individual project may contribute an incremental amount of GHG emissions that could combine with other emission sources to create concentrations of GHG that could influence climate change. For most projects, the main contribution of GHG emissions is from motor vehicles, but how much of those emissions are "new" is uncertain. New projects do not create new drivers, and therefore, do not create a new mobile source of emissions. Rather, new projects only redistribute the existing traffic patterns. Larger projects will certainly affect a larger geographic area, but again, would not necessarily cause the creation of new drivers. Some mixed-use, urban infill, and mass transit projects could actually reduce the number of vehicle miles traveled.

Worldwide population growth and the consequent use of energy is the primary reason for GHG emission increases. The market demand for goods and services and the use of land is directly linked to population changes and economic development trends within large geographies (e.g., regional, national, worldwide). Individual site-specific projects have a negligible effect on these macro population-driven and growth demand factors. Whether an individual site-specific project is constructed or not has little effect on GHG emissions. This is because the demand for goods and services in question would be provided in some other location to satisfy the demands of a growing population if not provided on the project site. The only exception to this basic relationship between population growth, development, energy consumption and GHG emissions would occur if the site-specific project (1) embodied features that were not typical of urban environment or developing communities, and (2) generated a disproportionate amount of vehicle miles of travel or had other unique and disproportionately high fuel consumption characteristics. The proposed project does not fall within these exceptions. It is a typical medical office project located in an urban area.

Operational GHG emissions are shown in **Table 6**. GHG emissions were calculated from mobile sources, natural gas usage, and electricity generation. The proposed project would result in carbon dioxide equivalent (CO_2e) emissions of 5,093 tons per year, which represents 9.63E-6 percent of Statewide emissions. In addition, the project has a Silver LEED certification for inclusion of several "green building" design features including upgraded windows, installation of 'cool roof' technology, and water-saving toilets.

TABLE 6: ESTIMATED ANNUAL GREENHOUSE GAS EMISSIONS

Source	Carbon Dioxide Equivalent (Tons per Year)		
	CO_2 /a/	CH_4 /b/	N_2O /b/
Mobile Emissions /c/	9,279	10	164
Natural Gas Emissions	119	<1	<1
General Electricity Emissions	480	<1	2
Water Cycle Electricity Emissions	39	<1	<1
Total Emissions	***5,093***		
2004 California GHG Emissions Inventory /d/	**528,820,000 /e/**		

/a/ Mobile and natural gas emissions were obtained from URBEMIS2007. Electricity emissions were obtained from *California Climate Action Registry General Reporting Protocol (March 2007)*.
/b/ Emissions were obtained from *California Climate Action Registry General Reporting Protocol* (March 2007).
/c/ Mobile emissions include annual weekday and weekend mobile emissions obtained from URBEMIS2007. Emissions were converted to a daily emissions rate (divided by 364), then multiplied by the appropriate days for each scenario's days per year (260 days for Weekday Mobile Emissions, and 104 days for Weekend Mobile Emissions).
/d/ CARB, DRAFT California Greenhouse Gas Inventory (Millions of Metric Tonnes of CO_2 Equivalent) – By IPCC Category, November 19, 2007.
/e/ Metric tonnes provided by the CARB were converted into tons to allow for the appropriate comparison.
SOURCE: TAHA, 2009 (Appendix C).

CEQA Guidelines Section 15130(b)(5)(c) states that with "some projects, the only feasible mitigation for cumulative impacts may involve the adoption of ordinances or regulations rather than the imposition of conditions on a project-by-project basis." The assessment and mitigation of cumulative impacts as they relate to global climate change fall into this category since the causes and effects are worldwide. Accordingly, the only feasible mitigation to address issues related to global warming will be CARB's adoption of regulations and thresholds pursuant to AB 32, which will be implemented by local air quality management agencies (e.g., SCAQMD), to limit GHG emissions in the State. Since the proposed project would comply with all AB 32-related regulations, cumulative impacts related to global warming would be considered less than significant.

Comparison to Impact Report

GHG emissions were not analyzed in the Impact Report. However, the Supplemental Analysis finds that the proposed project has acquired Silver LEED certification through the implementation of green building design features. The proposed project would result in a less-than-significant GHG impact.

SCAQMD Methodology

The SCAQMD has set forth both a methodological framework, as well as significance thresholds, for the assessment of a project's cumulative air quality impacts. SCAQMD's approach is based on the AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the federal and State Clean Air Acts. This forecast also takes into account SCAG's forecasted future regional growth. Therefore, the analysis of cumulative impacts focuses on determining whether the proposed project is consistent with forecasted future regional growth.

Based on SCAQMD's methodology, a project would have a significant cumulative air quality impact if the ratio of daily project-related employment vehicle miles traveled to daily countywide vehicle miles traveled exceeds the ratio of project-related employment to countywide employment. As shown in **Table 7**, the proposed project to countywide VMT ratio is not greater than the proposed project to countywide population ratio.

A localized CO impact analysis was also completed for cumulative traffic (i.e., related projects and ambient growth through 2008). When calculating future traffic impacts, the traffic consultant took 129 additional projects into consideration. Thus, the future traffic results without and with the proposed project already account for the cumulative impacts from these other projects. As shown in **Tables 4** and **5**, the proposed project with cumulative traffic would not violate CO standards at local intersections. Therefore, the proposed project would not contribute to cumulative air quality impacts.

TABLE 7: CUMULATIVE AIR QUALITY ANALYSIS	
Daily Vehicle Miles Traveled For Project Employment /a/	6,110
Daily Vehicle Miles Traveled Countywide /b/	208,324,000
Daily Vehicle Miles Traveled Ratio	**0.000029**
Project Employment /c/	230
Countywide Employment /d/	4,814,802
Employment Ratio	**0.000048**
Significance Test - Daily Vehicle Miles Traveled Ratio Greater Than Employment Ratio	**No**

/a/ Data obtained from URBEMIS2007.
/b/ Data obtained from EMFAC2007.
/c/ Employment was projected using SCAG's *Employment Density Summary Report*, 2001.
/d/ Data obtained from SCAG's Regional Transportation Plan, Socioeconomic Projections, 2004.
SOURCE: TAHA, 2009.

Comparison to Impact Report

As with the Impact Report, the Supplemental Analysis finds that the proposed project would remain a less-than-significant cumulative air quality impact.

Appendix A

Operational Emission Calculations and Output Files

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: J:\Projects\8767 Wilshire Boulevard Medical Office Project 2009-051\Air Quality\Operations\Weekday.urb924

Project Name: 8767 Wilshire - OPERATIONS - Weekday

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.04	0.54	0.46	0.00	0.00	0.00	652.80

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	23.55	34.82	302.88	0.30	47.82	9.33	28,384.18

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	23.59	35.36	303.34	0.30	47.82	9.33	29,036.98

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.04	0.54	0.46	0.00	0.00	0.00	652.80
Hearth							
Landscape							
Consumer Products	0.00						
Architectural Coatings							
TOTALS (lbs/day, unmitigated)	0.04	0.54	0.46	0.00	0.00	0.00	652.80

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Quality resturant	2.08	3.12	27.19	0.03	4.29	0.84	2,547.17
Strip mall	3.73	5.54	47.98	0.05	7.60	1.48	4,507.41
General office building	1.12	1.62	14.37	0.01	2.24	0.44	1,331.92
Pharmacy/drugstore without drive through	0.76	1.14	9.83	0.01	1.56	0.30	923.49
Medical office building	15.86	23.40	203.51	0.20	32.13	6.27	19,074.19
TOTALS (lbs/day, unmitigated)	23.55	34.82	302.88	0.30	47.82	9.33	28,384.18

Operational Settings:

6/22/2009 8:47:01 AM

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2009 Temperature (F): 80 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Quality resturant		90.00	1000 sq ft	3.00	270.00	2,481.84
Strip mall		42.97	1000 sq ft	11.40	489.86	4,395.50
General office building		27.04	1000 sq ft	4.70	127.09	1,293.44
Pharmacy/drugstore without drive through		89.61	1000 sq ft	1.12	100.36	900.56
Medical office building		36.98	1000 sq ft	54.90	2,030.20	18,587.51
					3,017.51	27,658.85

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	53.7	1.3	98.3	0.4
Light Truck < 3750 lbs	6.8	2.9	94.2	2.9
Light Truck 3751-5750 lbs	22.8	0.9	99.1	0.0
Med Truck 5751-8500 lbs	10.0	1.0	99.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.4	0.0	85.7	14.3
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.3	73.9	26.1	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Quality resturant				8.0	4.0	88.0
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5
Pharmacy/drugstore without drive through				2.0	1.0	97.0
Medical office building				7.0	3.5	89.5

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Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: J:\Projects\8767 Wilshire Boulevard Medical Office Project 2009-051\Air Quality\Operations\Weekday.urb924

Project Name: 8767 Wilshire - OPERATIONS - Weekday

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.04	0.54	0.46	0.00	0.00	0.00	652.80

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	26.69	41.98	291.67	0.24	47.82	9.33	25,711.17

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	26.73	42.52	292.13	0.24	47.82	9.33	26,363.97

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.04	0.54	0.46	0.00	0.00	0.00	652.80
Hearth							
Landscape							
Consumer Products	0.00						
Architectural Coatings							
TOTALS (lbs/day, unmitigated)	0.04	0.54	0.46	0.00	0.00	0.00	652.80

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Quality resturant	2.38	3.77	26.18	0.02	4.29	0.84	2,307.32
Strip mall	4.24	6.68	46.28	0.04	7.60	1.48	4,082.62
General office building	1.25	1.95	13.73	0.01	2.24	0.44	1,206.92
Pharmacy/drugstore without drive through	0.86	1.37	9.48	0.01	1.56	0.30	836.46
Medical office building	17.96	28.21	196.00	0.16	32.13	6.27	17,277.85
TOTALS (lbs/day, unmitigated)	26.69	41.98	291.67	0.24	47.82	9.33	25,711.17

Operational Settings:

6/22/2009 8:47:11 AM

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2009 Temperature (F): 60 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Quality resturant		90.00	1000 sq ft	3.00	270.00	2,481.84
Strip mall		42.97	1000 sq ft	11.40	489.86	4,395.50
General office building		27.04	1000 sq ft	4.70	127.09	1,293.44
Pharmacy/drugstore without drive through		89.61	1000 sq ft	1.12	100.36	900.56
Medical office building		36.98	1000 sq ft	54.90	2,030.20	18,587.51
					3,017.51	27,658.85

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	53.7	1.3	98.3	0.4
Light Truck < 3750 lbs	6.8	2.9	94.2	2.9
Light Truck 3751-5750 lbs	22.8	0.9	99.1	0.0
Med Truck 5751-8500 lbs	10.0	1.0	99.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.4	0.0	85.7	14.3
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.3	73.9	26.1	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Quality resturant				8.0	4.0	88.0
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5
Pharmacy/drugstore without drive through				2.0	1.0	97.0
Medical office building				7.0	3.5	89.5

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: J:\Projects\8767 Wilshire Boulevard Medical Office Project 2009-051\Air Quality\Operations\Weekday.urb924

Project Name: 8767 Wilshire - OPERATIONS - Weekday

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.01	0.10	0.08	0.00	0.00	0.00	119.14

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	4.48	6.79	54.58	0.04	8.72	1.70	5,017.50

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	4.49	6.89	54.66	0.04	8.72	1.70	5,136.64

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.01	0.10	0.08	0.00	0.00	0.00	119.14
Hearth							
Landscape							
Consumer Products	0.00						
Architectural Coatings							
TOTALS (tons/year, unmitigated)	0.01	0.10	0.08	0.00	0.00	0.00	119.14

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Quality resturant	0.40	0.61	4.90	0.00	0.78	0.15	450.27
Strip mall	0.71	1.08	8.65	0.01	1.39	0.27	796.76
General office building	0.21	0.32	2.58	0.00	0.41	0.08	235.47
Pharmacy/drugstore without drive through	0.14	0.22	1.77	0.00	0.28	0.06	163.24
Medical office building	3.02	4.56	36.68	0.03	5.86	1.14	3,371.76
TOTALS (tons/year, unmitigated)	4.48	6.79	54.58	0.04	8.72	1.70	5,017.50

Operational Settings:

6/22/2009 8:47:19 AM

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2009 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Quality resturant		90.00	1000 sq ft	3.00	270.00	2,481.84
Strip mall		42.97	1000 sq ft	11.40	489.86	4,395.50
General office building		27.04	1000 sq ft	4.70	127.09	1,293.44
Pharmacy/drugstore without drive through		89.61	1000 sq ft	1.12	100.36	900.56
Medical office building		36.98	1000 sq ft	54.90	2,030.20	18,587.51
					3,017.51	27,658.85

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	53.7	1.3	98.3	0.4
Light Truck < 3750 lbs	6.8	2.9	94.2	2.9
Light Truck 3751-5750 lbs	22.8	0.9	99.1	0.0
Med Truck 5751-8500 lbs	10.0	1.0	99.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.4	0.0	85.7	14.3
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.3	73.9	26.1	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Quality resturant				8.0	4.0	88.0
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5
Pharmacy/drugstore without drive through				2.0	1.0	97.0
Medical office building				7.0	3.5	89.5

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: J:\Projects\8767 Wilshire Boulevard Medical Office Project 2009-051\Air Quality\Operations\Weekend.urb924

Project Name: 8767 Wilshire - OPERATIONS - Weekend

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.04	0.54	0.46	0.00	0.00	0.00	652.80

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	11.71	16.88	146.65	0.14	23.19	4.52	13,757.41

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	11.75	17.42	147.11	0.14	23.19	4.52	14,410.21

6/22/2009 8:48:43 AM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.04	0.54	0.46	0.00	0.00	0.00	652.80
Hearth							
Landscape							
Consumer Products	0.00						
Architectural Coatings							
TOTALS (lbs/day, unmitigated)	0.04	0.54	0.46	0.00	0.00	0.00	652.80

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Quality resturant	2.18	3.27	28.50	0.03	4.50	0.88	2,669.72
Strip mall	4.33	6.44	55.80	0.05	8.84	1.72	5,242.73
General office building	0.13	0.14	1.24	0.00	0.19	0.04	115.26
Pharmacy/drugstore without drive through	0.90	1.36	11.80	0.01	1.87	0.36	1,108.16
Medical office building	4.17	5.67	49.31	0.05	7.79	1.52	4,621.54
TOTALS (lbs/day, unmitigated)	11.71	16.88	146.65	0.14	23.19	4.52	13,757.41

Operational Settings:

6/22/2009 8:48:43 AM

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2009 Temperature (F): 80 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Quality resturant		94.33	1000 sq ft	3.00	282.99	2,601.24
Strip mall		49.98	1000 sq ft	11.40	569.77	5,112.56
General office building		2.34	1000 sq ft	4.70	11.00	111.93
Pharmacy/drugstore without drive through		107.53	1000 sq ft	1.12	120.43	1,080.65
Medical office building		8.96	1000 sq ft	54.90	491.90	4,503.63
					1,476.09	13,410.01

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	53.7	1.3	98.3	0.4
Light Truck < 3750 lbs	6.8	2.9	94.2	2.9
Light Truck 3751-5750 lbs	22.8	0.9	99.1	0.0
Med Truck 5751-8500 lbs	10.0	1.0	99.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.4	0.0	85.7	14.3
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.3	73.9	26.1	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Quality resturant				8.0	4.0	88.0
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5
Pharmacy/drugstore without drive through				2.0	1.0	97.0
Medical office building				7.0	3.5	89.5

6/22/2009 8:48:51 AM

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: J:\Projects\8767 Wilshire Boulevard Medical Office Project 2009-051\Air Quality\Operations\Weekend.urb924

Project Name: 8767 Wilshire - OPERATIONS - Weekend

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.04	0.54	0.46	0.00	0.00	0.00	652.80

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	13.09	20.36	141.34	0.11	23.19	4.52	12,461.44

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	13.13	20.90	141.80	0.11	23.19	4.52	13,114.24

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.04	0.54	0.46	0.00	0.00	0.00	652.80
Hearth							
Landscape							
Consumer Products	0.00						
Architectural Coatings							
TOTALS (lbs/day, unmitigated)	0.04	0.54	0.46	0.00	0.00	0.00	652.80

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Quality resturant	2.50	3.95	27.44	0.02	4.50	0.88	2,418.33
Strip mall	4.93	7.77	53.84	0.04	8.84	1.72	4,748.64
General office building	0.12	0.17	1.19	0.00	0.19	0.04	104.44
Pharmacy/drugstore without drive through	1.04	1.64	11.38	0.01	1.87	0.36	1,003.73
Medical office building	4.50	6.83	47.49	0.04	7.79	1.52	4,186.30
TOTALS (lbs/day, unmitigated)	13.09	20.36	141.34	0.11	23.19	4.52	12,461.44

Operational Settings:

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Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2009 Temperature (F): 60 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Quality resturant		94.33	1000 sq ft	3.00	282.99	2,601.24
Strip mall		49.98	1000 sq ft	11.40	569.77	5,112.56
General office building		2.34	1000 sq ft	4.70	11.00	111.93
Pharmacy/drugstore without drive through		107.53	1000 sq ft	1.12	120.43	1,080.65
Medical office building		8.96	1000 sq ft	54.90	491.90	4,503.63
					1,476.09	13,410.01

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	53.7	1.3	98.3	0.4
Light Truck < 3750 lbs	6.8	2.9	94.2	2.9
Light Truck 3751-5750 lbs	22.8	0.9	99.1	0.0
Med Truck 5751-8500 lbs	10.0	1.0	99.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.4	0.0	85.7	14.3
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.3	73.9	26.1	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Quality resturant				8.0	4.0	88.0
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5
Pharmacy/drugstore without drive through				2.0	1.0	97.0
Medical office building				7.0	3.5	89.5

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: J:\Projects\8767 Wilshire Boulevard Medical Office Project 2009-051\Air Quality\Operations\Weekend.urb924

Project Name: 8767 Wilshire - OPERATIONS - Weekend

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.01	0.10	0.08	0.00	0.00	0.00	119.14

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	2.22	3.31	26.44	0.02	4.23	0.83	2,431.89

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	2.23	3.41	26.52	0.02	4.23	0.83	2,551.03

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.01	0.10	0.08	0.00	0.00	0.00	119.14
Hearth							
Landscape							
Consumer Products	0.00						
Architectural Coatings							
TOTALS (tons/year, unmitigated)	0.01	0.10	0.08	0.00	0.00	0.00	119.14

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Quality resturant	0.42	0.64	5.14	0.00	0.82	0.16	471.93
Strip mall	0.83	1.26	10.06	0.01	1.61	0.31	926.74
General office building	0.02	0.03	0.22	0.00	0.04	0.01	20.38
Pharmacy/drugstore without drive through	0.17	0.27	2.13	0.00	0.34	0.07	195.89
Medical office building	0.78	1.11	8.89	0.01	1.42	0.28	816.95
TOTALS (tons/year, unmitigated)	2.22	3.31	26.44	0.02	4.23	0.83	2,431.89

Operational Settings:

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Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2009 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

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Lite-Heavy Truck 8501-10,000 lbs	1.4	0.0	85.7	14.3
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0

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School Bus	0.1	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

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Medical office building				7.0	3.5	89.5