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March 8, 2005

Mr. George Britton
ROSENOW SPEVACEK GROUP INC.
309 West 4th Street
Santa Ana, CA 92701

Subject: The Center at La Quinta Access Evaluation

Dear Mr. Britton:

INTRODUCTION

The firm of Urban Crossroads, Inc. is pleased to submit the following access evaluation for the proposed Centre of La Quinta development. The site is located south of Highway 111 and west of Dune Palms Road in the City of La Quinta. Exhibit A illustrates the location of the site and the proposed driveway locations.

The purpose of this evaluation is to determine if the proposed project access points serving the commercial site along Dune Palms Road, and additional traffic due to the development can be accommodated. This analysis focuses on the following intersections:

Dune Palms Road (NS) at:

- Highway 111 (EW)
- Project Driveway 7 (EW)
- Avenue 48 (EW)

PROJECT DESCRIPTION

The proposed site is anticipated to be developed with a gas station, 26,900 square feet of shopping center facilities, a discount club and 300 apartment units. Access will be provided through three additional driveways located along Dune Palms Road for the commercial developments and two driveways also along Dune Palms Road for the residential development. The driveways serving the commercial development will be unsignalized and provide restricted access (right turns in/out only) to the site except for the middle driveway (Driveway 7). This driveway will also provide additional left turn opportunities into the site from the south. The northerly driveway serving the proposed apartment development will also provide right in/out and left in access with the southerly driveway being restricted to right turns in/out only.

PROJECT TRIP GENERATION

Table 1 presents the trip generation rates for the proposed site. The trip rates are based on data collected by the Institute of Transportation Engineers (ITE) and included in the Trip Generation manual, 7th Edition, 2003. In order to ensure a conservative estimate of traffic generated by the proposed developments, a standard deviation has been applied to the trip generation estimates to reflect a 75 percent confidence level in the trip estimates. Table 2 summarizes the trip generation for the proposed development. As indicated in Table 2, the proposed development is anticipated to generate approximately 13,833 trips per day with 718 trips during the AM peak hour and 1,695 trips during the PM peak hour. It should be noted that a portion of the trips (25 percent) are anticipated to be due to pass-by traffic. Pass by trips are defined as an intermediate stop between a primary origin and destination. Appendix "A" contains a comprehensive description of these types of trips.

The existing traffic both on the east side of Dune Palms Road and the existing Wal-Mart/retail site has been estimated to determine the potential impact associated with the

proposed access points along Dune Palms Road. Table 3 summarizes the trip generation due to the existing land uses.

PROJECT TRIP DISTRIBUTION

Trip distribution represents the directional orientation of traffic to and from the project site. Trip distribution is heavily influenced by the geographical location of the site, the location of residential, commercial, employment and the proximity to the regional roadway system. The directional orientation of traffic was determined by evaluating existing and proposed land uses and highways within the community.

The project trip distribution for this study has been based upon near-term conditions, based upon those highway facilities which are either in place or will be completed over the next few years, which represents the opening occupancy time-frame for the proposed development. The project trip distribution patterns for the project are graphically depicted on Exhibits B through F.

It is anticipated that the existing commercial uses, on the west side of Dune Palms Road will also use the new driveways to access the site. Similarly, the existing uses on the east side of Dune Palms Road have also been rerouted to account for turn restriction due to the proposed median on Dune Palms Road. Exhibits G through Q illustrate the revised distribution patterns for these existing uses.

PROJECT TRAFFIC VOLUMES

The assignment of traffic from the site to the adjoining roadway system has been based upon the site's trip generation and trip distribution patterns. Based on the identified project traffic generation and distribution, project AM and PM peak hour intersection turning movement volumes for the access points are shown on Exhibits R and S.

INTERSECTION ANALYSIS

The current technical guide to the evaluation of traffic operations is the 2000 Highway Capacity Manual (HCM) (Transportation Research Board Special Report 209). The HCM defines level of service as a qualitative measure which describes operational conditions within a traffic stream, generally in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. The criteria used criteria used to evaluate LOS (Level of Service) conditions vary based on the type of roadway and whether the traffic flow is considered interrupted or uninterrupted.

The definitions of level of service for uninterrupted flow (flow unrestrained by the existence of traffic control devices) are:

- LOS "A" represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream.

- LOS "B" is in the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.

- LOS "C" is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream.

- LOS "D" represents high-density but stable flow. Speed and freedom to maneuver are severely restricted, and the driver experiences a generally poor level of comfort and convenience.

- LOS "E" represents operating conditions at or near the capacity level. All speeds are reduced to a low, but relatively uniform value. Small increases in flow will cause breakdowns in traffic movement.

- LOS "F" is used to define forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point. Queues form behind such locations.

The definitions of level of service for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control.

The level of service is typically dependent on the quality of traffic flow at the intersections along a roadway. The HCM methodology expresses the level of service at an intersection in terms of delay time for the various intersection approaches. The HCM uses different procedures depending on the type of intersection control. The levels of service determined in this study are determined using the HCM methodology.

For signalized intersections, average total delay per vehicle for the overall intersection is used to determine level of service. Levels of service at signalized study intersections have been evaluated using an HCM intersection analysis program.

The study area intersections which are stop sign controlled with stop control on the minor street only have been analyzed using the unsignalized intersection methodology of the HCM. For these intersections, the calculation of level of service is dependent on the occurrence of gaps occurring in the traffic flow of the main street. Using data collected describing the intersection configuration and traffic volumes at the study area locations, the level of service has been calculated. The level of service criteria for this type of intersection analysis is based on total delay per vehicle for the worst minor street movements.

The levels of service are defined for the various analysis methodologies as follows:

LEVEL OF SERVICE	AVERAGE TOTAL DELAY PER VEHICLE (SECONDS)	
	SIGNALIZED	UNSIGNALIZED
A	0 to 10.00	0 to 10.00
B	10.01 to 20.00	10.01 to 15.00
C	20.01 to 35.00	15.01 to 25.00
D	35.01 to 55.00	25.01 to 35.00
E	55.01 to 80.00	35.01 to 50.00
F	80.01 and up	50.01 and up

The LOS analysis for signalized intersections has been performed using optimized signal timing. Signal timing optimization has considered pedestrian safety and signal coordination requirements. Appropriate times for pedestrian crossings have also been considered in the signalized intersection analysis. Saturation flow rates of 1,900 vehicles per hour of green (vphg) have been assumed for all capacity analysis.

Existing peak hour traffic operations have been evaluated for study area intersections. The results of this analysis are summarized in Table 4, along with the existing intersection geometrics and traffic control devices at each analysis location (See Exhibit T) Existing intersection level of service calculations are based upon manual AM and PM peak hour turning movement counts made for Urban Crossroads, Inc. in June, 2004 (see Exhibits U and V). The existing traffic counts were multiplied by 1.3 to reflect a peak seasonal difference of 30 percent. Traffic count worksheets are included in Appendix "B".

Existing HCM calculation worksheets are provided in Appendix "C".

Level of Service at Existing Plus Project Conditions

Existing Plus Project conditions intersection levels of service for the existing network are shown in Table 5. Table 5 shows HCM calculations based on the geometrics at the study area intersections without and with improvements. Existing Plus Project AM and PM peak hour intersection turning movement volumes are shown on Exhibits W and X, respectively. These volumes have been increased by 3 percent along Highway 111 and 6 percent along Dune Palms Road and Avenue 48 to account for areawide growth.

Based on the analysis presented above, it appears that the project will not have a significant level of service impact on the study intersections with the addition of the proposed access driveways. The HCM calculation worksheets are provided in Appendix "D".

ACCESS EVALUATION

The Auxiliary Lanes and Traffic Impact Studies Required for Proposed Development Projects, (City of La Quinta Engineering Bulletin No. 03-08), provides criterion for the requirement of left and right turn auxiliary lane for future developments. As the bulletin indicates, a right-turn deceleration lane with taper and storage length is required for any driveway located on a Primary Arterial street or higher, with a projected peak hour right ingress turning volume greater than 50 vehicles per hour (vph). It also indicates that a left turn deceleration lane with taper and storage length is required for any driveway with a projected peak hour left ingress turning volume greater than 25 vehicles per hour (vph). Appendix "E" contains the Auxiliary Lanes and Traffic Impact Studies Required for Proposed Development Projects, provided by the City of La Quinta Transportation Department. The criteria typically used to determine the storage length of a turn pocket is one foot of storage for every turning vehicle during the peak hour with a minimum storage length of 100 feet.

Based on the City's criteria, Exhibit Y illustrates the recommended pocket lengths at the project driveways along Dune Palms Road. These recommendations are described below:

1. Construct a 200 foot (minimum) southbound right turn lane at Driveway 7.
2. Construct a 350 foot (minimum) northbound right turn lane at Driveway 7.
3. Construct a 200 foot (minimum) southbound right turn lane at Driveway 8.
4. Construct a 200 foot (minimum) southbound left turn lane at Driveway 14.
5. Construct a 100 foot (minimum) northbound left turn at Driveway 9.
6. Construct a 100 foot (minimum) southbound right turn lane at Driveway 9.
7. Construct a 150 foot (minimum) southbound right turn lane at Driveway 10.

If you have any questions regarding this evaluation, please give me a call at (949) 660-1994 x209.

Respectfully submitted,

URBAN CROSSROADS, INC.

Scott Sato, P.E.
Associate Principal

SS:mg
JN:02051-03

Attachments

TABLE 1

TRIP GENERATION RATES[1]

LAND USE	ITE CODE	QUANTITY	UNITS[2]	PEAK HOUR TRIP RATES						DAILY
				AM			PM			
				IN	OUT	TOTAL	IN	OUT	TOTAL	
PROJECT:										
Discount Club	861	137.65	TSF	0.98	0.39	1.37	3.5	3.5	7	56.15
Shopping Center 2	820	26.9	TSF	1.77	1.12	2.89	4.20	4.55	8.75	86.42
Gasoline/Service Station	944	12	VEH. FUELING POS.	8.19	8.19	16.38	10.28	10.28	20.56	239.75
Apartment	220	300	DU	0.24	1	1.24	0.93	0.51	1.44	9.74
EXISTING DEVELOPMENT:										
Free-Standing Discount Superstore	813	219.822	TSF	1.71	1.64	3.35	2.94	3.04	5.98	50.72
20,000 Sq. Ft. Shopping Center	820	20	TSF	2.67	1.71	4.38	6.51	7.06	13.57	140.66
Gasoline/Service Station w/Conven. Mkt.	945	12	VEH. FUELING POS.	8.04	8.04	16.08	10.68	10.68	21.36	230.94
23,500 Sq Ft. Shopping Center	820	23.5	TSF	2.56	1.63	4.19	6.24	6.76	13	134.12
Mini Warehouse	151	567	STORAGE UNITS	0.08	0.08	0.16	0.13	0.07	0.2	0.82
Warehousing	150	35.749	TSF	0.98	0.21	1.19	0.32	0.95	1.27	9.01
General Office Building	710	30.297	TSF	3.32	0.457	3.78	0.86	4.23	5.09	23.69
General Office Building	710	15.488	TSF	3.62	0.497	4.12	1.29	6.29	7.58	26.62
General Office Building	710	73.674	TSF	2.97	0.407	3.38	0.60	2.96	3.56	20.44
Bus Storage Yard[3]	N/A	63	BUSSES	0.63	0.08	0.71	0.08	0.05	0.13	2.86
Shopping Center 1	820	86.25	TSF	1.77	1.12	2.89	4.2	4.55	8.75	86.42

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[1] Source: ITE (Institute of Transportation Engineers) Trip Generation Manual, 7th Edition, 2003.

[2] DU = Dwelling Units
TSF = Thousand Square Feet
VEH. FUELING POS. = Number of Fuel Pumps
STORAGE UNITS = Number of Storage Units
BUSSES = Number of Busses

[3] Source: DSUSD Transportation Department

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TABLE 2

PROJECT TRIP GENERATION SUMMARY

LAND USE	QUANTITY	UNITS[1]	PEAK HOUR						DAILY
			AM			PM			
			IN	OUT	TOTAL	IN	OUT	TOTAL	
Discount Club	137.65	TSF	135	54	189	482	482	964	7,729
Shopping Center 2	26.9	TSF	48	30	78	113	122	235	2,325
- "Pass-By" Trips (25%)[2]			-12	-8	-20	-28	-31	-59	-581
Subtotal (Shopping Center 2)			36	23	59	85	92	176	1,744
Gasoline/Service Station	12	VEH. FUELING POS.	98	98	196	123	123	246	2,877
- "Pass-By" Trips (25%)[2]			-25	-25	-49	-31	-31	-62	-719
- Internal (25%)[3]			-25	-25	-49	-31	-31	-62	-719
Subtotal (Gasoline/Service Station)			49	49	98	62	62	123	1,439
Apartment	300	DU	72	300	372	279	153	432	2,922
TOTAL			**292**	**426**	**718**	**907**	**788**	**1,695**	**13,833**

[1] DU = Dwelling Units
TSF = Thousand Square Feet
VEH. FUELING POS. = Number of Fuel Pumps

[2] "Pass-By" reduction rates have been used to account for traffic that will access the site as an intermediate stop on the way to a primary destination.

[3] A reduction of trips based on internal interaction between the Discount Club and the Gasoline/Service Station.

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TABLE 3

EXISTING DEVELOPMENT LAND USE AND TRIP GENERATION

PROJECT					PEAK HOUR						
					AM			PM			
#	NAME	LAND USE	QUANTITY	UNITS[1]	IN	OUT	TOTAL	IN	OUT	TOTAL	DAILY
1	Wal-Mart	Free-Standing Discount Superstore	219.822	TSF	376	361	737	646	668	1314	11149
		- "Pass-By" Trips (25%)[2]			-94	-90	-184	-162	-167	-329	-2,787
		Subtotal (Wal-Mart)			282	271	553	485	501	986	8,362
2	20,000 S.F. Retail	20,000 Sq. Ft. Shopping Center	20	TSF	53	34	87	130	141	271	2813
		- "Pass-By" Trips (25%)[2]			-13	-9	-22	-33	-35	-68	-703
		Subtotal (20,000 S.F. Retail)			40	26	65	98	106	203	2,110
3	Chevron w/ Mini Mart	Gasoline/Service Station w/Conven. Mkt.	12	VEH. FUELING POS	96	96	192	128	128	256	2771
		- "Pass-By" Trips (25%)[2]			-24	-24	-48	-32	-32	-64	-693
		Subtotal (Chevron w/ Mini Mart)			72	72	144	96	96	192	2,078
4	23,500 S.F. Retail Center	23,500 Sq Ft. Shopping Center	23.5	TSF	60	38	98	147	159	306	3152
		- "Pass-By" Trips (25%)[2]			-15	-10	-25	-37	-40	-77	-788
		Subtotal (23,500 S.F. Retail Center)			45	29	74	110	119	230	2,364
5	All State Storage	Mini Warehouse	567	STORAGE UNITS	45	45	90	74	40	114	465
6	DSUSD Warehouse	Warehousing	35.749	TSF	35	8	43	11	34	45	322
7	DSUSD Transportation, Maintenance, & Operations	General Office Building	30.297	TSF	101	14	115	26	128	154	718
8	DSUSD Nutrition Services	General Office Building	15.488	TSF	56	8	64	20	97	117	412
9	DSUSD Main/Administration Office	General Office Building	73.674	TSF	219	30	249	44	218	262	1506
10	DSUSD Bus Storage	Bus Storage Yard[3]	63	BUSSES	40	5	45	5	3	3	180
11	Shopping Center 1	Shopping Center 1	86.25	TSF	152	97	249	362	392	754	7454
		- "Pass-By" Trips (25%)[2]			-38	-24	-62	-91	-98	-189	-1,864
		Subtotal (Shopping Center 1)			114	73	187	272	294	566	5,591
TOTAL					**1,049**	**580**	**1,628**	**1,240**	**1,636**	**2,871**	**24,107**

[1] TSF = Thousand Square Feet
VEH. FUELING POS. = Number of Fuel Pumps
STORAGE UNITS = Number of Storage Units
BUSSES = Number of Busses

[2] "Pass-By" reduction rates have been used to account for traffic that will access the site as an intermediate stop on the way to a primary destination.

[3] Source: DSUSD Transportation Department

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TABLE 4

INTERSECTION ANALYSIS FOR EXISTING CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (SECS.)		LEVEL OF SERVICE	
		NORTH-BOUND			SOUTH-BOUND			EAST-BOUND			WEST-BOUND						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Dune Palms Rd. (NS) at:																	
• SR-111 (EW)	TS	1	2	1	1	2	1	1	2	0	1	2	0	23.2	22.9	C	C
• Avenue 48 (EW)	TS	0	1	0	1.5	0.5	1	2	2	0	1	2	0	11.8	9.7	B	A

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[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; 1 = Improvement; > = Right Turn Overlap Phase; >> = Free Right Turn Lane

[2] Delay and level of service calculated using the following analysis software: Traffix, Version 7.6 R2 (2003). Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for worst individual movement (or movements sharing a single lane) are shown.

[3] TS = Traffic Signal
CSS = Cross Street Stop
AWS = All Way Stop

[4] -- Delay high, intersection unstable. LOS= "F".

[5] New intersection or lanes.

TABLE 5

INTERSECTION ANALYSIS FOR EXISTING + PROJECT CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (SECS.)		LEVEL OF SERVICE	
		NORTH-BOUND			SOUTH-BOUND			EAST-BOUND			WEST-BOUND						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Dune Palms Rd. (NS) at:																	
• SR-111 (EW)	TS	1	2	1	1	2	1	1	2	0	1	2	0	23.4	31.6	C	C
• Dwy. 7 (EW)	CSS	1	2	0	0	2	0	0	0	1	0	0	0	10.3	12.3	B	B
• Avenue 48 (EW)	TS	0	1	0	1.5	0.5	1	2	2	0	1	2	0	16.0	14.0	B	B

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[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

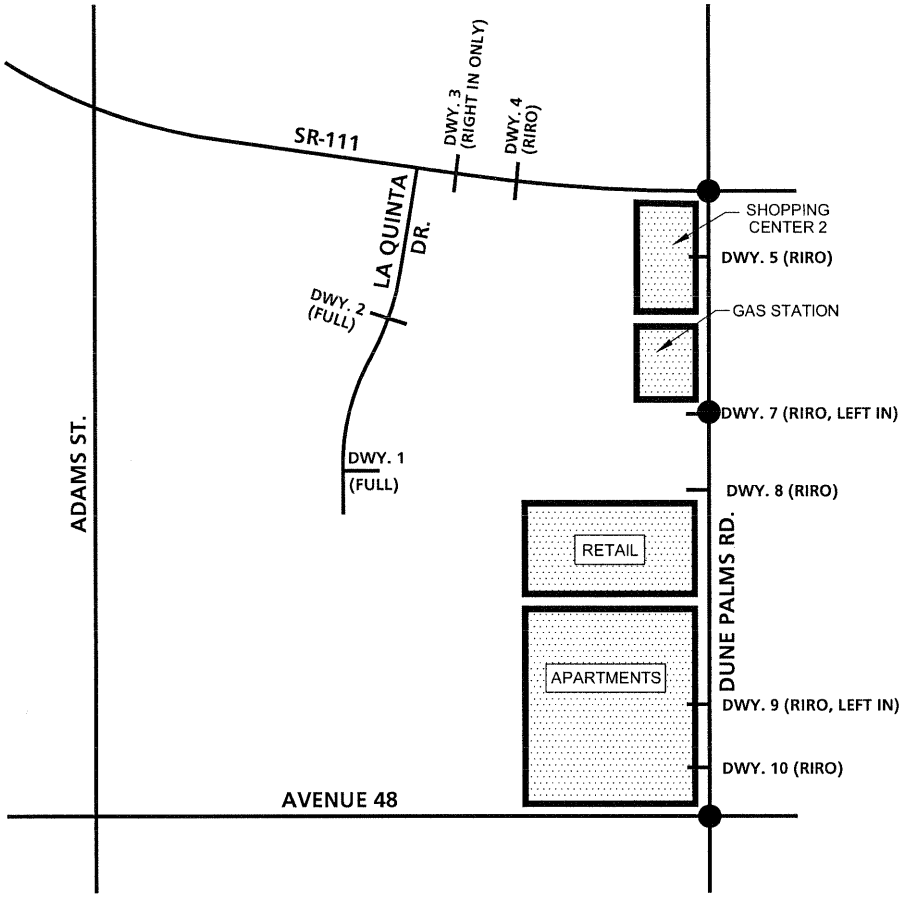
L = Left; T = Through; R = Right; 1 = Improvement; > = Right Turn Overlap Phase; >> = Free Right Turn Lane

[2] Delay and level of service calculated using the following analysis software: Traffix, Version 7.6 R2 (2003). Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for worst individual movement (or movements sharing a single lane) are shown.

[3] TS = Traffic Signal
CSS = Cross Street Stop
AWS = All Way Stop

EXHIBIT A

PROJECT LOCATION MAP



LEGEND:

● = INTERSECTION ANALYSIS LOCATION

RIRO = RIGHT-IN / RIGHT-OUT ONLY

N

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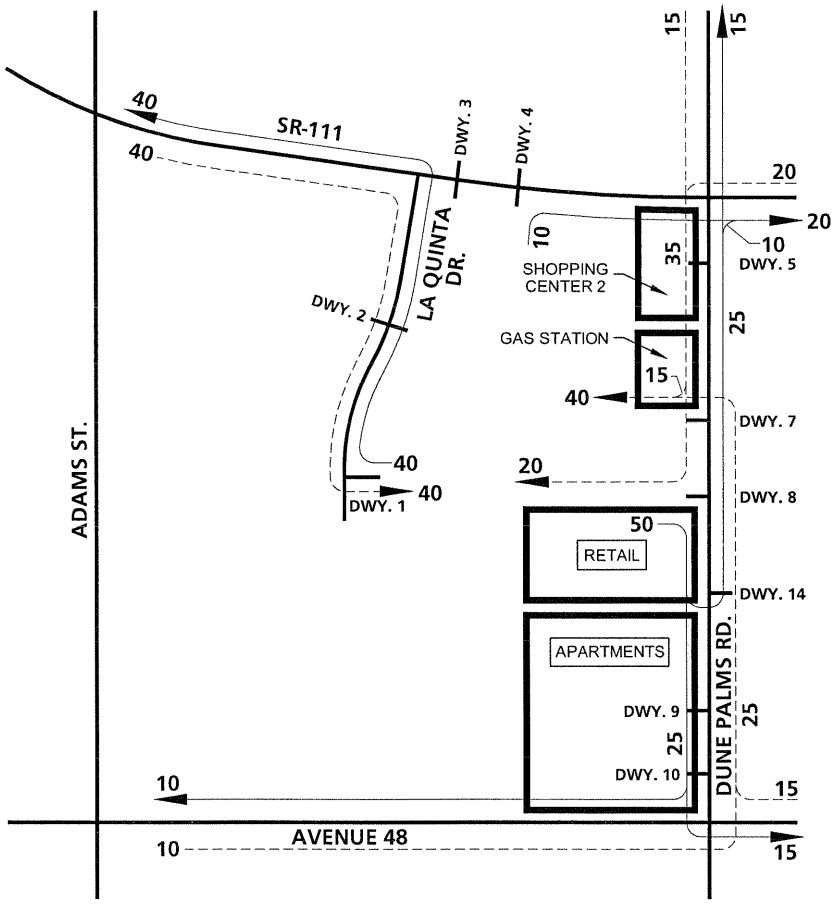
EXHIBIT B

PROJECT (DISCOUNT CLUB) TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

—— = OUTBOUND

- - - - = INBOUND

N

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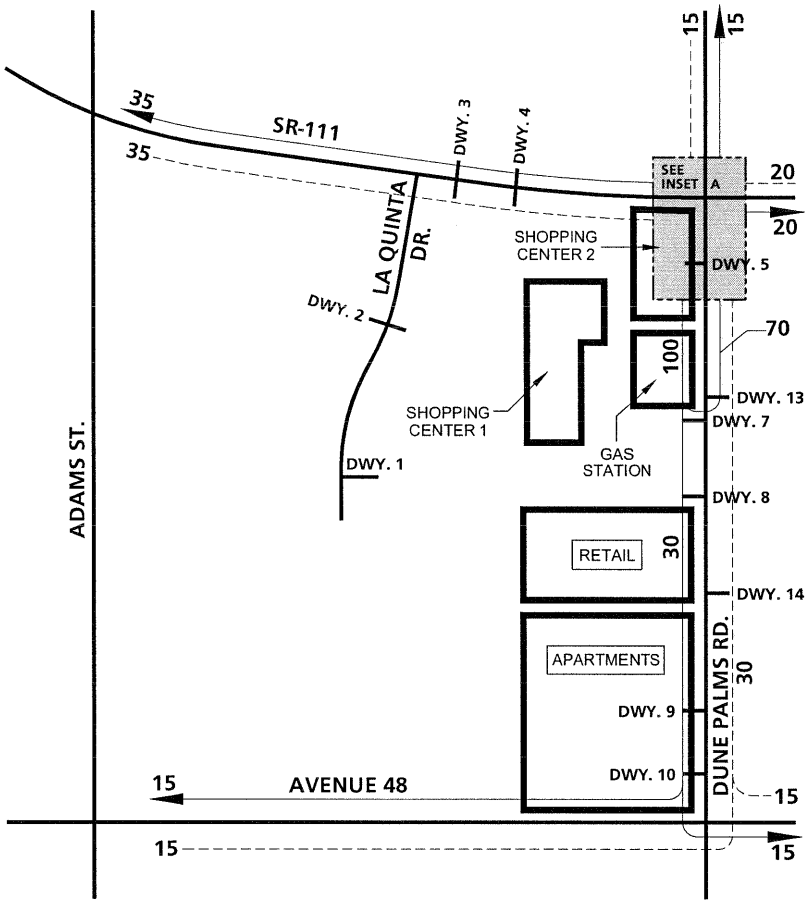
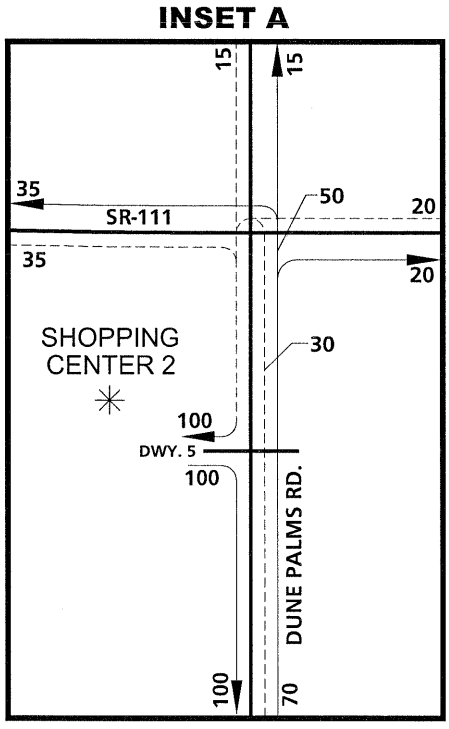
EXHIBIT C

PROJECT (SHOPPING CENTER 2) TRIP DISTRIBUTION





LEGEND:

10 = PERCENT TO/FROM PROJECT
——— = OUTBOUND
- - - - = INBOUND
RIRO = RIGHT IN/RIGHT OUT ONLY DRIVEWAY

N

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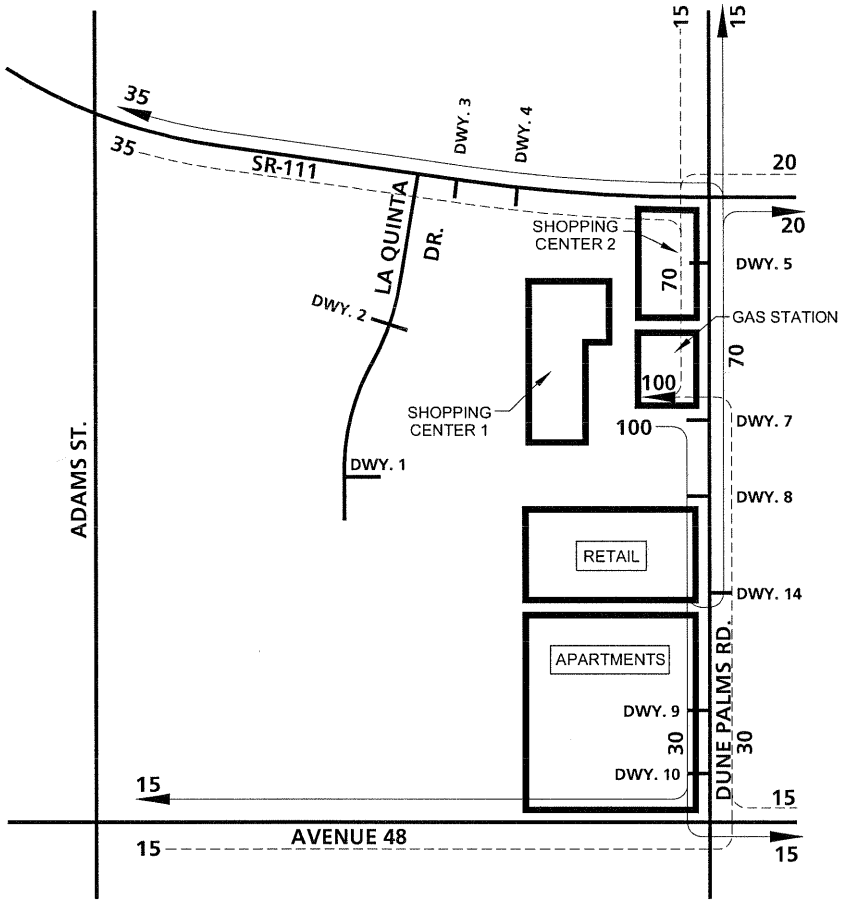
EXHIBIT D

PROJECT (GAS STATION) TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

—— = OUTBOUND

- - - - = INBOUND

N

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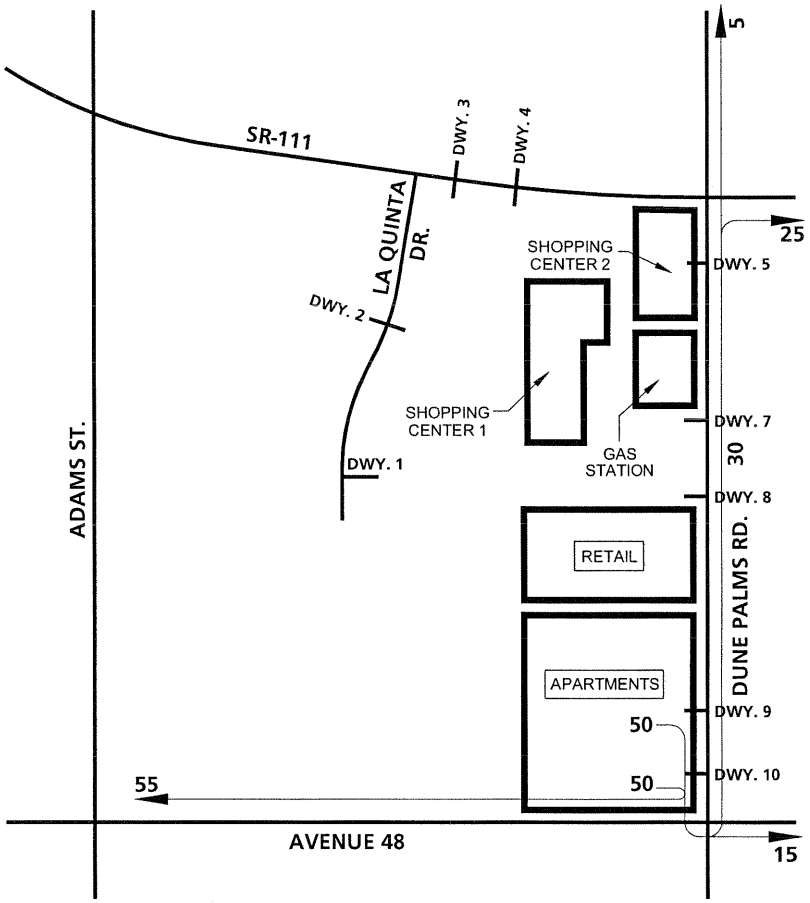
EXHIBIT E

PROJECT (APARTMENT OUTBOUND) TRIP DISTRIBUTION



LEGEND:

10 = PERCENT FROM PROJECT

N

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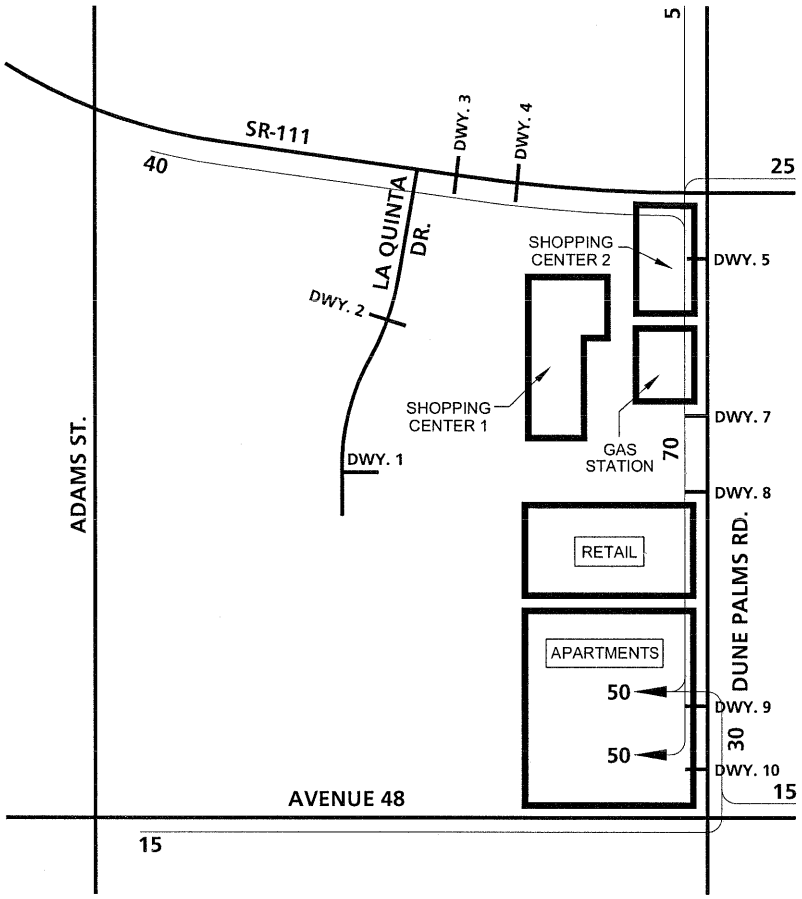
EXHIBIT F

PROJECT (APARTMENT INBOUND) TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO PROJECT

N

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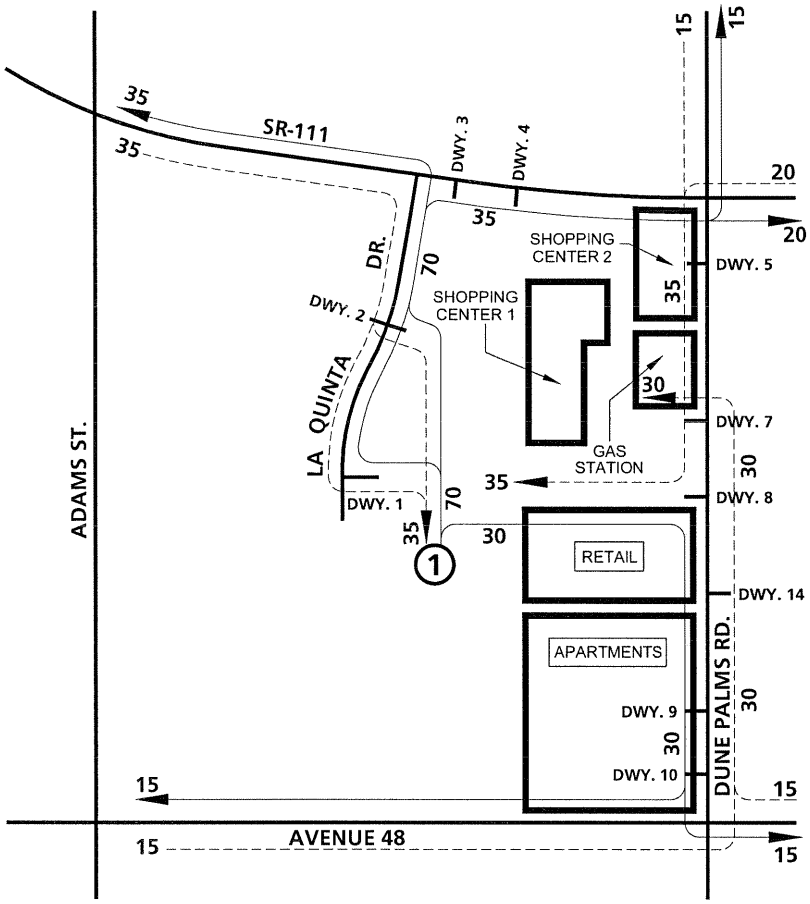
EXHIBIT G

WAL-MART TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

—— = OUTBOUND

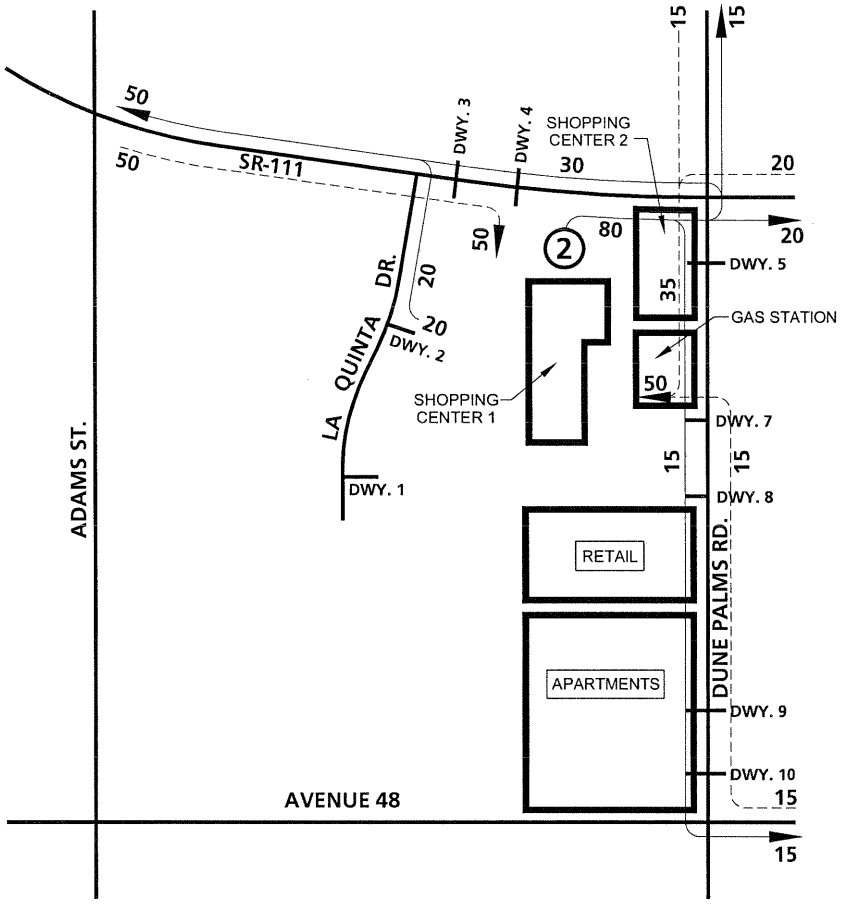
- - - - = INBOUND

N

URBAN CROSSROADS

EXHIBIT H

20,000 S.F. RETAIL TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

—— = OUTBOUND

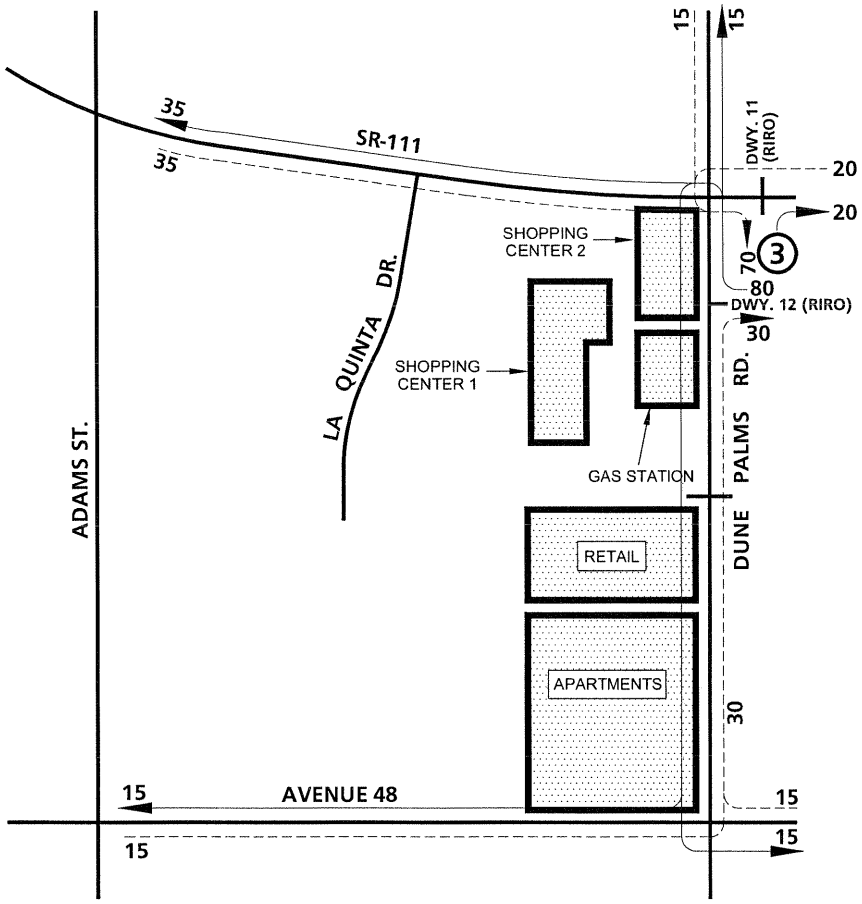
- - - - = INBOUND

N

URBAN CROSSROADS

EXHIBIT I

CHEVRON W/ MINI MART TRIP DISTRIBUTION



LEGEND:

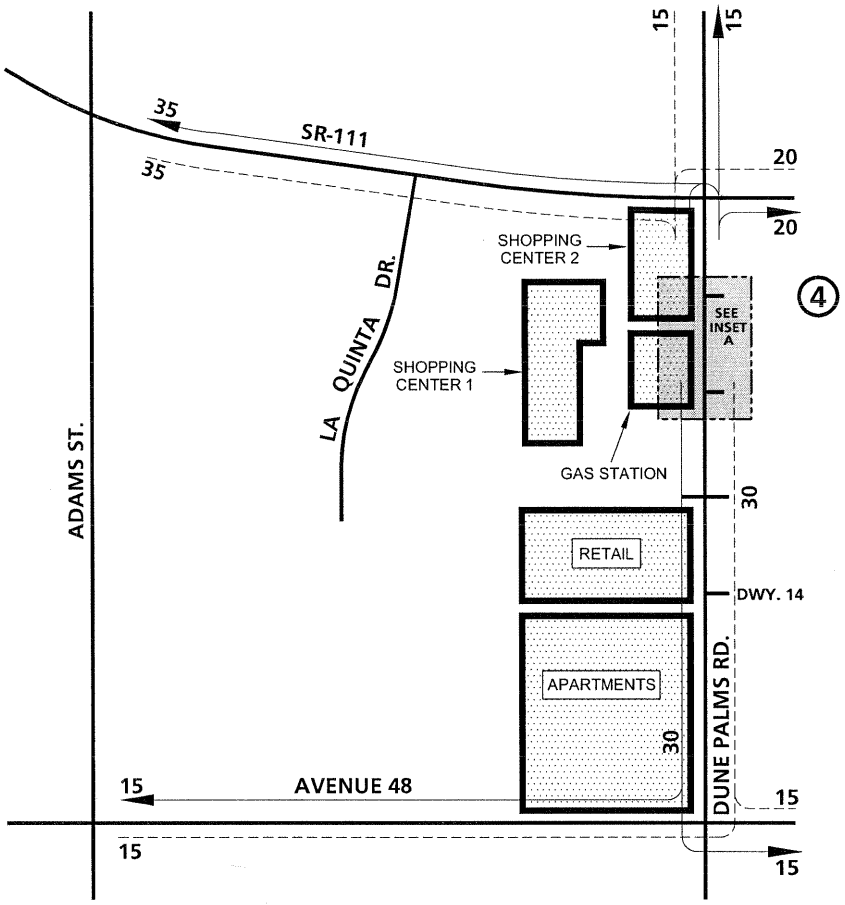
10 = PERCENT TO/FROM PROJECT
—— = OUTBOUND
- - - - = INBOUND
(3) = CHEVRON W/ MINI MART
RIRO = RIGHT IN/RIGHT OUT ONLY DRIVEWAY

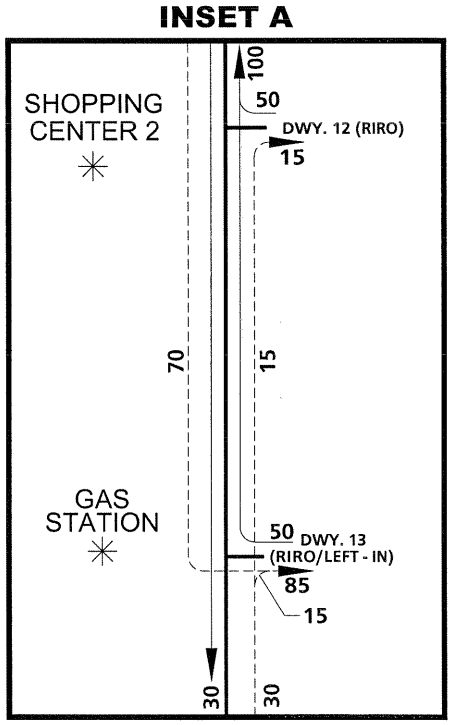
N

URBAN CROSSROADS

EXHIBIT J

23,500 S.F. RETAIL CENTER TRIP DISTRIBUTION





LEGEND:

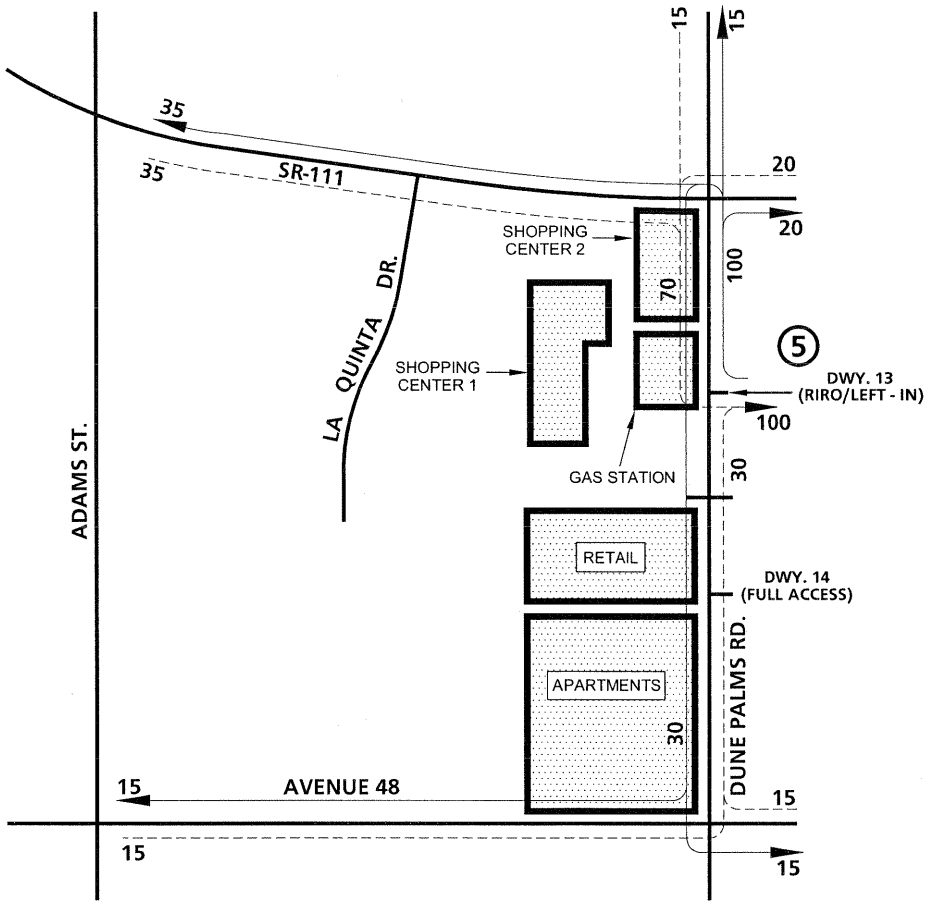
10 = PERCENT TO/FROM PROJECT
—— = OUTBOUND
- - - - = INBOUND
(4) = 23,500 S.F. RETAIL CENTER
RIRO = RIGHT IN/RIGHT OUT ONLY DRIVEWAY

N

URBAN CROSSROADS

EXHIBIT K

ALL STATE STORAGE TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

——— = OUTBOUND

- - - - = INBOUND

(5) = ALL STATE STORAGE

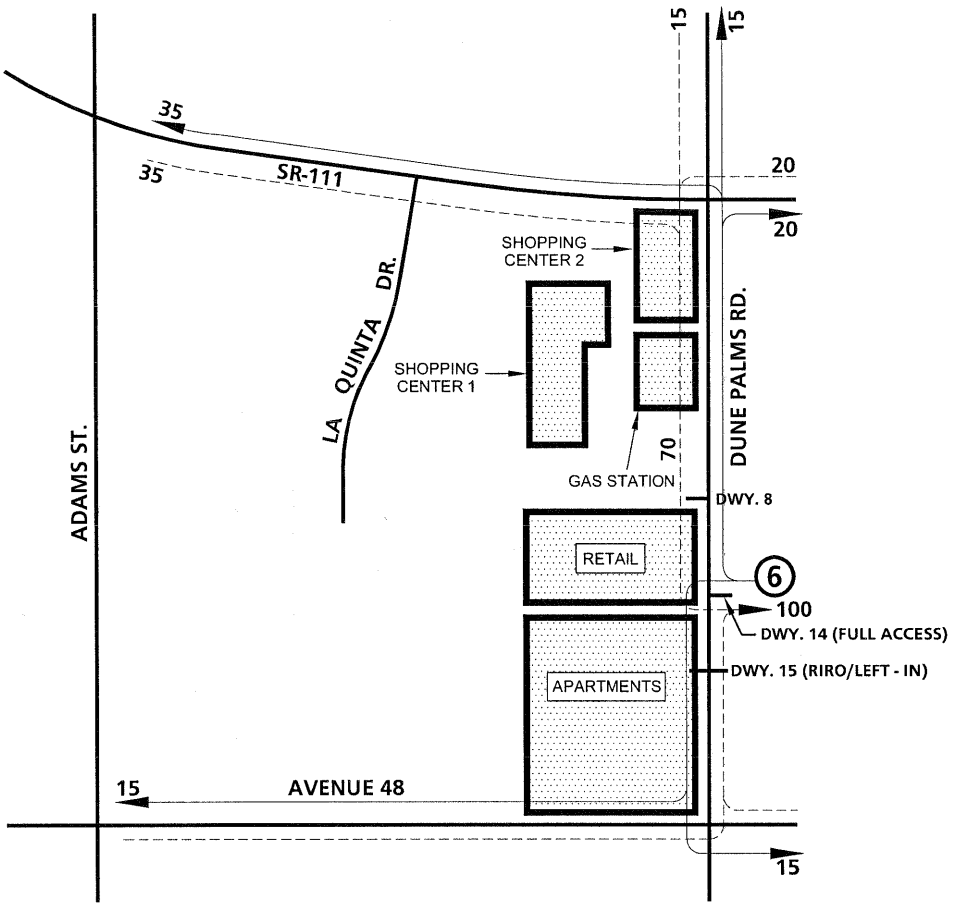
RIRO = RIGHT IN/RIGHT OUT ONLY DRIVEWAY

N

URBAN CROSSROADS

EXHIBIT L

DSUSD WAREHOUSE TRIP DISTRIBUTION



LEGEND:

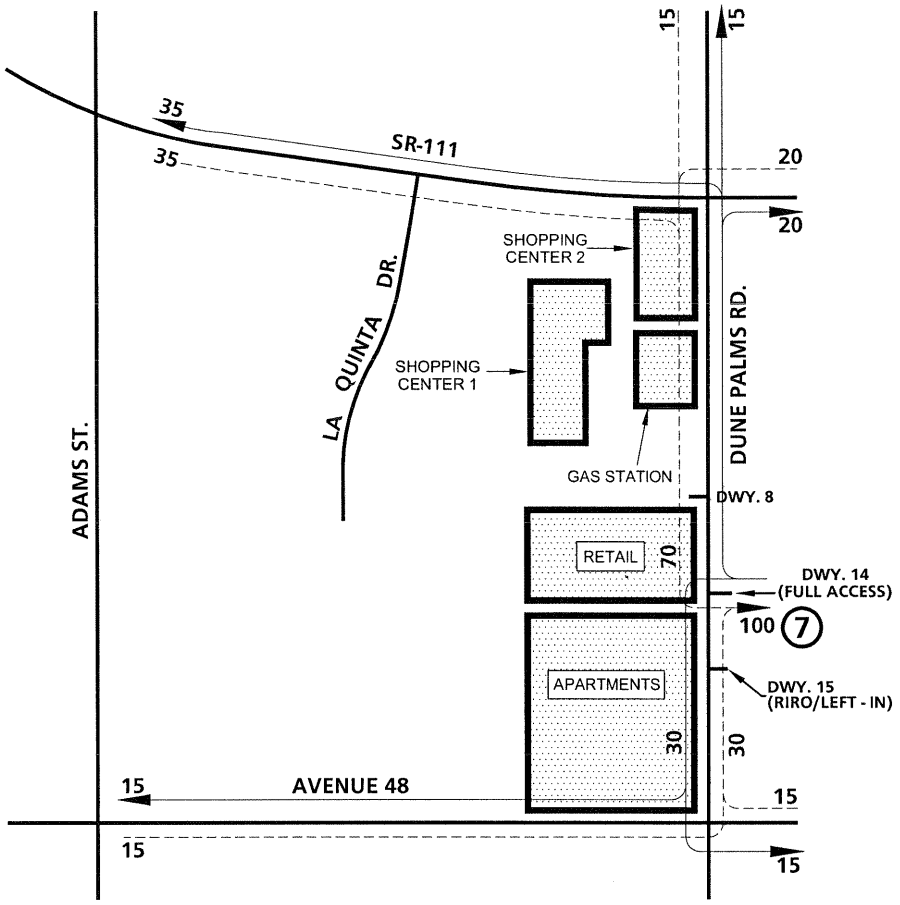
10 = PERCENT TO/FROM PROJECT
—— = OUTBOUND
- - - - = INBOUND
(6) = DSUSD WAREHOUSE
RIRO = RIGHT IN/RIGHT OUT ONLY DRIVEWAY

N

URBAN CROSSROADS

EXHIBIT M

DSUSD TRANSPORTATION, MAINTENANCE & OPERATIONS TRIP DISTRIBUTION



LEGEND:

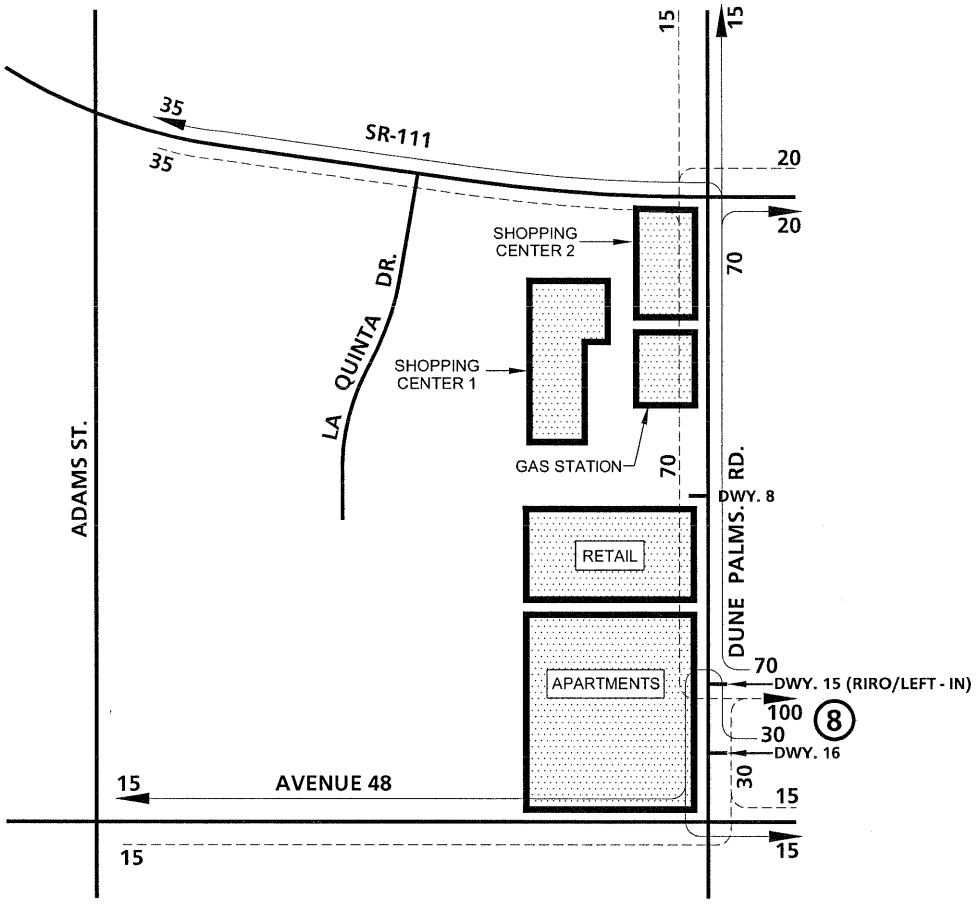
10 = PERCENT TO/FROM PROJECT
——— = OUTBOUND
- - - - = INBOUND
(7) = DSUSD TRANSPORTATION, MAINTENANCE & OPERATIONS
RIRO = RIGHT - IN/RIGHT - OUT

N

URBAN CROSSROADS

EXHIBIT N

DSUSD NUTRITION SERVICES TRIP DISTRIBUTION



LEGEND:

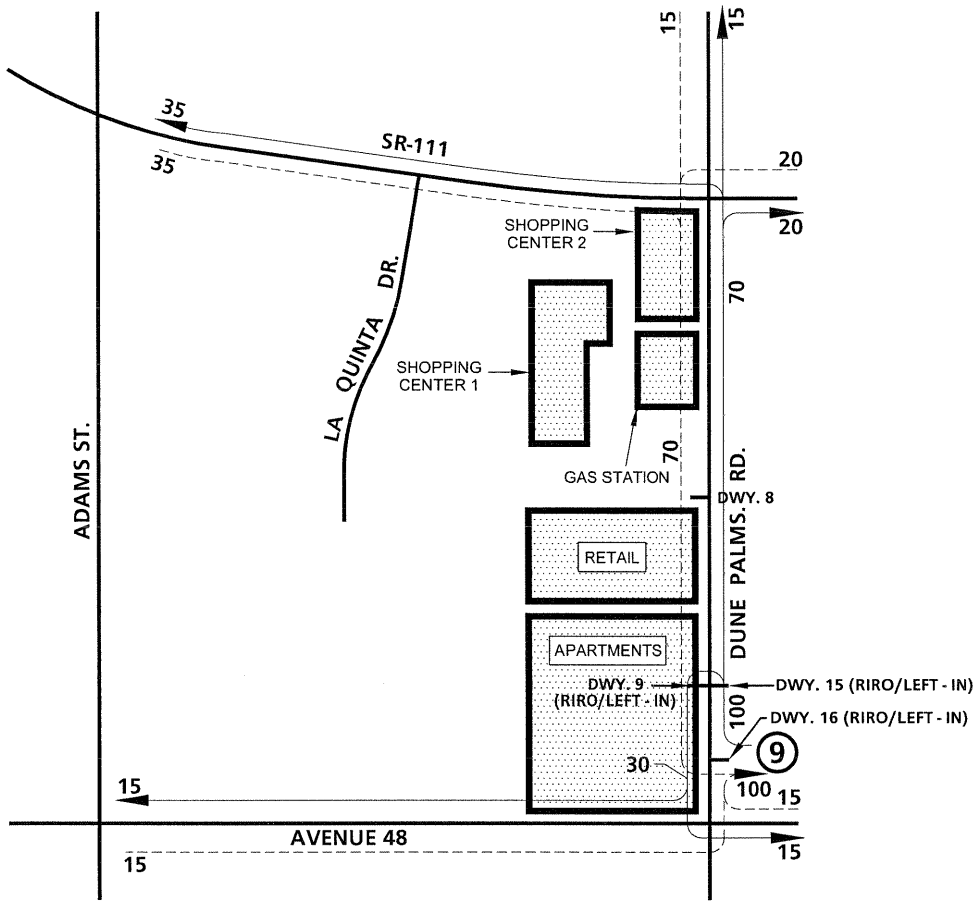
10 = PERCENT TO/FROM PROJECT
—— = OUTBOUND
- - - - = INBOUND
(8) = DSUSD NUTRITION SERVICES
RIRO = RIGHT - IN/RIGHT - OUT

N

URBAN CROSSROADS

EXHIBIT O

DSUSD MAIN/ADMINISTRATION OFFICE TRIP DISTRIBUTION



LEGEND:

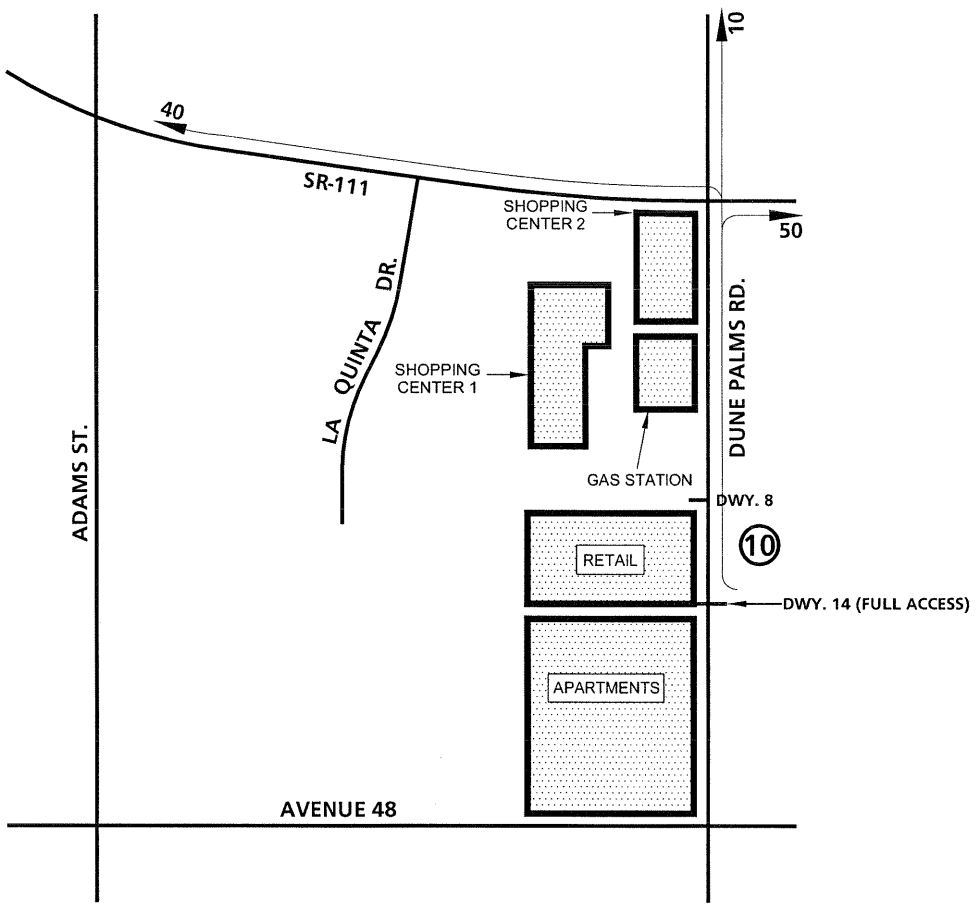
10 = PERCENT TO/FROM PROJECT
—— = OUTBOUND
- - - - = INBOUND
(9) = DSUSD MAIN/ADMINISTRATION OFFICE
RIRO = RIGHT - IN/RIGHT - OUT

N

URBAN CROSSROADS

EXHIBIT P

DSUSD BUS STORAGE TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

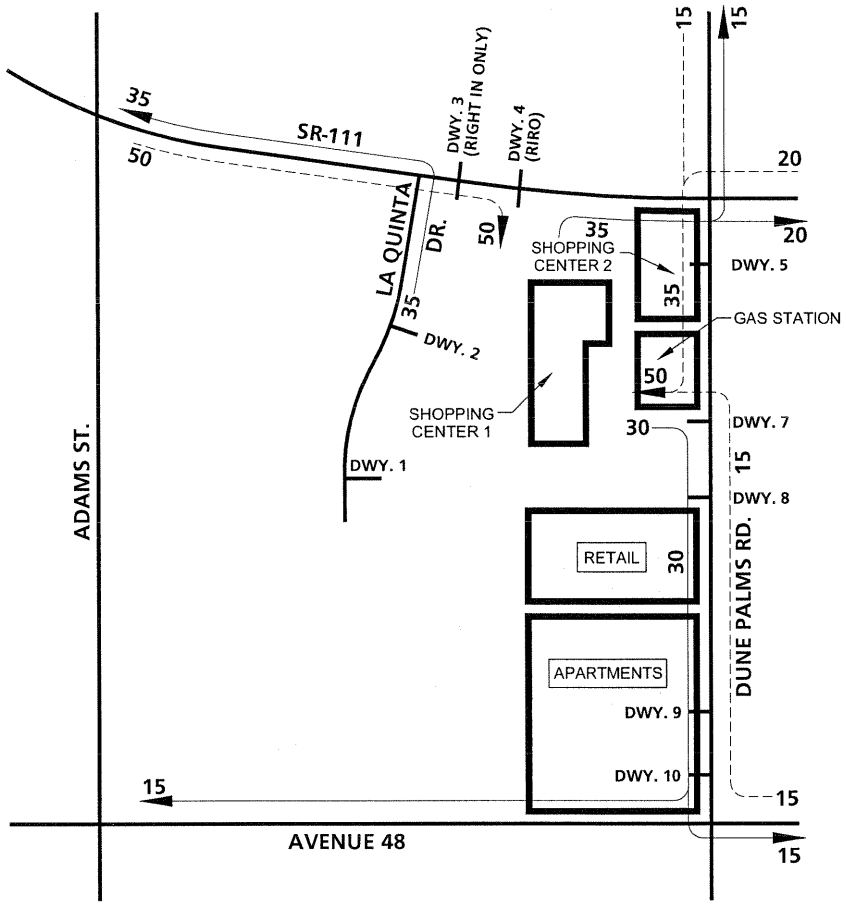
(10) = DSUSD BUS STORAGE

N

URBAN CROSSROADS

EXHIBIT Q

SHOPPING CENTER 1 TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT
—— = OUTBOUND
- - - - = INBOUND
RIRO = RIGHT IN/RIGHT OUT ONLY DRIVEWAY

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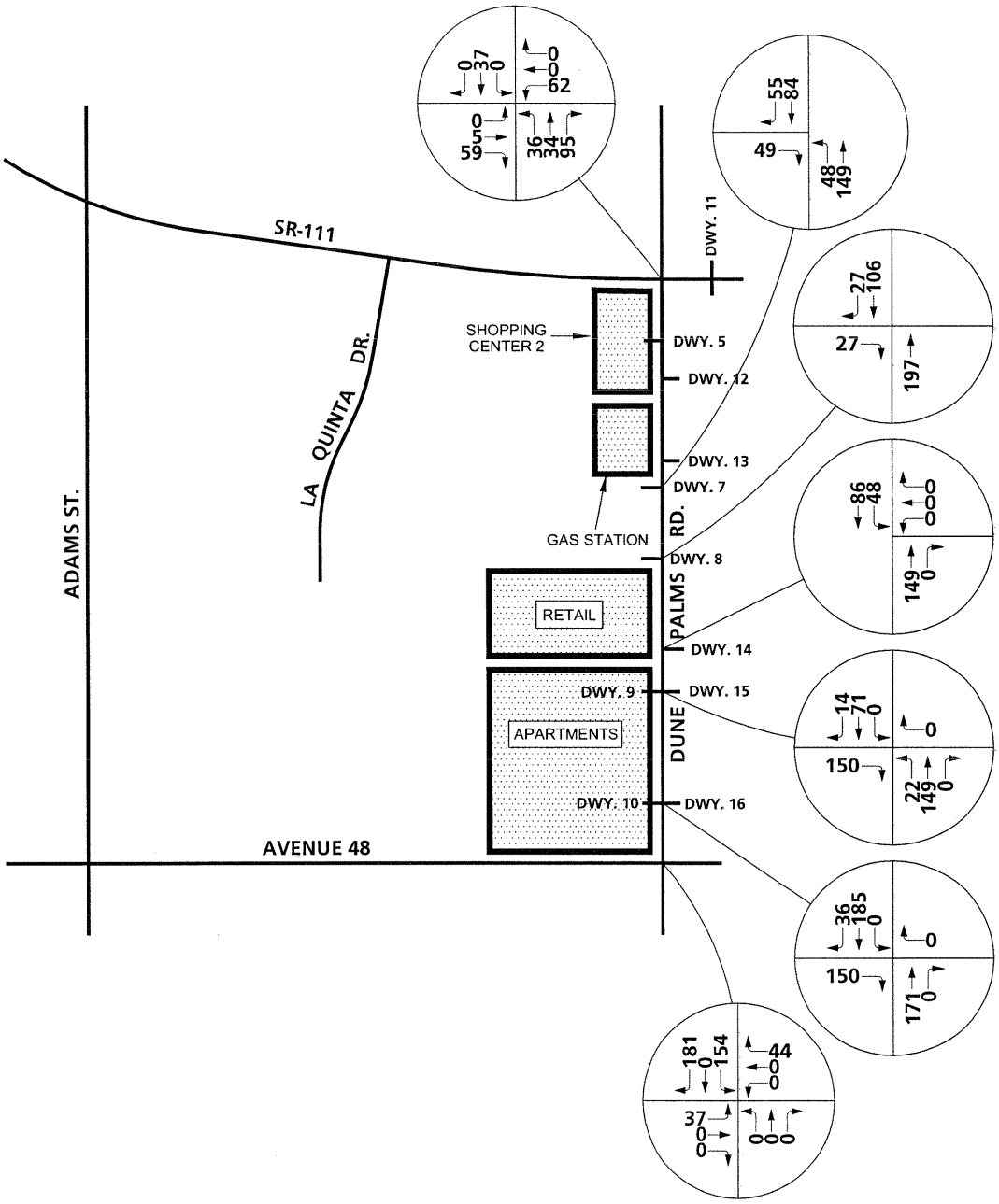
URBAN CROSSROADS

EXHIBIT R

TOTAL PROJECT AM PEAK HOUR INTERSECTION VOLUMES



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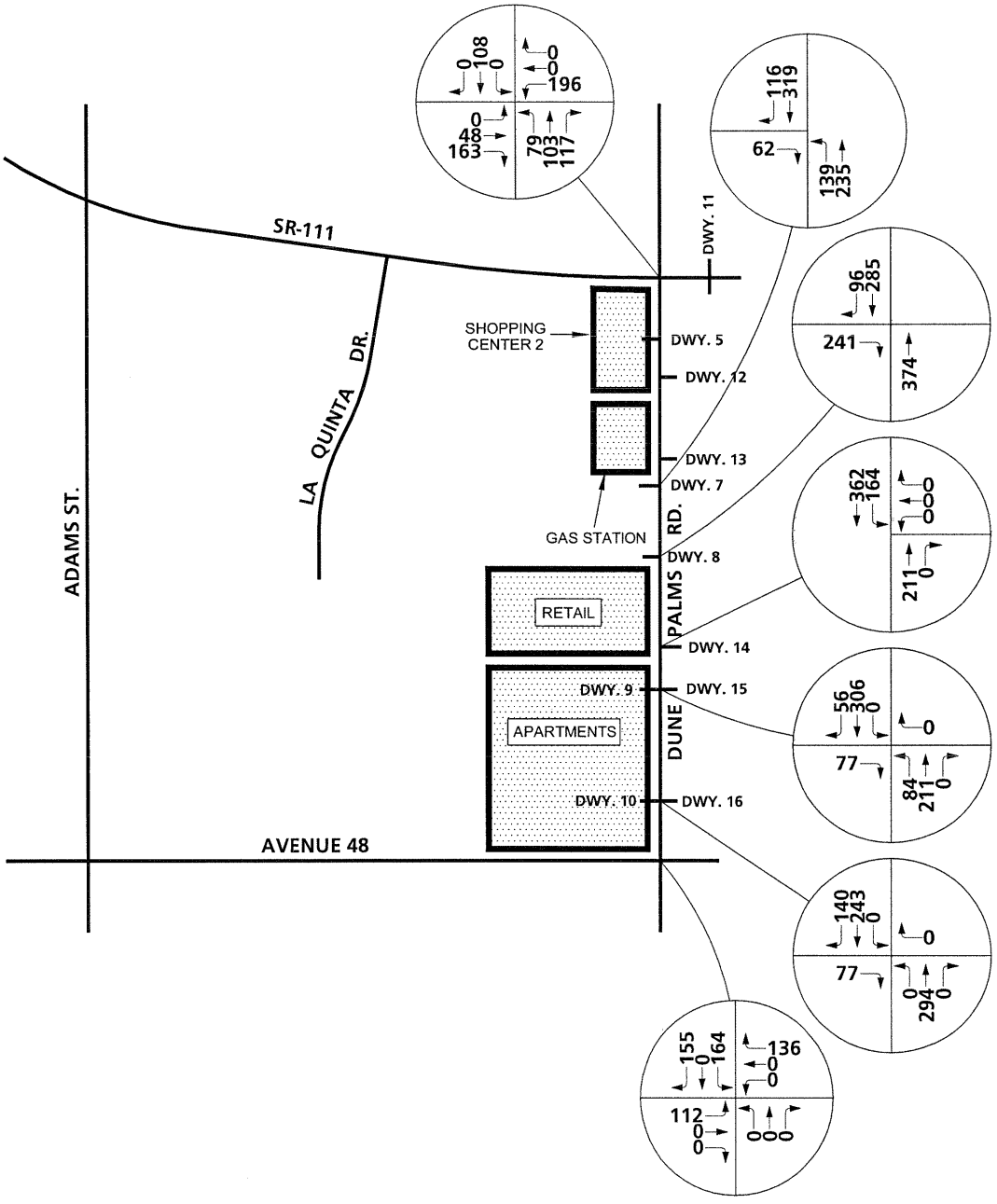
CENTRE AT LA QUINTA DEVELOPMENT, La Quinta, California - 02051:106

URBAN CROSSROADS

EXHIBIT S

TOTAL PROJECT PM PEAK HOUR INTERSECTION VOLUMES



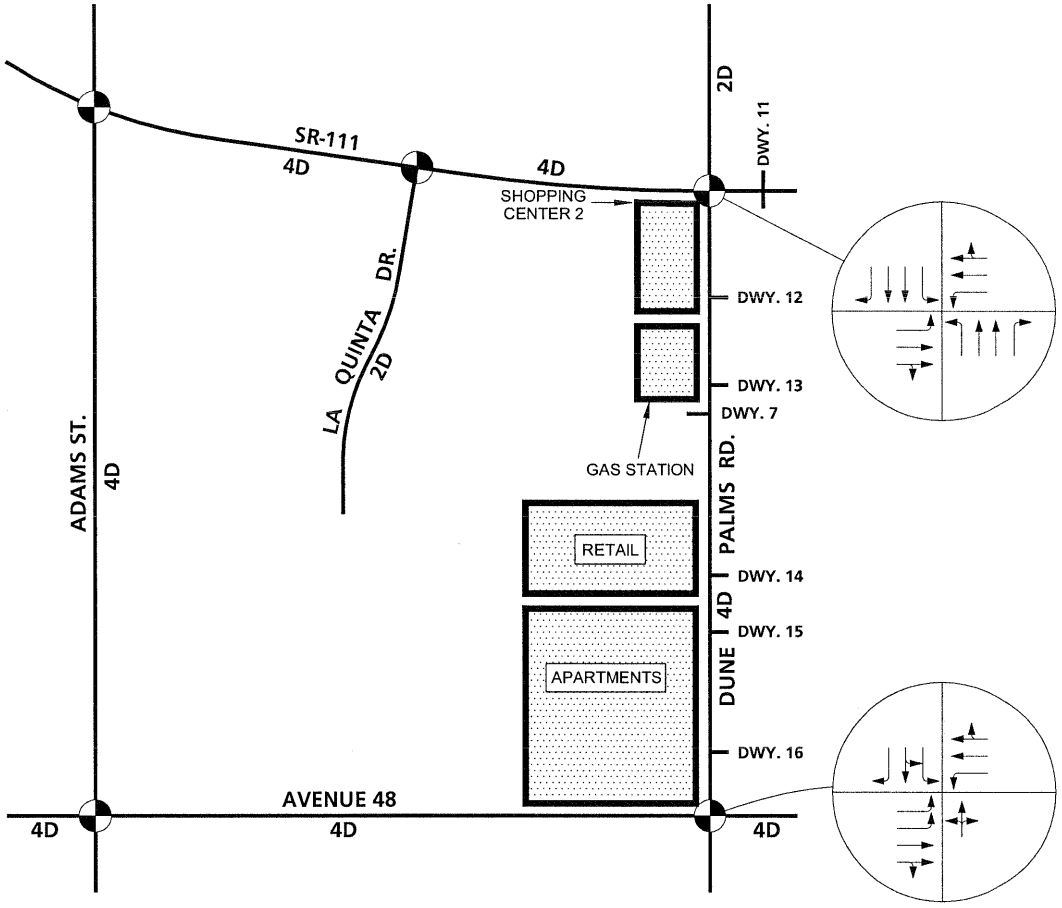
N

CENTRE AT LA QUINTA DEVELOPMENT, La Quinta, California - 02051:107

URBAN CROSSROADS

EXHIBIT T

EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS



LEGEND:

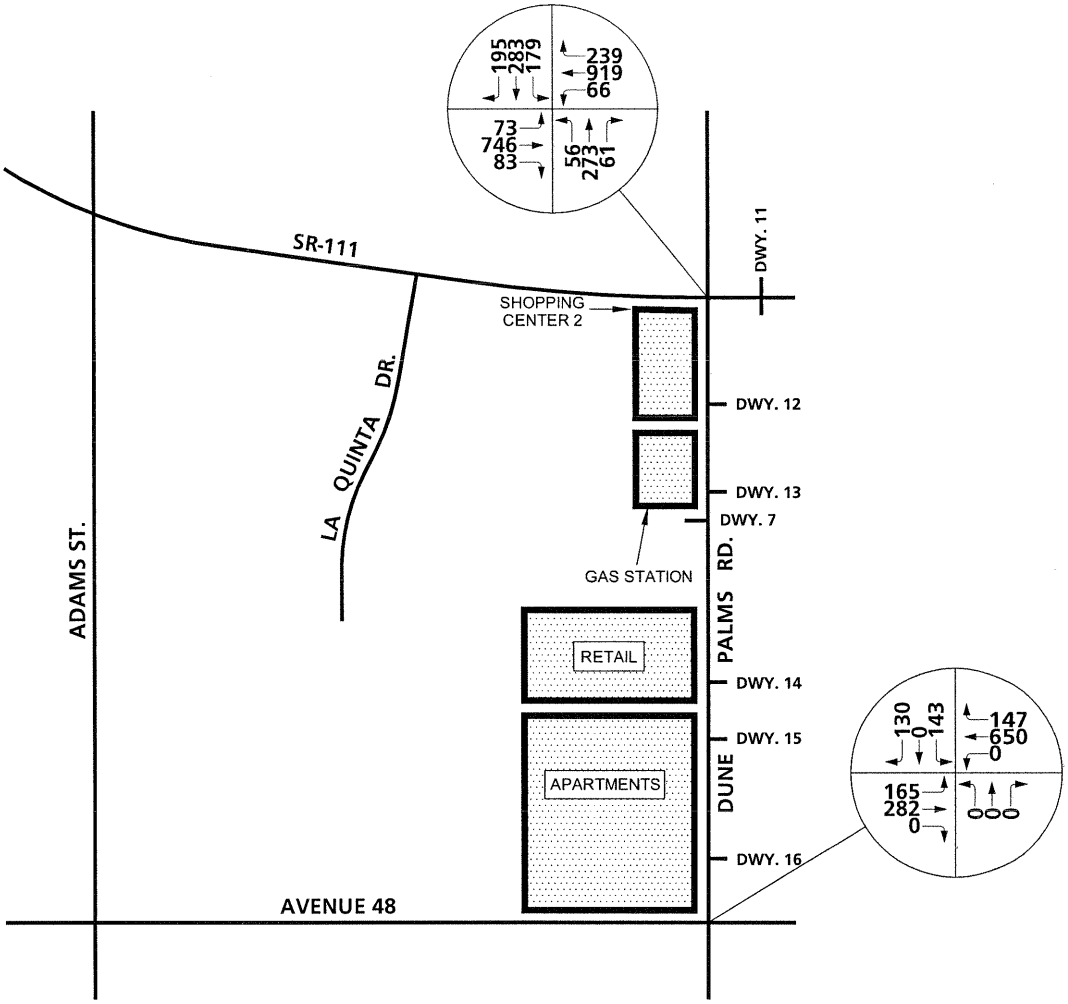
- = TRAFFIC SIGNAL
- 4 = NUMBER OF LANES
- D = DIVIDED
- U = UNDIVIDED

N

URBAN CROSSROADS

EXHIBIT U

EXISTING AM PEAK HOUR INTERSECTION VOLUMES



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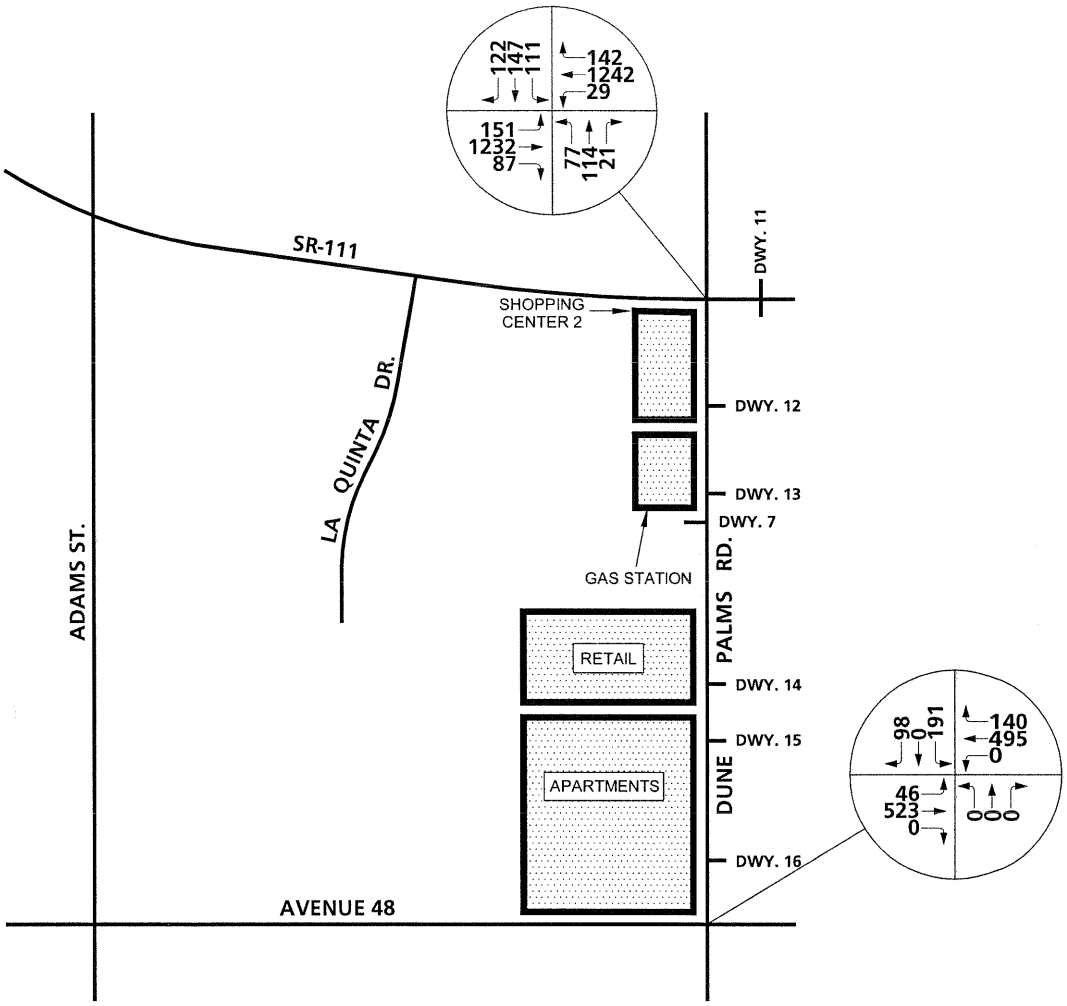
URBAN CROSSROADS

EXHIBIT V

EXISTING PM PEAK HOUR INTERSECTION VOLUMES

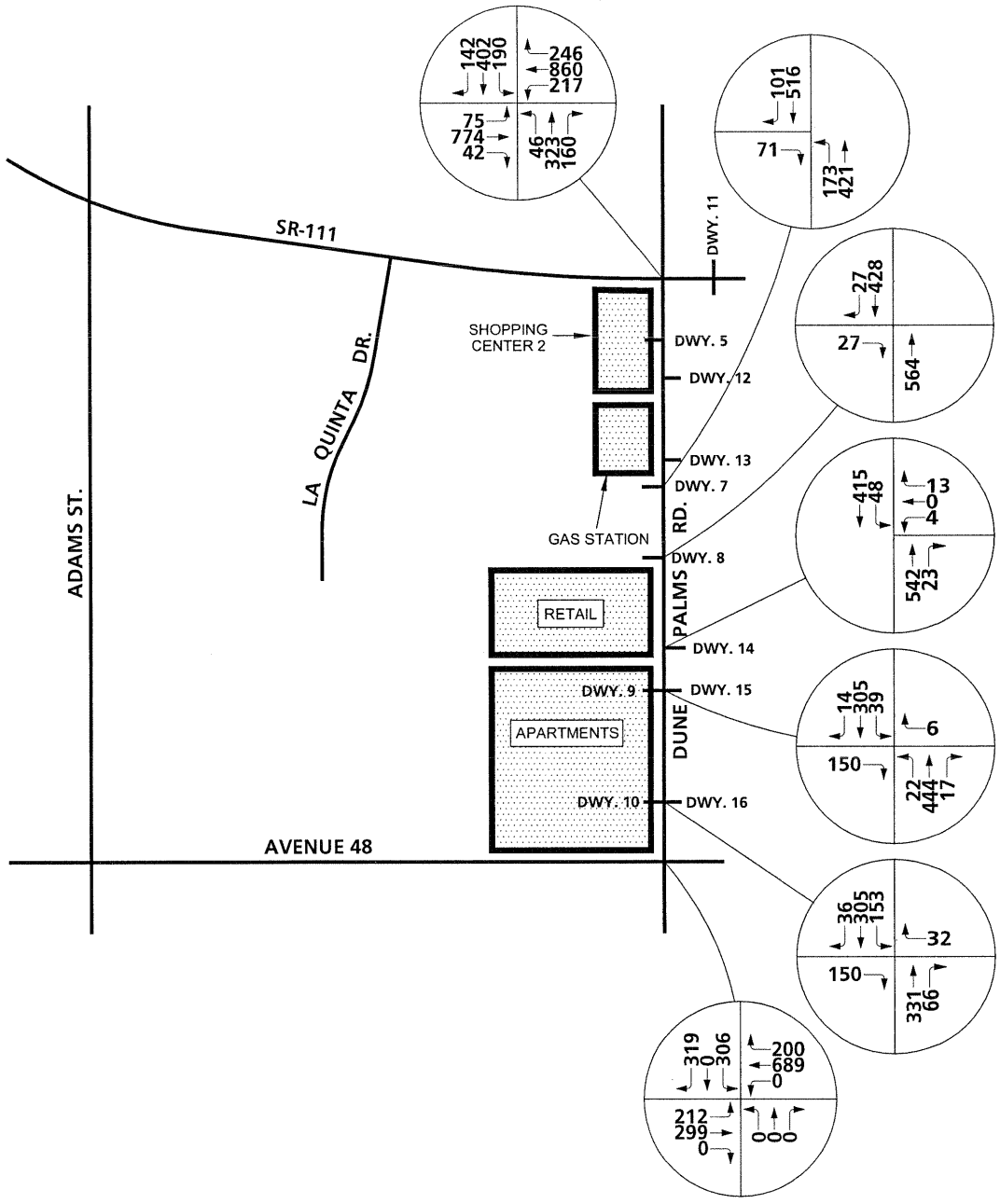


N

URBAN CROSSROADS

EXHIBIT W

EXISTING PLUS PROJECT AM PEAK HOUR INTERSECTION VOLUMES



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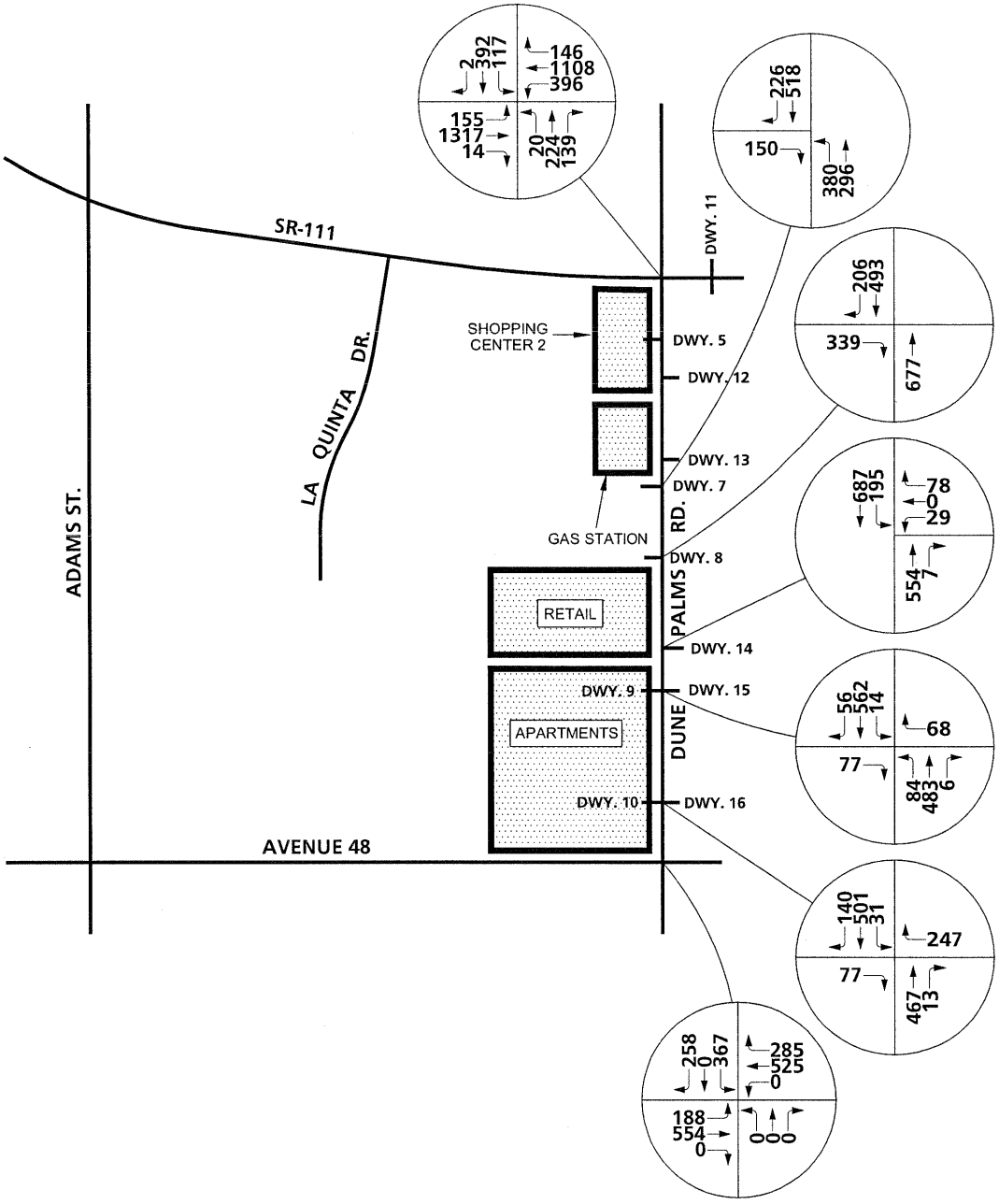
URBAN CROSSROADS

EXHIBIT X

EXISTING PLUS PROJECT PM PEAK HOUR INTERSECTION VOLUMES



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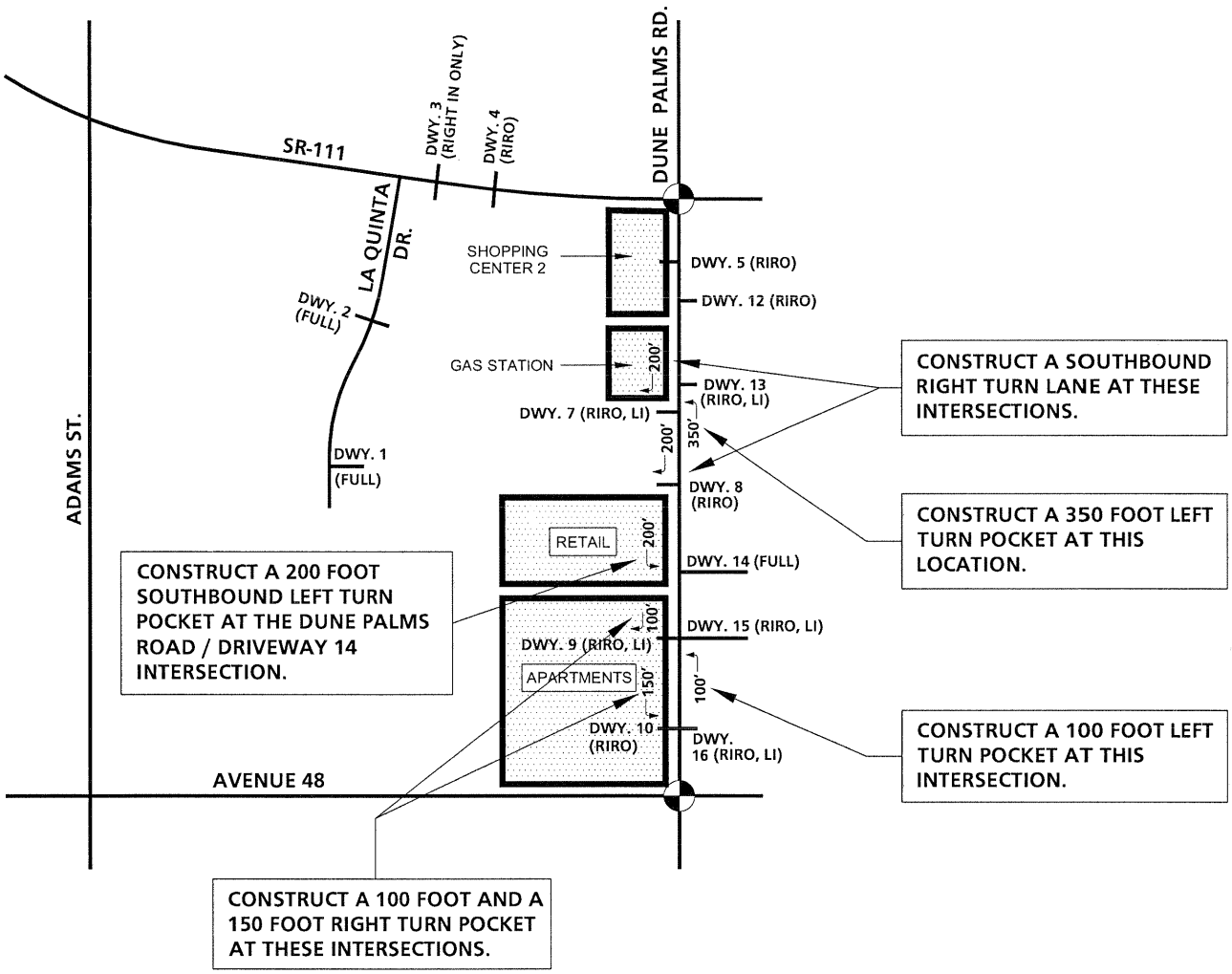
CENTRE AT LA QUINTA DEVELOPMENT, La Quinta, California - 02051:109

URBAN CROSSROADS

EXHIBIT Y

CIRCULATION RECOMMENDATIONS



LEGEND:

= TRAFFIC SIGNAL

N

URBAN CROSSROADS

APPENDIX A

"PASS-BY TRIPS

VII. Quantifying Pass-By and Diverted Linked Trips

Background

The trip generation rates and equations contained in this report were derived from actual measurements of traffic on the driveways of land uses or buildings. However, in some cases, the driveway volume at a generator is different than the amount of traffic *added* to the street system. Buildings such as retail establishments, restaurants, banks, service stations and convenience markets attract a portion of their trips from traffic passing the site on the way from one location to another.

Trip making where this phenomenon occurs can be broken down into the following four categories of trips:

- Primary Trips (N_{Pr})
- Pass-by Trips (N_{Pb})
- Diverted Linked Trips (N_{D})
- Non Pass-by Trips (N_{nPb})

These trips are defined as follows:

Primary Trips are trips made for the specific purpose of visiting the generator. The stop at that generator is the primary reason for the trip. For example, a home-to-shopping-to-home combination of trips is a primary trip set.

Pass-By Trips are trips made as intermediate stops on the way from an origin to a primary trip destination. Pass-by trips are attracted from traffic passing the site on an adjacent street which contains direct access to the generator. These trips do not require a diversion from another roadway.

Diverted Linked Trips are trips attracted from the traffic volume on roadways within the vicinity of the generator but which require a diversion from that roadway to another roadway to gain access to the site. These roadways could include streets or freeways adjacent to the generator but without access to the generator.

Non Pass-By Trips refer to the total of the primary trips and the diverted linked trips. This term is used when diverted linked trips are not quantified, but pass-by trips are quantified (i.e., the non pass-by trips are equal to the total trips minus the pass-by trips).

Figure VII-1 indicates an example of roadways from which pass-by trips and diverted linked trips are produced. It should be noted that the vicinity of the generator has not been defined. Research is needed to determine the size of the area or distance from a generator from which diverted linked trips are produced (much like the market area of a shopping center for primary trips).

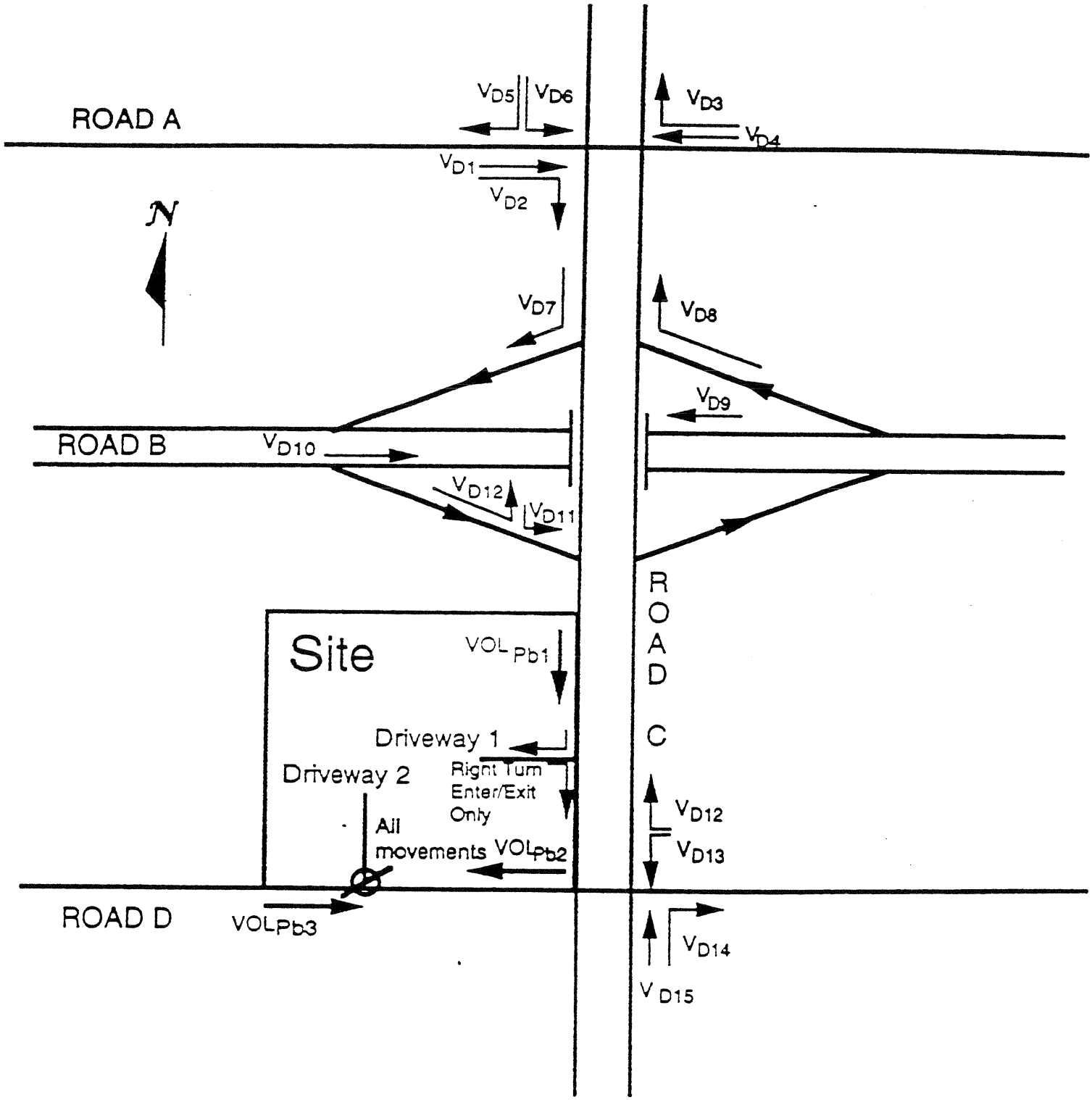
It is essential that this phenomenon be recognized when examining the traffic impact of a development on the street system. The pass-by and diverted linked trip estimation method initiated in previous editions is calculated as a percentage of the total number of trips entering the generator. Statistical correlation of the data collected by the professional community has proven difficult, with resulting low correlation indices. The results of the pass-by trip percentages analyzed to date and presented herein can be enhanced further with an expanded methodology that also accounts for the effects of the magnitude of the passing traffic stream volume on the adjacent road system. Additionally, more detailed data are needed before this estimation methodology can be statistically analyzed and formally adopted. To assist in this regard, the interview survey forms have been expanded to assist the professional community in collecting this data in a standard format for use in future analyses. The fifth edition of *Trip Generation* contains additional theoretical discussion on pass-by and diverted linked trips.

The professional community should continue to use the results of the analyses of pass-by trip percentages tempered with engineering judgment until more data are attained and the methodology produces results with higher correlation to the actual events.

Database on Pass-By Trip and Diverted Linked Trip Percentages

Surveys conducted to date have been limited to interviewing a limited sample of people to determine a pass-by trip and diverted linked trip percentage based on the interviews and relating the percentage to the size of the generator or shopping center. Some recent surveys also provided information on ADT, but not in sufficient detail

Figure VII-1: Identification of Pass-By and Diverted Linked Trip Volumes



Legend

$$V_{Pb\,TOT} = \sum VOL_{Pb1} + VOL_{Pb2} + VOL_{Pb3} \quad (VPH)$$

$$V_{D\,TOT} = \sum VOL_{D1} + VOL_{D2} + VOL_{D.....} + VOL_{D15} \quad (VPH)$$

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to identify traffic volume related to true pass-by trips and diverted linked trips. The data available for the land uses presented in this update are contained in the following tables.

Table VII-1	High-Turnover (Sit-Down) Restaurant (832) P.M. Peak Hour
Table VII-2	Fast-Food Restaurant with Drive-Through Window (834) A.M. Peak Hour
Table VII-3	Fast-Food Restaurant with Drive-Through Window (834) P.M. Peak Hour
Table VII-4	Gasoline/Service Station (844) A.M. Peak Hour
Table VII-5	Gasoline/Service Station (844) P.M. Peak Hour
Table VII-6	Gasoline/Service Station with Convenience Market (845) A.M. Peak Hour
Table VII-7	Gasoline/Service Station with Convenience Market (845) P.M. Peak Hour
Table VII-8	Convenience Market with Gasoline Pumps (853) A.M. Peak Hour
Table VII-9	Convenience Market with Gasoline Pumps (853) P.M. Peak Hour

Good correlation between the pass-by trip percentage and size of the generator has been illusive. The database needs to be further expanded before better predictive relationships can be developed. Therefore, the user is cautioned to use engineering judgment to establish the pass-by trip and diverted linked trip percentage before application. Whenever possible, and especially at planned expansion to existing facilities, it is recommended that the pass-by trip and diverted linked trip percentages be determined on the basis of site-specific data collected with the expanded forms provided.

Application of Pass-By Trip and Diverted Linked Trip Percentage Results

Until the estimation methodology is further developed, the results of the pass-by trip and diverted linked trip percentages may continue to be applied with caution, as explained herein. The pass-by trips and diverted linked trips estimated to enter and exit a development does not affect the driveway volumes but does affect the amount of traffic added to the adjacent street system. The following example and Figure VII-2 illustrate this point for pass-by trips.

- The p.m. peak hour traffic passing a retail center is 1,200 vehicles per hour, as shown in Figure VII-2(a).
- The driveway volumes are estimated to be 200 vehicles per hour entering and leaving the center as shown in Figure VII-2(b).
- The pass-by trips are estimated to be 25 percent of the driveway volumes, as shown in Figure VII-2(b).
- The trip distribution for the primary trips is shown in Figure VII-2(c).
- The distribution of the pass-by trips is based on the volume of traffic passing the driveway, as shown in Figure VII-2(d).
- The assignment of the pass-by trips is shown in Figure VII-2(f).
- The final assignment of all the trips entering and leaving and passing the driveway is shown in Figure VII-2(g).

Data Needs for Pass-By Trips and Diverted Linked Trips

More data are needed to further quantify the pass-by trips and diverted linked trips for all land uses where this phenomenon exists. It is essential that the data in this report be expanded through the uniform collection of data suggested in the survey forms. Following is a questionnaire to be used for conducting interviews for the purpose of collecting pass-by trip and diverted linked trip data, and a summary form. The summary form is designed to list the summary of survey results, but must also provide information related to the generator, location and traffic volumes associated with both true pass-by trips and diverted linked trips.

Table VII-1

Summary of Weekday Pass-By Trips and Diverted Linked Trips
P.M. Peak Hour of Adjacent Street Traffic

Land Use 832 - High Turnover (Sit-Down) Restaurant

Name of Development	*Seats*	*Size (Sq. Feet GLA)*	*Location*	*Week-day Survey Date*	*No. of Inter-views*	*Time Period*	*Primary Trip (%)*	*Non-Pass-By Trip (%)*	*Diverted Linked Trip (%)*	*Pass-By Trip (%)*	*Adjacent Street Peak Hour Volume*	*Source*
1. Denny's	-	5,808	Orlando, FL	1992	150	2 - 6 PM	-	68	-	32	n/a	TPD
2. Bob Evans	-	5,051	Casselberry, FL	1992	65	2 - 6 PM	-	42	-	58	n/a	TPD
3. Confidential	168	5,304	Louisville Area, KY	1993	n/a	4 - 6 PM	37	-	13	50	1,615	KRPDA/ JCPWTD
4. Confidential	169	2,880	Louisville Area, KY	1993	n/a	4 - 6 PM	27	-	36	37	3,935	KRPDA/ JCPWTD
5. Confidential	150	3,132	Louisville Area, KY	1993	n/a	4 - 6 PM	29	-	33	38	2,580	KRPDA/ JCPWTD
6. Confidential	250	7,120	New Albany, IN	1993	n/a	4 - 6 PM	23	-	54	23	1,565	KRPDA/ JCPWTD

Average Non-Pass-By Trip % **60%**
Average Primary Trip % **28%**
Average Diverted Linked Trip % **32%**
Average Pass-By Trip % **40%**

Table VII-2

Summary of Weekday Pass-By Trips and Diverted Linked Trips
A.M. Peak Hour of Adjacent Street Traffic

Land Use 834 - Fast Food Restaurant With Drive Through Window

Name of Development	*Seats*	*Size (Sq. Feet GLA)*	*Location*	*Week-day Survey Date*	*No. of Inter-views*	*Time Period*	*Primary Trip (%)*	*Non-Pass-By Trip (%)*	*Diverted Linked Trip (%)*	*Pass-By Trip (%)*	*Adjacent Street Peak Hour Volume*	*Source*
1. Burger King	-	<5,000	Chicago suburbs, IL	1987	84	7-9 AM		56		44	-	Kenig, O'Hara, Humes, Flock
2. Confidential	88	1,350	Louisville Area, KY	1993	n/a	7-9 AM	22	-	16	62	1,407	KRPDA/ JCPWTD
3. Confidential	100	3,584	Louisville, KY	1993	n/a	7-9 AM	48	-	21	32	437	KRPDA/ JCPWTD
4. Confidential	87	4,224	New Albany, IN	1993	n/a	7-9 AM	23	-	31	46	1,049	KRPDA/ JCPWTD
. Confidential	150	2,952	Louisville Area, KY	1993	n/a	7-9 AM	15	-	43	43	2,903	KRPDA/ JCPWTD

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Average Non-Pass-By Trip % **55%**

Average Primary Trip % **28%**

Average Diverted Linked Trip % **27%**

Average Pass-By Trip % **45%**

Table VII-3

Summary of Weekday Pass-By Trips and Diverted Linked Trips
P.M. Peak Hour of Adjacent Street Traffic

Land Use 834 - Fast Food Restaurant With Drive Through Window

Name of Development	Seats	Size (Sq. Feet GLA)	Location	Week-day Survey Date	No. of Inter-views	Time Period	Primary Trip (%)	Non-Pass-By Trip (%)	Diverted Linked Trip (%)	Pass-By Trip (%)	Adjacent Street Peak Hour Volume	Source
1. Burger King	-	~2,600	Minneapolis-St. Paul, MN	1987	50	3-7 PM	27		48	25	-	n/a
2. McDonalds	-	<5,000	Chicago suburbs, IL	1987	80	3-6 PM		62		38	-	Kenig, O'Hara, Humes, Flock
3. Wendy's	-	<5,000	Chicago suburbs, IL	1987	100	3-6 PM		45		55	-	Kenig, O'Hara, Humes, Flock
4. Wendy's	-	<5,000	Chicago suburbs, IL	1987	159	3-6 PM		44		56	-	Kenig, O'Hara, Humes, Flock
5. McDonalds	-	<5,000	Chicago suburbs, IL	1987	225	3-6 PM		52		48	-	Kenig, O'Hara, Humes, Flock
6. McDonalds	-	<5,000	Chicago suburbs, IL	1987	88	3-6 PM		65		35	-	Kenig, O'Hara, Humes, Flock
9. Confidential	88	1,350	Louisville Area, KY	1993	n/a	4-6 PM	22	-	10	68	2,055	KRPDA/ JCPWTD
10. Confidential	86	3,239	Louisville Area, KY	1993	n/a	4-6 PM	26	-	47	26	826	KRPDA/ JCPWTD
11. Confidential	120	1,862	Louisville Area, KY	1993	n/a	4-6 PM	24	-	9	67	2,447	KRPDA/ JCPWTD
13. Confidential	100	3,584	Louisville, KY	1993	n/a	4-6 PM	35	-	16	49	670	KRPDA/ JCPWTD
15. Confidential	87	4,224	New Albany, IN	1993	n/a	4-6 PM	25	-	19	56	1,632	KRPDA/ JCPWTD
16. Confidential	85	2,912	Louisville Area, KY	1993	n/a	4-6 PM	14	-	29	57	2,402	KRPDA/ JCPWTD
17. Confidential	85	3,286	Louisville Area, KY	1993	n/a	4-6 PM	56	-	11	33	2,429	KRPDA/ JCPWTD
18. Confidential	76	2,400	Louisville Area, KY	1993	n/a	4-6 PM	25	-	13	63	2,265	KRPDA/ JCPWTD
20. Confidential	150	2,952	Louisville Area, KY	1993	n/a	4-6 PM	31	-	38	31	4,250	KRPDA/ JCPWTD

Average Non-Pass-By Trip % **53%**
Average Primary Trip % **29%**
Average Diverted Linked Trip % **24%**
Average Pass-By Trip % **47%**

Table VII-4

Summary of Weekday Pass-By Trips and Diverted Linked Trips
A.M. Peak Hour of Adjacent Street Traffic

Land Use 844 - Gasoline/Service Station

Name of Development	Size (Sq. Feet GLA)	Vehicle Fueling Positions	Location	Weekday Survey Date	No. of Inter-views	Time Period	Primary Trip (%)	Non-Pass-By Trip (%)	Diverted Linked Trip (%)	Pass-By Trip (%)	Adj. Street Peak Hour Volume	Source
1. Confidential	2,300	6	Gaithersburg, MD	1992	37	7 - 9 AM	41	-	27	32	2,080	RBA
2. Confidential	2,120	6	Bethesda, MD	1992	26	7 - 9 AM	23	-	19	58	2,080	RBA
3. Confidential	1,650	6	Wheaton, MD	1992	21	7 - 9 AM	14	-	19	67	900	RBA
4. Confidential	1,950	8	Gaithersburg, MD	1992	46	7 - 9 AM	13	-	0	87	2,235	RBA
5. Confidential	1,200	6	Damacus, MD	1992	21	7 - 9 AM	28	-	29	43	870	RBA
6. Confidential	300	12	Wheaton, MD	1992	36	7 - 9 AM	8	-	31	61	3,480	RBA

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Average Non-Pass-By Trip % 42%
Average Primary Trip % 21%
Average Diverted Linked Trip % 21%
Average Pass-By Trip % 58%

Table VII-5

Summary of Weekday Pass-By Trips and Diverted Linked Trips
P.M. Peak Hour of Adjacent Street Traffic

Land Use 844 - Gasoline/Service Station

Name of Development	Size (Sq. Feet GLA)	Vehicle Fueling Postions	Location	Weekday Survey Date	No. of Inter-views	Time Period	Primary Trip (%)	Non-Pass-By Trip (%)	Diverted Linked Trip (%)	Pass-By Trip (%)	Adj. Street Peak Hour Volume	Source
1. Confidential	2,300	6	Gaithersburg, MD	1992	55	4 - 6 PM	11	-	49	40	2,760	RBA
2. Confidential	2,120	6	Bethesda, MD	1992	30	4 - 6 PM	20	-	27	53	1,060	RBA
3. Confidential	1,650	6	Wheaton, MD	1992	18	4 - 6 PM	6	-	33	61	2,510	RBA
4. Confidential	1,950	8	Gaithersburg, MD	1992	47	4 - 6 PM	23	-	15	62	2,635	RBA
5. Confidential	1,200	6	Damacus, MD	1992	26	4 - 6 PM	11	-	31	58	1,020	RBA
6. Confidential	300	12	Wheaton, MD	1992	52	4 - 6 PM	10	-	52	38	3,835	RBA

Average Non-Pass-By Trip % 48%
Average Primary Trip % 13%
Average Diverted Linked Trip % 35%
Average Pass-By Trip % 52%

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Table VII-6

Summary of Pass-By Trips and Diverted Linked Trips
A.M. Peak Hour of Adjacent Street Traffic

Land Use 845 - Gasoline/Service Station with Convenience Market

Name of Development	Size (Sq. Feet GLA)	Vehicle Fueling Positions	Location	Weekday Survey Date	No. of Inter-views	Time Period	Primary Trip (%)	Non-Pass-By Trip (%)	Diverted Linked Trip (%)	Pass-By Trip (%)	Adj. Street Peak Hour Volume	Source
1. Confidential	800	8	Louisville Area, KY	1993	n/a	7 - 9 AM	15	-	25	61	4,000	KRPDA/ JCPWTD
2. Confidential	564	8	Louisville, KY	1993	n/a	7 - 9 AM	13	-	19	69	1,307	KRPDA/ JCPWTD
3. Confidential	720	10	Louisville, KY	1993	n/a	7 - 9 AM	11	-	22	67	1,105	KRPDA/ JCPWTD
4. Confidential	726	8	Louisville Area, KY	1993	n/a	7 - 9 AM	22	-	22	57	1,211	KRPDA/ JCPWTD
5. Confidential	697	10	Louisville Area, KY	1993	n/a	7 - 9 AM	31	-	12	47	1,211	KRPDA/ JCPWTD
6. Confidential	800	8	Silver Spring, MD	1992	36	7 - 9 AM	14	-	39	47	3,095	RBA
7. Confidential	390	8	Derwood, MD	1992	46	7 - 9 AM	0	-	25	75	3,770	RBA
8. Confidential	2,160	8	Kensington, MD	1992	31	7 - 9 AM	34	-	19	47	1,785	RBA
9. Confidential	1,000	8	Silver Spring, MD	1992	35	7 - 9 AM	9	-	13	78	7,080	RBA

Average Non-Pass-By Trip % 39%
Average Primary Trip % 17%
Average Diverted Linked Trip % 22%
Average Pass-By Trip % 61%

Table VII-7

Summary of Weekday Pass-By Trips and Diverted Linked Trips
P.M. Peak Hour of Adjacent Street Traffic

Land Use 845 - Gasoline/Service Station with Convenience Market

Name of Development	Size (Sq. Feet GLA)	Vehicle Fueling Postions	Location	Weekday Survey Date	No. of Inter-views	Time Period	Primary Trip (%)	Non-Pass-By Trip (%)	Diverted Linked Trip (%)	Pass-By Trip (%)	Adj. Street Peak Hour Volume	Source
1. Confidential	800	8	Louisville Area, KY	1993	n/a	4 - 6 PM	8	-	40	52	4,965	KRPDA/ JCPWTD
2. Confidential	564	8	Louisville, KY	1993	n/a	4 - 6 PM	20	-	27	53	1,491	KRPDA/ JCPWTD
3. Confidential	720	10	Louisville, KY	1993	n/a	4 - 6 PM	19	-	24	56	1,812	KRPDA/ JCPWTD
4. Confidential	726	8	Louisville Area, KY	1993	n/a	4 - 6 PM	7	-	21	71	2,657	KRPDA/ JCPWTD
5. Confidential	697	10	Louisville Area, KY	1993	n/a	4 - 6 PM	16	-	29	55	2,657	KRPDA/ JCPWTD
6. Confidential	800	8	Silver Spring, MD	1992	36	4 - 6 PM	14	-	19	67	3,095	RBA
7. Confidential	390	8	Derwood, MD	1992	46	4 - 6 PM	11	-	43	46	3,770	RBA
8. Confidential	2,160	8	Kensington, MD	1992	31	4 - 6 PM	13	-	35	52	1,785	RBA
9. Confidential	1,000	8	Silver Spring, MD	1992	35	4 - 6 PM	3	-	43	54	7,080	RBA

Average Non-Pass-By Trip % **44%**
Average Primary Trip % **13%**
Average Diverted Linked Trip % **31%**
Average Pass-By Trip % **56%**

A12

Table VII-8

Summary of Weekday Pass-By Trips and Diverted Linked Trips
A.M. Peak Hour of Adjacent Street Traffic

Land Use 853 - Convenience Market with Gasoline Pumps

Name of Development	Size (Sq. Feet GLA)	Location	Weekday Survey Date	No. of Inter-views	Time Period	Primary Trip (%)	Non-Pass-By Trip (%)	Diverted Linked Trip (%)	Pass-By Trip (%)	Adjacent Street Peak Hour Volume	Source
1. Confidential	2,761	Louisville Area, KY	1993	n/a	7 - 9 AM	11	-	35	54	1,240	KRPDA/ JCPWTD
2. Confidential	2,400	Louisville Area, KY	1993	n/a	7 - 9 AM	17	-	35	48	1,210	KRPDA/ JCPWTD
3. Confidential	4,176	Louisville Area, KY	1993	n/a	7 - 9 AM	24	-	18	58	1,705	KRPDA/ JCPWTD
4. Confidential	2,620	Crestwood, KY	1993	n/a	7 - 9 AM	15	-	13	72	940	KRPDA/ JCPWTD
5. Confidential	3,696	Louisville Area, KY	1993	n/a	7 - 9 AM	16	-	18	66	990	KRPDA/ JCPWTD
6. Confidential	2,982	Albany, IN	1993	n/a	7 - 9 AM	10	-	16	74	790	KRPDA/ JCPWTD
7. Confidential	2,310	Louisville, KY	1993	n/a	7 - 9 AM	5	-	31	64	1,255	KRPDA/ JCPWTD
8. Confidential	2,170	New Albany, IN	1993	n/a	7 - 9 AM	6	-	38	56	635	KRPDA/ JCPWTD
9. Confidential	3,600	Louisville Area, KY	1993	n/a	7 - 9 AM	4	-	29	67	1,985	KRPDA/ JCPWTD

A13

Average Non-Pass-By Trip%	**38%**	
Average Primary Trip %		**12%**
Average Diverted Linked Trip %		**26%**
Average Pass-By Trip %	**62%**	

Table VII-9

Summary of Weekday Pass-By Trips and Diverted Linked Trips
P.M. Peak Hour of Adjacent Street Traffic

Land Use 853 - Convenience Market with Gasoline Pumps

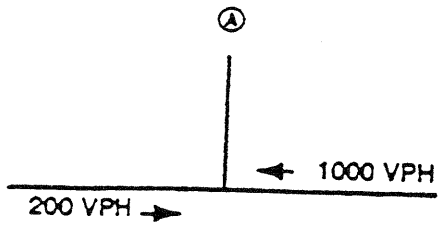
Name of Development	Size (Sq. Feet GLA)	Location	Weekday Survey Date	No. of Inter-views	Time Period	Primary Trip (%)	Non-Pass-By Trip (%)	Diverted Linked Trip (%)	Pass-By Trip (%)	Adjacent Street Peak Hour Volume	Source
1. Confidential	2,761	Louisville Area, KY	1993	n/a	4 - 6 PM	11	-	27	62	2,875	KRPDA/ JCPWTD
2. Confidential	2,400	Louisville Area, KY	1993	n/a	4 - 6 PM	13	-	29	58	2,655	KRPDA/ JCPWTD
3. Confidential	4,176	Louisville Area, KY	1993	n/a	4 - 6 PM	26	-	16	58	2,300	KRPDA/ JCPWTD
4. Confidential	2,620	Crestwood, KY	1993	n/a	4 - 6 PM	13	-	18	69	950	KRPDA/ JCPWTD
5. Confidential	3,696	Louisville Area, KY	1993	n/a	4 - 6 PM	16	-	23	61	2,175	KRPDA/ JCPWTD
6. Confidential	2,982	Albany, IN	1993	n/a	4 - 6 PM	15	-	20	65	1,165	KRPDA/ JCPWTD
7. Confidential	2,310	Louisville, KY	1993	n/a	4 - 6 PM	16	-	27	57	1,954	KRPDA/ JCPWTD
8. Confidential	2,170	New Albany, IN	1993	n/a	4 - 6 PM	16	-	36	48	820	KRPDA/ JCPWTD
9. Confidential	3,600	Louisville Area, KY	1993	n/a	4 - 6 PM	17	-	27	57	2,505	KRPDA/ JCPWTD
10. 7-Eleven	2,585	Seminole County, FL	1993	82	4 - 6 PM	20	-	7	73	n/a	Tipton Assoc.
11. 7-Eleven	2,585	Seminole County, FL	1993	98	4 - 6 PM	15	-	4	81	n/a	Tipton Assoc.
12. Circle K	2,612	Seminole County, FL	1993	115	4 - 6 PM	16	-	15	69	n/a	Tipton Assoc.
13. 7-Eleven	2,650	Volusia County, FL	1993	98	4 - 6 PM	15	-	11	74	n/a	Tipton Assoc.
14. Handy Way	2,400	Volusia County, FL	1993	38	4 - 6 PM	24	-	2	74	n/a	Tipton Assoc.
15. 7- Eleven	2,650	Volusia County, FL	1993	82	4 - 6 PM	8	-	5	87	n/a	Tipton Assoc.

Average Non-Pass-By Trip % **34%**
Average Primary Trip % **16%**
Average Diverted Linked Trip % **18%**
Average Pass-By Trip % **66%**

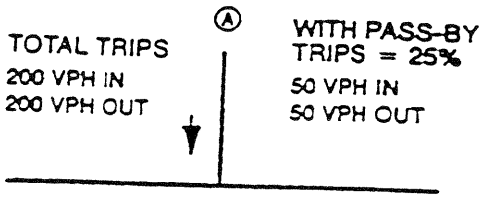
AIH

Figure VII-2

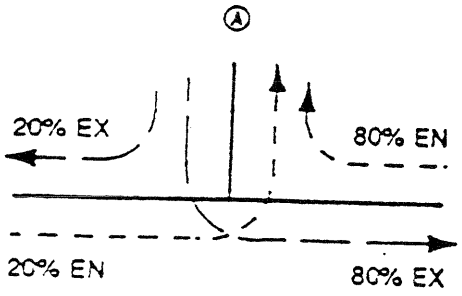
A. BASE VOLUMES



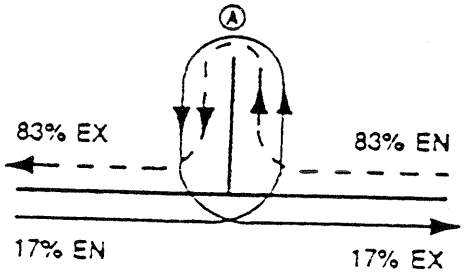
B. SITE GENERATION



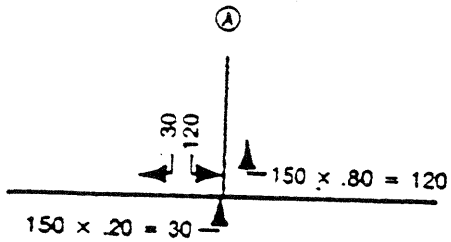
C. PRIMARY TRIP PATTERN



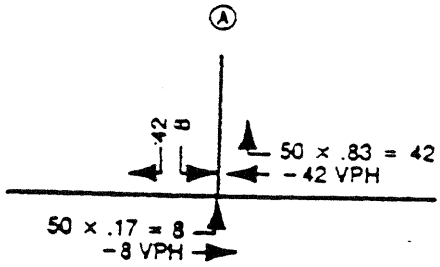
D. PASS-BY TRIP PATTERN



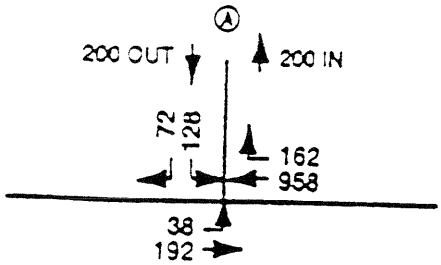
E. PRIMARY TRIP VOLUME ADJUSTMENT



F. PASS-BY TRIP VOLUME ADJUSTMENT



G. FINAL VOLUMES



APPLICATION OF PASS-BY TRIPS

LEGEND
EN = Enter
EX = Exit

A15

APPENDIX B

TRAFFIC COUNT WORKSHEETS

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: DUNE PALMS
EAST-WEST STREET: SR 111
JURISDICTION: LA QUINTA

DATE: 06-17-04

PEAK HOUR: 07:00AM

NORTH LEG

TOTAL: 506

Rt	Thru	Lt	
150	218	138	Total
32	48	27	1st
29	53	29	2nd
61	75	58	3rd
28	42	24	4th

EAST LEG TOTAL: 942

	1st	2nd	3rd	4th	Total
Rt	48	48	49	39	184
Thru	159	176	192	180	707
Lt	17	19	4	11	51

WEST LEG TOTAL: 694

Total	1st	2nd	3rd	4th	
56	10	9	18	19	Lt
574	114	142	140	178	Thru
64	14	16	15	19	Rt

PEAK HOUR FACTORS

NORTH LEG = 0.65
SOUTH LEG = 0.94
EAST LEG = 0.96
WEST LEG = 0.80

ALL LEGS = 0.89

SOUTH LEG

TOTAL: 300

	Lt	Thru	Rt
1st	8	63	9
2nd	7	65	6
3rd	13	50	14
4th	15	32	18
Total	43	210	47

HOUR TOTAL: 2,442

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: DUNE PALMS
EAST-WEST STREET: STORAGE CENTER
JURISDICTION: LA QUINTA

DATE: 06-17-04

PEAK HOUR: 07:15AM

NORTH LEG

TOTAL: 242

	234	8	Total
	62	0	1st
	74	4	2nd
	61	2	3rd
	37	2	4th
	Thru	Lt	

Rt

EAST LEG TOTAL: 11

Rt	1	0	4	1	6
Thru					
Lt	3	0	1	1	5
	1st	2nd	3rd	4th	Total

WEST LEG TOTAL: 0

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

PEAK HOUR FACTORS

NORTH LEG = 0.78
SOUTH LEG = 0.76
EAST LEG = 0.55
WEST LEG =

ALL LEGS = 0.78

SOUTH LEG

	Lt	Thru	Rt
1st		87	1
2nd		91	3
3rd		42	6
4th		46	9
Total		266	19

TOTAL: 285

HOUR TOTAL: 538

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: DUNE PALMS
EAST-WEST STREET: AVE 48
JURISDICTION: LA QUINTA

DATE: 06-22-04

PEAK HOUR: 07:15AM

NORTH LEG

TOTAL: 210

100		110	Total
18		33	1st
38		32	2nd
26		30	3rd
18		15	4th
Rt	Thru	Lt	

EAST LEG TOTAL: 613

	1st	2nd	3rd	4th	Total
Rt	37	33	18	25	113
Thru	121	150	129	100	500
Lt					

WEST LEG TOTAL: 344

Total	1st	2nd	3rd	4th	
127	43	52	13	19	Lt
217	46	55	64	52	Thru
					Rt

PEAK HOUR FACTORS

NORTH LEG = 0.75
SOUTH LEG =
EAST LEG = 0.84
WEST LEG = 0.80

ALL LEGS = 0.81

SOUTH LEG

TOTAL: 0

	Lt	Thru	Rt
1st			
2nd			
3rd			
4th			
Total			

HOUR TOTAL: 1,167

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: DUNE PALMS
EAST-WEST STREET: SR 111
JURISDICTION: LA QUINTA

DATE: 06-17-04

PEAK HOUR: 04:30PM

NORTH LEG

TOTAL: 292

Rt	Thru	Lt	
94	113	85	Total
32	22	23	1st
27	27	18	2nd
16	25	19	3rd
19	39	25	4th

EAST LEG TOTAL: 1,086

	1st	2nd	3rd	4th	Total
Rt	24	26	26	33	109
Thru	232	233	283	207	955
Lt	2	10	3	7	22

WEST LEG TOTAL: 1,131

Total	1st	2nd	3rd	4th	
116	37	25	23	31	Lt
948	194	268	240	246	Thru
67	25	20	9	13	Rt

PEAK HOUR FACTORS

NORTH LEG = 0.88
SOUTH LEG = 0.95
EAST LEG = 0.87
WEST LEG = 0.90

ALL LEGS = 0.96

SOUTH LEG

TOTAL: 163

	Lt	Thru	Rt
1st	11	21	7
2nd	14	24	5
3rd	19	18	3
4th	15	25	1
Total	59	88	16

HOUR TOTAL: 2,672

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: DUNE PALMS
EAST-WEST STREET: STORAGE CENTER
JURISDICTION: LA QUINTA

DATE: 06-17-04

PEAK HOUR: 04:45PM

NORTH LEG

TOTAL: 239

	222	17	Total
	63	10	1st
	54	6	2nd
	56	1	3rd
	49	0	4th
	Rt	Thru	Lt

EAST LEG TOTAL: 28

Rt	4	5	4	1	14
Thru					
Lt	2	6	4	2	14
	1st	2nd	3rd	4th	Total

WEST LEG TOTAL: 0

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

PEAK HOUR FACTORS

NORTH LEG = 0.82
SOUTH LEG = 0.85
EAST LEG = 0.64
WEST LEG =

ALL LEGS = 0.92

SOUTH LEG

TOTAL: 176

	Lt	Thru	Rt
1st		36	6
2nd		37	5
3rd		38	2
4th		52	0
Total		163	13

HOUR TOTAL: 443

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: DUNE PALMS
EAST-WEST STREET: AVE 48
JURISDICTION: LA QUINTA

DATE: 06-22-04

PEAK HOUR: 04:30PM

NORTH LEG

TOTAL: 222

Rt	Thru	Lt	
75		147	Total
20		39	1st
16		45	2nd
21		30	3rd
18		33	4th

EAST LEG TOTAL: 489

	1st	2nd	3rd	4th	Total
Rt	20	26	30	32	108
Thru	104	93	90	94	381
Lt					

WEST LEG TOTAL: 437

Total	1st	2nd	3rd	4th	
35	10	6	10	9	Lt
402	105	99	98	100	Thru
					Rt

PEAK HOUR FACTORS

NORTH LEG = 0.91
SOUTH LEG =
EAST LEG = 0.97
WEST LEG = 0.95

ALL LEGS = 0.96

SOUTH LEG

TOTAL: 0

	Lt	Thru	Rt
1st			
2nd			
3rd			
4th			
Total			

HOUR TOTAL: 1,148

Prepared by NEWPORT TRAFFIC STUDIES

24 HOUR VOLUMES

STREET : SR 111
LOCATION : W/O DUNE PALMS

LA QUINTA
DATE : 06-15-04

		EASTBOUND	WESTBOUND	TOTAL
AM	12:00	97	82	179
	1:00	98	51	149
	2:00	48	31	79
	3:00	39	64	103
	4:00	75	146	221
	5:00	224	329	553
	6:00	419	499	918
	7:00	727	889	1,616
	8:00	758	857	1,615
	9:00	703	904	1,607
	10:00	815	1,020	1,835
	11:00	938	1,132	2,070
PM	12:00	1,016	1,029	2,045
	1:00	1,084	1,041	2,125
	2:00	1,296	952	2,248
	3:00	1,214	915	2,129
	4:00	1,109	993	2,102
	5:00	1,104	969	2,073
	6:00	854	812	1,666
	7:00	832	821	1,653
	8:00	732	658	1,390
	9:00	666	514	1,180
	10:00	379	287	666
	11:00	228	167	395
	12:00	15,455	15,162	30,617

Prepared by NEWPORT TRAFFIC STUDIES

15 MINUTE COUNTS

STREET : SR 111 — LA QUINTA
LOCATION : W/O DUNE PALMS — DATE : 06-15-04

AM				PM		
EAST BOUND	WEST BOUND	TOTAL TOTAL		EAST BOUND	WEST BOUND	TOTAL TOTAL
30	26	56	12:00	272	269	541
30	23	53		244	251	495
24	19	43		241	262	503
13	14	27		259	247	506
28	13	41	1:00	278	219	497
34	14	48		258	246	504
17	13	30		268	259	527
19	11	30		280	317	597
11	12	23	2:00	292	262	554
9	2	11		336	235	571
14	9	23		327	229	556
14	8	22		341	226	567
9	12	21	3:00	311	199	510
9	11	20		291	232	523
12	14	26		336	239	575
9	27	36		276	245	521
9	19	28	4:00	285	273	558
21	29	50		284	227	511
21	47	68		278	250	528
24	51	75		262	243	505
34	58	92	5:00	259	277	536
48	69	117		317	259	576
67	84	151		279	226	505
75	118	193		249	207	456
76	84	160	6:00	217	214	431
85	108	193		214	198	412
117	156	273		218	198	416
141	151	292		205	202	407
165	163	328	7:00	215	234	449
172	197	369		215	209	424
184	263	447		200	199	399
206	266	472		202	179	381
192	174	366	8:00	208	194	402
201	259	460		176	161	337
193	219	412		164	152	316
172	205	377		184	151	335
165	202	367	9:00	204	158	362
169	217	386		163	122	285
164	228	392		158	112	270
205	257	462		141	122	263
191	240	431	10:00	117	81	198
203	258	461		92	82	174
191	241	432		88	66	154
230	281	511		82	58	140
228	289	517	11:00	73	58	131
244	288	532		66	45	111
224	280	504		50	37	87
242	275	517		39	27	66

Prepared by NEWPORT TRAFFIC STUDIES

24 HOUR VOLUMES

STREET : SR 111
LOCATION : E/O DUNE PALMS

LA QUINTA
DATE : 06-15-04

		EASTBOUND	WESTBOUND	TOTAL
AM	12:00	105	76	181
	1:00	101	52	153
	2:00	45	29	74
	3:00	32	67	99
	4:00	34	154	188
	5:00	143	397	540
	6:00	296	535	831
	7:00	649	889	1,538
	8:00	765	909	1,674
	9:00	734	828	1,562
	10:00	875	980	1,855
	11:00	992	1,198	2,190
PM	12:00	1,087	1,145	2,232
	1:00	1,122	1,124	2,246
	2:00	1,330	1,040	2,370
	3:00	1,235	968	2,203
	4:00	1,129	1,098	2,227
	5:00	1,132	970	2,102
	6:00	901	778	1,679
	7:00	803	682	1,485
	8:00	731	543	1,274
	9:00	682	401	1,083
	10:00	406	220	626
	11:00	232	124	356
	12:00	15,561	15,207	30,768

Prepared by NEWPORT TRAFFIC STUDIES

15 MINUTE COUNTS

STREET : SR 111 — LA QUINTA
LOCATION : E/O DUNE PALMS — DATE : 06-15-04

AM				PM		
EAST BOUND	WEST BOUND	TOTAL TOTAL		EAST BOUND	WEST BOUND	TOTAL TOTAL
34	24	58	12:00	286	285	571
26	19	45		263	274	537
24	17	41		265	299	564
21	16	37		273	287	560
20	14	34	1:00	267	256	523
41	15	56		274	274	548
24	14	38		270	296	566
16	9	25		311	298	609
13	15	28	2:00	337	285	622
10	2	12		317	253	570
11	5	16		327	257	584
11	7	18		349	245	594
6	14	20	3:00	289	218	507
10	6	16		314	249	563
8	20	28		336	260	596
8	27	35		296	241	537
3	22	25	4:00	290	276	566
13	29	42		298	264	562
9	49	58		274	279	553
9	54	63		267	279	546
18	73	91	5:00	265	283	548
32	93	125		326	265	591
34	96	130		284	216	500
59	135	194		257	206	463
52	94	146	6:00	232	207	439
57	119	176		220	211	431
80	151	231		221	171	392
107	171	278		228	189	417
112	201	313	7:00	197	187	384
171	210	381		201	180	381
165	254	419		182	149	331
201	224	425		223	166	389
194	201	395	8:00	199	154	353
195	225	420		191	131	322
184	247	431		158	142	300
192	236	428		183	116	299
167	202	369	9:00	190	114	304
188	199	387		173	96	269
198	229	427		159	94	253
181	198	379		160	97	257
226	247	473	10:00	129	62	191
227	237	464		102	63	165
210	240	450		94	49	143
212	256	468		81	46	127
250	303	553	11:00	70	46	116
234	308	542		57	25	82
250	291	541		53	32	85
258	296	554		52	21	73

Prepared by NEWPORT TRAFFIC STUDIES

24 HOUR VOLUMES

STREET : DUNE PALMS
LOCATION : S/O SR 111

LA QUINTA
DATE : 06-15-04

		NORTHBOUND	SOUTHBOUND	TOTAL
AM	12:00	6	10	16
	1:00	6	6	12
	2:00	0	2	2
	3:00	5	3	8
	4:00	17	9	26
	5:00	76	84	160
	6:00	113	119	232
	7:00	286	303	589
	8:00	197	186	383
	9:00	144	153	297
	10:00	170	150	320
	11:00	219	213	432
PM	12:00	194	191	385
	1:00	247	327	574
	2:00	176	190	366
	3:00	175	160	335
	4:00	157	167	324
	5:00	144	147	291
	6:00	97	110	207
	7:00	82	119	201
	8:00	70	103	173
	9:00	45	78	123
	10:00	23	31	54
	11:00	10	8	18
	12:00			
		2,659	2,869	5,528

Prepared by NEWPORT TRAFFIC STUDIES

B13

15 MINUTE COUNTS

STREET : DUNE PALMS
LOCATION : S/O SR 111

LA QUINTA
DATE : 06-15-04

AM				PM		
NORTH BOUND	SOUTH BOUND	TOTAL TOTAL		NORTH BOUND	SOUTH BOUND	TOTAL TOTAL
1	1	2	12:00	46	51	97
3	2	5		60	49	109
2	4	6		39	43	82
0	3	3		49	48	97
0	1	1	1:00	57	59	116
3	2	5		67	70	137
2	3	5		62	118	180
1	0	1		61	80	141
0	1	1	2:00	48	56	104
0	0	0		44	41	85
0	1	1		45	48	93
0	0	0		39	45	84
0	0	0	3:00	42	34	76
0	1	1		28	40	68
3	1	4		30	49	79
2	1	3		75	37	112
2	0	2	4:00	47	42	89
5	1	6		39	38	77
7	3	10		40	38	78
3	5	8		31	49	80
11	29	40	5:00	38	38	76
9	15	24		30	35	65
29	17	46		44	32	76
27	23	50		32	42	74
19	18	37	6:00	27	37	64
32	20	52		22	26	48
24	44	68		25	28	53
38	37	75		23	19	42
81	76	157	7:00	24	43	67
84	97	181		21	28	49
65	81	146		16	20	36
56	49	105		21	28	49
59	46	105	8:00	11	26	37
44	52	96		16	15	31
48	47	95		20	27	47
46	41	87		23	35	58
40	36	76	9:00	18	29	47
39	44	83		10	22	32
29	39	68		12	16	28
36	34	70		5	11	16
44	43	87	10:00	9	17	26
51	34	85		4	6	10
34	35	69		6	7	13
41	38	79		4	1	5
40	52	92	11:00	4	5	9
53	60	113		1	2	3
40	44	84		4	0	4
86	57	143		1	1	2

Prepared by NEWPORT TRAFFIC STUDIES

APPENDIX C

CALCULATION OF INTERSECTION LEVEL OF SERVICE - EXISTING

TRAFFIC IMPACT ANALYSIS (JN 02300)
Existing Conditions
AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Dune Palms Rd. (NS) / SR-111 (EW)

Cycle (sec): 65 Critical Vol./Cap. (X): 0.623
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 23.2
Optimal Cycle:OPTIMIZED Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	43	210	47	138	218	150	56	574	64	51	707	184
Growth Adj:	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
Initial Bse:	56	273	61	179	283	195	73	746	83	66	919	239
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Total Deduc:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	56	273	61	179	283	195	73	746	83	66	919	239
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	56	273	61	179	283	195	73	746	83	66	919	239
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	56	273	61	179	283	195	73	746	83	66	919	239
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	56	273	61	179	283	195	73	746	83	66	919	239
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.94	0.94	0.95	0.92	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.80	0.20	1.00	1.59	0.41
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	3199	357	1805	2776	722
Capacity Analysis Module:												
Vol/Sat:	0.03	0.08	0.04	0.10	0.08	0.12	0.04	0.23	0.23	0.04	0.33	0.33
Crit Moves:		****		****			****				****	
Green/Cycle:	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.34	0.34	0.23	0.42	0.42
Volume/Cap:	0.20	0.49	0.25	0.65	0.51	0.78	0.26	0.68	0.68	0.16	0.80	0.80
Delay/Veh:	24.4	25.9	24.7	31.0	26.0	41.5	24.8	19.9	19.9	20.4	19.8	19.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.4	25.9	24.7	31.0	26.0	41.5	24.8	19.9	19.9	20.4	19.8	19.8
HCM2kAvg:	1	3	1	5	3	6	2	8	8	1	12	12

CENTRE AT LA QUINTA DEVELOPMENT (JN# 02051)
Existing Conditions
AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #54 Dune Palms (NS) / Avenue 48 (EW)

Cycle (sec): 0 Critical Vol./Cap. (X): 0.364
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 11.8
Optimal Cycle: 60 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	10	0	10	10	10	0	0	10	10
Lanes:	0 0	0	0 0	2 0	0	0 1	2 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	0	0	0	110	0	100	127	217	0	0	500	113
Growth Adj:	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
Initial Bse:	0	0	0	143	0	130	165	282	0	0	650	147
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	143	0	130	165	282	0	0	650	147
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	143	0	130	165	282	0	0	650	147
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	143	0	130	165	282	0	0	650	147
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.92	0.95	0.95	1.00	0.92	0.92
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	2.00	0.00	1.00	1.63	0.37
Final Sat.:	0	0	0	3502	0	1615	3502	3610	0	1900	2862	647
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.04	0.00	0.08	0.05	0.08	0.00	0.00	0.23	0.23
Crit Moves:				****			****				****	
Green/Cycle:	0.00	0.00	0.00	0.18	0.00	0.18	0.17	0.68	0.00	0.00	0.52	0.52
Volume/Cap:	0.00	0.00	0.00	0.22	0.00	0.44	0.28	0.11	0.00	0.00	0.44	0.44
Delay/Veh:	0.0	0.0	0.0	21.0	0.0	22.8	22.1	3.3	0.0	0.0	9.2	9.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	21.0	0.0	22.8	22.1	3.3	0.0	0.0	9.2	9.2
HCM2kAvg:	0	0	0	1	0	3	2	1	0	0	5	5

Existing Condtiions
PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #47 Dune Palms Rd. (NS) / SR-111 (EW)

Cycle (sec): 75 Critical Vol./Cap. (X): 0.709
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 22.9
Optimal Cycle: 60 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Lanes:	1 0	2 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	59	88	16	85	113	94	116	948	67	22	955	109
Growth Adj:	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
Initial Bse:	77	114	21	111	147	122	151	1232	87	29	1242	142
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	58	19	25	0	17	0	0	0	41	23	0	0
Initial Fut:	135	133	46	111	164	122	151	1232	128	52	1242	142
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	135	133	46	111	164	122	151	1232	128	52	1242	142
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	135	133	46	111	164	122	151	1232	128	52	1242	142
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	135	133	46	111	164	122	151	1232	128	52	1242	142
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	1.00	0.85	0.95	0.94	0.94	0.95	0.94	0.94
Lanes:	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.81	0.19	1.00	1.80	0.20
Final Sat.:	1805	3610	1615	1805	1900	1615	1805	3224	335	1805	3192	364
Capacity Analysis Module:												
Vol/Sat:	0.07	0.04	0.03	0.06	0.09	0.08	0.08	0.38	0.38	0.03	0.39	0.39
Crit Moves:	****				****		****				****	
Green/Cycle:	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.46	0.46	0.16	0.49	0.49
Volume/Cap:	0.56	0.28	0.21	0.46	0.65	0.57	0.63	0.82	0.82	0.18	0.79	0.79
Delay/Veh:	33.4	29.6	29.5	31.4	36.5	34.0	35.9	20.9	20.9	27.4	18.2	18.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.4	29.6	29.5	31.4	36.5	34.0	35.9	20.9	20.9	27.4	18.2	18.2
HCM2kAvg:	4	2	1	3	5	4	5	16	16	1	15	15

Existing Condtiions
PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #54 Dune Palms (NS) / Avenue 48 (EW)

Cycle (sec): 0 Critical Vol./Cap. (X): 0.288
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 9.7
Optimal Cycle: 60 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	10	0	10	10	10	0	0	10	10
Lanes:	0 0 0 0 0			2 0 0 0 1			2 0 1 1 0			1 0 1 1 0		
Volume Module:												
Base Vol:	0	0	0	147	0	75	35	402	0	0	381	108
Growth Adj:	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
Initial Bse:	0	0	0	191	0	98	46	523	0	0	495	140
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	191	0	98	46	523	0	0	495	140
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	191	0	98	46	523	0	0	495	140
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	191	0	98	46	523	0	0	495	140
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.92	0.95	0.95	1.00	0.92	0.92
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	2.00	0.00	1.00	1.56	0.44
Final Sat.:	0	0	0	3502	0	1615	3502	3610	0	1900	2720	771
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.05	0.00	0.06	0.01	0.14	0.00	0.00	0.18	0.18
Crit Moves:				****			****				****	
Green/Cycle:	0.00	0.00	0.00	0.17	0.00	0.17	0.17	0.69	0.00	0.00	0.53	0.53
Volume/Cap:	0.00	0.00	0.00	0.31	0.00	0.35	0.08	0.21	0.00	0.00	0.35	0.35
Delay/Veh:	0.0	0.0	0.0	21.9	0.0	22.5	21.2	3.4	0.0	0.0	8.4	8.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	21.9	0.0	22.5	21.2	3.4	0.0	0.0	8.4	8.4
HCM2kAvg:	0	0	0	2	0	2	0	2	0	0	4	4

APPENDIX D

EXISTING PLUS PROJECT
LEVEL OF SERVICE WORKSHEETS

TRAFFIC IMPACT ANALYSIS (JN 02051) - Dwy. 7 - RIROLI
Existing + Project Conditions
AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Dune Palms Rd. (NS) / SR-111 (EW)

Cycle (sec): 65 Critical Vol./Cap. (X): 0.642
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 23.4
Optimal Cycle:OPTIMIZED Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	43	210	47	138	218	150	56	574	64	51	707	184
Growth Adj:	1.38	1.38	1.38	1.38	1.38	1.38	1.34	1.34	1.34	1.34	1.34	1.34
Initial Bse:	59	289	65	190	300	207	75	769	86	68	947	246
Added Vol:	36	34	95	0	37	0	0	5	59	62	0	0
Total Adjus:	-49	0	0	0	65	-65	0	0	-103	87	-87	0
Initial Fut:	46	323	160	190	402	142	75	774	42	217	860	246
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	46	323	160	190	402	142	75	774	42	217	860	246
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	46	323	160	190	402	142	75	774	42	217	860	246
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	46	323	160	190	402	142	75	774	42	217	860	246
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.94	0.94	0.95	0.92	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.90	0.10	1.00	1.55	0.45
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	3398	183	1805	2713	778
Capacity Analysis Module:												
Vol/Sat:	0.03	0.09	0.10	0.11	0.11	0.09	0.04	0.23	0.23	0.12	0.32	0.32
Crit Moves:			****	****			****				****	
Green/Cycle:	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.34	0.34	0.23	0.42	0.42
Volume/Cap:	0.17	0.58	0.64	0.68	0.72	0.57	0.27	0.67	0.67	0.52	0.76	0.76
Delay/Veh:	24.2	27.1	31.5	32.9	30.9	28.7	24.8	19.8	19.8	23.2	18.7	18.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.2	27.1	31.5	32.9	30.9	28.7	24.8	19.8	19.8	23.2	18.7	18.7
HCM2kAvg:	1	4	4	5	6	4	2	8	8	5	11	11

TRAFFIC IMPACT ANALYSIS (JN 02051) - Dwy. 7 - RIROLI
Existing + Project Conditions
AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #22 Dune Palms Rd. (NS) / Dwy. 7 (EW) (RIRO, Left-In)

****

Average Delay (sec/veh): 1.9 Worst Case Level Of Service: B[10.3]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 2 0 0			0 0 2 0 1			0 0 0 0 1			0 0 0 0 0		
Volume Module:												
Base Vol:	0	272	0	0	333	0	0	0	0	0	0	0
Growth Adj:	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
Initial Bse:	0	354	0	0	433	0	0	0	0	0	0	0
Added Vol:	48	149	0	0	84	55	0	0	49	0	0	0
PasserByVol:	125	-82	0	0	-1	46	0	0	22	0	0	0
Initial Fut:	173	421	0	0	516	101	0	0	71	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	173	421	0	0	516	101	0	0	71	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	173	421	0	0	516	101	0	0	71	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	617	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	258	xxxx	xxxx	xxxxx
Potent Cap.:	973	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	747	xxxx	xxxx	xxxxx
Move Cap.:	973	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	747	xxxx	xxxx	xxxxx
Volume/Cap:	0.18	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.10	xxxx	xxxx	xxxx
Level Of Service Module:												
Queue:	0.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.3	xxxxx	xxxx	xxxxx
Stopped Del:	9.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	10.3	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	B	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			10.3			xxxxxx		
ApproachLOS:	*			*			B			*		

TRAFFIC IMPACT ANALYSIS (JN 02051) - Dwy. 7 - RIROLI
Existing + Project Conditions
AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Dune Palms Rd. (NS) / Avenue 48 (EW)

Cycle (sec): 60 Critical Vol./Cap. (X): 0.595
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 16.0
Optimal Cycle:OPTIMIZED Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Lanes:	0 0	1! 0	0	1 1	0 0	1	2 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	110	0	100	127	217	0	0	500	113
Growth Adj:	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38
Initial Bse:	0	0	0	152	0	138	175	299	0	0	689	156
Added Vol:	0	0	0	154	0	181	37	0	0	0	0	44
Total Adjus:	0	0	0	0	0	0	9	0	0	0	0	0
Initial Fut:	0	0	0	306	0	319	221	299	0	0	689	200
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	306	0	319	221	299	0	0	689	200
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	306	0	319	221	299	0	0	689	200
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	306	0	319	221	299	0	0	689	200
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.95	1.00	0.85	0.92	0.95	0.95	1.00	0.92	0.92
Lanes:	0.00	1.00	0.00	2.00	0.00	1.00	2.00	2.00	0.00	1.00	1.55	0.45
Final Sat.:	0	1900	0	3618	0	1615	3502	3610	0	1900	2704	784
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.08	0.00	0.20	0.06	0.08	0.00	0.00	0.25	0.25
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.31	0.00	0.31	0.17	0.56	0.00	0.00	0.39	0.39
Volume/Cap:	0.00	0.00	0.00	0.28	0.00	0.65	0.38	0.15	0.00	0.00	0.65	0.65
Delay/Veh:	0.0	0.0	0.0	15.9	0.0	21.0	22.6	6.3	0.0	0.0	15.8	15.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	15.9	0.0	21.0	22.6	6.3	0.0	0.0	15.8	15.8
HCM2kAvg:	0	0	0	2	0	6	2	1	0	0	8	8

TRAFFIC IMPACT ANALYSIS (JN 02051)
Existing + Project Conditions
PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Dune Palms Rd. (NS) / SR-111 (EW)

Cycle (sec): 80 Critical Vol./Cap. (X): 0.822
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 31.6
Optimal Cycle:OPTIMIZED Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	59	88	16	85	113	94	116	948	67	22	955	109
Growth Adj:	1.38	1.38	1.38	1.38	1.38	1.38	1.34	1.34	1.34	1.34	1.34	1.34
Initial Bse:	81	121	22	117	156	130	155	1269	90	29	1279	146
Added Vol:	79	103	117	0	108	0	0	48	163	196	0	0
Total Adjus:	-140	0	0	0	128	-128	0	0	-239	171	-171	0
Initial Fut:	20	224	139	117	392	2	155	1317	14	396	1108	146
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	20	224	139	117	392	2	155	1317	14	396	1108	146
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	224	139	117	392	2	155	1317	14	396	1108	146
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	20	224	139	117	392	2	155	1317	14	396	1108	146
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.95	0.95	0.95	0.93	0.93
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.98	0.02	1.00	1.77	0.23
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	3569	37	1805	3136	413
Capacity Analysis Module:												
Vol/Sat:	0.01	0.06	0.09	0.06	0.11	0.00	0.09	0.37	0.37	0.22	0.35	0.35
Crit Moves:			****	****				****		****		
Green/Cycle:	0.13	0.13	0.13	0.13	0.13	0.13	0.17	0.41	0.41	0.24	0.48	0.48
Volume/Cap:	0.09	0.50	0.69	0.52	0.87	0.01	0.51	0.91	0.91	0.91	0.74	0.74
Delay/Veh:	31.1	33.5	43.1	34.9	50.6	30.7	31.5	30.6	30.6	51.5	18.4	18.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.1	33.5	43.1	34.9	50.6	30.7	31.5	30.6	30.6	51.5	18.4	18.4
HCM2kAvg:	1	3	5	4	8	0	4	20	20	14	14	14

TRAFFIC IMPACT ANALYSIS (JN 02051)
Existing + Project Conditions
PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #22 Dune Palms Rd. (NS) / Dwy. 7 (EW) (RIRO, Left-In)

****

Average Delay (sec/veh): 4.0 Worst Case Level Of Service: B[12.3]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 2 0 0			0 0 2 0 1			0 0 0 0 1			0 0 0 0 0		
Volume Module:												
Base Vol:	0	177	0	0	202	0	0	0	0	0	0	0
Growth Adj:	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
Initial Bse:	0	230	0	0	263	0	0	0	0	0	0	0
Added Vol:	139	235	0	0	319	116	0	0	62	0	0	0
PasserByVol:	241	-169	0	0	-64	110	0	0	88	0	0	0
Initial Fut:	380	296	0	0	518	226	0	0	150	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	380	296	0	0	518	226	0	0	150	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	380	296	0	0	518	226	0	0	150	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	744	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	259	xxxx	xxxx	xxxxx
Potent Cap.:	873	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	746	xxxx	xxxx	xxxxx
Move Cap.:	873	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	746	xxxx	xxxx	xxxxx
Volume/Cap:	0.44	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.20	xxxx	xxxx	xxxx
Level Of Service Module:												
Queue:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.7	xxxxx	xxxx	xxxxx
Stopped Del:	12.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	11.0	xxxxx	xxxx	xxxxx
LOS by Move:	B	*	*	*	*	*	*	*	B	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			11.0			xxxxxx		
ApproachLOS:	*			*			B			*		

TRAFFIC IMPACT ANALYSIS (JN 02051)
Existing + Project Conditions
PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Dune Palms Rd. (NS) / Avenue 48 (EW)

Cycle (sec): 60 Critical Vol./Cap. (X): 0.452
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 14.0
Optimal Cycle:OPTIMIZED Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Lanes:	0 0	1! 0	0	1 1	0 0	1	2 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	147	0	75	35	402	0	0	381	108
Growth Adj:	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38
Initial Bse:	0	0	0	203	0	103	48	554	0	0	525	149
Added Vol:	0	0	0	164	0	155	112	0	0	0	0	136
Total Adjus:	0	0	0	0	0	0	28	0	0	0	0	0
Initial Fut:	0	0	0	367	0	258	188	554	0	0	525	285
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	367	0	258	188	554	0	0	525	285
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	367	0	258	188	554	0	0	525	285
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	367	0	258	188	554	0	0	525	285
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.95	1.00	0.85	0.92	0.95	0.95	1.00	0.90	0.90
Lanes:	0.00	1.00	0.00	2.00	0.00	1.00	2.00	2.00	0.00	1.00	1.30	0.70
Final Sat.:	0	1900	0	3618	0	1615	3502	3610	0	1900	2216	1202
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.10	0.00	0.16	0.05	0.15	0.00	0.00	0.24	0.24
Crit Moves:				****			****				****	
Green/Cycle:	0.00	0.00	0.00	0.28	0.00	0.28	0.17	0.58	0.00	0.00	0.42	0.42
Volume/Cap:	0.00	0.00	0.00	0.36	0.00	0.57	0.32	0.26	0.00	0.00	0.57	0.57
Delay/Veh:	0.0	0.0	0.0	17.4	0.0	20.1	22.3	6.2	0.0	0.0	13.9	13.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	17.4	0.0	20.1	22.3	6.2	0.0	0.0	13.9	13.9
HCM2kAvg:	0	0	0	3	0	5	2	3	0	0	6	6

APPENDIX E

CITY OF LA QUINTA
ENGINEERING BULLETIN NO. 03-08

City of La Quinta

P.O. Box 1504
78-495 Calle Tampico
La Quinta, California 92253

(760) 777-7000
FAX (760) 777-7101

ENGINEERING BULLETIN # 03-08

TO: All Interested Parties

FROM: Timothy R. Jonasson, Public Works Directory/City Engineer

DATE: December 16, 2003

SUBJECT: Auxiliary Lanes and Traffic Impact Studies Required for Proposed Development Projects

This Engineering Bulletin establishes the City's policy on when auxiliary lanes and traffic impact studies will be required for proposed development projects.

AUXILIARY LANES

Auxiliary lanes shall be installed on all Primary Arterial streets, and higher order street classification according to the following criteria:

a) A left-turn deceleration lane with taper and storage length is required for any driveway with a projected peak hour left ingress turning volume greater than 25 vehicles per hour (vph). The taper length will be included within the required deceleration lane length.

b) A right-turn deceleration lane with taper and storage length is required for any driveway with a projected peak hour right ingress turning volume greater than 50 vehicles per hour (vph). The taper length will be included within the required deceleration lane length.

c) Right-turn deceleration will not generally be required on streets with more than three travel lanes in the direction of the right-turn lane.

Auxiliary lanes will also be required to meet the following criteria:

1. The minimum lane length shall be 100 feet plus taper length.
2. The right-of-way must be widened 12 feet to accommodate the 12-foot wide auxiliary lane.
3. No reductions in the width of the landscape buffer will be permitted to construct the auxiliary lane.
4. All auxiliary lanes must be contained within the development project limits.

TRAFFIC IMPACT STUDIES

All proposed development projects will be required to prepare a traffic impact study if they meet the following criteria:

1. The project is anticipated to generate 50, or more, peak hour trips;
2. The City Engineer reserves the right to require a traffic impact study when in his/her judgment the project will create potentially significant impacts to the level of service to any adjacent streets or intersections

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