La Quinta Corporate Centre Traffic Impact Study

Prepared by: Endo Engineering

May 10, 1999

SP 99-036

Endo Engineering *Traffic Engineering* *Air Quality Studies* *Noise Assessments*

May 10, 1999

Mr. Marvin Roos
Mainiero Smith & Associates, Inc.
777 E. Tahquitz Canyon Way - Suite 301
Palm Springs, CA 92262

SUBJECT: La Quinta Corporate Centre - Traffic Impact Study

Dear Mr. Roos;

Endo Engineering is pleased to submit this analysis of the circulation impacts associated with the La Quinta Corporate Centre in the City of La Quinta. The project site is located north of Highway 111, between Adams Street and Dune Palms Road. The proposed development includes: multi-tenant industrial/office uses, retail uses, offices, industrial lots, a fitness club, a bank, a gas station and a Recreational Vehicle and self storage area.

This study follows the format and methodology specified by Riverside County in their November 1991 *Traffic Impact Study Report Preparation Guide*. It details in graphic and narrative form: (1) existing circulation conditions; (2) conditions with and without project buildout in the year 2010; (3) areawide buildout conditions with and without the project in the year 2020; and (4) recommended mitigation measures. We trust that the information provided herein will be of value to City staff in their review of the impacts and conditions of approval associated with the project. Should questions or comments develop regarding the findings and recommendations within this report, please do not hesitate to contact our offices at (949) 362-0020.

Cordially,
ENDO ENGINEERING

Vicki Lee Endo

Vicki Lee Endo
Registered Professional
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TRAFFIC IMPACT STUDY

LA QUINTA CORPORATE CENTRE

NORTH OF HIGHWAY 111
BETWEEN ADAMS STREET AND DUNE PALMS ROAD

CITY OF LA QUINTA

May 10, 1999

Prepared For:

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777 E. Tahquitz Canyon Way, Suite 301
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I. INTRODUCTION AND SUMMARY

I. A PURPOSE AND OBJECTIVES

The purpose of this report is to provide in graphic and narrative form: (1) existing roadway and traffic conditions; (2) probable traffic changes related to the proposed project; and (3) mitigation measures required to meet City of La Quinta minimum level of service requirements and traffic engineering design standards.

The scope of the study complies with Riverside County specifications as set forth in the November 1991 *Traffic Impact Study Report Preparation Guide* developed by the Transportation Planning and Development Review Division. The analysis herein employs the 1994 update to the *Highway Capacity Manual* (HCM) to analyze levels of service via the Highway Capacity Software (HCS) package prepared under FHWA sponsorship and maintained by the McTrans Center at the University of Florida Transportation Research Center.

I. B EXECUTIVE SUMMARY

Site Location and Study Area

The site is located within the City of La Quinta, north of Highway 111, and south of the Whitewater River Channel, east of Adams Street, and west of Dune Palms Road. Four key intersections were analyzed including:

Adams Street @
- Adams Hotel Access

Highway 111 @
- Adams Street
- Main Site Access
- Dune Palms Road

Development Description

The proposed La Quinta Corporate Centre is mixed use development which includes: 91,600 square feet of business park uses, 79,300 square feet of commercial uses, 235,000 square feet of office uses, a 7,000 square-foot restaurant, a 6,500 square-foot bank, and 30,000 square-foot fitness center, a 15 fueling position service station, 10.6 acres of industrial park uses, and 3.61 acres of self-storage. Build-out of the project site is anticipated to occur by the year 2010.

Principal Findings

The City of La Quinta General Plan circulation policies require a minimum Level of Service "D". All of the key intersections will operate at acceptable levels of service (LOS D or better), under all scenarios based upon the minimum required lane configurations shown in Figure VI-1, VI-2 and VI-3. The intersection of the proposed industrial street and Dune Palms Road will require signalization to provide acceptable levels of service under citywide build-out plus project conditions.

Existing Conditions

All three of the key intersections are currently operating at acceptable levels of service (LOS D or better) during the peak travel hours. The one unsignalized key intersection does not require signalization to provide acceptable levels of service.

Year 2010 Conditions

All of the key intersections will provide acceptable levels of service (LOS D or better) in the year 2010 with or without site traffic. No intersection improvements (other than those proposed with the project) will be required to provide acceptable levels of service.

Year 2020 Conditions

All of the key intersections will provide acceptable levels of service (LOS D or better) in the year 2020 with or without site traffic. The year 2020 scenarios assumed that Highway 111, Adams Street, and Dune Palms Road were fully improved to their master planned cross-sections.

Conclusions

All of the key intersections will operate at acceptable levels of service with the proposed project. To provide acceptable levels of service, dual left-turn lanes will be required along the northbound and southbound approach of Adams Street and Dune Palms Road to Highway 111. Some flaring may be required to accommodate the dual-left turn lanes. The La Quinta Auto Centre will require dual westbound left-turn lanes on westbound Highway 111 at the main site access intersection to provide acceptable levels of service under citywide build-out conditions.

Recommendations

Areawide improvements to the circulation network will be required with or without the project to accommodate year 2020 peak hour traffic demands. The following mitigation measures are recommended to reduce potential circulation impacts associated with the proposed project and site access.

1. The proposed internal circulation layout shall be subject to the review and approval of the City Traffic Engineer during the development review process to insure compliance with City of La Quinta minimum access and design standards.

2. Adequate off-street parking (including handicapped parking) shall be provided per the parking requirements of the Municipal Code.

3. All internal streets shall be fully constructed to their ultimate cross-section as adjacent on-site development occurs.

4. Sidewalks and streetlights shall be installed on-site as specified by the City.

5. Clear, unobstructed sight distance shall be provided at all internal street intersections on-site.

6. A STOP sign will control exiting site traffic and clear unobstructed sight distances shall be provided at all site driveways.

7. The project proponent shall provide (at a minimum) the lane geometrics shown in Figures VI-2 and VI-3 at the site access locations in conjunction with adjacent development.

8. The project proponent shall install a traffic signal when warranted at the intersection of the proposed industrial street and Dune Palms Road.

9. The project proponent may be required to participate in a traffic mitigation fee program which would ensure that a "fair-share" contribution is made to future roadway improvements within the project vicinity.

II. PROPOSED DEVELOPMENT

II. A SUMMARY OF DEVELOPMENT

Project Location

The site is located within the City of La Quinta, north of Highway 111, and south of the Whitewater River Channel, east of Adams Street, and west of Dune Palms Road. Regional access is primarily provided by Highway 111. Figure II-1 depicts the location of the project site, the study area and the key intersections analyzed herein.

Figure II-1 illustrates the study area and the 4 key intersections evaluated. The key intersections include:

Adams Street @
- Adams Hotel Access

Highway 111 @
- Adams Street
- Main Site Access
- Dune Palms Road

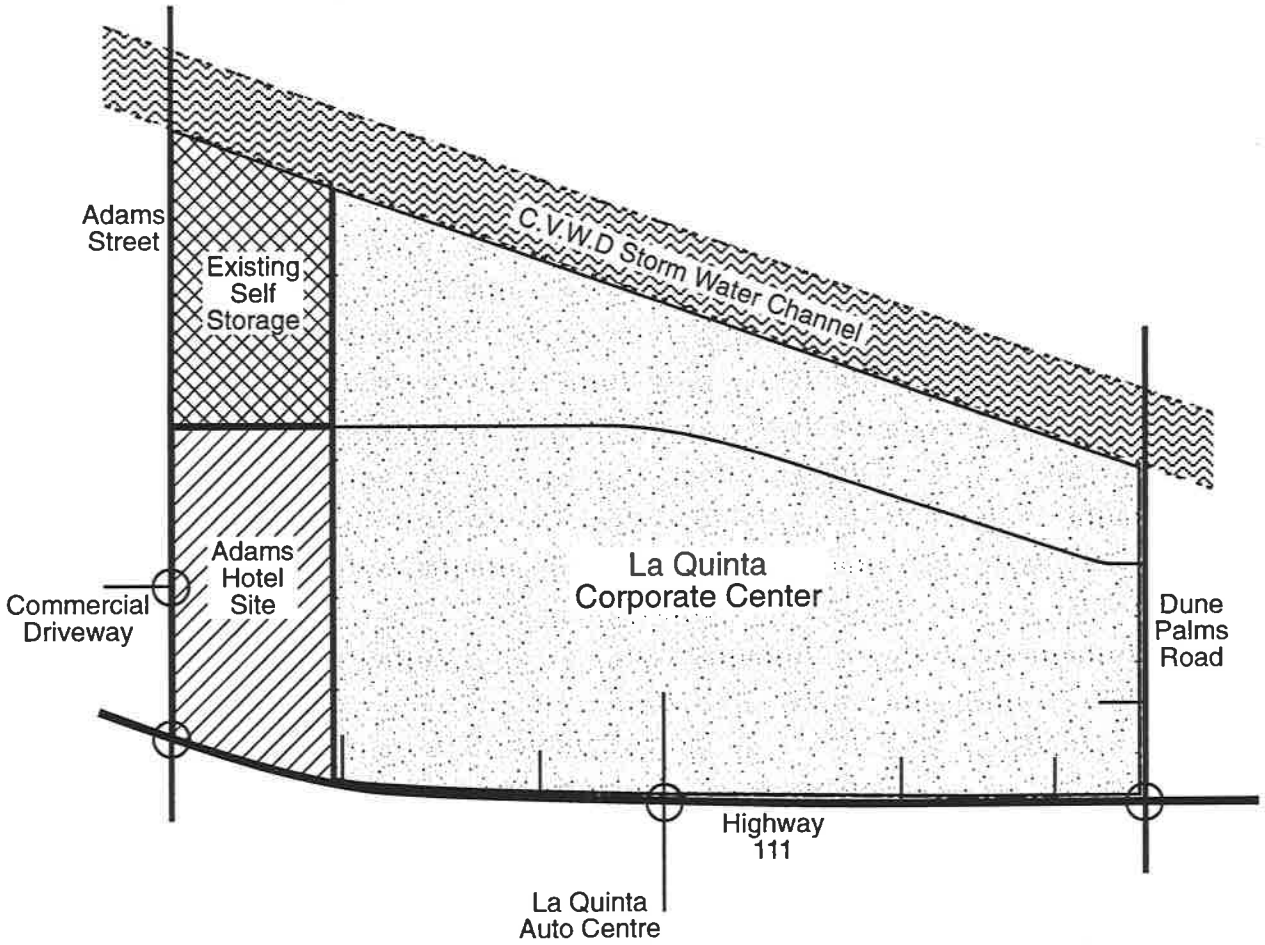
Project Land Use and Circulation Plan

The proposed La Quinta Corporate Centre is mixed use development which includes: 91,600 square feet of business park uses, 79,300 square feet of commercial uses, 235,000 square feet of office uses, a 7,000 square-foot restaurant, a 6,500 square-foot bank, and 30,000 square-foot fitness center, a 15 fueling position service station, 10.6 acres of industrial park uses, and 3.61 acres of self-storage. Build-out of the project site is anticipated to occur by the year 2010.

Zoning and Land Use Category

The proposed project is generally consistent with the current General Plan and Zoning designations on-site.

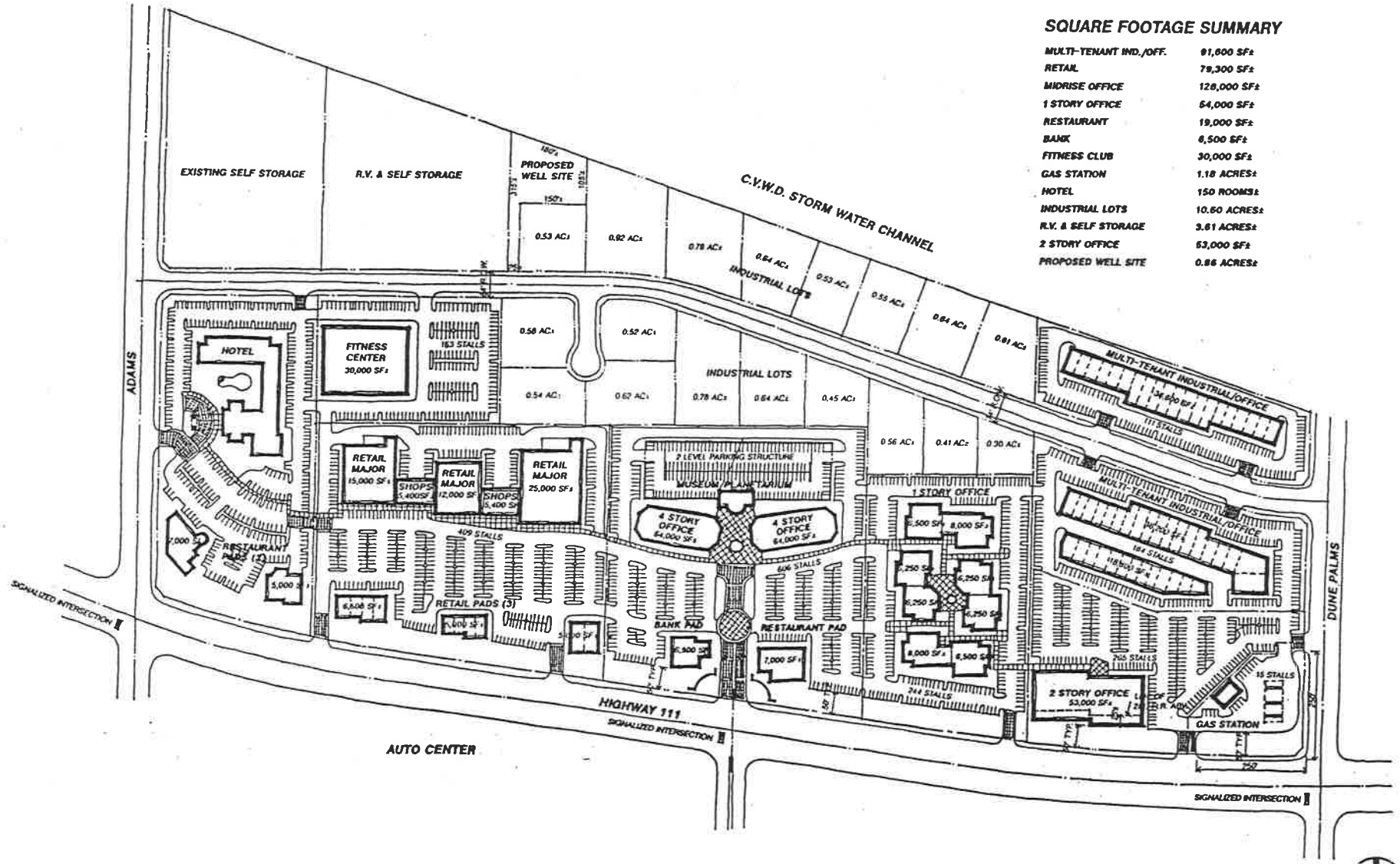
Figure II-1
Site Location



Endo Engineering

Scale: 1" = 525'

Figure II-2
Site Development Plan
(La Quinta Corporate Center)



Endo Engineering

Source: Architects Orange; 3/29/99.

Scale: 1"=330'

III. AREA CONDITIONS

III. A STUDY AREA

The study area was developed through coordination with City of La Quinta staff. As shown in Figure III-1, it includes the following 4 key intersections:

Adams Street @
- Adams Hotel Access

Highway 111 @
- Adams Street
- Main Site Access
- Dune Palms Road

The Adams Hotel access is proposed directly opposite a driveway to the Wal-Mart commercial project located west of Adams Street. The main site access is a signalized intersection that will be developed in conjunction the La Quinta Auto Centre, south of Highway 111.

III. B STUDY AREA LAND USE

The site is located within the City of La Quinta, north of Highway 111, and south of the Whitewater River Channel, east of Adams Street, and west of Dune Palms Road. The 57± acre site is currently vacant.

South of Highway 111, opposite the proposed project, is the site of the future La Quinta Auto Centre. The La Quinta Auto Centre will include 275,000 square feet of auto dealership facilities and approximately 400,000 square feet of mixed-use regional commercial uses, and is scheduled for completion by the year 2005. The land east of Dune Palms Road is currently vacant.

North of Highway 111 and west of Adams Street is the Wal-Mart commercial center. Between the project site and Adams Street, is the proposed Adams Hotel project which includes a 160-room hotel and 12,000 square feet of restaurant uses.

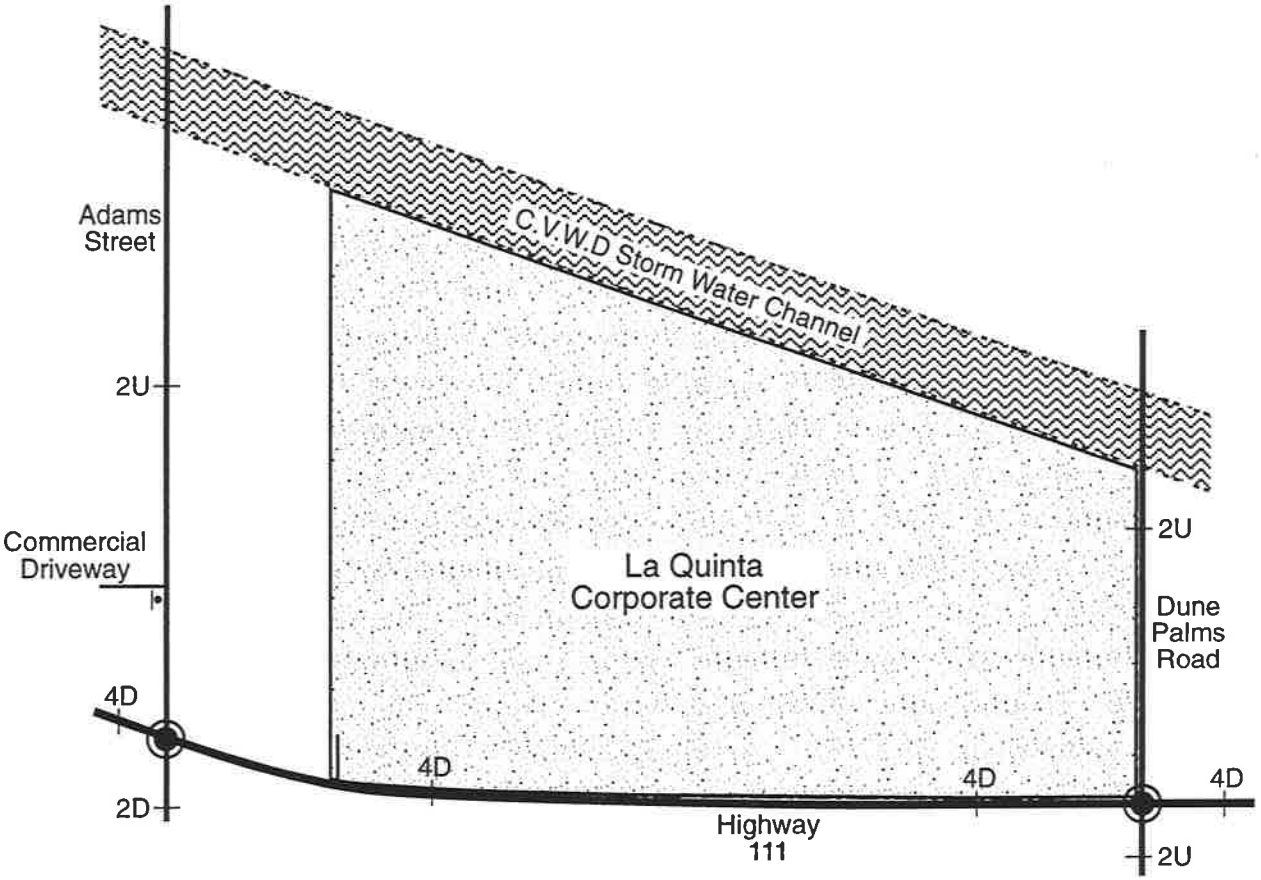
III. C SITE ACCESSIBILITY

Area Roadway System

Regional access is currently provided by State Highway 111. Local access is provided by Adams Street and Dune Palms Road. Direct site access is provided by four driveways and and one intersection on Highway 111, one driveway and one intersection on Adams Street, and one driveway and one intersection along Dune Palms Road. The four driveways on Highway 111 and the one driveway on Dune Palms Road will be restricted to right-turn movements.

Figure III-1 depicts the existing transportation system in the study area. Traffic control devices and mid-block lane geometrics are shown, based upon a field survey made in March of 1999.

Figure III-1
Existing Transportation System



Legend

2U — Number of Through Lanes
D = Divided U = Undivided

STOP Sign

Signalized Intersection

Endo Engineering

Scale: 1" = 525'

Figure III-2 depicts the future transportation system in the project vicinity, based upon the Circulation Element of the La Quinta General Plan. Figure III-3 provides typical street cross-sections for master planned roadways in La Quinta, including right-of-way requirements.

Highway 111 is shown in the La Quinta Circulation Element as a special class of Major Arterial, with a 172-foot right-of-way established by Caltrans. Adjacent to the project site, Highway 111 has a half-width with a 70-foot right-of-way, a 44-foot roadbed, a 14-foot median, and a 12-foot parkway.[1]

Adams Street is shown as a Secondary Arterial (88-foot right-of-way and a 64-foot roadbed) north of Highway 111, and as a Primary Arterial south of Highway 111. Dune Palms Road is shown as a Secondary Arterial north of Highway 111 and a Primary Arterial south of Highway 111.

Traffic Volumes

To analyze the peak hour conditions at the three existing key intersections, morning and evening peak hour traffic counts were made in February of 1999 at the key intersections by Counts Unlimited, Inc. Two-hour manual traffic counts were made between 7:00 AM and 9:00 AM and between 4:00 PM and 6:00 PM. The turning movement count data from the morning and evening peak hours at the key intersections is included in Appendix 1.

Figure III-4 depicts the current peak season peak hour traffic volumes on roadway links in the study area. Current daily peak season volumes were developed by assuming that 8.5% of the daily traffic volumes occur during the evening peak hour, and have been included in the summary of daily traffic volumes shown in Table IV-2.

Traffic Signal Warrants

The one existing key unsignalized intersection is Adams Street @ (future) Adams Hotel Access. With the existing traffic volumes from the Wal-Mart shopping center driveway located opposite the proposed Adams Hotel Access, this intersection is well below peak hour traffic signal warrants. Refer to Appendix 3 for Daily Planning Level Warrants, peak hour warrants, and worksheets.

Transit Service

Transit service is provided through the study area by the SunLine Transit Agency. Bus route 846 is located along Highway 111 adjacent to the project site.

Existing Relevant TSM Programs

There are no Transportation System Management plans in effect in the study area at present. However, the City of La Quinta has adopted a Transportation Demand Management Ordinance (Municipal Code Chapter 9.162).

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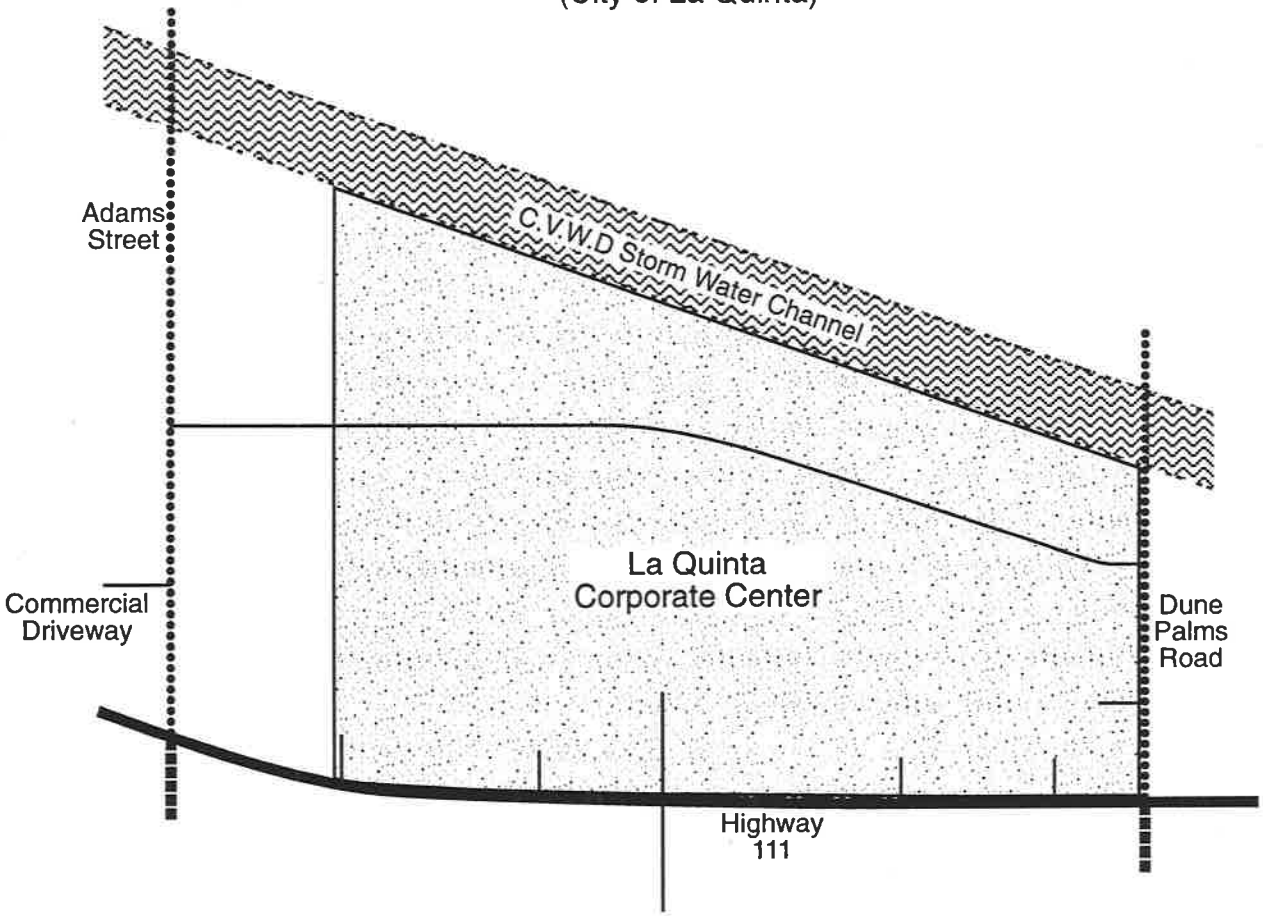
1. Source: Mr. Steve Speer, City of La Quinta.

Figure III-2

Anticipated Transportation System
(City of La Quinta)



Legend

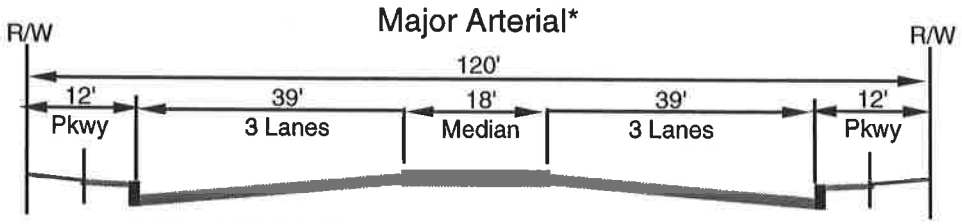
- Major Arterial
- Primary Arterial
- Secondary Arterial

Endo Engineering

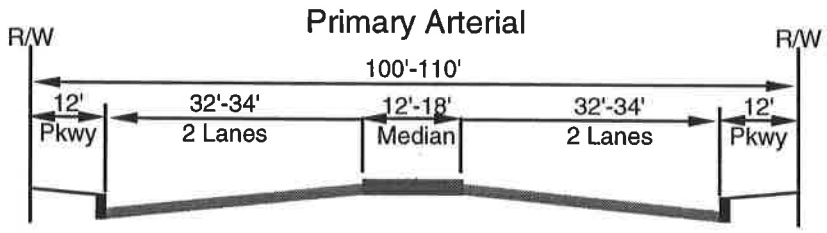
Source: Circulation System Policy Diagram; June 26, 1992.

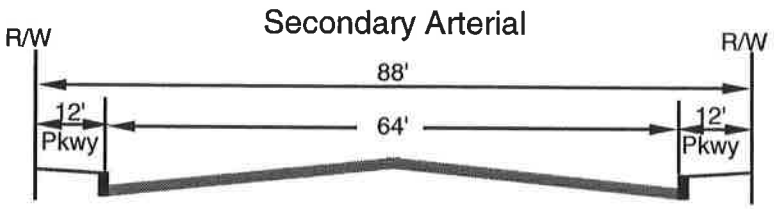
Scale: 1" = 525'

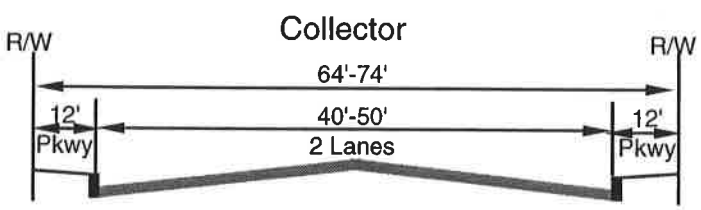
Figure III-3
Typical Street Cross-Sections
(La Quinta)



* State Highway 111 constitutes a special class of Major Arterial with a 172' right-of-way established by Caltrans.







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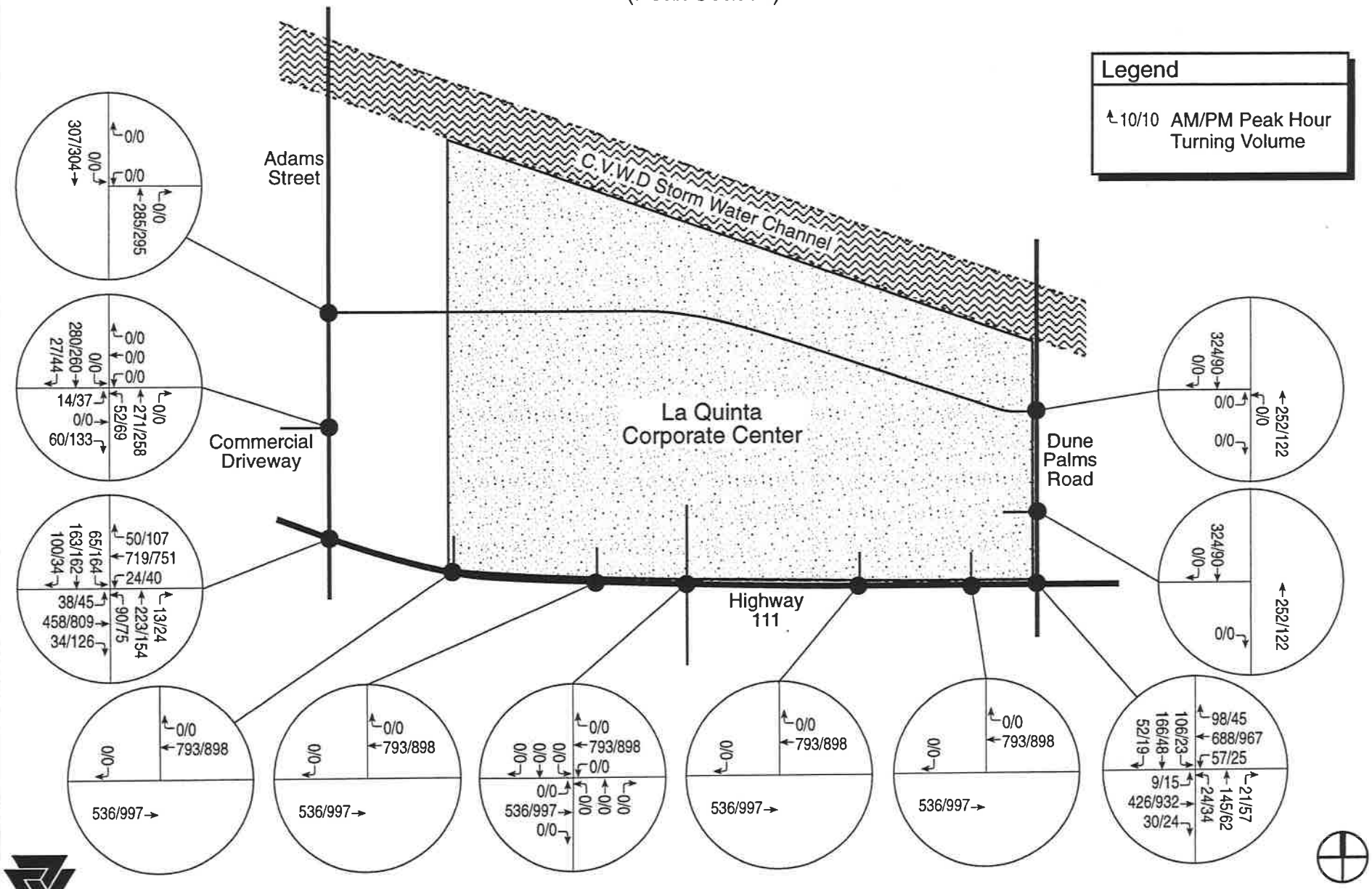
Source: City of La Quinta General Plan (10/92)

Figure III-4
1999 Peak Hour Traffic Volumes
(Peak Season)



IV. PROJECTED TRAFFIC

IV. A SITE TRAFFIC

Project-Related Trip Generation

The potential trip generation from development on-site was determined from the Institute of Transportation Engineers 1997 publication entitled *Trip Generation* (Sixth Edition). The trip generation forecast for the proposed project (site traffic generation) is shown in Table IV-1 summarized by land use.

Table IV-1
Estimated Site Traffic Generation[a]

Planning Area/Land Use (ITE Code)	Land Use Quantity	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily 2-Way
Proposed Project								
Business Park (770)	91.6 TSF	110	21	131	27	91	118	1,170
Commercial (820)	79.3 TSF	85	54	139	259	280	539	5,870
General Office (710)	235 TSF	323	44	367	60	291	351	2,590
Restaurant-HTO (832)	7 TSF	34	31	65	46	30	76	910
Bank W/O Drive Thru (SD)	6.5 TSF	27	12	39	31	47	78	980
Racquetball/Health Club(492)	30 TSF	26	18	44	33	22	55	510
Service Station (846)	15 Pumps	81	78	159	99	99	198	2,290
Industrial Park (130)	10.6 Acres	109	22	131	30	114	144	1,100
Mini Warehouse (151)	3.61 Acres	5	5	10	8	7	15	150
Total		**800**	**285**	**1,085**	**593**	**981**	**1,574**	**15,570**
Cumulative Project								
Hotel (310)	160 Room	45	29	74	43	38	81	1,060
Restaurant-HTO (832)	12 TSF	58	53	111	78	52	130	1,560
Total		**103**	**82**	**185**	**121**	**90**	**211**	**2,620**

a. TSF=Thousand Square Feet; Pumps=Vehicle Fueling Positions; HTO=High Turn Over.

Development of the entire site is expected to be completed by the year 2010. It includes the development of 57± acres of industrial, commercial, and office uses. As shown in Table IV-1, the proposed project will generate 15,570 daily trips, of which 1,085 would occur during the morning peak hour (800 inbound and 285 outbound) and 1,574 would occur during the evening peak hour (593 inbound and 981 outbound).

Along the western boundary of the project site is a cumulative project consisting of a hotel and two restaurants. Although the hotel and restaurants are being planned in conjunction with the proposed project, they are being processed separately. Therefore, the trip generation from the hotel and restaurants is addressed herein as a cumulative development (as shown in Table IV-1), rather than as part of the proposed project trip generation.

The development of mixed-use projects reduces the trip generation associated with the development below that which is projected directly from ITE trip generation rates because the ITE rates were developed from isolated single-use developments and therefore ignore trip overlap that occurs between various land uses on-site. To account for the potential for trip interaction between the various uses proposed for the project, 10 percent of the project trip generation was assumed to be internal trips with both an origin and destination on-site. No reduction in trip generation was assumed for pass-by trips, even though a significant portion of the trips that enter the site will already be on the adjacent street system, regardless of whether or not the proposed development occurs.

Project-Related Trip Distribution and Assignment

Traffic distribution is the determination of the directional orientation of traffic. It is based upon the geographical location of the site and land uses which will serve as trip origins and destinations. Traffic assignment is the determination of which specific routes project-related traffic will use, once the generalized traffic distribution is determined. The basic factors affecting route selection are minimizing time and distance. Other considerations might be the aesthetic quality of alternate routes, the number of turning maneuvers, and avoidance of congestion. Site access locations and turn restrictions at site driveways directly affect the site traffic assignment.

Figure IV-1 presents the percentage of project-related daily traffic utilizing the roadway links in the study area, based upon the existing distribution of land uses, turning movements at intersections, and distributions shown in traffic studies for nearby projects. Figure IV-2 provides the directional distribution of peak hour site traffic at the key intersections.

Figure IV-3 presents the project-related (year 2010) peak hour turning movement volumes at the project driveways and key intersections in the study area. The year 2020 site traffic volumes will be the same as the year 2010 site traffic volumes shown in Figure IV-3.

Table IV-2 provides daily traffic projections within the study area for each future scenario including year 2010 conditions (with and without the proposed project), and year 2020 conditions (with and without the proposed project). Year 1999 peak season daily volumes are included for comparison.

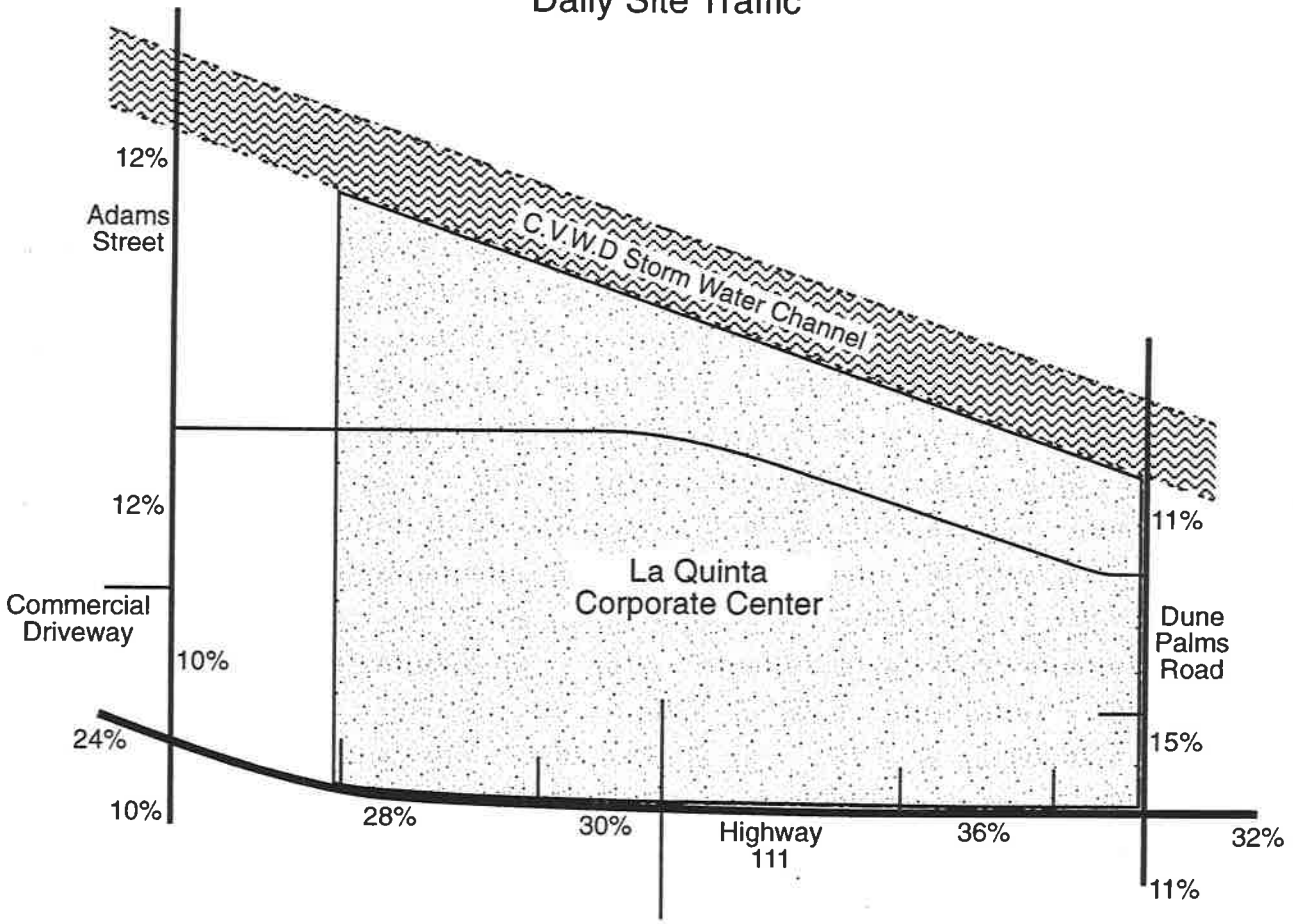
IV. B THROUGH TRAFFIC

Year 2010 non-site traffic volumes are provided in Figure IV-4. They were developed by interpolating between existing traffic volumes and year 2020 build-out volumes. The year 2010 daily traffic projections are shown in Table IV-2.

Year 2020 non-site peak hour traffic volumes are provided in Figure IV-5. They were developed by increasing existing turning movements to reflect the projected growth in daily traffic volumes between 1999 and 2020. Year 2020 daily volumes were based upon projections from the General Plan Update traffic model by BRW, Inc., for Adams Street and Dune Palms Road. Year 2020 daily traffic volumes on Highway 111 assumed that the highest volume link would operate at the upper limit of level of service E (54,000 ADT) with the project. After subtracting the project contribution to obtain the non-site traffic, a background traffic volume of 48,450 ADT was assumed to represent the year 2020 daily volume along Highway 111. The year 2020 daily traffic projections are shown in Table IV-2.

Figure IV-1

Directional Distribution of Daily Site Traffic



Legend

- Project Site
- 10% Percent of External Project-Related Traffic

Endo Engineering

Note: 10% of the individual project trips were assigned internally

Scale: 1" = 525'

Figure IV-2

Directional Distribution of Peak Hour Site Traffic

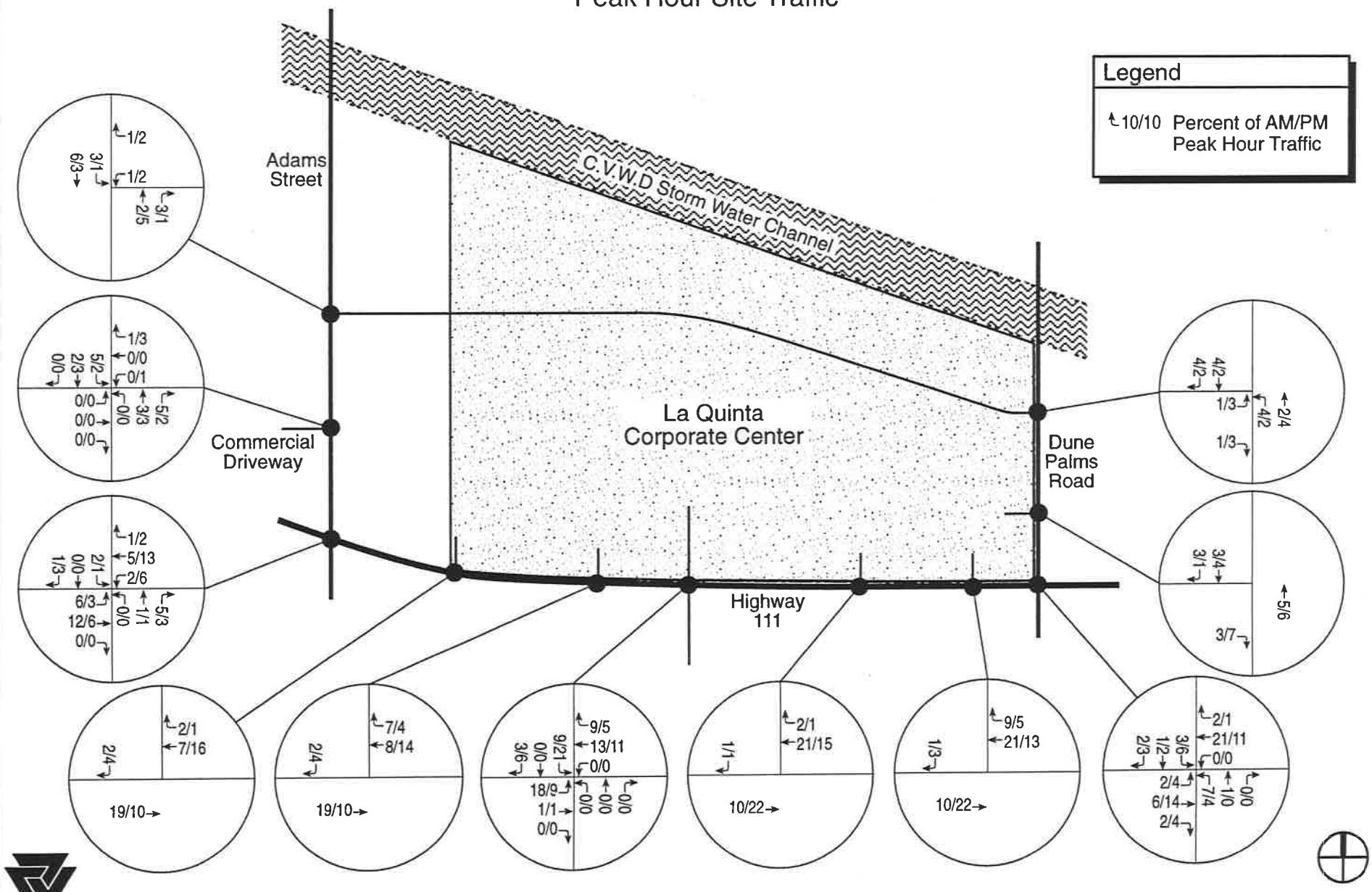


Figure IV-3
Peak Hour Site Traffic Volumes

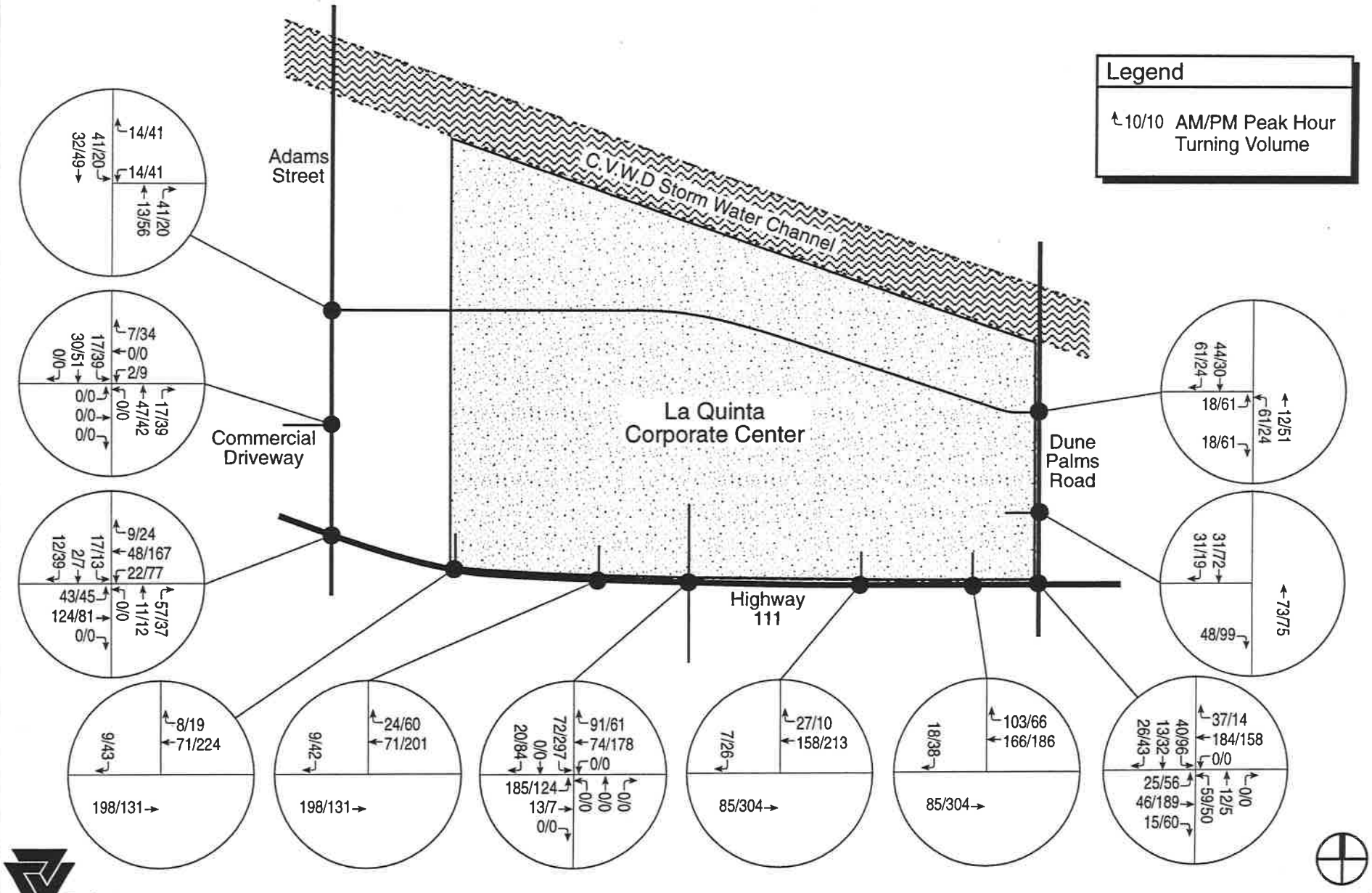


Figure IV-4

Estimated Peak Hour Non-Site Traffic
(Year 2010)

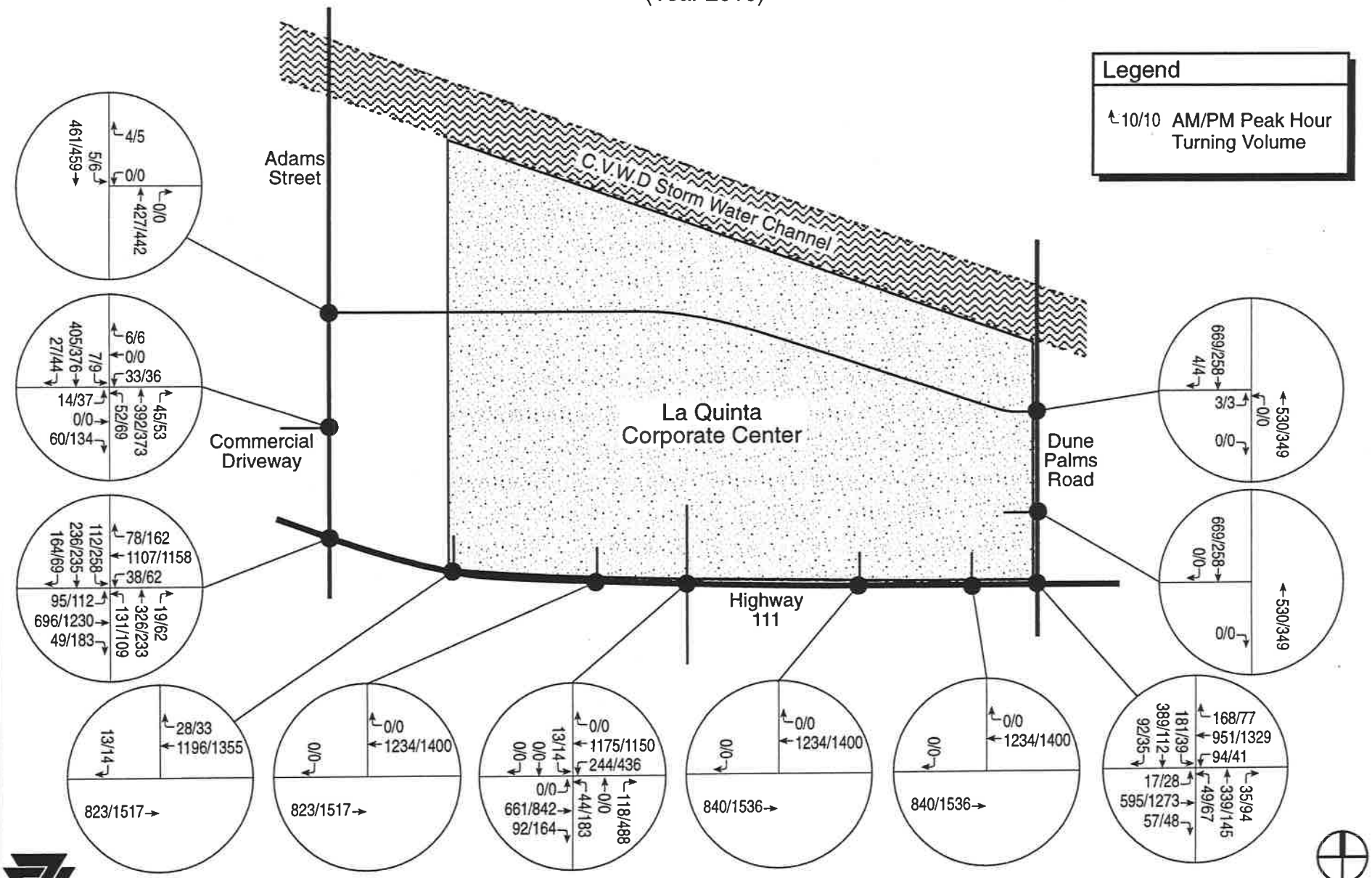


Figure IV-5
Estimated Peak Hour Non-Site Traffic
(Year 2020)

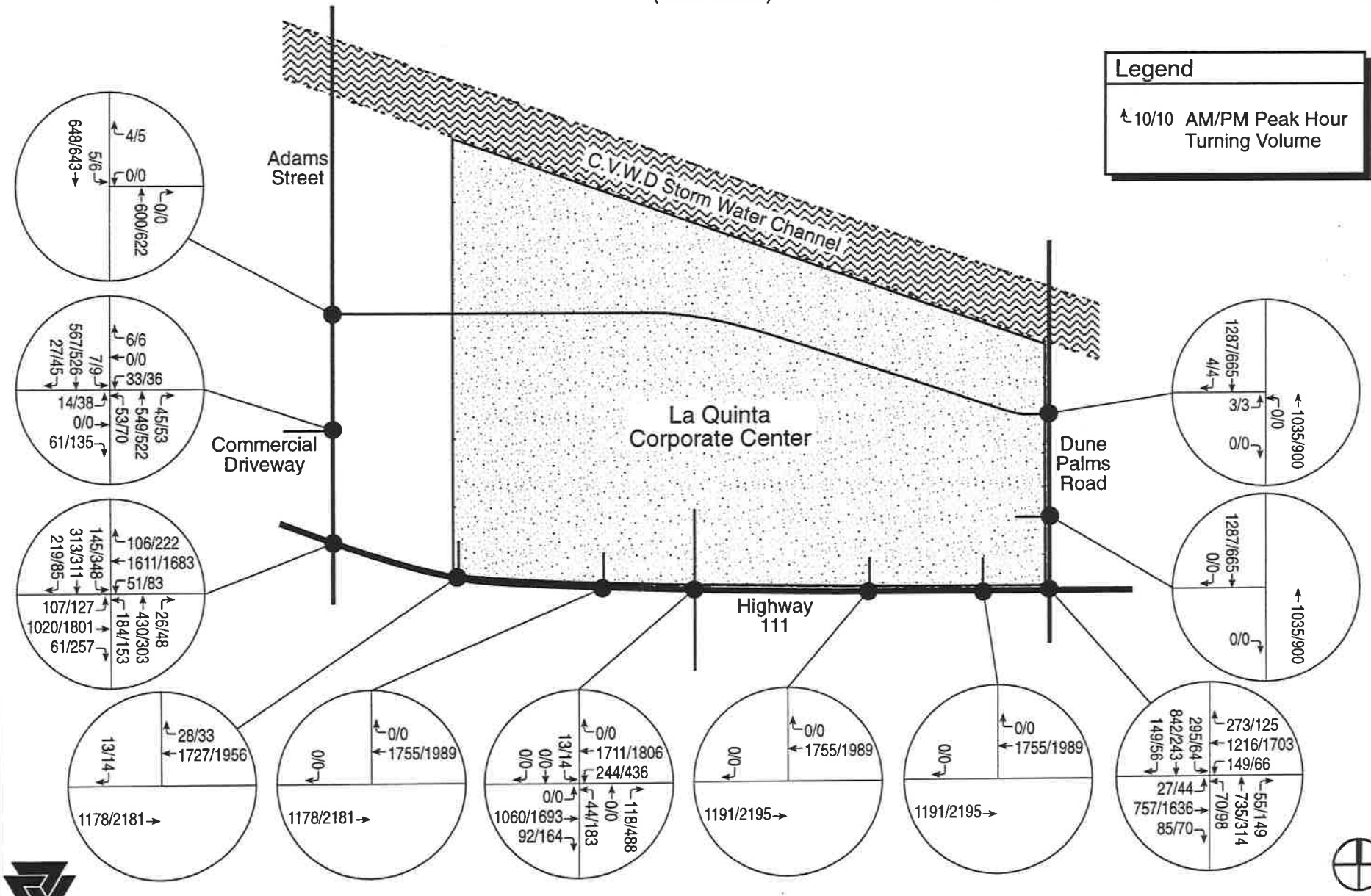


Table IV-2
Daily Traffic Volumes By Scenario

Roadway Link	1999[a] Peak Season	2010 Ambient	2010 +Project	2020 Ambient	2020 +Project
Highway 111					
- W/O Adams Street	21,650	33,010	36,360	48,450	51,800
- E/O Adams Street	22,290	33,480	37,550	48,450	52,520
- W/O Dune Palms Road	23,420	34,280	39,830	48,450	54,000
- E/O Dune Palms Road	24,110	34,750	39,250	48,450	52,960
Adams Street					
- N/O Project Site	7,050	10,360	12,010	14,700	16,350
- N/O Highway 111	7,840	10,890	12,280	14,700	16,090
- S/O Highway 111	6,840	9,430	10,790	12,640	14,000
Dune Palms Road					
- N/O Project Site	2,490	7,100	8,660	18,370	19,930
- N/O Highway 111	2,490	7,100	9,230	18,370	20,500
- S/O Highway 111	2,940	7,680	9,130	18,370	19,820

a. Estimated from 1999 peak hour traffic counts at the key intersections by assuming that 8.5% of the daily traffic occurs during the evening peak hour. These volumes were rounded to the nearest ten vehicles.

IV. C TOTAL TRAFFIC

Figure IV-6 shows the year 2010 total peak hour traffic volumes within the study area upon completion project. The total peak hour volumes shown in Figure IV-6 were developed by adding the site traffic (shown in Figure IV-3) to the 2010 non-site traffic (depicted in Figure IV-4).

Figure IV-7 shows the year 2020 total peak hour traffic volumes within the study area upon build-out of the proposed project and cumulative projects. The total peak hour volumes shown in Figure IV-7 were developed by adding the site traffic (shown in Figure IV-3) to the 2020 non-site traffic (depicted in Figure IV-5).

Figure IV-6
Estimated Peak Hour Total Future Traffic
(Year 2010)

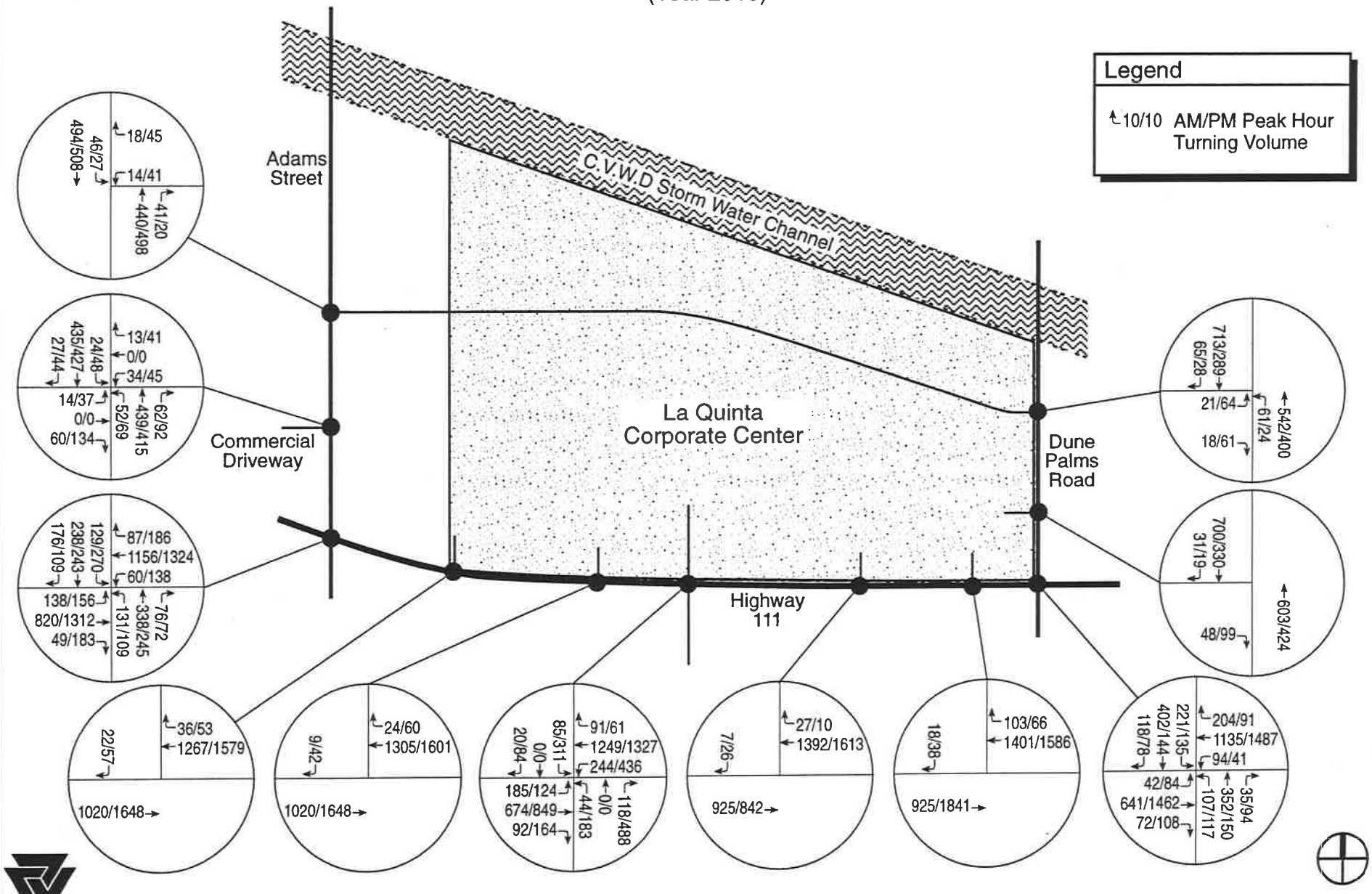
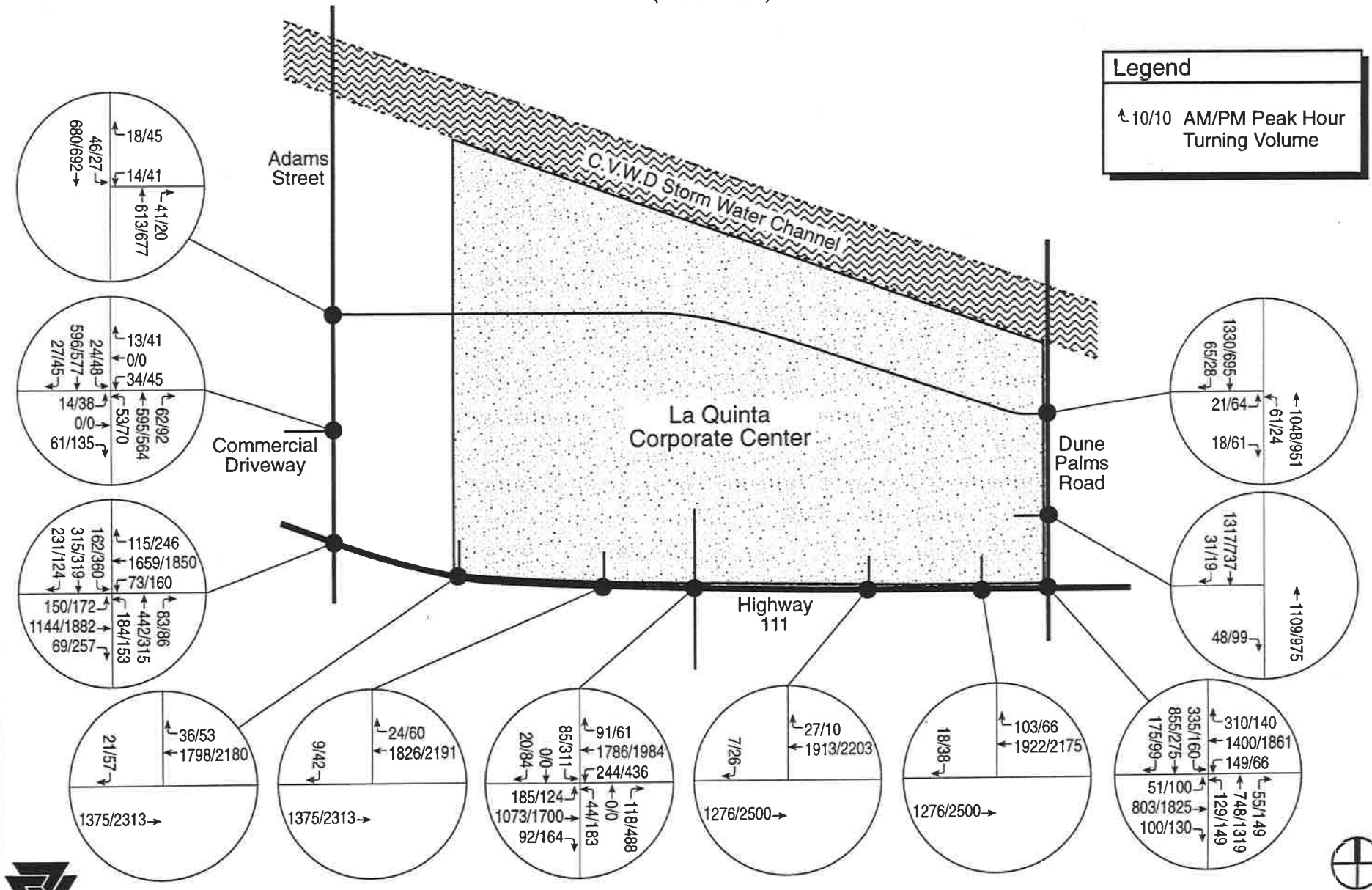


Figure IV-7

Estimated Peak Hour Total Future Traffic
(Year 2020)



V. TRAFFIC ANALYSIS

V. A SITE ACCESS

The proposed project benefits from access to three master planned roadways. State Highway 111 and Dune Palms Road border the project site on the south and east, respectively. Adams Street is located west of the project site and is accessible via a proposed east/west industrial street across the northern half of the project site. Site access is adequate to serve the future traffic demands associated with proposed project.

The proposed Site Development Plan incorporates internal connections to the neighboring Adams Hotel site at three points. These connections benefit the proposed development by permitting access to Adams Street and the two restaurants proposed in conjunction with the Adams Hotel development. They also benefit the Adams Hotel development by permitting easy access to the fitness center, the office and the retail uses proposed on-site.

City street access guidelines include Circulation Policy 3-3.1.3 which states: a) access by individual driveways to Major and Primary Arterials shall be restricted wherever possible; b) access to Major and Primary Arterials shall be limited through the use of medians and access controls; and c) when permitted, access along arterial and collector streets shall be located a minimum of 250 feet from the ends of the curb returns.

The proposed Site Development Plan includes six site driveways onto master planned streets, five of which are along Highway 111. A sixth driveway is proposed on Dune Palms Road, midway between Highway 111 and the proposed industrial street on-site (see Figure II-2).

The main site access is proposed on Highway 111 in the center of the site, opposite the main entry to the approved La Quinta Auto Center. This driveway will provide full access and will be signalized. The other four driveways proposed along Highway 111 will be restricted to right turns only. Three of the four driveways along Highway 111 are consistent with the City access design guidelines which require them to be located a minimum of 250 feet (from curb return to curb return) from the closest intersection.

The two site driveways proposed closest to the intersection of Highway 111 and Dune Palms Road will be located 250 feet from the intersection (from nearest edge to edge) in order to better serve the proposed gas station. This represents a minor deviation from City Circulation Policy 3-3.1.3. The driveway proposed on Dune Palms Road will be located 250 feet north of Highway 111 and will be restricted to right turns only. The driveway proposed on Highway 111 will be located 250 feet west of Dune Palms Road and will be restricted to right turns only.

V. B CAPACITY AND LEVEL OF SERVICE AND IMPROVEMENT ANALYSIS

Roadway capacity has been defined as the maximum number of vehicles that can pass over a given roadway during a given time period under prevailing roadway and traffic conditions. By comparison, levels of service are a relative measure of driver satisfaction, with values ranging from A (free flow) to F (forced flow). Levels of service (LOS) reflect a number of factors such as speed and travel time, traffic interruptions, vehicle delay, freedom to maneuver, driver comfort and convenience, safety and vehicle operating costs.

Peak hour traffic creates the heaviest demand on the circulation system and the lane configuration at intersections is the limiting factor in roadway capacity; consequently, peak hour intersection capacity analyses are useful indicators of "worst-case" conditions. The relationship between peak hour intersection capacity and levels of service is provided in Appendix 2 (Table A-1) for unsignalized intersections and Appendix 4 (Table A-2) for signalized intersections.

The La Quinta General Plan circulation Policy 3-2.1.3 establishes Level of Service "D" as the minimum acceptable intersection Level of Service allowed. No development project shall be approved which will increase the traffic at City intersections to the extent that an LOS worse that LOS D during the A.M. or P.M. peak hour results without adequate mitigation.

Existing 1999 Traffic Conditions

Two of the existing key intersections in the project vicinity (Highway 111 at Adams Street and Highway 111 at Dune Palms Road) are controlled by traffic signals. Figure III-1 indicates where traffic signals and where stop signs control traffic at the existing key intersections. The commercial driveway on Adams Street north of Highway 111 (that is located opposite the proposed Adams Hotel access) is currently controlled by a stop sign facing eastbound vehicles.

Unsignalized Intersection Analysis

The measure of effectiveness for unsignalized intersections is average total delay per vehicle. The 1994 update to the *Highway Capacity Manual* (TRB Special Report 209) includes an unsignalized intersection operational methodology which is the basis for determining unsignalized intersection delay. The existing unsignalized key intersections were evaluated with the methodology outlined in the 1994 *Highway Capacity Manual* (HCM). A general discussion of this methodology is included in Appendix 2.

The Highway Capacity Software (HCS) package is a direct computerized implementation of the 1994 HCM procedures, prepared under FHWA sponsorship and maintained by the McTrans Center at the University of Florida Transportation Research Center. HCS Release 2.1d was employed to assess the unsignalized key intersections in the project vicinity. Computerized HCS worksheets for the unsignalized intersections analyzed are included in Appendix 2.

Existing average total delay per vehicle and the corresponding level of service for the unsignalized key intersection is provided in Table V-1, assuming existing lane geometrics. As shown therein, the existing commercial driveway on Adams Street (opposite the future Adams Hotel access) is currently operating at level of service (LOS) A during both morning and evening peak hours.

Average intersection delay ranges from 0.7 during the morning peak hour to 1.4 seconds per vehicle during the evening peak hour at this key intersection. The eastbound movement experiences the most delay at this intersection. This movement operates at LOS A during the morning peak hour and LOS B during the evening peak hour (with average delays ranging from 4.4 to 5.4 seconds per vehicle).

Table V-1
Existing (1999) Unsignalized Intersection Peak Hour Delay and LOS Summary[a]
(Peak Season Average Weekday)

Unsignalized Intersection	Existing Condition (1999 No Project)				
	Intersection		Movement With The Most Delay		
	Delay	Level of Service	Move	Delay	Level of Service
Adams Street @ Hotel Access					
- AM Peak Hour	0.7	LOS A	EB	4.4	LOS A
- PM Peak Hour	1.4	LOS A	EB	5.4	LOS B

a. Delay=Average Total Delay (seconds/vehicle); EB=eastbound. LOS was determined from the delay (0-5 sec./veh.=LOS A; 5-10 sec./veh.=LOS B; 10-20 sec./veh.=LOS C; 20-30 sec./veh.=LOS D; 30-45 sec./veh.=LOS E; 45+ sec./veh. = LOS F) per 1994 HCM page 10-12. Appendix 2 includes all of the HCS unsignalized intersection peak hour worksheets.

Traffic Signal Warrants

The justification for the installation of a traffic signal at an intersection is based on the warrants adopted by Caltrans and the Federal Highway Administration. There are 11 types of traffic signal warrants including one for minimum vehicular volume, interruption of continuous traffic, minimum pedestrian volume, school crossings, progressive movement, accident experience, systems organization, a combination of warrants, a four-hour volume warrant, a peak hour delay warrant, and a peak hour volume warrant.

The installation of a traffic signal should be considered if one or more of the warrants is met; however, the satisfaction of a warrant is not necessarily sufficient justification in and of itself for the installation of signals. Delay, congestion, approach conditions, driver confusion, future land use or other evidence of the need for right-of-way assignment beyond that which could be provided by stop signs must be demonstrated. Improper or unwarranted signal installations may cause: (1) excessive delay; (2) disobedience of the signal indications; (3) circuitous travel on alternate routes; and (4) increased accident frequency.[1]

Rural volume warrants (70 percent of the urban warrants) apply when the 85th percentile speed of traffic on the major street exceeds 40 mph in either an urban or a rural area, or when the intersection lies within the built-up area of an isolated community with a population under 10,000. All other areas are considered urban and urban warrants should apply.

Planning level signal warrants (in terms of daily traffic volumes) were checked for the unsignalized key intersection of Adams Street at the Adams Hotel access for 1999 peak season conditions. Urban warrants were applied because the existing speed of traffic on the Adams Street is 35 mph. As shown in Appendix 3, this intersection does not appear to currently meet planning level daily signal warrants. Moreover, it does not meet the Caltrans peak hour traffic volume warrant.

Signalized Intersection Analysis

The measure of effectiveness for signalized intersections is average stopped delay per vehicle. The 1994 update to the *Highway Capacity Manual* includes a signalized intersection operational methodology which is the basis for determining signalized intersection delay. The Highway Capacity Software (HCS) package is a direct computerized implementation of the 1994 HCM procedures. HCS Release 2.4d was utilized to evaluate the key signalized intersection in the project vicinity. A general discussion of this methodology and the computerized HCS worksheets for the signalized intersection analyzed are included in Appendix 4.

The 1994 *Highway Capacity Manual* (HCM) signalized intersection capacity and level of service methodology addresses the capacity and level of service of intersection approaches as well as the level of service of the intersection as a whole. The analysis is undertaken in terms of the ratio of demand flow rate to capacity (V/C ratio) for individual movements during the peak hour and the composite V/C ratio for the sum of critical movements or lane groups within the intersection.

The level of service is determined based upon average stopped delay per vehicle. Average stopped delay is the total time vehicles are stopped in an intersection approach during a specified time interval divided by the volume departing from the approach during the same

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1. Caltrans; *Traffic Manual;* Revised 3/1/95; pg. 9-1 and 9-2.

time period. It does not include queue follow-up time (i.e. the time required for the vehicle to travel from the last-in-queue position to the first-in- queue position).

A critical V/C ratio less than 1.00 indicates that all movements at the intersection can be accommodated within the defined cycle length and phase sequence by proportionally allocating green time. In other words, the total available green time in the phase sequence is adequate to handle all movements, if properly allocated.

It is possible to have unacceptable delays (LOS F) while the V/C ratio is below 1.00 (when the cycle length is long, the lane group has a long red time because of signal timing and/or the signal progression for the subject movements is poor). Conversely, a saturated approach (with V/C ratio ≥ 1.00) may have low delays if the cycle length is short and/or the signal progression is favorable. Therefore, an LOS F designation may not necessarily mean that the intersection, approach or lane group is overloaded and LOS A to LOS E does not automatically imply available unused capacity.

Existing average stopped delay values and the corresponding levels of service during peak hours at the two currently signalized key intersections are provided in Table V-2, assuming existing lane geometrics. The intersection of Highway 111 and Adams Street currently operates at level of service B (LOS B) during the morning and evening peak hours. The average stopped delay ranges from 13.5 seconds/vehicle during the morning peak hour to 14.3 seconds/vehicle during the evening peak hour.

The intersection of Highway 111 and Dune Palms Road also currently operates at level of service B (LOS B) during the morning and evening peak hours. The average stopped delay ranges from 7.0 seconds/vehicle during the evening peak hour to 13.7 seconds/vehicle during the morning peak hour. LOS B at signalized intersections corresponds to average stopped delay values between 5.0 and 15.0 seconds/vehicle.

Table V-2
Existing (1999) Signalized Intersection
Peak Hour Delay and LOS Summary[a]

Signalized Intersection	Avg. Stopped Delay (Sec./Veh.)	V/C Ratio	Level of Service
Highway 111 @ Adams Street			
- Morning Peak Hour	13.5	0.514	B
- Evening Peak Hour	14.3	0.598	B
Highway 111 @ Dune Palms Road			
- Morning Peak Hour	13.7	0.454	B
- Evening Peak Hour	7.0	0.450	B

a. Based upon 1999 peak season traffic volumes and intersection geometrics and the 1994 *Highway Capacity Manual* Signalized Operation Methodology implemented by Version 2.4d of the Highway Capacity Software (8/11/96). A nine percent truck mix was assumed, per the December 1998 Caltrans publication "1997 Annual Average Daily Truck Traffic on California State Highways". Refer to the signalized intersection HCS worksheets in Appendix 4 for input parameters.

Year 2010 Ambient Conditions

Unsignalized Intersection Analysis

Tables V-3 and V-4 provide the delay values and levels of service at the key unsignalized and signalized intersections, respectively, for year 2010 conditions with and without the proposed project. The non-site traffic volumes include the cumulative traffic associated with the Adams Hotel project, the La Quinta Auto Center development driveway volumes, and the application of an annual traffic growth rate to reflect other cumulative development and the future growth in through traffic on Highway 111. The lane geometrics assumed for the year 2010 at all key intersections are shown in Figure VI-2.

The unsignalized key intersection of Adams Street and the Adams Hotel access will provide LOS A operation during peak hours in the year 2010 without the proposed project. The movements with the most delay at this unsignalized key intersection (westbound approach) are projected to experience LOS C, with average total delays of 12.7 seconds/vehicle in the morning peak hour and 14.0 seconds/vehicle during the evening peak hour.

Signalized Intersection Analysis

All three signalized key intersections will operate at LOS C or better (acceptable levels of service) in the year 2010, prior to the addition of site traffic. The intersection with the longest average stopped delay is projected to be Highway 111 @ Dune Palms Road during the morning peak hour (with an average delay of 21.3 seconds/vehicle which corresponds to LOS C). During the P.M. peak hour, this intersection is expected to provide a higher level of service (LOS B operation).

The intersection of Highway 111 and Adams Street is projected to operate at LOS C during both A.M. and P.M. peak hours in the year 2010, prior to the addition of site traffic. The average stopped delay will be comparable during the morning and evening peak periods (15.6 to 16.8 seconds/vehicle). The intersection of Highway 111 and the main site access is projected to operate at LOS B during the morning peak and LOS C during the evening peak hours. Without site traffic volumes, the average stopped delay is expected to range between 11.3 seconds/vehicle and 15.6 seconds/vehicle.

Year 2010 Plus Project Traffic Conditions

Unsignalized Intersection Analysis

With the addition of project-related traffic, the unsignalized key intersection will continue to provide LOS A operation in the year 2010, as shown in Table V-3. Site traffic will increase the average total delay by 0.1 seconds/vehicle during the A.M. peak hour and 0.6 seconds/vehicle during the P.M. peak hour. The movements with the most delay (westbound) at this intersection are projected to operate at LOS C, after site traffic is added.

Signalized Intersection Analysis

As shown in Table V-4, the addition of site traffic will not change the peak hour LOS at two of the three signalized key intersections analyzed (Highway 111 @ Adams Street and Highway 111 @ the main site access). However, the peak hour LOS will drop from LOS C to LOS D (during the morning peak) and from LOS B to LOS C during evening peak hours at the intersection of Highway 111 @ Dune Palms Road when site traffic is added to year 2010 non-site traffic volumes.

Table V-3
Year 2010 Unsignalized Intersection Peak Hour Delay and LOS Summary[a]
(Peak Season Average Weekday)

Unsignalized Intersection	No-Project			With Project			Change In	
	Intersection Delay/LOS	Move w/ Most Delay Move	Delay/LOS	Intersection Delay/LOS	Move w/ Most Delay Move	Delay/LOS	Intersection Delay	LOS
Adams Street @ Hotel Access								
- AM Peak Hour	1.1/LOS A	WB	12.7/LOS C	1.2/LOS A	WB	14.1/LOS C	0.1	No
- PM Peak Hour	1.9/LOS A	WB	14.0/LOS C	2.5/LOS A	WB	15.6/LOS C	0.6	No

a. Delay=Average Total Delay (seconds/vehicle). WB=westbound. LOS was determined from the delay (0-5 sec./veh.=LOS A; 5-10 sec./veh.=LOS B; 10-20 sec./veh.=LOS C; 20-30 sec./veh.=LOS D; 30-45 sec./veh.=LOS E; 45+ sec./veh.=LOS F) per 1994 HCM page 10-12. Appendix 2 includes all of the HCS unsignalized intersection peak hour worksheets.

Table V-4
Year 2010 Signalized Intersection Peak Hour Delay and LOS Summary[a]
(Peak Season Average Weekday)

Signalized Intersection	No-Project			With Project			Change In	
	Avg. Delay (Sec./Veh.)	Critical V/C	LOS	Avg. Delay (Sec./Veh.)	Critical V/C	LOS	Avg. Delay (Sec./Veh.)	LOS
Highway 111 @ Adams Street								
- AM Peak Hour	15.5	0.677	LOS C	16.7	0.733	LOS C	1.2	No
- PM Peak Hour	16.8	0.781	LOS C	19.5	0.825	LOS C	2.7	No
Highway 111 @ Main Site Access								
- AM Peak Hour	11.3	0.620	LOS B	13.6	0.731	LOS B	2.3	No
- PM Peak Hour	15.6	0.800	LOS C	17.7	0.803	LOS C	2.1	No
Highway 111 @ Dune Palms Road								
- AM Peak Hour	21.3	0.772	LOS C	31.6	0.936	LOS D	10.3	C-D
- PM Peak Hour	11.0	0.682	LOS B	18.5	0.861	LOS C	7.5	B-C

a. Average Delay=Average Stopped Delay (seconds per vehicle). Appendix 4 includes all of the HCS signalized intersection peak hour worksheets.

As shown in Table V-4, all three of the signalized key intersections are projected to operate at acceptable levels of service (LOS D or better) during peak hours with or without the proposed project. The peak hour level of service will drop at one of the three signalized key intersections, once site traffic is added to the street system. The intersection of Highway 111 and Dune Palms Road will experience a drop from LOS C to LOS D during the A.M. peak hours and a drop from LOS B to LOS C during the evening peak hours when site traffic is added to non-site traffic in the year 2010. Site traffic will increase the average stopped delay at this intersection by 10.3 seconds/vehicle during the A.M. and 7.5 seconds/vehicle during the P.M. peak hour

Year 2020 Ambient Conditions

Traffic Signal Warrants

Peak hour and daily planning level signal warrants were checked for three of the unsignalized intersections in the study area for 2020 peak season conditions with and without the proposed project. These intersections included: (1) Adams Street @ the Adams Hotel access; (2) Adams Street @ the proposed industrial street on-site; and (3) Dune Palms Road @ the proposed industrial street on-site. As shown in Appendix 3, one of these unsignalized intersections is projected to meet traffic signal warrants based upon year 2020+project volumes.

Adams Street at the Adams Hotel access was found to barely meet the peak hour signal warrant in the year 2020 as a result of westbound approach volumes (that were not affected by site traffic). Although existing volumes associated with the Wal-Mart and ultimate traffic volumes on Adams Street were sufficient to meet the peak hour warrant, the projected LOS at this intersection was determined to be acceptable without signalization. Consequently, a traffic signal is not required at this location under ultimate (year 2020+project) conditions.

Signal warrants were not met at the intersection of Adams Street and the proposed industrial street on-site under buildout (year 2020+project) conditions. Future volumes were insufficient to meet peak hour or daily traffic signal warrants and the peak hour levels of service at this intersection were found to be acceptable without signalization.

Signal warrants were met at the intersection of Dune Palms Road @ the proposed industrial street on-site under buildout (year 2020+project) conditions. Future volumes were sufficient to meet peak hour and daily traffic signal warrants and the peak hour levels of service at this intersection were found to be unacceptable without signalization.

Unsignalized Intersection Analysis

Tables V-5 and V-6 provide the delay values and levels of service at the key unsignalized and signalized intersections, respectively, for year 2020 conditions with and without the proposed project. The non-site traffic volumes included all of the traffic associated with buildout of the cumulative developments. Year 2020 lane geometrics assumed for all intersections are shown in Figure VI-3.

As shown in Table V-5, the unsignalized key intersection will provide LOS A operation in the year 2020 prior to the addition of site traffic. The movements (westbound) with the most delay at the unsignalized key intersection are projected to experience LOS D operation with average delays of up to 23.5 seconds/vehicle.

Table V-5
Year 2020 Unsignalized Intersection Peak Hour Delay and LOS Summary[a]
(Peak Season Average Weekday)

Unsignalized Intersection	No-Project			With Project			Change In	
	Intersection Delay/LOS	Move w/ Most Delay Move	Delay/LOS	Intersection Delay/LOS	Move w/ Most Delay Move	Delay/LOS	Intersection Delay	LOS
Adams Street @ Hotel Access								
- AM Peak Hour	1.2/LOS A	WB	21.3/LOS D	1.5/LOS A	WB	24.0/LOS D	0.3	No
- PM Peak Hour	2.2/LOS A	WB	23.5/LOS D	3.5/LOS A	WB	28.9/LOS D	1.3	No

a. Delay=Average Total Delay (seconds/vehicle). WB=westbound. LOS was determined from the delay (0-5 sec./veh.=LOS A; 5-10 sec./veh.=LOS B; 10-20 sec./veh.=LOS C; 20-30 sec./veh.=LOS D; 30-45 sec./veh.=LOS E; 45+ sec./veh.=LOS F) per 1994 HCM page 10-12. Appendix 2 includes all of the HCS unsignalized intersection peak hour worksheets.

Table V-6
Year 2020 Signalized Intersection Peak Hour Delay and LOS Summary[a]
(Peak Season Average Weekday)

Signalized Intersection	No-Project			With Project			Change In	
	Avg. Delay (Sec./Veh.)	Critical V/C	LOS	Avg. Delay (Sec./Veh.)	Critical V/C	LOS	Avg. Delay (Sec./Veh.)	LOS
Highway 111 @ Adams Street								
- AM Peak Hour	16.8	0.759	LOS C	18.2	0.808	LOS C	1.4	No
- PM Peak Hour	17.2	0.828	LOS C	20.9	0.887	LOS C	3.7	No
Highway 111 @ Main Site Access								
- AM Peak Hour	7.9	0.544	LOS B	10.8	0.679	LOS B	2.9	No
- PM Peak Hour	13.0	0.751	LOS B	24.8	0.960	LOS C	11.8	B-C
Highway 111 @ Dune Palms Road								
- AM Peak Hour	19.2	0.807	LOS C	21.4	0.893	LOS C	2.2	No
- PM Peak Hour	13.4	0.698	LOS B	15.8	0.789	LOS C	2.4	B-C

a. Average Delay=Average Stopped Delay (seconds per vehicle). Appendix 4 includes all of the HCS signalized intersection peak hour worksheets.

Signalized Intersection Analysis

The signalized key intersections are projected to operate at acceptable levels of service (LOS C or better) in the year 2020 prior to the addition of site traffic, as shown in Table V-6. The intersection with the longest average delay is projected to be Highway 111 @ Dune Palms Road during the morning peak hour (with an average of 19.2 seconds/vehicle of delay which corresponds to LOS C).

Year 2020 Plus Project Traffic Conditions

Unsignalized Intersection Analysis

Following the addition of site traffic, the unsignalized key intersection of Adams Street and the Adams Hotel access will continue to provide LOS A operation in the year 2020, as shown in Table V-5. The movements with the most delay at this intersection (westbound) are projected to operate at LOS D. Site traffic will increase the average total delay at this intersection by 0.3 seconds/vehicle during the A.M. peak hour and 1.3 seconds/vehicle during the P.M. peak hour.

Signalized Intersection Analysis

As shown in Table V-6, the signalized key intersections will operate at acceptable levels of service (LOS C or better) in the year 2020 with or without site traffic. The peak hour levels of service at two of the three key signalized intersections are projected to change following the addition of project-related traffic. The P.M. peak hour LOS will drop from LOS B to LOS C at the Highway 111 intersections with Dune Palms Road and the main site access.

The intersection with the longest average delay is expected to be Highway 111 @ the main site access during the evening peak hour. This intersection is projected to have an average delay of 24.8 seconds/vehicle under year 2020+project conditions, which corresponds to LOS C operation. Site traffic will increase the average stopped delay at this intersection by 11.8 seconds/vehicle during the evening peak hour.

Level of Service Summary

Table V-7 summarizes the morning and evening peak hour LOS findings at each key intersection in the study area with each development scenario. As shown therein, acceptable levels of service are projected to occur for all scenarios, provided traffic signals are installed when warranted and roadway improvements consistent with Figures VI-2 and VI-3 are phased to coincide with projected increases in traffic volumes. These roadway improvements are consistent with the master planned cross-sections.

Following implementation of the proposed mitigation measures, the proposed project will have a less-than significant impact on all roads and intersections in the study area. All streets and key intersections are projected to maintain a minimum of LOS D, per La Quinta Circulation Policy 3-2.1.3.

Table V-7
Level of Service Summary[a]

Key Intersection	1999 Peak Season	2010 Ambient	2010 +Project	2020[b] Ambient	2020[b] +Project
Adams Street					
- Adams Hotel Access	A/A	A/A	A/A	A/A	A/A
- Highway 111	B/B	C/C	C/C	C/C	C/C
Highway 111					
- Main Site Access	–	B/C	B/C	B/B	B/C
- Dune Palms Road	B/B	C/B	D/C	C/B	C/C

a. Format is AM/PM peak hour Level of Service.
b. For year 2020 conditions, the surrounding streets were assumed to be constructed to their master planned cross-sections which include: six through lanes on Highway 111, four travel lanes on Dune Palms Road and 4 travel lanes on Adams Street.

VI. FINDINGS AND CONCLUSIONS

VI.A Site Accessibility

The project has adequate access to serve the proposed land uses. No mid-block improvements beyond those shown in the La Quinta General Plan Circulation Element are required to accommodate site traffic at acceptable levels of service (LOS D or better). North of Highway 111, both Adams Street and Dune Palms Road will require flaring to accommodate dual southbound left-turn lanes.

Both of the proposed driveways for the service station (adjacent to the intersection of Dune Palms Road and Highway 111) deviate from the City access design standard requiring a minimum of 250 feet from the curb returns between driveways and intersections. The driveways are located approximately 250 feet from the edge of the nearest intersection, but do not include the extra space associated with the curb returns.

The proposed industrial street intersection on Adams Street varies from the City access design standard requiring a minimum of 250 feet between driveways and intersections. The existing self-storage facility is located directly to the north of the proposed intersection, and the middle Wal-Mart shopping center driveway is located approximately 150 feet north of the proposed intersection.

VI.B Traffic Impacts

The following are the circulation impacts associated with the proposed project:

1. The trip generation associated with build-out of the proposed project would total approximately 15,570 daily trips, of which 1,085 would occur during the morning peak hour (800 inbound and 285 outbound) and 1,574 would occur during the evening peak hour (593 inbound and 981 outbound).

2. The project will take primary access to Highway 111 which is projected to operate at its physical capacity by the year 2020 with a daily volume of 54,000 ADT.

3. The intersection of the proposed industrial road with Dune Palms Road will require signalization to serve site traffic and citywide build-out traffic volumes at acceptable levels of service.

4. The intersection of Adams Street and Highway 111 will require dual southbound left-turn lanes to serve site traffic and citywide build-out traffic volumes at acceptable levels of service.

5. The intersection of Dune Palms Road and Highway 111 will require dual southbound left-turn lanes to serve site traffic and citywide build-out traffic volumes at acceptable levels of service.

6. The intersection of the Main Site Access and Highway 111 will require dual westbound left-turn lanes (into the La Quinta Auto Centre) to serve citywide build-out traffic volumes at acceptable levels of service.

7. The year 2020 intersection lane requirements can be accommodated within the master planned cross-sections, with the exception of flaring needed along Adams Street and Dune Palms ,road north of Highway 111, to accommodate dual southbound left-turn lanes.

VI.C Off-Site Improvements Needed

Figure VI-1 depicts the existing lane geometrics. None of the key intersections require signalization or additional lanes to provide acceptable levels of service (LOS C or better) for current traffic volumes.

Year 2010 Improvements

Figure VI-2 illustrates the minimum lane requirements to accommodate year 2010 traffic volumes at acceptable levels of service (with or without the proposed project). None of the key intersections require signalization or additional lanes (other than those lanes necessary to provide access to the project) to ensure acceptable levels of service for projected traffic volumes.

Since the proposed industrial street intersects Adams Street approximately 150 feet south of the middle Wal-Mart shopping center driveway, the proposed access varies from the City access design standard requiring a minimum of 250 feet between driveway locations and the nearest intersection.[1] There is insufficient room to provide back-to-back left-turn pockets between the proposed industrial street and the middle Wal-Mart shopping center driveway. Site traffic could be accommodated by restriping the left-turn pocket for the Wal-Mart shopping center driveway as a two-way left-turn lane from the Wal-Mart shopping center driveway to the proposed industrial street.

Year 2020 Improvements

Figure VI-3 shows the minimum lane requirements for acceptable levels of service at the key intersections upon build-out of the proposed development and the City of La Quinta (year 2020 conditions). As shown therein, Highway 111, Adams Street, and Dune Palms Road will need to be fully improved to their master planned cross-sections to serve citywide build-out traffic volumes at acceptable levels of service. In addition, both Adams Street and Dune Palms Road will need to be flared along the southbound approach to Highway 111 to accommodate dual southbound left-turn lanes.

Traffic Signal Warrants

Planning level daily traffic signal warrants were checked for the one unsignalized key intersection (Adams Street @ Adams Hotel Access), and the intersections of the proposed industrial street with Adams Street and with Dune Palms Road (see the worksheets in Appendix 3). Although the intersection of Adams Street @ Adams Hotel Access appears to just meet signal warrants (assuming a two-lane major street and a one-lane minor street) based upon the existing volumes at the Wal-Mart shopping center driveway and year 2020 volumes on Adams Street, the intersection will provide adequate levels of service without signalization under citywide build-out conditions based upon the HCS unsignalized intersection analysis. The peak hour approach volume from the Adams Hotel Access is approximately one-half of the existing approach volume from the Wal-Mart shopping center driveway.

The intersection of the industrial street with Adams Street will not meet signal warrants and will provide adequate levels of service without a traffic signal under citywide build-out conditions. The intersection of the industrial street with Dune Palms Road will meet signal warrants and will not provide acceptable levels of service under citywide build-out conditions unless it is signalized.

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1. Source: BRW, Inc.; "City of La Quinta 1992 General Plan Update EIR"; July 15, 1992; page 4-149.

Figure VI-1
Existing Lane Geometrics

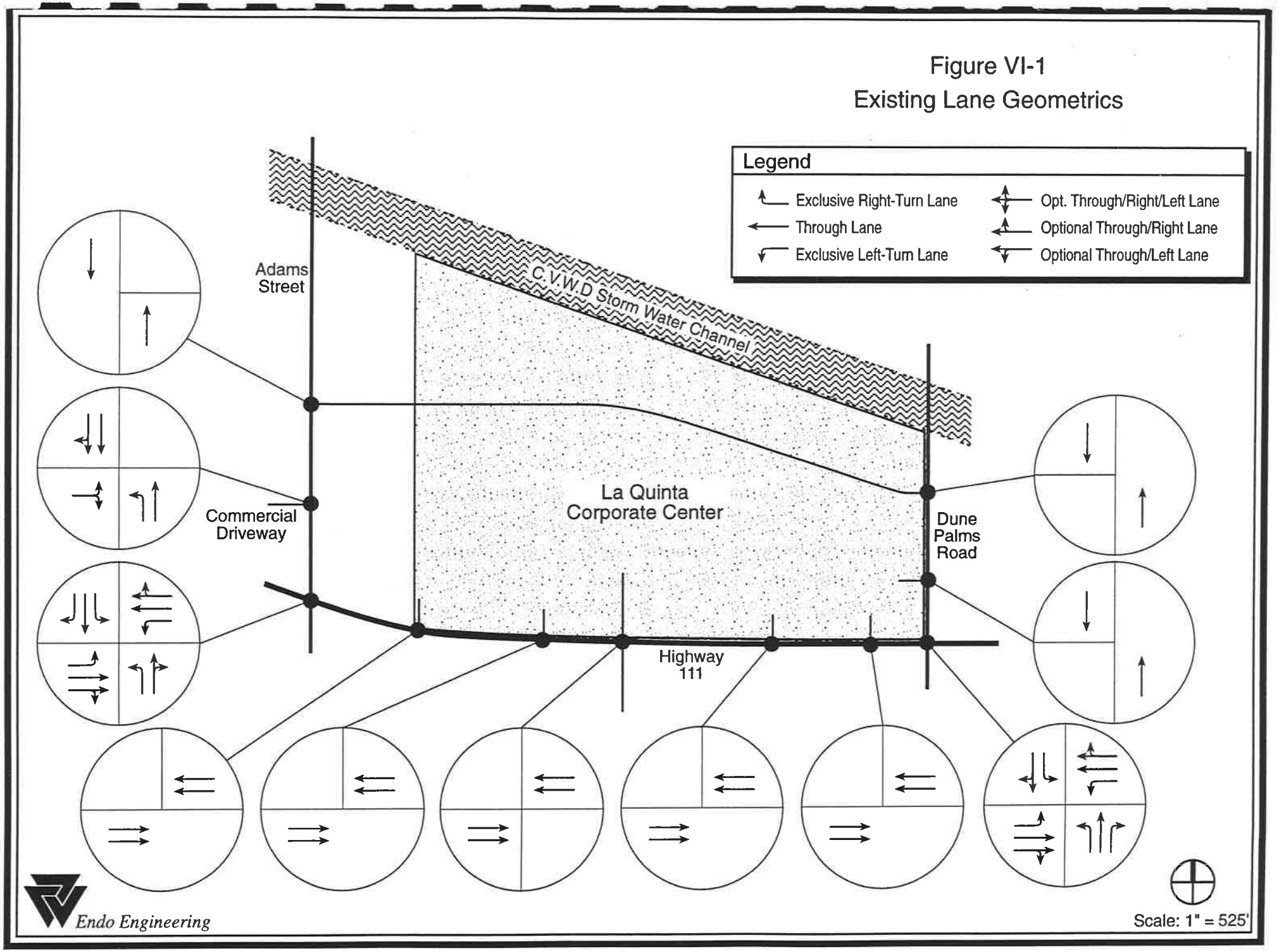


Figure VI-2
Required Year 2010 Lane Geometrics

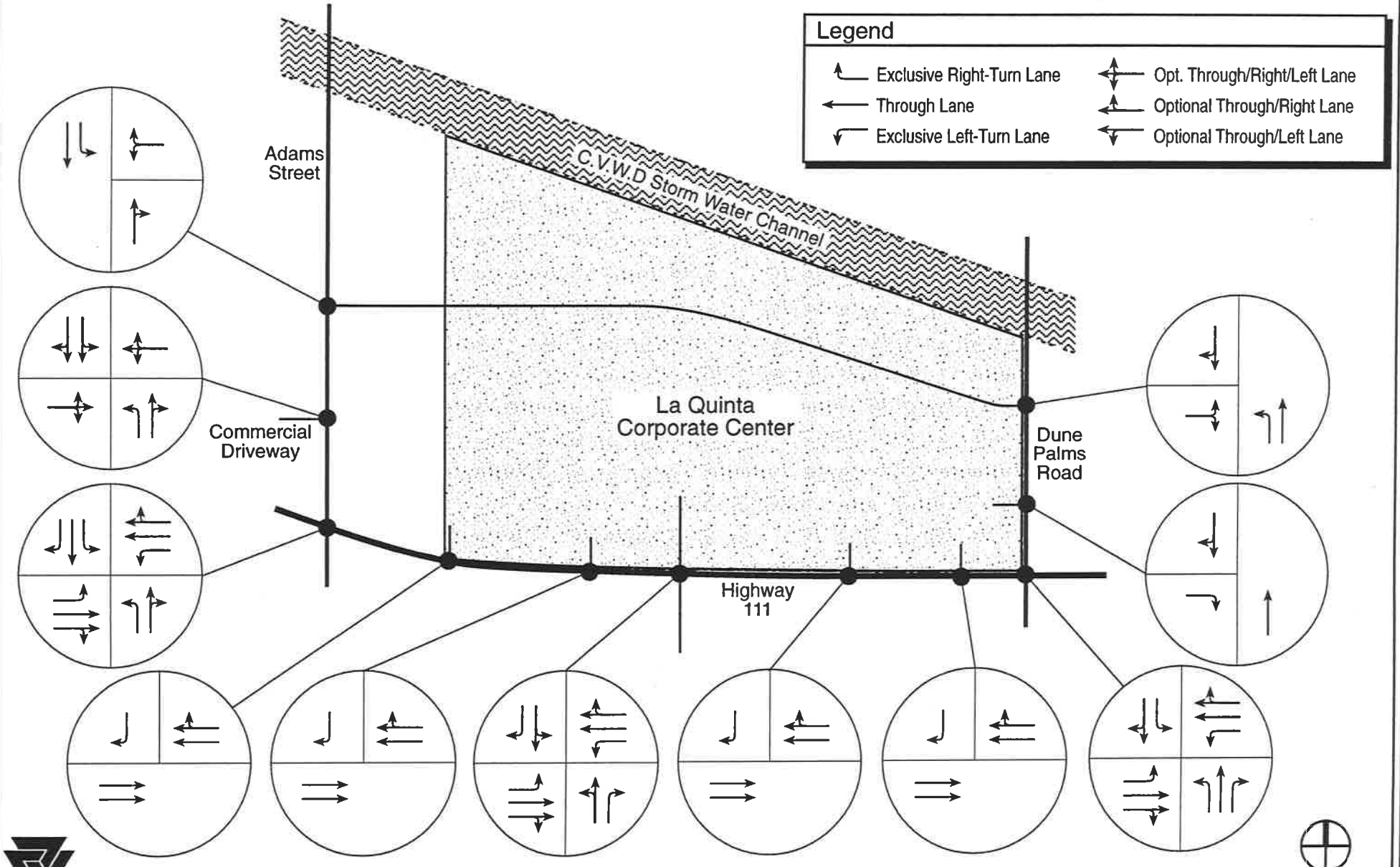
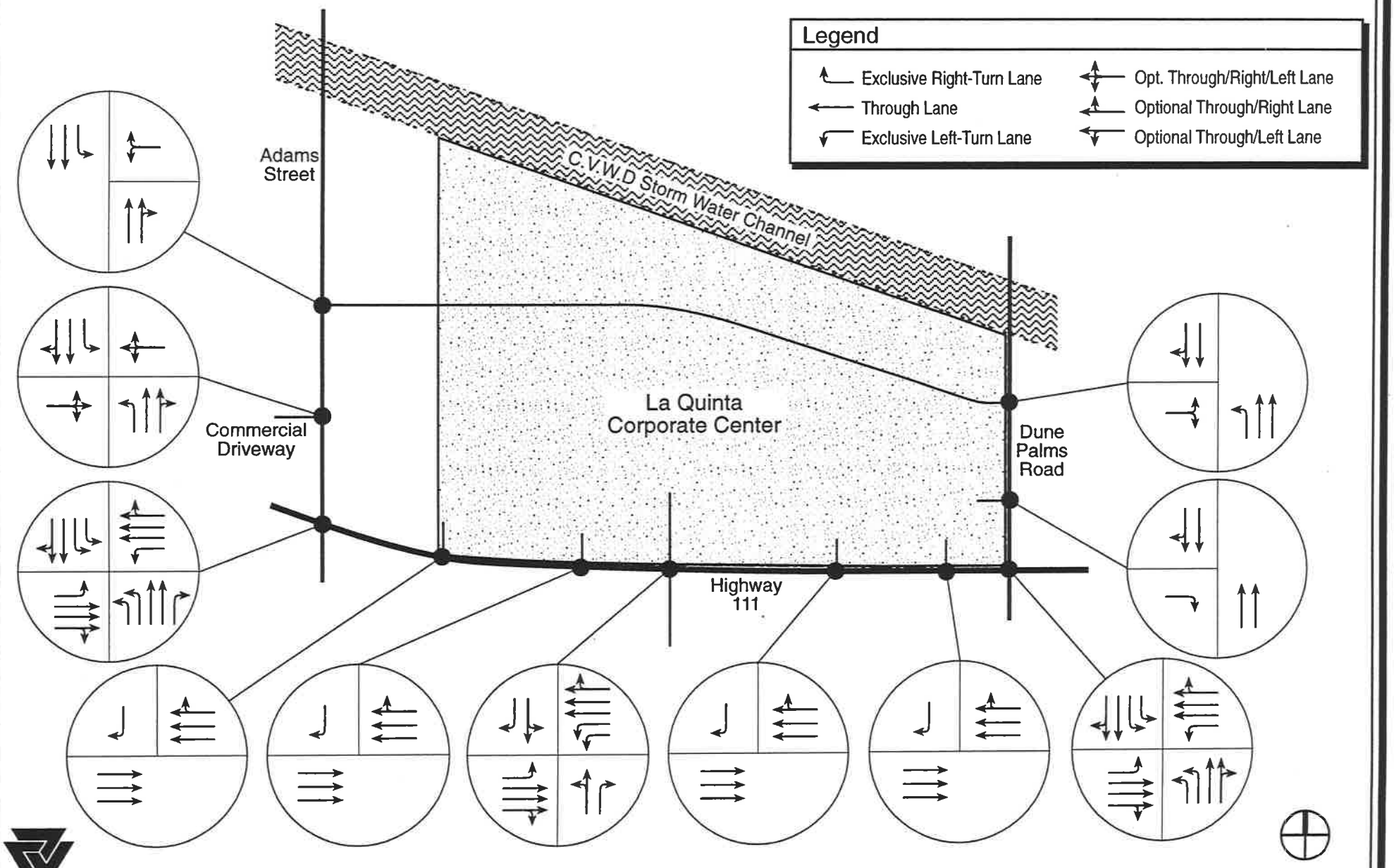


Figure VI-3
Required Year 2020 Lane Geometrics



VI.D Compliance With General Plan Circulation Policies

The proposed circulation system is generally consistent with the La Quinta Circulation Element. The project appears to comply with the General Plan policies (as shown in Appendix 5) except as noted above regarding the minimum intersection spacing standard of 250 feet. See Appendix 5 for the response to each La Quinta General Plan Policy.

VI.E CMP System Improvements Needed

The proposed project will contribute to the improvements identified in Figure VI-3 for the key intersections along Highway 111 (a CMP roadway).

VII. RECOMMENDATIONS

VII.A Site Access/Circulation Plan

The proposed development is served by three master planned streets as shown in Figure II-1. The primary project access is along Highway 111, with Adams Street and Dune Palms Road providing north-south access. Direct site access is provided by four driveways and one intersection on Highway 111, one driveway and one intersection on Adams Street, and one driveway and one intersection along Dune Palms Road. The four driveways on Highway 111 and the one driveway on Dune Palms Road will be restricted to right-turn movements. Only one proposed intersection (Dune Palms Road @ proposed industrial street) will require signalization upon completion of the project. The intersection at the main access location on Highway 111 will require signalization, with or without the project based upon the cumulative development of the La Quinta Auto Centre.

The following mitigation measures are recommended to reduce potential circulation impacts associated with the proposed project and site access.

1. The proposed internal circulation layout shall be subject to the review and approval of the City Traffic Engineer during the development review process to insure compliance with City of La Quinta minimum access and design standards.

2. Adequate off-street parking (including handicapped parking) shall be provided per the parking requirements of the Municipal Code.

3. All internal streets shall be fully constructed to their ultimate cross-section as adjacent on-site development occurs.

4. Sidewalks and streetlights shall be installed on-site as specified by the City.

5. Clear, unobstructed sight distance shall be provided at all internal street intersections on-site.

6. A STOP sign will control exiting site traffic and clear unobstructed sight distances shall be provided at all site driveways.

7. The project proponent shall provide (at a minimum) the lane geometrics shown in Figures VI-2 and VI-3 at the site access locations in conjunction with adjacent development.

8. The project proponent shall install a traffic signal when warranted at the intersection of the proposed industrial street and Dune Palms Road.

9. The project proponent may be required to participate in a traffic mitigation fee program which would ensure that a "fair-share" contribution is made to future roadway improvements within the project vicinity.

VII.B Roadway Improvements

Several roadway and traffic signal improvements will be required adjacent to the project site (as detailed in Figures VI-2 and VI-3) to provide adequate capacity for the proposed La Quinta Corporate Centre and citywide build-out traffic volumes. The project should participate in any improvements of areawide benefit on a "fair share" basis based upon

established fee programs (e.g. Traffic Signal Mitigation Fee), and be responsible for the implementation of site specific mitigation required by the City of La Quinta.

VII.C Transportation System Management Actions

The California Environmental Quality Act specifies that mitigation measures be identified which would further reduce the impacts of a project, even though the measures are not incorporated in the project. This allows local decision makers to decide whether or not the additional measures are warranted. Transportation System Management (TSM) actions fall into this category inasmuch as they would further reduce project-related impacts but are not incorporated in the project as proposed. The City of La Quinta could require a TSM Plan as a condition of approval. Such a plan would identify specific measures that are feasible on-site.

Appendices

1. 1999 Peak Hour Traffic Count Data
2. HCM Unsignalized Intersection Methodology and Worksheets
3. Traffic Signal Warrants
4. HCM Signalized Intersection Methodology and Worksheets
5. Consistency With General Plan Circulation Policies

Appendix 1

TRAFFIC COUNT DATA

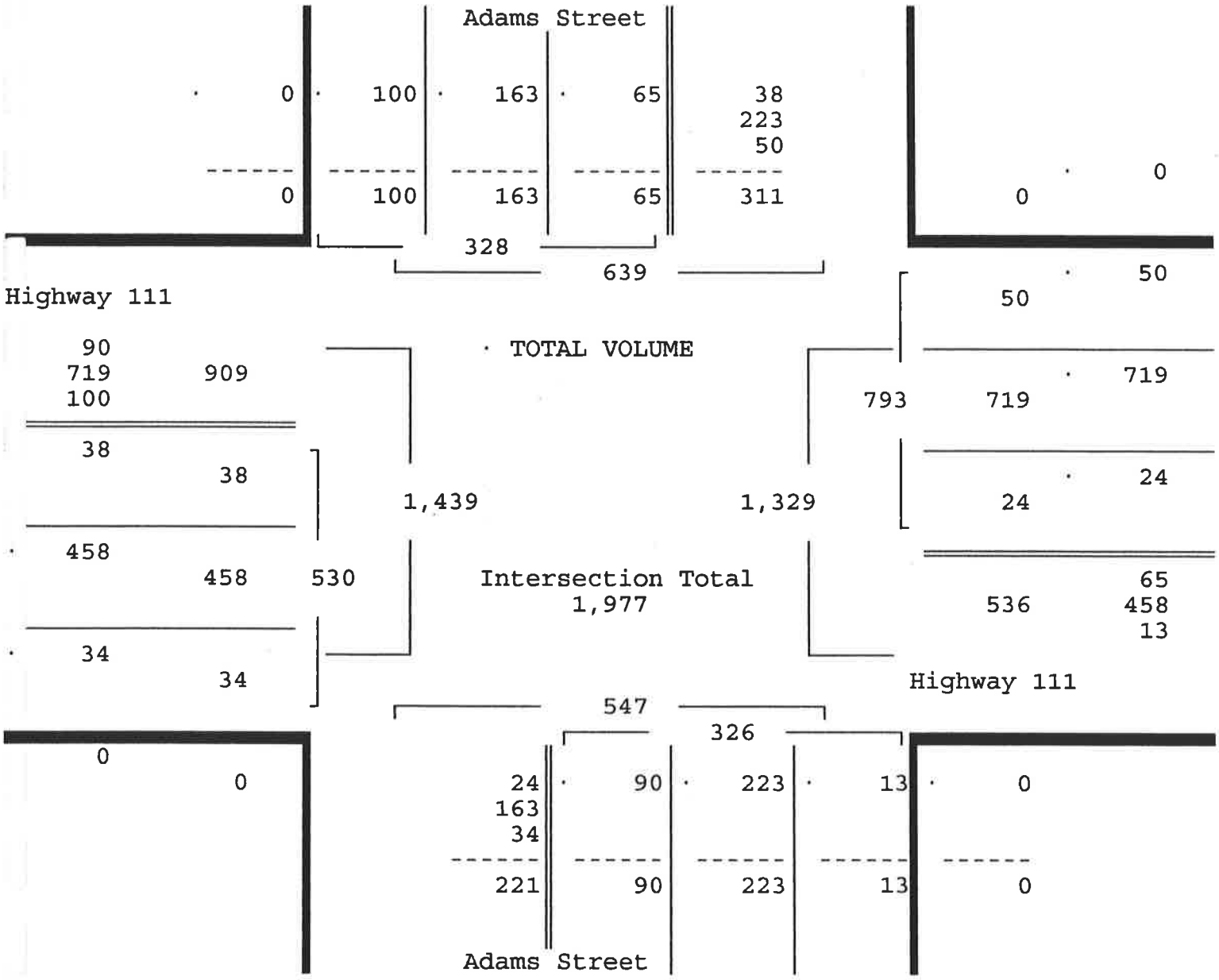
ty of La Quinta
N/S: Adams Street
E/W: Highway 111
WEATHER: Sunny

COUNTS UNLIMITED
25424 JACLYN AVENUE
MORENO VALLEY, CA 92557
909-247-6716

Site Code : 00093632
Start Date: 02/18/99
File I.D. : LQAD111A
Page : 1

TOTAL VOLUME

	Adams Street Southbound			Highway 111 Westbound			Adams Street Northbound			Highway 111 Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
Date 02/18/99													
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 02/18/99													
Peak start	07:15			07:15			07:15			07:15			
Volume	65	163	100	24	719	50	90	223	13	38	458	34	
Percent	20%	50%	30%	3%	91%	6%	28%	68%	4%	7%	86%	6%	
PK total	328			793			326			530			
Highest	07:45			07:30			07:30			08:00			
Volume	15	52	31	5	239	14	22	102	5	8	140	9	
Hour total	98			258			129			157			
PHF	.84			.77			.63			.84			



COUNTS UNLIMITED
25424 JACLYN AVENUE
MORENO VALLEY, CA 92557
909-247-6716

ty of La Quinta
N/S: Adams Street
E/W: Highway 111
WEATHER: Sunny

Site Code : 00093632
Start Date: 02/18/99
File I.D. : LQAD111A
Page : 1

TOTAL VOLUME

	Adams Street Southbound			Highway 111 Westbound			Adams Street Northbound			Highway 111 Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
Date 02/18/99													
07:00	14	31	10	6	117	13	13	45	4	5	86	9	353
:15	17	43	23	5	150	12	27	72	3	8	83	3	446
:30	14	45	34	5	239	14	22	102	5	14	107	6	607
07:45	15	52	31	9	186	13	20	22	3	8	128	16	503
Hr Total	60	171	98	25	692	52	82	241	15	35	404	34	1909
08:00	19	23	12	5	144	11	21	27	2	8	140	9	421
08:15	17	21	12	4	157	18	22	22	5	8	117	9	412
:30	18	17	14	3	179	14	8	34	2	5	125	11	430
:45	26	22	18	4	159	18	16	28	4	7	125	7	434
Hr Total	80	83	56	16	639	61	67	111	13	28	507	36	1697
TOTAL	140	254	154	41	1331	113	149	352	28	63	911	70	3606

Peak Hour Analysis By Individual Approach for the Period: 07:00 to 09:00 on 02/18/99

Peak start	07:00			07:30			07:00			07:45		
Volume	60	171	98	23	726	56	82	241	15	29	510	45
Percent	18%	52%	30%	3%	90%	7%	24%	71%	4%	5%	87%	8%
PK total	329			805			338			584		
Highest	07:45			07:30			07:30			08:00		
Volume	15	52	31	5	239	14	22	102	5	8	140	9
Hr total	98			258			129			157		
PHF	.84			.78			.66			.93		

Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 02/18/99

Peak start	07:15			07:15			07:15			07:15		
Volume	65	163	100	24	719	50	90	223	13	38	458	34
Percent	20%	50%	30%	3%	91%	6%	28%	68%	4%	7%	86%	6%
PK total	328			793			326			530		
Highest	07:45			07:30			07:30			08:00		
Volume	15	52	31	5	239	14	22	102	5	8	140	9
Hr total	98			258			129			157		
PHF	.84			.77			.63			.84		

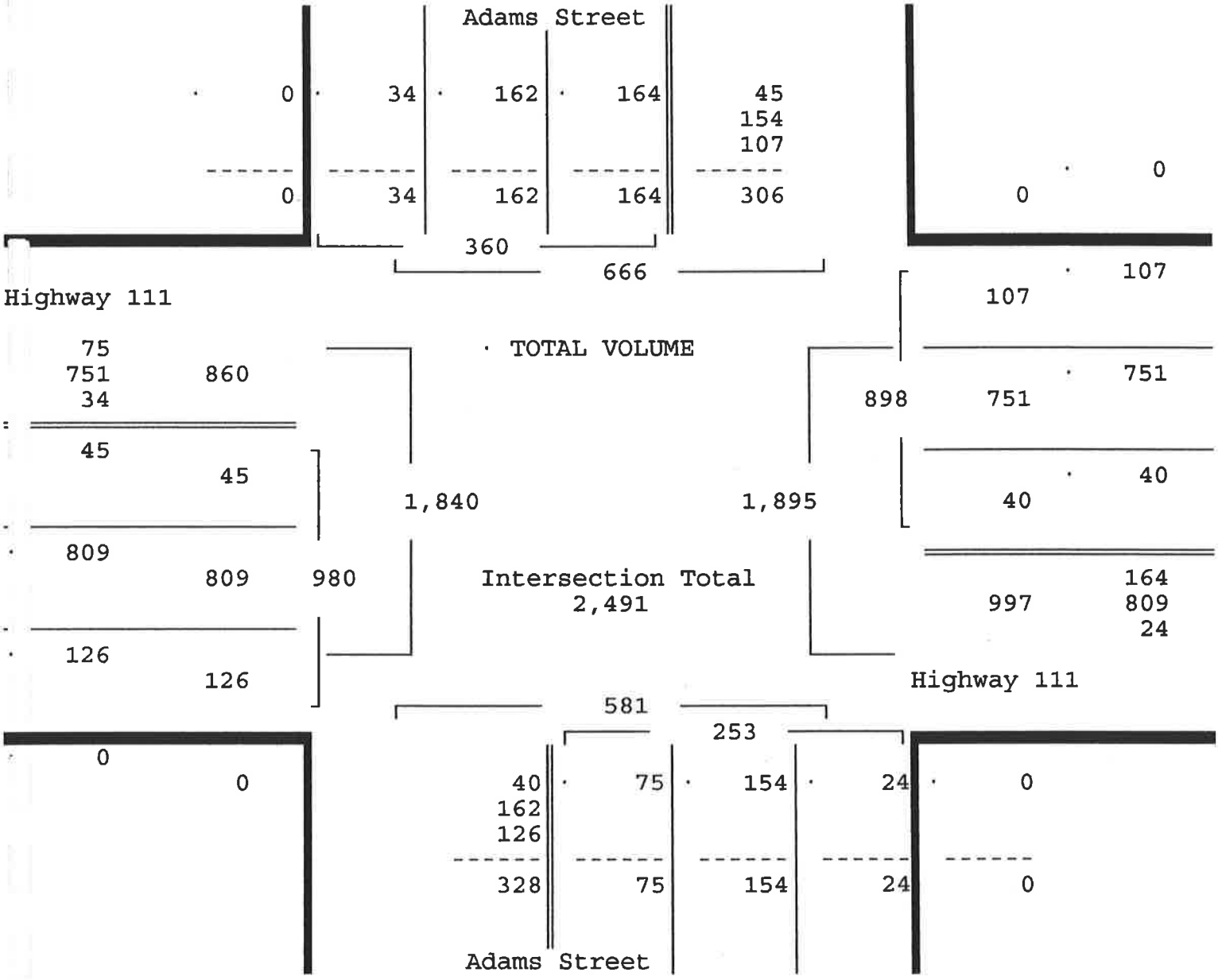
C y of La Quinta
N/S: Adams Street
E/W: Highway 111
W THER: Sunny

COUNTS UNLIMITED
25424 JACLYN AVENUE
MORENO VALLEY, CA 92557
909-247-6716

Site Code : 00093632
Start Date: 02/17/99
File I.D. : LQAD111P
Page : 1

TOTAL VOLUME

	Adams Street Southbound			Highway 111 Westbound			Adams Street Northbound			Highway 111 Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
D e 02/17/99													
P k Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 02/17/99													
Peak start	16:15			16:15			16:15			16:15			
V ume	164	162	34	40	751	107	75	154	24	45	809	126	
P cent	46%	45%	9%	4%	84%	12%	30%	61%	9%	5%	83%	13%	
Pk total	360			898			253			980			
Highest	16:30			16:45			17:00			16:15			
V ume	46	47	7	13	205	27	20	47	4	13	225	21	
L total	100			245			71			259			
PHF	.90			.92			.89			.95			



COUNTS UNLIMITED
25424 JACLYN AVENUE
MORENO VALLEY, CA 92557
909-247-6716

City of La Quinta
N/S: Adams Street
E/W: Highway 111
WEATHER: Sunny

Site Code : 00093632
Start Date: 02/17/99
File I.D. : LQAD111P
Page : 1

TOTAL VOLUME

	Adams Street Southbound			Highway 111 Westbound			Adams Street Northbound			Highway 111 Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
Date 02/17/99													
16:00	41	35	9	5	175	24	16	45	8	14	189	25	586
16:15	43	33	7	12	161	29	16	30	7	13	225	21	597
16:30	46	47	7	11	184	23	18	43	8	15	186	27	615
16:45	34	41	7	13	205	27	21	34	5	8	212	38	645
Hr Total	164	156	30	41	725	103	71	152	28	50	812	111	2443
17:00	41	41	13	4	201	28	20	47	4	9	186	40	634
17:15	20	46	9	9	187	26	15	43	3	11	193	29	591
17:30	37	50	5	5	186	16	23	45	2	14	211	27	621
17:45	21	35	5	5	157	18	14	20	4	6	174	18	477
Hr Total	119	172	32	23	731	88	72	155	13	40	764	114	2323
TOTAL	283	328	62	64	1456	191	143	307	41	90	1576	225	4766

Peak Hour Analysis By Individual Approach for the Period: 16:00 to 18:00 on 02/17/99

Peak start	16:15			16:30			16:45			16:15		
Volume	164	162	34	37	777	104	79	169	14	45	809	126
Percent	46%	45%	9%	4%	85%	11%	30%	65%	5%	5%	83%	13%
Pk total	360			918			262			980		
Highest	16:30			16:45			17:00			16:15		
Volume	46	47	7	13	205	27	20	47	4	13	225	21
Hr total	100			245			71			259		
PHF	.90			.94			.92			.95		

Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 02/17/99

Peak start	16:15			16:15			16:15			16:15		
Volume	164	162	34	40	751	107	75	154	24	45	809	126
Percent	46%	45%	9%	4%	84%	12%	30%	61%	9%	5%	83%	13%
Pk total	360			898			253			980		
Highest	16:30			16:45			17:00			16:15		
Volume	46	47	7	13	205	27	20	47	4	13	225	21
Hr total	100			245			71			259		
PHF	.90			.92			.89			.95		

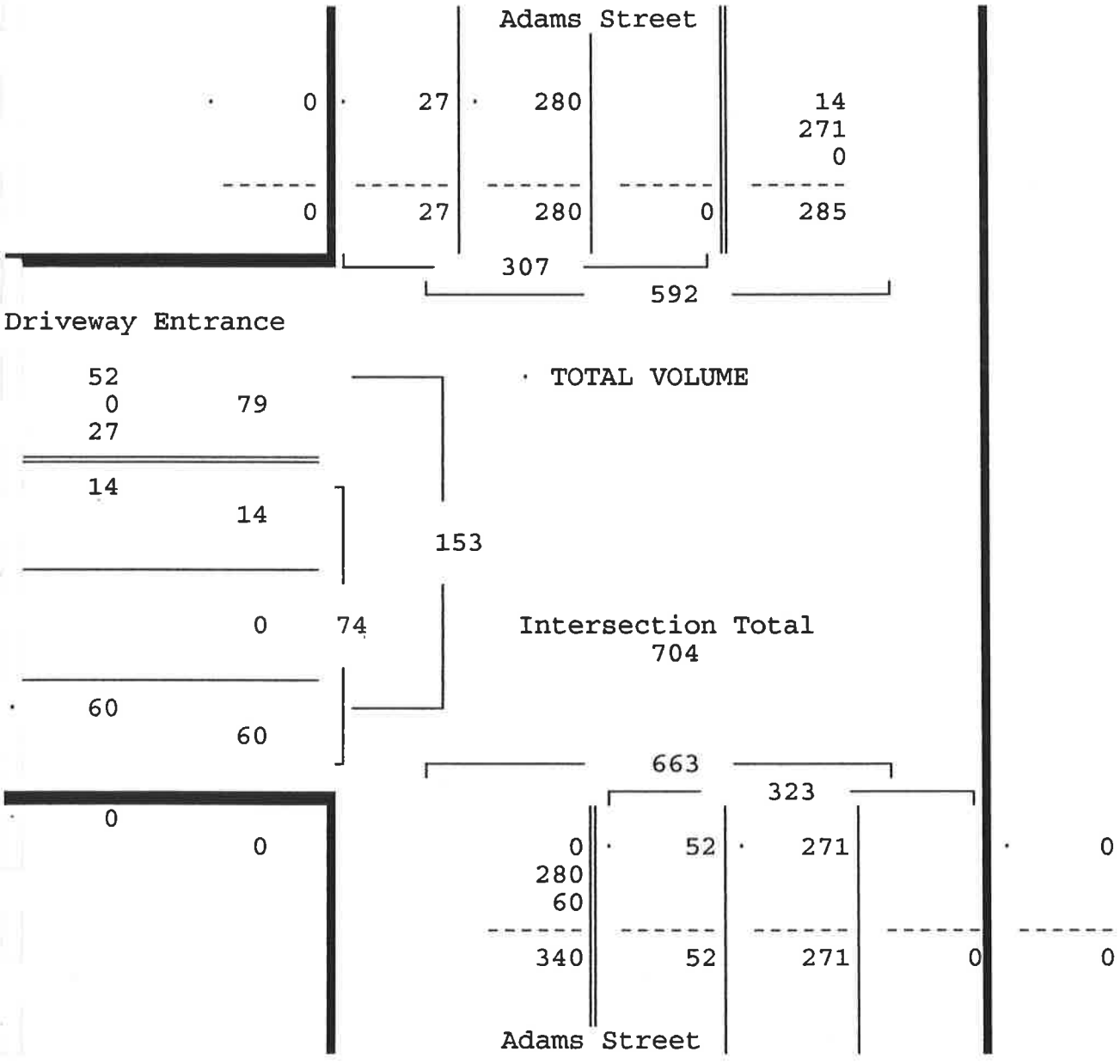
COUNTS UNLIMITED
25424 JACLYN AVENUE
MORENO VALLEY, CA 92557
909-247-6716

ty of La Quinta
N/S: Adams Street
E/W: Driveway/north of Highway 111
ATHER: Sunny

Site Code : 00093611
Start Date: 02/18/99
File I.D. : LQADDRAM
Page : 1

TOTAL VOLUME

	Adams Street Southbound		Adams Street Northbound		Driveway Entrance Eastbound		
	Thru	Right	Left	Thru	Left	Right	Total
te 02/18/99							
ak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 02/18/99							
Peak start	07:15		07:15		07:15		
lume	280	27	52	271	14	60	
rcent	91%	9%	16%	84%	19%	81%	
Pk total	307		323		74		
ighest	07:45		07:30		07:45		
lume	90	9	13	121	1	20	
ak total	99		134		21		
PHF	.78		.60		.88		



COUNTS UNLIMITED
25424 JACLYN AVENUE
MORENO VALLEY, CA 92557
909-247-6716

:y of La Quinta
N/S: Adams Street
E/W: Driveway/north of Highway 111
WEATHER: Sunny

Site Code : 00093611
Start Date: 02/18/99
File I.D. : LQADDRAM
Page : 1

TOTAL VOLUME

	Adams Street Southbound		Adams Street Northbound		Driveway Entrance Eastbound		
	Thru	Right	Left	Thru	Left	Right	Total
:e 02/18/99							
07:00	39	6	18	42	2	8	115
:15	72	5	13	77	5	11	183
:30	76	5	13	121	4	13	232
07:45	90	9	8	45	1	20	173
Hr Total	277	25	52	285	12	52	703
08:00	42	8	18	28	4	16	116
08:15	42	7	10	36	2	12	109
:30	36	8	16	37	2	16	115
:45	40	11	28	31	6	16	132
Hr Total	160	34	72	132	14	60	472
TOTAL	437	59	124	417	26	112	1175

..ak Hour Analysis By Individual Approach for the Period: 07:00 to 09:00 on 02/18/99

Peak start	07:15		07:00		08:00	
lume	280	27	52	285	14	60
rcent	91%	9%	15%	85%	19%	81%
Pk total	307		337		74	
Highest	07:45		07:30		08:45	
lume	90	9	13	121	6	16
ni total	99		134		22	
PHF	.78		.63		.84	

ak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 02/18/99

Peak start	07:15		07:15		07:15	
lume	280	27	52	271	14	60
rcent	91%	9%	16%	84%	19%	81%
Pk total	307		323		74	
Highest	07:45		07:30		07:45	
lume	90	9	13	121	1	20
ni total	99		134		21	
PHF	.78		.60		.88	

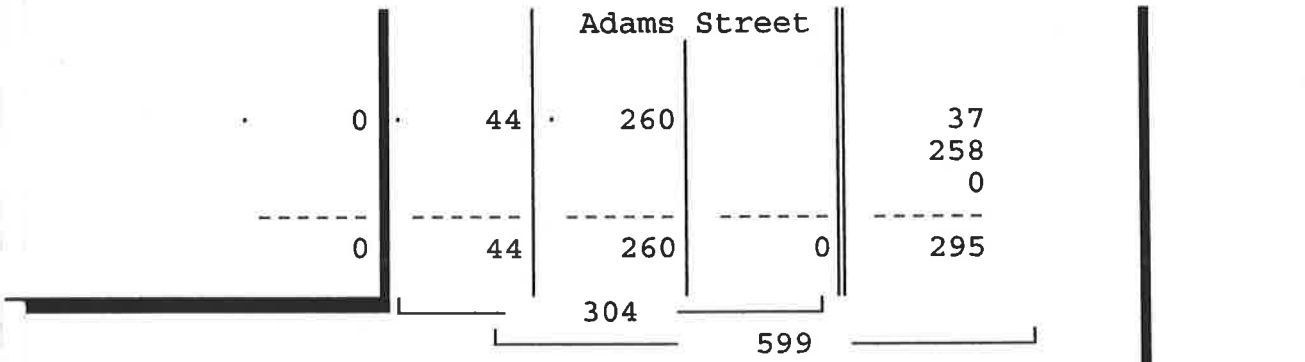
ty of La Quinta
N/S: Adams Street
E/W: Driveway/north of 111
WEATHER: Sunny

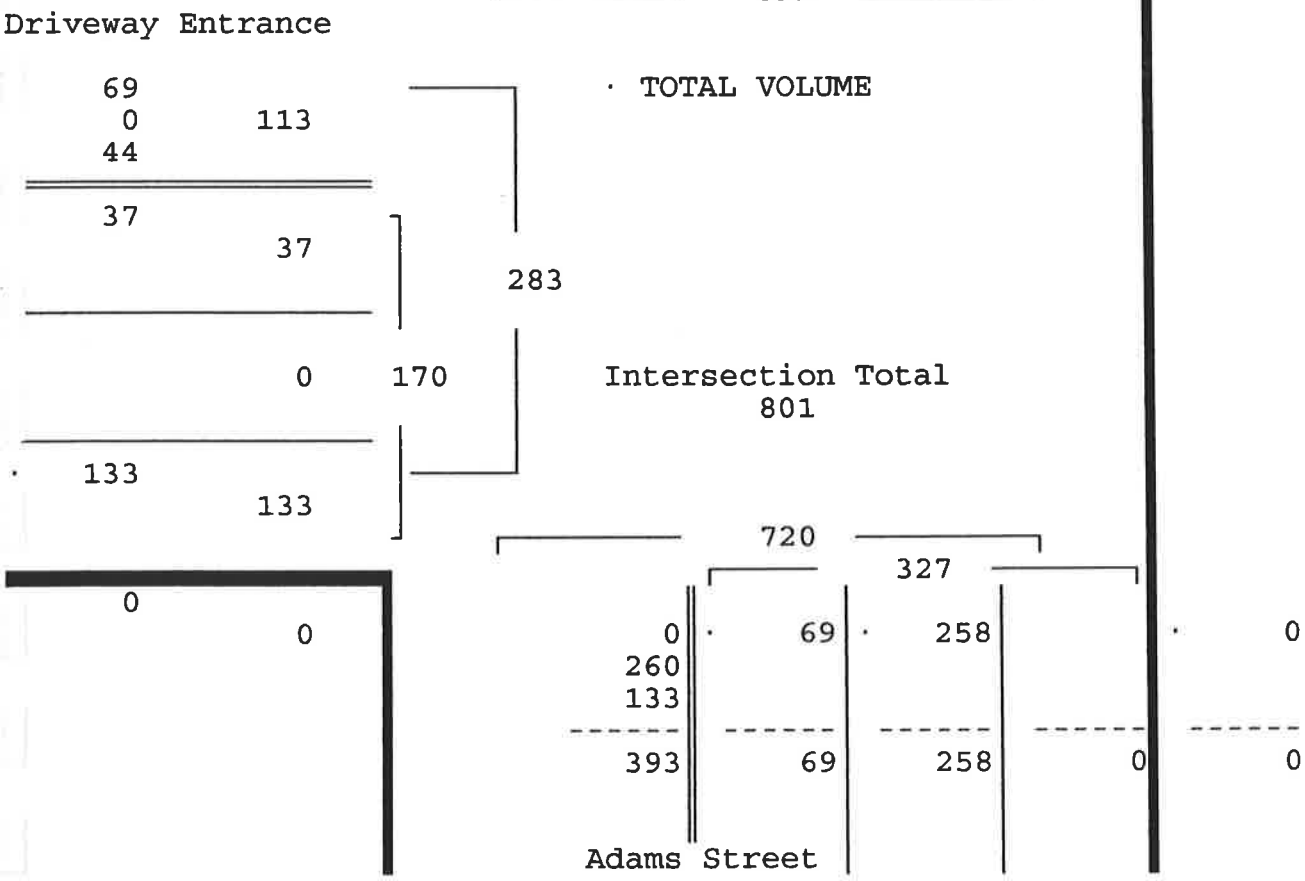
COUNTS UNLIMITED
25424 JACLYN AVENUE
MORENO VALLEY, CA 92557
909-247-6716

Site Code : 00093632
Start Date: 02/18/99
File I.D. : LQADDRPM
Page : 1

TOTAL VOLUME

	Adams Street Southbound		Adams Street Northbound		Driveway Entrance Eastbound		
	Thru	Right	Left	Thru	Left	Right	Total
Date 02/18/99							
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 02/18/99							
Peak start	17:00		17:00		17:00		
Volume	260	44	69	258	37	133	
Percent	86%	14%	21%	79%	22%	78%	
Pk total	304		327		170		
Highest	17:45		17:15		17:30		
Volume	75	11	20	73	13	40	
Hr total	86		93		53		
PHF	.88		.88		.80		





COUNTS UNLIMITED
25424 JACLYN AVENUE
MORENO VALLEY, CA 92557
909-247-6716

y of La Quinta
N/S: Adams Street
E/W: Driveway/north of 111
THER: Sunny

Site Code : 00093632
Start Date: 02/18/99
File I.D. : LQADDRPM
Page : 1

TOTAL VOLUME

	Adams Street Southbound		Adams Street Northbound		Driveway Entrance Eastbound		
	Thru	Right	Left	Thru	Left	Right	Total
e 02/18/99							
16:00	63	4	19	75	8	20	189
:15	48	7	12	62	17	24	170
:30	56	4	19	46	4	27	156
16:45	66	18	10	65	3	29	191
Hr Total	233	33	60	248	32	100	706
17:00	58	8	19	66	7	28	186
17:15	60	11	20	73	6	30	200
:30	67	14	17	66	13	40	217
:45	75	11	13	53	11	35	198
Hr Total	260	44	69	258	37	133	801
TOTAL	493	77	129	506	69	233	1507

ak Hour Analysis By Individual Approach for the Period: 16:00 to 18:00 on 02/18/99

Peak start	17:00		16:45		17:00	
lume	260	44	66	270	37	133
rcent	86%	14%	20%	80%	22%	78%
Pk total	304		336		170	
ighest	17:45		17:15		17:30	
lume	75	11	20	73	13	40
ak total	86		93		53	
PHF	.88		.90		.80	

ak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 02/18/99

Peak start	17:00		17:00		17:00	
lume	260	44	69	258	37	133
rcent	86%	14%	21%	79%	22%	78%
Pk total	304		327		170	
ighest	17:45		17:15		17:30	
lume	75	11	20	73	13	40
ak total	86		93		53	
PHF	.88		.88		.80	

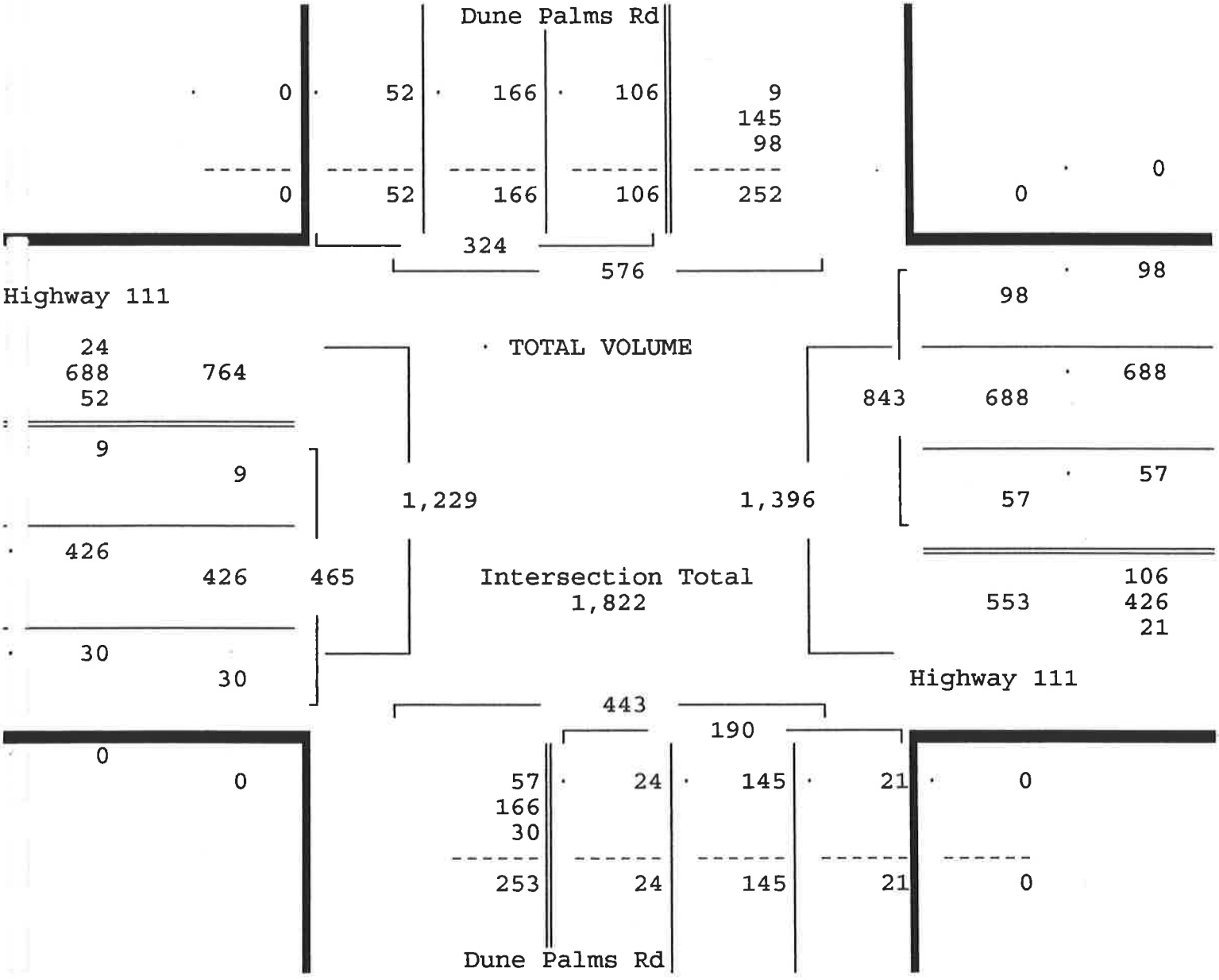
y of La Quinta
N/S: Dune Palms Road
E/W: Highway 111
WEATHER: Sunny

COUNTS UNLIMITED
25424 JACLYN AVENUE
MORENO VALLEY, CA 92557
909-247-6716

Site Code : 00093611
Start Date: 02/17/99
File I.D. : LQDP111A
Page : 1

TOTAL VOLUME

	Dune Palms Rd Southbound			Highway 111 Westbound			Dune Palms Rd Northbound			Highway 111 Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
Date 02/17/99													
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 02/17/99													
Peak start	07:15			07:15			07:15			07:15			
Volume	106	166	52	57	688	98	24	145	21	9	426	30	
Percent	33%	51%	16%	7%	82%	12%	13%	76%	11%	2%	92%	6%	
PK total	324			843			190			465			
Highest	07:30			07:30			07:30			08:00			
Volume	50	70	26	10	210	49	6	69	6	0	125	10	
HR total	146			269			81			135			
PHF	.55			.78			.59			.86			



y of La Quinta
N/S: Dune Palms Road
E/W: Highway 111
WEATHER: Sunny

COUNTS UNLIMITED
25424 JACLYN AVENUE
MORENO VALLEY, CA 92557
909-247-6716

Site Code : 00093611
Start Date: 02/17/99
File I.D. : LQDP111A
Page : 1

TOTAL VOLUME

	Dune Palms Rd Southbound			Highway 111 Westbound			Dune Palms Rd Northbound			Highway 111 Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
Date 02/17/99													
07:00	14	21	4	15	122	18	5	20	5	1	86	4	315
07:15	22	33	16	13	156	31	10	49	2	4	83	6	425
07:30	50	70	26	10	210	49	6	69	6	3	100	7	606
07:45	24	43	8	20	161	6	5	19	6	2	118	7	419
Hr Total	110	167	54	58	649	104	26	157	19	10	387	24	1765
08:00	10	20	2	14	161	12	3	8	7	0	125	10	372
08:15	2	10	3	18	134	5	6	7	9	1	138	8	341
08:30	5	11	6	11	190	2	5	3	13	2	141	3	392
08:45	4	16	4	13	167	3	4	7	2	1	142	6	369
Hr Total	21	57	15	56	652	22	18	25	31	4	546	27	1474
TOTAL	131	224	69	114	1301	126	44	182	50	14	933	51	3239

Peak Hour Analysis By Individual Approach for the Period: 07:00 to 09:00 on 02/17/99

Peak start	07:00			07:15			07:00			08:00		
Volume	110	167	54	57	688	98	26	157	19	4	546	27
Percent	33%	50%	16%	7%	82%	12%	13%	78%	9%	1%	95%	5%
Pk total	331			843			202			577		
Highest	07:30			07:30			07:30			08:45		
Volume	50	70	26	10	210	49	6	69	6	1	142	6
Hr total	146			269			81			149		
PHF	.57			.78			.62			.97		

Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 02/17/99

Peak start	07:15			07:15			07:15			07:15		
Volume	106	166	52	57	688	98	24	145	21	9	426	30
Percent	33%	51%	16%	7%	82%	12%	13%	76%	11%	2%	92%	6%
Pk total	324			843			190			465		
Highest	07:30			07:30			07:30			08:00		
Volume	50	70	26	10	210	49	6	69	6	0	125	10
Hr total	146			269			81			135		
PHF	.55			.78			.59			.86		

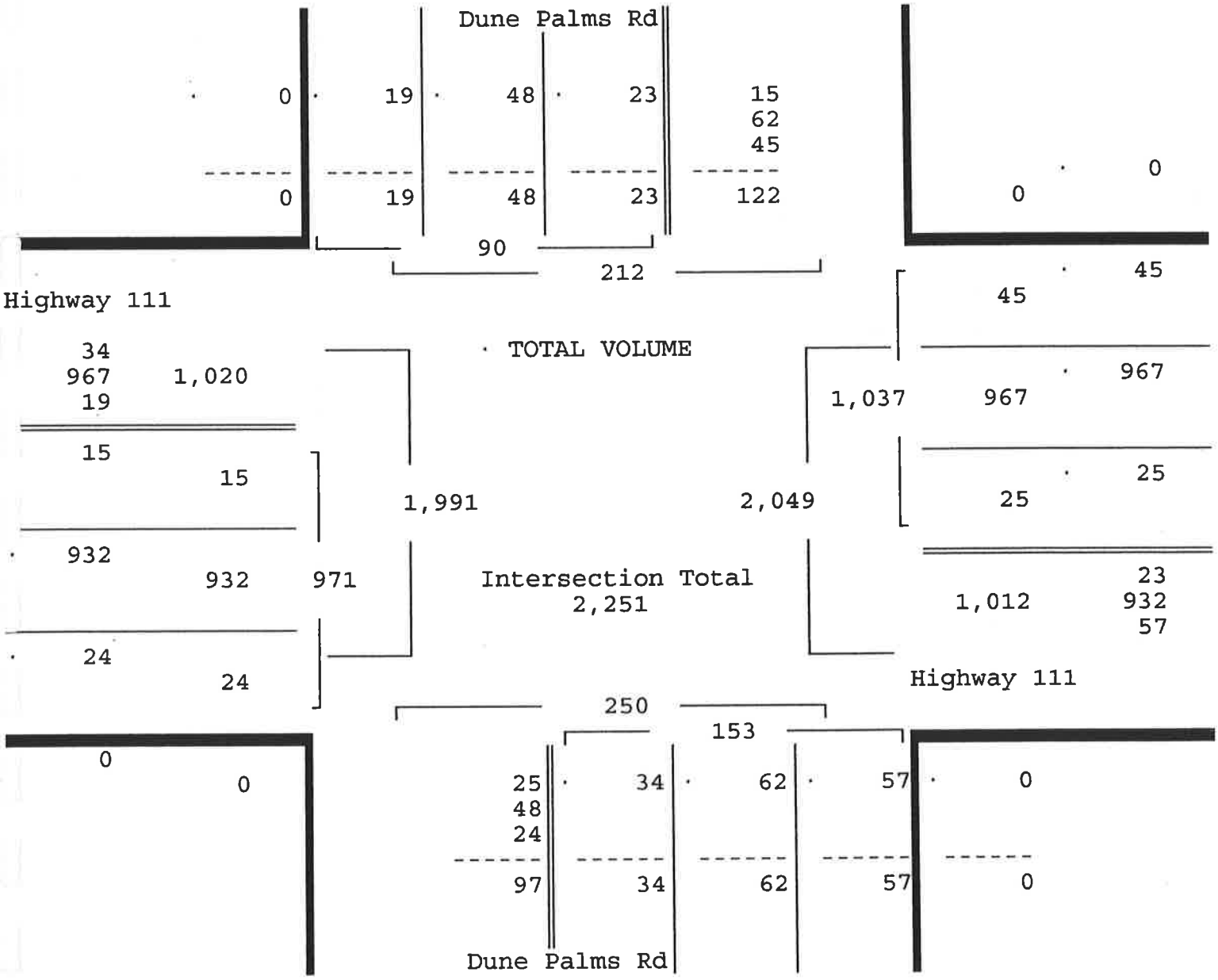
:y of La Quinta
N/S: Dune Palms Road
E/W: Highway 111
WEATHER: Sunny

COUNTS UNLIMITED
25424 JACLYN AVENUE
MORENO VALLEY, CA 92557
909-247-6716

Site Code : 00093632
Start Date: 02/17/99
File I.D. : LQDP111P
Page : 1

TOTAL VOLUME

	Dune Palms Rd Southbound			Highway 111 Westbound			Dune Palms Rd Northbound			Highway 111 Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
Date 02/17/99													
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 02/17/99													
Peak start	16:00			16:00			16:00			16:00			
Volume	23	48	19	25	967	45	34	62	57	15	932	24	
Percent	26%	53%	21%	2%	93%	4%	22%	41%	37%	2%	96%	2%	
Pk total	90			1037			153			971			
Highest	16:30			16:00			16:00			16:15			
Volume	6	17	7	11	255	9	8	18	26	5	252	8	
Hr total	30			275			52			265			
PHF	.75			.94			.74			.92			



ty of La Quinta
N/S: Dune Palms Road
E/W: Highway 111
WEATHER: Sunny

COUNTS UNLIMITED
25424 JACLYN AVENUE
MORENO VALLEY, CA 92557
909-247-6716

Site Code : 00093632
Start Date: 02/17/99
File I.D. : LQDP111P
Page : 1

TOTAL VOLUME

	Dune Palms Rd Southbound			Highway 111 Westbound			Dune Palms Rd Northbound			Highway 111 Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
Date 02/17/99													
16:00	5	17	7	11	255	9	8	18	26	3	209	6	574
:15	7	5	4	6	236	7	11	18	7	5	252	8	566
:30	6	17	7	4	238	14	8	13	17	4	252	4	584
16:45	5	9	1	4	238	15	7	13	7	3	219	6	527
Hr Total	23	48	19	25	967	45	34	62	57	15	932	24	2251
17:00	9	16	6	6	189	13	11	34	15	2	208	5	514
17:15	15	24	9	5	219	9	3	14	1	4	238	2	543
:30	15	19	4	2	202	5	7	10	4	1	201	8	478
:45	4	18	4	4	209	8	8	8	2	3	203	10	481
Hr Total	43	77	23	17	819	35	29	66	22	10	850	25	2016
TOTAL	66	125	42	42	1786	80	63	128	79	25	1782	49	4267

Peak Hour Analysis By Individual Approach for the Period: 16:00 to 18:00 on 02/17/99

Peak start	17:00			16:00			16:15			16:00		
Volume	43	77	23	25	967	45	37	78	46	15	932	24
Percent	30%	54%	16%	2%	93%	4%	23%	48%	29%	2%	96%	2%
Pk total	143			1037			161			971		
Highest	17:15			16:00			17:00			16:15		
Volume	15	24	9	11	255	9	11	34	15	5	252	8
Hr total	48			275			60			265		
PHF	.74			.94			.67			.92		

Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 02/17/99

Peak start	16:00			16:00			16:00			16:00		
Volume	23	48	19	25	967	45	34	62	57	15	932	24
Percent	26%	53%	21%	2%	93%	4%	22%	41%	37%	2%	96%	2%
Pk total	90			1037			153			971		
Highest	16:30			16:00			16:00			16:15		
Volume	6	17	7	11	255	9	8	18	26	5	252	8
Hr total	30			275			52			265		
PHF	.75			.94			.74			.92		

Appendix 2

HCM UNSIGNALIZED INTERSECTION METHODOLOGY AND WORKSHEETS

HCM Methodology

HCS Worksheets

Center For Microcomputers In Transportation
University of Florida
512 Weil Hall
Gainesville, FL 32611-2083
Ph: (904) 392-0378

Streets: (N-S) Adams Street (E-W) Hotel Access
Major Street Direction.... NS
Length of Time Analyzed... 60 (min)
Analyst..... Greg
Date of Analysis..... 5/3/99
Other Information.....Existing Conditions AM Pk
Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	2	< 0	0	> 0	< 0	0	0	0
Stop/Yield			N			N						
Volumes	52	271			280	27	14		60			
PHF	1	1			1	1	1		1			
Grade		0			0			0				
MC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's	1.10						1.10		1.10			

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

Worksheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)		154
Potential Capacity: (pcph)		1157
Movement Capacity: (pcph)		1157
Prob. of Queue-Free State:		0.94

Step 2: LT from Major Street	SB	NB
Conflicting Flows: (vph)		307
Potential Capacity: (pcph)		1224
Movement Capacity: (pcph)		1224
Prob. of Queue-Free State:		0.95

Step 4: LT from Minor Street	WB	EB
Conflicting Flows: (vph)		616
Potential Capacity: (pcph)		466
Major LT, Minor TH Impedance Factor:		0.95
Adjusted Impedance Factor:		0.95
Capacity Adjustment Factor due to Impeding Movements		0.95
Movement Capacity: (pcph)		444

Intersection Performance Summary

Movement		Flow Rate (pcph)	Move Cap (pcph)	Shared Cap (pcph)	Avg. Total Delay (sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)
EB	L	15	444 >					
				892	4.4	0.2	A	4.4
EB	R	66	1157 >					
NB	L	57	1224		3.1	0.0	A	0.5

Intersection Delay = 0.7 sec/veh

Center For Microcomputers In Transportation
University of Florida
512 Weil Hall
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Streets: (N-S) Adams Street (E-W) Hotel Access
Major Street Direction.... NS
Length of Time Analyzed... 60 (min)
Analyst..... Greg
Date of Analysis..... 5/3/99
Other Information.....Existing Conditions PM Pk
Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	2	< 0	0	> 0	< 0	0	0	0
Stop/Yield			N			N						
Volumes	69	258			260	44	37		133			
PHF	1	1			1	1	1		1			
Grade		0			0			0				
MC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's	1.10						1.10		1.10			

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

Worksheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)		152
Potential Capacity: (pcph)		1160
Movement Capacity: (pcph)		1160
Prob. of Queue-Free State:		0.87

Step 2: LT from Major Street	SB	NB
Conflicting Flows: (vph)		304
Potential Capacity: (pcph)		1228
Movement Capacity: (pcph)		1228
Prob. of Queue-Free State:		0.94

Step 4: LT from Minor Street	WB	EB
Conflicting Flows: (vph)		609
Potential Capacity: (pcph)		470
Major LT, Minor TH Impedance Factor:		0.94
Adjusted Impedance Factor:		0.94
Capacity Adjustment Factor due to Impeding Movements		0.94
Movement Capacity: (pcph)		441

Intersection Performance Summary

Movement		Flow Rate (pcph)	Move Cap (pcph)	Shared Cap (pcph)	Avg. Total Delay (sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)
EB	L	41	441 >					
				855	5.4	1.0	B	5.4
EB	R	146	1160 >					
NB	L	76	1228		3.1	0.1	A	0.7

Intersection Delay = 1.4 sec/veh

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512 Weil Hall
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Ph: (904) 392-0378

Streets: (N-S) Adams Street (E-W) Hotel Access
Major Street Direction.... NS
Length of Time Analyzed... 60 (min)
Analyst..... Greg
Date of Analysis..... 5/3/99
Other Information.....Year 2010 No Project Conditions AM Pk
Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1 < 0		0	> 2 < 0		0	> 1 < 0		0	> 1 < 0	
Stop/Yield			N			N						
Volumes	52	392	45	7	405	27	14	1	60	33	1	6
PHF	1	1	1	1	1	1	1	1	1	1	1	1
Grade		0			0			0			0	
MC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's	1.10			1.10			1.10	1.10	1.10	1.10	1.10	1.10

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

Worksheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)	414	216
Potential Capacity: (pcph)	854	1076
Movement Capacity: (pcph)	854	1076
Prob. of Queue-Free State:	0.99	0.94

Step 2: LT from Major Street	SB	NB
Conflicting Flows: (vph)	437	432
Potential Capacity: (pcph)	1061	1067
Movement Capacity: (pcph)	1061	1067
Prob. of Queue-Free State:	0.99	0.95
TH Saturation Flow Rate: (pcphpl)	3400	
RT Saturation Flow Rate: (pcphpl)	1700	
Major LT Shared Lane Prob. of Queue-Free State:	0.99	

Step 3: TH from Minor Street	WB	EB
Conflicting Flows: (vph)	906	914
Potential Capacity: (pcph)	365	362
Capacity Adjustment Factor due to Impeding Movements	0.94	0.94
Movement Capacity: (pcph)	342	340
Prob. of Queue-Free State:	1.00	1.00

Step 4: LT from Minor Street	WB	EB
Conflicting Flows: (vph)	878	896
Potential Capacity: (pcph)	328	321
Major LT, Minor TH Impedance Factor:	0.94	0.94
Adjusted Impedance Factor:	0.95	0.95
Capacity Adjustment Factor due to Impeding Movements	0.89	0.94
Movement Capacity: (pcph)	293	303

Intersection Performance Summary

Movement		Flow Rate (pcph)	Move Cap (pcph)		Shared Cap (pcph)	Avg. Total Delay (sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)
EB	L	15	303	>					
EB	T	1	340	>	721	5.6	0.4	B	5.6
EB	R	66	1076	>					
WB	L	36	293	>					
WB	T	1	342	>	328	12.7	0.5	C	12.7
WB	R	7	854	>					
NB	L	57	1067			3.6	0.0	A	0.4
SB	L	8	1061			3.4	0.0	A	0.1

Intersection Delay = 1.1 sec/veh

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Streets: (N-S) Adams Street (E-W) Hotel Access
Major Street Direction.... NS
Length of Time Analyzed... 60 (min)
Analyst..... Greg
Date of Analysis..... 5/3/99
Other Information.....Year 2010 No Project Conditions PM Pk
Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1 < 0		0 > 2 < 0			0 > 1 < 0			0 > 1 < 0		
Stop/Yield			N			N						
Volumes	69	373	53	9	376	44	37	1	134	36	1	6
PHF	1	1	1	1	1	1	1	1	1	1	1	1
Grade		0			0			0			0	
MC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's	1.10			1.10			1.10	1.10	1.10	1.10	1.10	1.10

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

Worksheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)	400	210
Potential Capacity: (pcph)	868	1084
Movement Capacity: (pcph)	868	1084
Prob. of Queue-Free State:	0.99	0.86

Step 2: LT from Major Street	SB	NB
Conflicting Flows: (vph)	426	420
Potential Capacity: (pcph)	1074	1081
Movement Capacity: (pcph)	1074	1081
Prob. of Queue-Free State:	0.99	0.93
TH Saturation Flow Rate: (pcphpl)	3400	
RT Saturation Flow Rate: (pcphpl)	1700	
Major LT Shared Lane Prob. of Queue-Free State:	0.99	

Step 3: TH from Minor Street	WB	EB
Conflicting Flows: (vph)	898	902
Potential Capacity: (pcph)	369	367
Capacity Adjustment Factor due to Impeding Movements	0.92	0.92
Movement Capacity: (pcph)	339	338
Prob. of Queue-Free State:	1.00	1.00

Step 4: LT from Minor Street	WB	EB
Conflicting Flows: (vph)	854	879
Potential Capacity: (pcph)	339	328
Major LT, Minor TH Impedance Factor:	0.92	0.92
Adjusted Impedance Factor:	0.94	0.94
Capacity Adjustment Factor due to Impeding Movements	0.81	0.93
Movement Capacity: (pcph)	274	305

Intersection Performance Summary

Movement		Flow Rate (pcph)	Move Cap (pcph)		Shared Cap (pcph)	Avg. Total Delay (sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)
EB	L	41	305	>					
EB	T	1	338	>	692	7.2	1.3	B	7.2
EB	R	147	1084	>					
WB	L	40	274	>					
WB	T	1	339	>	306	14.0	0.6	C	14.0
WB	R	7	868	>					
NB	L	76	1081			3.6	0.1	A	0.5
SB	L	10	1074			3.4	0.0	A	0.1

Intersection Delay = 1.9 sec/veh

Center For Microcomputers In Transportation
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Ph: (904) 392-0378

Streets: (N-S) Adams Street (E-W) Hotel Access
Major Street Direction.... NS
Length of Time Analyzed... 60 (min)
Analyst..... Greg
Date of Analysis..... 5/3/99
Other Information.....Year 2010 W/ Project Conditions AM Pk
Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1 < 0		0 > 2 < 0			0 > 1 < 0			0 > 1 < 0		
Stop/Yield			N			N						
Volumes	52	439	62	24	435	27	14	1	60	34	1	13
PHF	1	1	1	1	1	1	1	1	1	1	1	1
Grade		0			0			0			0	
MC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's	1.10			1.10			1.10	1.10	1.10	1.10	1.10	1.10

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

Worksheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)	470	231
Potential Capacity: (pcph)	800	1058
Movement Capacity: (pcph)	800	1058
Prob. of Queue-Free State:	0.98	0.94
Step 2: LT from Major Street	**SB**	**NB**
Conflicting Flows: (vph)	501	462
Potential Capacity: (pcph)	989	1033
Movement Capacity: (pcph)	989	1033
Prob. of Queue-Free State:	0.97	0.94
TH Saturation Flow Rate: (pcphpl)	3400	
RT Saturation Flow Rate: (pcphpl)	1700	
Major LT Shared Lane Prob. of Queue-Free State:	0.97	
Step 3: TH from Minor Street	**WB**	**EB**
Conflicting Flows: (vph)	1008	1026
Potential Capacity: (pcph)	323	316
Capacity Adjustment Factor due to Impeding Movements	0.92	0.92
Movement Capacity: (pcph)	296	289
Prob. of Queue-Free State:	1.00	1.00
Step 4: LT from Minor Street	**WB**	**EB**
Conflicting Flows: (vph)	982	1002
Potential Capacity: (pcph)	286	278
Major LT, Minor TH Impedance Factor:	0.91	0.91
Adjusted Impedance Factor:	0.93	0.93
Capacity Adjustment Factor due to Impeding Movements	0.87	0.92
Movement Capacity: (pcph)	250	255

Intersection Performance Summary

Movement		Flow Rate (pcph)	Move Cap (pcph)		Shared Cap (pcph)	Avg. Total Delay (sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)
EB	L	15	255	>					
EB	T	1	289	>	658	6.2	0.4	B	6.2
EB	R	66	1058	>					
WB	L	37	250	>					
WB	T	1	296	>	308	14.1	0.7	C	14.1
WB	R	14	800	>					
NB	L	57	1033			3.7	0.0	A	0.3
SB	L	26	989			3.7	0.0	A	0.2

Intersection Delay = 1.2 sec/veh

Center For Microcomputers In Transportation
University of Florida
512 Weil Hall
Gainesville, FL 32611-2083
Ph: (904) 392-0378

Streets: (N-S) Adams Street (E-W) Hotel Access
Major Street Direction.... NS
Length of Time Analyzed... 60 (min)
Analyst..... Greg
Date of Analysis..... 5/3/99
Other Information.....Year 2010 W/ Project Conditions PM Pk
Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1 <	0	0 >	2 <	0	0 >	1 <	0	0 >	1 <	0
Stop/Yield			N			N						
Volumes	69	415	92	48	427	44	37	1	134	45	1	41
PHF	1	1	1	1	1	1	1	1	1	1	1	1
Grade		0			0			0			0	
MC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's	1.10			1.10			1.10	1.10	1.10	1.10	1.10	1.10

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

Worksheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)	461	236
Potential Capacity: (pcph)	809	1051
Movement Capacity: (pcph)	809	1051
Prob. of Queue-Free State:	0.94	0.86

Step 2: LT from Major Street	SB	NB
Conflicting Flows: (vph)	507	471
Potential Capacity: (pcph)	983	1022
Movement Capacity: (pcph)	983	1022
Prob. of Queue-Free State:	0.95	0.93
TH Saturation Flow Rate: (pcphpl)	3400	
RT Saturation Flow Rate: (pcphpl)	1700	
Major LT Shared Lane Prob. of Queue-Free State:	0.94	

Step 3: TH from Minor Street	WB	EB
Conflicting Flows: (vph)	1049	1073
Potential Capacity: (pcph)	307	298
Capacity Adjustment Factor due to Impeding Movements	0.87	0.87
Movement Capacity: (pcph)	266	258
Prob. of Queue-Free State:	1.00	1.00

Step 4: LT from Minor Street	WB	EB
Conflicting Flows: (vph)	1005	1048
Potential Capacity: (pcph)	277	262
Major LT, Minor TH Impedance Factor:	0.86	0.86
Adjusted Impedance Factor:	0.90	0.90
Capacity Adjustment Factor due to Impeding Movements	0.77	0.85
Movement Capacity: (pcph)	213	222

Intersection Performance Summary

Movement		Flow Rate (pcph)	Move Cap (pcph)		Shared Cap (pcph)	Avg. Total Delay (sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)
EB	L	41	222	>					
EB	T	1	258	>	575	9.3	1.7	B	9.3
EB	R	147	1051	>					
WB	L	50	213	>					
WB	T	1	266	>	326	15.6	1.4	C	15.6
WB	R	45	809	>					
NB	L	76	1022			3.8	0.2	A	0.5
SB	L	53	983			3.9	0.0	A	0.4

Intersection Delay = 2.5 sec/veh

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Streets: (N-S) Adams Street (E-W) Hotel Access
Major Street Direction.... NS
Length of Time Analyzed... 60 (min)
Analyst..... Greg
Date of Analysis..... 5/3/99
Other Information.....Build-Out No Project Conditions AM Pk
Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	2	0	0	1	0	0	1	0
Stop/Yield			N			N						
Volumes	53	549	45	7	567	27	14	1	61	33	1	6
PHF	1	1	1	1	1	1	1	1	1	1	1	1
Grade		0			0			0			0	
MC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's	1.10			1.10			1.10	1.10	1.10	1.10	1.10	1.10

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

Worksheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)	572	297
Potential Capacity: (pcph)	710	979
Movement Capacity: (pcph)	710	979
Prob. of Queue-Free State:	0.99	0.93

Step 2: LT from Major Street	SB	NB
Conflicting Flows: (vph)	594	594
Potential Capacity: (pcph)	893	893
Movement Capacity: (pcph)	893	893
Prob. of Queue-Free State:	0.99	0.94
TH Saturation Flow Rate: (pcphpl)	3400	
RT Saturation Flow Rate: (pcphpl)	1700	
Major LT Shared Lane Prob. of Queue-Free State:	0.99	

Step 3: TH from Minor Street	WB	EB
Conflicting Flows: (vph)	1226	1234
Potential Capacity: (pcph)	248	246
Capacity Adjustment Factor due to Impeding Movements	0.92	0.92
Movement Capacity: (pcph)	229	228
Prob. of Queue-Free State:	1.00	1.00

Step 4: LT from Minor Street	WB	EB
Conflicting Flows: (vph)	1200	1216
Potential Capacity: (pcph)	214	209
Major LT, Minor TH Impedance Factor:	0.92	0.92
Adjusted Impedance Factor:	0.94	0.94
Capacity Adjustment Factor due to Impeding Movements	0.88	0.93
Movement Capacity: (pcph)	187	194

Intersection Performance Summary

Movement		Flow Rate (pcph)	Move Cap (pcph)		Shared Cap (pcph)	Avg. Total Delay (sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)
EB	L	15	194	>					
EB	T	1	228	>	553	7.7	0.6	B	7.7
EB	R	67	979	>					
WB	L	36	187	>					
WB	T	1	229	>	213	21.3	0.9	D	21.3
WB	R	7	710	>					
NB	L	58	893			4.3	0.1	A	0.4
SB	L	8	893			4.1	0.0	A	0.0

Intersection Delay = 1.2 sec/veh

Center For Microcomputers In Transportation
University of Florida
512 Weil Hall
Gainesville, FL 32611-2083
Ph: (904) 392-0378

Streets: (N-S) Adams Street (E-W) Hotel Access
Major Street Direction.... NS
Length of Time Analyzed... 60 (min)
Analyst..... Greg
Date of Analysis..... 5/3/99
Other Information.....Build-Out No Project Conditions PM Pk
Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1 < 0		0	> 2 < 0		0	> 1 < 0		0	> 1 < 0	
Stop/Yield			N			N						
Volumes	70	522	53	9	526	45	38	1	135	36	1	6
PHF	1	1	1	1	1	1	1	1	1	1	1	1
Grade		0			0			0			0	
MC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's	1.10			1.10			1.10	1.10	1.10	1.10	1.10	1.10

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

Worksheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)	548	286
Potential Capacity: (pcph)	731	992
Movement Capacity: (pcph)	731	992
Prob. of Queue-Free State:	0.99	0.85

Step 2: LT from Major Street	SB	NB
Conflicting Flows: (vph)	575	571
Potential Capacity: (pcph)	912	916
Movement Capacity: (pcph)	912	916
Prob. of Queue-Free State:	0.99	0.92
TH Saturation Flow Rate: (pcphpl)	3400	
RT Saturation Flow Rate: (pcphpl)	1700	
Major LT Shared Lane Prob. of Queue-Free State:	0.99	

Step 3: TH from Minor Street	WB	EB
Conflicting Flows: (vph)	1198	1202
Potential Capacity: (pcph)	257	255
Capacity Adjustment Factor due to Impeding Movements	0.90	0.90
Movement Capacity: (pcph)	232	230
Prob. of Queue-Free State:	1.00	1.00

Step 4: LT from Minor Street	WB	EB
Conflicting Flows: (vph)	1154	1180
Potential Capacity: (pcph)	227	220
Major LT, Minor TH Impedance Factor:	0.90	0.90
Adjusted Impedance Factor:	0.92	0.92
Capacity Adjustment Factor due to Impeding Movements	0.78	0.91
Movement Capacity: (pcph)	178	201

Intersection Performance Summary

Movement		Flow Rate (pcph)	Move Cap (pcph)		Shared Cap (pcph)	Avg. Total Delay (sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)
EB	L	42	201	>					
EB	T	1	230	>	528	10.7	1.9	C	10.7
EB	R	149	992	>					
WB	L	40	178	>					
WB	T	1	232	>	201	23.5	1.0	D	23.5
WB	R	7	731	>					
NB	L	77	916			4.3	0.2	A	0.5
SB	L	10	912			4.0	0.0	A	0.1

Intersection Delay = 2.2 sec/veh

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Streets: (N-S) Adams Street (E-W) Hotel Access
Major Street Direction.... NS
Length of Time Analyzed... 60 (min)
Analyst..... Greg
Date of Analysis..... 5/3/99
Other Information.....Build-Out W/ Project Conditions AM Pk
Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1 < 0		0 > 2 < 0			0 > 1 < 0			0 > 1 < 0		
Stop/Yield			N			N						
Volumes	53	595	62	24	596	27	14	1	61	34	1	13
PHF	1	1	1	1	1	1	1	1	1	1	1	1
Grade		0			0			0			0	
MC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's	1.10			1.10			1.10	1.10	1.10	1.10	1.10	1.10

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

Worksheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)	626	312
Potential Capacity: (pcph)	667	962
Movement Capacity: (pcph)	667	962
Prob. of Queue-Free State:	0.98	0.93

Step 2: LT from Major Street	SB	NB
Conflicting Flows: (vph)	657	623
Potential Capacity: (pcph)	834	865
Movement Capacity: (pcph)	834	865
Prob. of Queue-Free State:	0.97	0.93
TH Saturation Flow Rate: (pcphpl)	3400	
RT Saturation Flow Rate: (pcphpl)	1700	
Major LT Shared Lane Prob. of Queue-Free State:	0.96	

Step 3: TH from Minor Street	WB	EB
Conflicting Flows: (vph)	1326	1344
Potential Capacity: (pcph)	220	215
Capacity Adjustment Factor due to Impeding Movements	0.90	0.90
Movement Capacity: (pcph)	197	193
Prob. of Queue-Free State:	0.99	0.99

Step 4: LT from Minor Street	WB	EB
Conflicting Flows: (vph)	1300	1320
Potential Capacity: (pcph)	187	182
Major LT, Minor TH Impedance Factor:	0.89	0.89
Adjusted Impedance Factor:	0.92	0.92
Capacity Adjustment Factor due to Impeding Movements	0.85	0.90
Movement Capacity: (pcph)	160	164

Intersection Performance Summary

Movement		Flow Rate (pcph)	Move Cap (pcph)		Shared Cap (pcph)	Avg. Total Delay (sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)
EB	L	15	164	>					
EB	T	1	193	>	499	8.7	0.7	B	8.7
EB	R	67	962	>					
WB	L	37	160	>					
WB	T	1	197	>	202	24.0	1.1	D	24.0
WB	R	14	667	>					
NB	L	58	865			4.5	0.1	A	0.3
SB	L	26	834			4.5	0.0	A	0.2

Intersection Delay = 1.5 sec/veh

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Streets: (N-S) Adams Street (E-W) Hotel Access
Major Street Direction.... NS
Length of Time Analyzed... 60 (min)
Analyst..... Greg
Date of Analysis..... 5/3/99
Other Information.....Build-Out W/ Project Conditions PM Pk
Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1 < 0		0	> 2 < 0		0	> 1 < 0		0	> 1 < 0	
Stop/Yield			N			N						
Volumes	70	564	92	48	577	45	38	1	135	45	1	41
PHF	1	1	1	1	1	1	1	1	1	1	1	1
Grade		0			0			0			0	
MC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's	1.10			1.10			1.10	1.10	1.10	1.10	1.10	1.10

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

Intersection Performance Summary

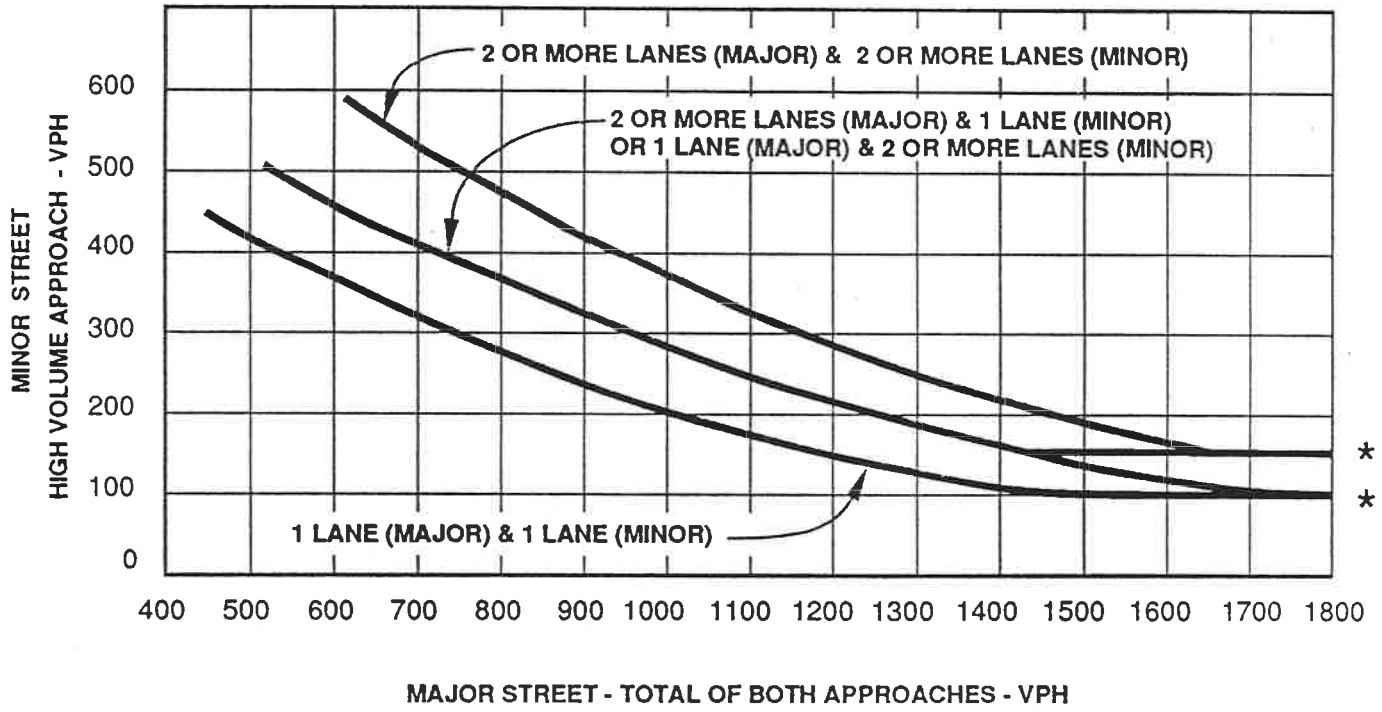
Movement		Flow Rate (pcph)	Move Cap (pcph)		Shared Cap (pcph)	Avg. Total Delay (sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)
EB	L	42	143	>					
EB	T	1	174	>	423	15.5	2.7	C	15.5
EB	R	149	963	>					
WB	L	50	137	>					
WB	T	1	179	>	220	28.9	2.4	D	28.9
WB	R	45	680	>					
NB	L	77	866			4.6	0.2	A	0.4
SB	L	53	835			4.6	0.1	A	0.3

Intersection Delay = 3.5 sec/veh

Appendix 3

TRAFFIC SIGNAL WARRANTS

Peak Hour Volume Warrant
(Urban Areas)



*** NOTE:**

150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Source: California Department of Transportation *Traffic Manual*

La Quinta Corporate Center
Peak Hour Volume Warrant

Intersection:Adams Street @ Adams Hotel Access

Major Approach: 2 Lanes | Minor Approach: 1 Lane | Rural Warrants

Approach	AM Peak Hour Existing	2010+Project	2020+Project		PM Peak Hour Existing	2010+Project	2020+Project
Southbound	307	486	647		304	519	670
Northbound	323	553	720		327	576	727
Eastbound	74	74	75		170	171	173
Meets 1-Hr. Warrant	No	No	No		No	No	Yes

Intersection:Adams Street @ Industrial Street

Major Approach: 2 Lanes | Minor Approach: 1 Lane | Rural Warrants

Approach	AM Peak Hour Existing	2010+Project	2020+Project		PM Peak Hour Existing	2010+Project	2020+Project
Southbound		540	726			607	719
Northbound		481	654			518	697
Eastbound		32	32			86	86
Meets 1-Hr. Warrant		No	No			No	No

Intersection:Dune Palms Road @ Industrial Street

Major Approach: 2 Lanes | Minor Approach: 1 Lane | Rural Warrants

Approach	AM Peak Hour Existing	2010+Project	2020+Project		PM Peak Hour Existing	2010+Project	2020+Project
Southbound		769	1395			317	723
Northbound		605	1109			424	975
Eastbound		36	39			125	125
Meets 1-Hr. Warrant		No	No			No	Yes

Planning Level Daily Traffic Signal Warrants

(Based on Estimated Average Daily Traffic)

Urban ☐ Rural ☐ Major Street Speed Limit _____	**Minimum Requirements Estimated ADT**	
1. Minimum Vehicular Satisified ☐ Not Satisified ☐	Vehicles per day on major street (total of both approaches)	Vehicles per day on higher-volume minor-street approach (one direction only)
Number of lanes for moving traffic on each approach Major Street / Minor Street 1 / 1 2 or more / 1 2 or more / 2 or more 1 / 2 or more	Urban / Rural 8,000 / 5,600 9,600 / 6,720 9,600 / 6,720 8,000 / 5,600	Urban / Rural 2,400 / 1,680 2,400 / 1,680 3,200 / 2,240 3,200 / 2,240
2. Interruption of Continuous Traffic Satisified ☐ Not Satisified ☐	Vehicles per day on major street (total of both approaches)	Vehicles per day on higher-volume minor-street approach (one direction only)
Number of lanes for moving traffic on each approach Major Street / Minor Street 1 / 1 2 or more / 1 2 or more / 2 or more 1 / 2 or more	Urban / Rural 12,000 / 8,400 14,400 / 10,080 14,400 / 10,080 12,000 / 8,400	Urban / Rural 1,200 / 850 1,200 / 850 1,600 / 1,120 1,600 / 1,120
3. Combination of Warrants Satisfied ☐ Not Satisifed ☐ No one warrant satisified but following warrants fulfilled 80% or more: ☐ 1 ☐ 2	2 Warrants	2 Warrants

Source: "Traffic Manual" State of California Revised 4/20/77

Notes:
1. Left turn movements from the major street may be included with minor street volumes if a separate signal phase is to be provided for the left-turn movement.
2. To be used only for NEW INTERSECTIONS or other locations where actual traffic volumes cannot be counted.

Signal Warrants

Intersection	Major	Approach Lanes		Major Leg Vol		Minor Leg	Warrant 1		Warrant 2		Minor	Major
	Speed	Major	Minor	Leg 1	Leg 2	Volume	Major	Minor	Major	Minor	Approach	Approach
Existing												
Adams Hotel Acc	35	1	1	7,050	8,470	3,330	No	No	No	Yes	1,665	7,760
Adams Street							0.97	0.694	0.647			
Build-Out												
Adams Hotel Acc	35	2	1	16,350	16,090	3,330	Yes	No	Yes	Yes	1,665	16,220
Adams Street								0.694				
Industrial Collecto	35	2	1	16,350	16,350	1,070	Yes	No	Yes	No	535	16,350
Adams Street								0.223		0.446		
Industrial Collecto	35	2	1	19,930	19,930	1,500	Yes	No	Yes	No	750	19,930
Dune Palms Road								0.313		0.625		

Appendix 4

HCM SIGNALIZED INTERSECTION METHODOLOGY AND WORKSHEETS

HCM Methodology

HCS Worksheets

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 04-29-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Adams Street
Analyst: Greg File Name: 11_ADEA.HC9
Area Type: Other 4-29-99 AM Pk
Comment: Existing Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	<	1	2	<	1	1	<	1	1	1
Volumes	35	458	34	24	719	50	90	223	13	65	163	100
Lane W (ft)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	12.0
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left *			
Thru		*			Thru	*		
Right		*			Right	*		
Peds		*			Peds			
WB Left	*				SB Left *			
Thru		*			Thru	*		
Right		*			Right	*		
Peds		*			Peds			
NB Right					EB Right			
SB Right	*	*			WB Right			
Green	5.0A	47.0A			Green	6.0A	16.0A	
Yellow/AR	4.0	4.0			Yellow/AR	4.0	4.0	

Cycle Length: 90 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	110	1656	0.317	0.067	26.4	D	8.7	B
	TR	1840	3450	0.281	0.533	7.5	B		
WB	L	110	1656	0.217	0.067	25.9	D	8.9	B
	TR	1841	3452	0.438	0.533	8.4	B		
NB	L	129	1656	0.699	0.078	36.3	D	29.8	D
	TR	327	1729	0.723	0.189	27.4	D		
SB	L	129	1656	0.505	0.078	28.4	D	16.9	C
	T	329	1743	0.495	0.189	22.1	C		
	R	1219	1482	0.082	0.822	1.0	A		

Intersection Delay = 13.5 sec/veh Intersection LOS = B
Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.514

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 04-29-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Adams Street
Analyst: Greg File Name: 11_ADEP.HC9
Area Type: Other 4-29-99 PM Pk
Comment: Existing Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	<	1	2	<	1	1	<	1	1	1
Volumes	45	809	126	40	751	107	75	154	24	164	162	34
Lane W (ft)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	12.0
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	*				NB	Left	*			
	Thru		*				Thru		*		
	Right		*				Right		*		
	Peds		*				Peds				
WB	Left	*				SB	Left	*			
	Thru		*				Thru		*		
	Right		*				Right		*		
	Peds		*				Peds				
NB	Right					EB	Right				
SB	Right	*	*			WB	Right				
Green		5.0A	46.0A			Green		11.0A	12.0A		
Yellow/AR		4.0	4.0			Yellow/AR		4.0	4.0		

Cycle Length: 90 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Group: Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	110	1656	0.408	0.067	27.4	D	10.4	B
	TR	1784	3416	0.550	0.522	9.6	B		
WB	L	110	1656	0.362	0.067	26.9	D	10.0	B
	TR	1787	3421	0.504	0.522	9.2	B		
NB	L	221	1656	0.340	0.133	23.2	C	28.3	D
	TR	247	1708	0.721	0.144	30.4	D		
SB	L	221	1656	0.743	0.133	32.7	D	27.3	D
	T	252	1743	0.643	0.144	27.3	D		
	R	1136	1482	0.030	0.767	1.6	A		

Intersection Delay = 14.3 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.598

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 04-29-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Adams Street
Analyst: Greg File Name: 11_AD0A.HC9
Area Type: Other 4-29-99 AM Pk
Comment: Year 2010 No Proj Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	<	1	2	<	2	2	1	2	2	<
Volumes	95	696	49	38	1107	78	131	326	19	112	236	164
Lane W (ft)	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	*				NB	Left	*			
	Thru		*				Thru		*		
	Right		*				Right		*		
	Peds		*				Peds				
WB	Left	*				SB	Left	*			
	Thru		*				Thru		*		
	Right		*				Right		*		
	Peds		*				Peds				
NB	Right	*	*			EB	Right				
SB	Right					WB	Right				
Green		6.0A	49.0A			Green		5.0A	14.0A		
Yellow/AR		4.0	4.0			Yellow/AR		4.0	4.0		

Cycle Length: 90 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	129	1656	0.738	0.078	39.2	D	10.9	B
	TR	1918	3452	0.408	0.556	7.5	B		
WB	L	129	1656	0.295	0.078	25.7	D	10.0	B
	TR	1918	3452	0.649	0.556	9.5	B		
NB	L	221	3312	0.611	0.067	29.8	D	24.4	C
	T	581	3486	0.589	0.167	23.5	C		
	R	1235	1482	0.015	0.833	0.8	A		
SB	L	221	3312	0.521	0.067	28.0	D	27.8	D
	TR	545	3272	0.770	0.167	27.8	D		

Intersection Delay = 15.5 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.677

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 05-03-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Adams Street
Analyst: Greg File Name: 11_AD0P.HC9
Area Type: Other 4-29-99 PM Pk
Comment: Year 2010 No Proj Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	<	1	2	<	2	2	1	2	2	<
Volumes	112	1230	183	62	1158	162	109	233	35	258	235	69
Lane W (ft)	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds		*			Peds		*	
WB Left	*				SB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds		*			Peds		*	
NB Right	*	*			EB Right			
SB Right					WB Right			
Green	8.0A	48.0A			Green	8.0A	10.0A	
Yellow/AR	4.0	4.0			Yellow/AR	4.0	4.0	

Cycle Length: 90 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Group: Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	166	1656	0.676	0.100	32.3	D	13.8	B
	TR	1861	3419	0.797	0.544	12.4	B		
WB	L	166	1656	0.374	0.100	25.1	D	11.9	B
	TR	1863	3422	0.744	0.544	11.3	B		
NB	L	331	3312	0.338	0.100	24.6	C	23.1	C
	T	426	3486	0.575	0.122	25.5	D		
	R	1186	1482	0.030	0.800	1.2	A		
SB	L	331	3312	0.803	0.100	34.7	D	32.6	D
	TR	412	3368	0.775	0.122	30.9	D		

Intersection Delay = 16.8 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.781

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 04-29-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Adams Street
Analyst: Greg File Name: 11_ADPA.HC9
Area Type: Other 4-29-99 AM Pk
Comment: Year 2010 W/ Proj Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	<	1	2	<	2	2	1	2	2	<
Volumes	138	820	49	60	1156	87	131	338	76	129	238	176
Lane W (ft)	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	*				NB Left	*			
Thru		*			Thru		*		
Right		*			Right		*		
Peds		*			Peds				
WB Left	*				SB Left	*			
Thru		*			Thru		*		
Right		*			Right		*		
Peds		*			Peds				
NB Right	*	*			EB Right				
SB Right					WB Right				
Green	9.0A	46.0A			Green	5.0A	14.0A		
Yellow/AR	4.0	4.0			Yellow/AR	4.0	4.0		

Cycle Length: 90 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	184	1656	0.750	0.111	35.5	D	12.7	B
	TR	1805	3457	0.505	0.522	9.2	B		
WB	L	184	1656	0.326	0.111	24.2	C	12.3	B
	TR	1802	3450	0.724	0.522	11.7	B		
NB	L	221	3312	0.611	0.067	29.8	D	22.2	C
	T	581	3486	0.611	0.167	23.8	C		
	R	1235	1482	0.062	0.833	0.9	A		
SB	L	221	3312	0.602	0.067	29.6	D	29.2	D
	TR	544	3264	0.800	0.167	29.0	D		

Intersection Delay = 16.7 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.733

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 05-03-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Adams Street
Analyst: Greg File Name: 11_ADPP.HC9
Area Type: Other 4-29-99 PM Pk
Comment: Year 2010 W/ Proj Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	<	1	2	<	2	2	1	2	2	<
Volumes	156	1312	183	138	1324	186	139	245	72	270	243	109
Lane W (ft)	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	*				NB Left	*			
Thru		*			Thru			*	
Right		*			Right			*	
Peds		*			Peds				
WB Left	*				SB Left	*	*		
Thru		*			Thru		*	*	
Right		*			Right		*	*	
Peds		*			Peds				
NB Right	*	*			EB Right				
SB Right					WB Right				
Green	8.0A	50.0A			Green	4.0A	5.0A	7.0A	
Yellow/AR	4.0	4.0			Yellow/AR	4.0	0.0	4.0	

Cycle Length: 90 secs Phase combination order: #1 #2 #5 #6 #7

Intersection Performance Summary

	Lane Group: Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	166	1656	0.942	0.100	64.3	F	16.7	C
	TR	1939	3422	0.810	0.567	12.0	B		
WB	L	166	1656	0.833	0.100	45.2	E	14.8	B
	TR	1939	3422	0.817	0.567	12.2	B		
NB	L	184	3312	0.777	0.056	39.6	D	32.7	D
	T	310	3486	0.829	0.089	37.7	D		
	R	1169	1482	0.062	0.789	1.4	A		
SB	L	368	3312	0.755	0.111	31.0	D	29.9	D
	TR	480	3324	0.771	0.144	29.1	D		

Intersection Delay = 19.5 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.825

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 05-03-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Adams Street
Analyst: Greg File Name: 11_ADBA.HC9
Area Type: Other 4-29-99 AM Pk
Comment: Build-Out No Proj Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	<	1	3	<	2	2	1	2	2	<
Volumes	107	1020	69	51	1611	106	184	430	26	145	313	219
Lane W (ft)	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds		*			Peds		*	
WB Left	*				SB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds		*			Peds		*	
NB Right	*	*			EB Right			
SB Right					WB Right			
Green	6.0A	45.0A			Green	5.0A	18.0A	
Yellow/AR	4.0	4.0			Yellow/AR	4.0	4.0	

Cycle Length: 90 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	129	1656	0.831	0.078	49.6	E	12.4	B
	TR	2648	5180	0.452	0.511	9.1	B		
WB	L	129	1656	0.396	0.078	26.6	D	12.0	B
	TR	2648	5181	0.713	0.511	11.6	B		
NB	L	221	3312	0.861	0.067	45.6	E	27.8	D
	T	736	3486	0.613	0.211	21.9	C		
	R	1235	1482	0.021	0.833	0.8	A		
SB	L	221	3312	0.675	0.067	31.9	D	27.9	D
	TR	691	3271	0.810	0.211	26.8	D		

Intersection Delay = 16.8 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.759

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 05-03-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Adams Street
Analyst: Greg File Name: 11_ADBP.HC9
Area Type: Other 4-29-99 PM Pk
Comment: Build-Out No Proj Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	<	1	3	<	2	2	1	2	2	<
Volumes	127	1801	257	83	1683	222	153	303	48	348	311	85
Lane W (ft)	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	*				NB	Left	*			
	Thru		*				Thru			*	
	Right		*				Right			*	
	Peds		*				Peds				
WB	Left	*				SB	Left	*	*		
	Thru		*				Thru		*	*	
	Right		*				Right		*	*	
	Peds		*				Peds				
NB	Right	*	*			EB	Right				
SB	Right					WB	Right				
Green		7.0A	48.0A			Green		5.0A	5.0A	9.0A	
Yellow/AR		4.0	4.0			Yellow/AR		4.0	0.0	4.0	

Cycle Length: 90 secs Phase combination order: #1 #2 #5 #6 #7

Intersection Performance Summary

	Lane Group: Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	147	1656	0.863	0.089	51.7	E	14.2	B
	TR	2794	5131	0.810	0.544	12.1	B		
WB	L	147	1656	0.564	0.089	29.0	D	11.7	B
	TR	2797	5138	0.749	0.544	11.0	B		
NB	L	221	3312	0.716	0.067	33.7	D	31.1	D
	T	387	3486	0.821	0.111	34.3	D		
	R	1153	1482	0.042	0.778	1.5	A		
SB	L	405	3312	0.884	0.122	39.2	D	32.4	D
	TR	562	3374	0.740	0.167	26.6	D		

Intersection Delay = 17.2 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.828

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 05-03-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Adams Street
Analyst: Greg File Name: 11_ADTA.HC9
Area Type: Other 4-29-99 AM Pk
Comment: Build-Out W/ Proj Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	<	1	3	<	2	2	1	2	2	<
Volumes	150	1144	69	73	1659	115	184	442	83	162	315	231
Lane W (ft)	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	*				NB Left	*			
Thru		*			Thru		*		
Right		*			Right		*		
Peds		*			Peds		*		
WB Left	*				SB Left	*			
Thru		*			Thru		*		
Right		*			Right		*		
Peds		*			Peds		*		
NB Right	*	*			EB Right				
SB Right					WB Right				
Green	9.0A	42.0A			Green	5.0A	18.0A		
Yellow/AR	4.0	4.0			Yellow/AR	4.0	4.0		

Cycle Length: 90 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	184	1656	0.815	0.111	41.3	E	13.9	B
	TR	2477	5185	0.538	0.478	10.9	B		
WB	L	184	1656	0.397	0.111	24.8	C	14.4	B
	TR	2474	5179	0.788	0.478	14.0	B		
NB	L	221	3312	0.861	0.067	45.6	E	25.8	D
	T	736	3486	0.630	0.211	22.1	C		
	R	1235	1482	0.067	0.833	0.9	A		
SB	L	221	3312	0.756	0.067	36.0	D	29.7	D
	TR	689	3265	0.831	0.211	27.9	D		

Intersection Delay = 18.2 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.808

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 04-29-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Adams Street
Analyst: Greg File Name: 11_ADTP3.HC9
Area Type: Other 4-29-99 PM Pk
Comment: Build-Out W/ Proj Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	<	1	3	<	2	2	1	2	2	<
Volumes	172	1882	257	160	1850	246	153	315	86	360	319	124
Lane W (ft)	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	*				NB	Left	*			
Thru		*				Thru			*	
Right		*				Right			*	
Peds		*				Peds				
WB Left	*				SB	Left	*	*		
Thru		*				Thru		*	*	
Right		*				Right		*	*	
Peds		*				Peds				
NB Right	*	*			EB	Right				
SB Right					WB	Right				
Green	9.0A	46.0A			Green		5.0A	5.0A	9.0A	
Yellow/AR	4.0	4.0			Yellow/AR		4.0	0.0	4.0	

Cycle Length: 90 secs Phase combination order: #1 #2 #5 #6 #7

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	184	1656	0.935	0.111	60.0	E	18.0	C
	TR	2682	5135	0.877	0.522	14.9	B		
WB	L	184	1656	0.870	0.111	48.2	E	16.4	C
	TR	2683	5137	0.860	0.522	14.2	B		
NB	L	221	3312	0.716	0.067	33.7	D	30.8	D
	T	387	3486	0.855	0.111	37.0	D		
	R	1153	1482	0.075	0.778	1.5	A		
SB	L	405	3312	0.917	0.122	43.3	E	36.4	D
	TR	557	3340	0.835	0.167	30.9	D		

Intersection Delay = 20.9 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.887

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 05-03-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Main Access
Analyst: Greg File Name: 11_MA0A.HC9
Area Type: Other 4-29-99 AM Pk
Comment: Year 2010 No Proj Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2 <		1	2 <		> 1		1	> 1		1
Volumes	1	661	92	244	1175	1	44	1	118	13	1	1
Lane W (ft)	12.0	12.0		12.0	12.0			12.0	12.0		12.0	12.0
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	*				NB	Left		*		
	Thru		*				Thru		*		
	Right		*				Right		*		
	Peds		*				Peds	*	*		
WB	Left	*				SB	Left	*			
	Thru		*				Thru	*			
	Right		*				Right	*			
	Peds		*				Peds	*	*		
NB	Right	*	*			EB	Right				
SB	Right	*	*			WB	Right				
Green		16.0A	48.0A			Green		5.0A	5.0A		
Yellow/AR		4.0	4.0			Yellow/AR		4.0	4.0		

Cycle Length: 90 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	313	1656	0.003	0.189	19.1	C	8.0	B
	TR	1863	3422	0.425	0.544	7.9	B		
WB	L	313	1656	0.780	0.189	30.6	D	13.3	B
	TR	1898	3486	0.651	0.544	9.9	B		
NB	LT	111	1662	0.406	0.067	27.4	D	8.2	B
	R	1235	1482	0.096	0.833	0.9	A		
SB	LT	111	1666	0.126	0.067	25.6	D	23.9	C
	R	1284	1482	0.001	0.867	0.5	A		

Intersection Delay = 11.3 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.620

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 05-03-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Main Access
Analyst: Greg File Name: 11_MA0P.HC9
Area Type: Other 4-29-99 PM Pk
Comment: Year 2010 No Proj Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2 <		1	2 <		> 1		1	> 1		1
Volumes	1	842	164	436	1150	1	183	1	488	14	1	1
Lane W (ft)	12.0	12.0		12.0	12.0			12.0	12.0		12.0	12.0
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	*				NB Left		*		
Thru			*		Thru		*		
Right			*		Right		*		
Peds		*	*		Peds	*	*		
WB Left	*	*			SB Left	*			
Thru		*	*		Thru	*			
Right		*	*		Right	*			
Peds		*	*		Peds	*	*		
NB Right	*	*	*		EB Right				
SB Right	*	*	*		WB Right				
Green	5.0A	21.0A	32.0A		Green	5.0A	11.0A		
Yellow/AR	4.0	0.0	4.0		Yellow/AR	4.0	4.0		

Cycle Length: 90 secs Phase combination order: #1 #2 #3 #5 #6

Intersection Performance Summary

	Lane Group: Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	110	1656	0.009	0.067	25.3	D	20.9	C
	TR	1247	3401	0.847	0.367	20.9	C		
WB	L	497	1656	0.878	0.300	30.7	D	13.6	B
	TR	2092	3486	0.578	0.600	7.4	B		
NB	LT	221	1661	0.831	0.133	39.9	D	11.9	B
	R	1235	1482	0.395	0.833	1.3	A		
SB	LT	111	1665	0.135	0.067	25.6	D	24.1	C
	R	1186	1482	0.001	0.800	1.2	A		

Intersection Delay = 15.6 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.800

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 05-03-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Main Access
Analyst: Greg File Name: 11_MAPA.HC9
Area Type: Other 4-29-99 AM Pk
Comment: Year 2010 W/ Proj Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2 <		1	2 <		> 1		1	> 1		1
Volumes	185	674	92	244	1249	91	44	1	118	85	1	20
Lane W (ft)	12.0	12.0		12.0	12.0			12.0	12.0		12.0	12.0
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	*				NB Left		*		
Thru		*			Thru		*		
Right		*			Right		*		
Peds		*			Peds	*	*		
WB Left	*				SB Left	*			
Thru		*			Thru	*			
Right		*			Right	*			
Peds		*			Peds	*	*		
NB Right	*	*			EB Right				
SB Right	*	*			WB Right				
Green	16.0A	48.0A			Green	5.0A	5.0A		
Yellow/AR	4.0	4.0			Yellow/AR	4.0	4.0		

Cycle Length: 90 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	313	1656	0.591	0.189	23.7	C	10.9	B
	TR	1864	3423	0.431	0.544	8.0	B		
WB	L	313	1656	0.780	0.189	30.6	D	14.2	B
	TR	1879	3451	0.749	0.544	11.4	B		
NB	LT	111	1662	0.406	0.067	27.4	D	8.2	B
	R	1235	1482	0.096	0.833	0.9	A		
SB	LT	111	1661	0.777	0.067	45.4	E	36.9	D
	R	1284	1482	0.016	0.867	0.5	A		

Intersection Delay = 13.6 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.731

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 05-03-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Main Access
Analyst: Greg File Name: 11_MAPP.HC9
Area Type: Other 4-29-99 PM Pk
Comment: Year 2010 W/ Proj Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2 <		1	2 <		> 1		1	> 1		1
Volumes	124	849	164	436	1305	65	183	1	488	14	1	1
Lane W (ft)	12.0	12.0		12.0	12.0			12.0	12.0		12.0	12.0
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru			*		Thru	*		
Right			*		Right	*		
Peds		*	*		Peds	*	*	
WB Left	*	*			SB Left	*		
Thru		*	*		Thru	*		
Right		*	*		Right	*		
Peds		*	*		Peds	*	*	
NB Right	*	*	*		EB Right			
SB Right	*	*	*		WB Right			
Green	12.0A	14.0A	32.0A		Green	5.0A	11.0A	
Yellow/AR	4.0	0.0	4.0		Yellow/AR	4.0	4.0	

Cycle Length: 90 secs Phase combination order: #1 #2 #3 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	239	1656	0.518	0.144	24.6	C	21.5	C
	TR	1247	3402	0.853	0.367	21.2	C		
WB	L	497	1656	0.878	0.300	30.7	D	17.3	C
	TR	1807	3461	0.796	0.522	13.2	B		
NB	LT	221	1661	0.831	0.133	39.9	D	11.9	B
	R	1235	1482	0.395	0.833	1.3	A		
SB	LT	111	1665	0.135	0.067	25.6	D	24.1	C
	R	1186	1482	0.001	0.800	1.2	A		

Intersection Delay = 17.7 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.803

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 05-03-1999

Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Main Access
Analyst: Greg File Name: 11_MABA.HC9
Area Type: Other 4-29-99 AM Pk
Comment: Build-Out No Proj Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3 <		2	3 <		> 1		1	> 1		1
Volumes	1	1060	92	244	1711	1	44	1	118	13	1	1
Lane W (ft)	12.0	12.0		12.0	12.0			12.0	12.0		12.0	12.0
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	*				NB	Left		*		
	Thru		*				Thru		*		
	Right		*				Right		*		
	Peds		*				Peds	*	*		
WB	Left	*				SB	Left	*			
	Thru		*				Thru	*			
	Right		*				Right	*			
	Peds		*				Peds	*	*		
NB	Right	*	*			EB	Right				
SB	Right	*	*			WB	Right				
Green		9.0A	55.0A			Green		5.0A	5.0A		
Yellow/AR		4.0	4.0			Yellow/AR		4.0	4.0		

Cycle Length: 90 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	184	1656	0.005	0.111	23.0	C	5.6	B
	TR	3215	5167	0.394	0.622	5.5	B		
WB	L	368	3312	0.682	0.111	28.4	D	9.2	B
	TR	3254	5229	0.579	0.622	6.7	B		
NB	LT	111	1662	0.406	0.067	27.4	D	8.2	B
	R	1235	1482	0.096	0.833	0.9	A		
SB	LT	111	1666	0.126	0.067	25.6	D	23.9	C
	R	1284	1482	0.001	0.867	0.5	A		

Intersection Delay = 7.9 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.544

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 05-03-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Main Access
Analyst: Greg File Name: 11_MABP.HC9
Area Type: Other 4-29-99 PM Pk
Comment: Build-Out No Proj Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	<	2	3	<	> 1		1	> 1		1
Volumes	1	1693	164	436	1806	1	183	1	488	14	1	1
Lane W (ft)	12.0	12.0		12.0	12.0			12.0	12.0		12.0	12.0
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	*				NB Left		*		
Thru			*		Thru		*		
Right			*		Right		*		
Peds		*	*		Peds	*	*		
WB Left	*	*			SB Left	*			
Thru		*	*		Thru	*			
Right		*	*		Right	*			
Peds		*	*		Peds	*	*		
NB Right	*	*	*		EB Right				
SB Right	*	*	*		WB Right				
Green	8.0A	6.0A	44.0A		Green	5.0A	11.0A		
Yellow/AR	4.0	0.0	4.0		Yellow/AR	4.0	4.0		

Cycle Length: 90 secs Phase combination order: #1 #2 #3 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	166	1656	0.006	0.100	23.6	C	13.3	B
	TR	2580	5160	0.792	0.500	13.3	B		
WB	L	552	3312	0.813	0.167	29.7	D	13.0	B
	TR	2963	5229	0.671	0.567	9.2	B		
NB	LT	221	1661	0.831	0.133	39.9	D	11.9	B
	R	1235	1482	0.395	0.833	1.3	A		
SB	LT	111	1665	0.135	0.067	25.6	D	24.1	C
	R	1186	1482	0.001	0.800	1.2	A		

Intersection Delay = 13.0 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.751

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 05-03-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Main Access
Analyst: Greg File Name: 11_MATA.HC9
Area Type: Other 4-29-99 AM Pk
Comment: Build-Out W/ Proj Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3 <		2	3 <		> 1		1	> 1		1
Volumes	185	1073	92	244	1786	91	44	1	118	85	1	20
Lane W (ft)	12.0	12.0		12.0	12.0			12.0	12.0		12.0	12.0
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	*				NB Left		*		
Thru		*			Thru		*		
Right		*			Right		*		
Peds		*			Peds	*	*		
WB Left	*				SB Left	*			
Thru		*			Thru	*			
Right		*			Right	*			
Peds		*			Peds	*	*		
NB Right	*	*			EB Right				
SB Right	*	*			WB Right				
Green	12.0A	52.0A			Green	5.0A	5.0A		
Yellow/AR	4.0	4.0			Yellow/AR	4.0	4.0		

Cycle Length: 90 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	239	1656	0.773	0.144	33.7	D	10.0	B
	TR	3043	5167	0.421	0.589	6.6	B		
WB	L	478	3312	0.525	0.144	23.9	C	10.2	B
	TR	3057	5191	0.676	0.589	8.6	B		
NB	LT	111	1662	0.406	0.067	27.4	D	8.2	B
	R	1235	1482	0.096	0.833	0.9	A		
SB	LT	111	1661	0.777	0.067	45.4	E	36.9	D
	R	1284	1482	0.016	0.867	0.5	A		

Intersection Delay = 10.8 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.679

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 05-03-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Main Access
Analyst: Greg File Name: 11_MATP.HC9
Area Type: Other 4-29-99 PM Pk
Comment: Build-Out W/ Proj Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3 <		2	3 <		> 1		1	> 1		1
Volumes	124	1700	164	436	1984	61	183	1	488	311	1	84
Lane W (ft)	12.0	12.0		12.0	12.0			12.0	12.0		12.0	12.0
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	*				NB Left		*		
Thru			*		Thru		*		
Right			*		Right		*		
Peds		*	*		Peds	*	*		
WB Left	*	*			SB Left	*			
Thru		*	*		Thru	*			
Right		*	*		Right	*			
Peds		*	*		Peds	*	*		
NB Right	*	*	*		EB Right				
SB Right	*	*	*		WB Right				
Green	7.0A	5.0A	37.0A		Green	16.0A	9.0A		
Yellow/AR	4.0	0.0	4.0		Yellow/AR	4.0	4.0		

Cycle Length: 90 secs Phase combination order: #1 #2 #3 #5 #6

Intersection Performance Summary

	Lane Group: Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	147	1656	0.842	0.089	48.6	E	24.2	C
	TR	2179	5160	0.941	0.422	22.7	C		
WB	L	478	3312	0.939	0.144	43.8	E	22.1	C
	TR	2487	5206	0.905	0.478	17.7	C		
NB	LT	185	1661	0.997	0.111	75.9	F	23.6	C
	R	1054	1482	0.463	0.711	3.9	A		
SB	LT	314	1660	0.995	0.189	61.3	F	48.5	E
	R	1219	1482	0.069	0.822	1.0	A		

Intersection Delay = 24.8 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.960

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 05-03-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Dune Palms Road
Analyst: Greg File Name: 11_DPEA.HC9
Area Type: Other 4-29-99 AM Pk
Comment: Existing Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	<	1	2	<	1	1	1	1	1	<
Volumes	9	426	30	57	688	98	24	145	21	106	166	52
Lane W (ft)	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	*				NB Left	*			
Thru			*		Thru			*	
Right			*		Right			*	
Peds		*	*		Peds			*	
WB Left	*	*			SB Left	*	*		
Thru		*	*		Thru		*	*	
Right		*	*		Right		*	*	
Peds		*	*		Peds			*	
NB Right					EB Right				
SB Right					WB Right				
Green	4.0A	4.0A	40.0A		Green	5.0A	7.0A	14.0A	
Yellow/AR	4.0	0.0	4.0		Yellow/AR	4.0	0.0	4.0	

Cycle Length: 90 secs Phase combination order: #1 #2 #3 #5 #6 #7

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	92	1656	0.098	0.056	26.1	D	10.3	B
	TR	1573	3452	0.305	0.456	10.0	B		
WB	L	166	1656	0.344	0.100	24.9	C	10.7	B
	TR	1710	3421	0.482	0.500	9.8	B		
NB	L	110	1656	0.217	0.067	25.9	D	23.2	C
	T	290	1743	0.499	0.167	23.2	C		
	R	247	1482	0.085	0.167	20.5	C		
SB	L	239	1656	0.443	0.144	23.6	C	21.3	C
	TR	411	1681	0.531	0.244	20.1	C		

Intersection Delay = 13.7 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.454

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 05-03-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Dune Palms Road
Analyst: Greg File Name: 11_DPEP.HC9
Area Type: Other 4-29-99 PM Pk
Comment: Existing Condition

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	<	1	2	<	1	1	1	1	1	<
Volumes	15	932	24	25	967	45	34	62	57	23	48	19
Lane W (ft)	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds		*			Peds			
WB Left	*				SB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds		*			Peds			
NB Right	*	*			EB Right			
SB Right					WB Right			
Green	5.0A	49.0A			Green	5.0A	5.0A	
Yellow/AR	4.0	4.0			Yellow/AR	4.0	4.0	

Cycle Length: 80 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	124	1656	0.121	0.075	22.3	C	5.5	B
	TR	2171	3473	0.463	0.625	5.2	B		
WB	L	124	1656	0.201	0.075	22.6	C	5.8	B
	TR	2164	3463	0.491	0.625	5.4	B		
NB	L	124	1656	0.274	0.075	22.9	C	15.6	C
	T	131	1743	0.474	0.075	25.0	C		
	R	1204	1482	0.047	0.813	0.9	A		
SB	L	124	1656	0.185	0.075	22.5	C	25.4	D
	TR	125	1669	0.535	0.075	26.4	D		

Intersection Delay = 7.0 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.450

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 05-03-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Dune Palms Road
Analyst: Greg File Name: 11_DP0A.HC9
Area Type: Other 4-29-99 AM Pk
Comment: Year 2010 No Proj Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	<	1	2	<	1	1	1	1	1	<
Volumes	17	595	57	94	951	168	49	339	35	181	389	92
Lane W (ft)	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	*				NB	Left	*			
	Thru			*			Thru			*	
	Right			*			Right			*	
	Peds		*	*			Peds			*	
WB	Left	*	*			SB	Left	*	*		
	Thru		*	*			Thru		*	*	
	Right		*	*			Right		*	*	
	Peds		*	*			Peds			*	
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		4.0A	5.0A	32.0A		Green		5.0A	7.0A	21.0A	
Yellow/AR		4.0	0.0	4.0		Yellow/AR		4.0	0.0	4.0	

Cycle Length: 90 secs Phase combination order: #1 #2 #3 #5 #6 #7

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	92	1656	0.185	0.056	26.3	D	15.2	C
	TR	1262	3441	0.543	0.367	14.9	B		
WB	L	184	1656	0.511	0.111	26.3	D	18.1	C
	TR	1439	3408	0.817	0.422	17.5	C		
NB	L	110	1656	0.444	0.067	28.0	D	26.7	D
	T	426	1743	0.796	0.244	27.5	D		
	R	362	1482	0.097	0.244	17.0	C		
SB	L	239	1656	0.757	0.144	32.6	D	30.4	D
	TR	546	1693	0.882	0.322	29.6	D		

Intersection Delay = 21.3 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.772

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 05-03-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Dune Palms Road
Analyst: Greg File Name: 11_DP0P.HC9
Area Type: Other 4-29-99 PM Pk
Comment: Year 2010 No Project Condition

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	<	1	2	<	1	1	1	1	1	<
Volumes	28	1273	48	41	1329	77	67	145	94	39	112	35
Lane W (ft)	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left *			
Thru		*			Thru	*		
Right		*			Right	*		
Peds		*			Peds			
WB Left	*				SB Left *			
Thru		*			Thru	*		
Right		*			Right	*		
Peds		*			Peds			
NB Right	*	*			EB Right			
SB Right					WB Right			
Green	5.0A	46.0A			Green 5.0A	8.0A		
Yellow/AR	4.0	4.0			Yellow/AR 4.0	4.0		

Cycle Length: 80 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	124	1656	0.225	0.075	22.7	C	8.3	B
	TR	2037	3467	0.681	0.587	8.0	B		
WB	L	124	1656	0.330	0.075	23.3	C	9.0	B
	TR	2032	3458	0.727	0.587	8.6	B		
NB	L	124	1656	0.539	0.075	26.6	D	21.0	C
	T	196	1743	0.739	0.112	31.4	D		
	R	1204	1482	0.078	0.813	1.0	A		
SB	L	124	1656	0.314	0.075	23.1	C	32.1	D
	TR	189	1681	0.777	0.112	34.5	D		

Intersection Delay = 11.0 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.682

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 04-29-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Dune Palms Road
Analyst: Greg File Name: 11_DPPA.HC9
Area Type: Other 4-29-99 AM Pk
Comment: Year 2010 W/ Proj Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	<	1	2	<	1	1	1	1	1	<
Volumes	42	641	72	94	1135	204	107	352	35	221	402	118
Lane W (ft)	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	*				NB Left	*			
Thru			*		Thru			*	
Right			*		Right			*	
Peds		*			Peds				
WB Left	*	*			SB Left	*	*		
Thru		*	*		Thru		*	*	
Right		*	*		Right		*	*	
Peds		*			Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	4.0A	10.0A	27.0A		Green	5.0A	8.0A	20.0A	
Yellow/AR	4.0	0.0	4.0		Yellow/AR	4.0	0.0	4.0	

Cycle Length: 90 secs Phase combination order: #1 #2 #3 #5 #6 #7

Intersection Performance Summary

	Lane Group:	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
	Mvmts Cap							
EB	L 92	1656	0.457	0.056	29.1	D	19.6	C
	TR 1068	3433	0.701	0.311	19.1	C		
WB	L 276	1656	0.341	0.167	21.7	C	29.9	D
	TR 1439	3407	0.977	0.422	30.4	D		
NB	L 110	1656	0.969	0.067	83.2	F	43.2	E
	T 407	1743	0.866	0.233	33.6	D		
	R 346	1482	0.101	0.233	17.5	C		
SB	L 258	1656	0.858	0.156	40.3	E	40.3	E
	TR 543	1684	0.958	0.322	40.2	E		

Intersection Delay = 31.6 sec/veh Intersection LOS = D

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.936

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 05-03-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Dune Palms Road
Analyst: Greg File Name: 11_DPPP.HC9
Area Type: Other 4-29-99 PM Pk
Comment: Year 2010 W/ Project Condition

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	<	1	2	<	1	1	1	1	1	<
Volumes	84	1462	108	41	1487	91	117	150	94	135	144	78
Lane W (ft)	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	*				NB	Left	*			
	Thru		*				Thru		*		
	Right		*				Right		*		
	Peds		*				Peds				
WB	Left	*				SB	Left	*			
	Thru		*				Thru		*		
	Right		*				Right		*		
	Peds		*				Peds				
NB	Right	*	*			EB	Right				
SB	Right					WB	Right				
Green		5.0A	49.0A			Green		8.0A	12.0A		
Yellow/AR		4.0	4.0			Yellow/AR		4.0	4.0		

Cycle Length: 90 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	110	1656	0.761	0.067	43.7	E	15.5	C
	TR	1917	3450	0.860	0.556	14.0	B		
WB	L	110	1656	0.371	0.067	27.0	D	14.4	B
	TR	1920	3456	0.863	0.556	14.1	B		
NB	L	166	1656	0.707	0.100	33.9	D	22.1	C
	T	252	1743	0.596	0.144	26.0	D		
	R	1186	1482	0.079	0.800	1.2	A		
SB	L	166	1656	0.815	0.100	43.0	E	49.3	E
	TR	238	1651	0.931	0.144	53.1	E		

Intersection Delay = 18.5 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.861

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 04-29-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Dune Palms Road
Analyst: Greg File Name: 11_DPBA.HC9
Area Type: Other 4-29-99 AM Pk
Comment: Build-Out No Proj Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	<	1	3	<	2	2	<	2	2	<
Volumes	27	757	85	149	1216	273	70	735	55	295	842	149
Lane W (ft)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	*				NB Left	*	*		
Thru			*		Thru		*	*	
Right			*		Right		*	*	
Peds		*			Peds				
WB Left	*	*			SB Left	*	*		
Thru		*	*		Thru		*	*	
Right		*	*		Right		*	*	
Peds		*			Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	4.0A	7.0A	29.0A		Green	4.0A	9.0A	21.0A	
Yellow/AR	4.0	0.0	4.0		Yellow/AR	4.0	0.0	4.0	

Cycle Length: 90 secs Phase combination order: #1 #2 #3 #5 #6 #7

Intersection Performance Summary

	Lane Group: Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	92	1656	0.293	0.056	26.9	D	16.3	C
	TR	1717	5150	0.539	0.333	16.0	C		
WB	L	221	1656	0.675	0.133	29.4	D	17.4	C
	TR	2091	5086	0.783	0.411	16.3	C		
NB	L	494	3312	0.146	0.156	21.3	C	18.0	C
	TR	1188	3450	0.698	0.344	17.7	C		
SB	L	494	3312	0.615	0.156	25.4	D	24.4	C
	TR	1174	3408	0.887	0.344	24.1	C		

Intersection Delay = 19.2 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.807

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 04-30-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Dune Palms Road
Analyst: Greg File Name: 11_DPBP.HC9
Area Type: Other 4-29-99 PM Pk
Comment: Build-Out No Proj Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	<	1	3	<	2	2	<	2	2	<
Volumes	44	1636	70	66	1703	125	98	314	149	64	243	56
Lane W (ft)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	*				NB Left	*			
Thru		*			Thru		*		
Right		*			Right		*		
Peds		*			Peds				
WB Left	*				SB Left	*			
Thru		*			Thru		*		
Right		*			Right		*		
Peds		*			Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	5.0A	49.0A			Green	5.0A	15.0A		
Yellow/AR	4.0	4.0			Yellow/AR	4.0	4.0		

Cycle Length: 90 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	110	1656	0.399	0.067	27.3	D	9.8	B
	TR	2887	5197	0.650	0.556	9.4	B		
WB	L	110	1656	0.598	0.067	32.3	D	10.6	B
	TR	2876	5176	0.699	0.556	9.9	B		
NB	L	221	3312	0.457	0.067	27.2	D	29.1	D
	TR	590	3318	0.824	0.178	29.5	D		
SB	L	221	3312	0.299	0.067	26.1	D	23.0	C
	TR	602	3388	0.521	0.178	22.3	C		

Intersection Delay = 13.4 sec/veh Intersection LOS = B
Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.698

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 04-29-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Dune Palms Road
Analyst: Greg File Name: 11_DPTA.HC9
Area Type: Other 4-29-99 AM Pk
Comment: Build-Out W/ Proj Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	<	1	3	<	2	2	<	2	2	<
Volumes	51	803	100	149	1400	310	129	748	55	335	855	175
Lane W (ft)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	*				NB Left	*	*		
Thru			*		Thru		*	*	
Right			*		Right		*	*	
Peds		*			Peds				
WB Left	*	*			SB Left	*	*		
Thru		*	*		Thru		*	*	
Right		*	*		Right		*	*	
Peds		*			Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	4.0A	7.0A	29.0A		Green	4.0A	9.0A	21.0A	
Yellow/AR	4.0	0.0	4.0		Yellow/AR	4.0	0.0	4.0	

Cycle Length: 90 secs Phase combination order: #1 #2 #3 #5 #6 #7

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	92	1656	0.554	0.056	31.9	D	17.1	C
	TR	1714	5142	0.579	0.333	16.4	C		
WB	L	221	1656	0.675	0.133	29.4	D	20.8	C
	TR	2091	5087	0.899	0.411	20.2	C		
NB	L	494	3312	0.269	0.156	21.8	C	18.4	C
	TR	1188	3450	0.709	0.344	17.9	C		
SB	L	494	3312	0.698	0.156	27.2	D	27.1	D
	TR	1170	3397	0.924	0.344	27.1	D		

Intersection Delay = 21.4 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.893

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4d 04-29-1999
Center For Microcomputers In Transportation

Streets: (E-W) Highway 111 (N-S) Dune Palms Road
Analyst: Greg File Name: 11_DPTP.HC9
Area Type: Other 4-29-99 PM Pk
Comment: Build-Out W/ Proj Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	<	1	3	<	2	2	<	2	2	<
Volumes	100	1825	130	66	1861	140	149	319	149	160	275	99
Lane W (ft)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	*				NB Left	*			
Thru		*			Thru		*		
Right		*			Right		*		
Peds		*			Peds				
WB Left	*				SB Left	*			
Thru		*			Thru		*		
Right		*			Right		*		
Peds		*			Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	5.0A	49.0A			Green	5.0A	15.0A		
Yellow/AR	4.0	4.0			Yellow/AR	4.0	4.0		

Cycle Length: 90 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	110	1656	0.906	0.067	66.7	F	13.1	B
	TR	2876	5177	0.748	0.556	10.6	B		
WB	L	110	1656	0.598	0.067	32.3	D	11.5	B
	TR	2874	5174	0.766	0.556	10.9	B		
NB	L	221	3312	0.693	0.067	32.6	D	30.6	D
	TR	590	3320	0.832	0.178	29.9	D		
SB	L	221	3312	0.747	0.067	35.4	D	27.5	D
	TR	595	3348	0.660	0.178	24.2	C		

Intersection Delay = 15.8 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.789

Appendix 5

CONSISTENCY WITH GENERAL PLAN CIRCULATION POLICIES

Appendix 5
Consistency With La Quinta Circulation Policies

1. (General Plan Policies 3-2.1.3 through 3-2.1.6)

   The proposed project shall comply with the provisions of the City Travel Demand Ordinance.

2. The City shall encourage mixed use developments, where appropriate, as a means of promoting increased opportunities for pedestrian travel (Policy 3-6.3.5).

   The proposed mixed use development includes a variety of support uses designed to encourage internal trips that can be accomplished by pedestrian travel.

3. Bikeways shall be designed and constructed in conformance with requirements in the Caltrans Manual "Planning and Design Criteria for Bikeways in California" (Policy 3-6.2.5).[1]

   The proposed development will incorporate a Class III bikeway along Highway 111, adjacent to the project site.

   The proposed development will incorporate a Class III bikeway along Dune Palm Road north of Highway 111 and adjacent to the project site.

   The proposed development will incorporate a Class III bikeway along Adams Street north of Highway 111 and adjacent to the project site.

4. City street access guidelines include Circulation Policy 3-3.1.3 which states: a) access by individual driveways to Major and Primary Arterials shall be restricted wherever possible; b) access to Major and Primary Arterials shall be limited through the use of medians and access controls; and c) when permitted, access along arterial and collector streets shall be located a minimum of 250 feet from the ends of the curb returns.

   The proposed project shall be inconsistent with the provisions of the City Circulation Policy 3-3.1.3 at the two gas station driveways adjacent to the corner of Highway 111 and Dune Palm Road and at the industrial street intersection with Adams Street.

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1. The master planned bikeway classifications adjacent to the site were provided by Mr. Greg Trousdell, City of La Quinta Community Development Department by facsimile dated 5/10/99.