APPENDIX D

Traffic Report; Alternatives Memorandum

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TRAFFIC IMPACT ANALYSIS

LAS COLINAS DETENTION FACILITY EXPANSION

SAN DIEGO, CALIFORNIA

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County of San Diego

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April 2008

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GLOSSARY

Level of Service (LOS) corresponds to "excellent" through "failure" conditions in terms of traffic congestions, both for road segments and for intersections. It is used to provide an indication of the amount of delay a driver would experience along a road segment or the amount of wait time a driver would experience at an intersection. *LOS* is rated on a scale of A through F, with A representing excellent, free flow condition, and F representing failures of road segments or intersections.

Volume to Capacity (V/C) Ratio is ratio of the actual traffic volume of a road segment or intersection to the design capacity of the road segment or intersection. It is used to provide an estimate of the LOS of the road segment or intersection.

AM or PM Peak Hours are those hours of the day in which the bulk of commute trips occur and in which traffic impacts are likely to be the greatest.

Average Daily Traffic (ADT) is the number of vehicles that use a roadway segment within a 24-hour period.

Capacity of a transportation facility is the maximum number of persons or vehicles that can be expected to traverse a point or uniform section of road within a specified time frame under prevailing roadway, traffic and control conditions. Theoretically, this is the point in which the flow rate (vehicles/hour) on the facility is the highest. The highest volume attainable under LOS E has been designated as the capacity of the roadway.

EXECUTIVE SUMMARY

This report provides a Traffic Impact Analysis (TIA) for the Las Colinas Detention Facility project located on County of San Diego owned land in the City of Santee. Plans call for construction of a replacement Las Colinas Detention Facility consisting of a 45-acre open campus-style development with multiple buildings. The location of the proposed expanded new facility includes the existing Las Colinas site and a portion of the adjacent Egdemoor site. The new facility would be constructed as a women's detention facility with 1,216 beds. The traffic study uses the increment of 616 beds (proposed 1,216 beds minus existing 600 beds) for trip generation purposes. The facility would include inmate housing, support facilities and training and administrative services encompassing approximately 512,537 square feet.

A TIA has been requested by County staff in order to determine the direct and cumulative impacts of the project on roadway segments and intersections in the vicinity of the project site.

The project is expected to generate 1312 daily trips, 67 AM peak hour trips and 87 PM peak hour trips. These trips were assigned to roadways in the vicinity of the project site and the resulting traffic increases were compared to County standards for the determination of traffic impacts.

There are no direct impacts of the project to the intersections or roadway segments within the study area. The project has cumulative impacts affecting one roadway segment and three intersections in the study area. These impacts are summarized below:

ROAD SEGMENTS

Cumulative impacts are expected to cause the following segment within the study area to be reduced below LOS D in the future with project (2030) conditions:

1. Magnolia Avenue between Mission Gorge Road and future Riverview Parkway

INTERSECTIONS

The project has cumulative significant impacts at the intersections of Mission Gorge Road / Cuyamaca Street and Prospect Avenue / Magnolia Avenue in the opening day conditions. The project has cumulative significant impacts at the intersections of Mission Gorge Road / Cuyamaca Street, Mission Gorge Road / Magnolia Avenue and Prospect Avenue / Magnolia Avenue in the future with project (2030) conditions. Table 1 shows the summary of impacts.

As per County of San Diego guidelines, if the cumulative impacts are found to be significant, each project that contributes any trips must mitigate a share of the cumulative impacts. Below is the project's percentage of traffic contributing to the cumulative impact at three intersections and one roadway segment within the project area.

The ADT component of the project of the total cumulative impacts for the segment of Magnolia Avenue between Mission Gorge Road and future proposed Riverview Parkway is 1.37%.

The ADT, AM and PM component of the project of the total cumulative impacts at the intersection of Mission Gorge Road / Magnolia Avenue is 0.24 % in the ADT, 0.52 % in the AM peak hour and 0.19 % in the PM peak hour.

The ADT, AM and PM component of the project of the total cumulative impacts at the intersection of Mission Gorge Road / Cuyamaca Street is 2.90 % in the ADT, 2.90 % in the AM peak hour and 1.32 % in the PM peak hour.

The ADT, AM and PM component of the project of the total cumulative impacts at the intersection of Prospect Avenue / Magnolia Avenue is 2.40 % in the ADT, 2.77 % in the AM peak hour and 3.20 % in the PM peak hour.

Using the percentages provided above, the project in discussion with the City of Santee can contribute its fair share to the estimated improvement costs provided in the City of Santee Traffic Improvement Master Plan in order to mitigate its cumulative impacts at the three intersections and one roadway segment discussed above. However, even after the project contributes its fair share to the estimated improvement costs provided in the City of Santee master plan, the project's cumulative impacts would not be fully mitigated because the County does not have the ability to implement the improvements and it cannot ensure that the mitigation will be in place prior to the realization of the project's impacts.

TABLE 1 : SUMMARY OF IMPACTS

Impact Area	Type of Impact	Recommended Mitigation
SEGMENT		
Magnolia Ave, Mission Gorge Road - Riverview Parkway	Cumulative	Mitigation through fair sharw contribution to the City of Santee Traffic Improvement Master Plan identified road improvement*
INTERSECTIONS		
Prospect Avenue / Magnolia Avenue	Cumulative	Mitigation through fair share contribution to the City of Santee Traffic Improvement Master Plan identified road improvement*
Mission Gorge Road / Cuyamaca Street	Cumulative	
Mission Gorge Rd / Magnolia Ave	Cumulative	

* Mitigation will not fully mitigate impacts below level of significance

TRAFFIC IMPACT ANALYSIS

COUNTY OF SAN DIEGO, CALIFORNIA

LAS COLINAS DETENTION FACILITY PROJECT

1.0 INTRODUCTION

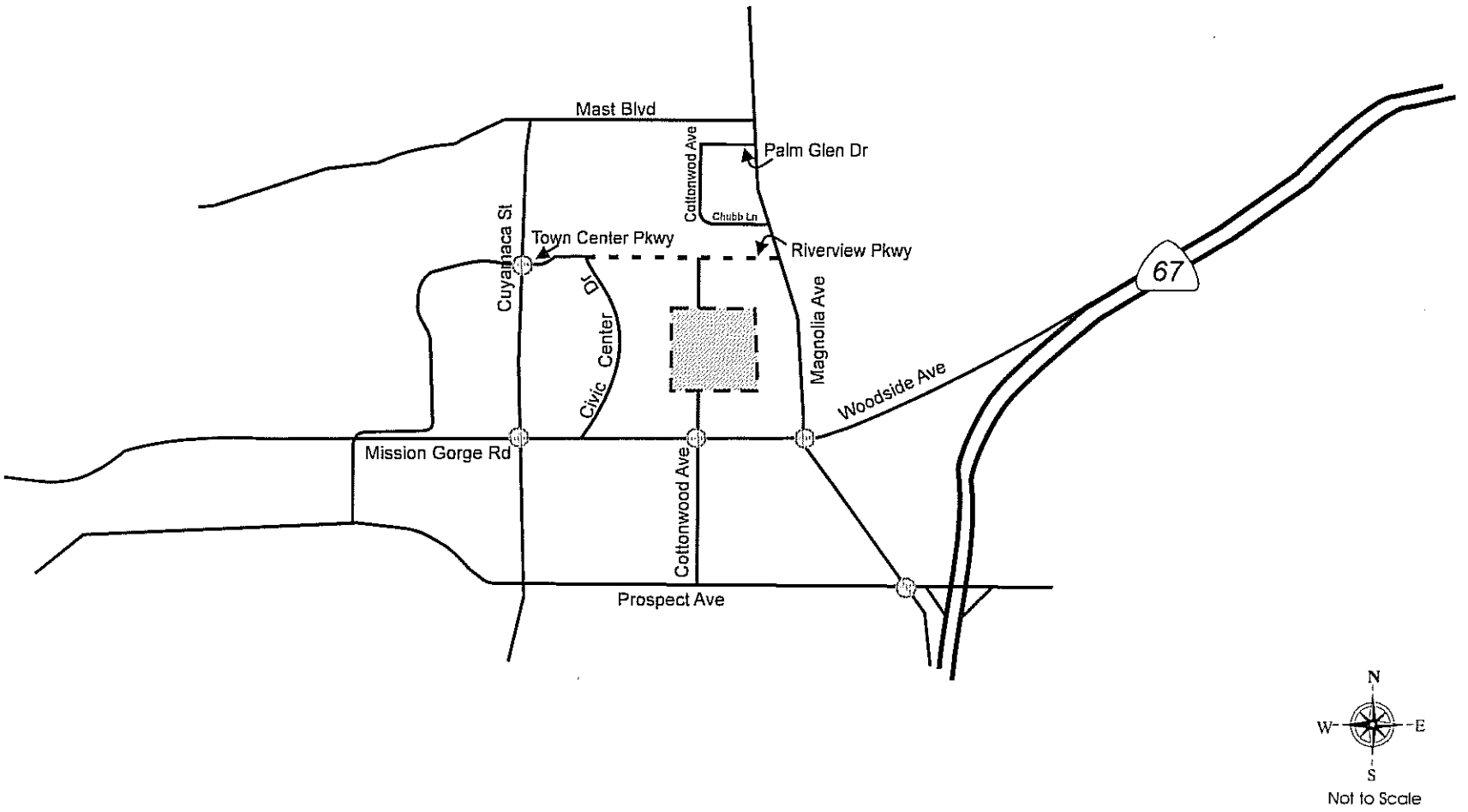
1.1 PURPOSE OF TRAFFIC IMPACT STUDY

This Traffic Impact Analysis (TIA) has been prepared for the purpose of analyzing traffic conditions and identifying potential traffic impacts related to the redevelopment and expansion of the existing Las Colinas Detention Facility located on County of San Diego owned land in the City of Santee, California.

1.2 PROJECT LOCATIONS AND DESCRIPTION

The existing Las Colinas Detention Facility is located on Cottonwood Avenue, north of Mission Gorge Road on County owned land that lies within the boundaries of the City of Santee. The facility is operated on a 15.98-acre site due west of the 42.3-acre Edgemoor Skilled Nursing Center. The existing facility is 118,755 square feet. The number of personnel working in the existing detention facility is approximately 282 contract /volunteer staff. The study area for this TIA is shown in Figure 1. The proposed larger and expanded detention facility is identified hereafter as the "project ".

The project proposes the construction of a replacement Las Colinas Detention Facility consisting of an open campus style development with multiple buildings. The location for the proposed new facility includes the existing Las Colinas site and a portion of the adjacent Edgemoor site to encompass a total of approximately 45 acres. The new facility would be constructed as a 1,216 bed women's detention facility and would include inmate housing, support facilities and training and administrative services encompassing approximately 512,537 square feet. The project site plan is shown in Figure 2. Table 2 shows a comparison between the existing detention facility and the proposed expanded detention facility.



Project Area

Figure 1

Legend :

Las Colinas Detention Facility

Future Roadway

Study Intersections

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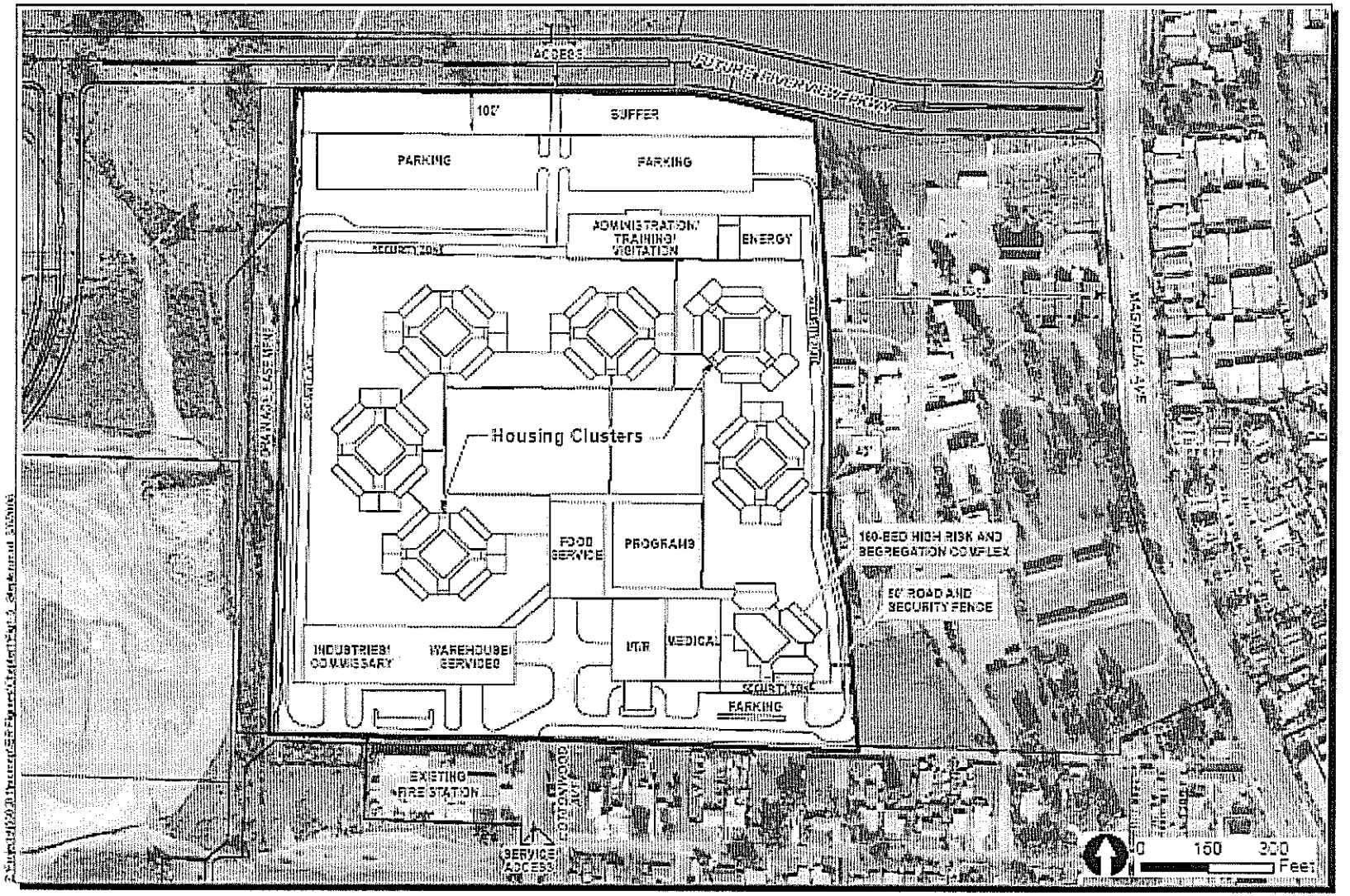

SITE PLAN

Figure 2

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TABLE 2 : COMPARISION BETWEEN EXISTING AND FUTURE PROPOSED LCDF

	Existing LCDF	Future Proposed LCDF
Project Site Acreage	15.98 acres	45 acres
Number of Inmates	600-800	1216
Square Footage	118,755 G.S.F.	512,537 G.S.F.

2.0 EXISTING CONDITIONS

2.1 EXISTING TRANSPORTATION CONDITIONS

Figure 3A shows the intersections and segments in the study area. Existing intersection lane geometry in the study area is shown in Figure 3B. All the intersections within the study area are currently signalized.

The first step toward assessing project traffic impacts was to assess existing traffic conditions. Existing average daily traffic counts in the study area were calculated from peak hour turning movement counts conducted by VRPA Technologies. AM and PM peak hour turning movement counts were recorded at each study area intersection in April 2007. Appendix A includes the traffic count data collected for the study area intersections. The resulting traffic is shown in Figures 4, 5 and 6.

The study area for the traffic impact analysis included the following street segments and intersections:

Street Segments:

- Mission Gorge Road between Town Center Parkway and Cuyamaca Street.
- Mission Gorge Road between Cuyamaca Street and Cottonwood Avenue.
- Mission Gorge Road between Cottonwood Avenue and Magnolia Avenue.
- Town Center Parkway between Mission Gorge Road and Cuyamaca Street.
- Town Center Parkway/Riverview Parkway between Cuyamaca Street and Magnolia Avenue (future only).
- Magnolia Avenue between Mission Gorge Road and Riverview Parkway (future only).
- Magnolia Avenue to the north of Riverview Parkway (future only)
- Magnolia Avenue between Mission Gorge Road and Prospect Avenue.
- Woodside Avenue between Magnolia Avenue and SR 67.

Intersections:

- Cuyamaca Street & Town Center Parkway
- Mission Gorge Road & Cuyamaca Street
- Mission Gorge Road & Cottonwood Avenue
- Mission Gorge Road & Magnolia Avenue
- Prospect Avenue and Magnolia Avenue

- Riverview Parkway & Cottonwood Avenue (Future only)
- Riverview Parkway & Magnolia Avenue (Future only)

The study area was determined using guidelines for Traffic Impact Analysis prepared by the County of San Diego (County of San Diego, Report Format & Content Requirements for Transportation and Traffic, September 26, 2006 and revised effective December 5, 2007). All segments receiving over 200 ADT were selected as a part of the study area as per County of San Diego Guidelines. All intersections receiving over 25 peak hour trips were selected as a part of the study area as per County of San Diego guidelines. Calculation of project trips was determined using trip generation and trip distribution information described in Chapter 3.

2.2 STREET NETWORK

The following is a brief description of the roadway system in the study area.

Mission Gorge Road is classified as a Major Arterial from the western city limits to SR 125 and a Prime Arterial from SR 125 to Magnolia Avenue. This roadway extends from Magnolia Avenue in Santee to Interstate 8 in San Diego. Mission Gorge road is currently a six lane roadway.

Town Center Parkway is classified as a Parkway between Mission Gorge Road and Civic Center Drive and is currently constructed as a six-lane roadway between Mission Gorge Road and Cuyamaca Street and a four lane roadway transitioning to a two-lane roadway between Cuyamaca Street and Civic Center Drive.

Cuyamaca Street is classified as a Major Arterial within the City of Santee. It extends from Fletcher Parkway in El Cajon to just north of El Nopal in Santee. Cuyamaca Street varies as a four-lane or six-lane roadway between Prospect Street and Mast Boulevard.

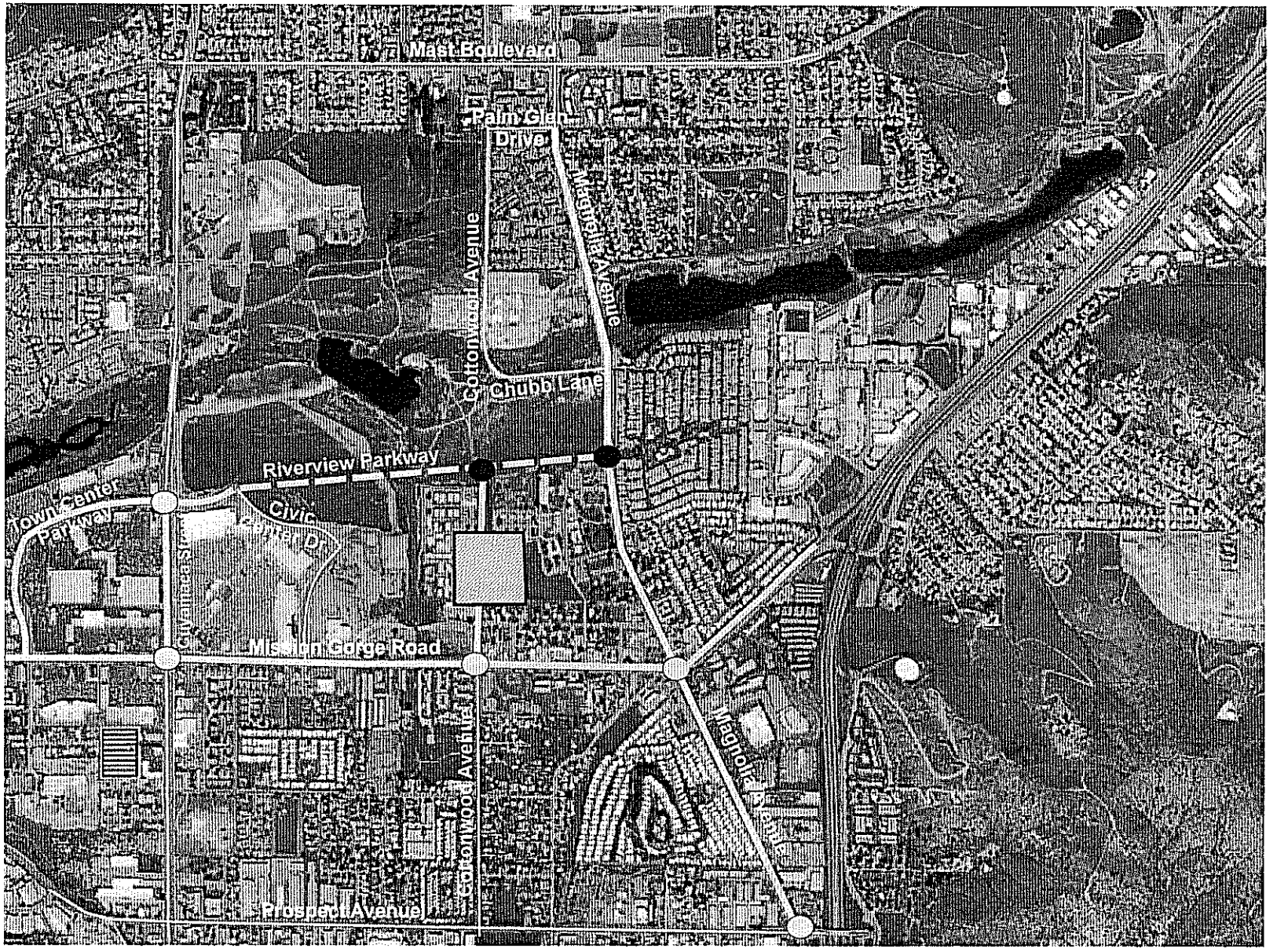
Magnolia Avenue extends from El Cajon to Princess Joann Road in the northern section of Santee and is classified as a Prime Arterial from Mission Gorge Road to Prospect Avenue and a Major Arterial from Mission Gorge Road to Mast Boulevard. Magnolia Avenue has six lanes between Prospect Avenue and Mission Gorge Road. Magnolia Avenue has four lanes between Mission Gorge Road and Mast Boulevard.

Riverview Parkway is a planned roadway to the north of the Detention Facility. The existing Civic Center "Riverview Parkway" is built from Mission Gorge Road to Town Center Parkway. Town Center Parkway to the western boundary of the existing LCDF is currently under construction. Future Riverview Parkway will be built from the LCDF project's western boundary to Magnolia Avenue according to the Riverview Office Park Tentative Parcel Map (TPM 2005-04, recorded December 21, 2006) and will be extended as a part of the Santee Office Park project approved by the City of Santee.

Riverview Parkway is expected to be completed before the opening day of the Las Colinas Detention Facility. Opening day scenario for the Las Colinas Detention Facility is conditioned on the extension of Riverview Parkway. Riverview Parkway is also shown as planned roadway in the City of Santee Circulation Element for horizon year 2020.

Woodside Avenue is classified as a major arterial and is presently a four lane roadway between Magnolia Avenue and State Route 67.

Table 5 shows the future horizon year classification characteristics for the study area roadway segments based on the information available in the City of Santee Circulation Element (2020). Appendix B provides information about the City of Santee Circulation Element (2020).



Project Area Intersections and Segments

Figure 3A

Legend :

Proposed LCDF – not to scale – schematic

Existing Intersection

Future Roadway

Future Intersection

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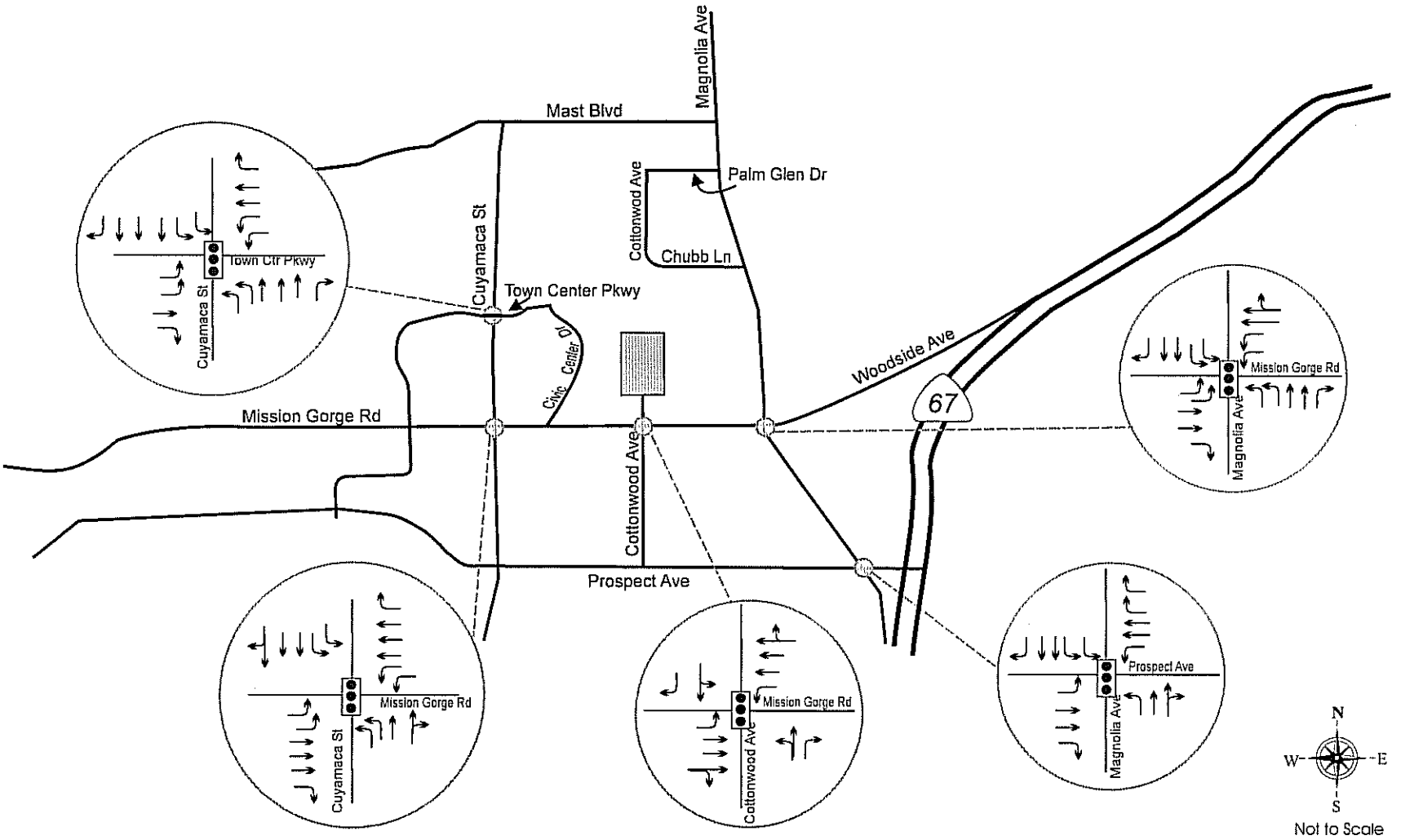

Existing Lane Geometry

Figure 3B

Legend :

Signal

Existing LCDF

→ Direction of Travel

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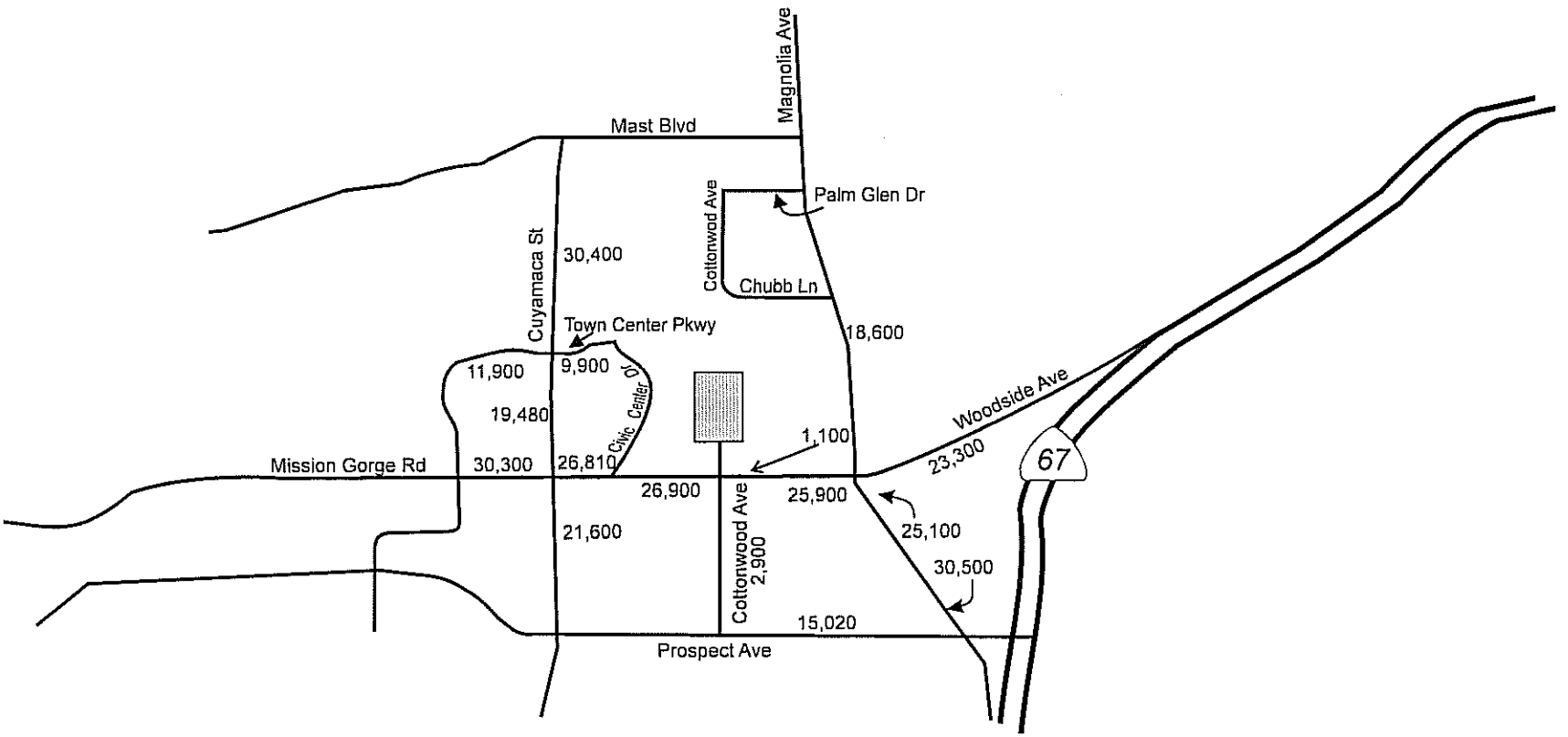

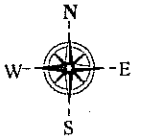

Not to Scale

Existing ADT

Figure 4

Legend :

Existing LCDF

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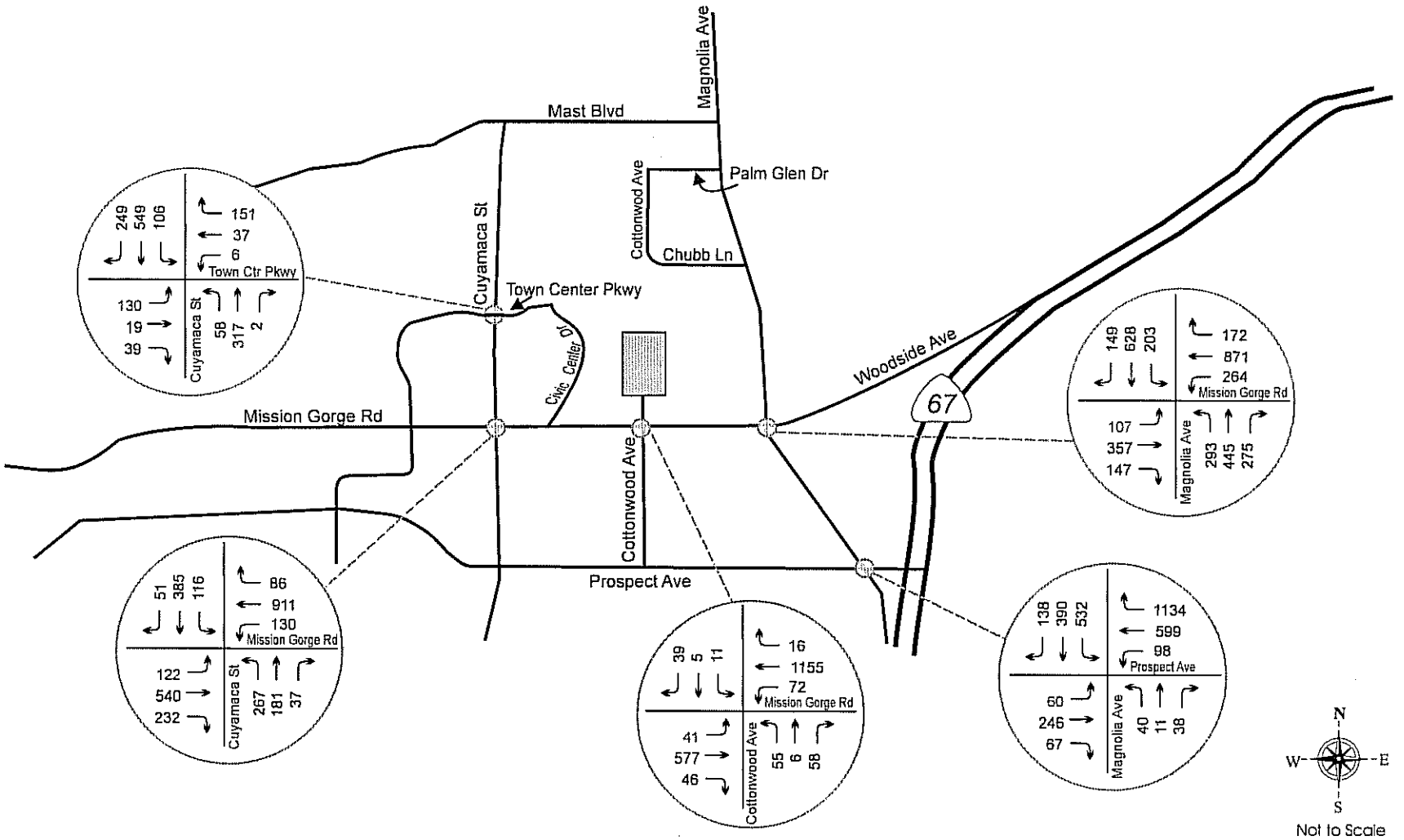


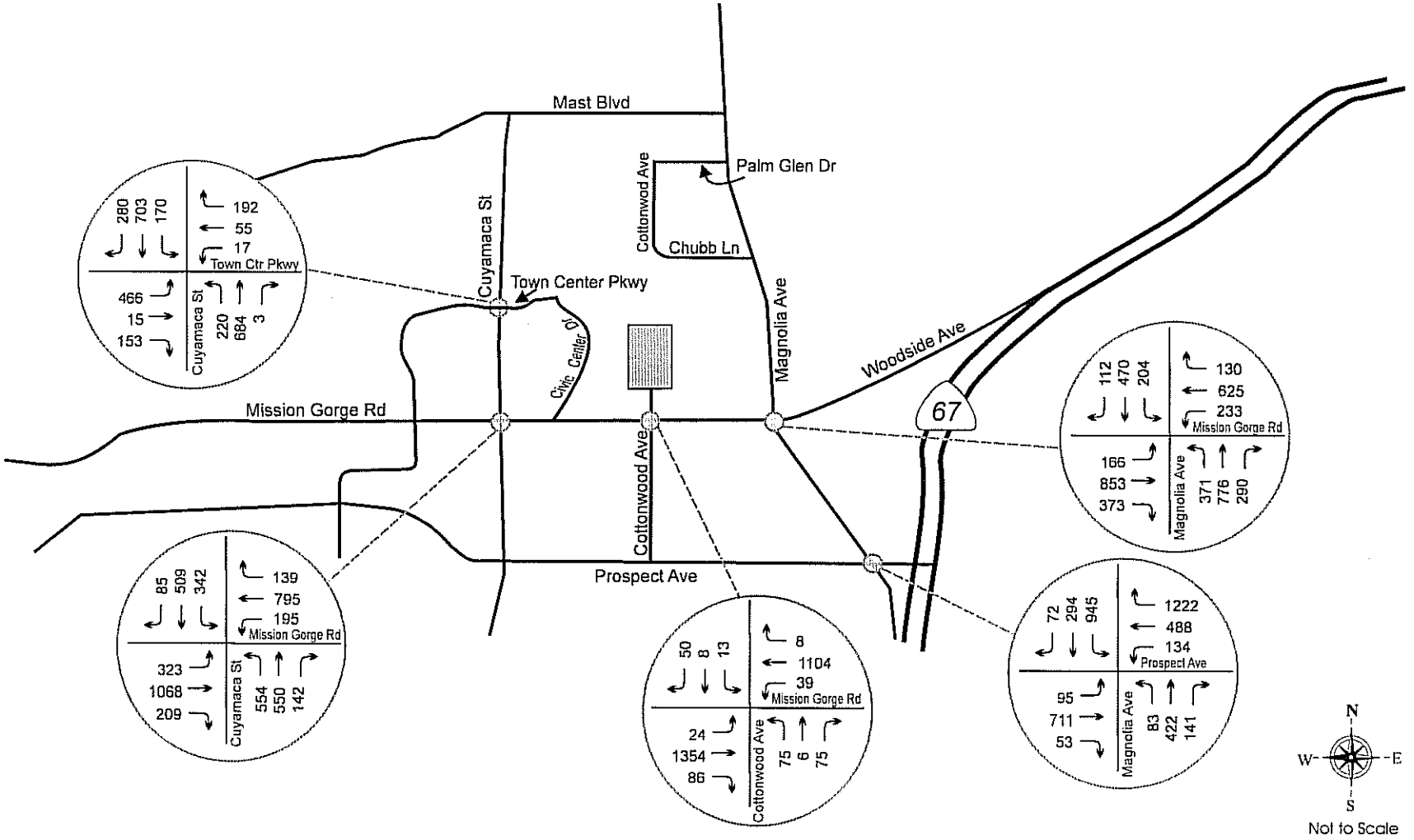
Existing AM Peak Hour

Figure 5

Legend :

Existing LCDF

VRPA Technologies, Inc.



Existing PM Peak Hour

Figure 6

Legend :

Existing LCDF

VRPA Technologies, Inc.

3.0 PROJECT IMPACT ANALYSIS

3.1 ANALYSIS METHODOLOGY

This traffic impact analysis was conducted using guidelines for traffic impact analysis prepared by the County .(County Of San Diego, Report Format and Content Requirements for Transportation and Traffic, September 26, 2006 and revised effective December 5, 2007). This guideline was selected because the County of San Diego is the lead agency under the California Environmental Quality Act (CEQA).

In traffic engineering methodology, roadway operations are described in terms of level of service (LOS), ranging from LOS A (light traffic, minimal delays) to LOS F (significant traffic congestion). LOS D was used as the standard for evaluation of roadway operations in the study area. Therefore, roadways operating at LOS A through LOS D were considered to be operating adequately with no need for improvement. Improvements were recommended for roadways expected to operate at level of service LOS E or LOS F.

3.1.1 SUMMARY OF SIGNIFICANCE CRITERIA

The County of San Diego guidelines for the determination of significance of impacts for roadway segments and intersections states that a significant traffic impact occurs when:

- The project was expected to cause a roadway segment to fall below LOS D operating conditions.
- The project added a significant amount of traffic to a roadway segment expected to operate at LOS E or F.
- The project was expected to cause an intersection to fall below LOS D operating conditions.
- The additional traffic generated by the proposed project will significantly increase congestion at an intersection currently operating at LOS E or F.

The significance criteria stated above is to be applied to determine direct impacts as well as for determining cumulative impacts. For cumulative impacts, the guidelines state that by adding the proposed project trips to all other trips from a list of projects, the significance criteria stated above must be used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes any trips must mitigate a share of the cumulative impacts. Appendix C provides information about the County of San Diego significance criteria.

3.2 PROJECT TRIP GENERATION

To assess the impacts that the project may have on the surrounding streets, the first step was to determine the project trip generation. The following information describes the operating characteristics of the new proposed expanded detention facility.

- 12.5 - hour shifts for sworn officers
- Three 8-hour shifts for intake/release/transfer staff (6:00am – 2:30 pm, 2:00pm – 10:30pm and 10:00pm – 6:00am)
- Three 8-hour shifts for the medical staff (6:00am – 2:30pm, 2:00pm – 11:30pm and 11:00pm – 6:30am)
- 8-hour shift for general staff.
- Weekday visitation hours from 9:00am – 3:00pm and 6:00pm – 9:00pm. Weekend visitation hours from 9:00am – 5:00pm.
- For existing LCDF, vendor deliveries by trucks average 10 per day and these are estimated to stay the same with the implementation of the project
- Staffing for the facility will be a minimum of 120 above current staffing levels but for purposes of estimating worst case scenario, it is assumed that staffing will be approximately 300 employees above current staffing levels.

The trip generation rate available in the ITE trip generation handbook for a detention facility type land-use was considered inadequate as the ITE Handbook provides trip generation information based on a very small and limited sample size data and there is no fitted curve equation available in the ITE trip generation handbook for detention type land-use. It was decided to collect the actual ADT counts from the field for existing detention facility and compare it with the ITE trip generation handbook rates to validate the trips rates available in the ITE Handbook. After comparing the trip rates, it was considered appropriate to determine the trip generation rate for the proposed project on the basis of the actual ADT counts collected from the field because the trip rates calculated from the actual counts were higher than the trip rates available in the ITE Handbook. The higher trip rates calculated from the actual trips would comply with the CEQA requirement that project impacts should be assessed by studying the worse case conditions. The counts were taken from a section of Cottonwood Avenue beyond the fire station that is only accessed by the trips entering and exiting the existing detention facility. The ADT counts were conducted for three days from Thursday – Saturday, on February 28, February 29 and March 1, 2008. The ADT count information collected for Thursday was selected as it was the most representative day to calculate the trip rate as the overall traffic in the study area would be higher on Thursday being a weekday as compared to the weekend and would be more suitable to study the project's impacts on study area intersections. Peak hour counts in the AM and PM were also conducted at the intersection of Mission Gorge Road / Cottonwood Avenue on Thursday, February 28, 2008. The ADT count data and the intersection count data is provided in the Appendix A for reference.

The trip rates calculated from the data collected is shown below:

Total ADT from the counts = 1275

AM peak hour trips = 65 (Peak hour between 7:15am - 8:15 am)
PM peak hour trips = 84 (Peak hour between 5:00pm - 6:00pm)

AM peak percentage = 65 / 1275 = 5.1%
PM peak percentage = 84 / 1275 = 6.6 %

AM percentage inbound = AM inbound trips / Total AM trips = 36 / 65 = 55 %
PM percentage inbound = PM inbound trips / Total PM trips = 45 / 84 = 54 %

Existing number of beds assumed = 600 beds. It should be noted that the existing Las Colinas facility typically has a bed count ranging from 600-800. The assumption of 600 beds is a conservative estimate as it results in a larger increase of beds resulting from the proposed project. Assuming 600 beds ensures that the increase of 616 beds (1,216 – 600) is a worst case scenario and complies with the CEQA requirement that the project impacts should be assessed by studying worst case conditions.

Daily trip rate = 1275 / 600 = 2.13 trips per bed
AM trip rate = 65 / 600 = 0.11 trips per bed
PM trip rate = 84 / 600 = 0.14 trips per bed

The difference between the existing beds (600 beds) and the proposed future beds (1216 beds) is 616 beds. Applying the trip rates calculated above to the increment of 616 beds gives us the trip generated by the proposed facility expansion. The resulting trip generation is shown in Table 3. Daily project traffic is shown in Figure 8. The AM and PM traffic generated by the project is shown in Figures 9 and 10. Although the project is to be developed in 2 phases, the TIA assumes the project to be completed in a single phase as the trips generated by dividing the project into separate phases are small and can be considered insignificant when compared to the trips generated if the project is considered developed in a single phase. For comparison purposes, Table 4 shows the expected trip generation if the project was not built and the project site was developed with business park land use as envisioned in the City's Town Center Specific Plan Amendment.

TABLE 3 : PROJECT TRIP GENERATION

Land Use	Size	Units	Daily Trip Generation	Daily Trips	% AM Peak	%PM Peak	% AM Inbound	% PM Inbound	AM Peak Hour Trips		PM Peak Hour Trips	
									IN	OUT	IN	OUT
Detention Facility	616**	beds	2.13	1312	5.1%	6.6%	55%	54%	37	30	47	40
									Total AM Peak = 67		Total PM Peak =87	

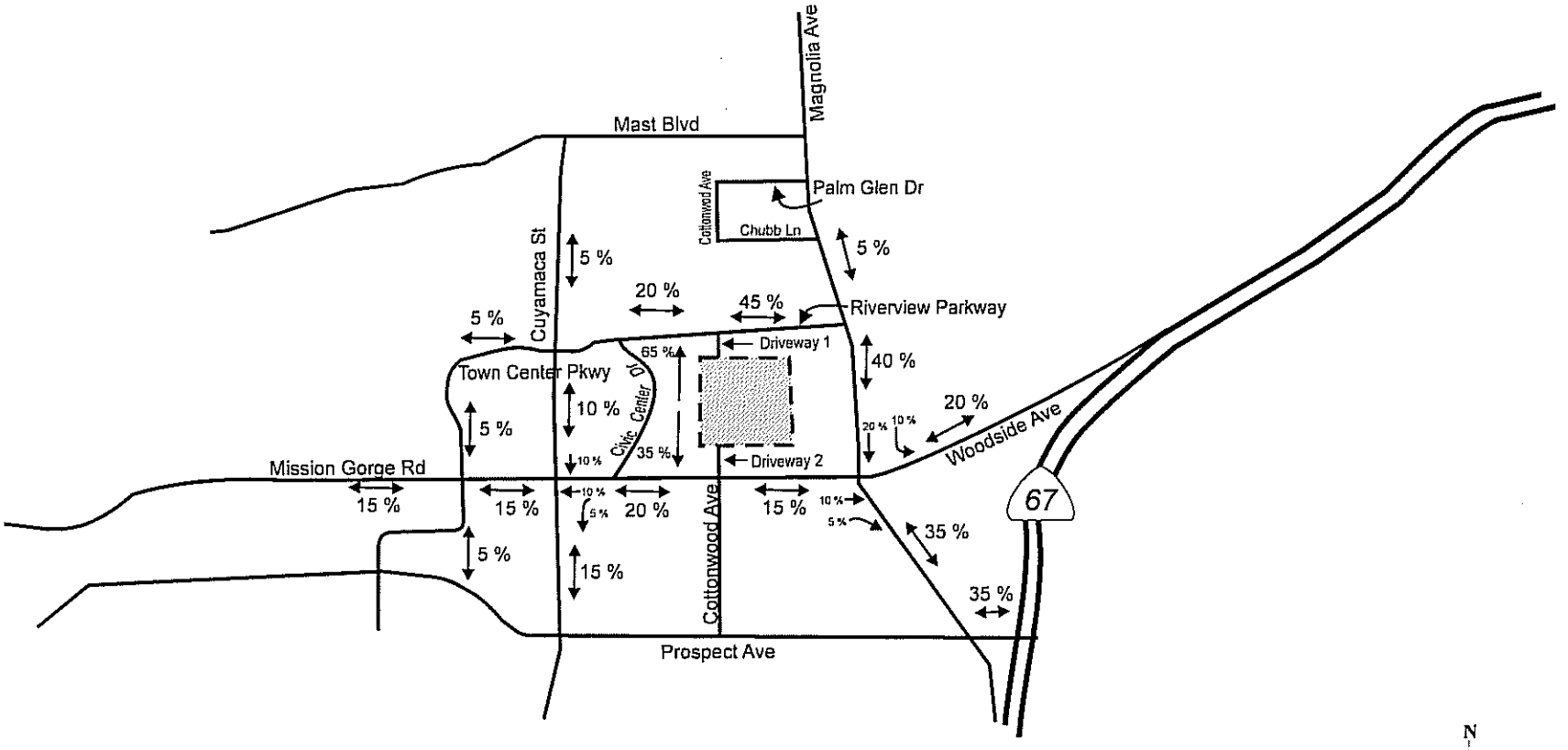
** Represents the propsed increase in the number of beds from 600 to 1,216

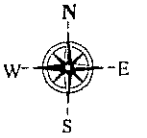
3.3 PROJECT TRIP DISTRIBUTION

Project traffic as calculated in Table 3 was distributed to the roadway system using the trip distribution percentages shown in Figure 7. This information was based on prevailing traffic patterns in the area of the project site. The primary visitor access of the proposed detention facility is provided from the north. The primary visitor access driveway leads into the detention facility from the future proposed Riverview Parkway. Cottonwood Avenue to the south of the proposed detention facility would become the secondary driveway providing access for the staff, service and emergency services. Figure 20 shows the lane geometry for the two access driveways.

3.4 EXISTING PLUS PROJECT CONDITIONS

The existing plus project conditions analyze the direct impacts of the proposed project at the existing study area intersections. The project trips calculated from the project trip generation were added to the existing traffic conditions to determine the traffic volumes for the existing plus project conditions. Figure 11 shows the average daily traffic volumes for the existing plus project conditions. Figures 12 and 13 show the AM and PM peak hour volumes for the existing plus project conditions. The existing plus project scenario does not cause any direct impacts to the roadway segments or intersections in the study area. Table 6A shows the capacity analysis for the roadway segments in the existing plus project conditions. Table 7A shows the capacity analysis results for the intersections in the existing plus project conditions.





Not to Scale

Project Trip Distribution

Figure 7

Legend :

Las Colinas Detention Facility

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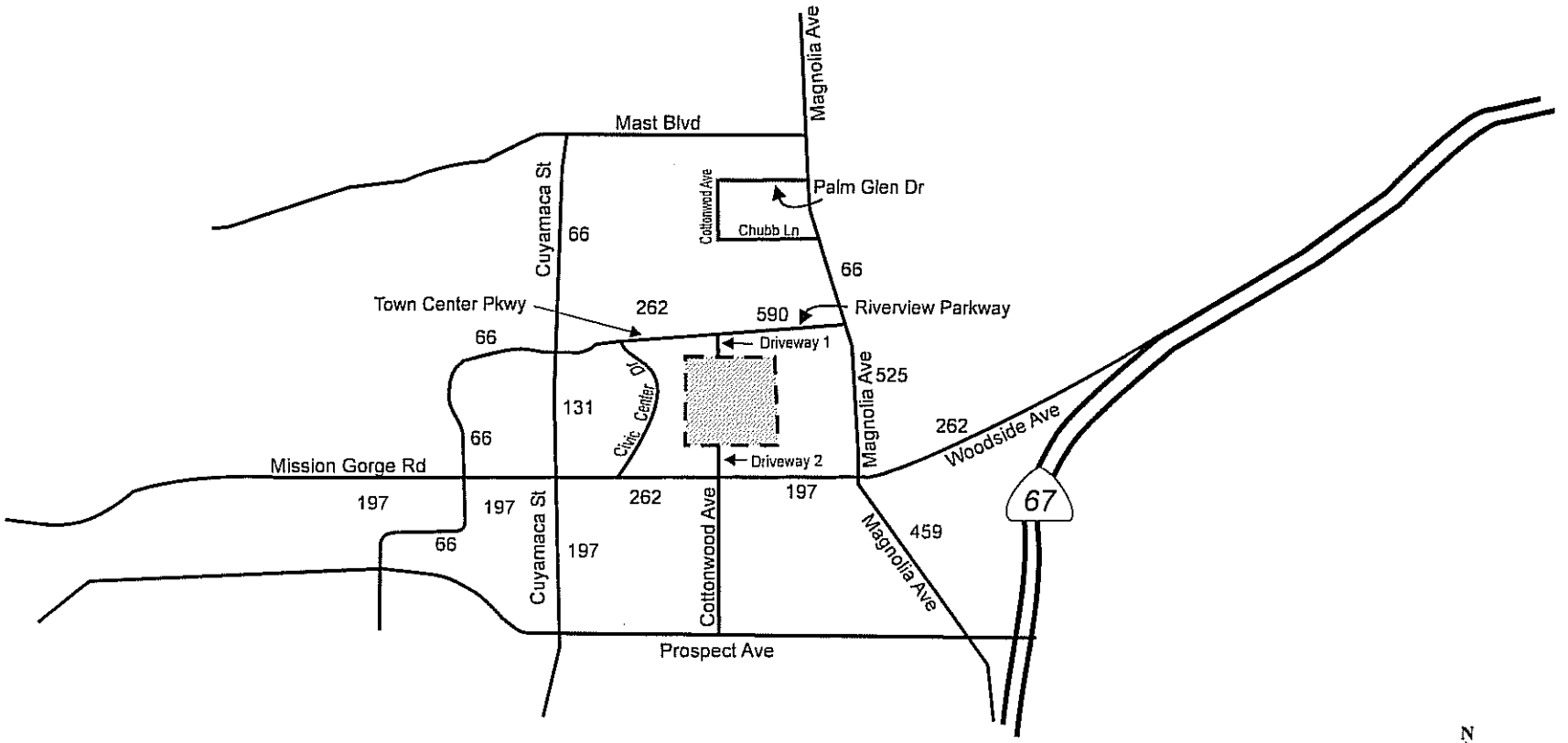

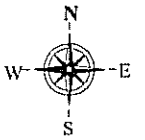

Not to Scale

Project ADT

Figure 8

Legend :

Las Colinas Detention Facility

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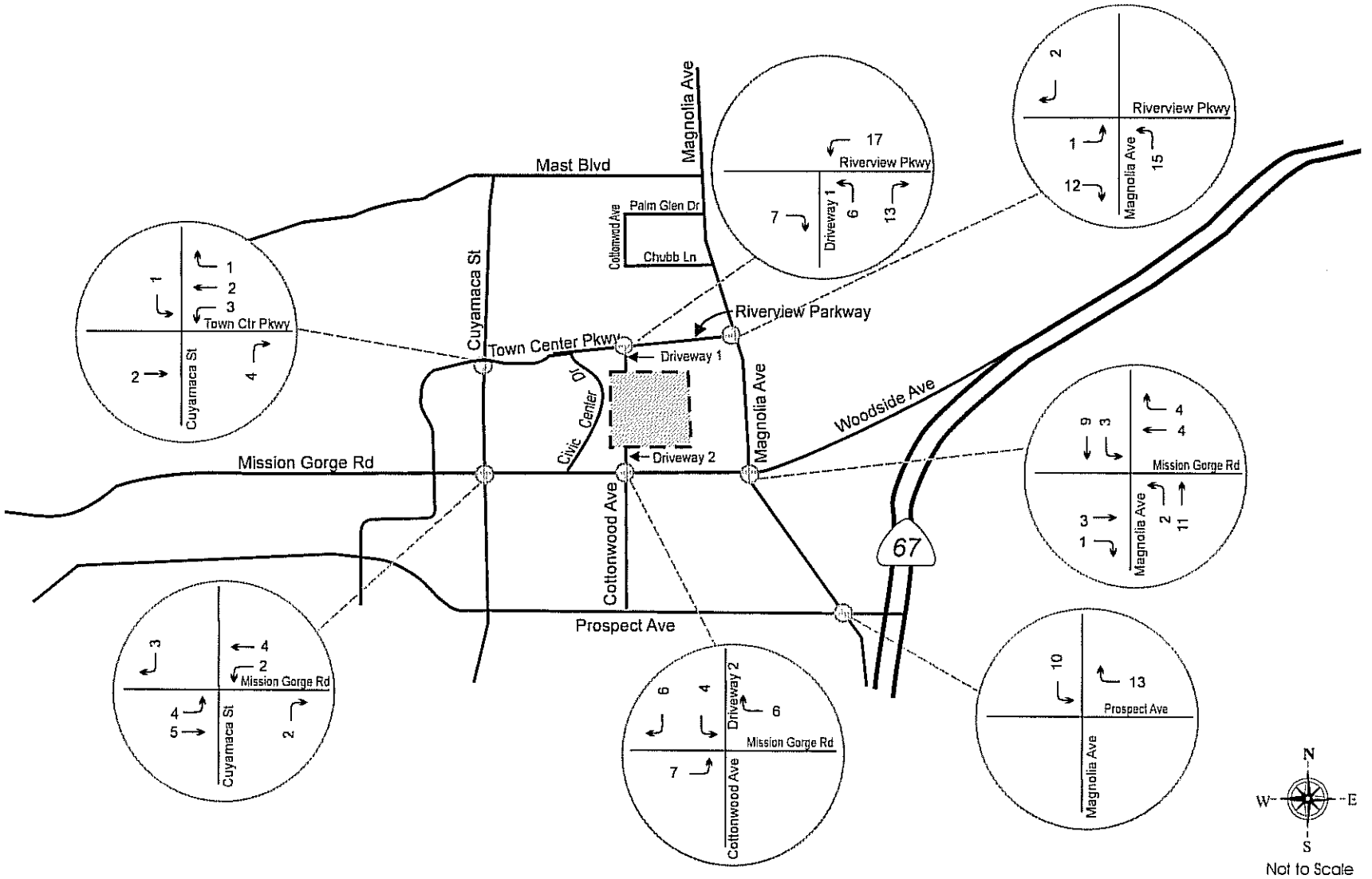


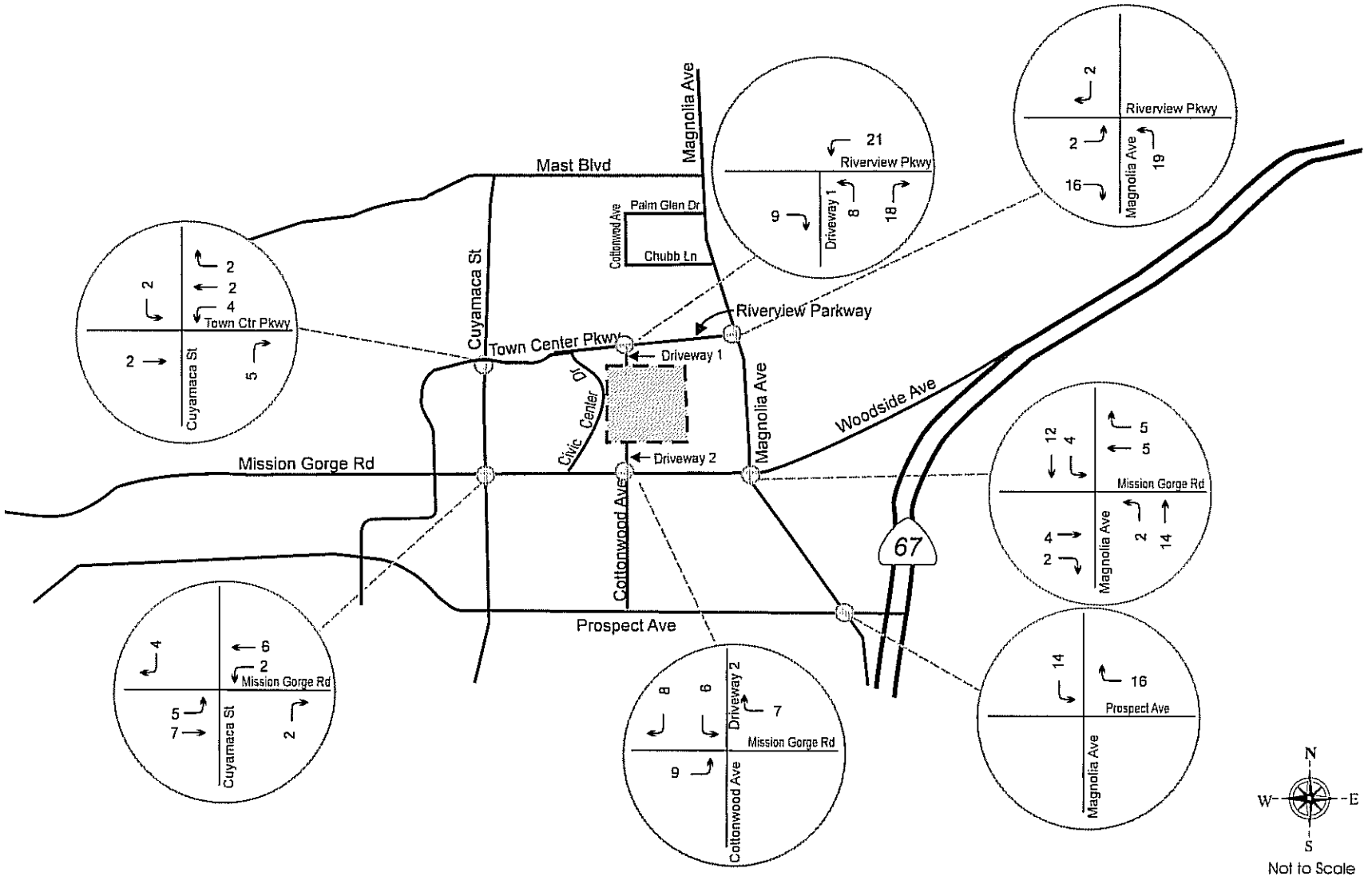
Project Trips AM Peak Hour

Figure 9

Legend :

Las Colinas Detention Facility

VRPA Technologies, Inc.



Project Trips PM Peak Hour

Figure 10

Legend :

Las Colinas Detention Facility

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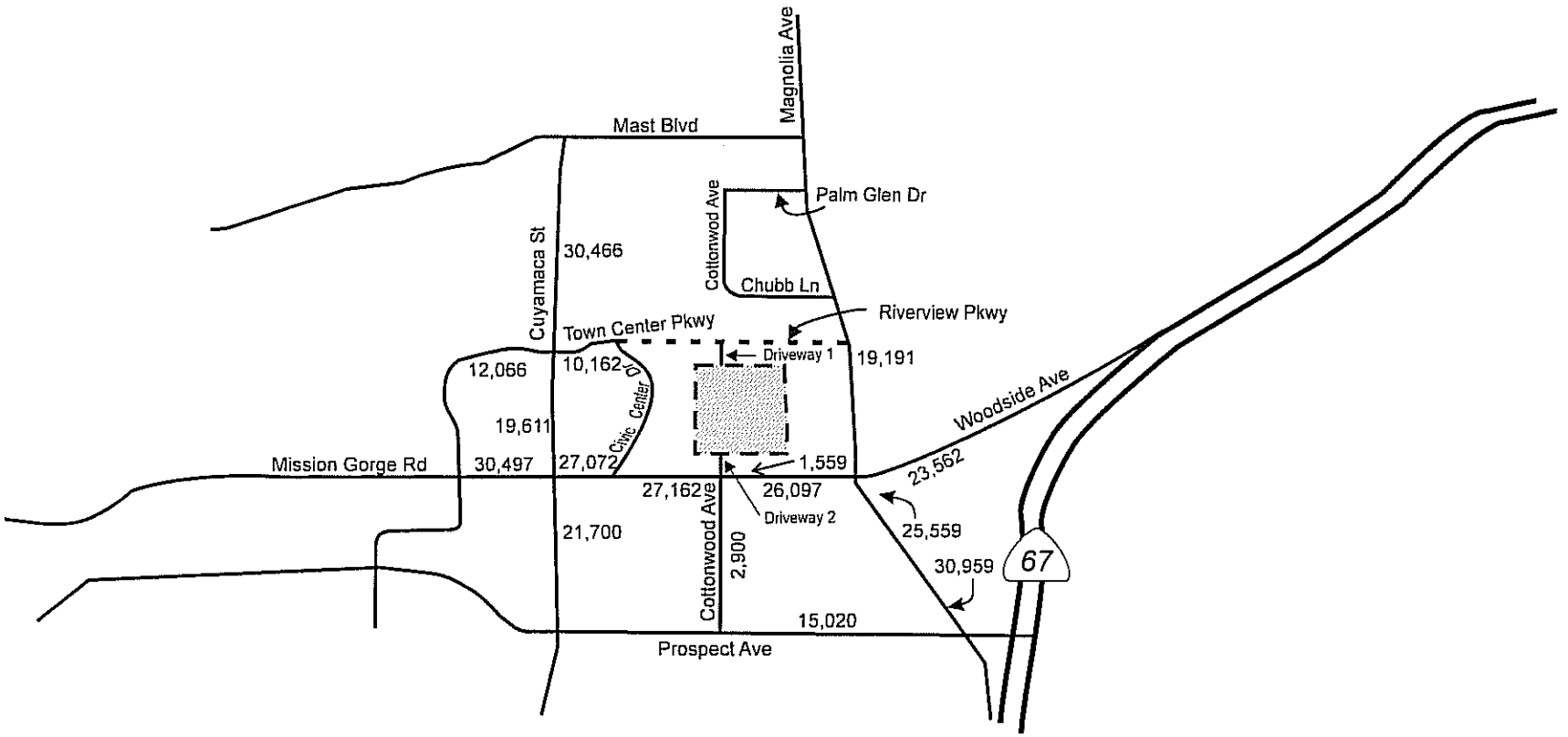
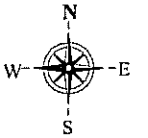




Not to Scale

Existing Plus Project ADT

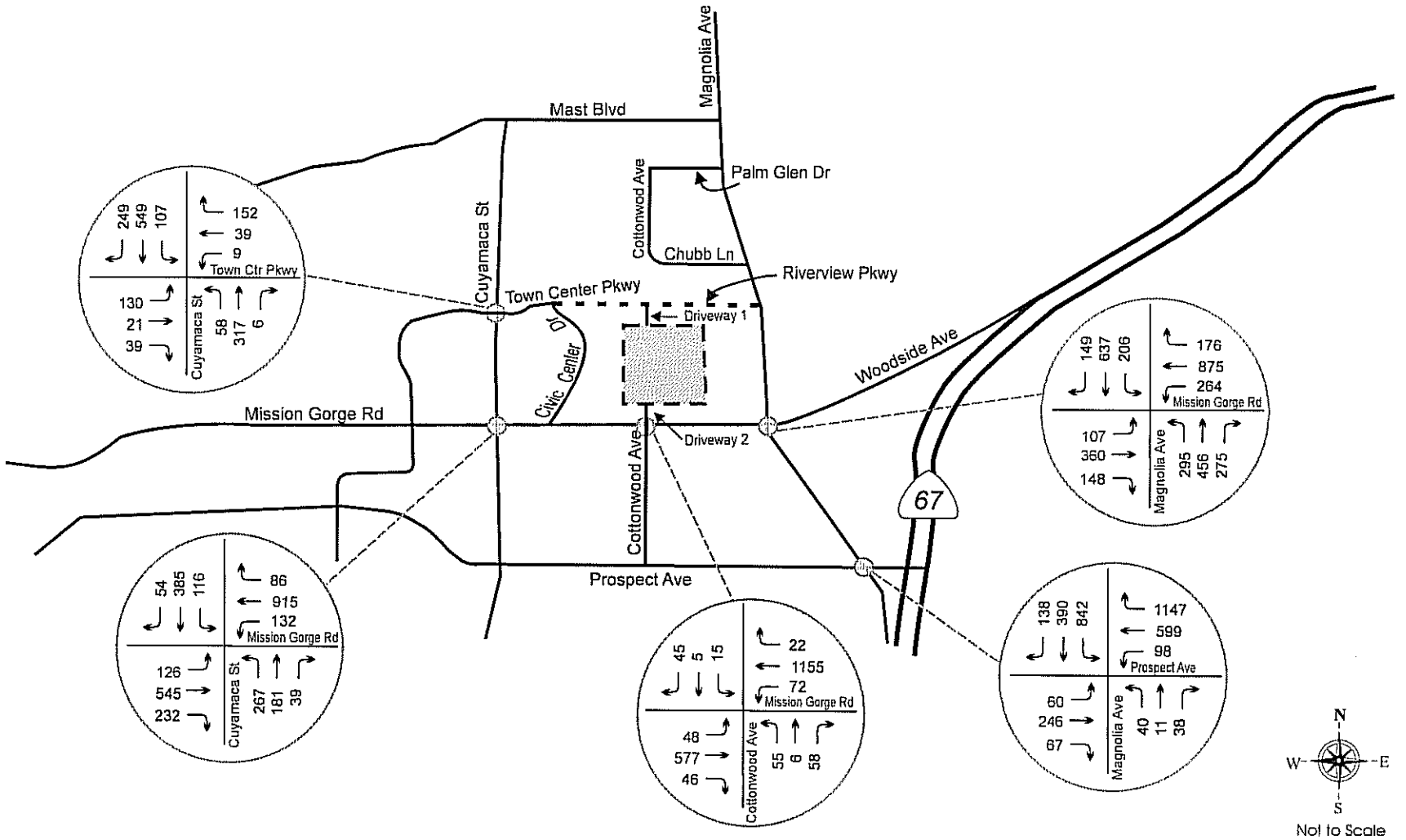
Figure 11

Legend :

Las Colinas Detention Facility

Future Roadway

VRPA Technologies, Inc.



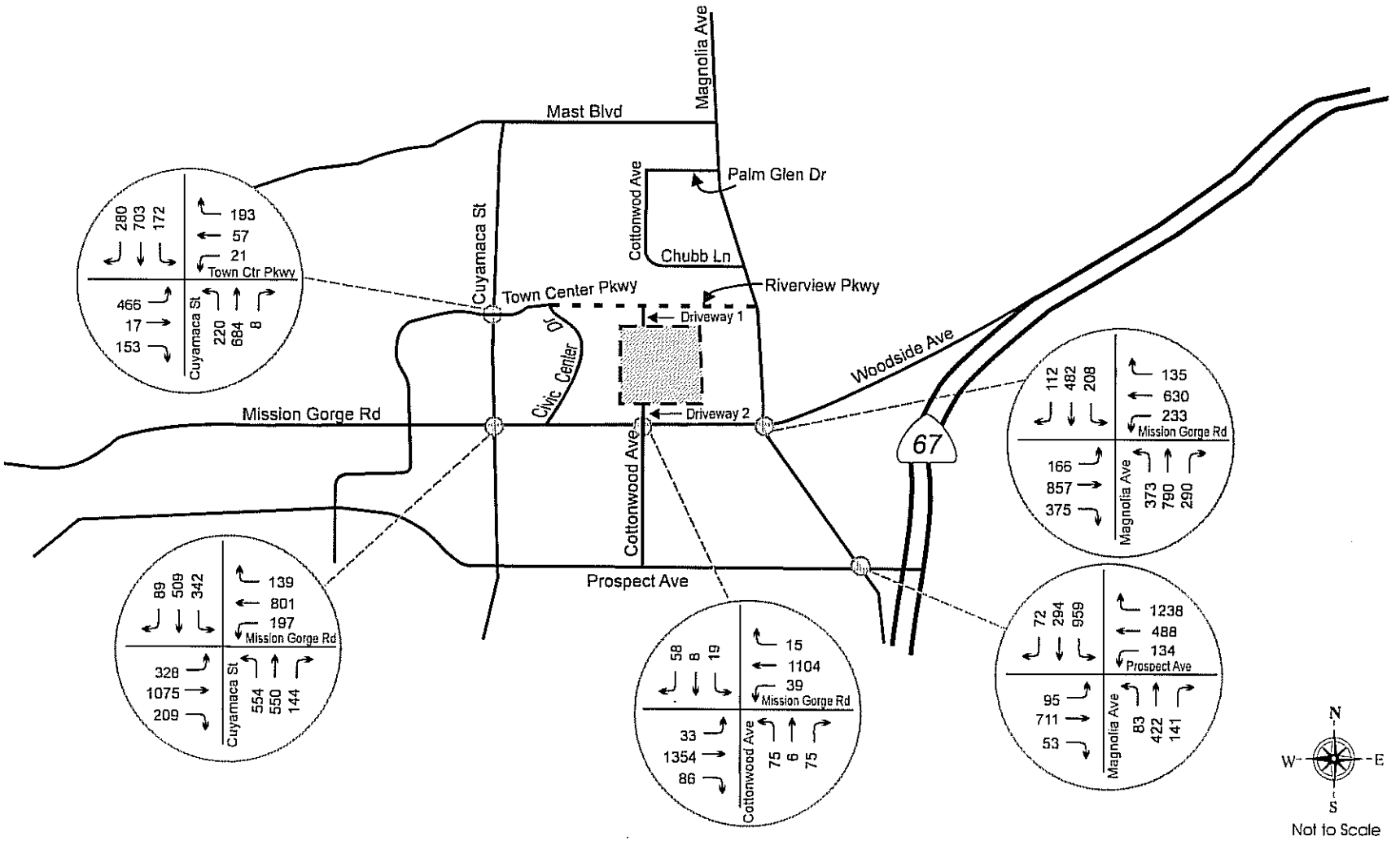
Existing Plus Project AM Peak Hour

Figure 12

Legend :

Las Colinas Detention Facility

VRPA Technologies, Inc.



Existing Plus Project PM Peak Hour

Figure 13

Legend :

Las Colinas Detention Facility

VRPA Technologies, Inc.

3.5 EXISTING PLUS CUMULATIVE CONDITIONS

The existing plus cumulative conditions analyze the existing traffic and cumulative traffic generated by adjacent development projects on the existing study area intersections. VRPA was provided with a list of cumulative projects to be used to analyze the existing plus cumulative conditions. The list of projects along with their location considered for the cumulative analysis is provided below.

CITY OF SANTEE PROJECTS:

- Walgreens # 1 (14,820 square feet), Mission Gorge Road between 1st Avenue and Magnolia Avenue.
- Market Place at Santee (71,350 square feet retail center), Mission Gorge Road, east of Carlton Hills Boulevard near Hazeldon between Cuyamaca Street and Magnolia Avenue.
- Walgreen's # 2 (12,729 square feet), 9305 Mission Gorge Road between Hazeldon and Justa Lane.
- San Diego River Restoration (140 acre riparian habitat enhancement project), San Diego River bound by Cuyamaca Street, N. Magnolia Ave Avenue and along the southern boundary of the 100-year floodplain of the river.
- Villages at Fanita (1,380 dwelling units on 2,600 acre), North of Fanita Parkway Terminus.
- Riverwalk Subdivision (218 Multifamily units), Hoffman Lane, East of Cuyamaca Street and South of Mast Boulevard.
- Sky Ranch Development (224 single family dwelling units, 149 multi-family dwelling units, common area and open space on 377.5 acres) north terminus of Graves Avenue, east of State Route 67.
- Express Performance Center (25,101 square feet industrial), North Magnolia Avenue near Sharlene Lane.
- Riverview Office Park (63,504 square feet), North of Town Center Parkway and Civic Center Drive, east of Cuyamaca Street.
- Marrokal Office Building (32,927 square feet industrial building), Mission Gorge Road between Marrokal Lane and State Street.
- Cozza Industrial Building (two five-story square feet industrial building totaling 38,961 square feet), Mission Gorge Road between Marrokal Lane and State Street.
- Hollywood Theater (1952 seating capacity theater totaling 38,555 square feet), North of Town Center Parkway, East of Cuyamaca Street and West Riverview Parkway
- Riverview Residential (238 condominium and 8 live/ work spaces on 11.26 acres),
- Town Center Parkway, East of Cuyamaca Street and West of Cottonwood Avenue. This project is already built.

- Cuyamaca Town Commons (38,532 square feet office building on 3.27 acres), Cuyamaca Street near Hoffman Drive, South of Mast Road and North of Mission Creek Drive. This project is already built.
- Morningside (138 condominium units), Cottonwood Avenue, South of Mission Gorge Road and North of Buena Vista Avenue. This project is already built.
- Santee Town Center Specific Plan Amendment (154 acre development within the City of Santee Town Center Specific Plan Area that includes residential, commercial, mixed use and community service uses), North of Mission Gorge Road, South of San Diego River, East of Cuyamaca Street and West of Magnolia Avenue.
- Treviso Subdivision (186 unit residential condominium), Mission Gorge Road and West Hills Parkway.
- Magnolia Town homes (10 residential units), 8943 Magnolia Avenue
- Grant Project (8700 square feet), 10050-55 Mission Gorge Road
- North Island Financial Credit (7950 square feet), 30 Town Center Parkway
- Ladera Tentative Map (46 residential units), east of the 11500 block of Woodside Avenue

COUNTY OF SAN DIEGO PROJECTS:

- Lakeside Downs (149 residential units), Lakeside.
- Edgemoor Facility Demolition Project (Demolition of existing Edgemoor Geriatric Hospital), along Magnolia Avenue.
- Edgemoor Skilled Nursing Facility (150,000-square foot, 192-bed facility on 13 acres of a 30-acre parcel of land), south of Mast Boulevard, north of San Diego River, bordered on east by Cottonwood Road.

The traffic generated by the developments listed above as well as a general increase in traffic was estimated using a growth factor of 2.5 % per year. The growth factor was determined based on a comparison of the existing ADT volumes along major streets within the study area with the future ADT volumes. Based on this comparison, it was determined that the growth factor varies between 2 – 3% growth per year. Therefore, an annual average growth factor of 2.5 % was applied to the existing traffic volumes to get the existing plus cumulative traffic volumes. Figures 14, 15 and 16 show the traffic volumes for the existing plus cumulative conditions. The traffic increase due to the cumulative projects on the existing conditions does not cause any significant impacts to the study area roadway segments. Table 6A shows the capacity analysis for the roadway segments in the existing plus cumulative conditions. Under the existing plus cumulative project conditions, there is a cumulative impact at the intersection of Prospect Avenue / Magnolia Avenue and Mission Gorge Road / Cuyamaca Street. Table 7A shows the capacity analysis results for the intersections in the existing plus cumulative conditions.

3.6 (OPENING DAY) CONDITIONS

The traffic generated by the project was added to the traffic generated by the existing plus cumulative conditions to get the opening day traffic conditions. Figures 17, 18 and 19 show the traffic volumes for the opening day conditions. The opening day scenario expects the future proposed Riverview Parkway east – west connection from Civic Center Drive to Magnolia Avenue to be built as a part of the Santee Office Park project approved by the City of Santee and the opening day conditions for the Las Colinas Detention Facility assumes that the extension of Riverview Parkway is completed. The intersection of the future proposed Riverview Parkway with the project access driveway is assumed as a three legged stop controlled intersection. All the roadway segments in the study area operate at LOS D or better in the opening day conditions. The proposed Las Colinas Detention Facility does not cause any cumulative impacts to the roadway segments in the study area. Table 6A shows the capacity analysis for the roadway segments in the opening day conditions. The intersections of Mission Gorge Road / Cuyamaca Street and Prospect Avenue / Magnolia Avenue operate below LOS D in the existing plus cumulative conditions. On opening day, the project adds trips to these intersections that operate below LOS D; therefore Las Colinas Detention Facility becomes a part of the cumulative impacts at these intersections. Thus it can be concluded that the project causes cumulative significant impacts to the intersections of Mission Gorge Road / Cuyamaca Street and Prospect Avenue / Magnolia Avenue in the opening day conditions. Table 7A shows the capacity analysis results for the intersections in the opening day conditions.

3.7 HORIZON YEAR (FUTURE NO PROJECT CONDITIONS 2030)

The transportation model for the 2030 conditions was run by SANDAG at the request of VRPA Technologies. A sub area model created specifically for the City of Santee was used as the base for the new model run. The sub area model used as base model includes the extension of SR 52 from SR 125 to SR 67.The sub area model was used in the development of the Circulation Element provided in the City of Santee's General Plan. A new model run was prepared to reflect future 2030 conditions assuming that the proposed Las Colinas Facility expansion does not occur and that the existing Las Colinas Facility continues to operate at its present location. Since the existing Las Colinas facility was assumed to continue operating at its present location, the extension of Cottonwood Avenue was deleted between Mission Gorge Road and the proposed Riverview Parkway as this extension passes through County owned land and the County of San Diego has stated that it would not agree to the extension of Cottonwood Avenue through its land. While the City of Santee could extend roadway through private land through eminent domain proceedings, this would not apply to County owned land since the County is a higher level agency than the City. Since the extension of Cottonwood Avenue from Mission Gorge Road to the future proposed Riverview Parkway was not assumed to occur, the northern extension of Cottonwood Avenue from the proposed Riverview Parkway to Mast Boulevard was also assumed to not occur since the northern extension of Cottonwood Avenue

was not considered logical if no connection to Mission Gorge Road could be made.

The Circulation Element provided in the City of Santee's General Plan was used to determine the future lane geometry for the roadways and intersections in the study area. Table 5 shows the roadway classification based on the information provided by the City of Santee Circulation Element. The expected future lane geometry is shown in Figure 20. Traffic volumes for future no project (2030) conditions are shown in Figures 21, 22 and 23. An alternative No Project scenario considers the existing LCDF facility to be removed completely. In this alternative scenario, the existing LCDF land and surrounding land would be redeveloped to business park use, per the City of Santee Town Center Specific Plan Amendment (2006). SANDAG trip generation rates (Brief guide of Vehicular Traffic Generation Rates for the San Diego Region, SANDAG, April 2002) for land use category "Business Park" were used to determine the trips for the "alternative" scenario.

Appendix D provides the SANDAG reference chart. Table 4 shows the trips generated if this alternative scenario is considered. The trips generated under this alternative scenario are much higher than the trips generated by the proposed project.

INTERSECTIONS

Under future no project (2030) conditions the following intersections are expected to operate below LOS D due to cumulative developments and growth:

1. Mission Gorge Road and Cuyamaca Street
2. Mission Gorge Road and Magnolia Avenue
3. Prospect Avenue and Magnolia Avenue

ROAD SEGMENTS

Under future no project (2030) conditions, the following street segment is expected to operate at LOS E due to cumulative developments and growth:

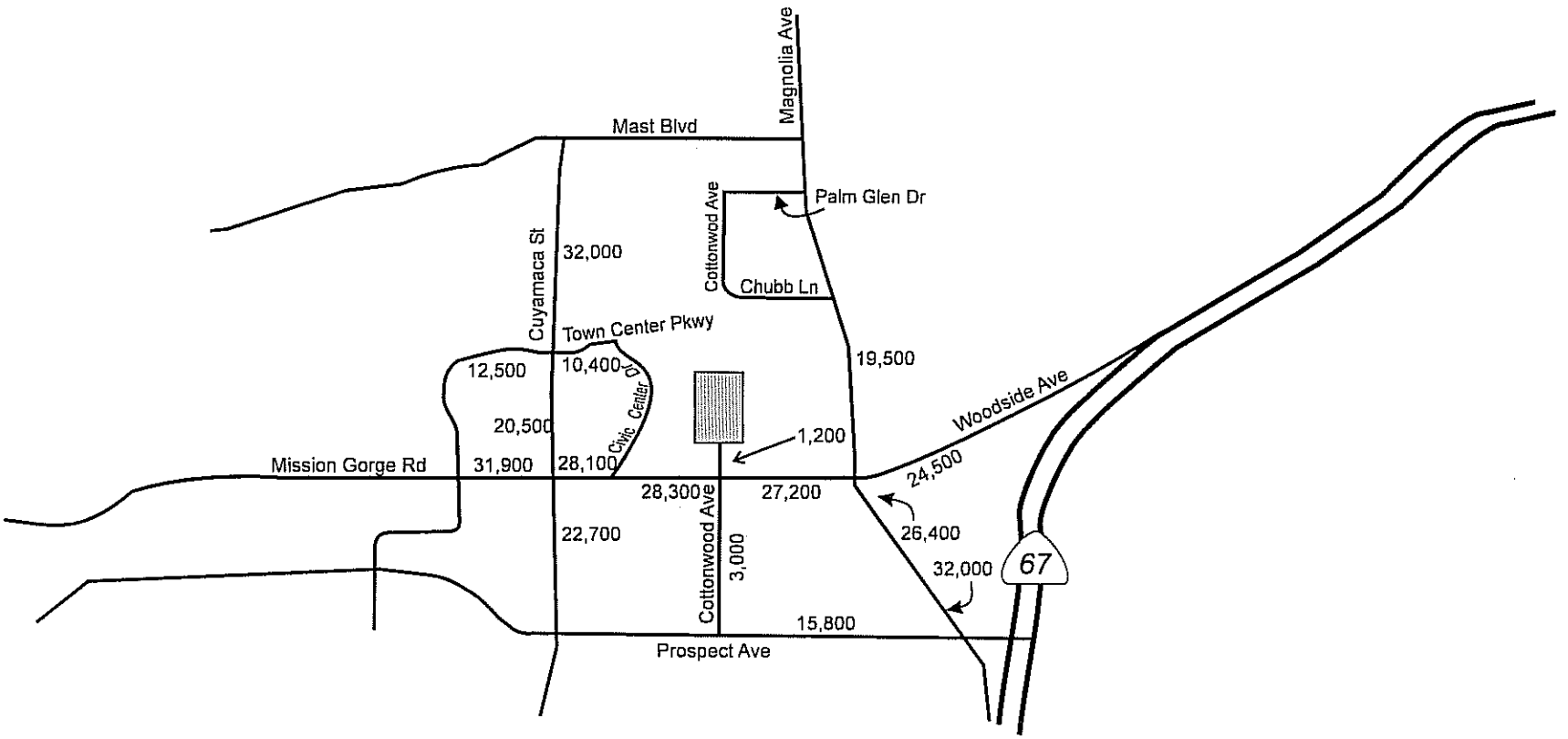
1. Magnolia Avenue between Mission Gorge Road and Riverview Parkway

Tables 6A and 7A show the capacity analysis results for the roadway segments and intersections for the future no project (2030) conditions.

3.8 HORIZON YEAR PLUS PROPOSED PROJECT CONDITIONS (FUTURE WITH PROJECT CONDITIONS 2030)

The traffic generated by the project was added to the future no project conditions to get the future with project traffic conditions. The Circulation Element of the City of Santee's General Plan was used to determine the future lane geometry for the roadways and intersections in the study area.

TABLE 4 : PROJECT TRIP GENERATION FOR ALTERNATIVE LAND USE												
Land Use	Size	Units	Daily Trip Generation	Daily Trips	% AM Peak	%PM Peak	% AM Inbound	% PM Inbound	AM Peak Hour Trips		PM Peak Hour Trips	
									IN	OUT	IN	OUT
Business Park	45	acres	200/acre	9000	8%	10.0%	70%	40%	504	216	360	540
									Total AM = 720		Total PM = 900	



N
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Not to Scale

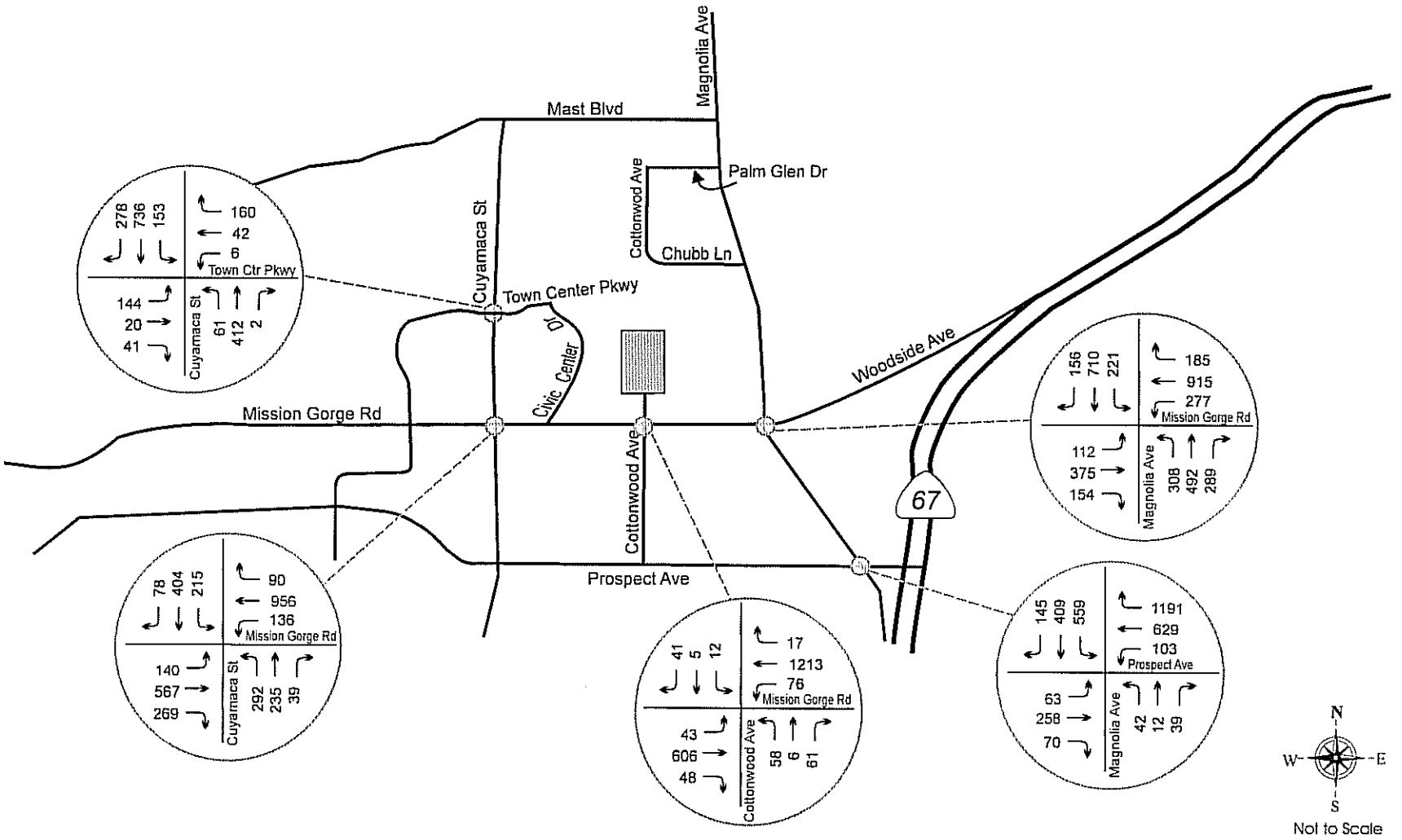
Existing Plus Cumulative Project ADT

Figure 14

Legend :

Existing LCDF

VRPA Technologies, Inc.



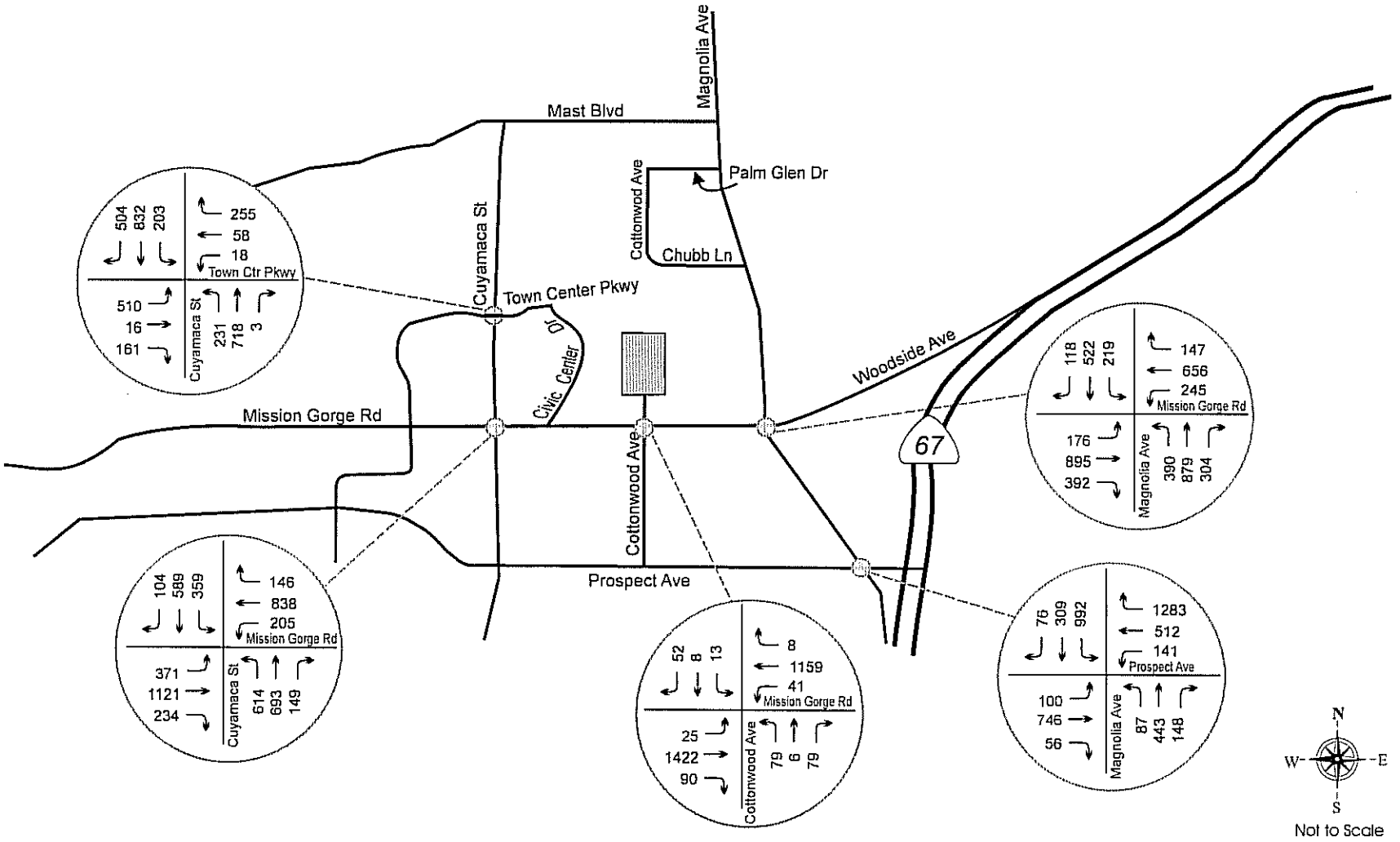
Existing Plus Cumulative AM Peak Hour

Figure 15

Legend :

Existing LCDF

VRPA Technologies, Inc.



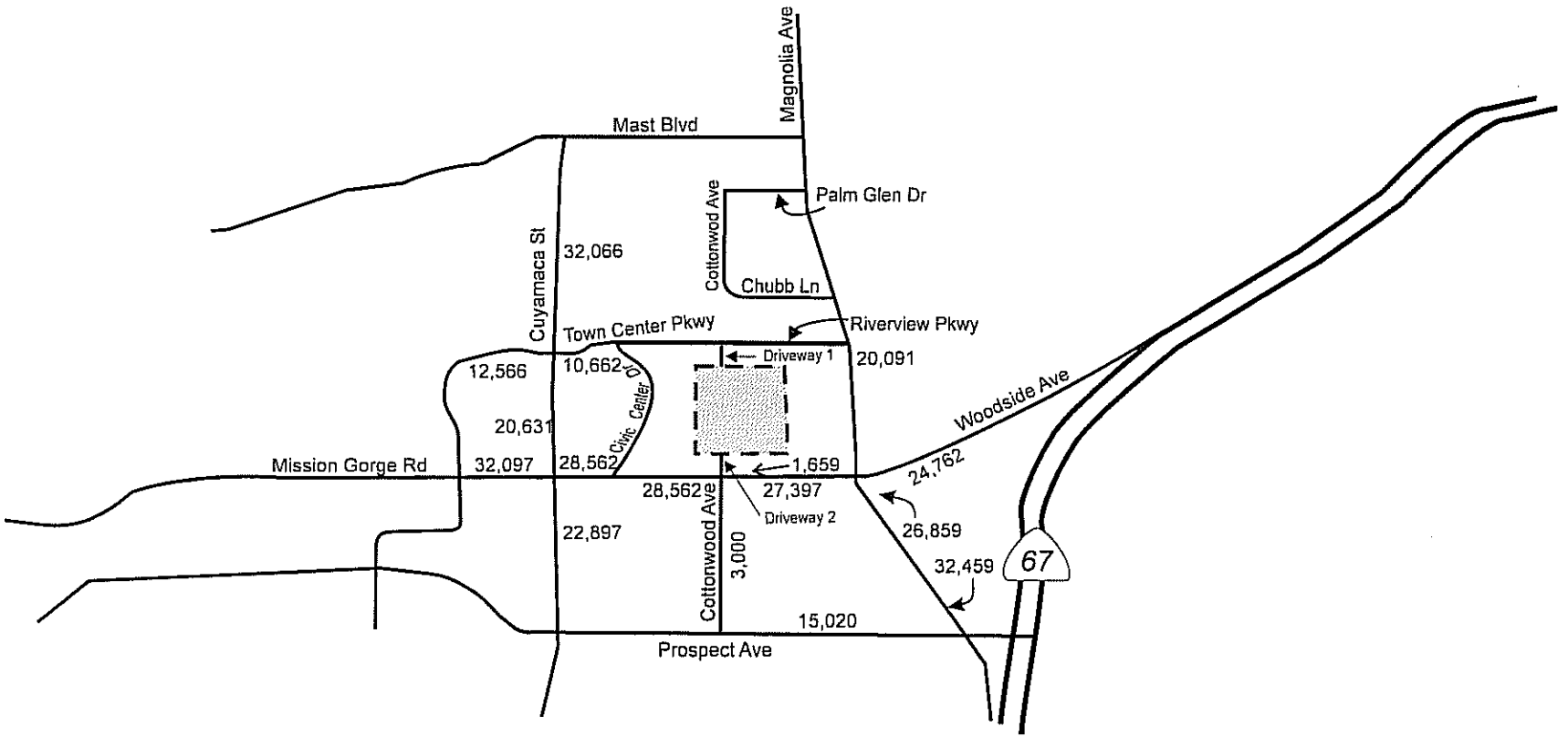
Existing Plus Cumulative PM Peak Hour

Figure 16

Legend :

Existing LCDF

VRPA Technologies, Inc.



N
W E
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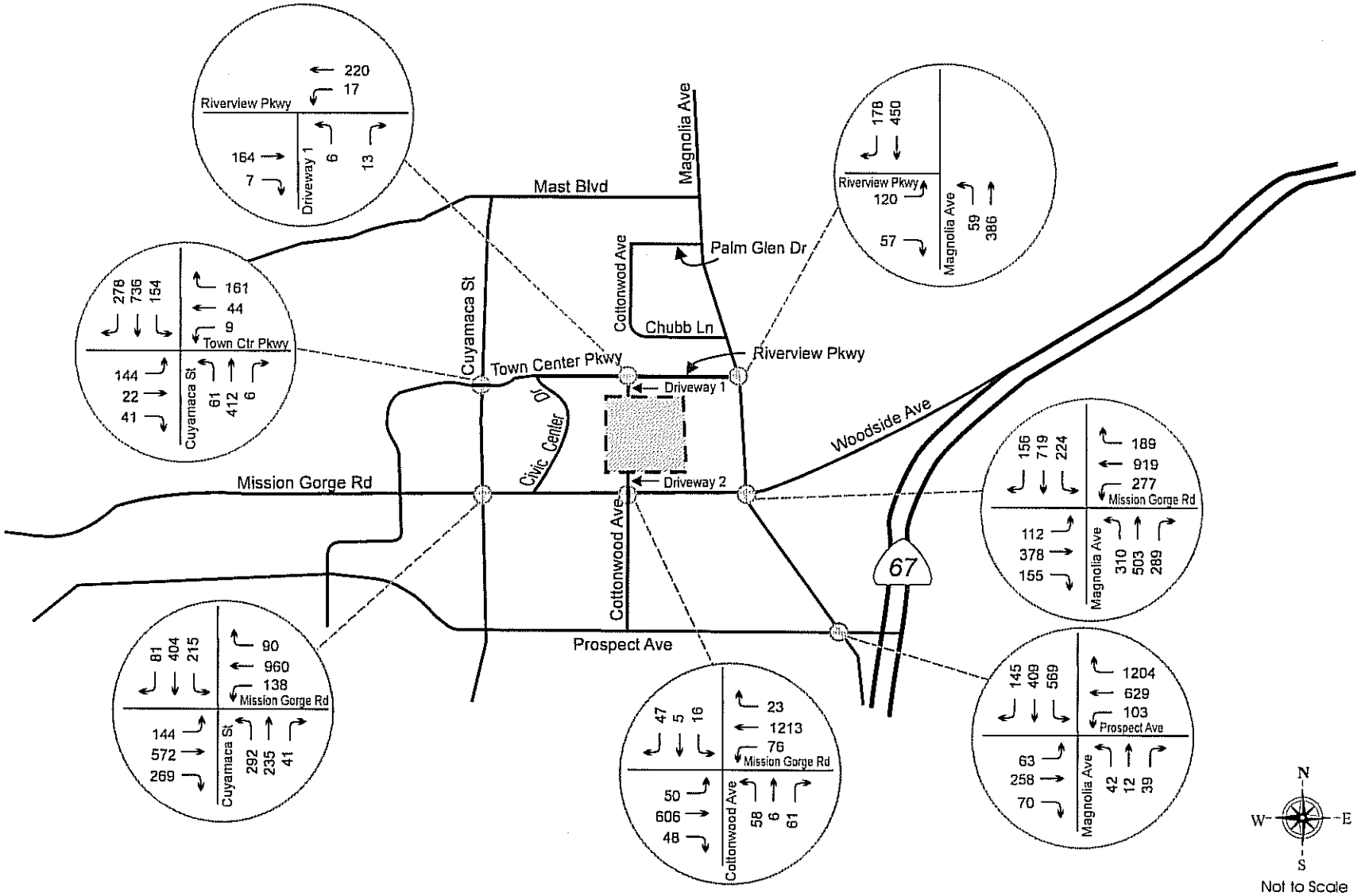
Existing Plus Cumulative Plus Project ADT

Figure 17

Legend :

Las Colinas Detention Facility

VRPA Technologies, Inc.



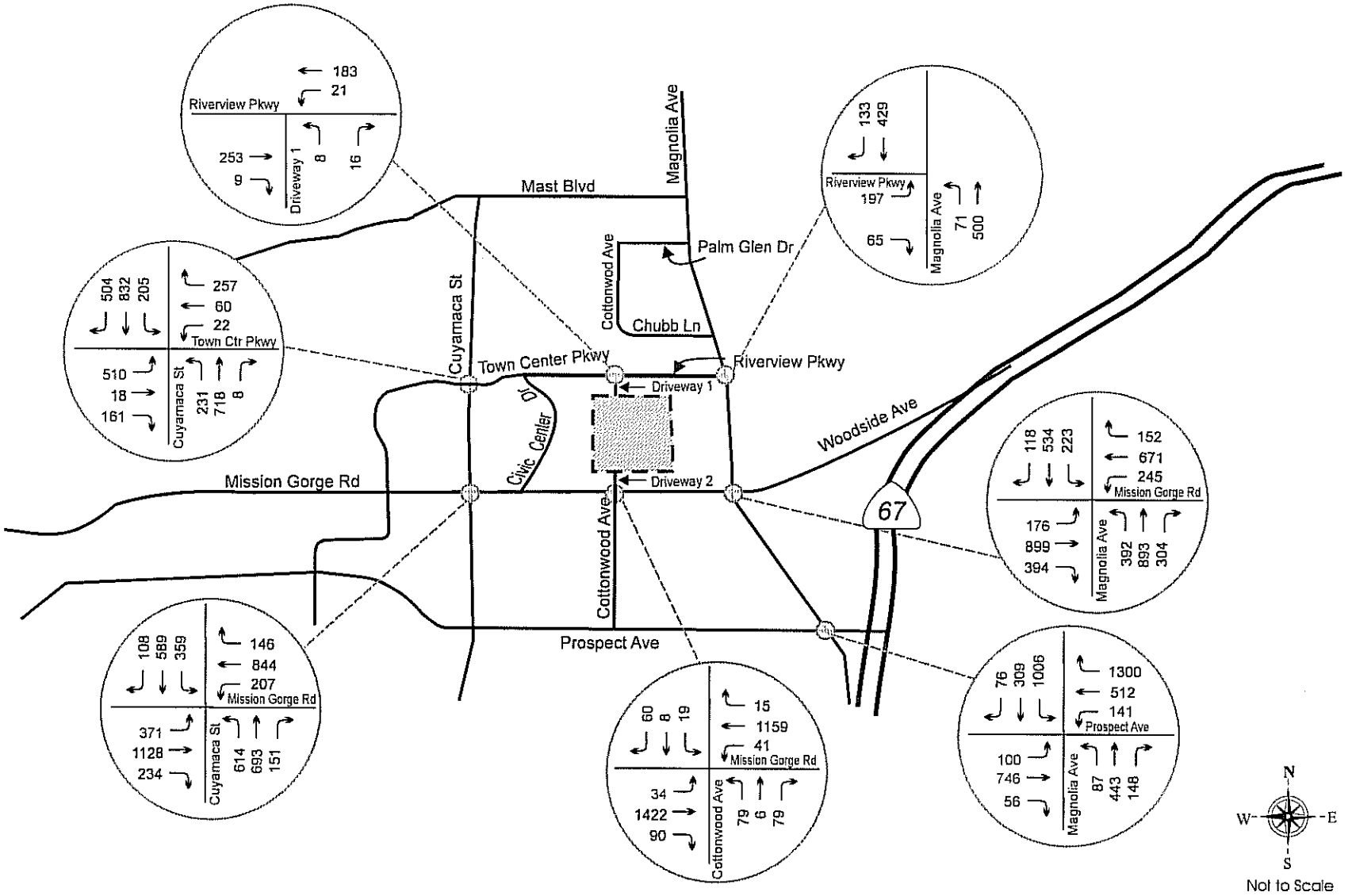
Existing Plus Cumulative Plus Project AM Peak Hour

Figure 18

Legend :

Las Colinas Detention Facility

VRPA Technologies, Inc.



Existing Plus Cumulative Plus Project PM Peak Hour

Figure 19

Legend :

Las Colinas Detention Facility

VRPA Technologies, Inc.

Table 5 shows the roadway characteristics based on the information provided in the City of Santee Circulation Element. The expected future lane geometry is shown in Figure 20. The traffic volumes for future with project (2030) conditions are shown in Figures 24, 25 and 26.

INTERSECTIONS

Under future with project (2030) conditions, the following intersections are expected to operate below LOS D:

1. Mission Gorge Road and Cuyamaca Street
2. Mission Gorge Road and Magnolia Avenue
3. Prospect Avenue and Magnolia Avenue

Since the proposed Las Colinas facility adds trips to the intersections already operating below LOS D, it can be concluded that the project causes cumulative significant impacts to the three intersections stated above in the future with project (2030) conditions.

ROAD SEGMENTS

Under future with project (2030) conditions, the following street segment is expected to operate at LOS E:

1. Magnolia Avenue between Mission Gorge Road and Riverview Parkway

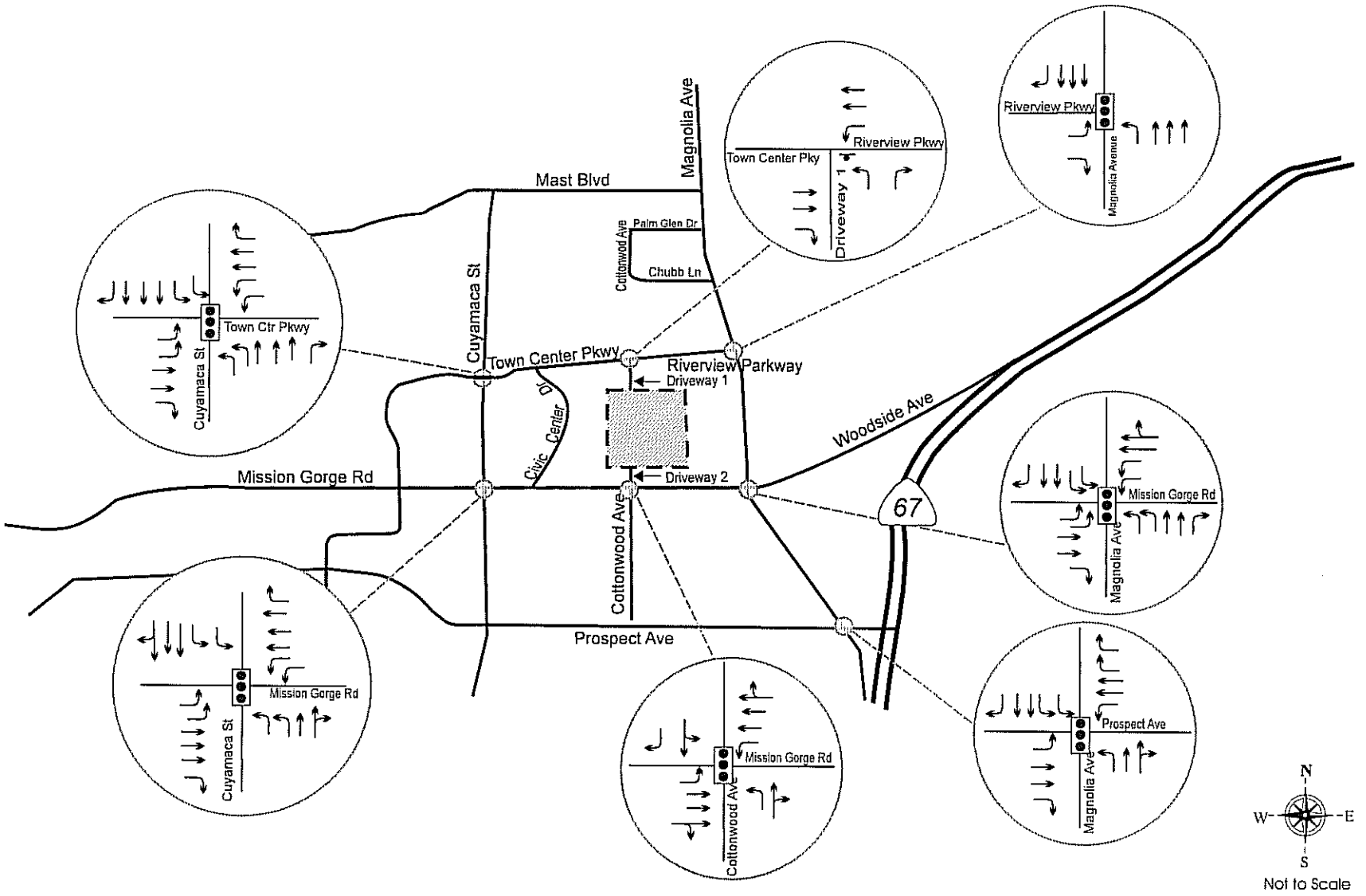
Since the proposed Las Colinas facility adds trips to the segment already operating at LOS E, it can be concluded that the project causes cumulative significant impacts to the segment stated above. Tables 6A and 7A show the capacity analysis results for the roadway segments and intersections for future with project (2030) conditions.

As per the County guidelines, if the total cumulative impacts are found to be significant, each project that contributes any trips must mitigate a share of the cumulative impacts.

Chapter 4 provides information on the mitigation measures needed to improve the impacted segments and intersections.

3.9 INTERSECTION SIGHT DISTANCE

A field review of all study area intersections indicates that there are no existing sight distance problems. It is expected that sight distance will be maintained by the City of Santee to urban standards and no future problems are anticipated with regard to intersection sight distance.



Future Lane Geometry

Figure 20

Legend :

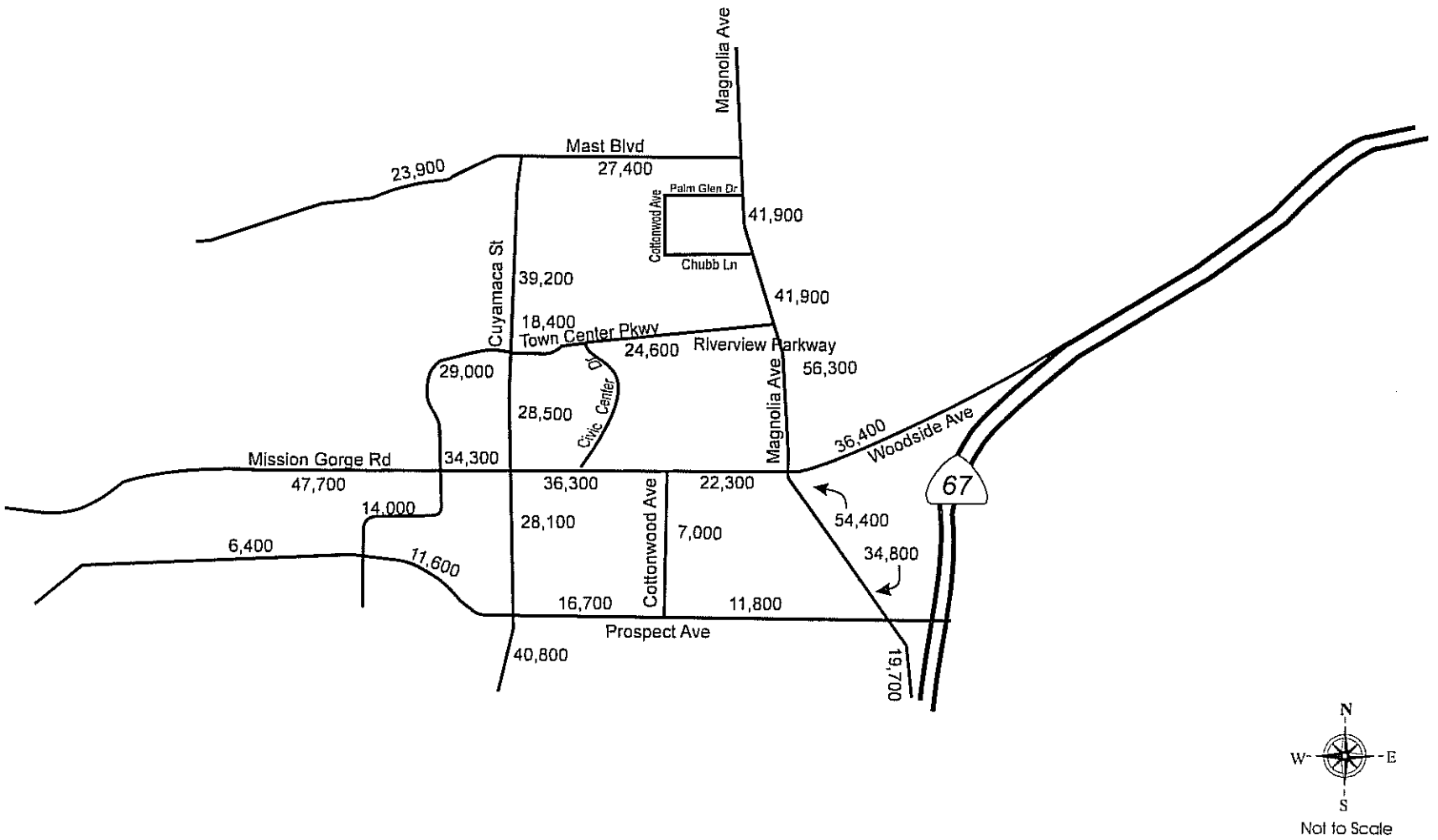
Las Colinas Detention Facility

Stop Sign

Signal

Direction of Travel

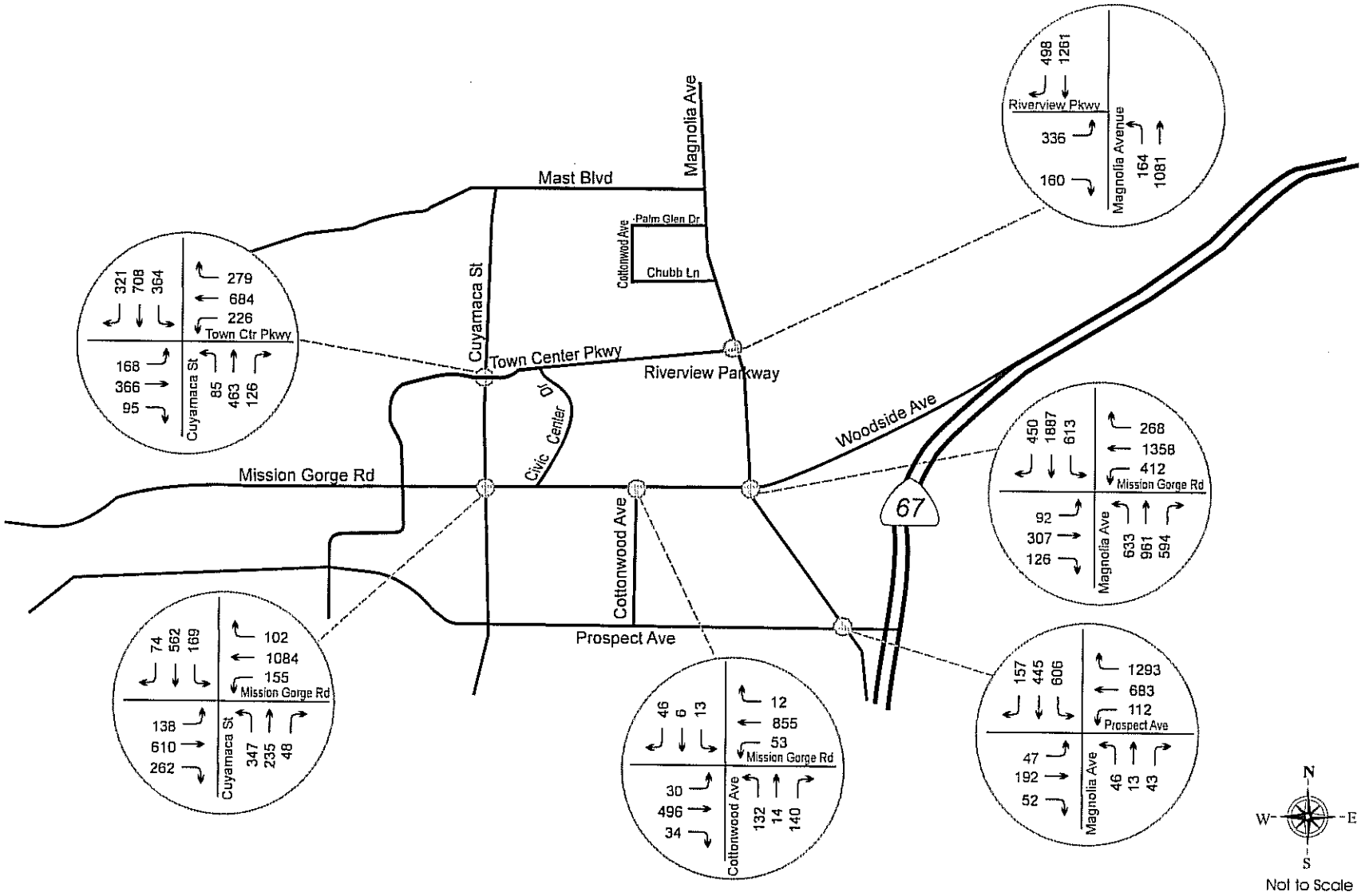
VRPA Technologies, Inc.



Future No Project ADT

Figure 21

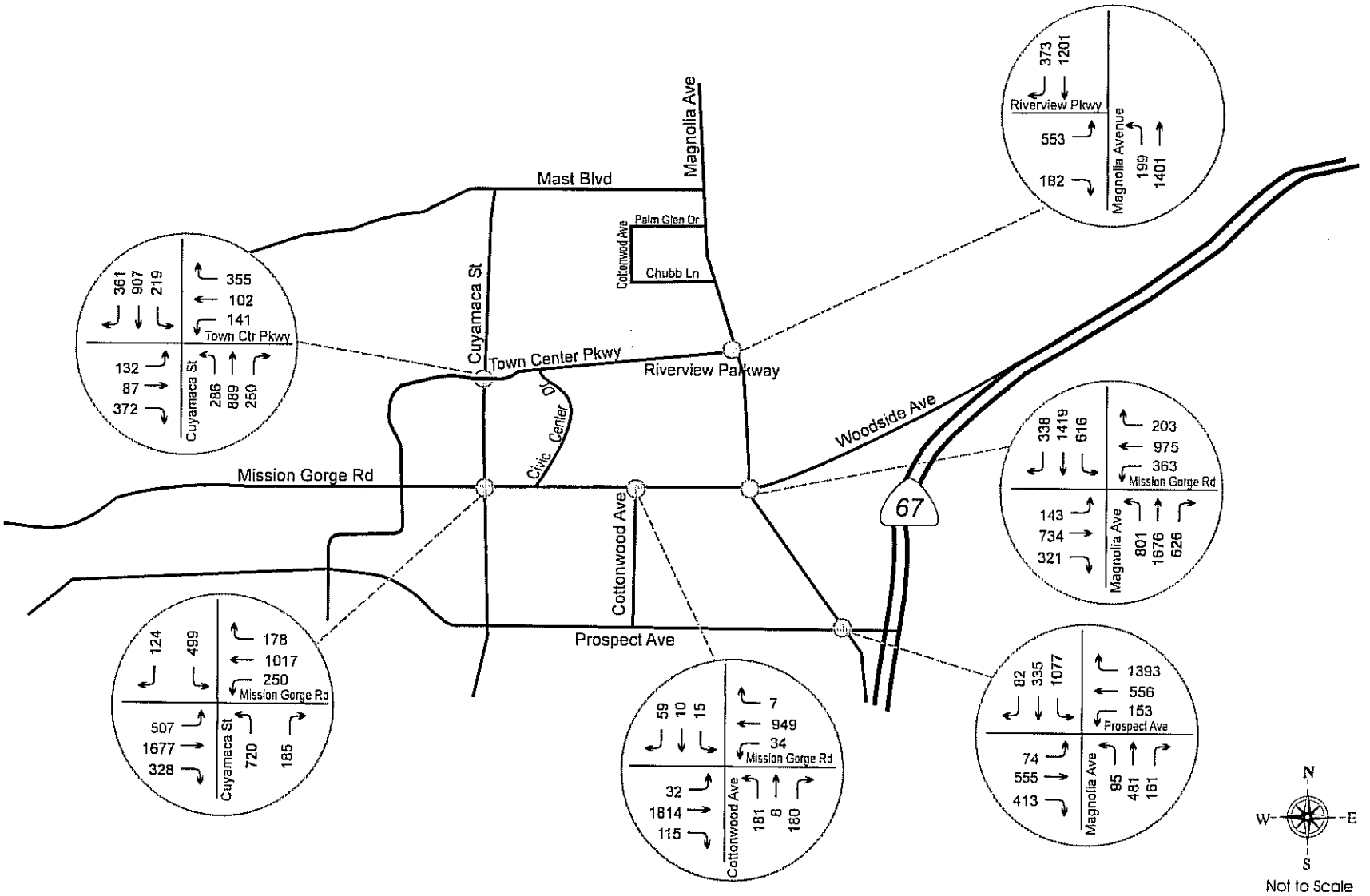
VRPA Technologies, Inc.



Future No Project AM Peak Hour

Figure 22

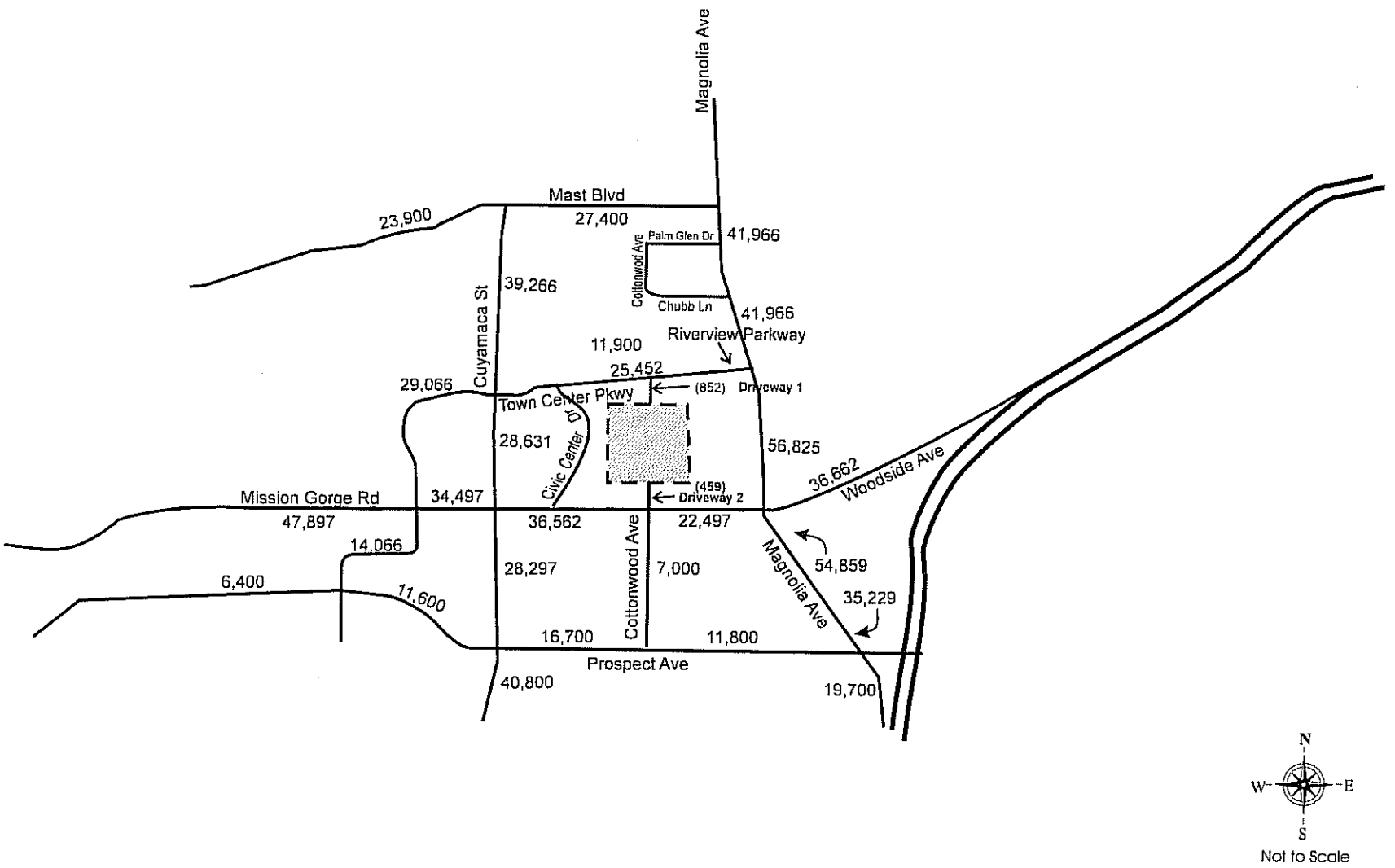
VRPA Technologies, Inc.



Future No Project PM Peak Hour

Figure 23

VRPA Technologies, Inc.



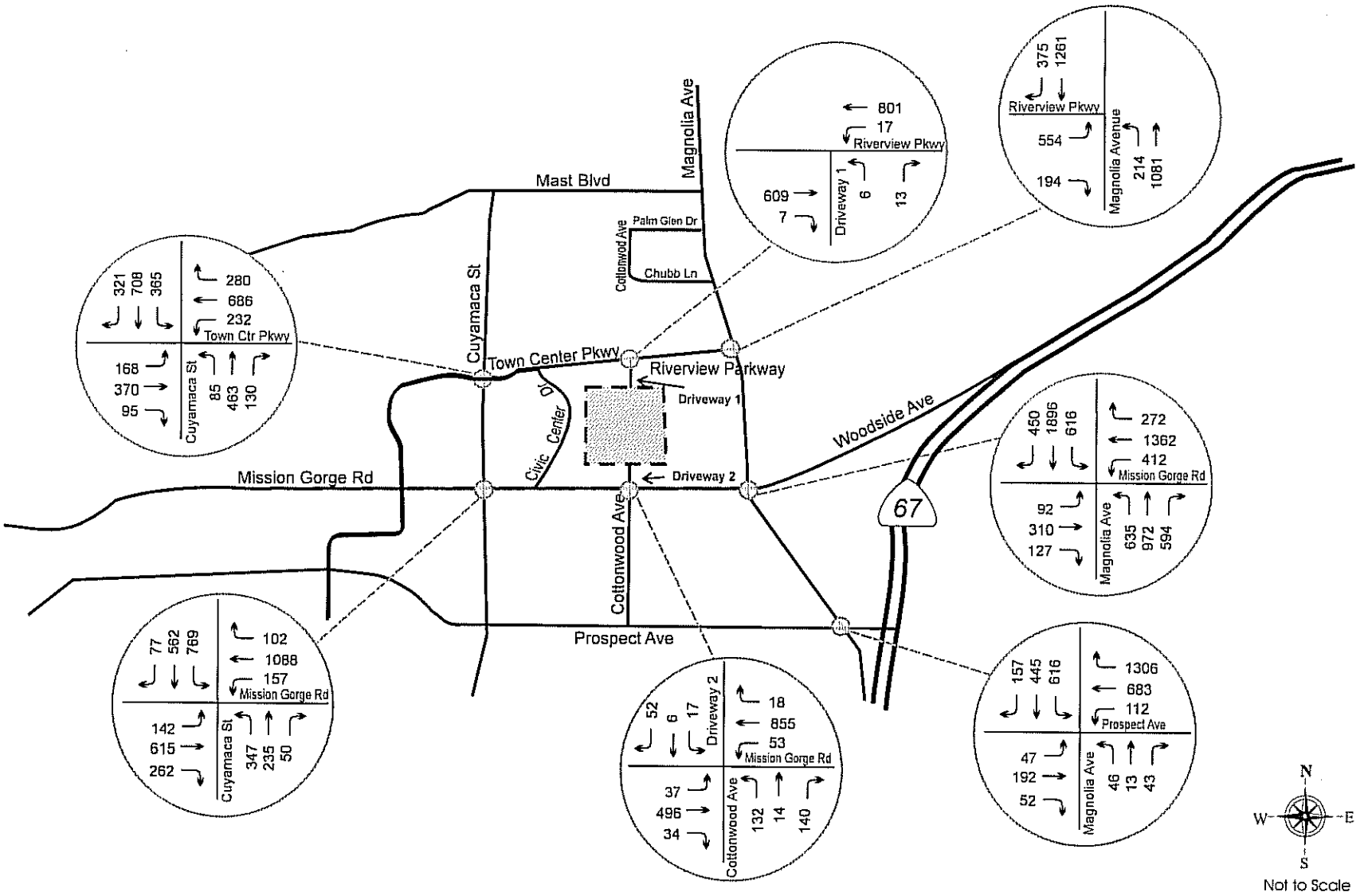
Future With Project ADT

Figure 24

Legend :

Las Colinas Detention Facility

VRPA Technologies, Inc.



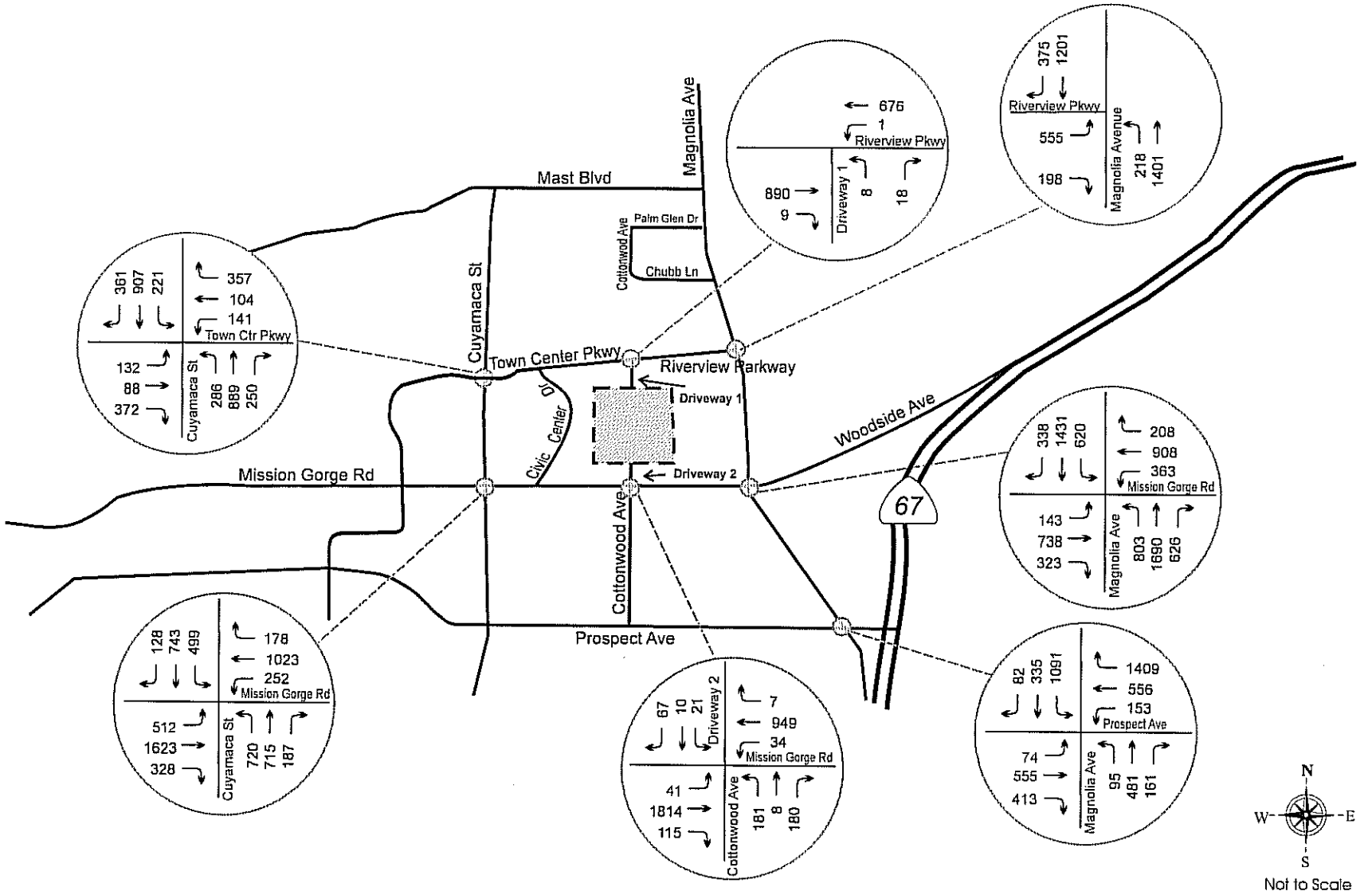
Future with Project AM Peak Hour

Figure 25

Legend :

Las Colinas Detention Facility

VRPA Technologies, Inc.



Future with Project PM Peak Hour

Figure 26

Legend :

Las Colinas Detention Facility

VRPA Technologies, Inc.

3.10 CONSTRUCTION TRAFFIC IMPACTS

Construction is expected to occur over a 36 month period. Construction traffic is expected to access the site from Cottonwood Avenue via Mission Gorge Road. Construction activities, on average, are anticipated to result in 50 roundtrip truck trips per day and 45 roundtrip vehicle trips per day. Construction assumptions also include the following:

- All construction workers would drive alone to the construction site. No substantial use of public transit is anticipated.
- All construction workers would assemble at the construction site (as opposed to assembling at an offsite location and shutting to the project site).
- Construction activities would peak in October 2010.
- A peak construction work force is estimated at 45 workers per day.
- All construction activity would take place during only one shift per day.
- All workers would arrive and leave at the beginning and end of the shift (i.e. two trips per employee per day).
- Approximately 50 construction material vehicles are expected per day.

Although the project would result in a temporary increase in traffic on local area roadways during construction, this short-term and limited construction-related traffic would not create a substantial impact on traffic volumes nor change traffic patterns in such a way as to result in unacceptable LOS (i.e. LOS D or worse) on local area roadways or intersections. This conclusion is based on the fact that construction traffic would be less than the traffic generated by the project upon opening and the project has been determined to have no direct impacts at the time it opens. Furthermore, as described in Section 1.2.1.6 of the EIR, the proposed project includes implementation of Traffic Control Plan to manage construction traffic and potential hazards.

3.11 CONGESTION MANAGEMENT PROGRAM

The Congestion Management Program (CMP) update is intended to directly link land use, transportation and air quality through Level of Service performance. The CMP requires an enhanced CEQA review for all large projects that are expected to generate either more than 2,400 ADT or more than 200 peak hour trips. Since the proposed project is not expected to generate more than 2,400 ADT or over 200 peak hour trips, the CMP analysis is not needed for the proposed detention facility.

3.12 SR 52 EXTENSION AND IMPACTS

CALTRANS has proposed the extension of SR 52 from SR 125 to SR 67. SR 52 extension is planned as a four-lane freeway in the City of Santee between SR 125 to SR 67. The extension would include new roadway, bridges and interchanges at Fanita Drive, Cuyamaca Street and Magnolia Avenue. Currently SR 52 ends at SR 125. The extension of SR 52 is expected to be completed and open to traffic in late 2010. This extension of SR 52 would carry approximately 42,000 ADT in 2011 and approximately 112,000 ADT in year 2030. The extension is expected to take around 30% of the ADT utilizing Mission Gorge Road and also reduce some of the heavy traffic burden now carried by adjacent roads. The extension of SR 52 is expected to be completed before the opening day of the proposed detention facility and the opening day conditions of the proposed project assumes the completion of SR 52. Appendix E provides information about the SR 52 extension plans.

4.0 IMPACT SUMMARY

4.1 IMPACT SUMMARY

The project does not cause direct impacts to the roadway segments or intersections in the . study area. The project causes cumulative significant impacts to the segment of Magnolia Avenue between Mission Gorge Road and Riverview Parkway in the future with project 2030 conditions. Table 6A shows the capacity analysis results for the roadway segments in the study area for all the scenarios Table 6B shows the summary of impacts on the roadway segments in the study area for all the scenarios.

The project causes cumulative significant impacts to the intersections of Mission Gorge Road / Cuyamaca Street and Prospect Avenue / Magnolia Avenue in the opening day conditions. Taking into account the overall growth between opening day and horizon year (2030) there is a proportional increase in the traffic volumes and this results in cumulative impacts at the two intersections of Mission Gorge Road / Cuyamaca Avenue and Prospect Avenue / Magnolia Avenue in the future with project (2030) conditions There are no cumulative impacts at the intersection of Mission Gorge Road / Magnolia Avenue in the opening day conditions but this intersection has cumulative impacts in the future with project (2030) conditions. Table 7A shows the capacity analysis results for all the intersections in the study area for all the scenarios. Table 7B shows the summary of impacts at the intersections for all the scenarios.

4.2 ROAD SEGMENTS

4.2.1 GUIDELINES FOR THE DETERMINATION OF SIGNIFICANCE

The County of San Diego guidelines for determination of significance of impacts for roadway segments state that the project would cause significant traffic impacts when:

- The project was expected to cause a roadway segment to fall below LOS D operating conditions.
- The project added a significant amount of traffic to a roadway segment expected to operate at LOS E or F.

This significance criteria is used to determine direct as well as cumulative impacts. For cumulative impacts, the guidelines state that by adding the proposed project trips to all other trips from a list of projects, the significance criteria stated above must be used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes any trips must mitigate a share of the cumulative impacts.

4.2.2 SIGNIFICANCE OF IMPACTS PRIOR TO MITIGATION

The project does not result in a direct significant impact to the study area roadway segments in the existing plus project conditions. The project does not result in cumulative impacts to the study area roadway segments in opening day conditions. All segments within the study area are expected to operate at LOS D or better in the existing plus project, existing plus cumulative and opening day conditions. However, overall growth and cumulative developments does result in impacts to the segment of Magnolia Avenue between future proposed Riverview Parkway and Mission Gorge Road in future no project (2030) conditions.

This segment is operating below LOS D in the future no project conditions.

Table 5 shows the classification of the study area roadway segments based on the City of Santee Circulation Element.

Since the proposed Las Colinas facility adds trips to the segment of Magnolia Avenue between Mission Gorge Road and future proposed Riverview Parkway which is already operating below LOS D, the project becomes a part of the cumulative impacts occurring at this segment in the future with project (2030) conditions. Therefore it can be concluded that the project causes cumulative significant impacts to the segment of Magnolia Avenue between Mission Gorge Road and Riverview Parkway. Table 6A shows the capacity analysis results of the segments in the study area for all the scenarios. Table 6B shows the impact summary for all the scenarios for the street segments in the study area. Appendix F provides information about the County of San Diego table for determining roadway segment capacity analysis.

4.2.3 CONCLUSIONS

The project does not cause direct impacts to the roadway segments within the study area. The project causes significant cumulative impacts to the segment of Magnolia Avenue between Mission Gorge Road and Riverview Parkway in the future with project 2030 conditions.

TABLE 5 : STUDY AREA ROADWAY SEGMENTS CHARACTERISTICS

ROADWAY SEGMENT	Existing Classification	Existing No of Lanes	Future 2020 Classification *	Future No of Lanes *
Mission Gorge Road, Civic Center Drive - Cuymaca Street	Prime Arterial	Six	Prime Arterial	Six
Mission Gorge Road , Cuyamaca Street - Cottonwood Avenue	Prime Arterial	Six	Prime Arterial	Six
Mission Gorge Road , Cottonwood Avenue - Magnolia Avenue	Prime Arterial	Six	Prime Arterial	Six
Town Center Parkway , Mission Gorge Road - Cuyamaca Street	Prime Arterial	Four	Parkway	Four
Riverview Parkway**, Civic Center Drive - Magnolia Avenue	-	-	Parkway	Four
Magnolia Avenue , Mission Gorge Road - Riverview Parkway	Major Arterial	Four	Major Arterial	Four
Magnolia Avenue, Riverview Parkway - Mast Boulevard	Major Arterial	Four	Major Arterial	Four
Magnolia Avenue, Mission Gorge Road - Prospect Avenue	Prime Arterial	Six	Prime Arterial	Six
Woodside Avenue, Magnolia Avenue - SR 67	Major Arterial	Four	Major Arterial	Four

** Riverview Parkway is a planned roadway in circulation element. Refer to Appendix F

* Circulation Element in City of Santee General Plan 2020 is provided in Appendix F

TABLE 6A : STUDY AREA ROADWAY SEGMENTS CAPACITY ANALYSIS

Segment	Existing			Existing + Project			Existing + Cumulative			Existing + Cumulative + Project (Opening Day)			Future No Project 2030			Future + Project 2030		
	ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS
Mission Gorge Road, Town Center Pkwy - Cuyamaca St	30,300	0.81	B	30,500	0.82	B	31,900	0.86	B	32,000	0.86	B	34,300	0.92	B	34,500	0.93	B
Mission Gorge Road, Cuyamaca St - Cottonwood Ave	26,900	0.72	B	27,200	0.73	B	28,300	0.76	B	28,600	0.77	B	36,300	0.98	B	36,600	0.98	B
Mission Gorge Road, Cottonwood Ave - Magnolia Ave	25,900	0.70	B	26,000	0.70	B	27,200	0.73	B	27,400	0.74	B	22,300	0.60	B	22,500	0.60	B
Town Center Pkwy, Mission Gorge Road - Cuyamaca St	11,900	0.80	A	12,000	0.81	A	12,500	0.84	A	12,600	0.85	A	29,000	0.97	C	29,100	0.98	C
Riverview Pkwy**, Civic Center Drive - Magnolia Ave	-	-	-	-	-	-	-	-	-	15,000	0.60	B	24,600	0.99	B	25,500	0.66	C
Magnolia Ave, Mission Gorge - Riverview Parkway**	18,600	0.75	B	19,200	0.77	B	19,500	0.78	B	20,100	0.81	B	56,300	0.98	E++	56,800	0.99	E++
Magnolia Ave, Riverview Parkway **- Mast Boulevard	18,600	0.75	B	19,200	0.77	B	19,500	0.78	B	20,100	0.81	B	41,900	0.83	D	42,000	0.94	B
Magnolia Ave, Mission Gorge - Prospect Avenue	25,100	0.67	B	25,600	0.69	B	26,400	0.71	B	26,900	0.72	B	54,400	0.95	D	54,900	0.94	D
Woodside Avenue, Magnolia Avenue - SR 67	23,300	0.94	B	23,600	0.95	B	24,500	0.99	B	24,800	0.83	C	38,400	0.95	C	38,700	0.95	D

** Riverview Parkway is a planned roadway in circulation element.

++ Cumulative Impacts

TABLE 6B : STUDY AREA ROAD SEGMENTS IMPACT SUMMARY	
STUDY SCENARIO	**IMPACT SUMMMARY**
EXISTING	NO IMPACTS
EXISTING PLUS PROJECT	NO DIRECT SIGNIFICANT IMPACTS
EXISTING PLUS CUMULATIVE	NO CUMULATIVE IMPACTS
EXISTING PLUS CUMULATIVE PLUS PROJECT (OPENING DAY)	NO CUMULATIVE SIGNIFICANT IMPACTS
FUTURE NO PROJECT (2030)	CUMULATIVE IMPACT AT SEGMENT OF MAGNOLIA AVENUE BETWEEN MISSION GORGE ROAD - RIVERVIEW PARKWAY
FUTURE PLUS PROJECT (2030)	CUMULATIVE SIGNIFICANT IMPACT AT SEGMENT OF MAGNOLIA AVENUE BETWEEN MISSION GORGE ROAD - RIVERVIEW PARKWAY

4.3 INTERSECTIONS

4.3.1 GUIDELINES FOR THE DETERMINATION OF SIGNIFICANCE

The County of San Diego guidelines for determination of significance of impacts for intersections state that the project would cause significant traffic impacts when:

- The project was expected to cause an intersection to fall below LOS D operating conditions.
- The additional traffic generated by the proposed project will significantly increase congestion at an intersection currently operating at LOS E or F.

This significance criterion is used to determine direct as well as cumulative impacts. For cumulative impacts, the guidelines state that by adding the proposed project trips to all other trips from a list of projects, the significance criteria stated above must be used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes any trips must mitigate a share of the cumulative impacts.

4.3.2 SIGNIFICANCE OF IMPACTS PRIOR TO MITIGATION

The intersections of Mission Gorge Road / Cuyamaca Street and Prospect Avenue / Magnolia Avenue operate below LOS D in the existing plus cumulative conditions. On opening day, the project adds trips to these intersections that operate below LOS D; the project becomes a part of the cumulative impacts at these intersections. Therefore, it can be concluded that the project causes cumulative significant impacts to the intersections of Mission Gorge Road / Cuyamaca Street and Prospect Avenue / Magnolia Avenue in the opening day scenario.

Overall growth and cumulative developments are expected to cause the intersections of Mission Gorge Road / Cuyamaca Street, Mission Gorge Road / Magnolia Avenue and Prospect Avenue / Magnolia Avenue to operate below LOS D in the future no project (2030) conditions. Since the proposed Las Colinas facility adds trips to the three intersections stated above that are already operating below LOS D, the project becomes a part of the cumulative impacts occurring at the three intersections. Therefore, it can be concluded that the project causes cumulative significant impacts to the intersections of Mission Gorge Road / Magnolia Avenue , Mission Gorge Road / Cuyamaca Street and Prospect Avenue / Magnolia Avenue in future with project (2030) conditions.

Table 7A shows the capacity analysis results for the intersections for all the scenarios. Table 7B shows the impact summary for all the scenarios. Appendix G shows the capacity analysis calculations. Figure 20 shows the expected future lane geometry based on the City of Santee Circulation Element. Figure 27 shows the expected future lane geometry of the project access driveways.

4.3.3 MITIGATION MEASURES

The project could contribute its fair share to the estimated costs for improving the three intersections provided in the City of Santee Master Plan.

The City of Santee has adopted the "Traffic Improvement Master Plan" (Master Plan) prepared by Meyer, Mohaddes Associates (January 2007). The Master Plan ranks congested intersections (with 1 being the most congested and in need of improvement) and identifies Mission Gorge Road / Magnolia Avenue as the number one congested intersection, Mission Gorge Road / Cuyamaca Street as the number two congested intersection and Prospect Avenue / Magnolia Avenue as the number seven congested intersection in the City of Santee.

The Master Plan suggests potential short terms enhancements to improve the three intersections and also provides cost estimates likely to be incurred to improve the three impacted intersections. This information provided in the City of Santee Master Plan is as follows:

- For the intersection of Mission Gorge Road / Magnolia Avenue, the Master Plan states that on the basis of the field investigations conducted, there is no room for additional capacity at the intersection of Magnolia Avenue / Mission Gorge Road in any direction. The Master Plan recommends relocating westbound advanced loop detectors to the Caltrans suggested minimum setback distance of 285 feet as minor modification. As a part of the City of Santee future capital improvement program (CIP), the cost of improvement to the intersection of Magnolia Avenue / Mission Gorge Road is expected to be $ 3,309,200.

- For the intersection of Mission Gorge Road / Cuyamaca Street, the Master Plan recommends upgrading traffic signal equipment to provide better trolley and vehicle traffic flow through Cuyamaca Street corridor as a mid-range and long term improvement for the intersection. The Master Plan identifies an additional northbound right turn lane as long term capacity enhancement to improve the LOS at the intersection of Mission Gorge Road / Cuyamaca Street. As a part of the City of Santee future CIP, the cost of improvements to the intersection of Mission Gorge Road / Cuyamaca Street is expected to be $ 382,000.

TABLE 7A : STUDY AREA INTERSECTION CAPACITY ANALYSIS (HCM)

Intersection	Existing		Existing + Project		Existing + Cumulative		Existing + Cumulative + Project (Opening Day)		Year 2030 Future No Project		Year 2030 Future + Project	
	Avg. Delay AM/PM (Sec)	LOS AM/PM	Avg. Delay AM/PM (Sec)	LOS AM/PM	Avg. Delay AM/PM (Sec)	LOS AM/PM	Avg. Delay AM/PM (Sec)	LOS AM/PM	Avg. Delay AM/PM (Sec)	LOS AM/PM	Avg. Delay AM/PM (Sec)	LOS AM/PM
Cuyamaca Street / Town Center Parkway	34.6/37.9	C/D	34.6/38.0	C/D	35.3/42.4	D/D	35.3/42.8	D/D	36.0/52.6	D/D	37.2/37.4	D/D
Mission Gorge Road / Cuyamaca Street	34.8/46.3	C/D	34.9/44.6	C/D	36.1/>80.0	D/F	36.1/>80.0	D/F++	43.8/>80.0	D/F	44.3/>80.0	D/F++
Mission Gorge Road / Cottonwood Avenue	16.0/17.5	B/B	16.3/17.8	B/B	16.2/17.8	B/B	22.5/23.4	C/C	25.3/35.6	C/D	27.0/49.0	C/D
Mission Gorge Road / Magnolia Avenue	46.0/48.1	D/D	46.6/48.8	D/D	51.0/53.9	D/D	51.7/54.5	D/D	>80.0/>80.0	F/F	>80.0/>80.0	F/F++
Prospect Avenue / Magnolia Avenue	36.5/59.9	D/E	44.6/56.3	D/E	50.1/>80.0	D/F	53.7/80.0	D/F++	49.6/>80.0	D/F	48.7/>80.0	D/F++
Project Driveway 1 & Riverview Parkway **	-	-	-	-	-	-	9.3/9.7	A/A	-	-	13.8/16.3	B/C
Magnolia Avenue / Riverview Parkway **	-	-	-	-	-	-	18.9/21.1	B/C	33.1/35.1	C/D	44.9/42.3	D/D

** Intersections exist only in the future scenario

++ Cumulative Impacts

TABLE 7B : STUDY AREA INTERSECTIONS IMPACT SUMMARY	
STUDY SCENARIO	**IMPACT SUMMMARY**
EXISTING	NO IMPACTS
EXISTING PLUS PROJECT	NO DIRECT IMPACTS
EXISTING PLUS CUMULATIVE	CUMULATIVE IMPACTS AT INTERSECTION OF PROSPECT AVE / MAGNOLIA AVE AND MISSION GORGE ROAD / CUYAMACA ST
EXISTING PLUS CUMULATIVE PLUS PROJECT (OPENING DAY)	CUMULATIVE SIGNIFICANT IMPACTS AT INTERSECTION OF PROSPECT AVE / MAGNOLIA AVE AND MISSION GORGE ROAD / CUYAMACA ST
FUTURE NO PROJECT (2030)	CUMULATIVE IMPACTS AT INTERSECTION OF PROSPECT AVE / MAGNOLIA AVE ,MISSION GORGE ROAD / CUYAMACA ST AND MISSION GORGE ROAD / MAGNOLIA AVENUE
FUTURE PLUS PROJECT (2030)	CUMULATIVE SIGNIFICANT IMPACTS AT INTERSECTION OF PROSPECT AVE / MAGNOLIA AVE ,MISSION GORGE ROAD / CUYAMACA ST AND MISSION GORGE ROAD / MAGNOLIA AVENUE

- For the intersection of Prospect Avenue / Magnolia Avenue, the Master Plan recommends that the existing controller should be changed to a Caltrans compliant controller for better communication with Caltrans signal and for a smoother traffic flow at the intersection. As a part of the City of Santee future CIP, the cost of improvements to the intersection of Prospect Avenue / Magnolia Avenue is expected to be $ 338,000.

- As a part of the City of Santee future CIP, the cost of widening the segment of Magnolia Avenue from Mission Gorge Road – Chubb lane is expected to be $ 3,395,300.

The calculation methodology used to determine the fair share of the project's cumulative impacts out of the overall cumulative impacts at the impacted segment and three intersections is given below:

% of project traffic = Traffic generated by the project only / (Future plus project minus Existing traffic)

Using the above formula, the ADT component of the project of the total cumulative impacts for the segment of Magnolia Avenue between Mission Gorge Road and future proposed Riverview Parkway is 1.37%.

Using the above formula, the ADT, AM and PM component of the project of the total cumulative impacts at the intersection of Mission Gorge Road / Magnolia Avenue is 0.24 % in the ADT, 0.52 % in the AM peak hour and 0.19 % in the PM peak hour.

Using the above formula, the ADT, AM and PM component of the project of the total cumulative impacts at the intersection of Mission Gorge Road / Cuyamaca Street is 2.90 % in the ADT, 2.90 % in the AM peak hour and 1.32 % in the PM peak hour.

Using the above formula, the ADT, AM and PM component of the project of the total cumulative impacts at the intersection of Prospect Avenue / Magnolia Avenue is 2.40 % in the ADT, 2.77 % in the AM peak hour and 3.20 % in the PM peak hour.

The fair share costs for mitigation for the project's direct impacts as well as cumulative impacts to the three impacted intersections and one roadway segment can be calculated as follows:

- Fair Share cost for mitigating project's cumulative impacts at intersection of Prospect Avenue / Magnolia Avenue = ADT fair share percentage of the project at the intersection * Estimated Costs for improving the intersection provided in the City of Santee master plan = (2.40% * 338000) = $ 8,112.
- Fair Share cost for mitigating project's cumulative impacts at intersection of Mission Gorge Road / Magnolia Avenue = ADT fair share percentage of the project at the intersection * Estimated Costs for improving the intersection provided in the City of Santee master plan = (0.24 % * 3309200) = $ 7,942
- Fair Share cost for mitigating project's cumulative impacts at intersection of Mission Gorge Road / Cuyamaca Street = ADT fair share percentage of the project at the intersection * Estimated Costs for improving the intersection provided in the City of Santee master plan = (2.90 % * 382000) = $ 11,078
- Fair Share cost for mitigating project's cumulative impacts at segment of Magnolia Avenue between Mission Gorge Road – Riverview Parkway = ADT fair share percentage of the project at the intersection * Estimated Costs for widening the Magnolia Avenue segment from Mission Gorge Road – Chubb lane provided in the City of Santee master plan = (1.37 % * 3395300) = $ 46,515

Table 8 also summarizes the information of the fair share costs mentioned in the discussion above.

The County shall pay its fair share portion of the costs for the improvements as provided in the City of Santee Master Plan and future CIP program as mitigation for the project's impacts. However, since the County does not have the ability to implement the improvements it cannot ensure that the mitigation will be in place prior to the realization of the project's impact and the impact can be considered to be significant and not mitigated.

Appendix H includes the information from the City of Santee Transportation Improvement Master Plan.

4.3.4 CONCLUSIONS

The proposed Las Colinas Detention Facility will have its main access off the Riverview Parkway. Future Riverview Parkway will be built from the LCDF project's western boundary map to Magnolia Avenue according to the Riverview Office Park Tentative Parcel Map (TP 2005-04, recorded December 21, 2006) and will be extended as a part of the Santee Office Park project approved by the City of Santee.

Riverview Parkway is expected to be completed before the opening day of the Las Colinas Detention Facility. Opening day scenario for the Las Colinas Detention Facility assumes the extension of Riverview Parkway. Riverview Parkway is also shown as a planned roadway in the City of Santee Circulation Element for horizon year 2020.

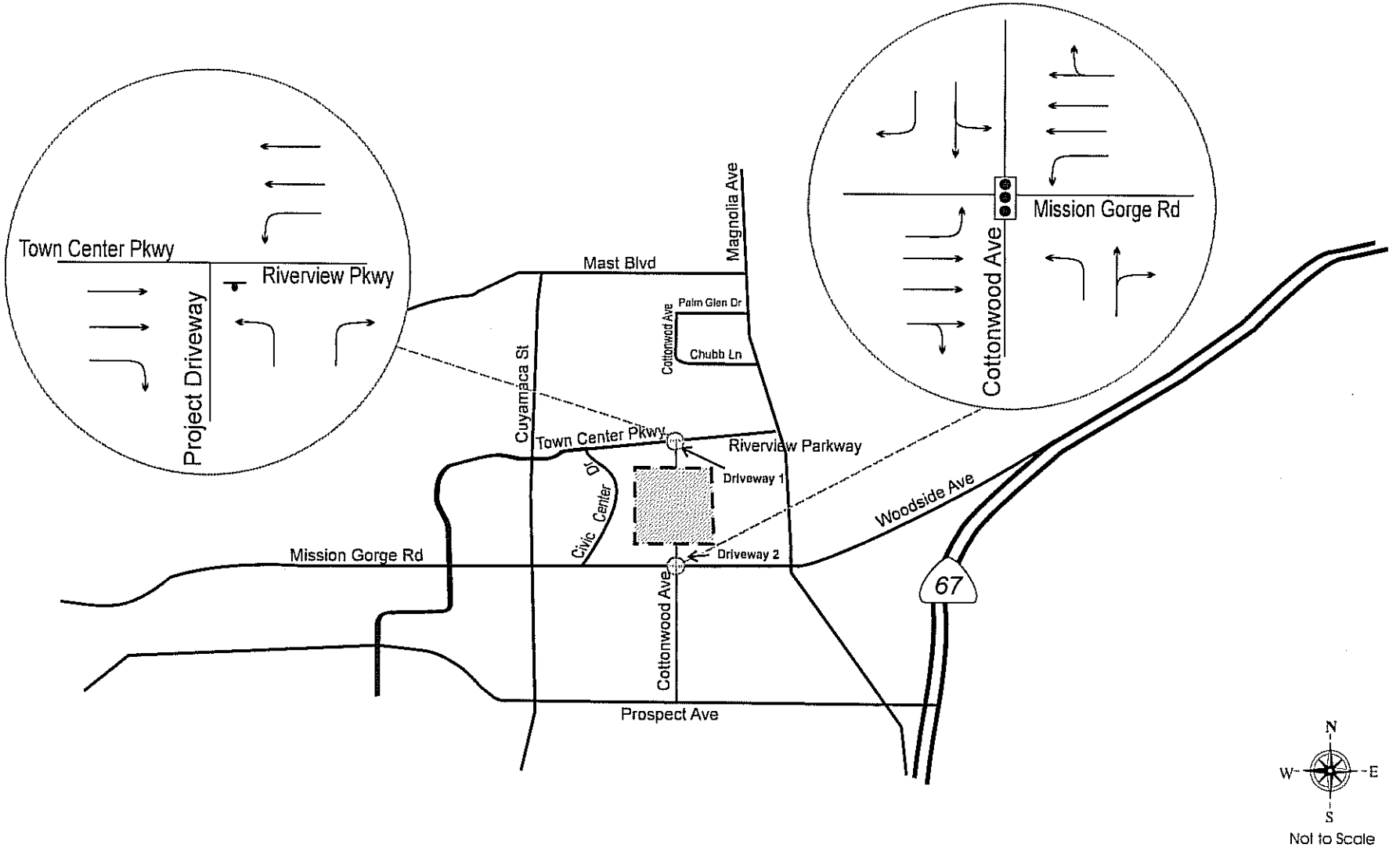
The project does not cause direct significant impacts to the roadway segments and intersections in the study area.

The project causes cumulative significant impacts to the segment of Magnolia Avenue between Mission Gorge Road and Riverview Parkway in the future with project (2030) conditions.

The project causes cumulative significant impacts to the intersection of Mission Gorge Road / Cuyamaca Street and Prospect Avenue / Magnolia Avenue in the opening day conditions. The project causes cumulative significant impacts to intersections of Mission Gorge Road / Cuyamaca Street, Mission Gorge Road / Magnolia Avenue and Prospect Avenue / Magnolia Avenue in the future with project (2030) conditions.

The project could contribute its fair share to the estimated costs for improving the three intersections and one roadway segment impacted by the proposed project at a cumulative level as provided in the City of Santee's Transportation Improvement Master Plan. However, since the County does not have the ability to implement the improvements and it cannot ensure that the mitigation will be in place prior to realization of the project's impact and therefore the impact is considered to be significant and not fully mitigated.

TABLE 8 : FAIR SHARE COST INFORMATION			
IMPACTED INTERSECTIONS	FAIR SHARE ADT % FOR CUMULATIVE IMPACTS	ESTIMATED IMPROVEMENTS COSTS	FAIR SHARE COSTS FOR CUMULATIVE IMPACT MITIGATION
PROSPECT AVENUE / MAGNOLIA AVENUE	2.40%	$338,000	$8,112
MISSION GORGE ROAD / MAGNOLIA AVENUE	0.24%	$3,309,200	$7,942
MISSION GORGE ROAD / CUYAMACA STREET	2.90%	$382,000	$11,078
IMPACTED SEGMENT			
MAGNOLIA AVENUE, MISSION GORGE ROAD - RIVERVIEW PARKWAY	1.37%	$3,395,300	$46,516



Future Project Access Driveway Lane Geometry

Figure 27

Legend :

Stop Sign

Signal

Las Colinas Detention Facility

Direction of Travel

VRPA Technologies, Inc.

5.0 SUMMARY OF IMPACTS AND MITIGATION

ROAD SEGMENTS:

The project does not cause direct impacts to the segments within the study area. The project causes significant cumulative impacts to the segment of Magnolia Avenue between Mission Gorge Road and Riverview Parkway in the future with project 2030 conditions.

INTERSECTIONS:

The project does not cause direct significant impacts to the intersections within the study area. The project causes cumulative significant impacts to the intersection of Cuyamaca Street / Mission Gorge Road and Prospect Avenue / Magnolia Avenue in the opening day conditions. The project causes cumulative significant impacts to intersections of Cuyamaca Street / Mission Gorge Road, Magnolia Avenue / Mission Gorge Road and Magnolia Avenue / Prospect Avenue in the future with project (2030) conditions.

MITIGATION:

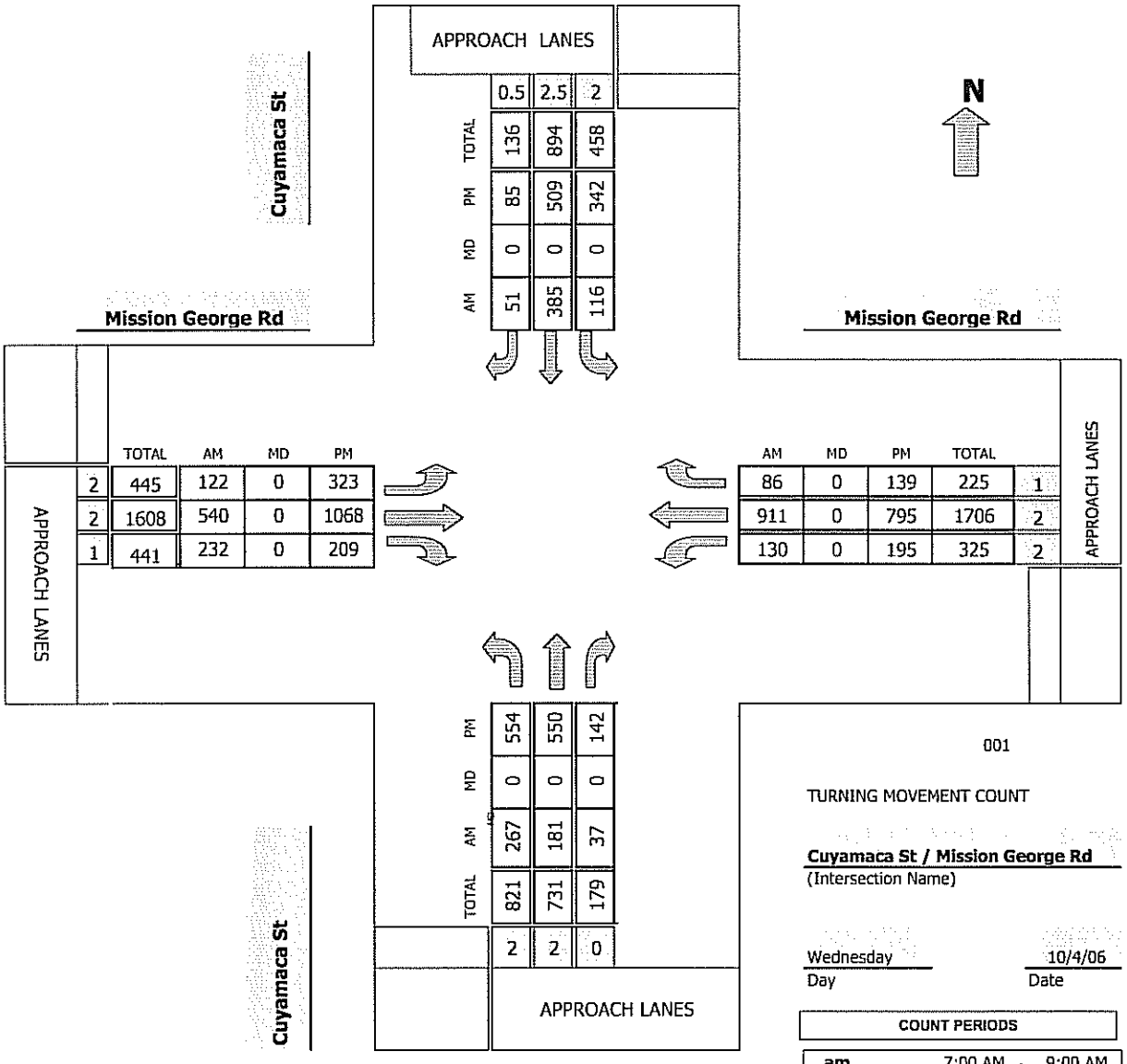
The project in discussion with the City of Santee can contribute its fair share costs to the different improvements identified in the City of Santee Transportation Improvement Master plan for intersections and segments cumulatively impacted by the project. However, since the County does not have the ability to implement the improvements, it cannot ensure that the mitigation will be in place prior to realization of the project's impact and the impact is considered to be significant and not mitigated.

APPENDIX A

Traffic Count Data

TMC Summary of Cuyamaca St/Mission George Rd

Project #: 06-4227-001



001

TURNING MOVEMENT COUNT

Cuyamaca St / Mission George Rd
(Intersection Name)

Wednesday — Day

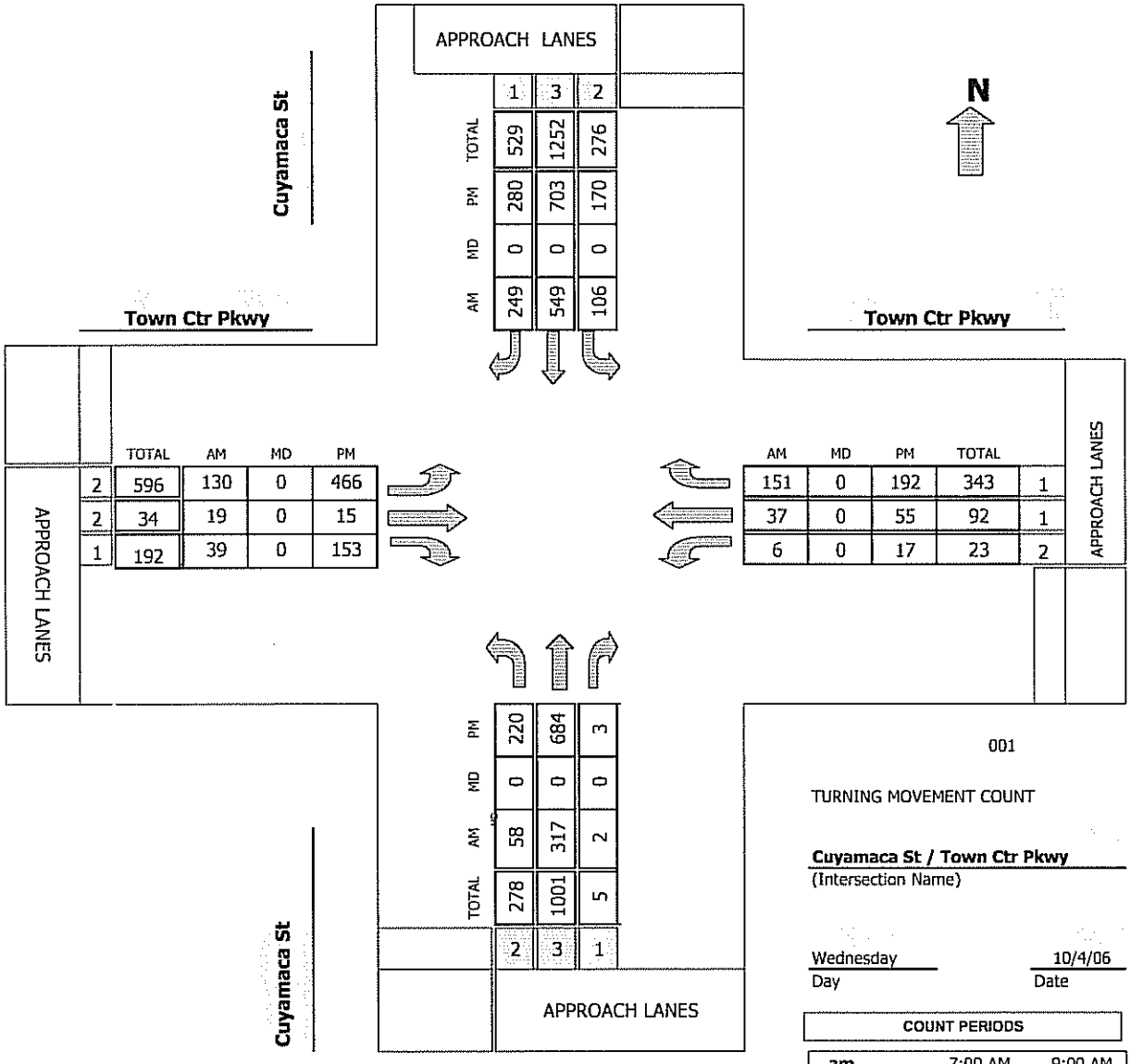
10/4/06 — Date

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	11:00 AM -	1:00 PM
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	715 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	430 PM

TMC Summary of Cuyamaca St/Town Ctr Pkwy

Project #: 06-4227-002



001

TURNING MOVEMENT COUNT

Cuyamaca St / Town Ctr Pkwy
(Intersection Name)

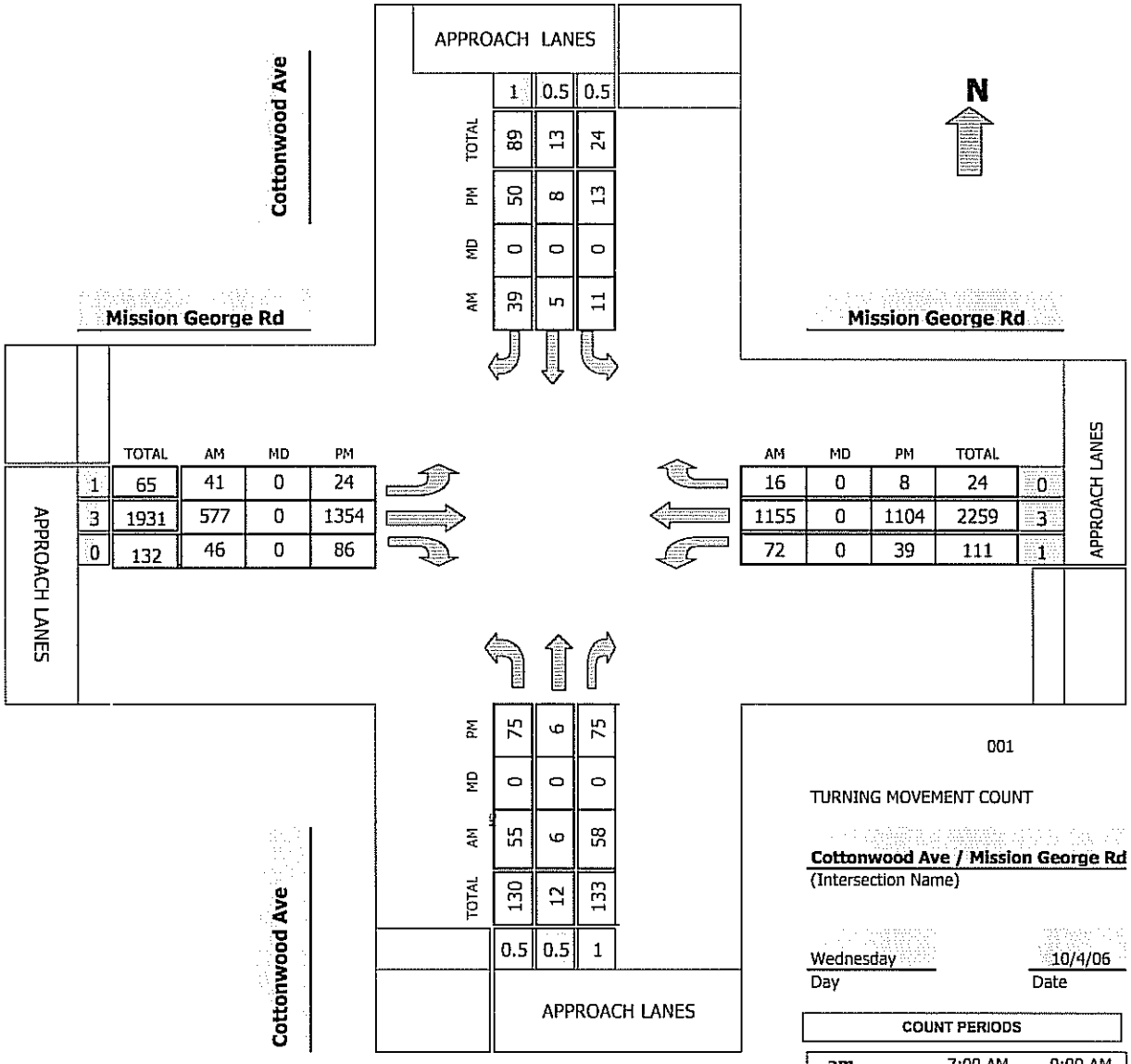
Wednesday — Day
10/4/06 — Date

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	11:00 AM -	1:00 PM
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	730 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	445 PM

TMC Summary of Cottonwood Ave/Mission George Rd

Project #: 06-4227-003



001

TURNING MOVEMENT COUNT

Cottonwood Ave / Mission George Rd
(Intersection Name)

Wednesday — Day

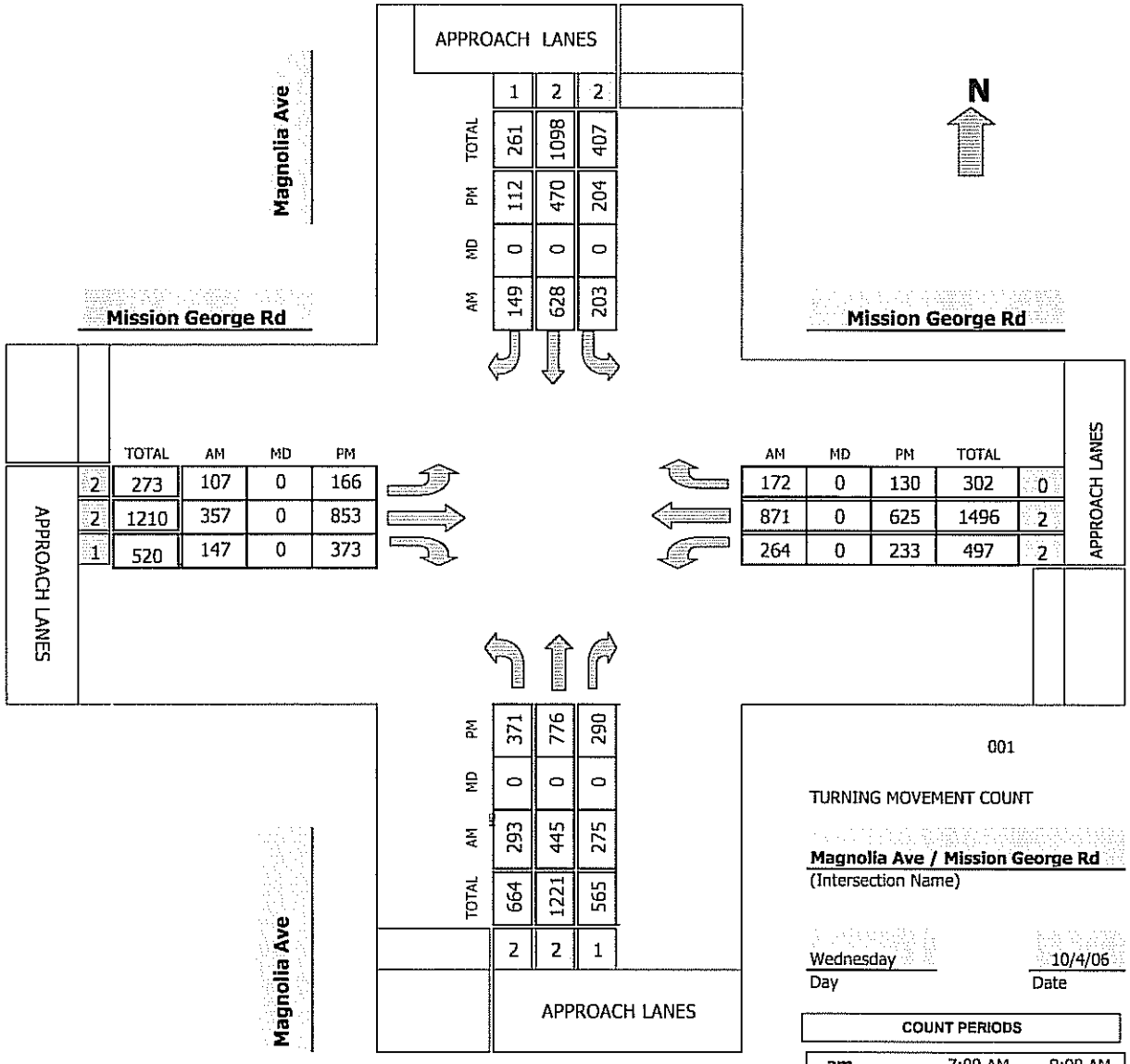
10/4/06 — Date

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	11:00 AM -	1:00 PM
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	745 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	400 PM

TMC Summary of Magnolia Ave/Mission George Rd

Project #: 06-4227-005



001

TURNING MOVEMENT COUNT

Magnolia Ave / Mission George Rd
(Intersection Name)

Wednesday
Day

10/4/06
Date

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	11:00 AM -	1:00 PM
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	715 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	445 PM

Volumes for: Thursday, February 28, 2008 City: Santee Project #: 08-4055-001

Location: Cottonwood Ave N/o Mission Gorge Rd and North of Fire Station

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	1		1					12:00	12		3				
00:15	3		2					12:15	7		5				
00:30	5		5					12:30	6		8				
00:45	1	10	1	9			19	12:45	11	36	1	17			53
01:00	1		6					13:00	9		12				
01:15	0		0					13:15	14		0				
01:30	1		0					13:30	10		3				
01:45	4	6	4	10			16	13:45	22	55	8	23			78
02:00	1		1					14:00	12		19				
02:15	2		4					14:15	4		13				
02:30	3		0					14:30	8		22				
02:45	3	9	1	6			15	14:45	17	41	2	56			97
03:00	1		1					15:00	12		14				
03:15	1		0					15:15	7		33				
03:30	1		1					15:30	8		25				
03:45	1	4	1	3			7	15:45	3	30	18	90			120
04:00	2		3					16:00	5		11				
04:15	4		0					16:15	10		15				
04:30	3		1					16:30	6		14				
04:45	7	16	3	7			23	16:45	10	31	8	48			79
05:00	9		2					17:00	13		8				
05:15	15		3					17:15	13		9				
05:30	8		1					17:30	13		5				
05:45	21	53	5	11			64	17:45	6	45	17	39			84
06:00	15		22					18:00	6		18				
06:15	9		13					18:15	9		6				
06:30	14		1					18:30	5		5				
06:45	46	84	3	39			123	18:45	4	24	4	33			57
07:00	14		3					19:00	4		4				
07:15	10		8					19:15	8		6				
07:30	5		8					19:30	9		7				
07:45	12	41	7	26			67	19:45	6	27	7	24			51
08:00	9		6					20:00	3		3				
08:15	8		3					20:15	2		9				
08:30	1		3					20:30	4		11				
08:45	7	25	0	12			37	20:45	3	12	3	26			38
09:00	7		6					21:00	6		8				
09:15	4		3					21:15	1		1				
09:30	4		4					21:30	4		4				
09:45	9	24	3	16			40	21:45	6	17	7	20			37
10:00	4		5					22:00	1		12				
10:15	6		6					22:15	1		4				
10:30	6		13					22:30	6		5				
10:45	7	23	11	35			58	22:45	9	17	5	26			43
11:00	3		6					23:00	4		2				
11:15	7		6					23:15	2		13				
11:30	2		6					23:30	1		3				
11:45	3	15	9	27			42	23:45	1	8	1	19			27
Total Vol.		310		201			**511**			343		421			**764**

Daily Totals

NB	SB	EB	WB	Combined
653	622			**1275**

	AM			PM		
Split %	60.7%	39.3%	**40.1%**	44.9%	55.1%	**59.9%**
Peak Hour	06:00	05:30	**06:00**	13:15	15:00	**15:00**
Volume	84	41	**123**	58	90	**120**
P.H.F.	0.46	0.47	**0.63**	0.77	0.68	**0.75**

Volumes for: Friday, February 29, 2008 City: Santee Project #: 08-4055-001

Location: Cottonwood Ave N/o Mission Gorge Rd and North of Fire Station

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	2		3					12:00	7		9				
00:15	1		3					12:15	4		11				
00:30	1		0					12:30	9		3				
00:45	1	5	2	8			13	12:45	12	32	9	32			64
01:00	1		1					13:00	6		5				
01:15	4		4					13:15	5		7				
01:30	0		3					13:30	8		7				
01:45	2	7	1	9			16	13:45	11	30	6	25			55
02:00	2		2					14:00	5		11				
02:15	1		0					14:15	3		15				
02:30	2		3					14:30	9		4				
02:45	2	7	0	5			12	14:45	16	33	10	40			73
03:00	1		0					15:00	8		15				
03:15	1		0					15:15	8		22				
03:30	0		2					15:30	5		28				
03:45	1	3	1	3			6	15:45	12	33	11	76			109
04:00	3		0					16:00	3		9				
04:15	3		4					16:15	5		10				
04:30	1		2					16:30	8		9				
04:45	6	13	0	6			19	16:45	6	22	6	34			56
05:00	17		5					17:00	16		8				
05:15	12		4					17:15	9		6				
05:30	2		3					17:30	5		5				
05:45	19	50	10	22			72	17:45	9	39	9	28			67
06:00	11		19					18:00	6		22				
06:15	6		4					18:15	5		13				
06:30	10		4					18:30	0		6				
06:45	40	67	4	31			98	18:45	4	15	6	47			62
07:00	18		7					19:00	3		4				
07:15	14		11					19:15	5		8				
07:30	10		12					19:30	2		4				
07:45	10	52	4	34			86	19:45	1	11	3	19			30
08:00	7		4					20:00	4		1				
08:15	7		4					20:15	5		2				
08:30	4		2					20:30	1		2				
08:45	5	23	2	12			35	20:45	3	13	7	12			25
09:00	3		2					21:00	6		5				
09:15	4		5					21:15	6		5				
09:30	8		6					21:30	3		5				
09:45	6	21	5	18			39	21:45	4	19	5	20			39
10:00	7		4					22:00	3		2				
10:15	8		10					22:15	7		14				
10:30	4		4					22:30	5		4				
10:45	7	26	10	28			54	22:45	9	24	5	25			49
11:00	7		8					23:00	7		6				
11:15	6		4					23:15	4		13				
11:30	7		6					23:30	3		6				
11:45	2	22	6	24			46	23:45	5	19	4	29			48
Total Vol.		296		200			**496**			290		387			**677**

Daily Totals

NB	SB	EB	WB	**Combined**
586	587			**1173**

	AM			**PM**		
Split %	59.7%	40.3%	**42.3%**	42.8%	57.2%	**57.7%**
Peak Hour	06:30	05:45	**06:45**	14:30	15:00	**14:45**
Volume	82	37	**116**	41	76	**112**
P.H.F.	0.51	0.49	**0.66**	0.64	0.68	**0.85**

Volumes for: Saturday, March 01, 2008 City: Santee Project #: 08-4055-001

Location: Cottonwood Ave N/o Mission Gorge Rd and North of Fire Station

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	1		3					12:00	8		11				
00:15	1		4					12:15	21		8				
00:30	2		4					12:30	15		13				
00:45	2	6	2	13			19	12:45	12	56	7	39			95
01:00	4		4					13:00	17		8				
01:15	1		4					13:15	16		4				
01:30	2		2					13:30	15		15				
01:45	2	9	4	14			23	13:45	12	60	16	43			103
02:00	3		3					14:00	9		23				
02:15	1		1					14:15	7		17				
02:30	2		0					14:30	6		5				
02:45	1	7	2	6			13	14:45	15	37	7	52			89
03:00	2		0					15:00	2		13				
03:15	3		0					15:15	5		11				
03:30	3		5					15:30	3		21				
03:45	3	11	2	7			18	15:45	7	17	7	52			69
04:00	3		4					16:00	4		7				
04:15	3		2					16:15	10		9				
04:30	2		1					16:30	6		5				
04:45	6	14	2	9			23	16:45	8	28	6	27			55
05:00	17		6					17:00	15		4				
05:15	9		2					17:15	11		4				
05:30	2		1					17:30	9		2				
05:45	11	39	10	19			58	17:45	17	52	15	25			77
06:00	10		15					18:00	15		24				
06:15	6		9					18:15	9		11				
06:30	8		2					18:30	10		6				
06:45	20	44	6	32			76	18:45	7	41	4	45			86
07:00	10		1					19:00	3		5				
07:15	14		12					19:15	9		29				
07:30	6		6					19:30	7		9				
07:45	9	39	3	22			61	19:45	7	26	2	45			71
08:00	8		4					20:00	1		10				
08:15	8		4					20:15	3		3				
08:30	16		5					20:30	2		4				
08:45	8	40	10	23			63	20:45	1	7	4	21			28
09:00	10		4					21:00	6		4				
09:15	10		8					21:15	2		1				
09:30	11		4					21:30	4		4				
09:45	5	36	15	31			67	21:45	4	16	2	11			27
10:00	4		13					22:00	3		3				
10:15	8		20					22:15	1		9				
10:30	0		8					22:30	4		2				
10:45	4	16	4	45			61	22:45	5	13	3	17			30
11:00	3		3					23:00	6		1				
11:15	4		8					23:15	1		13				
11:30	9		6					23:30	1		6				
11:45	5	21	8	25			46	23:45	4	12	2	22			34
Total Vol.		282		246			**528**			365		399			**764**

Daily Totals

	NB	SB	EB	WB	Combined
	647	645			**1292**

	AM			PM		
Split %	53.4%	46.6%	**40.9%**	47.8%	52.2%	**59.1%**
Peak Hour	06:30	09:45	**11:45**	12:15	13:30	**13:30**
Volume	52	56	**89**	65	71	**114**
P.H.F.	0.65	0.70	**0.77**	0.71	0.77	**0.89**

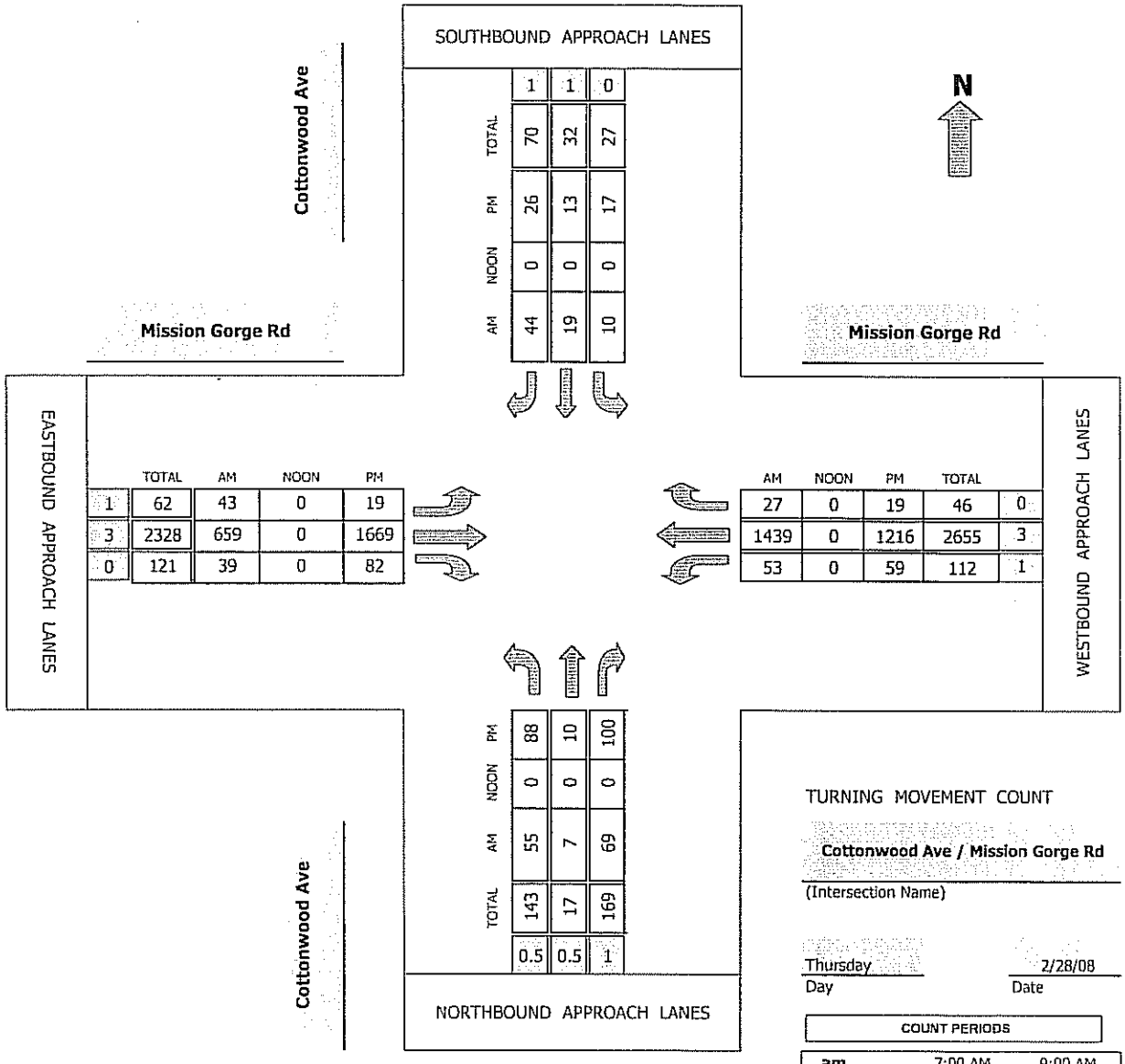
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Cottonwood Ave/Mission Gorge Rd

Project #: 08-4056-001



	TOTAL	AM	NOON	PM
1	70	44	0	26
1	32	19	0	13
0	27	10	0	17

	TOTAL	AM	NOON	PM
1	62	43	0	19
3	2328	659	0	1669
0	121	39	0	82

	AM	NOON	PM	TOTAL
27	0	19	46	0
1439	0	1216	2655	3
53	0	59	112	1

	TOTAL	AM	NOON	PM
0.5	143	55	0	88
0.5	17	7	0	10
1	169	69	0	100

TURNING MOVEMENT COUNT

Cottonwood Ave / Mission Gorge Rd

(Intersection Name)

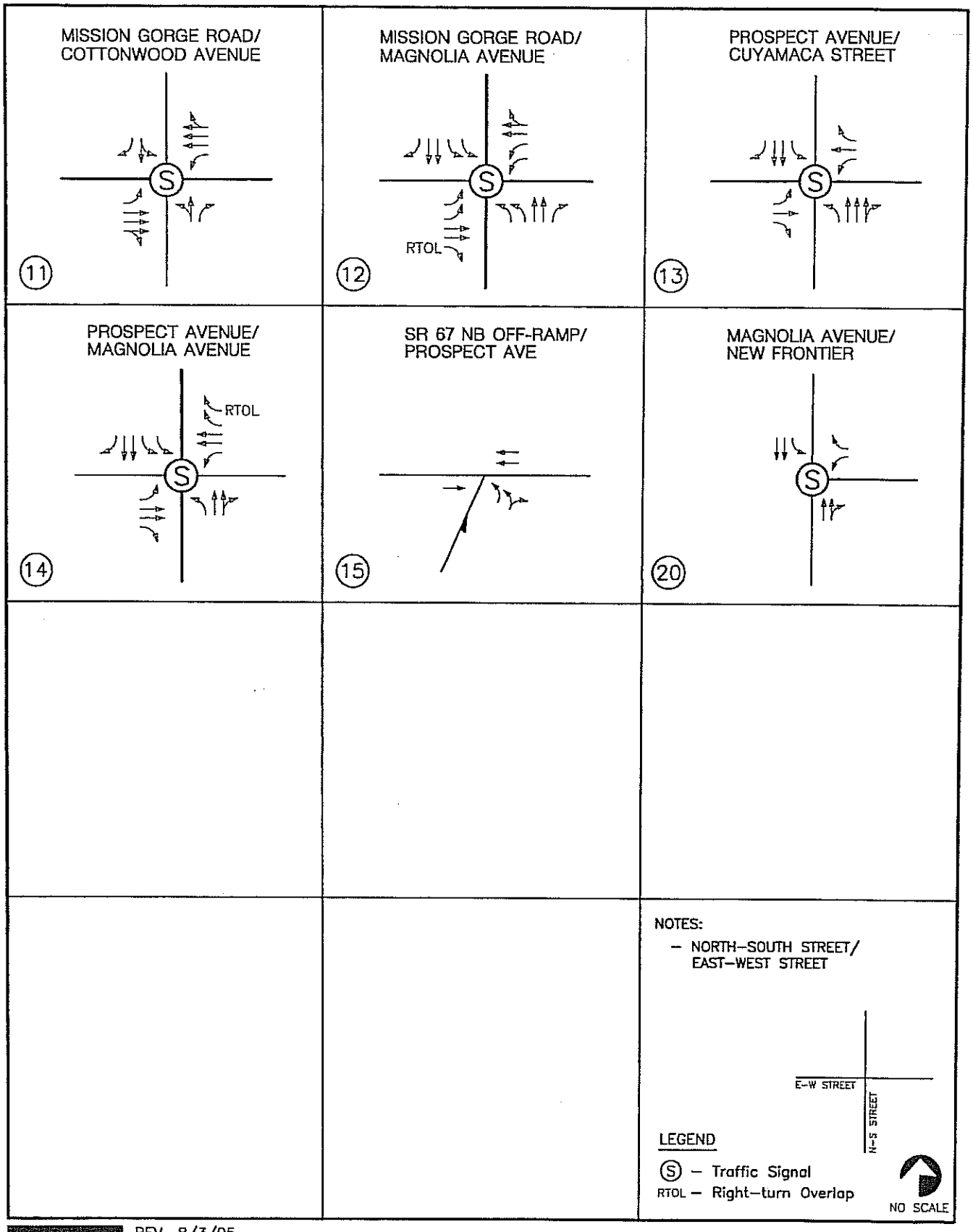
Thursday — Day

2/28/08 — Date

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	-	
pm	4:00 PM -	6:00 PM

CONTROL: Signalized

AM PEAK HOUR	715 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	500 PM



LINSCOTT LAW & GREENSPAN engineers

REV. 8/3/05
LLG1386.DWG

Figure 3-2

(2 OF 2)

EXISTING INTERSECTION GEOMETRY

SANTEE OFFICE PARK

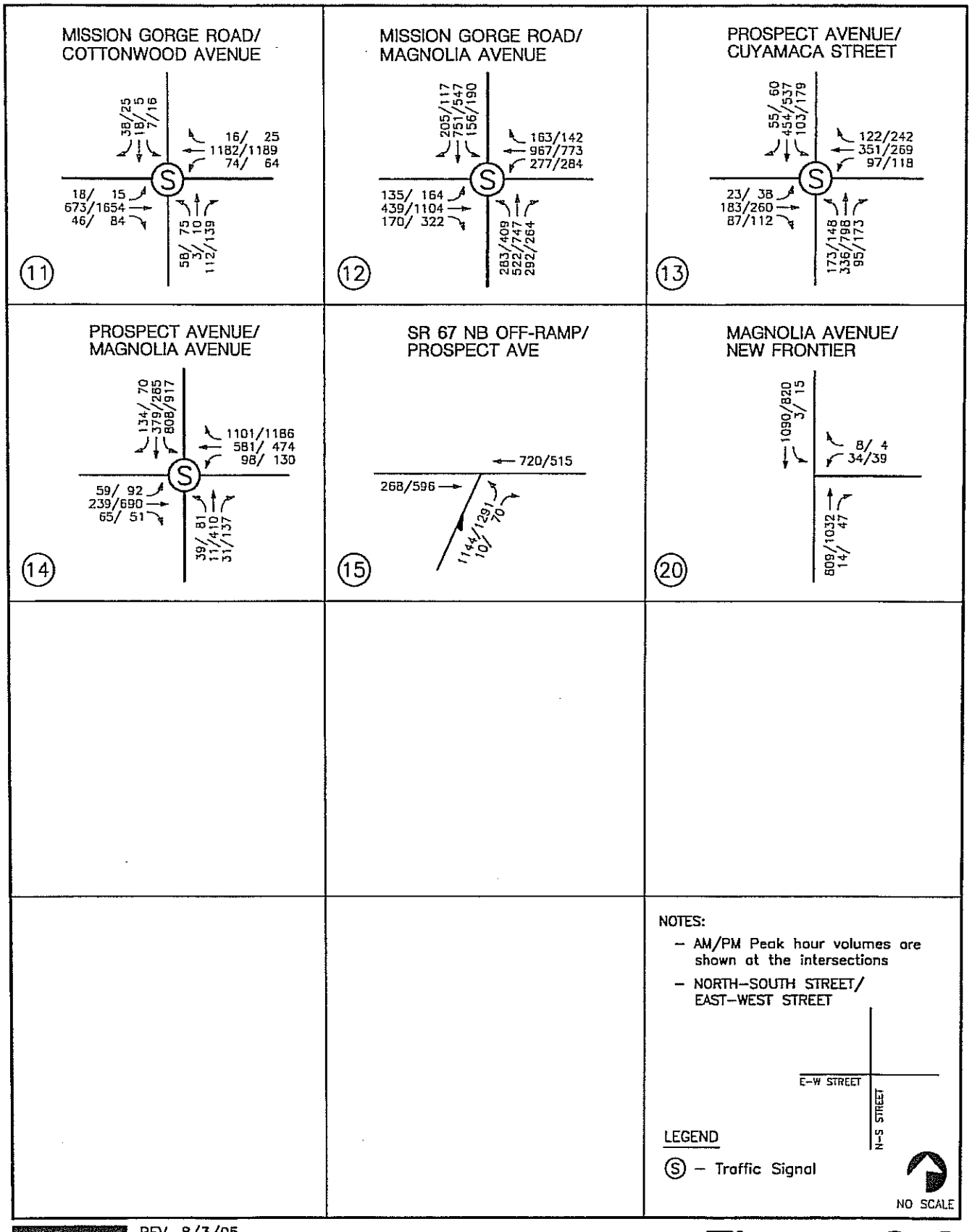


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Figure 3-3

(2 OF 2)

EXISTING TRAFFIC VOLUMES AM/PM PEAK HOURS

SANTEE OFFICE PARK

APPENDIX B

City of Santee Circulation Element

Policy 6.7 The City supports a truck route system that provides for access to all commercial and industrial areas within the City but discourages through truck traffic that does not stop in Santee.

7.0 Implementation

7.1 Circulation Plan

The Circulation Plan as shown on Figure 3-1 represents an extensive road network in terms of both the number of links and classifications. Eight street designations have been used to define differing characteristics among elements of the Circulation Plan:

a. **Freeways** are multilane divided highways for through traffic with full control of access and with grade separations at all intersections.

b. **Prime Arterials** are six lanes or larger divided roadways with raised, landscaped medians to control turning movements that cross other arterials at grade with signalized intersections. Prime Arterials also have an increased landscaped parkway width between the right-of-way and curb.

c. **Major Arterials** are four to six lane divided roadways with landscaped raised medians to control turning movements and that cross other arterials at grade with signalized intersections.

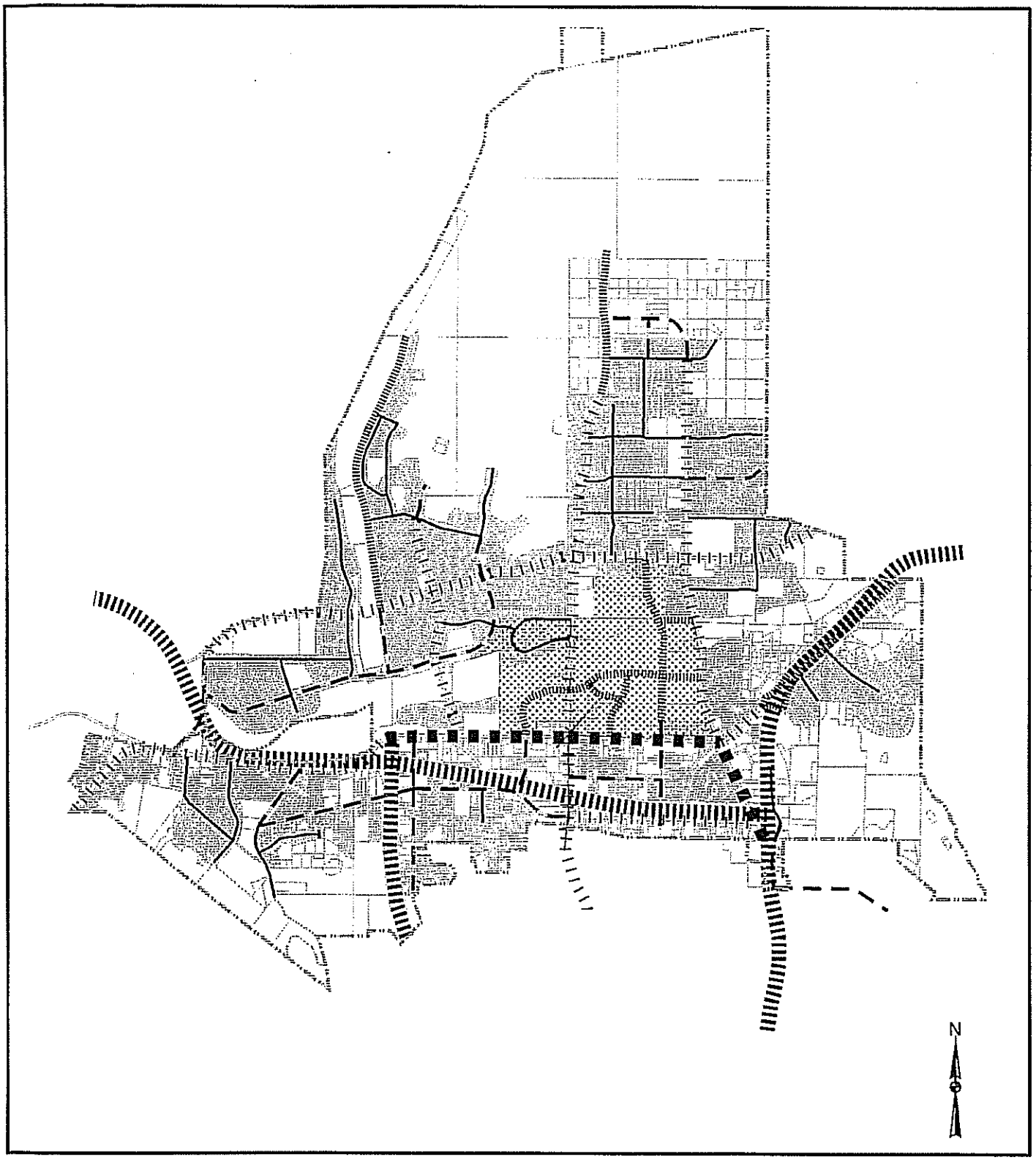
d. **Collectors** are feeder or connector roadways that complement the arterial network, but are of lesser capacity, with two or four lanes and striped turning lanes. Collectors typically have signalized or "Stop" sign control at intersections with other circulation element streets.

e. **Industrial Streets** are slightly larger local roadways to accommodate commercial vehicles safely in areas of industrial development.

f. **Residential Collectors** are two lane distributor roadways, slightly larger than local streets to enhance safety and traffic circulation into and out of neighborhood areas.

g. **Parkways** are roadways requiring unique design applications where standard designs cannot be utilized because of steep terrain, right-of-way constraints, special development needs and/or other special conditions.

h. **Local Streets** are all streets not designated within the circulation element plan that provide access within residential areas and are designed to discourage through traffic. Local streets are made up of standard residential streets and special situation streets in hillside and other areas. Hillside streets have reduced widths by eliminating parking on one or both sides of the street to reduce grading and biological impacts.



Freeway
Prime Arterial
Major Arterial
Parkway
Collector
Residential Collector
San Diego Trolley

CITY OF SANTEE
GENERAL PLAN

CIRCULATION PLAN
FIGURE 3-1

APPENDIX C

County of San Diego Guidelines to determine significance of impacts

by the development, and to maintain a Level of Service D on Circulation Element Roads." "New development that would significantly impact congestion on roads operating at LOS E or F, either currently or as a result of the project, will be denied unless improvements are scheduled to improve the LOS to D or better or appropriate mitigation is provided." The PFE, however, does not specify what would significantly impact congestion or establish criteria for evaluating when increased traffic volumes would significantly impact congestion. The following significance guidelines provided are the County's preferred method for evaluating whether or not increased traffic volumes generated or redistributed from a proposed project will "significantly impact congestion" on County roads, operating at LOS E or F, either currently or as a result of the project.

Traffic volume increases from public or private projects that result in one or more of the following criteria will have a significant traffic volume or level of service traffic impact on a road segment, unless specific facts show that there are other circumstances that mitigate or avoid such impacts:

- ***The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a Circulation Element Road or State Highway currently operating at LOS E or LOS F, or will cause a Circulation Element Road or State Highway to operate at a LOS E or LOS F as a result of the proposed project as identified in Table 1, or***

- ***The additional or redistributed ADT generated by the proposed project will cause a residential street to exceed its design capacity.***

Table 1
Measures of Significant Project Impacts to Congestion on Road Segments
Allowable Increases on Congested Road Segments

Level of service	Two-lane road	Four-lane road	Six-lane road
LOS E	200 ADT	400 ADT	600 ADT
LOS F	100 ADT	200 ADT	300 ADT

Notes:
1. By adding proposed project trips to all other trips from a list of projects, this same table must be used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes any trips must mitigate a share of the cumulative impacts.
2. The County may also determine impacts have occurred on roads even when a project's traffic or cumulative impacts do not trigger an unacceptable level of service, when such traffic uses a significant amount of remaining road capacity.

The first significance criterion listed in Table 1 addresses roadways presently operating at LOS E. Based on these criteria, an impact from new development on an LOS E road would be reached when the increase in average daily trips (ADT) on a two-lane road exceeds 200 ADT. Using SANDAG's "Brief Guide for Vehicular Traffic Generation Rates for the San Diego Region" for most discretionary projects this would generate less than 25 peak hour trips. On average, during peak hour conditions, this would be

that the traffic allowed under the threshold would not significantly impact traffic operation on the road segment.

Non-Circulation Element Residential Streets

Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots and not to carry through traffic, however, for projects that will substantially increase traffic volumes on residential streets, a comparison of the traffic volumes on the residential streets with the recommended design capacity must be provided. Recommended design capacities for residential non-Circulation Element streets are provided in the San Diego County Public and Private Road Standards. Traffic volume that exceeds the design capacity on residential streets may impact residences and should be analyzed on a case-by-case basis.

4.2 Intersections

This section provides guidance for evaluating adverse environmental effects a project may have on signalized and unsignalized intersections.

4.2.1 Signalized

Traffic volume increases from public or private projects that result in one or more of the following criteria will have a significant traffic volume or level of service traffic impact on a road segment:

- ***The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a signalized intersection currently operating at LOS E or LOS F, or will cause a signalized intersection to operate at a LOS E or LOS F as identified in Table 2.***

Table 2
Measures of Significant Project Impacts to Congestion on Intersections
Allowable Increases on Congested Intersections

Level of service	Signalized	Unsignalized
LOS E	Delay of 2 seconds	20 peak hour trips on a critical movement
LOS F	Delay of 1 second, or 5 peak hour trips on a critical movement	5 peak hour trips on a critical movement

Notes:

1. **A critical movement is one that is experiencing excessive queues.**
2. **By adding proposed project trips to all other trips from a list of projects, these same tables are used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes any trips must mitigate a share of the cumulative impacts.**
3. **The County may also determine impacts have occurred on roads even when a project's traffic or cumulative impacts do not trigger an unacceptable level of service, when such traffic uses a significant amount of remaining road capacity.**

Table 1 - County Criteria for the Need to Prepare a Traffic Impact Study (TIS)

PROJECT GENERATED TRAFFIC*	FOCUSED TIS	FULL TIS NEEDED	CONGESTION MANAGEMENT ANALYSIS NEEDED
Less than 200 Average Daily Trips OR Less than 20 Peak Hour Trips	No	No	No
500 Average Daily Trips OR 50 Peak Hour Trips	Yes	No	No
1,000 Average Daily Trips OR 100 Peak Hour Trips	No	Yes	No
2,400 Average Daily Trips OR 200 Peak Hour Trips	No	Yes	Yes

* Other situations could result in a request for an Issue Specific or Focused Traffic Impact Study. These include, but are not limited to, those issues addressed in this report.
NOTE: Analysis of cumulative traffic impacts may require a Traffic Impact Study, even when project generated traffic volumes alone do not.

2.1.1 Issue Specific Traffic Impact Study

Generally, an issue specific TIS will be required for projects that generate between 200 and 500 average daily trips (ADT) or between 20 and 50 peak hour trips that may potentially impact or alter the design of a nearby intersection or road segment. Typically, the scope of an issue specific traffic study is limited to nearby roads receiving over 200 ADT (100 ADT is adjacent road is operating at LOS F) and intersections receiving over 20 peak hour trips (5 peak hour trips on a critical move for an adjacent intersection operating at LOS F). County staff may also based upon a field review, public comment, or recommendations of a planning group require an issue specific TIS to address particular traffic issues. For example, an examination of available sight distance, driveway access, access road geometrics and capacity, parking capacity, intersection analysis or a signal timing study are issue specific/focused studies that could be required.

All discretionary projects are required to evaluate project-level (direct) and cumulative traffic impacts that may include preparation of a TIS. When a proposed project generates less than 200 average daily trips (ADT), in most cases (given the distribution of traffic onto County Circulation Element roads and the traffic impact criteria identified

APPENDIX D

SANDAG Trip Generation Table

(NOT SO)

BRIEF GUIDE OF VEHICULAR TRAFFIC GENERATION RATES FOR THE SAN DIEGO REGION

APRIL 2002

SANDAG
401 B Street, Suite 800
San Diego, California 92101
(619) 699-1900 • Fax (619) 699-1950

NOTE: This listing only represents a *guide* of average, or estimated, traffic generation "driveway" rates and some very general trip data for land uses (emphasis on acreage and building square footage) in the San Diego region. These rates (both local and national) are subject to change as future documentation becomes available, or as regional sources are updated. For more specific information regarding traffic data and trip rates, please refer to the San Diego Traffic Generators manual. *Always check with local jurisdictions for their preferred or applicable rates.*

LAND USE	TRIP CATEGORIES [PRIMARY:DIVERTED:PASS-BY][a]	ESTIMATED WEEKDAY VEHICLE TRIP GENERATION RATE (DRIVEWAY)	HIGHEST PEAK HOUR % (plus IN:OUT ratio) Between 6:00-9:30 A.M.		Between 3:00-6:30 P.M.		TRIP LENGTH (Miles)[4]
AGRICULTURE (Open Space)	[80:18:2]	2/acre**					10.8
AIRPORT	[78:20:2]						12.5
Commercial		60/acre, 100/flight, 70/1000 sq. ft.* **	5%	(6:4)	8%	(5:5)	
General Aviation		6/acre, 2/flight, 6/based aircraft* **	9%	(7:3)	15%	(5:5)	
Heliports		100/acre**					
AUTOMOBILE[5]							
Car Wash							
Automatic		900/site, 600/acre**	4%	(5:5)	9%	(5:5)	
Self-serve		100/wash stall**	4%	(5:5)	8%	(5:5)	
Gasoline	[21:51:28]						2.8
with/Food Mart		160/vehicle fueling space**	7%	(5:5)	8%	(5:5)	
with/Food Mart & Car Wash		155/vehicle fueling space**	8%	(5:5)	9%	(5:5)	
Older Service Station Design		150/vehicle fueling space, 900/station**	7%	(5:5)	9%	(5:5)	
Sales (Dealer & Repair)		50/1000 sq. ft., 300/acre, 60/service stall* **	5%	(7:3)	8%	(4:6)	
Auto Repair Center		20/1000 sq. ft., 400/acre, 20/service stall*	8%	(7:3)	11%	(4:6)	
Auto Parts Sales		60/1000 sq. ft.**	4%		10%		
Quick Lube		40/service stall**	7%	(6:4)	10%	(5:5)	
Tire Store		25/1000 sq. ft., 30/service stall**	7%	(6:4)	11%	(5:5)	
CEMETERY		5/acre*					
CHURCH (or Synagogue)	[64:25:11]	9/1000 sq. ft., 30/acre** (quadruple rates for Sunday, or days of assembly)	5%	(6:4)	8%	(5:5)	5.1
COMMERCIAL/RETAIL[5]							
Super Regional Shopping Center (More than 80 acres, more than 800,000 sq. ft., w/usually 3+ major stores)		35/1000 sq. ft.,[c] 400/acre*	4%	(7:3)	10%	(5:5)	
Regional Shopping Center (40-80acres, 400,000-800,000 sq. ft., w/usually 2+ major stores)	[54:35:11]	50/1000 sq. ft.,[c] 500/acre*	4%	(7:3)	9%	(5:5)	5.2
Community Shopping Center (15-40 acres, 125,000-400,000 sq. ft., w/usually 1 major store, detached restaurant(s), grocery and drugstore)	[47:31:22]	80/1000 sq. ft., 700/acre* **	4%	(6:4)	10%	(5:5)	3.6
Neighborhood Shopping Center (Less than 15 acres, less than 125,000 sq. ft., w/usually grocery & drugstore, cleaners, beauty & barber shop, & fast food services)		120/1000 sq. ft., 1200/acre* **	4%	(6:4)	10%	(5:5)	
Commercial Shops	[45:40:15]						
Specialty Retail/Strip Commercial		40/1000 sq. ft., 400/acre*	3%	(6:4)	9%	(5:5)	4.3
Electronics Superstore		50/1000 sq. ft**			10%	(5:5)	
Factory Outlet		40/1000 sq. ft.**	3%	(7:3)	9%	(5:5)	
Supermarket		150/1000 sq. ft., 2000/acre* **	4%	(7:3)	10%	(5:5)	
Drugstore		90/1000 sq. ft.**	4%	(6:4)	10%	(5:5)	
Convenience Market (15-16 hours)		500/1000 sq. ft.**	8%	(5:5)	8%	(5:5)	
Convenience Market (24 hours)		700/1000 sq. ft.**	9%	(5:5)	7%	(5:5)	
Convenience Market (w/gasoline pumps)		850/1000 sq. ft., 550/vehicle fueling space**	8%	(5:5)	7%	(5:5)	
Discount Club		60/1000 sq. ft., 600/acre* **	7%	(7:3)	9%	(5:5)	
Discount Store		60/1000 sq. ft., 600/acre**	3%	(6:4)	8%	(5:5)	
Furniture Store		6/1000 sq. ft., 100/acre**	4%	(7:3)	8%	(5:5)	
Lumber Store		30/1000 sq. ft., 150/acre**	7%	(6:4)	9%	(5:5)	
Home Improvement Superstore		40/1000 sq. ft.**	5%	(6:4)	8%	(5:5)	
Hardware/Paint Store		60/1000 sq. ft., 600/acre**	2%	(6:4)	9%	(5:5)	
Garden Nursery		40/1000 sq. ft., 90/acre**	3%	(6:4)	10%	(5:5)	
Mixed Use: Commercial (w/supermarket)/Residential		110/1000 sq. ft., 2000/acre* (commercial only) 5/dwelling unit, 200/acre* (residential only)	3% 9%	(6:4) (3:7)	9% 13%	(5:5) (6:4)	
EDUCATION							
University (4 years)	[91:9:0]	2.4/student, 100 acre*	10%	(8:2)	9%	(3:7)	8.9
Junior College (2 years)	[92:7:1]	1.2/student, 24/1000 sq. ft., 120/acre* **	12%	(8:2)	9%	(6:4)	9.0
High School	[75:19:6]	1.3/student, 15/1000 sq. ft., 60/acre* **	20%	(7:3)	10%	(4:6)	4.8
Middle/Junior High	[63:25:12]	1.4/student, 12/1000 sq. ft. 50/acre**	30%	(6:4)	9%	(4:6)	5.0
Elementary	[57:25:10]	1.6/student, 14/1000 sq. ft., 90/acre* **	32%	(6:4)	9%	(4:6)	3.4
Day Care	[28:58:14]	5/child, 80/1000 sq. ft.**	17%	(5:5)	18%	(5:5)	3.7
FINANCIAL[5]	[35:42:23]						3.4
Bank (Walk-In only)		150/1000 sq. ft., 1000/acre* **	4%	(7:3)	8%	(4:6)	
with Drive-Through		200/1000 sq. ft., 1500/acre*	5%	(6:4)	10%	(5:5)	
Drive-Through only		250 (125 one-way)/lane*	3%	(5:5)	13%	(5:5)	
Savings & Loan		60/1000 sq. ft., 600/acre**	2%		9%		
Drive-Through only		100 (50 one-way)/lane**	4%		15%		
HOSPITAL	[73:25:2]						8.3
General		20/bed, 25/1000 sq. ft., 250/acre*	8%	(7:3)	10%	(4:6)	
Convalescent/Nursing		3/bed**	7%	(6:4)	7%	(4:6)	
INDUSTRIAL							
Industrial/Business Park (commercial included)	[79:19:2]	16/1000 sq. ft., 200/acre* **	12%	(8:2)	12%	(2:8)	9.0
Industrial Park (no commercial)		8/1000 sq. ft., 90/acre**	11%	(9:1)	12%	(2:8)	
Industrial Plant (multiple shifts)	[92:5:3]	10/1000 sq. ft., 120/acre*	14%	(8:2)	15%	(3:7)	11.7
Manufacturing/Assembly		4/1000 sq. ft., 50/acre**	19%	(9:1)	20%	(2:8)	
Warehousing		5/1000 sq. ft., 60/acre**	13%	(7:3)	15%	(4:6)	
Storage		2/1000 sq. ft., 0.2/vault, 30/acre*	6%	(5:5)	9%	(5:5)	
Science Research & Development		8/1000 sq. ft., 80/acre*	16%	(9:1)	14%	(1:9)	
Landfill & Recycling Center		6/acre	11%	(5:5)	10%	(4:6)	

(OVER)

MEMBER AGENCIES: Cities of Carlsbad, Chula Vista, Coronado, Del Mar, El Cajon, Encinitas, Escondido, Imperial Beach, La Mesa, Lemon Grove, National City, Oceanside, Poway, San Diego, San Marcos, Santee, Solana Beach, Vista and County of San Diego.
ADVISORY/LIAISON MEMBERS: California Department of Transportation, County Water Authority, U.S. Department of Defense, S.D. Unified Port District and Tijuana/Baja California.

LAND USE	TRIP CATEGORIES (PRIMARY:DIVERTED:PASS-BY)[F]	ESTIMATED WEEKDAY VEHICLE TRIP GENERATION RATE (DRIVEWAY)	HIGHEST PEAK HOUR % (plus IN:OUT ratio) Between 6:00-9:30 A.M.		Between 3:00-6:30 P.M.		TRIP LENGTH (Miles)[L]
LIBRARY	[44:44:12]	50/1000 sq. ft., 400/acre**	2%	(7:3)	10%	(5:5)	3.9
LODGING	[58:38:4]						7.6
Hotel (w/convention facilities/restaurant)		10/occupied room, 300/acre	8%	(6:4)	8%	(6:4)	
Motel		9/occupied room, 200/acre*	8%	(4:6)	9%	(6:4)	
Resort Hotel		8/occupied room, 100/acre*	5%	(6:4)	7%	(4:6)	
Business Hotel		7/occupied room**	8%	(4:6)	9%	(6:4)	
MILITARY	[82:16:2]	2.5/military & civilian personnel*	8%	(9:1)	10%	(2:8)	11.2
OFFICE							
Standard Commercial Office	[77:19:4]	20/1000 sq. ft.,[D] 300/acre*	14%	(9:1)	13%	(2:8)	8.8
(less than 100,000 sq. ft.)							
Large (High-Rise) Commercial Office	[82:15:3]	17/1000 sq. ft.,[D] 600/acre*	13%	(9:1)	14%	(2:8)	10.0
(more than 100,000 sq. ft., 6+ stories)							
Office Park (400,000+ sq. ft.)		12/1000 sq.ft., 200/acre* **	13%	(9:1)	13%	(2:8)	
Single Tenant Office		14/1000 sq. ft., 180/acre*	15%	(9:1)	15%	(2:8)	8.8
Corporate Headquarters		7/1000 sq. ft., 110/acre*	17%	(9:1)	16%	(1:9)	
Government (Civic Center)	[50:34:16]	30/1000 sq. ft.**	9%	(9:1)	12%	(3:7)	6.0
Post Office							
Central/Walk-In Only		90/1000 sq. ft.**	5%		7%		
Community (not including mail drop lane)		200/1000 sq. ft., 1300/acre*	8%	(6:4)	9%	(5:5)	
Community (w/mail drop lane)		300/1000 sq. ft., 2000/acre*	7%	(5:5)	10%	(5:5)	
Mail Drop Lane only		1500 (750 one-way)/lane*	7%	(5:5)	12%	(5:5)	
Department of Motor Vehicles		180/1000 sq. ft., 900/acre**	8%	(6:4)	10%	(4:6)	
Medical-Dental	[60:30:10]	50/1000 sq. ft., 500/acre*	8%	(8:2)	11%	(3:7)	6.4
PARKS	[66:28:6]		4%		8%		5.4
City (developed w/meeting rooms and sports facilities)		50/acre*	13%	(5:5)	9%	(5:5)	
Regional (developed)		20/acre*					
Neighborhood/County (undeveloped)		5/acre (add for specific sport uses), 6/picnic site* **					
State (average 1000 acres)		1/acre, 10/picnic site**					
Amusement (Theme)		80/acre, 130/acre (summer only)**			8%	(6:4)	
San Diego Zoo		115/acre*					
Sea World		80/acre*					
RECREATION							
Beach, Ocean or Bay	[52:39:9]	600/1000 ft. shoreline, 60/acre*					6.3
Beach, Lake (fresh water)		50/1000 ft. shoreline, 5/acre*					
Bowling Center		30/1000 sq. ft., 300/acre, 30/lane **	7%	(7:3)	11%	(4:6)	
Campground		4/campsite**	4%		8%		
Golf Course		7/acre, 40/hole, 700/course* **	7%	(8:2)	9%	(3:7)	
Driving Range only		70/acre, 14/tee box*	3%	(7:3)	9%	(5:5)	
Marinas		4/berth, 20/acre* **	3%	(3:7)	7%	(6:4)	
Multi-purpose (miniature golf, video arcade, batting cage, etc.)		90/acre	2%		6%		
Racquetball/Health Club		30/1000 sq. ft., 300/acre, 40/court*	4%	(6:4)	9%	(6:4)	
Tennis Courts		16/acre, 30/court**	5%		11%	(5:5)	
Sports Facilities							
Outdoor Stadium		50/acre, 0.2/seat*					
Indoor Arena		30/acre, 0.1/seat*					
Racetrack		40/acre, 0.6 seat*					
Theaters (multiplex w/matinee)	[66:17:17]	80/1000 sq. ft., 1.8/seat, 360/screen*	10%		8%	(6:4)	6.1
RESIDENTIAL	[86:11:3]						7.9
Estate, Urban or Rural		12/dwelling unit**	8%	(3:7)	10%	(7:3)	
(average 1-2 DU/acre)							
Single Family Detached		10/dwelling unit**	8%	(3:7)	10%	(7:3)	
(average 3-6 DU/acre)							
Condominium		8/dwelling unit**	8%	(2:8)	10%	(7:3)	
(or any multi-family 6-20 DU/acre)							
Apartment		6/dwelling unit**	8%	(2:8)	9%	(7:3)	
(or any multi-family units more than 20 DU/acre)							
Military Housing (off-base, multi-family)							
(less than 6 DU/acre)		8/dwelling unit	7%	(3:7)	9%	(6:4)	
(6-20 DU/acre)		6/dwelling unit	7%	(3:7)	9%	(6:4)	
Mobile Home							
Family		5/dwelling unit, 40/acre*	8%	(3:7)	11%	(6:4)	
Adults Only		3/dwelling unit, 20/acre*	9%	(3:7)	10%	(6:4)	
Retirement Community		4/dwelling unit**	5%	(4:6)	7%	(6:4)	
Congregate Care Facility		2.5/dwelling unit**	4%	(6:4)	6%	(5:5)	
RESTAURANT[3]	[51:37:12]						4.7
Quality		100/1000 sq. ft., 3/seat, 500/acre* **	7%	(6:4)	8%	(7:3)	
Sit-down, high turnover		160/1000 sq. ft., 6/seat, 1000/acre* **	8%	(5:5)	8%	(6:4)	
Fast Food (w/drive-through)		650/1000 sq. ft., 20/seat, 3000/acre* **	7%	(5:5)	7%	(5:5)	
Fast Food (without drive-through)		700/1000 sq. ft.**	5%	(6:4)	7%	(5:5)	
Delicatessen (7am-4pm)		150/1000 sq. ft., 11/seat*	9%	(6:4)	3%	(3:7)	
TRANSPORTATION							
Bus Depot		25/1000 sq. ft.**					
Truck Terminal		10/1000 sq. ft., 7/bay, 80/acre**	9%	(4:6)	8%	(5:5)	
Waterport/Marine Terminal		17/berth, 12/acre**					
Transit Station (Light Rail w/parking)		300/acre, $2^{1/2}$/parking space (4/occupied)**	14%	(7:3)	15%	(3:7)	
Park & Ride Lots		400/acre (600/paved acre), 5/parking space (8/occupied)* **	14%	(7:3)	15%	(3:7)	

* Primary source: *San Diego Traffic Generators.*

* Other sources: *ITE Trip Generation Report (6th Edition)*, Trip Generation Rates (other agencies and publications), various SANDAG & CALTRANS studies, reports and estimates.

[F] Trip category percentage ratios are daily from local household surveys, often cannot be applied to very specific land uses, and do not include non-resident drivers (draft SANDAG *Analysis of Trip Diversion*, revised November, 1990):
PRIMARY - one trip directly between origin and primary destination.
DIVERTED - linked trip (having one or more stops along the way to a primary destination) whose distance compared to direct distance ≥ 1 mile.
PASS-BY - undiverted or diverted < 1 mile.

[L] Trip lengths are average weighted for all trips to and from general land use site. (All trips system-wide average length = 6.9 miles)

[C] Fitted curve equation: $\ln(T) = 0.502 \ln(x) + 6.945$

[D] Fitted curve equation: $\ln(T) = 0.756 \ln(x) + 3.950$

T = total trips, x = 1,000 sq. ft.

[3] Fitted curve equation: $t = -2.169 \ln(d) + 12.85$ t = trips/DU, d = density (DU/acre), DU = dwelling unit

[3] Suggested PASS-BY (undiverted or diverted < 1 mile) percentages for trip rate reductions only during P.M. peak period (based on combination of local data/review and Other sources**):

COMMERCIAL/RETAIL	
Regional Shopping Center	20%
Community " "	30%
Neighborhood " "	40%
Specialty Retail/Strip Commercial (other)	10%
Supermarket	40%
Convenience Market	50%
Discount Club/Store	30%
FINANCIAL	
Bank	25%
AUTOMOBILE	
Gasoline Station	50%
RESTAURANT	
Quality	10%
Sit-down high turnover	20%
Fast Food	40%

[F] Trip Reductions - In order to help promote regional "smart growth" policies, and acknowledge San Diego's expanding mass transit system, consider vehicle trip rate reductions (with proper documentation and necessary adjustments for peak periods). The following are some examples:

[1] A 5% daily trip reduction for land uses with transit access or near transit stations accessible within 1/4 mile.

[2] Up to 10% daily trip reduction for mixed-use developments where residential and commercial retail are combined (demonstrate mode split of walking trips to replace vehicular trips).

APPENDIX E

SR 52 Extension Information

Department of Transportation
4050 Taylor Street
San Diego, CA 92110
ph: (619) 688-6670 Fax (619) 688-3695
www.dot.ca.gov/dist11

SAN DIEGO AND IMPERIAL COUNTIES

January 2008

State Route 52
(SR-125 to SR-67)

OVERALL GOALS

- Reduce traffic congestion on Interstate 8 and local arterials;
- Increase traffic capacity of the regional transportation system;
- Provide direct access between east county communities and job centers to the west and north; and
- Create a major link in regional transportation network, known as the inner-loop, which consists of State Routes 52 to 125 to 54 back to Interstate 5.

THE PROJECT

The project will construct four miles of four-lane freeway in the city of Santee from State Route 125 (SR-125) to State Route 67. It will include new roadway, bridges, and interchanges at Fanita Drive, Cuyamaca Street and Magnolia Avenue. Currently State Route 52 (SR-52) terminates at SR-125. This extension to the east completes the last segment of the proposed route.

TRAFFIC

The completion of SR-52 to SR-67 is critical in that it provides an important link in regional traffic circulation plans. By the year 2025, the segment will carry approximately 110,000 vehicles a day. It will also reduce some of the heavy traffic burden now carried by adjacent local roads.

ENVIRONMENTAL CONCERNS

The environmental clearance was addressed as part of the Environmental Impact Statement (EIS) prepared and approved for the corridor in 1989. Caltrans has completed an environmental re-evaluation of the project to ensure there are no new significant issues. The FHWA approved the project's reevaluation in November 2006.

FUNDING

The current cost estimate for the project is $600 million. The right of way portion of that estimate is approximately $226 million. Programmed funding comes from a number of Federal, State and local sources.

SR-52 is one of the projects identified for funding in the TransNet extension that was recently approved by voters. SANDAG has also identified this as one of the region's TransNet Early Action Projects and a priority for early funding.

SCHEDULE

Right of way acquisition for the portion from SR-125 to Cuyamaca Street has been completed. Acquisition of the required parcels between Cuyamca Street and SR-67 is underway.

Caltrans expects to begin construction on the first stage of the project this month. The second stage is set to begin in May, and the final phase in February 2009. The project should be completed and open to traffic in late 2010.

CONTACT

For more information on this project please contact Project Manager John Rieger at (619) 220-5391 or e-mail at John.Rieger@dot.ca.gov.

APPENDIX F

County of San Diego Table to determine roadway segment capacity.

TABLE 1

AVERAGE DAILY VEHICLE TRIPS

CIRCULATION ELEMENT ROADS		LEVEL OF SERVICE				
CLASS	X-SECTION	A	B	C	D	E
Expressway	126/146	<36,000	<54,000	<70,000	<86,000	<108,000
Prime Arterial	102/122	<22,200	<37,000	<44,600	<50,000	<57,000
Major Road	78/98	<14,800	<24,700	<29,600	<33,400	<37,000
Collector	64/84	<13,700	<22,800	<27,400	<30,800	<34,200
Town Collector	54/74	<3,000	<6,000	<9,500	<13,500	<19,000
Light Collector	40/60	<1,900	<4,100	<7,100	<10,900	<16,200
Rural Collector	40/84	<1,900	<4,100	<7,100	<10,900	<16,200
Rural Light Collector	40/60	<1,900	<4,100	<7,100	<10,900	<16,200
Recreational Parkway	40/100	<1,900	<4,100	<7,100	<10,900	<16,200
Rural Mountain	40/100	<1,900	<4,100	<7,100	<10,900	<16,200

NON – CIRCULATION ELEMENT ROADS		LEVEL OF SERVICE				
CLASS	X-SECTION	A	B	C	D	E
Residential Collector	40/60	*	*	<4,500	*	*
Residential Road	36/56	*	*	<1,500	*	*
Residential Cul-de-sac or Loop Road	32/52	*	*	< 200	*	*

*Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Levels of service normally apply to roads carrying through traffic between major trip generators and attractors.

APPENDIX G

HCM Analysis

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Existing Peak Hour Traffic
E/W St: Town Center

Inter.: Cuyamaca/Town Center
Area Type: All other areas
Jurisd: San Diego County
Year : 2007

N/S St: Cuyamaca

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	1	1	2	2	1	2	3	1	2	3	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	130	19	39	6	37	151	58	317	2	106	549	249
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			10			38			0			62

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	15.0	32.0					15.0	38.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	417	3338	0.34	0.13	48.4	D		
T	483	1810	0.04	0.27	32.7	C	44.2	D
R	422	1583	0.08	0.27	33.0	C		
Westbound								
L	430	3437	0.02	0.13	46.0	D		
T	919	3445	0.04	0.27	32.7	C	35.3	D
R	410	1538	0.30	0.27	35.5	D		
Northbound								
L	417	3338	0.15	0.13	47.0	D		
T	1561	4929	0.22	0.32	29.4	C	32.1	C
R	487	1538	0.00	0.32	28.1	C		
Southbound								
L	430	3437	0.27	0.13	47.9	D		
T	1607	5074	0.37	0.32	31.0	C	33.5	C
R	501	1583	0.41	0.32	32.7	C		

Intersection Delay = 34.6 (sec/veh) Intersection LOS = C

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Existing Peak Hour Traffic
E/W St: Town Center

Inter.: Cuyamaca/Town Center
Area Type: All other areas
Jurisd: San Diego County
Year : 2007

N/S St: Cuyamaca

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	1	1	2	2	1	2	3	1	2	3	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	466	15	153	17	55	192	220	684	3	170	703	280
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			38			48			1			70

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A	A			NB	Left	A			
Thru		A	A			Thru		A		
Right		A	A			Right		A		
Peds						Peds				
WB Left	A				SB	Left	A			
Thru			A			Thru		A		
Right			A			Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	15.0	8.0	18.0				15.0	39.0		
Yellow	4.0	4.0	4.0				4.0	4.0		
All Red	1.0	1.0	1.0				1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	779	3338	0.65	0.23	43.5	D		
T	468	1810	0.03	0.26	33.3	C	41.9	D
R	409	1583	0.31	0.26	36.3	D		
Westbound								
L	430	3437	0.04	0.13	46.2	D		
T	517	3445	0.12	0.15	44.2	D	52.5	D
R	231	1538	0.68	0.15	56.4	E		
Northbound								
L	417	3338	0.57	0.13	51.4	D		
T	1602	4929	0.46	0.32	31.3	C	36.2	D
R	500	1538	0.00	0.32	27.4	C		
Southbound								
L	430	3437	0.43	0.13	49.2	D		
T	1649	5074	0.46	0.32	31.3	C	34.3	C
R	514	1583	0.44	0.32	32.6	C		

Intersection Delay = 37.9 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Existing Peak Hour Traffic
E/W St: Mission Gorge

Inter.: Cuyamaca/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2007
N/S St: Cuyamaca

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	1	2	2	0	2	3	0
LGConfig	L	T	R	L	T	R	L	TR		L	TR	
Volume	122	540	232	130	911	86	267	181	37	116	385	51
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vol			58			22			9			12

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A	A		
Thru		A				Thru		A	A	
Right		A				Right		A	A	
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru			A	
Right		A				Right			A	
Peds						Peds				
NB Right					EB	Right	A	A		
SB Right					WB	Right	A			
Green	14.0	42.0					14.0	8.0	17.0	
Yellow	4.0	4.0					4.0	4.0	4.0	
All Red	1.0	1.0					1.0	1.0	1.0	

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	389	3338	0.34	0.12	49.3	D		
T	1725	4929	0.34	0.35	27.3	C	26.9	C
R	976	1583	0.19	0.62	10.1	B		
Westbound								
L	401	3437	0.35	0.12	49.4	D		
T	1725	4929	0.57	0.35	30.4	C	31.7	C
R	782	1538	0.09	0.51	15.2	B		
Northbound								
L	751	3338	0.39	0.22	39.8	D		
TR	844	3377	0.27	0.25	36.4	D	38.3	D
Southbound								
L	401	3437	0.31	0.12	49.1	D		
TR	709	5005	0.65	0.14	50.8	D	50.4	D

Intersection Delay = 34.8 (sec/veh) Intersection LOS = C

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Existing Peak Hour Traffic
E/W St: Mission Gorge

Inter.: Cuyamaca/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2007

N/S St: Cuyamaca

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	1	2	2	0	2	3	0
LGConfig	L	T	R	L	T	R	L	TR		L	TR	
Volume	323	1068	209	195	795	139	554	550	142	342	509	85
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vol			58			22			9			12

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A	A			NB	Left	A	A		
	Thru		A	A			Thru		A	A	
	Right		A	A			Right		A	A	
	Peds						Peds				
WB	Left	A				SB	Left	A			
	Thru			A			Thru			A	
	Right			A			Right			A	
	Peds						Peds				
NB	Right					EB	Right	A	A		
SB	Right					WB	Right	A			
Green		10.0	8.0	32.0				15.0	8.0	17.0	
Yellow		4.0	4.0	4.0				4.0	4.0	4.0	
All Red		1.0	1.0	1.0				1.0	1.0	1.0	

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	640	3338	0.55	0.19	44.8	D		
T	1848	4929	0.63	0.38	28.9	C	30.2	C
R	1029	1583	0.16	0.65	8.3	A		
Westbound								
L	286	3437	0.74	0.08	64.3	E		
T	1314	4929	0.66	0.27	40.3	D	42.5	D
R	666	1538	0.19	0.43	21.1	C		
Northbound								
L	779	3338	0.77	0.23	48.0	D		
TR	836	3344	0.89	0.25	56.7	E	52.8	D
Southbound								
L	430	3437	0.87	0.13	71.1	E		
TR	705	4979	0.90	0.14	67.6	E	68.9	E

Intersection Delay = 46.3 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Existing Peak Hour Traffic
E/W St: Mission Gorge

Inter.: Cottonwood/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2007

N/S St: Cottonwood

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	0	1	3	0	0	1	1	0	1	1
LGConfig	L	TR		L	TR			LT	R		LT	R
Volume	41	577	46	72	1155	16	55	6	58	11	5	39
Lane Width	12.0	12.0		12.0	12.0			12.0	12.0		12.0	12.0
RTOR Vol			21			4			15			10

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru	A			
Right		A				Right	A			
Peds						Peds				
WB Left	A				SB	Left		A		
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	14.0	66.0					10.0	10.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	201	1719	0.22	0.12	48.6	D		
TR	2697	4904	0.24	0.55	9.6	A	12.1	B
Westbound								
L	207	1770	0.38	0.12	50.1	D		
TR	2707	4922	0.47	0.55	11.3	B	13.5	B
Northbound								
LT	144	1732	0.47	0.08	54.8	D	54.4	D
R	128	1538	0.37	0.08	53.8	D		
Southbound								
LT	150	1799	0.11	0.08	51.2	D	52.0	D
R	132	1583	0.24	0.08	52.4	D		

Intersection Delay = 16.0 (sec/veh) Intersection LOS = B

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Existing Peak Hour Traffic
E/W St: Mission Gorge

Inter.: Cottonwood/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2007

N/S St: Cottonwood

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	0	1	3	0	0	1	1	0	1	1
LGConfig	L	TR		L	TR			LT	R		LT	R
Volume	24	1354	86	39	1104	8	75	6	75	13	8	50
Lane Width	12.0	12.0		12.0	12.0			12.0	12.0		12.0	12.0
RTOR Vol			21			2			19			12

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru	A			
Right		A				Right	A			
Peds						Peds				
WB Left	A				SB	Left		A		
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	14.0	63.0					13.0	10.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	201	1719	0.13	0.12	47.8	D		
TR	2574	4902	0.60	0.52	14.7	B	15.3	B
Westbound								
L	207	1770	0.20	0.12	48.4	D		
TR	2586	4925	0.47	0.52	13.2	B	14.3	B
Northbound								
LT	187	1730	0.48	0.11	52.2	D	51.7	D
R	167	1538	0.37	0.11	51.0	D		
Southbound								
LT	151	1808	0.15	0.08	51.5	D	52.5	D
R	132	1583	0.31	0.08	53.1	D		

Intersection Delay = 17.5 (sec/veh) Intersection LOS = B

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Existing Peak Hour Traffic
E/W St: Mission Gorge

Inter.: Magnolia/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2007

N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	0	2	2	1	2	2	1
LGConfig	L	T	R	L	TR		L	T	R	L	T	R
Volume	107	357	147	264	871	172	293	445	275	203	628	149
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			37			43			69			37

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	A				NB Left	A			
Thru		A			Thru		A		
Right		A			Right		A		
Peds					Peds				
WB Left	A				SB Left	A			
Thru		A			Thru		A		
Right		A			Right		A		
Peds					Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	15.0	43.0				15.0	27.0		
Yellow	4.0	4.0				4.0	4.0		
All Red	1.0	1.0				1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	417	3338	0.28	0.13	48.0	D		
T	1234	3445	0.31	0.36	26.2	C	30.4	C
R	567	1583	0.21	0.36	26.9	C		
Westbound								
L	430	3437	0.67	0.13	54.1	D		
TR	1211	3379	0.90	0.36	44.4	D	46.5	D
Northbound								
L	417	3338	0.76	0.13	59.3	E		
T	775	3445	0.62	0.22	43.5	D	49.1	D
R	346	1538	0.65	0.22	46.5	D		
Southbound								
L	430	3437	0.51	0.13	50.2	D		
T	798	3547	0.86	0.22	54.6	D	51.9	D
R	356	1583	0.34	0.22	39.6	D		

Intersection Delay = 46.0 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Existing Peak Hour Traffic
E/W St: Mission Gorge

Inter.: Magnolia/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2007
N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	0	2	2	1	2	2	1
LGConfig	L	T	R	L	TR		L	T	R	L	T	R
Volume	166	853	373	233	625	130	371	776	290	204	470	112
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			93			32			72			28

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A	A		
Thru		A				Thru		A	A	
Right		A				Right		A	A	
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru			A	
Right		A				Right			A	
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	15.0	35.0					15.0	8.0	22.0	
Yellow	4.0	4.0					4.0	4.0	4.0	
All Red	1.0	1.0					1.0	1.0	1.0	

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	417	3338	0.43	0.13	49.3	D		
T	1005	3445	0.92	0.29	57.6	E	52.9	D
R	462	1583	0.66	0.29	40.7	D		
Westbound								
L	430	3437	0.59	0.13	51.7	D		
TR	984	3375	0.80	0.29	43.9	D	45.8	D
Northbound								
L	779	3338	0.52	0.23	40.7	D		
T	1005	3445	0.84	0.29	46.4	D	43.3	D
R	449	1538	0.53	0.29	36.8	D		
Southbound								
L	430	3437	0.52	0.13	50.2	D		
T	650	3547	0.79	0.18	53.4	D	51.4	D
R	290	1583	0.31	0.18	43.1	D		

Intersection Delay = 48.1 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Existing Peak Hour Traffic
E/W St: Prospect Ave

Inter.: Magnolia/Prospect Ave
Area Type: All other areas
Jurisd: San Diego County
Year : 2008

N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	1	1	2	2	1	2	0	2	2	1
LGConfig	L	T	R	L	T	R	L	TR		L	T	R
Volume	60	246	67	98	599	1134	40	11	141	532	390	138
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
RTOR Vol			17			284			35			35

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right	A			
SB Right	A				WB	Right	A			
Green	11.0	43.0					22.0	24.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	158	1719	0.41	0.09	53.2	D		
T	1234	3445	0.22	0.36	25.2	C	27.9	C
R	923	1583	0.06	0.58	10.8	B		
Westbound								
L	162	1770	0.66	0.09	62.7	E		
T	1234	3445	0.53	0.36	28.9	C	24.2	C
R	1588	2722	0.58	0.58	16.3	B		
Northbound								
L	315	1719	0.14	0.18	41.2	D		
TR	595	2977	0.21	0.20	40.3	D	40.5	D
Southbound								
L	630	3437	0.92	0.18	72.0	E		
T	709	3547	0.60	0.20	45.0	D	57.4	E
R	528	1583	0.21	0.33	28.9	C		

Intersection Delay = 36.5 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Existing Peak Hour Traffic
E/W St: Prospect Ave

Inter.: Magnolia/Prospect Ave
Area Type: All other areas
Jurisd: San Diego County
Year : 2008

N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	1	1	2	2	1	2	0	2	2	1
LGConfig	L	T	R	L	T	R	L	TR		L	T	R
Volume	95	711	53	134	488	1222	83	422	141	945	294	72
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
RTOR Vol			13			306			35			18

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru			A	
Right		A				Right			A	
Peds						Peds				
WB Left	A				SB	Left	A	A		
Thru		A				Thru		A	A	
Right		A				Right		A	A	
Peds						Peds				
NB Right					EB	Right	A			
SB Right	A				WB	Right	A	A		
Green	13.0	28.0					18.0	13.0	24.0	
Yellow	4.0	4.0					4.0	4.0	4.0	
All Red	1.0	1.0					1.0	1.0	1.0	

Cycle Length: 121.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	185	1719	0.56	0.11	55.0+	E		
T	797	3445	0.97	0.23	86.0	F	79.5	E
R	667	1583	0.06	0.42	20.9	C		
Westbound								
L	190	1770	0.77	0.11	71.7	E		
T	797	3445	0.66	0.23	44.4	D	31.4	C
R	1552	2722	0.64	0.57	18.5	B		
Northbound								
L	256	1719	0.35	0.15	47.1	D		
TR	663	3342	0.87	0.20	60.1	E	58.3	E
Southbound								
L	1023	3437	1.00	0.30	102.5	F		
T	1231	3547	0.26	0.35	26.9	C	81.7	F
R	785	1583	0.08	0.50	16.0	B		

Intersection Delay = 59.9 (sec/veh) Intersection LOS = E

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Existing + Project
E/W St: Town Center

Inter.: Cuyamaca/Town Center
Area Type: All other areas
Jurisd: San Diego County
Year : 2007

N/S St: Cuyamaca

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	1	1	2	2	1	2	3	1	2	3	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	130	21	39	9	39	152	58	317	6	107	549	249
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			10			38			2			62

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	15.0	32.0					15.0	38.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	417	3338	0.34	0.13	48.4	D		
T	483	1810	0.05	0.27	32.7	C	44.1	D
R	422	1583	0.08	0.27	33.0	C		
Westbound								
L	430	3437	0.02	0.13	46.1	D		
T	919	3445	0.05	0.27	32.7	C	35.4	D
R	410	1538	0.30	0.27	35.5	D		
Northbound								
L	417	3338	0.15	0.13	47.0	D		
T	1561	4929	0.22	0.32	29.4	C	32.0	C
R	487	1538	0.01	0.32	28.1	C		
Southbound								
L	430	3437	0.27	0.13	47.9	D		
T	1607	5074	0.37	0.32	31.0	C	33.5	C
R	501	1583	0.41	0.32	32.7	C		

Intersection Delay = 34.6 (sec/veh) Intersection LOS = C

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Existing + Project
E/W St: Town Center

Inter.: Cuyamaca/Town Center
Area Type: All other areas
Jurisd: San Diego County
Year : 2007

N/S St: Cuyamaca

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	1	1	2	2	1	2	3	1	2	3	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	466	17	153	21	57	193	220	684	8	172	703	280
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			38			48			2			70

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A	A			NB	Left	A			
Thru		A	A			Thru		A		
Right		A	A			Right		A		
Peds						Peds				
WB Left	A				SB	Left	A			
Thru			A			Thru		A		
Right			A			Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	15.0	8.0	18.0				15.0	39.0		
Yellow	4.0	4.0	4.0				4.0	4.0		
All Red	1.0	1.0	1.0				1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	779	3338	0.65	0.23	43.5	D		
T	468	1810	0.04	0.26	33.4	C	41.9	D
R	409	1583	0.31	0.26	36.3	D		
Westbound								
L	430	3437	0.05	0.13	46.3	D		
T	517	3445	0.12	0.15	44.2	D	52.6	D
R	231	1538	0.68	0.15	56.7	E		
Northbound								
L	417	3338	0.57	0.13	51.4	D		
T	1602	4929	0.46	0.32	31.3	C	36.1	D
R	500	1538	0.01	0.32	27.5	C		
Southbound								
L	430	3437	0.43	0.13	49.3	D		
T	1649	5074	0.46	0.32	31.3	C	34.4	C
R	514	1583	0.44	0.32	32.6	C		

Intersection Delay = 38.0 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Existing + Project
E/W St: Mission Gorge

Inter.: Cuyamaca/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2007

N/S St: Cuyamaca

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	1	2	2	0	2	3	0
LGConfig	L	T	R	L	T	R	L	TR		L	TR	
Volume	126	545	232	132	915	86	267	181	39	116	385	54
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vol			58			22			10			14

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A	A		
Thru		A				Thru		A	A	
Right		A				Right		A	A	
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru			A	
Right		A				Right			A	
Peds						Peds				
NB Right					EB	Right	A	A		
SB Right					WB	Right	A			
Green	14.0	42.0					14.0	8.0	17.0	
Yellow	4.0	4.0					4.0	4.0	4.0	
All Red	1.0	1.0					1.0	1.0	1.0	

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	389	3338	0.35	0.12	49.4	D		
T	1725	4929	0.34	0.35	27.3	C	27.1	C
R	976	1583	0.19	0.62	10.1	B		
Westbound								
L	401	3437	0.36	0.12	49.4	D		
T	1725	4929	0.58	0.35	30.5	C	31.8	C
R	782	1538	0.09	0.51	15.2	B		
Northbound								
L	751	3338	0.39	0.22	39.8	D		
TR	843	3373	0.27	0.25	36.4	D	38.3	D
Southbound								
L	401	3437	0.31	0.12	49.1	D		
TR	709	5003	0.65	0.14	50.8	D	50.4	D

Intersection Delay = 34.9 (sec/veh) Intersection LOS = C

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Existing + Project
E/W St: Mission Gorge

Inter.: Cuyamaca/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2007

N/S St: Cuyamaca

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	1	2	2	0	2	3	0
LGConfig	L	T	R	L	T	R	L	TR		L	TR	
Volume	328	1075	209	197	801	139	554	550	144	342	509	80
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vol			52			35			36			20

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A	A			NB	Left	A	A		
Thru		A	A			Thru		A	A	
Right		A	A			Right		A	A	
Peds						Peds				
WB Left	A				SB	Left	A			
Thru			A			Thru			A	
Right			A			Right			A	
Peds						Peds				
NB Right					EB	Right	A	A		
SB Right					WB	Right	A			
Green	11.0	5.0	33.0				15.0	8.0	18.0	
Yellow	4.0	4.0	4.0				4.0	4.0	4.0	
All Red	1.0	1.0	1.0				1.0	1.0	1.0	

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	601	3437	0.61	0.17	47.3	D		
T	1818	5074	0.66	0.36	33.1	C	33.7	C
R	1003	1583	0.17	0.63	9.1	A		
Westbound								
L	315	3437	0.70	0.09	59.0	E		
T	1395	5074	0.64	0.28	39.1	D	40.9	D
R	699	1583	0.17	0.44	20.3	C		
Northbound								
L	802	3437	0.77	0.23	47.2	D		
TR	894	3459	0.82	0.26	47.6	D	47.4	D
Southbound								
L	430	3437	0.88	0.13	72.9	E		
TR	749	4994	0.85	0.15	58.3	E	63.8	E

Intersection Delay = 44.6 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Existing + Project
E/W St: Mission Gorge

Inter.: Cottonwood/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2007

N/S St: Cottonwood

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	0	1	3	0	0	1	1	0	1	1
LGConfig	L	TR		L	TR			LT	R		LT	R
Volume	48	577	46	72	1155	22	55	6	58	15	5	45
Lane Width	12.0	12.0		12.0	12.0			12.0	12.0		12.0	12.0
RTOR Vol			12			6			15			11

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru	A			
Right		A				Right	A			
Peds						Peds				
WB Left	A				SB	Left		A		
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	14.0	66.0					10.0	10.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	201	1719	0.26	0.12	49.0	D		
TR	2693	4896	0.25	0.55	9.6	A	12.5	B
Westbound								
L	207	1770	0.38	0.12	50.1	D		
TR	2705	4919	0.47	0.55	11.3	B	13.5	B
Northbound								
LT	144	1732	0.47	0.08	54.8	D	54.4	D
R	128	1538	0.37	0.08	53.8	D		
Southbound								
LT	150	1794	0.14	0.08	51.4	D	52.3	D
R	132	1583	0.28	0.08	52.8	D		

Intersection Delay = 16.3 (sec/veh) Intersection LOS = B

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Existing Peak Hour Traffic
E/W St: Mission Gorge

Inter.: Cottonwood/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2007

N/S St: Cottonwood

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	0	1	3	0	0	1	1	0	1	1
LGConfig	L	TR		L	TR			LT	R		LT	R
Volume	33	1354	86	39	1104	15	75	6	75	19	8	58
Lane Width	12.0	12.0		12.0	12.0			12.0	12.0		12.0	12.0
RTOR Vol			22			4			19			15

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru	A			
Right		A				Right	A			
Peds						Peds				
WB Left	A				SB	Left		A		
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	14.0	63.0					13.0	10.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	201	1719	0.18	0.12	48.2	D		
TR	2574	4902	0.60	0.52	14.7	B	15.5	B
Westbound								
L	207	1770	0.20	0.12	48.4	D		
TR	2584	4922	0.47	0.52	13.2	B	14.4	B
Northbound								
LT	187	1730	0.48	0.11	52.2	D	51.7	D
R	167	1538	0.37	0.11	51.0	D		
Southbound								
LT	150	1800	0.20	0.08	51.9	D	53.0	D
R	132	1583	0.36	0.08	53.6	D		

Intersection Delay = 17.8 (sec/veh) Intersection LOS = B

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Existing + Project
E/W St: Mission Gorge

Inter.: Magnolia/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2007

N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	0	2	2	1	2	2	1
LGConfig	L	T	R	L	TR		L	T	R	L	T	R
Volume	107	360	148	264	875	176	295	456	275	206	637	149
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			37			44			69			37

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	15.0	43.0					15.0	27.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	417	3338	0.28	0.13	48.0	D		
T	1234	3445	0.32	0.36	26.2	C	30.4	C
R	567	1583	0.21	0.36	26.9	C		
Westbound								
L	430	3437	0.67	0.13	54.1	D		
TR	1210	3378	0.90	0.36	45.4	D	47.2	D
Northbound								
L	417	3338	0.77	0.13	59.9	E		
T	775	3445	0.64	0.22	43.9	D	49.4	D
R	346	1538	0.65	0.22	46.5	D		
Southbound								
L	430	3437	0.52	0.13	50.3	D		
T	798	3547	0.87	0.22	55.9	E	52.8	D
R	356	1583	0.34	0.22	39.6	D		

Intersection Delay = 46.6 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Existing + Project
E/W St: Mission Gorge

Inter.: Magnolia/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2007

N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	0	2	2	1	2	2	1
LGConfig	L	T	R	L	TR		L	T	R	L	T	R
Volume	166	857	375	233	630	135	373	790	290	208	482	112
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			94			34			73			28

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A	A		
Thru		A				Thru		A	A	
Right		A				Right		A	A	
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru			A	
Right		A				Right			A	
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	15.0	35.0					15.0	8.0	22.0	
Yellow	4.0	4.0					4.0	4.0	4.0	
All Red	1.0	1.0					1.0	1.0	1.0	

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	417	3338	0.43	0.13	49.3	D		
T	1005	3445	0.93	0.29	58.8	E	53.7	D
R	462	1583	0.66	0.29	40.8	D		
Westbound								
L	430	3437	0.59	0.13	51.7	D		
TR	984	3374	0.81	0.29	44.4	D	46.2	D
Northbound								
L	779	3338	0.52	0.23	40.8	D		
T	1005	3445	0.85	0.29	47.7	D	44.1	D
R	449	1538	0.53	0.29	36.7	D		
Southbound								
L	430	3437	0.53	0.13	50.4	D		
T	650	3547	0.81	0.18	54.8	D	52.4	D
R	290	1583	0.31	0.18	43.1	D		

Intersection Delay = 48.8 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Existing Plus Project AM Peak Hour
E/W St: Prospect Ave

Inter.: Magnolia/Prospect Ave
Area Type: All other areas
Jurisd: San Diego County
Year : 2007
N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	1	1	2	2	1	2	0	2	2	1
LGConfig	L	T	R	L	T	R	L	TR		L	T	R
Volume	60	246	67	98	599	1147	40	11	38	842	390	138
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
RTOR Vol			17			287			35			35

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right	A			
SB Right	A				WB	Right	A			
Green	15.0	35.0					33.0	17.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	215	1719	0.30	0.13	48.5	D		
T	1005	3445	0.27	0.29	32.5	C	32.0	C
R	963	1583	0.06	0.61	9.6	A		
Westbound								
L	221	1770	0.48	0.13	50.6	D		
T	1005	3445	0.65	0.29	38.3	D	25.9	C
R	1656	2722	0.56	0.61	14.5	B		
Northbound								
L	473	1719	0.09	0.28	32.4	C		
TR	473	3342	0.03	0.14	44.4	D	35.5	D
Southbound								
L	945	3437	0.97	0.28	77.4	E		
T	502	3547	0.84	0.14	64.3	E	70.0	E
R	488	1583	0.23	0.31	31.1	C		

Intersection Delay = 44.6 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Existing + Project Peak Hour Traffic
E/W St: Prospect Ave

Inter.: Magnolia/Prospect Ave
Area Type: All other areas
Jurisd: San Diego County
Year : 2008
N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	1	1	2	2	1	2	0	2	2	1
LGConfig	L	T	R	L	T	R	L	TR		L	T	R
Volume	95	711	53	134	488	1238	83	422	141	959	294	72
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
RTOR Vol			13			309			35			18

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru			A	
Right		A				Right			A	
Peds						Peds				
WB Left	A				SB	Left	A	A		
Thru		A				Thru		A	A	
Right		A				Right		A	A	
Peds						Peds				
NB Right					EB	Right	A			
SB Right	A				WB	Right	A	A		
Green	13.0	28.0					18.0	14.0	22.0	
Yellow	4.0	4.0					4.0	4.0	4.0	
All Red	1.0	1.0					1.0	1.0	1.0	

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	186	1719	0.55	0.11	54.4	D		
T	804	3445	0.96	0.23	80.4	F	74.7	E
R	673	1583	0.06	0.43	20.4	C		
Westbound								
L	192	1770	0.76	0.11	69.9	E		
T	804	3445	0.66	0.23	43.7	D	30.2	C
R	1588	2722	0.64	0.58	17.4	B		
Northbound								
L	258	1719	0.35	0.15	46.6	D		
TR	613	3342	0.94	0.18	79.0	E	74.6	E
Southbound								
L	1060	3437	0.98	0.31	82.1	F		
T	1212	3547	0.26	0.34	27.3	C	67.0	E
R	778	1583	0.08	0.49	16.1	B		

Intersection Delay = 56.4 (sec/veh) Intersection LOS = E

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Existing + Cumulative
E/W St: Town Center

Inter.: Cuyamaca/Town Center
Area Type: All other areas
Jurisd: San Diego County
Year : 2012

N/S St: Cuyamaca

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	1	1	2	2	1	2	3	1	2	3	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	144	20	41	6	42	160	61	412	2	153	736	278
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			10			40			1			70

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	15.0	32.0					15.0	38.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	417	3338	0.38	0.13	48.8	D		
T	483	1810	0.05	0.27	32.7	C	44.6	D
R	422	1583	0.08	0.27	33.1	C		
Westbound								
L	430	3437	0.02	0.13	46.0	D		
T	919	3445	0.05	0.27	32.7	C	35.3	D
R	410	1538	0.32	0.27	35.7	D		
Northbound								
L	417	3338	0.16	0.13	47.0	D		
T	1561	4929	0.29	0.32	30.1	C	32.2	C
R	487	1538	0.00	0.32	28.0	C		
Southbound								
L	430	3437	0.39	0.13	48.8	D		
T	1607	5074	0.50	0.32	32.6	C	35.0-	C
R	501	1583	0.45	0.32	33.3	C		

Intersection Delay = 35.3 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Existing + Cumulative
E/W St: Town Center

Inter.: Cuyamaca/Town Center
Area Type: All other areas
Jurisd: San Diego County
Year : 2012

N/S St: Cuyamaca

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	1	1	2	2	1	2	3	1	2	3	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	510	16	161	18	58	255	231	718	3	203	832	504
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			40			64			1			126

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A	A			NB	Left	A			
	Thru		A	A			Thru		A		
	Right		A	A			Right		A		
	Peds						Peds				
WB	Left	A				SB	Left	A			
	Thru			A			Thru		A		
	Right			A			Right		A		
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		15.0	8.0	18.0				15.0	39.0		
Yellow		4.0	4.0	4.0				4.0	4.0		
All Red		1.0	1.0	1.0				1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	779	3338	0.71	0.23	45.4	D		
T	468	1810	0.04	0.26	33.3	C	43.4	D
R	409	1583	0.32	0.26	36.5	D		
Westbound								
L	430	3437	0.05	0.13	46.3	D		
T	517	3445	0.12	0.15	44.3	D	82.3	F
R	231	1538	0.90	0.15	97.2	F		
Northbound								
L	417	3338	0.60	0.13	52.1	D		
T	1602	4929	0.49	0.32	31.6	C	36.6	D
R	500	1538	0.00	0.32	27.4	C		
Southbound								
L	430	3437	0.51	0.13	50.2	D		
T	1649	5074	0.55	0.32	32.5	C	38.7	D
R	514	1583	0.80	0.32	46.3	D		

Intersection Delay = 42.6 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Existing + Cumulative Peak Hour Traffic
E/W St: Mission Gorge

Inter.: Cuyamaca/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2012
N/S St: Cuyamaca

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	1	2	2	0	2	3	0
LGConfig	L	T	R	L	T	R	L	TR		L	TR	
Volume	140	567	269	136	956	90	292	235	39	215	404	78
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vol			67			23			10			20

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A	A		
Thru		A				Thru		A	A	
Right		A				Right		A	A	
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru			A	
Right		A				Right			A	
Peds						Peds				
NB Right					EB	Right	A	A		
SB Right					WB	Right	A			
Green	14.0	42.0					14.0	8.0	17.0	
Yellow	4.0	4.0					4.0	4.0	4.0	
All Red	1.0	1.0					1.0	1.0	1.0	

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	389	3338	0.39	0.12	49.7	D		
T	1725	4929	0.36	0.35	27.5	C	27.1	C
R	976	1583	0.23	0.62	10.4	B		
Westbound								
L	401	3437	0.37	0.12	49.5	D		
T	1725	4929	0.60	0.35	30.9	C	32.2	C
R	782	1538	0.09	0.51	15.3	B		
Northbound								
L	751	3338	0.42	0.22	40.2	D		
TR	847	3388	0.34	0.25	37.1	D	38.7	D
Southbound								
L	401	3437	0.58	0.12	52.4	D		
TR	705	4979	0.71	0.14	52.6	D	52.6	D

Intersection Delay = 36.1 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Existing + Cumulative
E/W St: Mission Gorge

Inter.: Cuyamaca/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2012

N/S St: Cuyamaca

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	1	2	2	0	2	3	0
LGConfig	L	T	R	L	T	R	L	TR		L	TR	
Volume	371	1121	234	205	838	146	614	693	149	359	589	104
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vol			59			37			37			26

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A	A			NB	Left	A	A		
	Thru		A	A			Thru		A	A	
	Right		A	A			Right		A	A	
	Peds						Peds				
WB	Left	A				SB	Left	A			
	Thru			A			Thru			A	
	Right			A			Right			A	
	Peds						Peds				
NB	Right					EB	Right	A	A		
SB	Right					WB	Right	A			
Green		12.0	5.0	35.0				16.0	5.0	17.0	
Yellow		4.0	4.0	4.0				4.0	4.0	4.0	
All Red		1.0	1.0	1.0				1.0	1.0	1.0	

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	630	3437	0.65	0.18	47.7	D		
T	1903	5074	0.65	0.38	31.8	C	33.0	C
R	1003	1583	0.19	0.63	9.3	A		
Westbound								
L	344	3437	0.66	0.10	56.4	E		
T	1480	5074	0.63	0.29	37.6	D	39.2	D
R	739	1583	0.16	0.47	18.6	B		
Northbound								
L	745	3437	0.92	0.22	64.2	E		
TR	781	3473	1.14	0.22	322.4	F	210.7	F
Southbound								
L	458	3437	0.87	0.13	68.7	E		
TR	706	4985	1.05	0.14	175.7	F	138.2	F

Intersection Delay = 102.7 (sec/veh) Intersection LOS = F

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Existing + Cumulative
E/W St: Mission Gorge

Inter.: Cottonwood/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2012

N/S St: Cottonwood

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	0	1	3	0	0	1	1	0	1	1
LGConfig	L	TR		L	TR			LT	R		LT	R
Volume	43	606	48	76	1213	17	58	6	61	12	5	41
Lane Width	12.0	12.0		12.0	12.0			12.0	12.0		12.0	12.0
RTOR Vol			12			7			14			13

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru	A			
Right		A				Right	A			
Peds						Peds				
WB Left	A				SB	Left		A		
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	14.0	66.0					10.0	10.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	201	1719	0.23	0.12	48.7	D		
TR	2693	4896	0.26	0.55	9.7	A	12.2	B
Westbound								
L	207	1770	0.40	0.12	50.4	D		
TR	2708	4923	0.49	0.55	11.5	B	13.8	B
Northbound								
LT	144	1732	0.49	0.08	55.1	E	54.7	D
R	128	1538	0.40	0.08	54.2	D		
Southbound								
LT	150	1798	0.12	0.08	51.3	D	51.9	D
R	132	1583	0.23	0.08	52.3	D		

Intersection Delay = 16.2 (sec/veh) Intersection LOS = B

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Existing + Cumulative
E/W St: Mission Gorge

Inter.: Cottonwood/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2012

N/S St: Cottonwood

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	0	1	3	0	0	1	1	0	1	1
LGConfig	L	TR		L	TR			LT	R		LT	R
Volume	25	1422	90	41	1159	8	79	6	79	13	8	52
Lane Width	12.0	12.0		12.0	12.0			12.0	12.0		12.0	12.0
RTOR Vol			22			2			20			13

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru	A			
Right		A				Right	A			
Peds						Peds				
WB Left	A				SB	Left		A		
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	14.0	63.0					13.0	10.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	201	1719	0.13	0.12	47.9	D		
TR	2574	4902	0.63	0.52	15.2	B	15.7	B
Westbound								
L	207	1770	0.22	0.12	48.6	D		
TR	2586	4925	0.49	0.52	13.4	B	14.6	B
Northbound								
LT	187	1730	0.50	0.11	52.5	D	52.0	D
R	167	1538	0.38	0.11	51.2	D		
Southbound								
LT	151	1808	0.15	0.08	51.5	D	52.6	D
R	132	1583	0.32	0.08	53.2	D		

Intersection Delay = 17.8 (sec/veh) Intersection LOS = B

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Existing + Cumulative Peak Hour Traffic
E/W St: Mission Gorge

Inter.: Magnolia/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2012
N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	0	2	2	1	2	2	1
LGConfig	L	T	R	L	TR		L	T	R	L	T	R
Volume	112	375	154	277	915	185	308	492	289	221	710	156
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			39			46			72			39

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A			
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
WB	Left	A				SB	Left	A			
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		14.0	43.0					14.0	29.0		
Yellow		4.0	4.0					4.0	4.0		
All Red		1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	389	3338	0.31	0.12	49.1	D		
T	1234	3445	0.33	0.36	26.4	C	30.7	C
R	567	1583	0.22	0.36	27.0	C		
Westbound								
L	401	3437	0.75	0.12	59.4	E		
TR	1210	3377	0.95	0.36	55.2	E	56.1	E
Northbound								
L	389	3338	0.86	0.12	72.8	E		
T	833	3445	0.64	0.24	42.6	D	52.1	D
R	372	1538	0.63	0.24	44.3	D		
Southbound								
L	401	3437	0.60	0.12	52.8	D		
T	857	3547	0.90	0.24	59.0	E	55.4	E
R	383	1583	0.33	0.24	38.0	D		

Intersection Delay = 51.0 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Existing + Cumulative
E/W St: Mission Gorge

Inter.: Magnolia/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2012

N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	0	2	2	1	2	2	1
LGConfig	L	T	R	L	TR		L	T	R	L	T	R
Volume	176	895	392	245	656	147	390	879	304	219	522	118
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			98			37			76			30

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A	A		
	Thru		A				Thru		A	A	
	Right		A				Right		A	A	
	Peds						Peds				
WB	Left	A				SB	Left	A			
	Thru		A				Thru			A	
	Right		A				Right			A	
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		14.0	36.0					15.0	8.0	22.0	
Yellow		4.0	4.0					4.0	4.0	4.0	
All Red		1.0	1.0					1.0	1.0	1.0	

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	389	3338	0.49	0.12	50.6	D		
T	1034	3445	0.94	0.30	61.4	E	55.6	E
R	475	1583	0.67	0.30	40.7	D		
Westbound								
L	401	3437	0.66	0.12	54.9	D		
TR	1011	3371	0.82	0.30	44.4	D	47.0	D
Northbound								
L	779	3338	0.54	0.23	41.2	D		
T	1005	3445	0.95	0.29	66.0	E	55.2	E
R	449	1538	0.55	0.29	37.4	D		
Southbound								
L	430	3437	0.55	0.13	50.9	D		
T	650	3547	0.87	0.18	61.9	E	57.0	E
R	290	1583	0.33	0.18	43.3	D		

Intersection Delay = 53.9 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Existing Plus Cumulative AM Peak Hour
E/W St: Prospect Ave

Inter.: Magnolia/Prospect Ave
Area Type: All other areas
Jurisd: San Diego County
Year : 2012
N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	1	1	2	2	1	2	0	2	2	1
LGConfig	L	T	R	L	T	R	L	TR		L	T	R
Volume	63	258	70	103	629	1191	42	12	39	559	409	145
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
RTOR Vol			17			298			10			36

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right	A			
SB Right	A				WB	Right	A			
Green	15.0	37.0					21.0	27.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	215	1719	0.32	0.13	48.7	D		
T	1062	3445	0.26	0.31	30.7	C	31.4	C
R	831	1583	0.07	0.52	14.1	B		
Westbound								
L	221	1770	0.51	0.13	51.0	D		
T	1062	3445	0.64	0.31	36.4	D	29.6	C
R	1429	2722	0.68	0.52	22.4	C		
Northbound								
L	301	1719	0.15	0.17	42.2	D		
TR	693	3078	0.06	0.22	36.6	D	39.4	D
Southbound								
L	601	3437	1.01	0.17	134.6	F		
T	798	3547	0.56	0.22	42.1	D	88.3	F
R	620	1583	0.19	0.39	24.1	C		

Intersection Delay = 50.1 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Existing Plus Cumulative PM Peak Hour
E/W St: Prospect Ave

Inter.: Magnolia/Prospect Ave
Area Type: All other areas
Jurisd: San Diego County
Year : 2012
N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	1	1	2	2	1	2	0	2	2	1
LGConfig	L	T	R	L	T	R	L	TR		L	T	R
Volume	100	746	56	141	512	1283	87	443	148	992	309	76
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
RTOR Vol			14			320			47			19

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A	A		
	Thru		A				Thru		A	A	
	Right		A				Right		A	A	
	Peds						Peds				
WB	Left	A				SB	Left	A			
	Thru		A				Thru	P		A	
	Right		A				Right			A	
	Peds						Peds				
NB	Right					EB	Right	A			
SB	Right	A				WB	Right	A			
Green		15.0	30.0					24.0	8.0	18.0	
Yellow		4.0	4.0					4.0	4.0	4.0	
All Red		1.0	1.0					1.0	1.0	1.0	

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	215	1719	0.51	0.13	51.0	D		
T	861	3445	0.94	0.25	69.0	E	64.5	E
R	778	1583	0.06	0.49	16.0	B		
Westbound								
L	221	1770	0.69	0.13	59.7	E		
T	861	3445	0.65	0.25	42.0	D	35.4	D
R	1338	2722	0.78	0.49	28.4	C		
Northbound								
L	367	1719	0.26	0.31	33.8	C		
TR	865	3349	0.68	0.26	42.4	D	41.2	D
Southbound								
L	687	3437	1.57	0.20	1080	F		
T	1241	3547	0.27	0.35	26.5	C	795.8	F
R	501	1583	0.12	0.32	29.3	C		

Intersection Delay = 271.7 (sec/veh) Intersection LOS = F

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Existing + Cumulative + Project
E/W St: Town Center

Inter.: Cuyamaca/Town Center
Area Type: All other areas
Jurisd: San Diego County
Year : 2012
N/S St: Cuyamaca

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	1	1	2	2	1	2	3	1	2	3	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	144	22	41	9	44	161	61	412	6	154	736	278
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			10			40			1			70

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A			
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
WB	Left	A				SB	Left	A			
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		15.0	32.0					15.0	38.0		
Yellow		4.0	4.0					4.0	4.0		
All Red		1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	417	3338	0.38	0.13	48.8	D		
T	483	1810	0.05	0.27	32.7	C	44.5	D
R	422	1583	0.08	0.27	33.1	C		
Westbound								
L	430	3437	0.02	0.13	46.1	D		
T	919	3445	0.05	0.27	32.7	C	35.5	D
R	410	1538	0.32	0.27	35.8	D		
Northbound								
L	417	3338	0.16	0.13	47.0	D		
T	1561	4929	0.29	0.32	30.1	C	32.2	C
R	487	1538	0.01	0.32	28.1	C		
Southbound								
L	430	3437	0.39	0.13	48.9	D		
T	1607	5074	0.50	0.32	32.6	C	35.0+	D
R	501	1583	0.45	0.32	33.3	C		

Intersection Delay = 35.3 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Existing + Cumulative + Project
E/W St: Town Center

Inter.: Cuyamaca/Town Center
Area Type: All other areas
Jurisd: San Diego County
Year : 2012
N/S St: Cuyamaca

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	1	1	2	2	1	2	3	1	2	3	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	510	18	161	22	60	257	231	718	8	205	832	504
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			40			64			2			126

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A	A			NB	Left	A			
Thru		A	A			Thru		A		
Right		A	A			Right		A		
Peds						Peds				
WB Left	A				SB	Left	A			
Thru			A			Thru		A		
Right			A			Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	15.0	8.0	18.0				15.0	39.0		
Yellow	4.0	4.0	4.0				4.0	4.0		
All Red	1.0	1.0	1.0				1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	779	3338	0.71	0.23	45.4	D		
T	468	1810	0.04	0.26	33.4	C	43.4	D
R	409	1583	0.32	0.26	36.5	D		
Westbound								
L	430	3437	0.06	0.13	46.3	D		
T	517	3445	0.13	0.15	44.3	D	84.4	F
R	231	1538	0.91	0.15	101.2	F		
Northbound								
L	417	3338	0.60	0.13	52.1	D		
T	1602	4929	0.49	0.32	31.6	C	36.5	D
R	500	1538	0.01	0.32	27.5	C		
Southbound								
L	430	3437	0.52	0.13	50.2	D		
T	1649	5074	0.55	0.32	32.5	C	38.8	D
R	514	1583	0.80	0.32	46.3	D		

Intersection Delay = 42.8 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Existing + Cumulative + Project
E/W St: Mission Gorge

Inter.: Cuyamaca/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2012
N/S St: Cuyamaca

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	1	2	2	0	2	3	0
LGConfig	L	T	R	L	T	R	L	TR		L	TR	
Volume	144	572	269	138	960	90	292	235	41	215	404	81
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vol			67			23			10			20

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A	A		
Thru		A				Thru		A	A	
Right		A				Right		A	A	
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru			A	
Right		A				Right			A	
Peds						Peds				
NB Right					EB	Right	A	A		
SB Right					WB	Right	A			
Green	14.0	42.0					14.0	8.0	17.0	
Yellow	4.0	4.0					4.0	4.0	4.0	
All Red	1.0	1.0					1.0	1.0	1.0	

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	389	3338	0.40	0.12	49.8	D		
T	1725	4929	0.36	0.35	27.5	C	27.2	C
R	976	1583	0.23	0.62	10.4	B		
Westbound								
L	401	3437	0.37	0.12	49.5	D		
T	1725	4929	0.60	0.35	31.0	C	32.3	C
R	782	1538	0.09	0.51	15.3	B		
Northbound								
L	751	3338	0.42	0.22	40.2	D		
TR	846	3385	0.34	0.25	37.1	D	38.7	D
Southbound								
L	401	3437	0.58	0.12	52.4	D		
TR	705	4975	0.72	0.14	52.8	D	52.7	D

Intersection Delay = 36.1 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Existing + Cumulative + Project
E/W St: Mission Gorge

Inter.: Cuyamaca/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2012
N/S St: Cuyamaca

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	1	2	2	0	2	3	0
LGConfig	L	T	R	L	T	R	L	TR		L	TR	
Volume	376	1128	234	207	844	146	614	693	151	359	589	108
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vol			59			37			38			27

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right	A			
SB Right					WB	Right	A			
Green	14.0	44.0					22.0	20.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	389	3338	1.05	0.12	203.7	F		
T	1807	4929	0.68	0.37	30.8	C	67.5	E
R	937	1583	0.20	0.59	11.5	B		
Westbound								
L	401	3437	0.56	0.12	51.9	D		
T	1807	4929	0.51	0.37	27.7	C	30.4	C
R	910	1538	0.13	0.59	10.9	B		
Northbound								
L	612	3338	1.09	0.18	240.8	F		
TR	562	3373	1.56	0.17	1065	F	708.5	F
Southbound								
L	630	3437	0.62	0.18	47.0	D		
TR	830	4982	0.88	0.17	60.7	E	55.9	E

Intersection Delay = 229.2 (sec/veh) Intersection LOS = F

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Existing + Cumulative + Project
E/W St: Mission Gorge

Inter.: Cottonwood/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2012
N/S St: Cottonwood

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	0	1	3	0	0	1	1	0	1	1
LGConfig	L	TR		L	TR			LT	R		LT	R
Volume	50	606	48	76	1213	23	58	6	61	16	5	47
Lane Width	12.0	12.0		12.0	12.0			12.0	12.0		12.0	12.0
RTOR Vol			12			6			15			12

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A			
	Thru		A				Thru	A			
	Right		A				Right	A			
	Peds						Peds				
WB	Left	A				SB	Left		A		
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		14.0	56.0					15.0	15.0		
Yellow		4.0	4.0					4.0	4.0		
All Red		1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	201	1719	0.27	0.12	49.1	D		
TR	2285	4896	0.31	0.47	16.3	B	18.6	B
Westbound								
L	207	1770	0.40	0.12	50.4	D		
TR	2296	4919	0.58	0.47	19.5	B	21.3	C
Northbound								
LT	217	1732	0.32	0.13	48.7	D	48.5	D
R	192	1538	0.26	0.13	48.2	D		
Southbound								
LT	224	1793	0.10	0.13	46.7	D	47.2	D
R	198	1583	0.19	0.13	47.5	D		

Intersection Delay = 22.5 (sec/veh) Intersection LOS = C

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Existing + Cumulative + Project
E/W St: Mission Gorge

Inter.: Cottonwood/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2012
N/S St: Cottonwood

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	0	1	3	0	0	1	1	0	1	1
LGConfig	L	TR		L	TR			LT	R		LT	R
Volume	34	1422	90	41	1159	15	79	6	79	19	8	60
Lane Width	12.0	12.0		12.0	12.0			12.0	12.0		12.0	12.0
RTOR Vol			23			4			20			15

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru	A			
Right		A				Right	A			
Peds						Peds				
WB Left	A				SB	Left		A		
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	14.0	56.0					15.0	15.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	201	1719	0.18	0.12	48.3	D		
TR	2288	4902	0.71	0.47	21.8	C	22.4	C
Westbound								
L	207	1770	0.22	0.12	48.6	D		
TR	2297	4922	0.55	0.47	19.0	B	20.1	C
Northbound								
LT	216	1730	0.43	0.13	49.9	D	49.5	D
R	192	1538	0.33	0.13	49.0	D		
Southbound								
LT	225	1800	0.13	0.13	47.0	D	47.7	D
R	198	1583	0.25	0.13	48.1	D		

Intersection Delay = 23.4 (sec/veh) Intersection LOS = C

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Existing + Cumulative + Project
E/W St: Mission Gorge

Inter.: Magnolia/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2012
N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	0	2	2	1	2	2	1
LGConfig	L	T	R	L	TR		L	T	R	L	T	R
Volume	112	378	155	277	919	189	310	503	289	224	719	156
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			39			47			72			39

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	15.0	43.0					15.0	27.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	417	3338	0.29	0.13	48.1	D		
T	1234	3445	0.33	0.36	26.4	C	30.5	C
R	567	1583	0.22	0.36	27.0	C		
Westbound								
L	430	3437	0.70	0.13	55.5	E		
TR	1210	3376	0.95	0.36	57.2	E	56.9	E
Northbound								
L	417	3338	0.81	0.13	63.4	E		
T	775	3445	0.71	0.22	45.8	D	51.6	D
R	346	1538	0.68	0.22	48.1	D		
Southbound								
L	430	3437	0.57	0.13	51.2	D		
T	798	3547	0.98	0.22	92.8	F	78.2	E
R	356	1583	0.36	0.22	39.8	D		

Intersection Delay = 57.2 (sec/veh) Intersection LOS = E

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Existing + Cumulative + Project
E/W St: Mission Gorge

Inter.: Magnolia/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2012
N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	0	2	2	1	2	2	1
LGConfig	L	T	R	L	TR		L	T	R	L	T	R
Volume	176	899	394	245	671	152	392	893	304	223	534	118
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			99			38			76			30

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A	A		
	Thru		A				Thru		A	A	
	Right		A				Right		A	A	
	Peds						Peds				
WB	Left	A				SB	Left	A			
	Thru		A				Thru			A	
	Right		A				Right			A	
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		15.0	35.0					15.0	8.0	22.0	
Yellow		4.0	4.0					4.0	4.0	4.0	
All Red		1.0	1.0					1.0	1.0	1.0	

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	417	3338	0.46	0.13	49.5	D		
T	1005	3445	0.97	0.29	76.8	E	65.9	E
R	462	1583	0.69	0.29	42.4	D		
Westbound								
L	430	3437	0.62	0.13	52.5	D		
TR	983	3370	0.87	0.29	49.2	D	50.0	D
Northbound								
L	779	3338	0.55	0.23	41.2	D		
T	1005	3445	0.97	0.29	73.4	E	59.6	E
R	449	1538	0.55	0.29	37.4	D		
Southbound								
L	430	3437	0.56	0.13	51.1	D		
T	650	3547	0.89	0.18	65.4	E	59.3	E
R	290	1583	0.33	0.18	43.3	D		

Intersection Delay = 59.3 (sec/veh) Intersection LOS = E

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Existing Plus Cumulative Plus Project AM Peak Hour
E/W St: Prospect Ave

Inter.: Magnolia/Prospect Ave
Area Type: All other areas
Jurisd: San Diego County
Year : 2012
N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	1	1	2	2	1	2	0	2	2	1
LGConfig	L	T	R	L	T	R	L	TR		L	T	R
Volume	63	258	70	103	629	1204	42	12	39	569	409	145
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
RTOR Vol			17			301			9			35

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right	A			
SB Right	A				WB	Right	A			
Green	15.0	37.0					21.0	27.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	215	1719	0.32	0.13	48.7	D		
T	1062	3445	0.26	0.31	30.7	C	31.4	C
R	831	1583	0.07	0.52	14.1	B		
Westbound								
L	221	1770	0.51	0.13	51.0	D		
T	1062	3445	0.64	0.31	36.4	D	29.7	C
R	1429	2722	0.69	0.52	22.6	C		
Northbound								
L	301	1719	0.15	0.17	42.2	D		
TR	692	3075	0.07	0.22	36.6	D	39.4	D
Southbound								
L	601	3437	1.03	0.17	153.6	F		
T	798	3547	0.56	0.22	42.1	D	98.5	F
R	620	1583	0.19	0.39	24.2	C		

Intersection Delay = 53.7 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Existing Plus Cumulative Plus Project PM Peak Hour
E/W St: Prospect Ave

Inter.: Magnolia/Prospect Ave
Area Type: All other areas
Jurisd: San Diego County
Year : 2012
N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	1	1	2	2	1	2	0	2	2	1
LGConfig	L	T	R	L	T	R	L	TR		L	T	R
Volume	100	746	56	141	512	1300	87	443	148	1006	309	76
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
RTOR Vol			14			325			47			19

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A	A		
	Thru		A				Thru		A	A	
	Right		A				Right		A	A	
	Peds						Peds				
WB	Left	A				SB	Left	A			
	Thru		A				Thru			A	
	Right		A				Right			A	
	Peds						Peds				
NB	Right					EB	Right	A	A		
SB	Right					WB	Right	A			
Green		15.0	30.0					20.0	8.0	22.0	
Yellow		4.0	4.0					4.0	4.0	4.0	
All Red		1.0	1.0					1.0	1.0	1.0	

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	215	1719	0.51	0.13	51.0	D		
T	861	3445	0.94	0.25	69.0	E	64.3	E
R	897	1583	0.05	0.57	11.6	B		
Westbound								
L	221	1770	0.69	0.13	59.7	E		
T	861	3445	0.65	0.25	42.0	D	39.3	D
R	1248	2722	0.85	0.46	34.9	C		
Northbound								
L	473	1719	0.20	0.28	33.6	C		
TR	977	3349	0.61	0.29	37.4	D	36.8	D
Southbound								
L	573	3437	1.91	0.17	1690	F		
T	650	3547	0.52	0.18	44.9	D	1251	F
R	290	1583	0.21	0.18	42.0	D		

Intersection Delay = 411.5 (sec/veh) Intersection LOS = F

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Existing + Cumulative + Project AM Peak Hour
E/W St: Riverview Pkwy

Inter.: Magnolia/ Riverview Pkwy
Area Type: All other areas
Jurisd: San Diego County
Year : 2013
N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	0	1	0	0	0	1	3	0	0	3	1
LGConfig	L		R				L	T			T	R
Volume	120		57				59	386			450	178
Lane Width	12.0		12.0				12.0	12.0			12.0	12.0
RTOR Vol			14									45

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru						Thru	A	A		
Right	A					Right				
Peds						Peds				
WB Left					SB	Left				
Thru						Thru		A		
Right						Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	35.0						22.0	48.0		
Yellow	4.0						4.0	4.0		
All Red	1.0						1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	501	1719	0.27	0.29	32.9	C		
							32.4	C
R	462	1583	0.10	0.29	31.1	C		
Westbound								
Northbound								
L	315	1719	0.21	0.18	41.9	D		
T	3081	4929	0.14	0.63	4.7	A	9.7	A
Southbound								
T	2030	5074	0.25	0.40	21.5	C	22.1	C
R	633	1583	0.23	0.40	24.0	C		

Intersection Delay = 18.9 (sec/veh) Intersection LOS = B

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Existing + Cumulative + Project PM Peak Hour
E/W St: Riverview Pkwy

Inter.: Magnolia/Riverview Pkwy
Area Type: All other areas
Jurisd: San Diego County
Year : 2013
N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	0	1	0	0	0	1	3	0	0	3	1
LGConfig	L		R				L	T			T	R
Volume	197		65				71	500			429	133
Lane Width	12.0		12.0				12.0	12.0			12.0	12.0
RTOR Vol			16									33

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru						Thru	A	A		
Right	A					Right				
Peds						Peds				
WB Left					SB	Left				
Thru						Thru		A		
Right						Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	42.0						21.0	42.0		
Yellow	4.0						4.0	4.0		
All Red	1.0						1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	602	1719	0.36	0.35	29.4	C		
							28.8	C
R	554	1583	0.10	0.35	26.3	C		
Westbound								
Northbound								
L	301	1719	0.26	0.17	43.3	D		
T	2793	4929	0.20	0.57	8.3	A	12.6	B
Southbound								
T	1776	5074	0.27	0.35	26.5	C	26.7	C
R	554	1583	0.20	0.35	27.4	C		

Intersection Delay = 21.1 (sec/veh) Intersection LOS = C

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: VRPA Technologies
Agency/Co.:
Date Performed: 3/12/2008
Analysis Time Period: AM
Intersection: Riverview Parkway / Pr Drive
Jurisdiction: City of Santee
Units: U. S. Customary
Analysis Year: 2013
Project ID: Ex + Cum + Project
East/West Street: Riverview Parkway
North/South Street: Project Driveway
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		164	7	17	220	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		164	7	17	220	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?			No			
Lanes		2	1	1	2	
Configuration		T	R	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	6		13			
Peak Hour Factor, PHF	1.00		1.00			
Hourly Flow Rate, HFR	6		13			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1		1			
Configuration	L		R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L	L		R			
v (vph)		17	6		13			
C(m) (vph)		1418	657		968			
v/c		0.01	0.01		0.01			
95% queue length		0.04	0.03		0.04			
Control Delay		7.6	10.5		8.8			
LOS		A	B		A			
Approach Delay				9.3				
Approach LOS				A				

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: VRPA Technologies
Agency/Co.:
Date Performed: 3/12/2008
Analysis Time Period: PM
Intersection: Riverview Parkway / Pr Drive
Jurisdiction: City of Santee
Units: U. S. Customary
Analysis Year: 2013
Project ID: Ex + Cum + Project
East/West Street: Riverview Parkway
North/South Street: Project Driveway
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		253	9	21	183	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		253	9	21	183	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?			No			
Lanes		2	1	1	2	
Configuration		T	R	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	8		18			
Peak Hour Factor, PHF	1.00		1.00			
Hourly Flow Rate, HFR	8		18			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1		1			
Configuration	L		R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L	L		R			
v (vph)		21	8		18			
C(m) (vph)		1314	585		907			
v/c		0.02	0.01		0.02			
95% queue length		0.05	0.04		0.06			
Control Delay		7.8	11.2		9.0			
LOS		A	B		A			
Approach Delay				9.7				
Approach LOS				A				

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Future No Project
E/W St: Town Center

Inter.: Cuyamaca/Town Center
Area Type: All other areas
Jurisd: San Diego County
Year : 2030

N/S St: Cuyamaca

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	1	2	3	1	2	3	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	168	366	95	226	684	279	85	463	126	364	708	321
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			24			70			32			80

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A			
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
WB	Left	A				SB	Left	A			
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
NB	Right	A				EB	Right	A			
SB	Right	A				WB	Right	A			
Green		17.0	30.0					23.0	30.0		
Yellow		4.0	4.0					4.0	4.0		
All Red		1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	473	3338	0.40	0.14	47.4	D		
T	861	3445	0.47	0.25	38.7	D	38.5	D
R	765	1583	0.10	0.48	16.9	B		
Westbound								
L	487	3437	0.52	0.14	48.6	D		
T	861	3445	0.88	0.25	55.5	E	47.3	D
R	743	1538	0.31	0.48	19.1	B		
Northbound								
L	640	3338	0.15	0.19	40.4	D		
T	1232	4929	0.42	0.25	37.9	D	35.7	D
R	666	1538	0.16	0.43	20.8	C		
Southbound								
L	659	3437	0.61	0.19	46.1	D		
T	1269	5074	0.62	0.25	40.9	D	39.2	D
R	686	1583	0.39	0.43	23.6	C		

Intersection Delay = 40.9 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Future No Project
E/W St: Town Center

Inter.: Cuyamaca/Town Center
Area Type: All other areas
Jurisd: San Diego County
Year : 2030

N/S St: Cuyamaca

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	1	2	3	1	2	3	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	132	87	372	141	102	355	286	889	250	219	907	361
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			93			89			63			90

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A	A			NB	Left	A			
Thru		A	A			Thru		A		
Right		A	A			Right		A		
Peds						Peds				
WB Left	A				SB	Left	A			
Thru			A			Thru		A		
Right			A			Right		A		
Peds						Peds				
NB Right					EB	Right	A			
SB Right					WB	Right				
Green	13.0	8.0	22.0				20.0	32.0		
Yellow	4.0	4.0	4.0				4.0	4.0		
All Red	1.0	1.0	1.0				1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	723	3338	0.20	0.22	38.7	D		
T	1005	3445	0.10	0.29	30.8	C	26.3	C
R	792	1583	0.39	0.50	19.0	B		
Westbound								
L	372	3437	0.42	0.11	50.8	D		
T	632	3445	0.18	0.18	41.5	D	133.4	F
R	282	1538	1.05	0.18	212.2	F		
Northbound								
L	556	3338	0.57	0.17	47.5	D		
T	1314	4929	0.75	0.27	42.9	D	43.2	D
R	410	1538	0.51	0.27	38.4	D		
Southbound								
L	573	3437	0.42	0.17	45.3	D		
T	1353	5074	0.75	0.27	42.6	D	43.6	D
R	422	1583	0.71	0.27	45.6	D		

Intersection Delay = 53.3 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Future no Project
E/W St: Mission Gorge

Inter.: Cuyamaca/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2030

N/S St: Cuyamaca

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	1	2	2	0	2	3	0
LGConfig	L	T	R	L	T	R	L	TR		L	TR	
Volume	138	610	262	155	1084	102	347	235	48	169	562	74
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vol			65			25			12			19

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A	A		
Thru		A				Thru		A	A	
Right		A				Right		A	A	
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru			A	
Right		A				Right			A	
Peds						Peds				
NB Right					EB	Right	A	A		
SB Right					WB	Right	A			
Green	14.0	42.0					14.0	8.0	17.0	
Yellow	4.0	4.0					4.0	4.0	4.0	
All Red	1.0	1.0					1.0	1.0	1.0	

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	389	3338	0.39	0.12	49.7	D		
T	1725	4929	0.39	0.35	27.9	C	27.4	C
R	976	1583	0.22	0.62	10.3	B		
Westbound								
L	401	3437	0.43	0.12	50.0	D		
T	1725	4929	0.70	0.35	32.9	C	33.9	C
R	782	1538	0.11	0.51	15.4	B		
Northbound								
L	751	3338	0.51	0.22	41.4	D		
TR	844	3377	0.36	0.25	37.3	D	39.6	D
Southbound								
L	401	3437	0.47	0.12	50.4	D		
TR	709	5006	0.97	0.14	92.2	F	83.2	F

Intersection Delay = 43.8 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Future No Project
E/W St: Mission Gorge

Inter.: Cuyamaca/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2030

N/S St: Cuyamaca

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	1	2	2	0	2	3	0
LGConfig	L	T	R	L	T	R	L	TR		L	TR	
Volume	507	1677	328	250	1017	178	720	715	185	499	743	124
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vol			82			45			47			32

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right	A			
SB Right					WB	Right	A			
Green	22.0	30.0					25.0	23.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	612	3338	0.92	0.18	73.3	E		
T	1232	4929	1.51	0.25	971.2	F	687.5	F
R	792	1583	0.34	0.50	18.4	B		
Westbound								
L	630	3437	0.44	0.18	44.0	D		
T	1232	4929	0.92	0.25	56.8	E	50.7	D
R	769	1538	0.19	0.50	16.7	B		
Northbound								
L	695	3338	1.15	0.21	337.9	F		
TR	644	3362	1.47	0.19	904.0	F	644.8	F
Southbound								
L	716	3437	0.77	0.21	50.3	D		
TR	956	4990	0.97	0.19	83.7	F	71.2	E

Intersection Delay = 423.1 (sec/veh) Intersection LOS = F

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Future No Project
E/W St: Mission Gorge

Inter.: Cottonwood/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2030

N/S St: Cottonwood

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	0	1	3	0	1	1	0	0	1	1
LGConfig	L	TR		L	TR		L	TR			LT	R
Volume	30	496	34	53	855	12	132	14	140	13	6	46
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0			12.0	12.0
RTOR Vol			9			3			35			12

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru	A			
Right		A				Right	A			
Peds						Peds				
WB Left	A				SB	Left		A		
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	14.0	56.0					15.0	15.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	201	1719	0.16	0.12	48.1	D		
TR	2287	4900	0.25	0.47	15.8	B	17.6	B
Westbound								
L	207	1770	0.29	0.12	49.2	D		
TR	2296	4921	0.42	0.47	17.4	B	19.2	B
Northbound								
L	215	1719	0.68	0.13	59.3	E		
TR	196	1571	0.68	0.13	59.7	E	59.5	E
Southbound								
LT	225	1803	0.09	0.13	46.7	D	47.2	D
R	198	1583	0.19	0.13	47.5	D		

Intersection Delay = 25.3 (sec/veh) Intersection LOS = C

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Future No Project
E/W St: Mission Gorge

Inter.: Cottonwood/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2030

N/S St: Cottonwood

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	0	1	3	0	1	1	0	0	1	1
LGConfig	L	TR		L	TR		L	TR			LT	R
Volume	32	1814	115	34	949	7	181	8	180	15	10	59
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0			12.0	12.0
RTOR Vol			29			2			45			15

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru	A			
Right		A				Right	A			
Peds						Peds				
WB Left	A				SB	Left		A		
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	14.0	56.0					15.0	15.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	201	1719	0.18	0.12	48.2	D		
TR	2288	4902	0.92	0.47	32.3	C	32.6	C
Westbound								
L	207	1770	0.18	0.12	48.3	D		
TR	2298	4925	0.46	0.47	17.9	B	18.9	B
Northbound								
L	215	1719	0.93	0.13	120.3	F		
TR	194	1553	0.82	0.13	79.1	E	102.1	F
Southbound								
LT	226	1808	0.12	0.13	46.9	D	47.6	D
R	198	1583	0.25	0.13	48.1	D		

Intersection Delay = 35.6 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Future No Project
E/W St: Mission Gorge

Inter.: Magnolia/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2030

N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	0	2	2	1	2	2	1
LGConfig	L	T	R	L	TR		L	T	R	L	T	R
Volume	92	307	126	412	1358	268	633	961	594	613	1887	450
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			32			67			149			113

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	15.0	43.0					15.0	27.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	417	3338	0.24	0.13	47.7	D		
T	1234	3445	0.28	0.36	25.8	C	30.0	C
R	567	1583	0.18	0.36	26.6	C		
Westbound								
L	430	3437	1.07	0.13	218.2	F		
TR	1211	3379	1.43	0.36	815.3	F	690.5	F
Northbound								
L	417	3338	1.69	0.13	1298	F		
T	775	3445	1.38	0.22	735.4	F	931.2	F
R	346	1538	1.43	0.22	833.4	F		
Southbound								
L	430	3437	1.58	0.13	1114	F		
T	798	3547	2.63	0.22	2980	F	2247	F
R	356	1583	1.05	0.22	199.9	F		

Intersection Delay = 1315 (sec/veh) Intersection LOS = F

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Future No project
E/W St: Mission Gorge

Inter.: Magnolia/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2030

N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	0	2	2	1	2	2	1
LGConfig	L	T	R	L	TR		L	T	R	L	T	R
Volume	143	734	321	363	975	203	801	1676	626	616	1419	338
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			80			51			157			85

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A	A		
Thru		A				Thru		A	A	
Right		A				Right		A	A	
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru			A	
Right		A				Right			A	
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	15.0	35.0					15.0	8.0	22.0	
Yellow	4.0	4.0					4.0	4.0	4.0	
All Red	1.0	1.0					1.0	1.0	1.0	

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	417	3338	0.38	0.13	48.8	D		
T	1005	3445	0.81	0.29	44.5	D	43.7	D
R	462	1583	0.58	0.29	38.1	D		
Westbound								
L	430	3437	0.94	0.13	93.3	F		
TR	985	3376	1.27	0.29	538.5	F	430.1	F
Northbound								
L	779	3338	1.14	0.23	319.8	F		
T	1005	3445	1.85	0.29	1581	F	1043	F
R	449	1538	1.16	0.29	357.7	F		
Southbound								
L	430	3437	1.59	0.13	1127	F		
T	650	3547	2.43	0.18	2621	F	1943	F
R	290	1583	0.97	0.18	126.0	F		

Intersection Delay = 1047 (sec/veh) Intersection LOS = F

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Future No Project AM Peak Hour Traffic
E/W St: Prospect Ave

Inter.: Magnolia/Prospect Ave
Area Type: All other areas
Jurisd: San Diego County
Year : 2030
N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	1	1	2	2	1	2	0	2	2	1
LGConfig	L	T	R	L	T	R	L	TR		L	T	R
Volume	47	192	52	112	683	1293	46	13	43	606	445	157
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
RTOR Vol			13			323			11			44

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right	A			
SB Right	A				WB	Right	A			
Green	15.0	35.0					23.0	27.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	215	1719	0.24	0.13	47.9	D		
T	1005	3445	0.21	0.29	31.9	C	32.1	C
R	831	1583	0.05	0.52	13.9	B		
Westbound								
L	221	1770	0.55	0.13	52.4	D		
T	1005	3445	0.74	0.29	41.0	D	32.5	C
R	1429	2722	0.74	0.52	24.2	C		
Northbound								
L	329	1719	0.15	0.19	40.6	D		
TR	692	3076	0.07	0.22	36.7	D	38.7	D
Southbound								
L	659	3437	1.00	0.19	118.6	F		
T	798	3547	0.61	0.22	43.1	D	80.6	F
R	620	1583	0.20	0.39	24.2	C		

Intersection Delay = 49.6 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Future No Project PM Peak Hour Traffic
E/W St: Prospect Ave

Inter.: Magnolia/Prospect Ave
Area Type: All other areas
Jurisd: San Diego County
Year : 2030
N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	1	1	2	2	1	2	0	2	2	1
LGConfig	L	T	R	L	T	R	L	TR		L	T	R
Volume	74	555	413	153	556	1393	95	481	161	1077	335	82
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
RTOR Vol			103			348			40			20

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A	A		
Thru		A				Thru		A	A	
Right		A				Right		A	A	
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru			A	
Right		A				Right			A	
Peds						Peds				
NB Right					EB	Right	A			
SB Right	A				WB	Right	A			
Green	17.0	24.0					32.0	6.0	16.0	
Yellow	4.0	4.0					4.0	4.0	4.0	
All Red	1.0	1.0					1.0	1.0	1.0	

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	244	1719	0.33	0.14	47.1	D		
T	689	3445	0.88	0.20	60.4	E	45.6	D
R	805	1583	0.42	0.51	18.8	B		
Westbound								
L	251	1770	0.66	0.14	55.3	E		
T	689	3445	0.88	0.20	60.7	E	41.4	D
R	1384	2722	0.82	0.51	29.1	C		
Northbound								
L	616	1719	0.17	0.36	26.4	C		
TR	752	3341	0.87	0.22	57.1	E	52.9	D
Southbound								
L	917	3437	1.28	0.27	551.5	F		
T	473	3547	0.77	0.13	58.2	E	417.6	F
R	501	1583	0.13	0.32	29.4	C		

Intersection Delay = 157.9 (sec/veh) Intersection LOS = F

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Future No Project
E/W St: Riverview Pkwy

Inter.: Magnolia /Riverview Pkwy
Area Type: All other areas
Jurisd: San Diego County
Year : 2030

N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	0	1	0	0	0	1	3	0	0	3	1
LGConfig	L		R				L	T			T	R
Volume	336		160				164	1081			1261	498
Lane Width	12.0		12.0				12.0	12.0			12.0	12.0
RTOR Vol			33									106

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru						Thru	A	A		
Right	A					Right				
Peds						Peds				
WB Left					SB	Left				
Thru						Thru		A		
Right						Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	45.0						22.0	38.0		
Yellow	4.0						4.0	4.0		
All Red	1.0						1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	645	1719	0.58	0.38	31.2	C		
							29.8	C
R	594	1583	0.24	0.38	25.9	C		
Westbound								
Northbound								
L	315	1719	0.58	0.18	47.4	D		
T	2670	4929	0.45	0.54	11.7	B	16.4	B
Southbound								
T	1607	5074	0.87	0.32	43.6	D	46.6	D
R	501	1583	0.87	0.32	56.5	E		

Intersection Delay = 33.1 (sec/veh) Intersection LOS = C

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Future No Project
E/W St: Riverview Pkwy

Inter.: Magnolia /Riverview Pkwy
Area Type: All other areas
Jurisd: San Diego County
Year : 2030

N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	0	1	0	0	0	1	3	0	0	3	1
LGConfig	L		R				L	T			T	R
Volume	553		182				199	1401			1201	373
Lane Width	12.0		12.0				12.0	12.0			12.0	12.0
RTOR Vol			45									93

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru						Thru	A	A		
Right	A					Right				
Peds						Peds				
WB Left					SB	Left				
Thru						Thru		A		
Right						Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	45.0						22.0	38.0		
Yellow	4.0						4.0	4.0		
All Red	1.0						1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	645	1719	0.95	0.38	72.5	E		
							63.3	E
R	594	1583	0.26	0.38	26.2	C		
Westbound								
Northbound								
L	315	1719	0.70	0.18	53.0	D		
T	2670	4929	0.58	0.54	13.2	B	18.1	B
Southbound								
T	1607	5074	0.83	0.32	40.9	D	40.2	D
R	501	1583	0.62	0.32	37.3	D		

Intersection Delay = 35.1 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Future w Project
E/W St: Town Center

Inter.: Cuyamaca/Town Center
Area Type: All other areas
Jurisd: San Diego County
Year : 2030

N/S St: Cuyamaca

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	1	2	3	1	2	3	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	168	370	95	232	686	280	85	463	130	365	708	321
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			24			70			33			80

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru			A			Thru		A		
Right			A			Right		A		
Peds						Peds				
WB Left	A	A			SB	Left	A			
Thru		A	A			Thru		A		
Right		A	A			Right		A		
Peds						Peds				
NB Right	A	A			EB	Right	A			
SB Right	A				WB	Right	A			
Green	15.0	11.0	25.0				16.0	27.0		
Yellow	4.0	4.0	4.0				4.0	4.0		
All Red	1.0	1.0	1.0				1.0	1.0		

Cycle Length: 119.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	433	3437	0.43	0.13	48.3	D		
T	745	3547	0.55	0.21	42.3	D	41.5	D
R	612	1583	0.13	0.39	21.4	C		
Westbound								
L	895	3437	0.29	0.26	35.2	D		
T	1222	3547	0.62	0.34	31.2	C	28.4	C
R	825	1583	0.28	0.52	11.8	B		
Northbound								
L	462	3437	0.20	0.13	45.9	D		
T	1151	5074	0.45	0.23	39.7	D	36.0	D
R	838	1583	0.13	0.53	10.2	B		
Southbound								
L	462	3437	0.88	0.13	57.5	E		
T	1151	5074	0.68	0.23	42.6	D	43.3	D
R	625	1583	0.43	0.39	23.7	C		

Intersection Delay = 37.2 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Future w project
E/W St: Town Center

Inter.: Cuyamaca/Town Center
Area Type: All other areas
Jurisd: San Diego County
Year : 2030

N/S St: Cuyamaca

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	1	2	3	1	2	3	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	132	88	372	141	104	357	286	889	250	221	907	361
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			93			89			63			90

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A	A			NB	Left	A			
Thru		A	A			Thru		A		
Right		A	A			Right		A		
Peds						Peds				
WB Left	A				SB	Left	A			
Thru			A			Thru		A		
Right			A			Right		A		
Peds						Peds				
NB Right	A				EB	Right	A			
SB Right	A	A			WB	Right	A			
Green	12.0	19.0	20.0				15.0	29.0		
Yellow	4.0	4.0	4.0				4.0	4.0		
All Red	1.0	1.0	1.0				1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	1031	3437	0.14	0.30	30.7	C		
T	1301	3547	0.07	0.37	23.0	C	18.6	B
R	844	1583	0.36	0.53	11.6	B		
Westbound								
L	344	3437	0.44	0.10	51.2	D		
T	591	3547	0.19	0.17	43.1	D	39.4	D
R	528	1583	0.55	0.33	31.7	C		
Northbound								
L	430	3437	0.72	0.13	52.4	D		
T	1226	5074	0.79	0.24	43.8	D	42.9	D
R	607	1583	0.33	0.38	24.0	C		
Southbound								
L	430	3437	0.56	0.13	49.9	D		
T	1226	5074	0.80	0.24	44.1	D	38.0	D
R	923	1583	0.32	0.58	7.9	A		

Intersection Delay = 37.4 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Future w Project
E/W St: Mission Gorge

Inter.: Cuyamaca/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2030

N/S St: Cuyamaca

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	1	2	2	0	2	3	0
LGConfig	L	T	R	L	T	R	L	TR		L	TR	
Volume	142	615	262	157	1088	102	347	235	50	169	562	77
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vol			66			26			13			19

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A	A		
Thru		A				Thru		A	A	
Right		A				Right		A	A	
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru			A	
Right		A				Right			A	
Peds						Peds				
NB Right					EB	Right	A	A		
SB Right					WB	Right	A			
Green	14.0	42.0					14.0	8.0	17.0	
Yellow	4.0	4.0					4.0	4.0	4.0	
All Red	1.0	1.0					1.0	1.0	1.0	

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	389	3338	0.41	0.12	49.8	D		
T	1725	4929	0.40	0.35	27.9	C	27.6	C
R	976	1583	0.22	0.62	10.3	B		
Westbound								
L	401	3437	0.43	0.12	50.1	D		
T	1725	4929	0.70	0.35	33.0	C	34.0	C
R	782	1538	0.11	0.51	15.4	B		
Northbound								
L	751	3338	0.51	0.22	41.4	D		
TR	844	3375	0.36	0.25	37.3	D	39.6	D
Southbound								
L	401	3437	0.47	0.12	50.4	D		
TR	709	5003	0.97	0.14	94.9	F	85.3	F

Intersection Delay = 44.3 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Future w Project
E/W St: Mission Gorge

Inter.: Cuyamaca/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2030

N/S St: Cuyamaca

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	1	2	2	0	2	3	0
LGConfig	L	T	R	L	T	R	L	TR		L	TR	
Volume	512	1623	328	252	1023	178	720	715	187	499	743	128
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vol			82			45			47			32

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right	A			
SB Right					WB	Right	A			
Green	22.0	30.0					25.0	23.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	612	3338	0.93	0.18	76.6	E		
T	1232	4929	1.46	0.25	883.8	F	620.8	F
R	792	1583	0.34	0.50	18.4	B		
Westbound								
L	630	3437	0.44	0.18	44.1	D		
T	1232	4929	0.92	0.25	57.8	E	51.5	D
R	769	1538	0.19	0.50	16.7	B		
Northbound								
L	695	3338	1.15	0.21	337.9	F		
TR	644	3360	1.48	0.19	912.4	F	649.8	F
Southbound								
L	716	3437	0.77	0.21	50.3	D		
TR	956	4987	0.98	0.19	87.0	F	73.3	E

Intersection Delay = 398.7 (sec/veh) Intersection LOS = F

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Future with project
E/W St: Mission Gorge

Inter.: Cottonwood/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2030

N/S St: Cottonwood

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	0	1	3	0	1	1	0	0	1	1
LGConfig	L	TR		L	TR		L	TR			LT	R
Volume	37	496	34	53	855	18	132	14	140	17	6	52
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0			12.0	12.0
RTOR Vol			9			5			35			13

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru	A			
Right		A				Right	A			
Peds						Peds				
WB Left	A				SB	Left		A		
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	16.0	50.0					24.0	10.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	229	1719	0.18	0.13	46.5	D		
TR	2042	4900	0.28	0.42	20.4	C	22.1	C
Westbound								
L	236	1770	0.25	0.13	47.2	D		
TR	2049	4918	0.47	0.42	22.4	C	23.9	C
Northbound								
L	344	1719	0.43	0.20	42.8	D		
TR	314	1571	0.42	0.20	42.9	D	42.9	D
Southbound								
LT	150	1797	0.17	0.08	51.7	D	52.7	D
R	132	1583	0.33	0.08	53.3	D		

Intersection Delay = 27.0 (sec/veh) Intersection LOS = C

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Future with Project
E/W St: Mission Gorge

Inter.: Cottonwood/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2030

N/S St: Cottonwood

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	0	1	3	0	1	1	0	0	1	1
LGConfig	L	TR		L	TR		L	TR			LT	R
Volume	41	1814	115	34	949	7	181	8	180	21	10	67
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0			12.0	12.0
RTOR Vol			29			2			45			17

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru	A			
Right		A				Right	A			
Peds						Peds				
WB Left	A				SB	Left		A		
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	14.0	52.0					22.0	12.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	201	1719	0.23	0.12	48.7	D		
TR	2124	4902	0.99	0.43	63.0	E	62.7	E
Westbound								
L	207	1770	0.18	0.12	48.3	D		
TR	2134	4925	0.50	0.43	21.2	C	22.2	C
Northbound								
L	315	1719	0.64	0.18	49.7	D		
TR	285	1553	0.56	0.18	47.0	D	48.5	D
Southbound								
LT	180	1802	0.19	0.10	50.0	D	51.1	D
R	158	1583	0.35	0.10	51.8	D		

Intersection Delay = 49.0 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Future w Project
E/W St: Mission Gorge

Inter.: Magnolia/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2030

N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	0	2	2	1	2	2	1
LGConfig	L	T	R	L	TR		L	T	R	L	T	R
Volume	92	310	127	412	1362	272	635	972	594	616	1896	450
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			32			68			149			113

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	15.0	43.0					15.0	27.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	417	3338	0.24	0.13	47.7	D		
T	1234	3445	0.28	0.36	25.8	C	30.0	C
R	567	1583	0.19	0.36	26.6	C		
Westbound								
L	430	3437	1.07	0.13	218.2	F		
TR	1210	3378	1.44	0.36	829.3	F	702.0	F
Northbound								
L	417	3338	1.69	0.13	1310	F		
T	775	3445	1.39	0.22	763.0	F	947.8	F
R	346	1538	1.43	0.22	833.4	F		
Southbound								
L	430	3437	1.59	0.13	1127	F		
T	798	3547	2.64	0.22	3003	F	2266	F
R	356	1583	1.05	0.22	199.9	F		

Intersection Delay = 1329 (sec/veh) Intersection LOS = F

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Future w Project
E/W St: Mission Gorge

Inter.: Magnolia/Mission Gorge
Area Type: All other areas
Jurisd: San Diego County
Year : 2030

N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	0	2	2	1	2	2	1
LGConfig	L	T	R	L	TR		L	T	R	L	T	R
Volume	143	738	323	363	980	208	803	1690	626	620	1431	338
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			81			52			157			85

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A	A		
Thru		A				Thru		A	A	
Right		A				Right		A	A	
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru			A	
Right		A				Right			A	
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	15.0	35.0					15.0	8.0	22.0	
Yellow	4.0	4.0					4.0	4.0	4.0	
All Red	1.0	1.0					1.0	1.0	1.0	

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	417	3338	0.38	0.13	48.8	D		
T	1005	3445	0.82	0.29	44.8	D	43.9	D
R	462	1583	0.58	0.29	38.1	D		
Westbound								
L	430	3437	0.94	0.13	93.3	F		
TR	984	3374	1.28	0.29	558.9	F	446.2	F
Northbound								
L	779	3338	1.15	0.23	324.2	F		
T	1005	3445	1.87	0.29	1610	F	1063	F
R	449	1538	1.16	0.29	357.7	F		
Southbound								
L	430	3437	1.60	0.13	1148	F		
T	650	3547	2.45	0.18	2657	F	1973	F
R	290	1583	0.97	0.18	126.0	F		

Intersection Delay = 1066 (sec/veh) Intersection LOS = F

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Future with Project AM Peak Hour Traffic
E/W St: Prospect Ave

Inter.: Magnolia/Prospect Ave
Area Type: All other areas
Jurisd: San Diego County
Year : 2030
N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	1	1	2	2	1	2	0	2	2	1
LGConfig	L	T	R	L	T	R	L	TR		L	T	R
Volume	47	192	52	112	683	1306	46	13	43	606	445	157
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
RTOR Vol			13			326			10			39

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru		A		
Right		A				Right		A		
Peds						Peds				
NB Right					EB	Right	A			
SB Right	A				WB	Right	A			
Green	15.0	37.0					23.0	25.0		
Yellow	4.0	4.0					4.0	4.0		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	215	1719	0.24	0.13	47.9	D		
T	1062	3445	0.20	0.31	30.0	C	30.7	C
R	857	1583	0.05	0.54	13.0	B		
Westbound								
L	221	1770	0.55	0.13	52.4	D		
T	1062	3445	0.70	0.31	37.9	D	30.3	C
R	1474	2722	0.72	0.54	22.5	C		
Northbound								
L	329	1719	0.15	0.19	40.6	D		
TR	640	3073	0.08	0.21	38.3	D	39.4	D
Southbound								
L	659	3437	1.00	0.19	118.6	F		
T	739	3547	0.65	0.21	45.7	D	81.5	F
R	594	1583	0.22	0.38	25.7	C		

Intersection Delay = 48.7 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Future With Project PM Peak Hour Traffic
E/W St: Prospect Ave

Inter.: Magnolia/Prospect Ave
Area Type: All other areas
Jurisd: San Diego County
Year : 2030
N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	1	1	2	2	1	2	0	2	2	1
LGConfig	L	T	R	L	T	R	L	TR		L	T	R
Volume	74	555	413	153	556	1409	95	481	161	1091	335	82
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
RTOR Vol			103			352			40			20

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A	A		
Thru		A				Thru		A	A	
Right		A				Right		A	A	
Peds						Peds				
WB Left	A				SB	Left	A			
Thru		A				Thru			A	
Right		A				Right			A	
Peds						Peds				
NB Right					EB	Right	A			
SB Right	A				WB	Right	A			
Green	15.0	35.0					15.0	8.0	22.0	
Yellow	4.0	4.0					4.0	4.0	4.0	
All Red	1.0	1.0					1.0	1.0	1.0	

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	215	1719	0.37	0.13	49.3	D		
T	1005	3445	0.60	0.29	37.2	D	33.4	C
R	726	1583	0.46	0.46	22.8	C		
Westbound								
L	221	1770	0.75	0.13	65.3	E		
T	1005	3445	0.60	0.29	37.2	D	43.6	D
R	1248	2722	0.92	0.46	43.9	D		
Northbound								
L	401	1719	0.26	0.23	37.9	D		
TR	974	3341	0.67	0.29	39.0	D	38.8	D
Southbound								
L	430	3437	2.76	0.13	3224	F		
T	650	3547	0.56	0.18	45.7	D	2376	F
R	554	1583	0.12	0.35	26.6	C		

Intersection Delay = 750.7 (sec/veh) Intersection LOS = F

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: AM
Project ID: Future with project
E/W St: Riverview Pkwy

Inter.: Magnolia/ Riverview Pkwy
Area Type: All other areas
Jurisd: San Diego County
Year : 2030

N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	0	1	0	0	0	1	3	0	0	3	1
LGConfig	L		R				L	T			T	R
Volume	554		194				214	1081			1261	375
Lane Width	12.0		12.0				12.0	12.0			12.0	12.0
RTOR Vol			49									94

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru						Thru	A	A		
Right	A					Right				
Peds						Peds				
WB Left					SB	Left				
Thru						Thru		A		
Right						Right		A		
Peds						Peds				
NB Right					EB	Right	A			
SB Right					WB	Right				
Green	42.0						23.0	40.0		
Yellow	4.0						4.0	4.0		
All Red	1.0						1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	602	1719	1.02	0.35	137.0	F		
							111.1	F
R	923	1583	0.17	0.58	11.7	B		
Westbound								
Northbound								
L	329	1719	0.72	0.19	53.5	D		
T	2793	4929	0.43	0.57	9.8	A	17.0	B
Southbound								
T	1691	5074	0.83	0.33	39.0	D	38.3	D
R	528	1583	0.59	0.33	35.0-	C		

Intersection Delay = 44.9 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1f

Analyst: VRPA Technologies
Agency: SDC
Date: 4/2/07
Period: PM
Project ID: Future with project
E/W St: Riverview Pkwy

Inter.: Magnolia/Riverview Pkwy
Area Type: All other areas
Jurisd: San Diego County
Year : 2030

N/S St: Magnolia

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	0	1	0	0	0	1	3	0	0	3	1
LGConfig	L		R				L	T			T	R
Volume	555		198				218	1401			1201	375
Lane Width	12.0		12.0				12.0	12.0			12.0	12.0
RTOR Vol			50									94

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru						Thru	A	A		
Right	A					Right				
Peds						Peds				
WB Left					SB	Left				
Thru						Thru		A		
Right						Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	42.0						21.0	42.0		
Yellow	4.0						4.0	4.0		
All Red	1.0						1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	602	1719	1.02	0.35	139.0	F		
							115.8	F
R	554	1583	0.30	0.35	28.6	C		
Westbound								
Northbound								
L	301	1719	0.80	0.17	63.8	E		
T	2793	4929	0.56	0.57	10.9	B	18.0	B
Southbound								
T	1776	5074	0.75	0.35	34.3	C	34.0	C
R	554	1583	0.56	0.35	32.9	C		

Intersection Delay = 42.3 (sec/veh) Intersection LOS = D

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: VRPA Technologies
Agency/Co.:
Date Performed: 3/12/2008
Analysis Time Period: AM
Intersection: Riverview Parkway / Pr Drive
Jurisdiction: City of Santee
Units: U. S. Customary
Analysis Year: 2030
Project ID: Future with project
East/West Street: Riverview Parkway
North/South Street: Project Driveway
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		609	7	17	801	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		609	7	17	801	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?			No			
Lanes		2	1	1	2	
Configuration		T	R	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	6		13			
Peak Hour Factor, PHF	1.00		1.00			
Hourly Flow Rate, HFR	6		13			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes		1	1			
Configuration		L	R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L	L		R			
v (vph)		17	6		13			
C(m) (vph)		974	224		698			
v/c		0.02	0.03		0.02			
95% queue length		0.05	0.08		0.06			
Control Delay		8.8	21.5		10.3			
LOS		A	C		B			
Approach Delay				13.8				
Approach LOS				B				

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

Analyst: VRPA Technologies
Agency/Co.:
Date Performed: 3/12/2008
Analysis Time Period: PM
Intersection: Riverview Parkway / Pr Drive
Jurisdiction: City of Santee
Units: U. S. Customary
Analysis Year: 2030
Project ID: Future with project
East/West Street: Riverview Parkway
North/South Street: Project Driveway
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		890	9	21	676	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		890	9	21	676	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?			No			
Lanes		2	1	1	2	
Configuration		T	R	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	8		18			
Peak Hour Factor, PHF	1.00		1.00			
Hourly Flow Rate, HFR	8		18			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes		1	1			
Configuration		L	R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L	L		R			
v (vph)		21	8		18			
C(m) (vph)		764	159		566			
v/c		0.03	0.05		0.03			
95% queue length		0.08	0.16		0.10			
Control Delay		9.8	28.8		11.6			
LOS		A	D		B			
Approach Delay				16.9				
Approach LOS				C				

APPENDIX H

"Exerts from City of Santee Transportation Improvement Master Plan Information"

ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are more frequent.

Level of service E describes operations with delay in the range of 55.1 seconds to 80.0 seconds per vehicle. This is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.

Level of service F describes operations with delay in excess of over 80.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with over-saturation (i.e., when arrival flow rates exceed the capacity of the intersection). It may also occur at high v/c ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Table 2.2 lists the levels of service (LOS) of signalized intersections in the City of Santee. The intersections in bold are major intersections, as identified by City staff. The intersection rankings represent the top 10 congested signalized intersections in the City. Mission Gorge Road at Magnolia Avenue intersection has the highest congestion followed by Mission Gorge Road at Cuyamaca Street.

Table 2.2: Signalized Intersection Levels of Service[1]

No.	Intersection	AM Peak	PM Peak	Rank
1	**Mission Gorge Rd./Magnolia Ave.**	**D**	**F**	**1**
2	**Mission Gorge Rd./Cuyamaca St.**	**D**	**D**	**2**
3	**Mission Gorge Rd./Fanita Dr.**	**B**	**E**	**3**
4	**Mission Gorge Rd./Town Center Pkwy.**	**C**	**E**	**4**
5	**Mast Blvd./Magnolia Ave.**	**D**	**D**	**5**
6	**Mission Gorge Rd./Carlton Hills Blvd.**	**D**	**C**	**6**
7	**Magnolia Ave./Prospect Ave.**	**C**	**D**	**7**
8	**Mast Blvd./Cuyamaca St.**	**D**	**D**	**8**
9	**Mast Blvd./Carlton Hills Blvd.**	**C**	**C**	**9**
10	**Carlton Hills Blvd./Carlton Oaks Dr.**	**C**	**C**	**10**
11	Carlton Hills Blvd./Willow Grove Dr.	A	A	--
12	Carlton Oaks Dr. /Fanita Pkwy.	A	A	--
13	Cuyamaca St./River Park Dr.	A	B	--
14	Cuyamaca St./Town Center Pkwy.	B	C	--
15	Cuyamaca St./Buena Vista Ave.	A	B	--
16	Cuyamaca St./Prospect Ave.	C	C	--
17	Magnolia Ave./Woodglen Vista Dr.	B	B	--
18	Magnolia Ave./El Nopal	C	C	--
19	Magnolia Ave./Second St.	B	A	--
20	Magnolia Ave./Carefree Dr.	B	A	--
21	Magnolia Ave./Braverman Ave.	A	A	--

[1] Intersection Levels of Service (LOS) was provided by the City of Santee.

Magnolia Avenue on the east, Mission Gorge Road to the south, and the San Diego River to the north.

New development typically results in an increase of traffic. A significant increase in traffic may reduce the effectiveness of an intersection, especially if it is formatted for a specific volume capacity. The priority corridors whose volume will be affected by the new developments may require signal timing and coordination adjustments.

Table 2.5 lists the future levels of service (LOS) of new signalized intersections and those that require improvements as a result of the Fanita Ranch and other future developments.

Table 2.5: Future LOS Year 2010 and Beyond[2]

INTERSECTION	Peak Hour LOS		Notes
	Before	After	
Carlton Oaks Dr / Carlton Hills Blvd	F	D	Mitigation Required
Mast Blvd / West Hill Pkwy[3]	F	C	Additional Lanes Required
Mission Gorge Rd / Fanita Dr[3]	E	B	Additional Lanes Required
Mission Gorge Rd / Cuyamaca St	E	E	Additional Lanes Required
Mission Gorge Rd / Magnolia Ave[3]	E	D	Additional Lanes Required
Woodglen Vista Dr / Cuyamaca St	F	C	New Signal
El Nopal / Cuyamaca St	F	C	New Signal
Woodside Ave / SR 67 Off-Ramp	F	D	Mitigation Required

2.9 Capital Improvement Program (CIP)

The 5 year Capital Improvement Program (CIP) is scheduled for the Fiscal Years (FY) 2006 through 2010 and will be implemented based on community needs, available funding, prior City Council direction, and staff resources available to oversee the projects. Some CIP projects that may influence the recommendations in this Master Plan are listed below. For a detailed list of traffic related CIP projects, see **Appendix B**.

Traffic Management Master Plan: This project will provide funding for a consultant to prepare a Citywide Traffic Management Master Plan. The process will include review of existing conditions, assessment of current and future needs, evaluation of options for improvement, and preparation of an implementation plan. In order to better address traffic needs within the City, the preparation of Traffic Management Master Plan is needed. The Master Plan will concentrate on maximizing the effectiveness of our traffic signal system, while also comprehensively addressing all aspects of the City's transportation network. Approximately $70,000 in Traffic Mitigation fees will be collected in FY 2005-2006. The "Transportation Improvement Master Plan", this project, is the outcome of this CIP project.

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[2] Source: Traffic Impact Analysis Report, "Village at Fanita" prepared by Linscott Law & Greenspan, September 19, 2005 (**Appendix B**). Mitigation should be implemented as recommended in the report and by the City of Santee.

[3] Source: Before and After Peak Hour LOS and Notes provided by the City of Santee on September 13, 2006.

Mission Gorge Widening: This project will widen Mission Gorge Road from Carlton Hills Boulevard to State Route 125 in response to forecasted traffic volume increases over the next decade. It is in accordance with the Circulation Element of the City's General Plan. The estimated cost is more than $9.4 million. The proposed CIP designates nearly $2 million in Traffic Mitigation fees to be collected over the next five years for this project. Planning and design is scheduled to begin in FY 2006-07, but construction may not begin until additional funding is identified.

Cuyamaca Street Improvements Adjacent to Town Center Community Park: Northbound Cuyamaca Street between River Park Drive and Mission Creek Drive is required to be widened for the development of Town Center Community Park. In addition to the street widening, a 25-foot landscaped parkway with a meandering sidewalk/bikeway will be included. This project provides better access to Town Center Community Park by widening Cuyamaca Street to major arterial standards to comply with the Town Center Specific Plan. The proposed CIP designates approximately $2.3 million in Traffic Mitigation fees to be collected over the next two years for this project, beginning in FY 2006-07.

Olive Lane Improvements: Install missing curb, gutter and sidewalks and widen Olive Lane Road to a four lane collector between Mission Gorge Road and Via Zapador. Forecasted traffic volumes for 2020 and the Circulation Element of the General Plan show the need to widen Olive Lane. Curb, gutter and drainage facilities will be installed to control water runoff and sidewalks will be installed to improve pedestrian safety. Approximately $4.6 million in Traffic Mitigation fees is expected to be collected over the next four years. The proposed CIP is set to begin in FY 2006-07.

SR 67/Prospect Avenue Interchange Improvements: Construct a new on-ramp from Magnolia Avenue to southbound SR 67 and widen the northbound SR 67/Prospect Avenue off-ramp to three lanes. The project, totaling $5.3 million, will be funded and constructed by the Sky Ranch Developer and maintained by Caltrans, beginning FY 2006-07.

Traffic Management Master Plan Implementation: This project will provide software and hardware improvements to existing traffic signals throughout the City in order to maximize the effectiveness of the City's traffic signal system to improve traffic flow. Specific locations will be prioritized based on the recommendations of the Traffic Management Master Plan which is currently underway. Approximately $800,000 in Traffic Signal fees are expected to be available for this program over the next five years, beginning in FY 2007-08. See the deployment schedule for details of the Master Plan recommended projects.

Bicycle Master Plan Update: Preparation of a new Bikeway and Pedestrian Master Plan to identify existing facilities and deficiencies throughout the City. The objective of the new Bikeway and Pedestrian Master Plan study is to review and make recommendations as to how the current bikeway and pedestrian network within the City planning area can be updated to best suit the needs of the City now and in the future. The existing Bike and Trail Study was prepared in 1989 and needs to be updated.

only left-turn operation to protected/permissive operation).

The above category of improvements would require different levels of financial commitment by the City depending on the needs of each specific intersection or roadway segment. The top 10 ranked intersections within the City (as identified by City staff based on intersection delay shown in **Table 2.1**) were examined for potential improvements. It should be noted that before improvement projects are developed, each intersection and proposed improvement should be reviewed and studied in more detail with reference to safety and efficiency. In particular the real-time level of service and volume-to-capacity ratios at each intersection should be measured and calculated and thoroughly analyzed.

3.1.3 Field Review

The initial step in identifying the deficiencies of an intersection is to asses its existing conditions. A detailed field review was conducted along with a detailed photo inventory of the 10 critical intersections. The improvements/enhancements were categorized into three groups: (1) signal, (2) geometry, and (3) operation, as described in **Section 3.1.2**. At each intersection, photos were taken and a quick sketch of the existing conditions and possible improvements was prepared. Measurements were taken to determine the existing location of visible advance loop detectors for calculating whether or not the detectors where placed outside of the dilemma zone (**Appendix A**).

3.1.4 Analysis

In addition to the field review and operational observation conducted, the levels of service at the 10 critical intersections were reviewed and further analyzed. The suggested improvements are based on a combination of engineering judgment, levels of service values, and the site geometric/right-of-way availability conditions. Detailed analysis will be needed during the developmental stages.

Table 3.4 is a summary of improvements that are recommended for the 10 critical intersections based on the on-site investigation. Following the table is a brief description of the recommendations for each intersection. As identified in the circulation element of the general plan and other future developments, some critical intersections require additional lane capacity to improve the level of service to acceptable standards.

Table 3.4: Summary of Potential Improvements at Critical Signalized Intersections

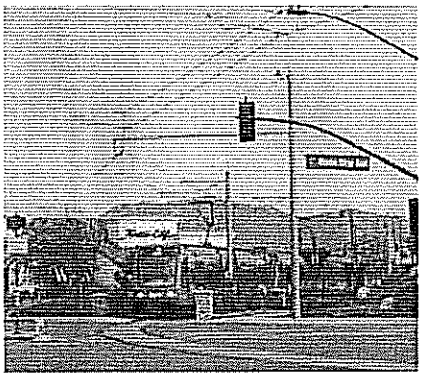
INTERSECTION	PROPOSED ENHANCEMENT Signal Modifications
Mission Gorge Rd & Magnolia Ave	• Relocate advance loop detection for the westbound traffic
Mission Gorge Rd & Cuyamaca St	• Upgrade signal/trolley equipment
Mission Gorge Rd & Fanita Dr	• Relocate advance loop detection for the northbound traffic

INTERSECTION	PROPOSED ENHANCEMENT Signal Modifications
Mission Gorge Rd & Town Center Pkwy.	• Relocate advance loop detection for the northbound traffic
Magnolia Ave & Prospect Ave	• Install Caltrans compliant 170 signal controller and cabinet
Mast Blvd & Cuyamaca St	• Relocate advance loop detection for westbound traffic
Mast Blvd & Carlton Hills Blvd	• Relocate advance loop detection for westbound traffic

Mission Gorge Road & Magnolia Avenue

Based on the field observation, the eastbound, westbound and southbound thru movements may require additional modification. The observations to increase capacity for these movements were conducted; however, field investigations indicated that there is no room for additional capacity in all directions. As for minor modifications, **Appendix A** indicates that the westbound advance loop detection is currently placed within the dilemma zone. Therefore, the westbound advance loop detectors should be relocated to at least the Caltrans suggested minimum setback distance of 285 feet.

Mission Gorge Road & Cuyamaca Street



Mission Gorge Road and Cuyamaca Street is the intersection with the highest accident rate in the City of Santee. This intersection is shared by the Green Line Trolley and recent ITS enhancements were installed. Video detection is used for the light rail traffic and a CCTV monitoring camera is already in place to monitor the traffic at this busy intersection. Green time is taken from the eastbound and westbound thru movements to serve the light rail movements, which are also very frequent. Mid-range and long term improvements include upgrading traffic signal equipment to provide better trolley and vehicle traffic flow through the Cuyamaca Street corridor. Also, a northbound right-turn lane as a long-term capacity enhancement to potentially improve the current level of service should be further analyzed.

Mission Gorge Road & Fanita Drive

It is recommended that the northbound advance loop detectors be relocated to a distance of at least 230 feet away from the stop line to avoid the dilemma zone (**Appendix A**). It is observed that future developments may congestion the eastbound and westbound movements; therefore, further investigation is recommended as new developments are deployed.

Mission Gorge Road & Town Center Parkway/Olive Lane

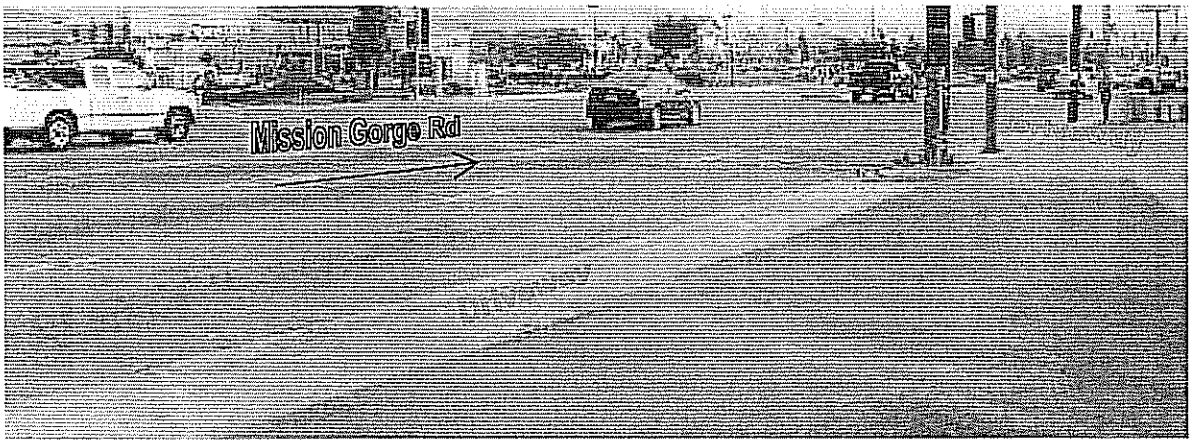
The northbound advance loop detectors are only 153 feet away from the stop line, which is below the Caltrans minimum requirement of 185 feet.

Mast Boulevard & Magnolia Avenue

There is a high school on the northeast quadrant of Mast Boulevard and Magnolia Avenue. The City may want to consider generating coordination/flush plans to accommodate for the quick, yet heavy, school peak periods throughout the day.

Mission Gorge Road & Carlton Hills Boulevard

Mission Gorge Road and Carlton Hills Boulevard is a three legged intersection with many closely spaced driveways on the south side without any traffic signal to monitor the flow in and out of the shops. Therefore, it is recommended that further analysis be conducted for the consolidation of the south side driveways and an additional northbound signal. As future development occurs on the south side of the street, consolidation of the driveways will occur.



Magnolia Avenue & Prospect Avenue

Construction for a new on-ramp to SR 67 will occur in the next year as part of a condition of approval for the Sky Ranch Project. The existing traffic signal controller should be changed to a Caltrans compliant controller so that communication with the Caltrans signals will be possible. This feature will allow for smoother traffic flow at this intersection.

Mast Boulevard & Cuyamaca Street

The westbound advance loop detector set-back distance is located 169 feet. This distance is within the dilemma zone, a distance closer to the stop line than the Caltrans recommended set-back distance. Therefore, it is recommended that advance loop detectors be relocated to at least 230 feet for westbound traffic. Mast Boulevard and Cuyamaca Street was also evaluated for left turn operation modification; however, no operational change is recommended because the combination of a vertical and horizontal slope creates a major visibility constraint.

PROJECTS	COST
P2: Installation of Protected/Permissive Left-Turn at other locations	**$ TBD**
Description: Additional locations will be considered as they are identified by City staff.	
P3: Continued Signal Coordination Improvements	**$ 100,000.00**
Description: This project will prepare timing plans for signal coordination along the priority corridors.	
5% Contingency for Operation & Maintenance (Short-Term Projects)	*$ 7,500.00*
INTERMEDIATE PROJECTS	
P4: Continued Signal Coordination Improvements	**$ 100,000.00**
Description: Two to three years after the previous signal coordination improvement, plans would need to be revised again to accommodate the changes in traffic and signal operation.	
P5: Traffic Control System (TCS) Upgrade	**$ 782,500.00**
Description: This pilot project includes the installation of the BI Tran QuicNet/4 software and hardware and the replacement of the existing controllers with Type 170 controllers at two major corridors (Mission Gorge Road and Cuyamaca Street) and TSP at 5 intersections near trolley line.	
P6: Deployment of Video Detection at Major Intersections	**$ 83,000.00**
Description: Concurrent with paving projects, this project will install video detection cameras for all approaches at two locations – Magnolia Avenue at Mast Boulevard and Mission Gorge Road.	
P7: Install Communication along Gaps in the Traffic Signal System	**$ 967,000.00**
Description: This project recommends closing the interconnect gap along the entire corridors of Mission Gorge Road and Cuyamaca Street concurrent with or before the TSC upgrade. As well as installing interconnect along Magnolia Avenue from Mast Boulevard to the TMC.	
5% Contingency for Operation & Maintenance (Intermediate Projects)	*$ 96,500.00*
LONG-TERM PROJECTS	
P8: Critical Intersection Improvements	**$ TBD**
Description: As development occurs, potential improvements critical intersections should be implemented, which include operation improvements, signal modifications, and geometric enhancements as directed by City staff.	
P9: Continued Signal Coordination Improvements	**$ 100,000.00**
Description: Every 2 to 3 years after coordination plans have been modified it is recommended that the plans be reviewed again, especially since projects are being implemented citywide.	
P10: Remote Traffic Control Workstation at Sheriff's Department	**$ 64,000.00**
Description: After the TCS upgrades on Cuyamaca Street, a new remote workstation, via a telephone line, at the Sheriff Department should be communicating via the new system.	
P11: Continued Traffic Signal Control System Upgrade	**$ 360,000.00**
Description: Once the first two corridors are upgraded and fully functional, major corridors intersecting Mission Gorge Road or Cuyamaca Street, should begin their controller replacement.	
P12: Installation of CCTV Cameras at Critical Intersections	**$ 390,000.00**
Description: During or after the controller upgrade, installation of the proposed CCTV monitoring cameras should also be deployed. There are a total of 10 recommended CCTV camera locations.	
P13: City of Santee TMC Capacity Expansion	**$ 390,000.00**
Description: Depending on the progress of ATIS, ATMS, and communication improvements, the TMC is recommended to be upgraded once a large portion of the enhancements has occurred.	
P14: Web-based Traveler Information Dissemination	**$ 60,000.00**
Description: With all the new developments, especially the extension of SR 52, the community will greatly benefit from a web-based traveler information guide.	
P15: Deployment of Trailblazer Signs	**$ 78,000.00**
Description: Trailblazer signs should be placed along Mission Gorge Road (East and West of SR 52/SR 125) and Magnolia Avenue (South of Prospect to SR 67) to guide traffic in and out of Santee.	
P16: System Integration	**$ 390,000.00**
Description: During the planning stages of the TMC expansion, system integration should be a large	

PROJECTS	COST
factor in the final design.	
P17: Continue to Install Signal Interconnect System	**$2,006,500.00**
Description: Major corridors, which still require interconnect include Mast Boulevard, Carlton Oaks Drive, Prospect Avenue, Carlton Hills Boulevard, and Magnolia Avenue. Modes of communication consist of fiber, twisted pair, and wireless.	
P18: Roadway Improvements	**$ TBD**
Description: Widening of lanes, extension of corridor, and other roadway improvements.	
Contingency for Operation & Maintenance (Long-Term Projects)	*$ 192,000.00*
TOTAL (Short-Term, Intermediate, and Long-Term Projects)*	***$ 6,219,500.00***

* Total cost does not include projects whose costs remain to be determined (TBD).

The development of operations and maintenance (O&M) policies and procedures and their associated costs is an important strategy to ensure that the implemented projects will be fully and efficiently operated for the life of the improvements. An O&M plan, even a brief one, should be developed and refined at each stage of implementation. This plan should address both the deployed (field and central) elements and the components of the communication system. It should address staffing requirements for operation and for maintenance and also the opportunities for sharing of duties and responsibilities between them.

Many of the proposed Santee projects probably will not require additional staff for operations and maintenance beyond the current levels. It is anticipated, however, that several of the intermediate and long-term traffic signal upgrade projects will require additional operating staff and additional annual cost of maintenance. Added staffing resources of approximately ½ time of a full time engineer (about 4 hours per day) may be needed to operate and trouble shoot the upgraded and expanded traffic management system. For a city having approximately 100 signals, a minimum of 2 fulltime staff are normally required for operations and a crew of about 5 maintenance technicians required for overall maintenance of the traffic signal system. For City of Santee budgeting purposes, it is initially suggested that approximately 5% be added to the cost of each project for operations and another 5% for the maintenance cost during the useful life of the project. A more detailed estimation of resources and costs should be prepared when the initial set of ITS improvements are tentatively selected.

6.2 Staged Implementation

Implementation of the 19 projects discussed in Section 6.1 will vary based on available funding, community needs, resources, and response to the first phase implementations.

6.2.1 Construction Packaging

Each project may be implemented as a package with other relevant projects, with future CIP projects, or individually. The decision to group projects or keep them separate will be dependent on available funding. Whether projects remain as individual or packaged projects, such as controller upgrade and interconnect system, the implementation should occur concurrently.

6.2.2 Implementation Costs

A conceptual cost implementation schedule is shown below in **Table 6.3**.

STREET NAME	LIMITS	DESCRIPTION	COST	STATUS
Cuyamaca St	River Park Dr - Mission Creek Dr	Widening, pedestrian and bike improvements	$ 2,262,600	CIP 07-03, Begin design
Cuyamaca St	River Park Dr - Town Center Pkwy	Sidewalk	$ 186,000	CIP 07-04
Cuyamaca St	Mesa Av - Mast Bl	Widening, pedestrian and bike improvements	$ 378,300	CIP 00-04, Completed
Magnolia Av	Chubb Ln - San Diego River	Sidewalk	$ 396,100	CIP 06-10, Contract awarded
Magnolia Av	Park Av - Chubb Ln	Sidewalk	$ 143,100	CIP FY07-08
Mission Gorge Rd	SR 125 - Carlton Hills	Widening	$ 9,447,300	CIP 07-08
Olive Ln	Mission Gorge - Via Zapador	Improve to 4 lane collector	$ 4,584,000	CIP 07-10
Prospect Av	Interchange with SR 67	Ramp improvements	$ 5,300,000	CIP 07-13
Woodside Av & Shadow Hill Rd		Intersection improvements	$ 180,000	CIP 07-11
Prospect Av		Widening and undergrounding	$ 20,075,000	Future CIP
Buena Vista Av	Cottonwood Av - Railroad Av	Widening	$ 422,200	Future CIP
Civic Center Dr.	B St - Town Center Pkwy	Widening	$ 2,625,000	Future CIP
Cottonwood Av	Park Av - Mast Bl	Widening	$ 12,768,000	Future CIP
Cuyamaca St	Mast Bl - Lafe Dr	Widening	$ 1,821,900	Future CIP
Cuyamaca St	Town Center Pkway - Mesa Av	Widening	$ 9,226,300	Future CIP
Fanita Dr	Prospect Av - Mission Gorge Rd	Widening	$ 1,273,600	Future CIP
Fanita Dr	Southern City Limit - Prospect Av	Widening	$ 22,938,200	Future CIP
Graves Av	Pepper Dr - Prospect Av	Widening	$ 1,341,600	Future CIP
Graves Av	Prospect Av - Northerly End	Widening	$ 207,300	Future CIP
Lake Canyon Dr	Fanita Dr - Settle Rd	Widening	$ 527,600	Future CIP
Magnolia Av	Mission Gorge Rd - Chubb Ln	Widening	$ 3,395,300	Future CIP
Mast Bl	Los Ranchitos Rd - Eastern City Limit	Widening	$ 3,601,800	Future CIP
Mesa Rd	Southern City Limit - Prospect Av	Widening	$ 1,269,300	Future CIP
Mesa Rd	Prospect Av - Mission Gorge Rd	Widening	$ 294,200	Future CIP
Prospect Av	Mesa Rd - Cuyamaca St	Widening	$ 30,071,200	Future CIP
Railroad Av	Mission Gorge Rd - Prospect Av	Widening	$ 2,525,400	Future CIP
Town Center Pkwy	B St - Cottonwood Av	Widening	$ 5,775,000	Future CIP
Town Center Pkwy	Cottonwood Av - Magnolia Av	Widening	$ 2,625,000	Future CIP
Magnolia Av & Mission Gorge Rd		Intersection improvements	$ 3,309,200	Future CIP

STREET NAME	LIMITS	DESCRIPTION	COST	STATUS
Mission Gorge Rd & Cottonwood Av		Intersection improvements	$ 335,600	Future CIP
Mission Gorge Rd & Cuyamaca St		Intersection improvements	$ 382,000	Future CIP
Mission Gorge Rd & Fanita Dr		Intersection improvements	$ 338,100	Future CIP
Magnolia Av & Prospect Av		Intersection improvements	$ 338,000	Future CIP
Carlton Hills Bl	Gorge Av - San Diego River	Median improvements	$ 820,000	Future CIP
Cuyamaca St	San Diego River - 950' south	Median improvements	$ 546,000	Future CIP
Magnolia Av	Chubb Ln - Braverman Dr	Median improvements	$ 1,200,000	Future CIP
Magnolia Av	Kerrigan St - 2nd St	Median improvements	$ 1,880,000	Future CIP
Mast Bl	Fanita Pkwy - Carlton Hills Bl	Median improvements	$ 1,100,000	Future CIP
Mast Bl	Magnolia Av - Los Ranchitos Rd	Median improvements	$ 1,857,000	Future CIP
Mast Bl	Cuyamaca St - Magnolia Av	Median improvements	$ 983,000	Future CIP
Mission Gorge Rd	Civic Center Dr - Magnolia Av	Median improvements	$ 1,857,000	Future CIP
Woodside Av	Magnolia Av - SR 67	Median improvements	$ 1,311,000	Future CIP
Cuyamaca St	Northerly terminus to southerly boundary of Fanita Ranch	Street extension	Dev. Funded	To be constructed with development
Magnolia Av	Princess JoAnn - Cuyamaca St	Street extension	Dev. Funded	To be constructed with development

PROJECTS	Unit	Quantity	Unit Price	Total Cost
P1: Reinstallation of Advance Loop Detection at Critical Intersections				
Relocation of advance loop detectors at critical intersections (per approach)	EA	5	$ 8,000.00	$ 40,000.00
Design and Construction Management			30%	$ 12,000.00
P2: Installation of Protected/Permissive Left-Turn at Other Locations				
Prot/Perm Left-Turn operation as directed by City Staff		TBD	TBD	TBD
P3: Continued Signal Coordination Improvements				
New/Modify intersection coordination plans	EA	50	$ 2,000.00	$ 100,000.00
P4: Continued Signal Coordination Improvements				
New/Modify intersection coordination plans	EA	50	$ 2,000.00	$ 100,000.00
P5: Traffic Control System (TCS) Upgrade				
Upgrade to BI Tran QuicNet/4 System	EA	1	$ 200,000.00	$ 200,000.00
Replace intersection controller with Type 170	EA	25	$ 16,000.00	$ 400,000.00
Trolley priority operation at intersection(s) near trolley line	EA	5	$ 25,000.00	$ 125,000.00
Design and Construction Management			30%	$ 217,500.00
Contingencies		1	$ 100,000.00	$ 100,000.00
P6: Deployment of Video Detection at Major Intersections				
Install video detection at Mission Gorge Rd & Magnolia Ave	EA	4	$ 8,000.00	$ 32,000.00
Install video detection at Mast Blvd & Magnolia Ave	EA	4	$ 8,000.00	$ 32,000.00
Design and Construction Management			30%	$ 19,200.00
P7: Install Communication along Gaps in the Traffic Signal System				
Fiber Optic along gap of Mission Gorge Road	MI	0.45	$ 250,000.00	$ 112,500.00
Twisted Pair along gap of Mission Gorge Road and Cuyamaca Street	MI	2.22	$ 200,000.00	$ 444,000.00
Fiber Optic along Magnolia Avenue from Mast Blvd to City Hall	MI	0.75	$ 250,000.00	$ 187,500.00
Design and Construction Management			30%	$ 223,200.00
P8: Critical Intersection Improvements				
Trolley equipment upgrade, operational improvements, signal modification, etc.		TBD	TBD	TBD
P9: Continued Signal Coordination Improvements				
New/Modify intersection coordination plans	EA	50	$ 2,000.00	$ 100,000.00
P10: Remote Traffic Control Workstation at Sheriff's Department				
Install Traffic Control Workstation	EA	1	$ 40,000.00	$ 40,000.00
Lease phone line	YR	4	$ 3,000.00	$ 12,000.00
Design and Construction Management			30%	$ 12,000.00
P11: Continued Traffic Signal Control System Upgrade				
Replace intersection controller with Type 170	EA	25	$ 16,000.00	$ 400,000.00
Design and Construction Management			30%	$ 120,000.00
Contingencies		1	$ 100,000.00	$ 100,000.00
P12: Installation of CCTV Cameras at Critical Intersections				
Install CCTV camera at critical intersections	EA	10	$ 30,000.00	$ 300,000.00
Design and Construction Management			30%	$ 90,000.00
P13: City of Santee TMC Capacity Expansion				
Additional rooms	EA	3	$ 100,000.00	$ 300,000.00
Design and Construction Management			30%	$ 90,000.00
P14: Web-based Traveler Information Dissemination				
Web-based traveler guide	EA	1	$ 60,000.00	$ 60,000.00
P15: Deployment of Trailblazer Signs				
Install Trailblazer sign at Mission Gorge Road & SR 52/SR 125	EA	2	$ 20,000.00	$ 40,000.00
Install Trailblazer sign at Magnolia Avenue & Prospect Ave	EA	1	$ 20,000.00	$ 20,000.00
Design and Construction Management			30%	$ 18,000.00
P16: System Integration				
Upgrade Software	EA	1	$ 150,000.00	$ 150,000.00
Upgrade Hardware	EA	1	$ 150,000.00	$ 150,000.00
Design and Construction Management			30%	$ 90,000.00
P17: Continue to Install Signal Interconnect System				
Replace existing twisted pair with Fiber Optic along Mission Gorge Road	MI	0.59	$ 250,000.00	$ 147,500.00
Install Fiber Optic along the remaining major corridors in Santee	MI	6.48	$ 200,000.00	$ 1,296,000.00
Install wireless communication	EA	2	$ 50,000.00	$ 100,000.00
Design and Construction Management			30%	$ 463,050.00
P18: Roadway Improvements				
Widening, extension, and other improvements		TBD	TBD	TBD
			SUB-TOTAL	*$ 6,443,450.00*
			5% Contingency for Operations & Maintenance	*$ 322,172.50*
TOTAL (Short-Term, Intermediate, and Long-Term Projects)*				***$ 6,765,622.50***

* Does not include projects whose cost is to be determined (TBD)

List of References

1. Transportation and Traffic Report Format & Content Requirements, County of San Diego, Land Use and Environmental Group, September 26, 2006.

2. Transportation and Traffic Guidelines for Determining Significance, County of San Diego, Land Use and Environmental Group, September 26, 2006.

3. City of Santee Transportation Improvement Master Plan, Meyer, Mohaddes Associates, January 2007.

4. City of Santee General Plan 2020.

5. Santee Office Park Traffic Impact Analysis, Linscott, Law & Greenspan Engineers, September 26, 2005.

6. Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, SANDAG, April 2002.

Transportation Planning • Traffic Engineering • Intelligent Transportation Systems
Environmental Assessments • Public Outreach

VRPA Technologies, Inc.

MEMORANDUM

TO: Shawn Shamlou, Dudek

FROM: Aditya Jatar, VRPA Technologies

DATE: August 22, 2007

RE: Traffic Analysis of Alternative Sites for Las Colinas Detention Facility.

Two alternative sites are being considered for the relocation of existing Las Colinas Detention Facility.

The first site is located about 1800 feet northeast of the Santo Road interchange with the SR – 52 freeway. LOS conditions on the segments of SR – 52 to the east and west of the Santo Road Interchange were studied for the year 2030. Future basic traffic volume forecasts for the year 2030 for various freeways and roadways are provided by SANDAG. The network planned for future 2030 is provided by SANDAG in the 2030 Regional Transportation Plan. SR – 52 is shown to have six lanes with two additional managed lanes that function as reversible lanes during peak hour in the 2030 Regional Transportation Plan. For the purposes of determining the LOS conditions in the year 2030 the total number of lanes was assumed as ten lanes. The average daily traffic forecasts for the two segments for the year 2030 are as follows:

2030 ADT on the segment of SR – 52 west of Santo Road	164,000
2030 ADT on the segment of SR – 52 east of Santo Road	142,000

LOS on the segment of SR – 52 west of Santo Road	D
LOS on the segment of SR – 52 east of Santo Road	C

The second site is located near the existing East Mesa prison facility in Otay Mesa. LOS conditions on the segments of SR – 11 to the east and west of the future planned Enrico Ferni Drive interchange were studied for the year 2030. Future basic traffic volumes forecasts for the year 2030 for various freeways and roadways are provided by SANDAG. SR – 11 is a part of the future 2030 planned roadway network provided by SANDAG in the 2030 Regional Transportation Plan. SR – 11 is shown to have six lanes in the 2030 Regional Transportation

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Plan. The average daily traffic forecasts for the two segments for the year 2030 are as follows:

2030 ADT on the segment of SR – 11 west of Enrico Ferni Drive	87,000
2030 ADT on the segment of SR – 11 east of Enrico Ferni Drive	57,000

LOS on the segment of SR – 11 west of Enrico Ferni Drive	C
LOS on the segment of SR – 11 east of Enrico Ferni Drive	B

If you have any questions, please feel free to contact me. I can be reached at (858) 566-1766.