# Palm Springs Country Club (TTM 36691)
# Traffic Impact Study

Prepared By: Endo Engineering

February 2014

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

February 10, 2014

Mr. Eric Taylor and Mr. Behrooz Haverim
Palm Springs Country Club, LLC
1200 N. Bundy Drive
Los Angeles, CA 90049

***SUBJECT:*** ***Traffic Impact Analysis for Tentative Tract Map #36691 Proposed on the Former Palm Springs Country Club Site***

Gentlemen;

Endo Engineering is pleased to submit this evaluation of the traffic impacts associated with a proposed General Plan Amendment, Planned Development District, and Tentative Tract Map 36691 to permit the development of up to 441 low-density residential dwelling units and the dedication of a 5.37-acre site for a future public park in the City of Palm Springs. The project would replace the fallow former Palm Springs Country Club Golf Course and clubhouse facilities on a site with 156.18 gross acres located east of Sunrise Way and north of Verona Road. It would permit the construction of 137 multi-family attached cluster dwelling units in the North Village, with access east of Sunrise Way via the intersection of San Rafael Drive/Golden Sands Drive. In addition, up to 304 single-family detached dwellings would be constructed in the South Village, with access via Whitewater Club Drive, north of Verona Road.

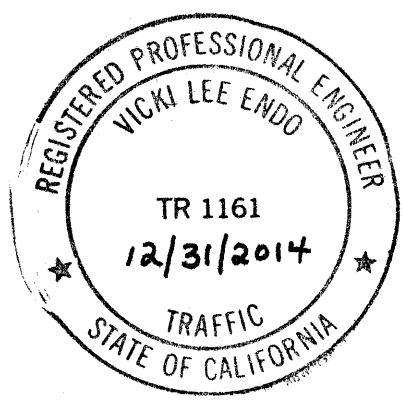
The format of this report is consistent with the requirements of the City of Palm Springs. The pages which follow briefly summarize in graphic and narrative form: (1) existing peak season weekday traffic conditions in the project vicinity; (2) future year 2020 conditions with and without the proposed project; and (3) General Plan buildout (year 2030) conditions with and without the proposed project. We trust that the information provided herein will be of use in the preparation of the required environmental documentation and assist the City of Palm Springs in their review of the impacts and conditions of approval associated with the project. In the event that questions or comments arise regarding the findings and recommendations within this report, please do not hesitate to contact Endo Engineering by telephone or electronic mail at endoengr@cox.net. We look forward to discussing our findings and recommendations with you.

Cordially,

ENDO ENGINEERING

Vicki Lee Endo

Vicki Lee Endo, P.E., T.E.
Registered Professional
Traffic Engineer TR 1161

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# TRAFFIC IMPACT STUDY

# FOR TENTATIVE TRACT MAP NO. 36691

## (THE FORMER PALM SPRINGS COUNTRY CLUB SITE)

EAST OF SUNRISE WAY AND NORTH OF VERONA ROAD,
WITH ACCESS TO SAN RAFAEL DRIVE AND WHITEWATER CLUB DRIVE

CITY OF PALM SPRINGS

FEBRUARY 10, 2014

**Prepared For**

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# EXECUTIVE SUMMARY

### *a. Project Location*

The project site is comprised of 156.18 gross acres (125.88 net acres) formerly developed as the Palm Springs Country Club, an 18-hole golf course with a clubhouse, a driving range, and four outdoor tennis courts. The site is located east of Sunrise Way and north of Verona Road, with in the City of Palm Springs. The North Village Planning Area is located east of Sunrise Way at San Rafael Drive, between the Four Seasons at Palm Springs residential community (Tract 30054) and the Golden Sands Mobile Home Park. The South Village Planning Area surrounds the existing Palm Springs Country Club and Alexander Estates residential community and generally extends east of Farrell Drive to Whitewater Club Drive, and south of San Rafael Drive to Verona Road.

### *b. Project Description*

The project site has no existing entitlements. The project proposes a General Plan Amendment and Planned Development District, in lieu of a zone change, to permit the development of up to 441 low-density residential dwelling units within two gated villages located east of Sunrise Way and north of Verona Road. Site access is proposed via a roundabout on San Rafael Drive, east of Sunrise Way, and a roundabout on Whitewater Club Drive, north of Verona Road. An internal roadway connection proposed between the two development areas would provide the future residents of both villages with access to three gated site access points on public streets including: two northwest gates (proposed on San Rafael Road at Golden Sands Drive) and the southeast gate (proposed on Whitewater Club Drive, north of Verona Road).

The North Village Planning Area would be developed with 137 multi-family attached cluster dwelling units. The South Village Planning Area would be developed with up to 304 single-family detached dwelling units. Both residential villages could be constructed and occupied by the year 2020.

A 5.37-acre site for a future public park adjacent to the Whitewater River Channel within the South Village would be deeded to the City of Palm Springs in conjunction with the proposed project. This park could serve as a trailhead for the future Coachella Valley (CV) Link, a 52-mile multi-purpose trail planned along the Whitewater River Channel flood control levee. Public access to this park would be provided via a roundabout proposed outside of the gated southeast project entry on Whitewater Club Drive, north of Verona Road.

#### *Proposed Site Access*

The project site would be developed as a gated community with access via two gates located at the southwest corner of the North Village and a third gate at the southeast corner of the South Village, adjacent to the future public park site. The residential villages would be connected via an internal roadway that would permit access between the two residential development areas.

San Rafael Drive, east of Sunrise Way, and Golden Sands Drive currently provide access to the Golden Sands Mobile Home Park, which would be surrounded on all sides by the proposed North Village development. With the proposed project, San Rafael Drive would be reconstructed to public street standards to serve both the existing mobile home park and

the North Village residents via a roundabout with two gated entries to the North Village as well as a connection to Golden Sands Drive that would not be gated.

The South Village would take access from the extension of Whitewater Club Drive, north of Verona Road. Whitewater Club Drive currently terminates at the gated eastern access associated with the existing Palm Springs Country Club and Alexander Estates residential community, which would be surrounded on all sides by the South Village development. With the proposed project, Whitewater Club Drive would be realigned and a roundabout would be constructed at the southeast corner of the site to serve both the future public park site and the gated South Village residential development.

Residents of the existing Palm Springs Country Club and Alexander Estates community would be provided the means with which to pass through the gated entry for the South Village, prior to accessing the eastern gated entry to the existing Palm Springs Country Club and Alexander Estates. Future residents of the South Village would not be permitted access through the existing Palm Springs Country Club and Alexander Estates or use the existing gated entry located at southwest corner of the existing Palm Springs Country Club and Alexander Estates community, near Farrell Drive.

### *c. Project Study Area and Scenarios Evaluated*

The study area and the ten existing key intersections that were evaluated are shown in Figure 1-2. The traffic impact analysis addressed future conditions with and without the proposed project in the year 2020 (the project completion year) and upon General Plan buildout in the year 2030.

### *d. Existing Traffic Conditions*

#### *Minimum Performance Standard*

The Circulation Element of the *Palm Springs 2007 General Plan* includes as a policy, the provision and maintenance of level of service (LOS) D operation for the City's circulation network, based upon average weekday conditions during the peak month of March. The application of this minimum performance standard is straight forward for signalized and all-way stop-controlled (AWSC) intersections.

The *Highway Capacity Manual* does not define a single overall level of service for unsignalized intersections with two-way stop-control (TWSC). For these intersections the LOS is defined in terms of the minor-street approaches and the conflicting left-turn movements from the major street. Consequently, the City Engineer must review intersections with TWSC that are projected to exhibit excessive control delay and poor levels of service (i.e., LOS E or LOS F) on an individual basis to determine the appropriate mitigation to meet the Palm Springs minimum intersection performance standard of LOS D.

#### *Current Peak Hour Intersection LOS*

Peak hour traffic creates the heaviest demand on the circulation system and the lane configuration at intersections is the limiting factor in roadway capacity. Consequently, peak hour intersection capacity analyses are useful indicators of worst-case conditions. The peak hour delay and levels of service were determined for the existing key intersections with the methodologies outlined in the *Highway Capacity Manual* (HCM 2000).

The current levels of control delay at the unsignalized key intersections evaluated are within the range considered acceptable by the City of Palm Springs. The majority of the motorists

at these intersections are using the major streets and experience LOS A or LOS B operation with relatively little, if any, control delay.

The all-way stop-controlled intersection of Whitewater Club Drive and Via Escuela currently provides LOS A operation during the mid-day and evening peak hours. The southbound approach at the intersection of Farrell Drive and Racquet Club Road exhibits the most control delay and operates at LOS B during the peak hours.

At the intersection of Whitewater Club Drive and Vista Chino, southbound motorists experience an average control delay during the midday and evening peak hours of 20.3 seconds per vehicle and 22.3 seconds per vehicle, respectively. The southbound approach is currently operating at LOS C during the peak hours.

All seven of the signalized key intersections are currently providing acceptable levels of service during the peak hours. Five of the signalized key intersections are currently operating at LOS C or better levels of service during the peak hours. Both of the signalized key intersections on Vista Chino (at Farrell Drive and at Sunrise Way) currently operate at LOS C during the midday peak hour and LOS D during the evening peak hour.

***e. Traffic Impacts***

The following circulation impacts are associated with the proposed project:

1. The proposed project would generate approximately 3,740 daily trip-ends, of which 291 would occur during the midday peak hour (71 inbound and 220 outbound) and 364 would occur during the evening peak hour (232 inbound and 132 outbound).

2. Upon project completion in the year 2020, site traffic is projected to increase the average intersection control delay by 1.33 seconds per vehicle and cause the LOS at the AWSC intersection of Via Escuela and Whitewater Club Drive to drop from LOS A to LOS B during the evening peak hour on weekdays in the peak season. LOS B operation is considered acceptable in Palm Springs.

3. Upon project completion in the year 2020, site traffic is projected to reduce the average control delay on the southbound approach by 1.7 seconds per vehicle and cause the LOS at the TWSC intersection of Whitewater Club Drive and Vista Chino to improve from LOS D to LOS C during the midday peak hour on weekdays in the peak season. LOS C operation is considered acceptable in Palm Springs.

4. With or without site traffic, a dedicated northbound right-turn lane will be needed at the signalized intersection of Farrell Drive and Vista Chino in the year 2020 to achieve the City of Palm Springs minimum intersection performance standard. With this improvement, site traffic is projected to increase the average intersection control delay by 0.7 seconds per vehicle during the midday peak hour in the year 2030, thereby degrading the level of service at this intersection from LOS C to LOS D.

5. The addition of site traffic making southbound right-turn movements with relatively little delay at the intersection of Whitewater Club Drive and Vista Chino, is expected to slightly decrease the overall average southbound approach control delay during the peak hours, as shown in Table 3-3 and Table 3-5. By adding southbound right-turning vehicles to Whitewater Club Drive at Vista Chino, the proposed project would result in a minor increase in the total southbound control delay and a minor decrease in the average control delay per vehicle on the southbound approach. As a result, the LOS is projected to improve from LOS F to LOS E during the midday peak hour but

remain LOS F during the evening peak hour in the year 2030. The volume of site traffic projected to pass through this intersection (28 VPH during the midday peak hour and 42 VPH during the evening peak hour) would be less than the 50 project-related peak hour trips typically used by the City of Palm Springs to identify key intersections for evaluation in traffic impact studies.

6. With or without site traffic, a second dedicated southbound left-turn lane will be needed at the signalized intersection of Sunrise Way and Vista Chino in the year 2030 to achieve the City of Palm Springs minimum intersection performance standard.

### *f. Recommendations*

The following items reflect *Palm Springs Municipal Code* or policy requirements that apply to all developments as conditions of approval.

1. All required off-site public and on-site private streets shall be designed in accordance with City of Palm Springs design standards, as required by the City Engineer.

2. The project developer/applicant shall submit street improvement plans for construction of required streets to the Palm Springs City Engineer for review and approval.

3. The controlled primary entryways to the site shall include provisions to facilitate access by emergency vehicles in a manner approved by the chief of police per *Palm Springs Municipal Code* Section 8.04.190. All power-operated controlled access devices shall have a radio-controlled override system capable of opening the gate or barrier when activated by a special transmitter located in emergency vehicles and be equipped to facilitate opening in the event of a power failure.

4. Sufficient off-street parking shall be provided on-site to meet the requirements of the *Palm Springs Municipal Code*.

5. The project proponent shall comply with City of Palm Springs requirements regarding the master planned bikeway and equestrian trail that transect the South Village site along the Whitewater River levee.

6. As required by the City of Palm Springs, the project proponent shall contribute on a fair-share basis to the cost of mitigation at two off-site key intersections.

7. The project proponent shall contribute traffic impact mitigation fees, by participating in the Traffic Uniform Mitigation Fee (TUMF) program prior to the issuance of building permits.

In addition, the mitigation measures below are recommended to reduce potential circulation and/or site access impacts associated with the proposed project.

8. As required by the City of Palm Springs, the project proponent shall contribute on a fair-share basis to the cost of the construction of street improvements (consisting of pavement widening, curb and gutter and sidewalks) which shall be constructed in conjunction with approved phasing plans for development and/or associated with an approved Final Map or Maps (if the development is phased) as follows:

- Whitewater Club Drive, north of Verona Road: reconstruction of the northern terminus and access to the existing Palm Springs Country Club and Alexander Estates; and
- San Rafael Drive, east of Sunrise Way: reconstruction of the access road between Sunrise Way and the Golden Sands Mobile Home Park.

9. The project developer/applicant shall be responsible for construction of all private streets, in conjunction with approved phasing plans for development and/or as associated with an approved Final Map or Maps (if the development is phased).

10. The project applicant shall contribute on a fair-share basis to circulation improvements required on roadways and/or at intersections that are not in the TUMF program, as specified by the Palm Springs City Engineer.[1]

11. The project developer/applicant shall coordinate with SunLine Transit Agency regarding required public transit facilities on and adjacent to the project site. Any required public transit facilities shall be furnished, constructed and installed in conjunction with construction of the associated street improvements.

1. The applicant's fair share contribution to the cost of improvements at intersections involving roadways that are not part of the CMP System is identified in Section 4b.

# 1. PROJECT DESCRIPTION

## *a. Project Location*

The project site is comprised of 156.18 gross acres (125.88 net acres) formerly developed as the Palm Springs Country Club. Figure 1-1 illustrates the project in its regional context within the City of Palm Springs, California. The project site is generally located south of Interstate 10, north of Vista Chino (State Highway 111), east of Sunrise Way, and west of Gene Autry Trail and the Whitewater River Channel.

Figure 1-2 illustrates the project site in its local context including the extent of the two on-site Planning Areas known as the North Village and the South Village. As shown therein, the North Village is more precisely located between North Sunrise Way and North Farrell Drive. The North Village is south of Four Seasons Boulevard and north of East San Rafael Drive. The South Village extends from North Farrell Drive east to North Whitewater Club Drive. The South Village is north of Verona Road and south of East San Rafael Drive.

## *b. Project Description*

### *Existing On-Site Land Uses*

The project site was previously developed as the Palm Springs Country Club, a private golf course, driving range, and golf clubhouse with four tennis courts. The Palm Springs Country Club was sustained by daily fee golfers until economic conditions forced its closure. Once reopening the golf course was determined to be no longer feasible, the clubhouse structure was demolished and removed from the site. The foundation of the clubhouse and the tennis courts and paved parking area remain in the southeast corner of the South Village Planning Area. The turf associated with the fallow 18-hole golf course was removed and the surface soil was chemically stabilized to minimize erosion.

A flood control levee separates the development area within the South Village from the Whitewater River Channel and a 24.93-acre triangular remainder Lot "L" within the South Village Planning Area. Construction is scheduled to begin in the year 2016 on a 52-mile regional multi-purpose trail known as the CV Link that is currently being planned along the Whitewater River Channel flood control levee.

### *Proposed Development*

The proposed project would include: (1) a General Plan Amendment from Private Open Space to Residential Low-4, and (2) a Planned Development District in lieu of a Zone Change to permit a low-density residential land use and a public park site to replace the former golf course and golf clubhouse. The residential density with the proposed project would be approximately 3.6 dwelling units per acre.

The public park site proposed at the southeast corner of the South Village would be deeded to the City of Palm Springs and have public access via North Whitewater Club Drive, outside the gated project entry. The 5.37-acre park site could serve as a trailhead for the planned CV Link, a regional corridor for a Coachella Valley multi-purpose trail to be located along the adjacent flood control levee.

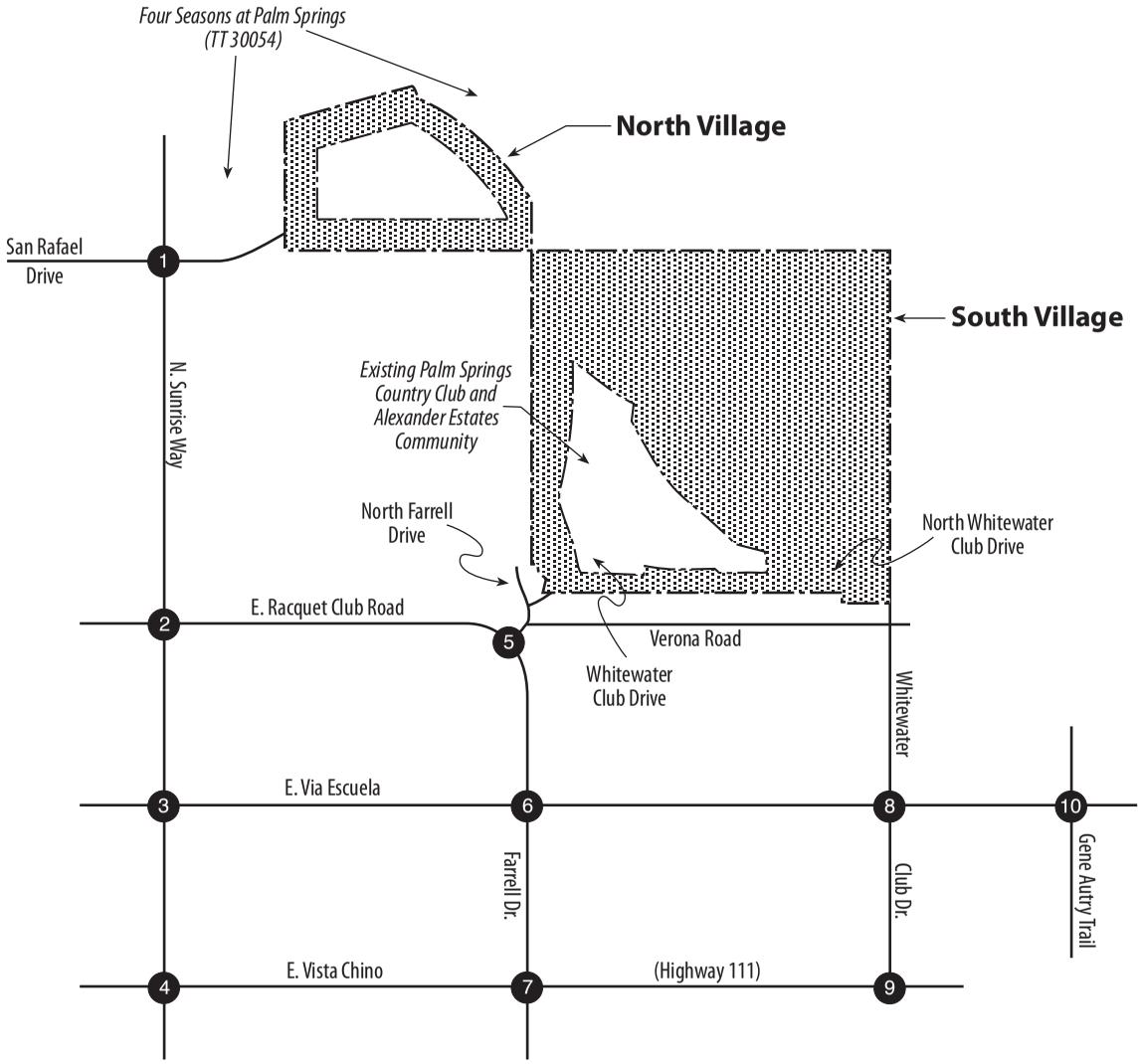
The project proposes the development of a combined total of up to 441 residential dwelling units with direct access via East San Rafael Drive (east of North Sunrise Way) and North

# Figure 1-1
# Regional Location Map


*Endo Engineering*

Scale: 1" = 5,700'

# Figure 1-2
## Study Area and Key Intersections




Legend

- Key Intersection
- Project Site

Endo Engineering

Scale: 1" = 1380'

Whitewater Club Drive (like the former golf clubhouse). The North Village would be developed with 137 multi-family attached clustered dwelling units on 17.9 net acres, as shown in Figure 1-3A. The South Village would be developed with up to 304 single-family detached dwelling units on 45.89 net acres, as shown in Figure 1-3B.

***Proposed Internal Circulation and Site Access***

The project would be developed as a gated community with access via two gated access points located at the southwest corner of the North Village Planning Area and a third gated access located at the southeast corner of the South Village Planning Area, adjacent to the future public park site. The North Village and South Village Planning Areas would be connected via an internal roadway that would allow uncontrolled access between the two development areas within the site.

The existing Golden Sands Mobile Home Park would be surrounded on all sides by the North Village Planning Area. Residents and visitors associated with the Golden Sands Mobile Home Park currently use Golden Sands Drive and East San Rafael Drive to access North Sunrise Way.

*Roundabouts*

Three single-lane roundabouts are proposed in conjunction with the proposed development. A roundabout is proposed at the primary entry to the North Village, at the primary entry to the South Village and at the point where an internal connection is proposed between the two villages. A single-lane roundabout is proposed on North Whitewater Drive, north of Verona Road, to facilitate access to the gated South Village development and provide public access to the future public park proposed immediately north of the roundabout. People destined to and from the park will not be required to pass through the entry gates associated with the South Village.

To facilitate access via the two gated entries associated with the North Village Planning Area, East San Rafael Drive (east of North Sunrise Way) would be reconstructed with a single-lane roundabout with yield control on all entries. Motor vehicles destined to/from the Golden Sands Mobile Home Park would pass through this roundabout without being required to pass through the entry gates designed to limit access to the North Village or the Four Seasons at Palm Springs community.

The proposed geometric features would encourage slow travel speeds through the roundabout. The entry design speed would be 20 mph to 25 mph. The inscribed circle diameter would be approximately 177 feet. To enhance visibility and accommodate larger design vehicles, the diameter of the landscaped central island would be approximately 120 feet.

*Emergency Access*

A proposed access and utility easement (90 feet in width) located adjacent to the flood control levee would include a 20-foot wide emergency access that would also function as a pedestrian, bicycle and neighborhood electric vehicle (NEV) path. A 24-foot wide gated emergency access is proposed to Farrell Drive, opposite the intersection of Francis Drive. This emergency access would be located between two existing residences located west of the South Village Planning Area. A Knox-Box Rapid Entry System would be installed at the gate to facilitate emergency access by fire fighters and other emergency first responders.

Figure 1-3A
Site Development Plan - North Village

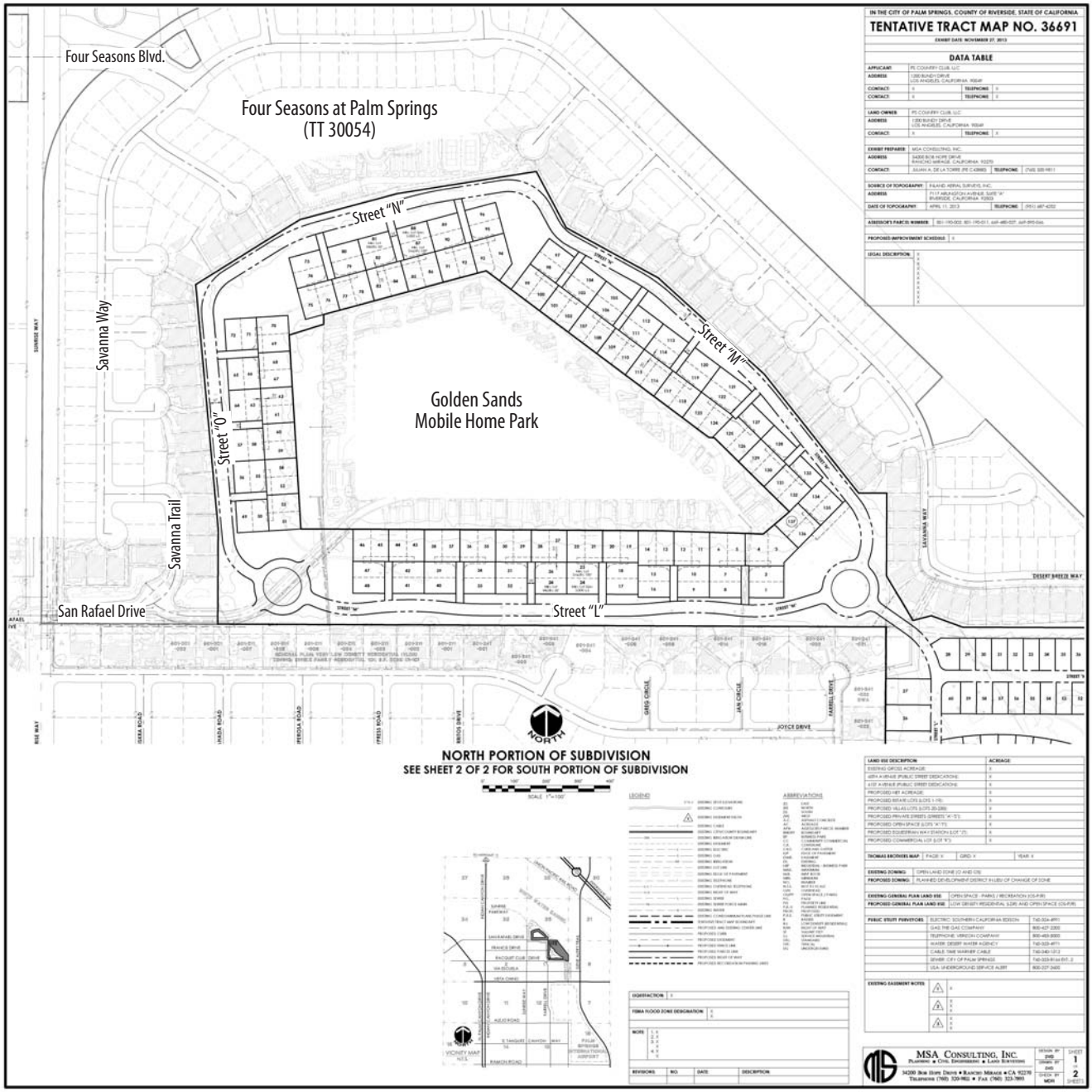


Figure 1-3B
Site Development Plan - South Village

The proposed project includes two emergency access connections to Whitewater Club Drive, east of Farrell Drive, at the southwest corner of the gated existing Palm Springs Country Club and Alexander Estates community. These two emergency access connections are proposed to alleviate potential concerns associated with two lengthy cul-de-sacs (Street "B" and Street "K") that are proposed within the site to provide independent access for the residential lots proposed immediately west of and south of the existing Palm Springs Country Club and Alexander Estates community. To facilitate access by emergency vehicles and other large vehicles, Street "B" would provide a turn around area near its mid-point (see Figure 1-3B).

The residents of the existing Palm Springs Country Club and Alexander Estates currently take access to the southwest via the intersection of Whitewater Club Drive with Farrell Drive. Whitewater Club Drive currently terminates at the gated eastern access associated with the existing Palm Springs Country Club and Alexander Estates residential community. The proposed development within the South Village would surround the existing Palm Springs Country Club and Alexander Estates gated community on all sides without taking access through that neighborhood.

With the proposed project, Whitewater Club Drive, north of Verona Road, would be realigned and a roundabout would be constructed to serve both the future public park site and the gated South Village residential development. Residents of the existing Palm Springs Country Club and Alexander Estates community would be permitted to pass through the gated entry for the South Village, prior to accessing the gated entry to the existing Palm Springs Country Club and Alexander Estates. Future residents of the South Village, however, would not be permitted to enter or pass through the existing Palm Springs Country Club and Alexander Estates community or use the existing gated entry located at the southwest corner of the existing Palm Springs Country Club and Alexander Estates community near Farrell Drive.

***Project Phasing***

Construction of the proposed project could begin in the year 2015. Although the phasing of the development will be dictated by the demands of the marketplace, both planning areas could be fully developed and occupied by the year 2020.

### *c. Study Area*

As shown in Figure 1-2, the study area includes ten existing key intersections. The key intersections were identified through coordination with the Palm Springs City Engineer. They include:

(1) North Sunrise Way @ East San Rafael Drive;
(2) North Sunrise Way @ East Racquet Club Drive.
(3) North Sunrise Way @ East Via Escuela;
(4) North Sunrise Way @ East Vista Chino;
(5) Farrell Drive @ East Racquet Club Drive;
(6) Farrell Drive @ East Via Escuela;
(7) Farrell Drive @ East Vista Chino;
(8) North Whitewater Club Drive @ East Via Escuela;
(9) North Whitewater Club Drive @ East Vista Chino; and
(10) Gene Autry Trail @ East Via Escuela.

***Existing Land Uses Surrounding the North Village Planning Area***

The North Village Planning Area surrounds the existing Golden Sands Mobile Home Park which includes 139 spaces for mobile homes, three of which are not currently occupied. Access to this development is via Golden Sands Drive, a private street that extends east from the eastern terminus of East San Rafael Drive. When fully occupied, approximately 81 (inbound plus outbound) vehicles per hour would be expected to use East San Rafael Drive, east of Sunrise Way, for access to this mobile home park during the evening peak hour on an average weekday during the peak season. The 136 currently occupied mobile homes generate approximately 79 vehicles per hour (inbound plus outbound) during the evening peak hour on a weekday.

The North Village Planning Area is surrounded to the west, north, and east by the Four Seasons at Palm Springs gated community (Tract 30054). The primary access to this community of 238 single-family detached dwelling units is located northwest of the North Village, at the intersection of Four Seasons Boulevard and Sunrise Way.

Approximately 76 single-family dwellings are located south of Four Seasons Boulevard and north of San Rafael Drive, between Sunrise Way and the western boundary of the North Village. Residents of these dwellings can take access via the gated entry on Four Seasons Boulevard or the secondary gated access located on Savanna Trail, which intersects East San Rafael Drive, east of Sunrise Way. Both Savanna Trail and Savanna Way are private north/south residential streets with access to East San Rafael Drive via the gated southern access to Tract 30054.

Willdan Associates prepared the approved *"Palm Springs Country Club Residential Development Traffic Study"* (dated August 6, 2001) evaluating Tract 30054. Willdan estimated that approximately 20 percent of the trips generated by Tract 30054 were expected to use the southern gated access and San Rafael Drive (east of Sunrise Way) for access. That traffic assignment would result in approximately 48 (inbound plus outbound) vehicles per hour passing through the southern gated access onto San Rafael Drive during the evening peak hour on an average weekday.

***Existing Land Uses Surrounding the South Village Planning Area***

The South Village Planning Area surrounds the gated residential community known as the existing Palm Springs Country Club and Alexander Estates. This community includes 275 residences with access to and from North Farrell Drive via Whitewater Club Drive, at the southwest corner of the South Village. With the proposed project, the 23 single-family detached dwellings and 275 condominiums within this community would also have access through the South Village Planning Area via North Whitewater Club Drive (i.e., at the southeast corner of the South Village). North Whitewater Club Drive was the access to the former Palm Springs Country Club clubhouse.

***d. Existing Entitlements***

The project site has no existing entitlements. The General Plan land use designation for the portion of the project site located west of the Whitewater River levee is Open Space-Parks and Recreation. The General Plan land use designation for the contiguous parcel, located east of the Whitewater River levee, is Open Space Conservation.

The existing zoning designation of the North Village is primarily Open Space with a portion designated O-5 and a smaller portion designated as R-1-C (single-family residential with 10,000 square-foot minimum lots). The existing zoning of the South Village (the area west

of the levee) is O or O-5 (open space with 5-acre minimum lots). The parcel located east of the Whitewater River levee is zoned W (watercourse). Although the former golf course was a compatible use within the Open Space-Conservation designation, the low-density residential land uses currently proposed would require a Planned Development District in lieu of a zone change.

### *e. Cumulative Development*

Plans for the construction of cumulative developments have been disrupted by the economic recession. The growth in traffic volumes projected with the traffic model developed for the 2007 Palm Springs General Plan Update have been utilized for this traffic analysis, and are assumed to address future cumulative development within the study area. Year 2020 ambient traffic volumes were developed by assuming a geometric proportionate growth between existing year 2013 traffic volumes and year 2030 General Plan buildout traffic volumes. Although the year 2020 and year 2030 traffic volumes evaluated assume that Sunrise Parkway will be extended from Sunrise Way to Indian Canyon Drive, an evaluation of year 2020 conditions without the Sunrise Parkway connection is included on page 3-18 under the heading "Other Considerations".

# 2. CIRCULATION BACKGROUND ANALYSIS

### *a. Existing & Approved Land Uses*

The portion of the South Village located west of the Whitewater River levee is designated Open Space-Parks and Recreation in the Land Use Element of the *Palm Springs General Plan*. The 24.93-acre triangular remainder Lot "L" (located east of the Whitewater River levee) is designated Open Space-Conservation in the Land Use Element of the *Palm Springs General Plan* but is not a part of the currently proposed project. It is a contiguous parcel not included in the 125.8-acre project site.

The existing zoning designation of the North Village is primarily "O" (Open Space). A portion is designated "O-5" (Open Space with a 5-acre minimum lot size). A smaller portion is designated for single-family residential use with a 10,000 square-foot minimum lot size. The existing zoning designations of the South Village include "O" (Open Space) and O-5 (Open Space with 5-acre minimum lots) west of the levee, and W (Watercourse) east of the levee.

### *b. Surrounding Street System*

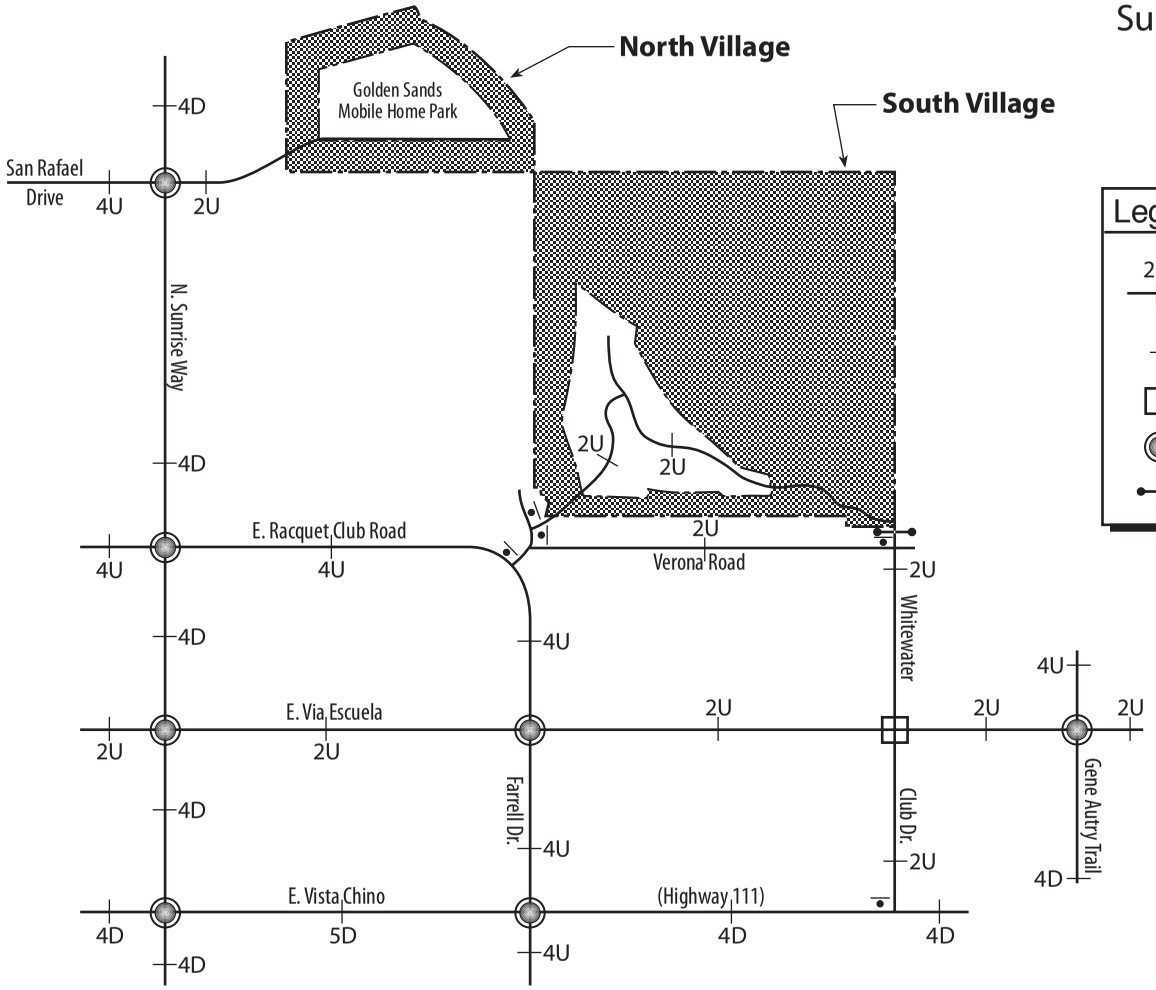
Figure 2-1 depicts the surrounding street system in the study area. Regional access is currently available from Gene Autry Trail, Farrell Drive, Sunrise Way, and Vista Chino (State Highway 111). Local access is provided by San Rafael Drive, Racquet Club Road, Verona Road and Via Escuela. Direct site access is available from San Rafael Drive/Golden Sands Drive and North Whitewater Club Drive. The existing traffic control devices and the number of mid-block travel lanes are shown in Figure 2-1, based upon field reconnaissance.

**Gene Autry Trail** is a north/south facility that provides direct access to an interchange at Interstate 10. North of Vista Chino, Gene Autry Trail is a four-lane undivided roadway with a prima facie speed of 55 miles per hour (mph). Gene Autry Trail extends south of Vista Chino, to Sunny Dunes Road, as a 6-lane divided roadway with a posted speed limit of 45 mph. Gene Autry Trail is designated as State Highway 111 from Vista Chino south to East Palm Canyon Drive. The intersections of Gene Autry Trail with Via Escuela and with Vista Chino are controlled by traffic signals.

**Sunrise Way** is a 4-lane divided north/south roadway with a posted speed limit of 45 mph within the study area. The intersections of Sunrise Way with Vista Chino, Racquet Club Road, and San Rafael Drive are signalized. The northerly and westerly extension of Sunrise Way was scheduled to be constructed to Indian Canyon Drive in conjunction with the Palm Springs Village Planned Development District (renamed Avalon) project and named "Sunrise Parkway." The economic recession delayed the construction of Sunrise Parkway. When eventually completed, this new north/south connection will provide an attractive alternate route for through traffic that may substantially increase future traffic volumes on Sunrise Way.

**Vista Chino** is an east/west roadway designated as Highway 111 from North Palm Canyon Drive to Gene Autry Trail. West of Sunrise Way, Vista Chino provides a four-lane divided cross-section with a posted speed limit of 45 mph. From Sunrise Way through Farrell Drive, Vista Chino has been widened to provide five through lanes, including two westbound and three eastbound through lanes. East of Farrell Drive, Vista Chino narrows from a five-lane to a four-lane divided highway, with a posted speed limit of 50 mph. East

# Figure 2-1
# Surrounding Street System




## Legend

- 2U — Number of Through Lanes
  D = Divided U = Undivided
- Stop Sign
- All Way Stop Control
- Signalized Intersection
- Gate

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Scale: 1" = 1380'

of Gene Autry Trail, Vista Chino transitions from a four-lane divided roadway to a four-lane undivided roadway.

**Racquet Club Road** is a four-lane undivided secondary thoroughfare, east and west of Sunrise Way. Racquet Club Road is signalized at Sunrise Way. Racquet Club Road has a posted speed limit of 45 mph.

**East San Rafael Drive** is a 4-lane undivided roadway, west of Sunrise Way, that narrows to a 2-lane undivided roadway east of Sunrise Way. San Rafael Drive is controlled by a traffic signal at its intersection with Sunrise Way. The centerline of San Rafael Drive is currently offset by approximately 20 feet at Sunrise Way. The right-of-way of San Rafael Drive east of Sunrise Way is smaller than the right-of-way of San Rafael Drive west of Sunrise Way. San Rafael Drive has a posted speed limit of 45 miles per hour west of Sunrise Way and a prima facie speed limit of 25 mph east of Sunrise Way.

**Farrell Drive** is a 4-lane undivided roadway with signalized intersections at Via Escuela and at Vista Chino. North of Via Escuela, the alignment of Farrell Drive turns westerly and transitions into Racquet Club Drive. The posted speed limit on Farrell Drive, south of Racquet Club Road is 45 mph. Just west of the South Village, North Farrell Drive (a two-lane undivided street with direct residential frontage) extends north of Racquet Club Road and Verona Road, roughly parallel to the western boundary of the South Village. North Farrell Drive terminates just south of the southern boundary of the North Village.

**East Via Escuela** is a 2-lane undivided collector street that extends from east of Gene Autry Trail to west of Sunrise Way with a posted speed limit of 25 mph. Via Escuela is signalized at the intersections of Sunrise Way, Farrell Drive, and Gene Autry Trail. Via Escuela is all-way stop-controlled at North Whitewater Club Drive. Via Escuela functions as a parallel route for motorists seeking to avoid potential congestion on Vista Chino during the peak commuter travel hours.

**Verona Road** is a 2-lane undivided collector street (with direct residential frontage) that is controlled by a stop sign at the intersection of North Farrell Drive. The intersection of Verona Road and Volturno Road is an all-way stop-controlled intersection.

**Golden Sands Drive** is a 2-lane undivided local street aligned with the easterly extension of the terminus of San Rafael Drive. Golden Sands Drive is a private street within the existing mobile home development that will be surrounded by the proposed North Village development.

**North Whitewater Club Drive** is a 2-lane undivided collector street with direct residential frontage, north of Vista Chino. The posted speed limit is 25 mph. North Whitewater Club Drive is controlled by an all-way stop at Via Escuela and a stop sign facing southbound motorists at the intersections of Verona Road and Vista Chino. To avoid excessive control delay, some of the southbound motorists on North Whitewater Club Drive avoid making the left-turn movement onto eastbound Vista Chino during peak commuter travel hours by using alternate routes to reach signalized intersections including Gene Autry Trail at Via Escuela.

### *c. General Plan Street System*

The Circulation Element of the *City of Palm Springs General Plan* details the general location and extent of the circulation system required to serve future travel demands associated with buildout per the Land Use Element. It also details the master planned roadway classification (i.e. major thoroughfare, secondary thoroughfare or collector street)

and the location of master planned bikeways and equestrian trails. The master planned roadway classifications in the vicinity of the project site per the adopted City of Palm Springs Circulation Plan are shown in Figure 2-2. Typical cross-sections and right-of-way requirements associated with each classification of master planned street are shown in Figure 2-3.

Major thoroughfares are typically high-capacity divided arterials that provide four or six travel lanes within a 100 to 110-foot right-of-way. They have a limited number of cross streets and provide stacking and exclusive turn lanes at intersections. Gene Autry Trail, Sunrise Way and Vista Chino are master planned major thoroughfares within the study area.

Secondary thoroughfares are four-lane undivided roadways with 64 feet of pavement and an 80-foot to 88-foot right-of-way that chiefly serve locally destined traffic and secondary traffic generators. San Rafael Drive, Racquet Club Road, and Farrell Drive are classified as secondary thoroughfares within the study area.

Collector streets are typically two-lane undivided roadways with 40 feet of pavement within a 60-foot to 66-foot right-of-way. Whitewater Club Drive (from Vista Chino to Verona Road), Verona Road, Via Escuela, Volturno Road, North Cerritos Drive, and Francis Drive are master planned collector streets within the study area that would require a 60-foot right-of-way.

The City of Palm Springs Circulation Element includes several circulation policies that are relevant to the project. Policy 7.2.1 specifies that LOS D shall be provided and maintained for the City's circulation network, using average weekday conditions during the peak month of March as a base. Policy 7.1.7 states that increased right-of-way may be required of developers through land dedication prior to the approval of development plans to accommodate the additional demand for dual left-turn and exclusive right-turn lanes, bus stops and lanes, bicycle facilities, or other improvements necessary to maintain LOS D. Policy 7.10.10 states that the City shall encourage the proper design and maintenance of bicycle facilities and appropriate signing to ensure the safe use of the bikeway system.

The City of Palm Springs Circulation Element also includes several circulation implementation programs that could be relevant to the project. For example, the City shall require all new developments to provide off-street parking in accordance with the Municipal Code parking requirements. The City shall install protected left-turn traffic signal phasing when traffic volumes increase to the point that such phasing is warranted.

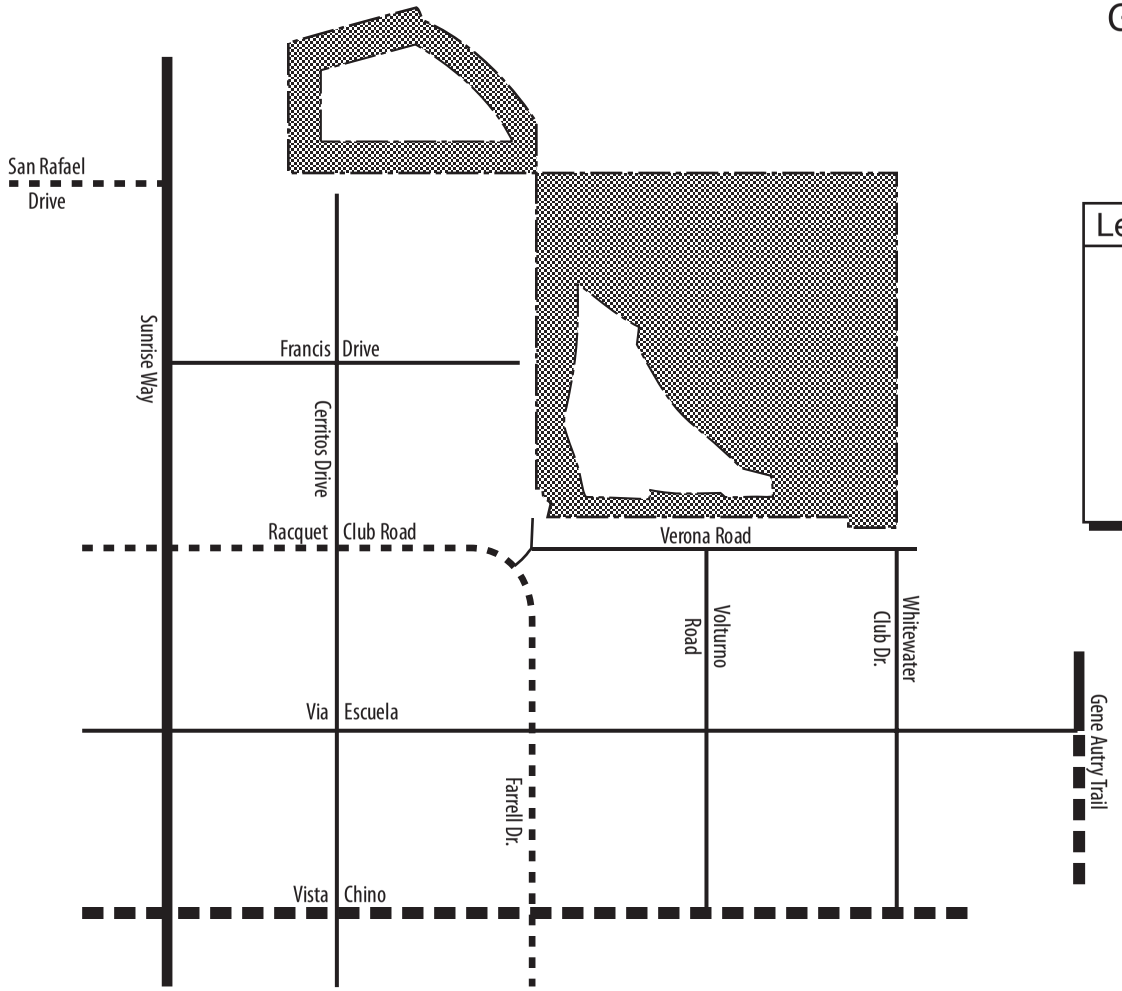
The Palm Springs General Plan Circulation Element Circulation Plan includes master planned bikeways in the study area. Master planned bikeways are shown along Gene Autry Trail, Sunrise Way, Vista Chino, San Rafael Drive, Racquet Club Road, and Farrell Drive. A master planned bikeway and equestrian trail are shown extending along the Whitewater River levee in the study area.

### *d. Existing Traffic Volumes*

Two-hour midday (11:30 AM to 1:30 PM) and two-hour evening (4:00 PM to 6:00 PM) manual turning movement traffic counts were made by Counts Unlimited, Inc. at ten key intersections on May 2, 2013. The unadjusted peak hour traffic count data is provided in Appendix A.

Year 2012 Caltrans traffic count data for State Highway 111 (back of Post Mile 52.4 at Farrell Drive) includes a peak hour volume of 2,650 vehicles per hour, a peak month volume

# Figure 2-2
## General Plan Street System (City of Palm Springs)




Legend

- Major Thoroughfare (6 Lanes)
- Major Thoroughfare (4 Lanes)
- Secondary Thoroughfare
- Collector Street

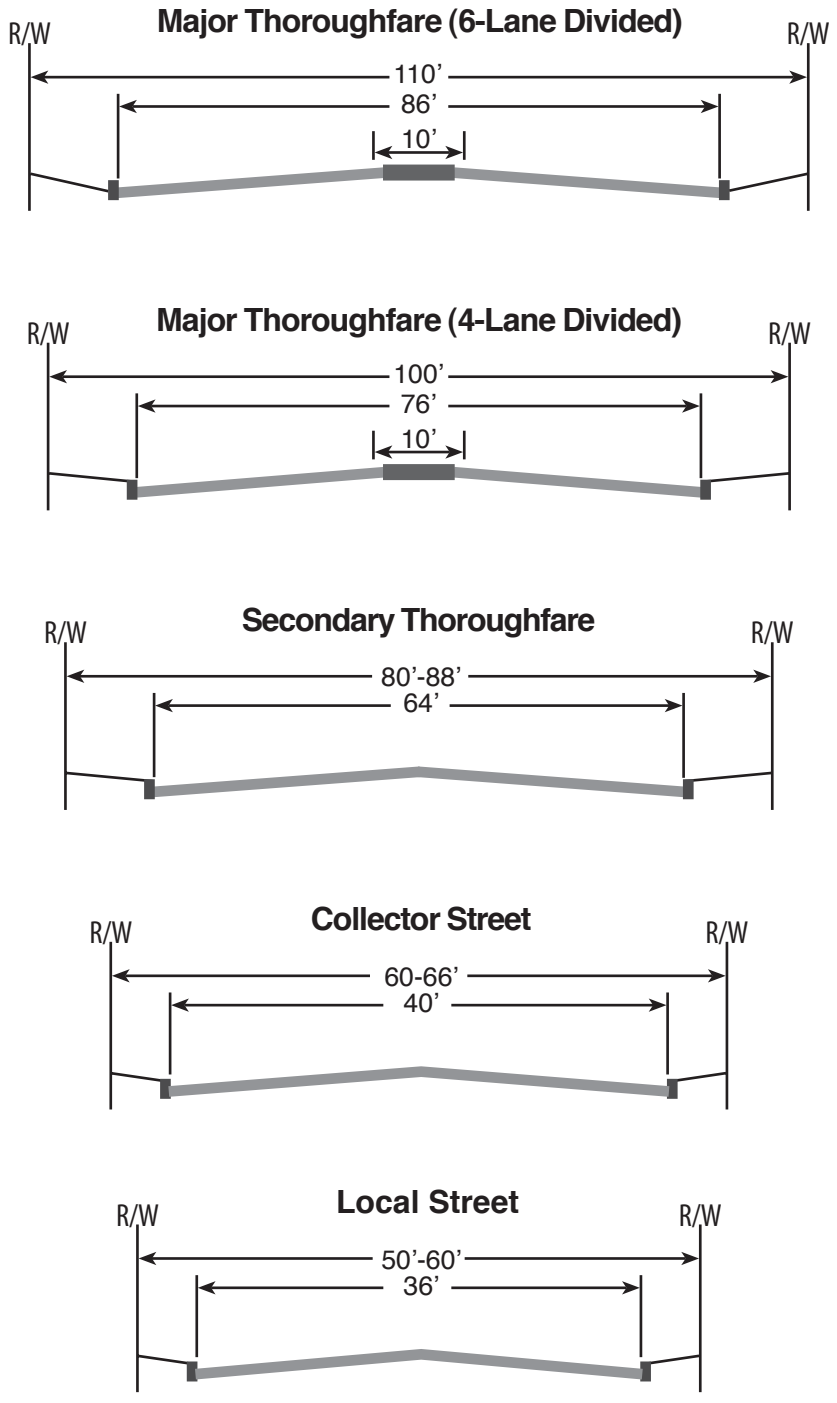
Endo Engineering

Source: *City of Palm Springs 2007 General Plan*

Scale: 1" = 1380'

Figure 2-3

Typical Street Cross-Sections
(City of Palm Springs)




Additional right-of-way may be required for sidewalks and bike lanes in some cases

*Endo Engineering*

Source: *City of Palm Springs 2007 General Plan*

of 31,000 vehicles per day, and an annual average traffic (AADT) volume of 29,000 vehicles per day. The peak hour traffic volume was nine percent of the AADT. The daily traffic volume during the peak month was 6.9 percent higher than the AADT.

The daily traffic volumes within the study area were estimated by assuming that 8 percent of the typical weekday traffic occurs during the peak hour. This methodology is consistent with previously approved traffic studies for projects with the same master planned streets as those in this study area (e.g. the *Palm Springs Village Traffic Impact Study* and the *Palm Springs Classic Planned Development District Traffic Impact Study).*

The peak hour traffic counts were expanded to estimate the daily traffic volumes by assuming that eight percent of the typical weekday traffic volume occurs during the evening peak hour. The expanded peak hour counts were then compared to the eight peak season daily traffic counts available for roadways within the study area published in the *2013 CVAG Traffic Census Report*. The comparison was made to determine an appropriate seasonal expansion factor for use in expanding the new traffic count data to reflect peak season traffic volumes.

Prior to the application of a seasonal adjustment, the daily traffic volume estimates were found to be lower than the peak season CVAG daily traffic counts at seven of the eight count locations by an average of 16.6 percent. The daily traffic volume estimate made from the peak hour traffic counts for Gene Autry Trail, north of Vista Chino, was 20.8 percent greater than the peak season 2013 CVAG 24-hour count. Consequently, so seasonal adjustment was made to the traffic counts made at the intersection of Gene Autry Trail and Via Escuela. However, the traffic volumes at all of the other key intersections were expanded by fifteen percent to reflect peak-season conditions.

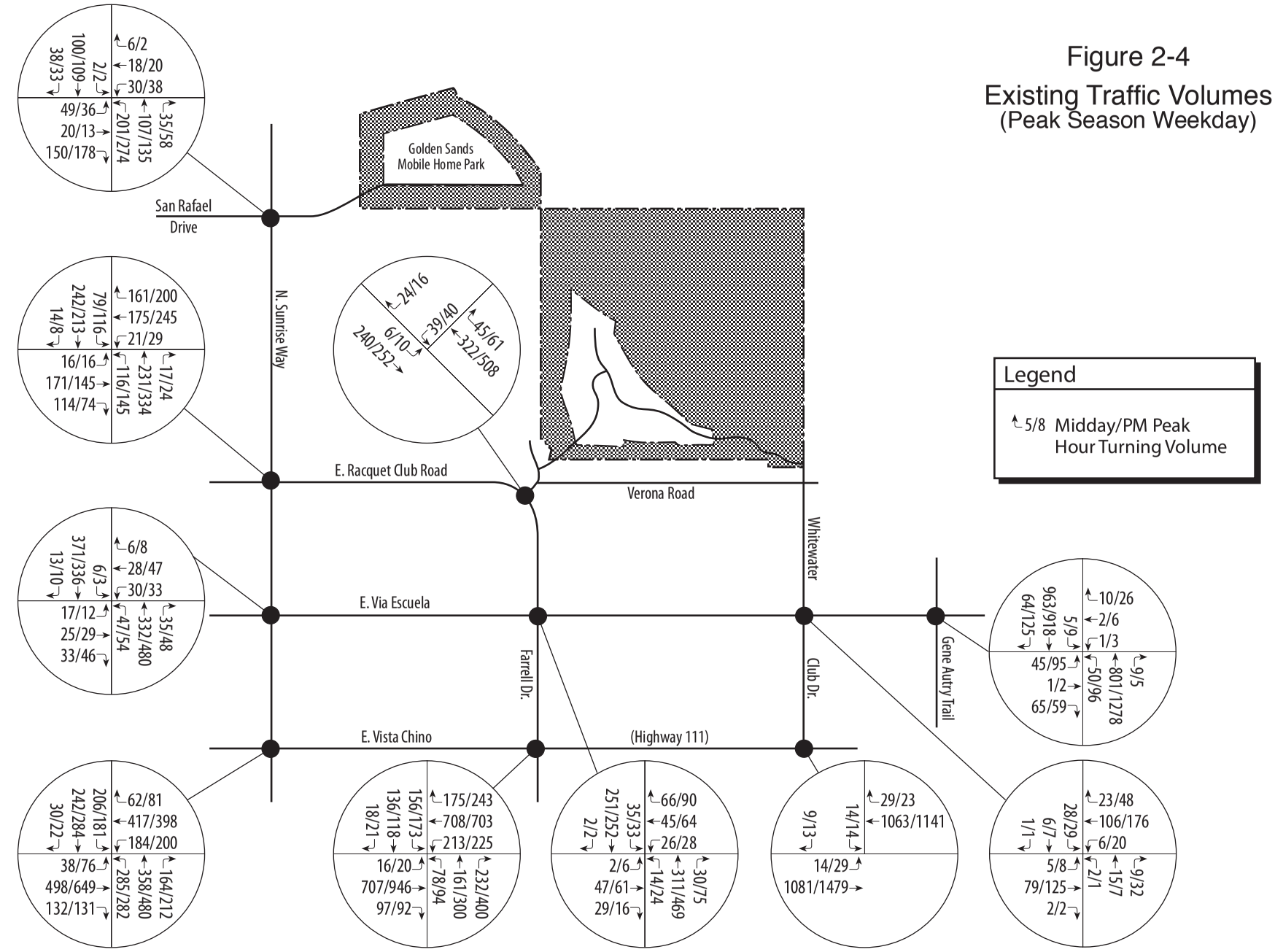
Caltrans publishes truck traffic count data for State Routes including Vista Chino (Highway 111). Truck traffic on Vista Chino after Post Mile 51.59 represented 7.70 percent of the AADT in 2012.[1] Consequently, an 8 percent truck mix was assumed for the peak hour HCM 2000 operational analyses.

The current midday and evening peak hour traffic volumes on a typical weekday during the peak season are depicted in Figure 2-4. Table 2-1 provides the current daily traffic volumes that were estimated from the peak hour traffic count data (including the 15 percent seasonal adjustment where appropriate). The winter 2013 CVAG 24-hour traffic counts are also shown in Table 2-4. Available Caltrans daily traffic count data for Vista Chino that reflects conditions during the peak month in 2012 are also shown therein.

CVAG has published peak season daily traffic counts for Vista Chino that provide an historical perspective on the traffic growth in the study area. From 1995 to 2006, the traffic volumes on Vista Chino, west of Sunrise Way, have exhibited an annual traffic growth rate of 4.1 percent. With the economic downturn, the traffic volume on Vista Chino decreased from its high of 24,064 ADT (in the year 2006) to 18,332 in the year 2007, 18,002 ADT in the year 2008, and 17,924 in the year 2009. The traffic volume on Vista Chino, west of Sunrise Way, increased to 23,411 ADT in the year 2013.

1. *2012 Annual Average Daily Truck Traffic on the California State Highway System;* Caltrans; 2012.

# Figure 2-4
## Existing Traffic Volumes
(Peak Season Weekday)

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Scale: 1" = 1380'

Table 2-1
Current Peak Season
Typical Weekday Traffic Volumes

| Roadway Link | CVAG 2013 24-Hour Count[a] | Daily Traffic Volume Estimate[b] |
|---|---|---|
| **Sunrise Way** | | |
| - N/O San Rafael Drive | | 3,970 |
| - S/O San Rafael Drive | 9,676 | 9,890 |
| - N/O Racquet Club Road | 13,811 | 11,080 |
| - S/O Racquet Club Road | 9,992 | 10,220 |
| - N/O Via Escuela | | 10,610 |
| - S/O Via Escuela | | 12,460 |
| - N/O Vista Chino | 20,153 | 14,030 |
| - S/O Vista Chino | 12,141 | 19,850 |
| **Farrell Drive** | | |
| - N/O Racquet Club Road | | 1,600 |
| - S/O Racquet Club Road | | 10,770 |
| - N/O Via Escuela | | 10,650 |
| - S/O Via Escuela | | 10,800 |
| - N/O Vista Chino | | 10,930 |
| - S/O Vista Chino | | 15,380 |
| **Whitewater Club Drive** | | |
| - N/O Via Escuela | | 1,250 |
| - S/O Via Escuela | | 860 |
| - N/O Vista Chino | | 980 |
| **Gene Autry Trail** | | |
| - N/O Via Escuela | | 30,640 |
| - S/O Via Escuela | 24,406 | 29,490 |
| **San Rafael Drive** | | |
| - W/O Sunrise Way | | 6,910 |
| - E/O Sunrise Way | | 1,650 |
| **Racquet Club Road** | | |
| - W/O Sunrise Way | | 7,910 |
| - E/O Sunrise Way | | 9,490 |
| - W/O Farrell Drive | | 9,830 |
| **Via Escuela** | | |
| - W/O Sunrise Way | | 2,470 |
| - E/O Sunrise Way | | 2,110 |
| - W/O Farrell Drive | | 2,170 |
| - E/O Farrell Drive | | 4,380 |
| - W/O Whitewater Club Drive | | 3,920 |
| - E/O Whitewater Club Drive | | 5,380 |
| - W/O Gene Autry Trail | | 4,790 |
| - E/O Gene Autry Trail | | 640 |

a. Volumes shown are winter 2013 24-hour counts from the *2013 Traffic Census Report* (CVAG).
b. Volumes are estimates of the current peak season typical weekday traffic volume made by expanding the peak hour traffic count data collected on May 2, 2013. These volumes assume that 8 percent of the daily traffic occurs during the evening peak hour, and include a 15 percent seasonal expansion factor for all links except those adjacent to the intersection of Gene Autry Trail and Via Escuela.

Table 2-1 (Cont.)
Current Peak Season
Typical Weekday Traffic Volumes

| Roadway Link | CVAG 2013 24-Hour Count[a] | Daily Traffic Volume Estimate[b] |
|---|---|---|
| **Vista Chino** | | |
| - W/O Sunrise Way | 23,411 | 19,460 [22,300] |
| - E/O Sunrise Way | | 21,490 [24,500] |
| - W/O Farrell Drive | | 23,450 [24,500] |
| - E/O Farrell Drive | | 33,620 [31,000] |
| - W/O Whitewater Club Drive | | 33,260 [31,000] |
| - E/O Whitewater Club Drive | 30,165 | 33,210 [31,000] |

a. Volumes shown are winter 2013 24-hour counts from the *2013 Traffic Census Report* (CVAG).
b. Volumes shown in square brackets are peak month traffic volumes published by Caltrans in *2012 Traffic Volumes on California State Highways*. Volumes without brackets are estimates of the current peak season weekday volume made by expanding the peak hour count data collected on May 2, 2013. These volumes assume that 8 percent of the daily traffic volume occurs during the evening peak hour, and include a 15 percent seasonal expansion factor for all links except those adjacent to the intersection of Gene Autry Trail and Via Escuela.

### *e. Existing Levels of Service*

Roadway capacity has been defined as the maximum number of vehicles that can pass over a given roadway during a given time period under prevailing roadway and traffic conditions. By comparison, levels of service are a relative measure of driver satisfaction, with values ranging from A (free flow) to F (forced flow). Levels of service (LOS) reflect a number of factors such as speed and travel time, traffic interruptions, vehicle delay, freedom to maneuver, driver comfort and convenience, and vehicle operating costs. Levels of service do not reflect safety.

An important distinction exists between the concepts of capacity and levels of service. A given lane or roadway may provide a wide range of service levels, depending upon traffic volumes and speeds. The design capacity of a roadway (LOS D in the City of Palm Springs) is the level at which the facility is handling the maximum traffic volume that it can accommodate while maintaining an acceptable level of driver satisfaction.

The maximum capacity of a roadway, generally defined at the upper limit of LOS E, is the maximum traffic volume that a roadway can handle. The maximum capacity is determined from roadway factors (such as lane widths, lateral clearance, shoulders, surface conditions, alignment and grades) as well as traffic factors (such as vehicle composition i.e. truck and bus mixture, distribution by lane, peaking characteristics, traffic control devices, intersections, etc.).

### *Methodology and Minimum Performance Standard*

The City of Palm Springs requires the use of the *Highway Capacity Manual* (HCM) methodology to determine the peak hour level of service at intersections. The Circulation Element includes as a policy, the provision and maintenance of level of service (LOS) D operation for the City's circulation network, based upon average weekday conditions during the peak month of March. The key intersections were analyzed with the *Highway Capacity*

*Manual* (HCM 2000) methodologies as implemented by version 5.3 of the Highway Capacity Software (HCS+).

The application of the City of Palm Springs minimum performance standard is straight forward for signalized and all-way stop-controlled (AWSC) intersections, where the HCM methodology identifies a single level of service that characterizes the overall intersection operation. However, a single level of service is not defined for unsignalized two-way stop-controlled (TWSC) intersections as a whole by the HCM 2000, but rather for the minor-street approaches and the conflicting left-turn moves from the major street.

The Palm Springs City Engineer reviews each TWSC intersection where LOS D is projected to be exceeded on the approach with the most delay on an individual basis to determine the appropriate mitigation. The following factors are considered to ensure that the final decision regarding required intersection improvements and changes in traffic control are consistent with the City's system performance objectives:

- the number of vehicles that are expected to be making the movement with the most delay;
- the existing and appropriate future spacing of signalized intersections;
- whether or not signal warrants are currently met or expected to be met in the future;
- whether alternative routes are available to accommodate those motorists experiencing excessive delay and a poor LOS during the peak hours.

***Peak Hour Intersection Analysis***

Peak hour traffic creates the heaviest demand on the circulation system and the lane configuration at intersections is the limiting factor in roadway capacity. Consequently, peak hour intersection capacity analyses are useful indicators of worst-case conditions. The *Highway Capacity Manual* (HCM) presents the best available techniques for determining capacity, delay, and LOS for transportation facilities.[2] The peak hour delay and levels of service were determined at the existing key intersections with the methodologies outlined in the HCM 2000.

A brief discussion of the HCM 2000 methodologies is provided in Appendix B. The intersection delay worksheets are also included in Appendix B. The relationships between peak hour intersection control delay and levels of service are provided in Appendix B (Table B-1 for unsignalized intersections and Table B-2 for signalized intersections).

The "Highway Capacity Software" (HCS+) package was employed to perform the numerical calculations for the HCM analysis procedures. This commercial software implements the HCM 2000 procedures and is prepared under FHWA sponsorship and maintained by the McTrans Center at the University of Florida Transportation Research Center.

*Unsignalized Intersection Analysis*

The operational analysis procedure for unsignalized intersections contained in Chapter 17 of the HCM 2000 was utilized to evaluate the average control delay that drivers experience at the key intersections that are two-way stop-controlled (TWSC). Three of the key

2. *Highway Capacity Manual;* Fourth Edition; TRB Report 209; Transportation Research Board, National Research Council; Washington, D.C.; 2000.

intersections are currently unsignalized. None of the unsignalized key intersections currently meet peak hour traffic signal warrants.

Unsignalized intersections are typically categorized as either two-way stop-controlled (TWSC) if the minor street is controlled by stop signs or all-way stop-controlled (AWSC) if both streets are controlled by stop signs. As shown in Figure 2-5, the intersections of Farrell Drive with Racquet Club Drive and North Whitewater Club Drive with Vista Chino are two-way stop-controlled. The intersection of Whitewater Club Drive with Via Escuela is all-way stop-controlled.

*Two-Way Stop-Controlled (TWSC) Intersections*

At TWSC intersections, the approaches controlled by the stop sign are referred to as the minor-street approaches. Minor-street approaches can be either public streets or private driveways. The intersection approaches that are not controlled by stop signs are called the major-street approaches. The left-turn movement from the minor street faces the most complex set of conflicting moves and is normally the most difficult move to execute at a TWSC intersection.

The performance measures for TWSC and AWSC intersections are: control delay, delay to major street through vehicles, queue length, and volume-to-capacity ratio. However, the level of service is primarily related to the average control delay, which is given in terms of seconds of delay per vehicle by minor-street movement and intersection approach. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The average control delay for any particular minor-street movement is a function of the capacity of the approach and the degree of saturation.

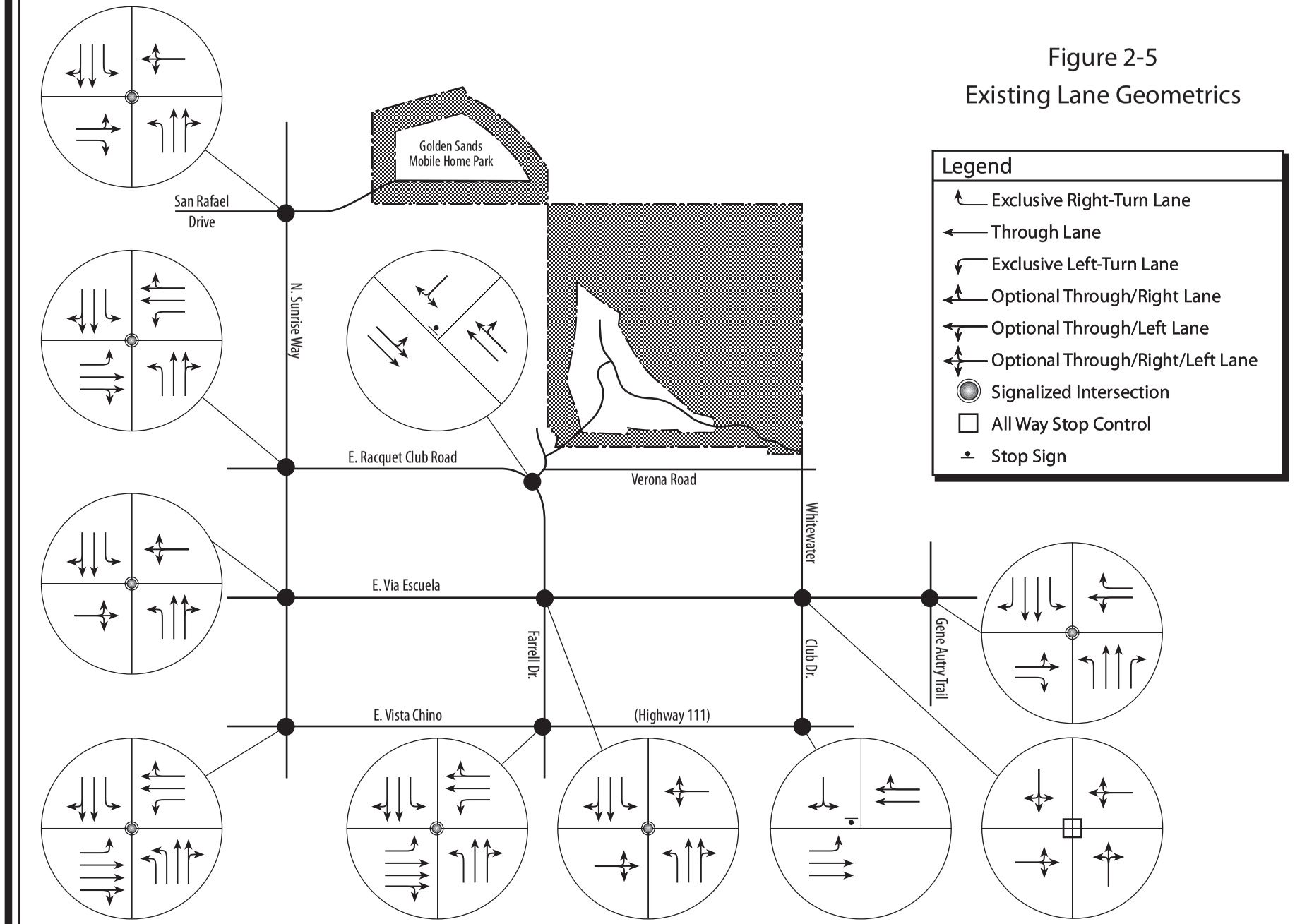
Existing average approach control delay values and the corresponding level of service values for the unsignalized key intersections are provided in Table 2-2. These results assume existing approach lane geometrics at the intersections (as shown in Figure 2-5) and an eight percent heavy vehicle mix (per Caltrans count data for SR 111). It is important to note that LOS is not defined for TWSC intersections as a whole, but rather for the minor-street approaches and the conflicting left-turn moves from the major street.

It can be seen from Table 2-2, that the peak hour control delay experienced by motorists turning left from the major street at the TWSC intersections ranges from 8.2 to 11.7 seconds per vehicle. The minor-street approaches with the most delay exhibit average approach control delays that range from 11.8 to 22.3 seconds per vehicle during peak hours at the key intersections with TWSC control.

The approach with the most control delay at the intersection of North Whitewater Club Drive and Vista Chino currently operates at LOS C during the peak hours. The control delay associated with the left-turn movement from Vista Chino at this intersection (which represents the “best case” movement) corresponds to LOS B operation during the peak hours.

The intersection of Farrell Drive and Racquet Club Drive currently operates at LOS B during peak hours on the approach with the most delay, and LOS A for left-turn movements from the major street. Although a single overall intersection delay and LOS are not defined for TWSC intersections in the HCM 2000, it may be concluded from the evaluation summarized herein that both TWSC intersections are currently operating at acceptable levels of service during the peak hours on weekdays in the peak season.

# Figure 2-5
# Existing Lane Geometrics




*Endo Engineering*

Scale: 1" = 1380'

Table 2-2
Existing Unsignalized Intersection Peak Hour Delay and LOS Summary[a]

| Unsignalized Intersection | Existing Peak Season Typical Weekday Condition | | | | |
|---|---|---|---|---|---|
| | Left Turn From Major Street[b] | | Intersection Approach With The Most Delay | | |
| | Control Delay | Level of Service[c] | Approach | Control Delay[d] | Level of Service[c] |
| ALL-WAY STOP CONTROL | | | | | |
| **Whitewater Club Dr. @ Via Escuela** | | | | | |
| - Midday Peak Hour | [7.87] | [A] | Westbound | 7.96 | A |
| - Evening Peak Hour | [8.67] | [A] | Westbound | 9.02 | A |
| TWO-WAY STOP CONTROL | | | | | |
| **Farrell Drive @ Racquet Club Road** | | | | | |
| - Midday Peak Hour | 8.2 | A | Southbound | 11.8 | B |
| - Evening Peak Hour | 8.8 | A | Southbound | 14.7 | B |
| **Whitewater Club Dr. @ Vista Chino** | | | | | |
| - Midday Peak Hour | 11.1 | B | Southbound | 20.3 | C |
| - Evening Peak Hour | 11.7 | B | Southbound | 22.3 | C |

a. Appendix B includes the HCS worksheets for the unsignalized intersections. The values shown assume the existing intersection approach lane geometrics shown in Figure 2-5, a peak hour factor of 1.0, and an eight percent truck mix.
b. The values shown in brackets represent the overall average intersection control delay (seconds/vehicle) and LOS for the intersection with all-way stop control. The average control delay (seconds/vehicle) is shown for the left-turn movement from the major street onto the minor street at intersections with two-way stop control.
c. The LOS was determined from the control delay per the HCM 2000 (page 17-2 and 17-32) with 0-10 sec./veh. = LOS A; 10-15 sec./veh. = LOS B; 15-25 sec./veh. = LOS C; 25-35 sec./veh. = LOS D; 35-50 sec./veh. = LOS E; 50+ sec./veh. = LOS F.
d. The average control delay (seconds/vehicle) for the intersection approach with the most delay.

*All-Way Stop-Controlled (AWSC) Intersections*

The intersection of Whitewater Club Drive and Via Escuela is an all-way stop-controlled (AWSC) intersection. The HCM 2000 procedures for this type of intersection provide the overall intersection delay and level of service as well as delay and LOS for the approach with the most delay.

During the midday and evening peak hours, the overall delay at the intersection of Whitewater Club Drive and Via Escuela is currently 7.87 seconds per vehicle and 8.67 seconds per vehicle, respectively. This corresponds to level of service A operation. The approach with the most delay (westbound) is currently operating at LOS A, with an average control delay of 7.96 seconds per vehicle in the midday peak hour and 9.02 seconds per vehicle during the evening peak hour.

*Signalized Intersection Analysis*

The HCM 2000 procedures were utilized via the HCS 2000 software to evaluate the seven signalized key intersections. Default values were assumed for: saturation flow rate (1,900 passenger cars per hour per lane); lost time (2-second clearance interval plus any "all red" time); and the peak hour factor (1.0) at each intersection.

The HCM 2000 methodology addresses the capacity, V/C ratio, and LOS of intersection approaches as well as the LOS of the intersection as a whole. The analysis is undertaken in terms of the ratio of demand flow rate to capacity (V/C ratio) for individual movements or approach lane groups during the peak hour and the composite V/C ratio for the sum of the critical movements or lane groups within the intersection. The critical V/C ratio is an indicator of whether or not the physical geometry and signal design provide sufficient capacity for the movements.

The measures of effectiveness for signalized intersections include: average control delay per vehicle, critical V/C ratios, and levels of service. The level of service is based on the average control delay for various intersection movements. The following parameters affect levels of service: (1) V/C ratio; (2) quality of progression; (3) length of green phases; (4) cycle lengths; and (5) average control delay. Average control delay is the total time vehicles are stopped on an intersection approach during a specified time interval divided by the volume departing from the approach during the same time period. It does not include queue follow-up time (i.e. the time required for the vehicle to travel from the last-in-queue position to the first-in-queue position).

A critical V/C ratio less than 1.00 indicates that all movements at the intersection can be accommodated within the defined cycle length and phase sequence by proportionally allocating green time. In other words, the total available green time in the phase sequence is adequate to handle all movements, if properly allocated. When V/C ratios are greater than 1.0 for either an individual lane group or for the overall intersection, departure volumes are less than arrival volumes.

The current peak hour intersection control delay, critical volume-to-capacity ratios, and intersection level of service values at the signalized key intersections are provided in Table 2-3. The intersection control delay values currently range from a low of 7.7 seconds per vehicle (LOS A) to a high of 40.3 seconds per vehicle (LOS D) during the peak hours at the signalized key intersections. During the midday peak hour, the signalized key intersections are currently operating at LOS C or better levels of service.

Table 2-3
Existing Signalized Intersection
Peak Hour Delay and LOS Summary
(Peak Season Typical Weekday)

| Signalized Intersection | Existing (Year 2013) | | |
|---|---|---|---|
| | Delay[a] (Sec./Veh.) | Critical V/C Ratio | LOS[b] |
| **Sunrise Way @ San Rafael Dr.** | | | |
| - Midday Peak Hour | 12.5 | 0.28 | B |
| - PM Peak Hour | 11.9 | 0.35 | B |
| **Sunrise Way @ Racquet Club Rd.** | | | |
| - Midday Peak Hour | 14.8 | 0.24 | B |
| - PM Peak Hour | 15.0 | 0.30 | B |
| **Sunrise Way @ Via Escuela** | | | |
| - Midday Peak Hour | 7.7 | 0.18 | A |
| - PM Peak Hour | 8.2 | 0.24 | A |
| **Sunrise Way @ Vista Chino** | | | |
| - Midday Peak Hour | 33.3 | 0.66 | C |
| - PM Peak Hour | 36.4 | 0.74 | D |
| **Farrell Drive @ Via Escuela** | | | |
| - Midday Peak Hour | 11.1 | 0.21 | B |
| - PM Peak Hour | 11.3 | 0.31 | B |
| **Farrell Drive @ Vista Chino** | | | |
| - Midday Peak Hour | 28.9 | 0.63 | C |
| - PM Peak Hour | 40.3 | 0.83 | D |
| **Gene Autry Trail @ Via Escuela** | | | |
| - Midday Peak Hour | 9.9 | 0.41 | A |
| - PM Peak Hour | 11.8 | 0.53 | B |

a. Delay = Average Intersection Control Delay (seconds per vehicle). The values shown assume an eight percent truck mix and the intersection approach lane geometrics shown in Figure 2-5. The signalized intersection HCS worksheets are provided in Appendix B.

b. LOS is the intersection level of service determined from the delay per the HCM 2000 (page10-16) with ≤10 sec./veh. = LOS A; >10 and ≤20 sec./veh. = LOS B; >20 and ≤35 sec./veh. = LOS C; >35 and ≤55 sec./veh. = LOS D; >55 and ≤80 sec./veh. = LOS E; >80 sec./veh. = LOS F).

All seven of the signalized key intersections are currently providing acceptable levels of service. Two of the signalized intersections on Vista Chino (at Sunrise Way and at Farrell Drive) currently operate at LOS D during the evening peak hour.

### *f. Transit Service*

The SunLine Transit Agency was created in 1977 through a Joint Powers Authority of five cities and Riverside County. SunLine Transit now provides public transit service to 2.8 million passengers per year throughout the entire Coachella Valley and has a service area of approximately 366 square miles. Twelve SunBus transit lines provide public bus service

with a fleet of 27 buses throughout the Coachella Valley seven days a week (excluding Thanksgiving and Christmas). Sunline Transit has bicycle racks on every bus in its fleet. These bike racks can carry up to three bicycles per bus. Bicycle parking is planned at the Amtrak station near Indian Canyon Drive and at the Greyhound bus station near the downtown.

Public transportation in the City of Palm Springs is provided by SunLine Transit Agency through the SunBus Transit Service. SunBus service is provided between approximately 5:00 a.m. and 11:00 p.m. Line 111 is the major trunk line, which is interconnected with twelve smaller community feeder routes that provide access to every community in the Coachella Valley. Three routes currently pass through the study area including: Line 14, 24, and 32.

SunBus Line 14 extends from Desert Hot Springs to downtown Palm Springs, along Gene Autry Trail, Vista Chino, and Farrell Drive. SunBus Line 24 serves the area north of Vista Chino along: Palm Canyon Drive, Indian Canyon Drive, and Sunrise Way. Line 24 provides transit service along Sunrise Way (between Vista Chino and Tahquitz Canyon Way) and along Vista Chino, west of Sunrise Way. Line 32 connects Palm Springs to Cathedral City and Thousand Palms. Line 32 passes closest to the site at the intersection of Gene Autry Trail and Vista Chino.

### *g. Other Modes of Transportation*

Bikeways and pathways are used by a wide variety of people including children on their way to school, commuters riding to work, and people exercising, racing or touring. While recreational riders seek routes leading to parks, through areas of interest, or racing circuits, commuters want the shortest, fastest, and safest route between two points.

CALTRANS standards are used to design bikeways by most jurisdictions throughout California. The City of Palm Springs adheres to Caltrans bikeway standards. Bike lanes on existing roadways should conform to Caltrans standards or be upgraded to meet Caltrans standards. These standards apply to three different classifications of bicycle facilities (Class I, Class II, and Class III bikeways) as described below.

- Class I Bikeway - A bike path that provides for bicycle travel on a right-of-way completely separated from any street or highway. The paths may be located along alignments parallel to streets or unrelated alignments as long as there is no encroachment from motor vehicle or pedestrian traffic except at grade intersections.
- Class II Bikeway - A bike lane that provides a striped lane for one-way bike travel within the paved area of a street or highway. These bike lanes are within an exclusive right-of-way designated for use by bicyclists. However, cross traffic is permitted for driveway access.
- Class III Bikeway - A bike route in which both bicycle and motor vehicle traffic share the same roadway surface area. The route is marked with signs or stenciled lettering on the pavement identifying the roadway as part of a bikeway system.

#### *Existing Non-Motorized Facilities*

Class I bikeways (bike paths) offer a paved right-of-way completely separated from any street or highway for bicycle travel. Class II bikeways are often called bike lanes because they provide a striped or stenciled lane for one-way travel on a street or highway. Class III

bikeways are often referred to as bike routes. They provide for shared use with pedestrian or motor vehicle traffic and are identified only by signing.

The Coachella Valley Association of Governments (CVAG) *Final Non-Motorized Transportation Plan Update* (September, 2010) identifies existing and proposed non-motorized facilities within the project vicinity. It identifies 2.5 miles of existing Class I bikeways, 3.6 miles of existing Class II bikeways, and 22.1 miles of existing Class III bikeways within the City of Palm Springs. A Class III bike route currently exists along Vista Chino from Cerritos Drive to Gene Autry Trail. A bicycle parking facility currently exists in the study area (north of Vista Chino and west of Sunrise Way).

The *2007 City of Palm Springs General Plan* states that the City currently has 8 miles of Class I bikeways, 13 miles of Class II bikeways, and 35 miles of Class III bikeways. Designated bikeway routes primarily geared toward tourists and visitors exist in the central portion of Palm Springs.

***Future Non-Motorized Facilities***

The *Palm Springs General Plan* Circulation Element Circulation Plan (adopted October 24, 2007) indicates that a proposed Class I Bikeway and a hiking/equestrian trail extend adjacent to the north side of the project site along the Whitewater River levee. Class III bike routes are also shown in the study area along Gene Autry Trail, Farrell Drive, Sunrise Way, San Rafael Drive, Racquet Club Road, and Vista Chino.

The CVAG *Final Non-Motorized Transportation Plan Update* (September 2010) indicates that the City of Palm Springs has identified seven Class I projects, nineteen Class II projects, and twenty-one Class III projects for inclusion in the Plan. Class I projects are estimated to cost $1,000,000 per mile. Costs for Class II projects are estimated at $50,000 per mile. Class III projects are estimated to cost $20,000 per mile. The City of Palm Springs has identified 47 proposed bikeway projects, including: thirteen top-priority projects, twenty-one second-priority projects, and thirteen third-priority projects.

An 11.5 mile top priority Class I project along the Whitewater Wash from Interstate 10 to the Cathedral City limit is projected to cost $11,500,000.00. This bikeway appears to extend across the northeastern corner of the South Village site along the Whitewater River levee.

A second-priority Class II project is proposed along a 2.3 mile length of Gene Autry Trail from Interstate 10 to Vista Chino with an estimated cost of $115,000. A second-priority Class III project is proposed along a 1.8 mile length of Racquet Club Road, from North Palm Canyon Drive to Farrell Drive, with an estimated cost of $36,000. A second-priority Class III project is proposed along a 1.3 mile length of Vista Chino, from Indian Canyon Drive to Cerritos Drive, with an estimated cost of $26,000. A second-priority Class III project is proposed along a 1.0 mile length of San Rafael Drive, from Indian Canyon Drive to Sunrise Way, with an estimated cost of $20,000. A third-priority Class III project is proposed along Sunrise Way from the Whitewater River to Alejo Road along a 2.6 mile length with an estimated cost of $52,000.00.

*CVAG Regional Bikeway Plan*

The CVAG Regional Bikeways Plan identifies regionally significant routes that link important destinations in neighboring cities and are candidates for joint funding applications among cities and/or the County of Riverside. The Regional Bikeway Plan routes include Class I (bike paths), Class II (bike lanes), and Class III (signed bike routes). A regional

bikeway is shown in the Regional Bikeway Plan within the study area. A Class I bike path is shown adjacent to the project site, along the Whitewater Wash. In addition, regional on-road bikeways are shown along Vista Chino and Gene Autry Trail.

*CV Link*

CVAG is the lead agency for the CV Link, a 52-mile multi-modal pathway connection planned between Palm Springs and Coachella to connect neighborhoods, communities, and amenities within the Coachella Valley. Approximately 40 miles of the pathway would be located along the Whitewater River Channel levee, with the remainder along public streets.

The design process is currently underway, with a primary goal being easy access for residents on both sides of the Whitewater River Channel. The CV Link would provide a separate path for pedestrians and a shared paved path for use by cyclists and low-speed electric vehicles (35 mph or less). Conventional automobiles and motorcycles would not be permitted to use the CV Link.

Amenities such as water fountains and structures to provide shade and windbreaks will be included in the improvement plans for the CV Link, which is projected to cost 1.5 million dollars per mile to complete. The entire trail will be accessible to emergency services. Adequate lighting, cameras, and enforcement will also be provided to discourage anti-social behavior. Construction is scheduled to begin in the year 2016. Some segments currently exist while others are expected to require up to a decade to complete.

***h. Congestion Management Program (CMP)***

The Congestion Management Program (CMP) is intended to link land use, transportation, and air quality with reasonable growth management methods, strategies and programs that effectively utilize new transportation funds to alleviate traffic congestion and related impacts. The Riverside County Transportation Commission (RCTC) is the designated Congestion Management Agency (CMA) that prepares the Riverside County Congestion Management Program updates in consultation with local agencies, the County of Riverside, transit agencies and sub regional agencies like the Coachella Valley Association of Governments (CVAG).

The RCTC designates a system of highways and roadways to include (at a minimum) all State Highway facilities within Riverside County and a system of "principal arterials" as the Congestion Management System (CMS). State Highway 111 is a CMP facility in the study area extending along North Palm Canyon Drive (north of Vista Chino), Vista Chino (from North Palm Canyon Drive to Gene Autry Trail), and Gene Autry Trail (south of Vista Chino). It is the responsibility of local agencies, when reviewing and approving development proposals to consider the traffic impacts on the CMS.

When including additional arterials in the CMP System, consideration is given to the following: (1) routes identified by Caltrans as "principal arterials" on their "Functional Classification System" maps; (2) designated expressways; and (3) facilities linking cities/communities (inter-regional facilities) and major activity centers (shopping malls, major industrial/ business parks, stadiums). While participation in the CMP is voluntary, local agencies may nominate arterials for inclusion in the CMP System.[3] Indian Canyon Drive is a regionally significant arterial in the area that has been nominated and included in the CMP System.

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3. *2001 Riverside County Congestion Management Program;* RCTC; December 12, 2001.

Per the adopted Level of Service standard of "E", when a Congestion Management System (CMS) segment falls to LOS F, a deficiency plan is typically prepared by the local agency where the deficiency is located, following coordination with other agencies identified as contributors to the deficiency. The deficiency plan contains mitigation measures (including TDM strategies and transit alternatives) and a schedule for mitigating the deficiency. The RCTC will prepare deficiency plans on the State Highway System when deficiencies are identified by local jurisdictions.

The CMA provides a uniform database of traffic impacts for use in a countywide transportation computer model. The RCTC has recognized use of the Coachella Valley Area Transportation System (CVATS) sub-regional transportation model and the Riverside Transportation Analysis Model (RIVTAM) to analyze traffic impacts associated with development proposals or land use plans. The methodology for measuring LOS must be that contained in the most recent version of the *Highway Capacity Manual*. Traffic standards must be set no lower than LOS E for any segment or intersection on the CMP system unless the current LOS is lower (i.e., LOS F).

The Coachella Valley Association of Governments has developed a Transportation Uniform Mitigation Fee (TUMF) that complements the objectives of the Congestion Management Program (CMP). In addition, Palm Springs has adopted an approved TDM Ordinance. One of the Palm Springs General Plan Implementation Programs includes continuing the City's association with CVAG to achieve a regional transportation strategy that coordinates physical improvements, TUMF, TSM, TDM, public transit and issues of development affecting circulation. The City of Palm Springs is in compliance with the Riverside County CMP, provided all developments participate in the TUMF program.

***i. Regional Transportation Improvement Plans***

The Capital Improvement Program (CIP) is a 7-year program including all regional and local capital improvement projects that maintain or improve the LOS for traffic and transit and conform to air quality mitigation measures associated with transportation-related emissions. Currently, regional projects are programmed in the Riverside County Transportation Improvement Plan (TIP), while locally funded projects (off the State Highway System) are identified in local agency CIPs. To comply with CMP Statutes, CIP requirements shall be the same as and accomplished through the RCTC TIP development process. Projects in the CIP may be incorporated into the Regional Transportation Improvement Program (RTIP) for the programming of Flexible Congestion Relief (FCR) and Urban and Commuter Rail funds.

# 3. CIRCULATION IMPACT ANALYSIS

The traffic analysis summarized below evaluated future conditions at the key intersections with and without the proposed project in the year 2020 (project completion) and the year 2030 (General Plan buildout). For each scenario, peak season typical weekday midday and evening peak hour conditions were evaluated to determine if mitigation would be required to achieve the City of Palm Springs minimum traffic performance standard (LOS D).

### *a. Site Traffic*

### *Trip Generation Forecast*

The potential trip generation associated with the proposed development was estimated from the regression equations included in the Institute of Transportation Engineers publication entitled *Trip Generation* (Eighth Edition; 2008). Table 3-1 provides the peak hour and daily trip generation forecast for the proposed project and the existing Palm Springs Country Club and Alexander Estates community that the proposed South Village surrounds. The trip generation rates for the AM "peak hour of generator" were utilized to forecast the midday peak hour trip generation.

Table 3-1
Project-Related Weekday Trip-Generation Forecast

| Development/ Land Use | Land Use Quantity[b] | Midday Peak Hour In | Out | Total | PM Peak Hour In | Out | Total | Daily 2-Way |
|---|---|---|---|---|---|---|---|---|
| **Proposed Project** | | | | | | | | |
| North Village | 137 DU | 12 | 53 | 65 | 52 | 26 | 78 | 850 |
| South Village | 304 DU | 59 | 167 | 226 | 180 | 106 | 286 | 2,890 |
| Total | | 71 | 220 | 291 | 232 | 132 | 364 | 3,740 |
| **Existing P.S. Country Club and Alexander Estates** | | | | | | | | |
| Single-Family Detached | 23 DU | 7 | 21 | 28 | 18 | 10 | 28 | 270 |
| Multi-Family Attached | 252 DU | 21 | 88 | 108 | 86 | 42 | 128 | 1,440 |
| Total | | 28 | 109 | 137 | 104 | 53 | 156 | 1,710 |

a. Based upon trip generation data published by the ITE in *Trip Generation* (8th Edition, December, 2008). The ITE Land Use Codes assumed were 230 for the multi-family attached housing in the North Village and 210 for the single-family detached housing in the South Village.
b. DU = dwelling units.

The proposed project would provide a new access for the existing Palm Springs Country Club and Alexander Estates development via a gate on North Whitewater Club Drive, north of Verona Road. This will allow a portion of the existing traffic generated by the existing Palm Springs Country Club and Alexander Estates to divert through the project site onto North Whitewater Club Drive. It is estimated that approximately 25 percent of the traffic generated by the existing Palm Springs Country Club and Alexander Estates development

will be redistributed from the intersection of Farrell Drive and Racquet Club Road to North Whitewater Club Drive, north of Verona Road.

When fully occupied the proposed development would generate an estimated 3,740 weekday trip-ends. During the midday peak hour, 291 trip-ends would be generated (71 inbound and 220 outbound). During the evening peak hour, 364 trip-ends would be generated (232 inbound and 132 outbound). As shown in Table 3-1, the trip generation associated with the South Village is projected to be more than three times that of the North Village.

***Trip Distribution and Assignment***

Traffic distribution is the determination of the directional orientation of traffic. It is based upon the geographical location of the site and land uses which will serve as trip origins and destinations. Traffic assignment is the determination of which specific routes project-related traffic will use, once the generalized traffic distribution is determined.

The basic factors affecting route selection are minimizing travel time and the distance traveled. Other considerations may include the aesthetic quality of alternate routes, the number of turning maneuvers, the location of signalized intersections, and avoidance of perceived congestion. Site access locations and turn restrictions directly affect the project traffic assignment.

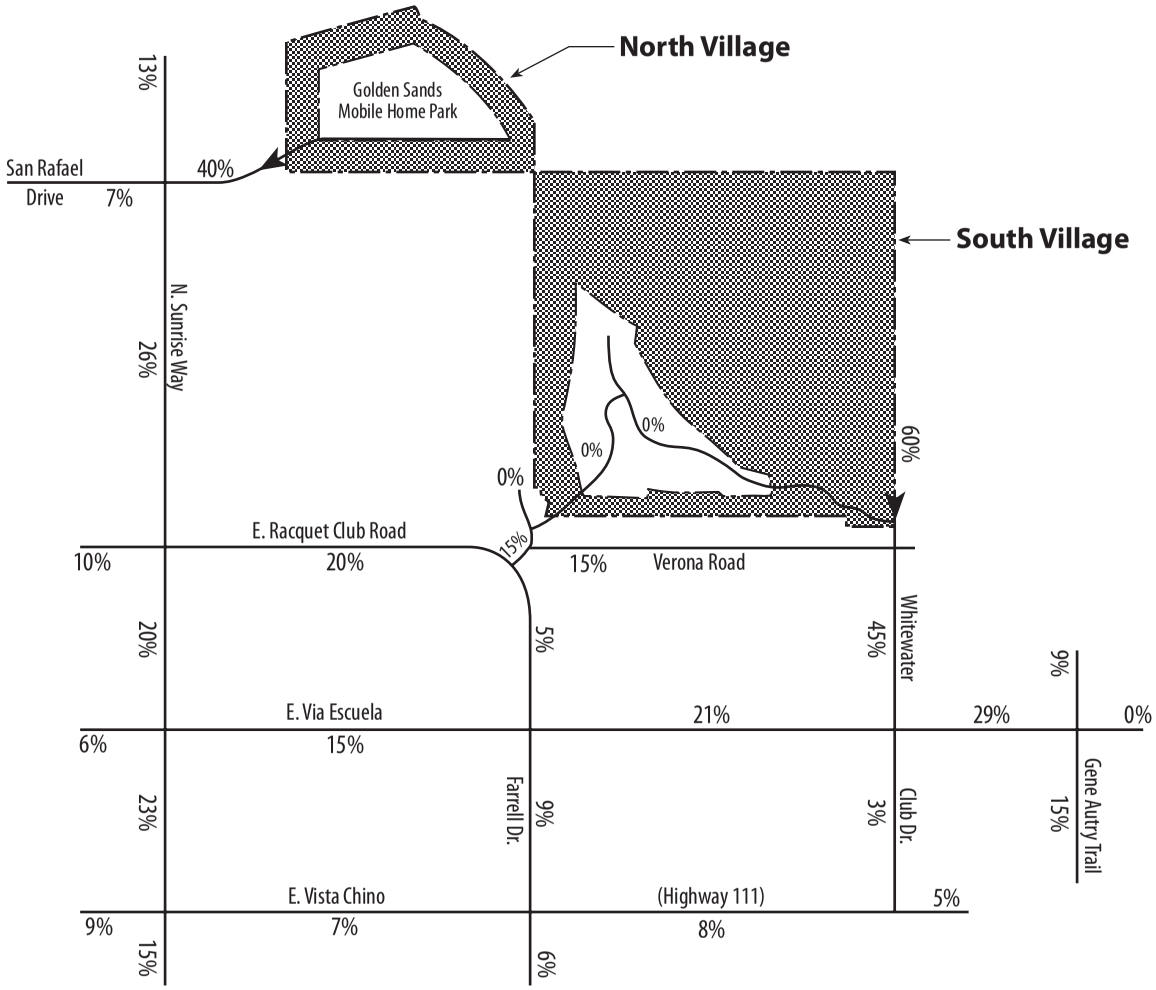
Although the project site would attract trips from all directions and generate trips destined in all directions, access to the site is proposed only to the west and south. Local east/west access is primarily provided by Via Escuela and Vista Chino. Local north/south access is primarily provided by Sunrise Way and Gene Autry Trail. The adjacent Whitewater River Channel and flood control levee prevents site traffic from traveling directly north or east from the project site.

The North Village would take access primarily from San Rafael Drive, which extends east of Sunrise Way. With unrestricted access permitted between the North Village and the South Village, San Rafael Drive would also serve the South Village traffic demand for destinations to the northwest. Similarly, North Whitewater Club Drive would serve the North Village and the South Village traffic demand for destinations to the southeast.

The north project access would require two gates located on either side of San Rafael Drive. The south project access would include the reconfiguration of the currently closed access to the existing Palm Springs Country Club and Alexander Estates to allow traffic from the existing Palm Springs Country Club and Alexander Estates to pass through the project site. This reconfiguration would include a gate at the border with existing Palm Springs Country Club and Alexander Estates and a second gate on North Whitewater Club Drive, north of Verona Road for the residents of the proposed project. Public access for the proposed 5-acre public park would be provided outside of the proposed project gate at a proposed roundabout on North Whitewater Club Drive.

The combined outbound site traffic distribution associated with the North Village and the South Village is shown in Figure 3-1A. The combined inbound site traffic distribution is shown in Figure 3-1B. The percentage of the site traffic shown for each roadway segment was determined by dividing the inbound or outbound daily site traffic volume on the roadway segment by the appropriate inbound or outbound daily trip generation of the entire project. Figure 3-2 illustrates the project-related midday and evening peak hour turning movement volumes at the key intersections.

# Figure 3-1A
# Outbound Site Traffic Distribution

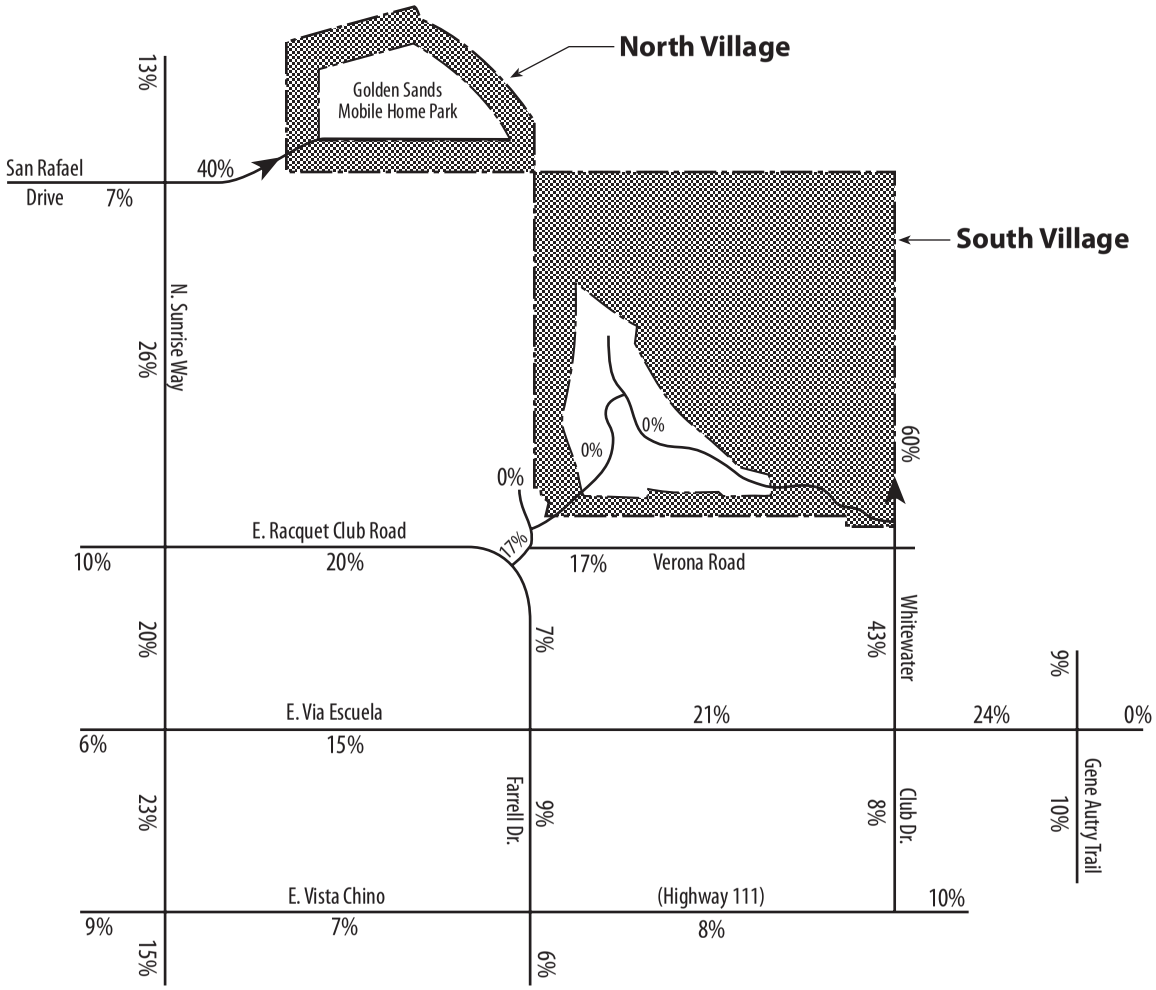



| Legend | |
|---|---|
| 100% | Percent of Site Traffic (Outbound) |
| ➤ | Site Access |

*Endo Engineering*

Scale: 1" = 1380'

# Figure 3-1B
## Inbound Site Traffic Distribution

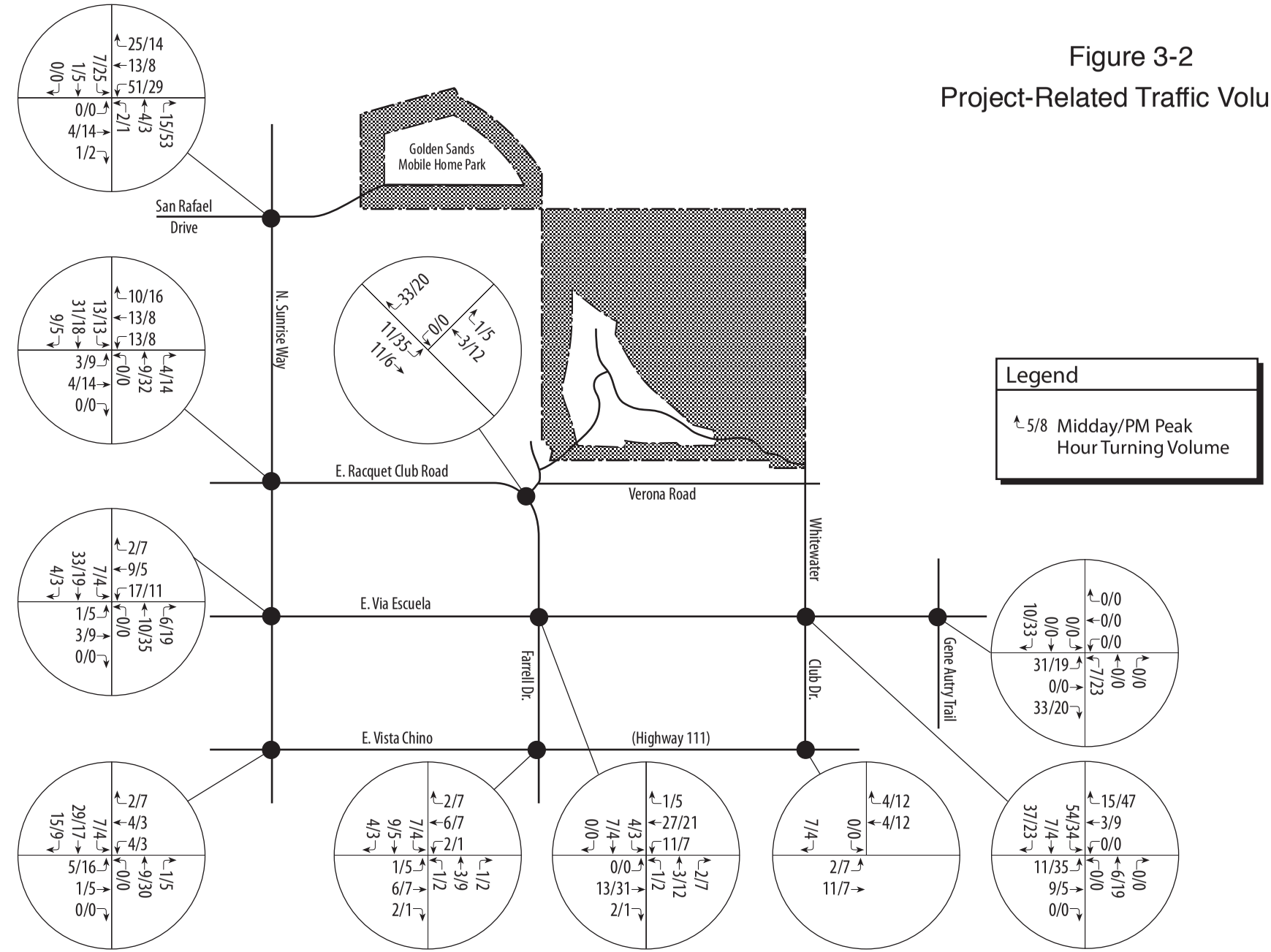



| Legend | |
|---|---|
| 100% | Percent of Site Traffic (Inbound) |
| ➤ | Site Access |

*Endo Engineering*

Scale: 1" = 1380'

# Figure 3-2
# Project-Related Traffic Volumes

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Scale: 1" = 1380'

### *b. Through Traffic Volumes*

#### *Year 2020 Through Traffic Volume Projections*

Based on the change in traffic volumes between the existing traffic levels and the year 2030 General Plan buildout traffic projections, a constant rate of growth in future traffic volumes was identified on each leg of the key intersections. Future year 2020 traffic volumes were estimated by interpolating between the current daily volumes and the future General Plan buildout daily traffic projections developed with the Palm Springs 2007 General Plan Traffic Model. Table 3-2 provides the future daily traffic volume projections for typical weekdays during the peak season in the year 2020 and the year 2030 with and without the traffic generated by the proposed TTM 36691 development. Sunrise Parkway was assumed to be extended from Sunrise Way to Indian Canyon Drive by the year 2020.[1]

When Sunrise Parkway is extended from Sunrise Way to Indian Canyon Drive, many of the northbound vehicles on Sunrise Way currently turning left onto San Rafael Drive will instead travel northbound onto Sunrise Parkway. To adjust for the anticipated redistribution of traffic associated with the completion of Sunrise Parkway to Indian Canyon Drive, one-half of the current northbound left-turning vehicles at the intersection of Sunrise Way and San Rafael Drive were redistributed to a northbound through movement at this intersection. Similarly, one-half of the eastbound vehicles currently turning right from San Rafael Drive onto Sunrise Way were redistributed to a southbound through movement on Sunrise Way at this intersection.

Future non-site (or through) peak hour turning movement volumes in the year 2020 at the key intersections are shown in Figure 3-3. These projections were developed by interpolating between the existing volumes (shown in Figure 2-4) and the year 2030 through traffic projections. The through traffic volumes reflect conditions without site traffic associated with the proposed Palm Springs Country Club Repurposing Project, but with the connection of Sunrise Parkway between Indian Canyon Drive and Sunrise Way.

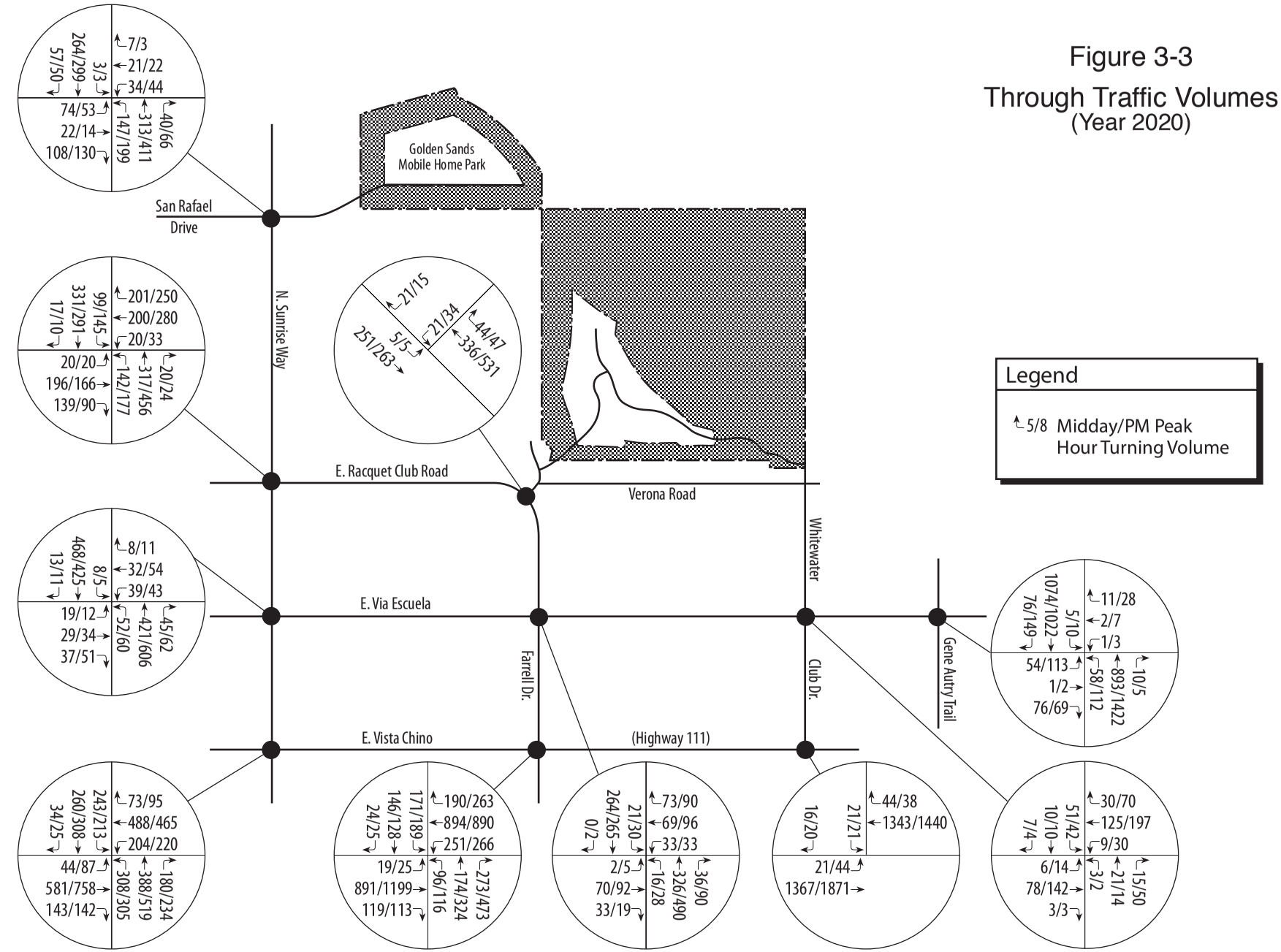
#### *Year 2030 Through Traffic Volume Projections*

Year 2030 peak hour non-site turning movement volumes at the key intersections are shown in Figure 3-4. These volumes reflect General Plan buildout conditions in the year 2030 without traffic associated with the proposed TTM 36691.

Year 2030 peak hour turning movement projections were developed by assuming that the increase in peak hour volumes between the year 2013 and the year 2030 would mirror the change in the daily volumes. Each existing turning movement volume was multiplied by the ratio of the future year 2030 weekday traffic volume divided by the current weekday traffic volume on both intersection legs associated with that turning movement. The increase in peak hour turning volumes was normalized to the growth in daily traffic volumes to ensure that the future peak hour volumes would accurately reflect the overall increase in daily traffic volumes. In any instances where the current volume exceeded the future volume projection (or a future projection was not available) the current volume was increased by ten percent and assumed to reflect the future year 2030 traffic volume.

1. For a discussion of conditions without Sunrise Parkway completed, refer to Section 3g on pg. 3-15.

# Figure 3-3
## Through Traffic Volumes
(Year 2020)

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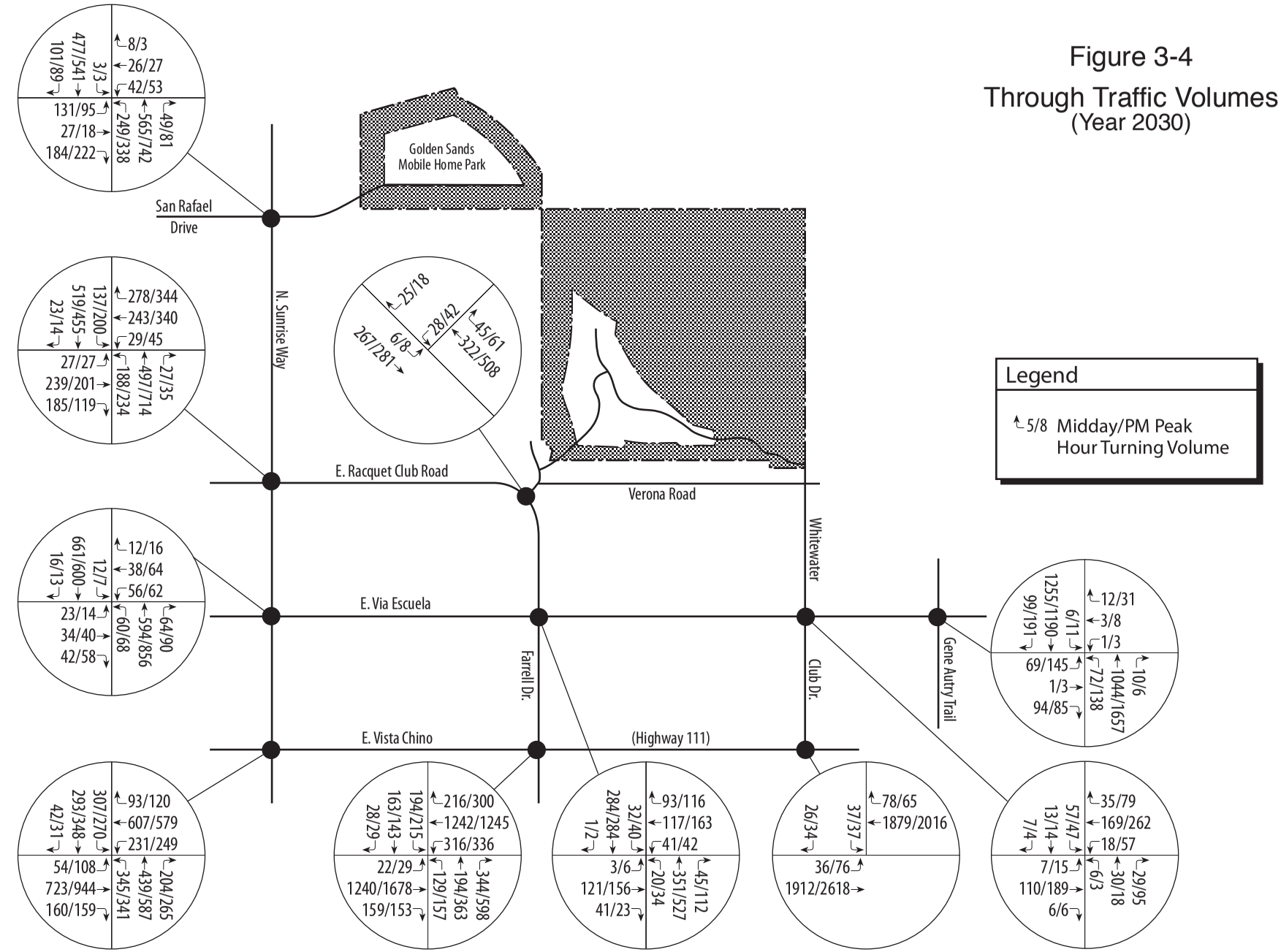
Scale: 1" = 1380'

# Figure 3-4
## Through Traffic Volumes
(Year 2030)

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Scale: 1" = 1380'

# Table 3-2
## Future Daily Traffic Projections[a]
(Peak Season Typical Weekday)

| Roadway Segment | Project Traffic | Year 2020 Ambient | 2020+Project Volume | Year 2030 Ambient | 2030+Project Volume |
|---|---|---|---|---|---|
| **Sunrise Way** | | | | | |
| - North of San Rafael Drive | 480 | 7,650 | 8,130 | 19,500 | 19,980 |
| - South of San Rafael Drive | 970 | 14,340 | 15,310 | 24,400 | 25,370 |
| - North of Racquet Club Road | 970 | 15,340 | 16,310 | 24,400 | 25,370 |
| - South of Racquet Club Road | 750 | 13,470 | 14,220 | 20,100 | 20,850 |
| - North of Via Escuela | 750 | 13,770 | 14,520 | 20,100 | 20,850 |
| - South of Via Escuela | 860 | 15,140 | 16,000 | 20,100 | 20,960 |
| - North of Vista Chino | 860 | 16,240 | 17,100 | 20,100 | 20,960 |
| - South of Vista Chino | 560 | 20,650 | 21,210 | 21,840 | 22,400 |
| **Farrell Drive** | | | | | |
| - North of Racquet Club Road | 600 | 1,730 | 2,330 | 2,400 | 3,000 |
| - South of Racquet Club Road | 220 | 11,020 | 11,240 | 11,670 | 11,890 |
| - North of Via Escuela | 220 | 10,900 | 11,120 | 11,540 | 11,760 |
| - South of Via Escuela | 340 | 11,230 | 11,570 | 11,880 | 12,220 |
| - North of Vista Chino | 340 | 11,370 | 11,710 | 12,020 | 12,360 |
| - South of Vista Chino | 220 | 17,620 | 17,840 | 21,400 | 21,620 |
| **Whitewater Club Drive** | | | | | |
| - North of Via Escuela | 1,650 | 1,530 | 3,180 | 1,610 | 3,260 |
| - South of Via Escuela | 210 | 930 | 1,140 | 980 | 1,190 |
| - North of Vista Chino | 210 | 1,050 | 1,260 | 1,110 | 1,320 |
| **Gene Autry Trail** | | | | | |
| - North of Via Escuela | 520 | 34,580 | 35,100 | 41,100 | 41,620 |
| - South of Via Escuela | 470 | 32,200 | 32,670 | 36,500 | 36,970 |
| **San Rafael Drive** | | | | | |
| - West of Sunrise Way | 260 | 7,910 | 8,170 | 9,600 | 9,860 |
| - East of Sunrise Way | 1,490 | 1,720 | 3,210 | 1,820 | 3,310 |
| **Racquet Club Road** | | | | | |
| - West of Sunrise Way | 370 | 8,960 | 9,330 | 10,700 | 11,070 |
| - East of Sunrise Way | 750 | 10,800 | 11,550 | 13,100 | 13,850 |
| - West of Farrell Drive | 750 | 10,170 | 10,920 | 10,760 | 11,510 |
| **Via Escuela** | | | | | |
| - West of Sunrise Way | 220 | 2,570 | 2,790 | 2,720 | 2,940 |
| - East of Sunrise Way | 560 | 2,860 | 3,420 | 4,400 | 4,960 |
| - West of Farrell Drive | 560 | 2,910 | 3,470 | 4,400 | 4,960 |
| - East of Farrell Drive | 750 | 6,100 | 6,850 | 10,100 | 10,850 |
| - West of Whitewater Club Dr. | 750 | 4,330 | 5,080 | 5,200 | 5,950 |
| - East of Whitewater Club Dr. | 990 | 6,460 | 7,450 | 8,400 | 9,390 |
| - West of Gene Autry Trail | 990 | 6,040 | 7,030 | 8,400 | 9,390 |

a. All projections shown were rounded to the nearest 10 vehicles per day and assumed that Sunrise Parkway would be extended from Sunrise Way to Indian Canyon Boulevard by the year 2020.

Table 3-2
Future Daily Traffic Projections[a]
(Peak Season Typical Weekday)

| Roadway Segment | Project Traffic | Year 2020 Ambient | 2020+Project Volume | Year 2030 Ambient | 2030+Project Volume |
|---|---|---|---|---|---|
| **Vista Chino** | | | | | |
| - West of Sunrise Way | 340 | 22,130 | 22,470 | 26,600 | 26,940 |
| - East of Sunrise Way | 260 | 25,180 | 25,440 | 31,500 | 31,760 |
| - West of Farrell Drive | 260 | 31,030 | 31,290 | 46,200 | 46,460 |
| - East of Farrell Drive | 300 | 40,070 | 40,370 | 51,500 | 51,800 |
| - West of Whitewater Club Dr. | 300 | 41,430 | 41,730 | 56,700 | 57,000 |
| - East of Whitewater Club Dr. | 280 | 42,400 | 42,680 | 60,100 | 60,380 |

a. All projections shown were rounded to the nearest 10 vehicles per day and assumed that Sunrise Parkway would be extended from Sunrise Way to Indian Canyon Boulevard by the year 2020.

### *c. Total Traffic Volumes*

#### *Year 2020 Total Traffic*

Figure 3-5 illustrates the year 2020 total peak hour traffic volumes at the key intersections. The year 2020 total peak hour volumes shown include the project-related traffic (from Figure 3-2) and the through-traffic volumes for the year 2020 (from Figure 3-3).

#### *Year 2030 Total Traffic*

Year 2030 total peak hour traffic volumes at the key intersections are provided in Figure 3-6. The year 2030 total peak hour volumes were developed by adding the project-related traffic (from Figure 3-2) to the through-traffic volumes for the year 2030 (shown in Figure 3-4).

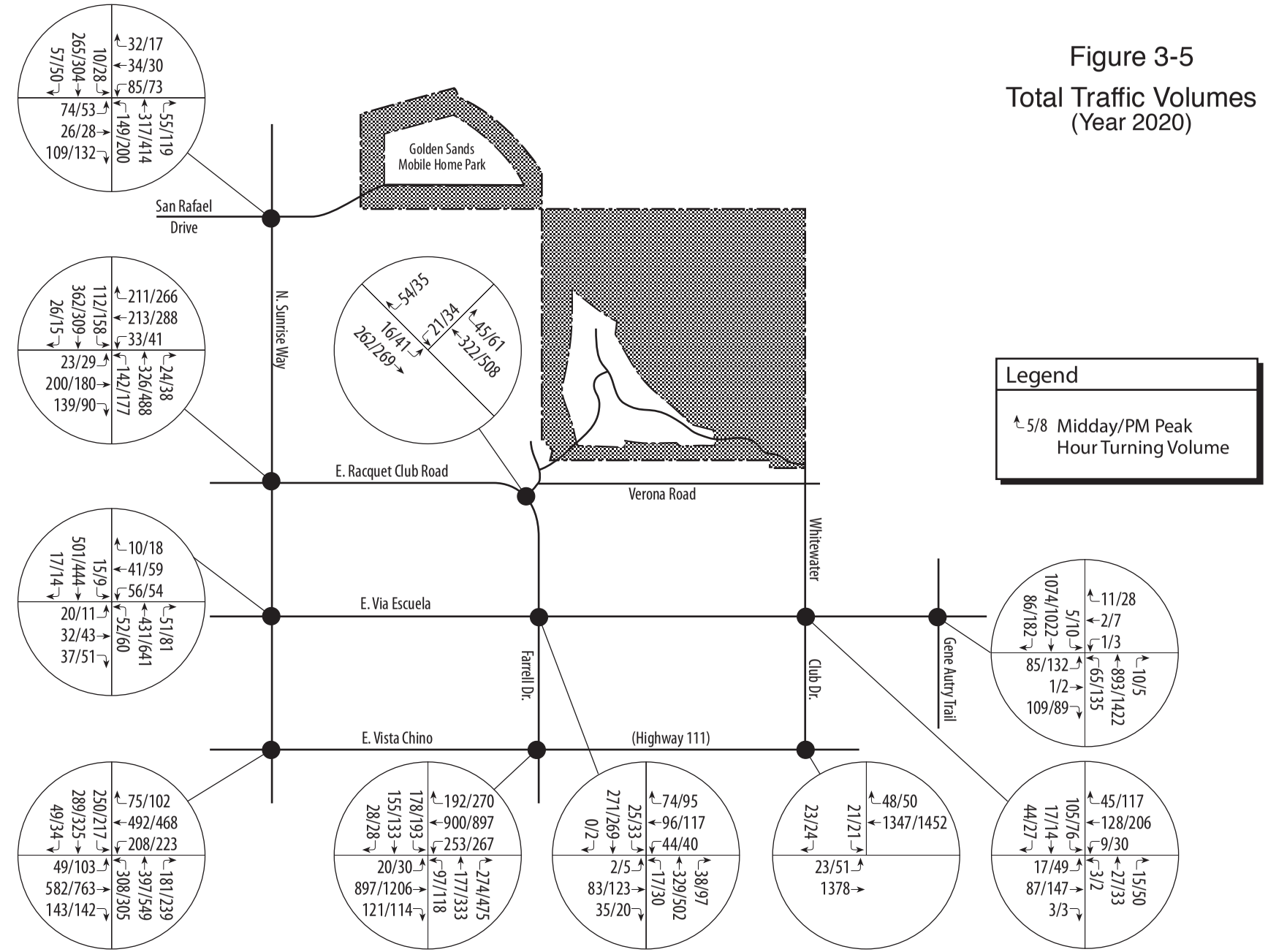
### *d. Site Access Analysis*

The proposed project has adequate access to accommodate the future site traffic demands. Following the development of the site, all of the site access intersections will provide sufficient capacity to ensure acceptable levels of service with the improvements proposed in conjunction with the project. With traffic between both parts of the project site permitted, the three proposed site access gates would adequately serve the entire project site. The 5-acre public park site, will be located outside of the south Village gated access to provde public access. This site may eventually become a trailhead for the future 52-mile long CV Link regional multi-purpose trail being planned along the Whitewater River flood control levee.

#### *North Site Access*

The North Village site surrounds the Golden Sands Mobile Home Park, and is surrounded on three sides by the gated Four Seasons at Palm Springs community (TTM 30054). Approximately eighty percent of the 238 existing single-family residential dwellings in TTM 30054 are accessed primarily via Sunrise Way and Four Seasons Boulevard. The

# Figure 3-5
## Total Traffic Volumes
(Year 2020)

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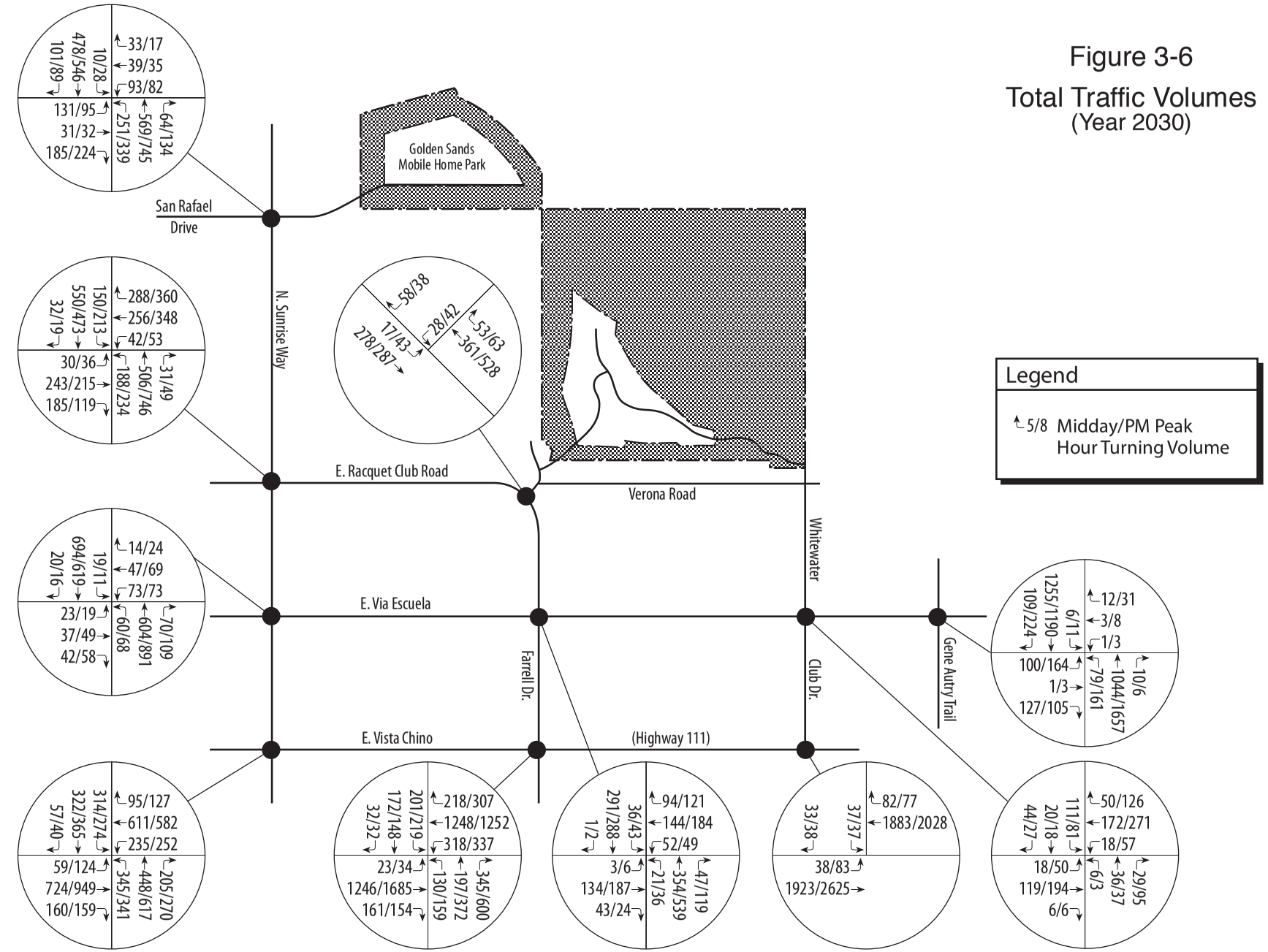
Scale: 1" = 1380'

# Figure 3-6
## Total Traffic Volumes
(Year 2030)




Endo Engineering

Scale: 1" = 1380'

remaining 20 percent of the residences are accessed from East San Rafael Drive, east of Sunrise Way, via the gated access for Tract 30054 on Savanna Trail.[2]

East San Rafael Drive currently extends as a private street east of Sunrise Way and across the southwest corner of the North Village Planning Area to Golden Sands Drive. Golden Sands Drive is also a private street that functions as the only access for the 139 mobile home spaces within the Golden Sands Mobile Home Park. East San Rafael Drive would continue to provide access to Golden Sands Drive and the existing mobile home park after the North Village is built. However, it would be improved to public street standards and dedicated to the City of Palm Springs.

The project proposes to take access to East San Rafael Drive, east of Savanna Trail, via a new roundabout designed to also provide access for the residents of the Golden Sands Mobile Home Park. The proposed North Village access would include two gated entries located at the roundabout. The proposed roundabout would be located at the point where the roadway turns north from its east/west alignment and crosses the North Village site.

The Site Development Plan (Figure 1-3A) illustrates the proposed site access plan for the North Village. San Rafael Drive, east of Savanna Trail, would be modified to include a four-leg roundabout to serve the mobile home park as well as the North Village. The two legs of the roundabout that will serve the North Village (Street "L"and Street "O") would be gated whereas the Golden Sands Drive connection would not be gated.

The gated access to the North Village on San Rafael Drive appears to provide sufficient storage space in advance of the entry gates to have a very high probability of storing all arriving vehicles. A 95 percent probability is suggested by the ITE, based on the number of entering vehicles in a peak 15-minute interval. The ITE recommends a minimum gate storage length of 50 feet for gates serving fewer than 50 dwelling units and 75 feet for gates serving 50 to 100 dwellings. Gates serving more than 100 dwellings should provide a minimum storage of 100 feet.[3] Since there are 137 multi-family dwelling units proposed for the North Village and there are two gates, each entry gate is serving 69 units and shall include at a minimum 75 feet of vehicular storage. The pavement in advance of the gate appears to be wide enough to allow an approaching vehicle to turn around in advance of the gate and return to Sunrise Way. An unrestricted internal vehicular access connection would be constructed between the North Village and the South Village to provide two independent access routes for the residential development proposed.

***South Site Access***

The South Village would be developed as a gated community with access primarily from the south via North Whitewater Club Drive, north of Verona Road. Whitewater Club Drive currently extends directly north of Verona Road, where it turns to the west to provide access to the existing Palm Springs Country Club and Alexander Estates, an existing residential development. Access to the South Village would require the reconstruction of Whitewater Club Drive and the access to the existing Palm Springs Country Club and Alexander Estates development.

The Site Plan for the South Village (Figure 1-3B) includes a single-lane roundabout on North Whitewater Club Drive, north of Verona Road, that would provide public access to

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2. Willdan Associates, *Palm Springs Country Club Residential Development Traffic Study*. August 6, 2001.
3. Stover, Vergil G., Frank J. Koepke, *Transportation and Land Development*. Institute of Transportation Engineers, 2002 (pg. 13-14).

the proposed 5.37-acre public park site and access for the South Village development via a gated entry on Street "A". A second gate located west of the roundabout on North Whitewater Club Drive, would separate the existing Palm Springs Country Club and Alexander Estates from the South Village, and provide access for residents of existing Palm Springs Country Club and Alexander Estates through the project site.

With up to 304 single-family detached dwelling units proposed for the South Village, the entry gates should include a minimum of 100 feet of queue storage for entering vehicles without blocking the circulating lane on the new roundabout. The development plan appears to provide sufficient storage space on Street "A" for both the entering and exiting queues. The pavement in advance of the gate appears to provide sufficient space to permit a vehicle approaching inadvertently to turn around without entering the gate and return to Whitewater Club Drive.

Street "K" and Street "B" are long cul-de-sacs required to provide independent access to the proposed low-density single-family residential development located along the southern and western boundaries of the South Village. To alleviate concerns associated with the length of these roadways, emergency access connections are proposed to Whitewater Club Drive, at the southwest corner of the existing Palm Springs Country Club and Alexander Estates community. A turn around area is proposed at the mid-point of Street "B" to facilitate access by large vehicles including fire trucks. A 24-foot wide gated emergency access is proposed from Street "K" to Farrell Drive, opposite the intersection of Francis Drive. This emergency access would be located between two existing residences located west of the South Village Planning Area. A Knox-Box Rapid Entry System would be installed at the gate to facilitate emergency access by fire fighters and other emergency first responders. In addition, a proposed access and utility easement (90 feet in width) located adjacent to the flood control levee would include a 20-foot wide emergency access that would also function as a pedestrian, bicycle and neighborhood electric vehicle (NEV) path.

***Proposed Roundabouts***

Three single-lane roundabouts are proposed in conjunction with the proposed development. A roundabout is proposed at the primary entry to the North Village, at the primary entry to the South Village and at the point where an internal connection is proposed between the two villages. A single-lane roundabout is proposed on North Whitewater Drive, north of Verona Road, to facilitate access to the gated South Village development and provide public access to the future public park proposed immediately north of the roundabout. People destined to and from the park would not pass through the entry gates associated with the South Village.

To facilitate access via the two gated entries associated with the North Village Planning Area, East San Rafael Drive (east of North Sunrise Way) would be reconstructed with a single-lane roundabout with yield control on all entries. Motor vehicles destined to/from the Golden Sands Mobile Home Park would pass through this roundabout without being required to pass through the entry gates designed to limit access to the North Village or the Four Seasons at Palm Springs community.

The proposed geometric features would encourage slow travel speeds through the roundabout. The entry design speed would be 20 mph to 25 mph. The inscribed circle diameter would be approximately 177 feet. To enhance visibility and accommodate larger design vehicles, the diameter of the landscaped central island would be approximately 120 feet. This design would accommodate SU-30, B-40, WB-50 and WB-67 design vehicles.

### *e. Projected Level of Service Analysis*

### *Year 2020 Traffic Conditions*

*Unsignalized Intersection Analysis*

Table 3-3 provides the year 2020 unsignalized intersection average approach control delay and LOS for the overall intersection and the minor street approach with the most delay. Year 2020 delay and LOS values are shown therein for conditions with and without the proposed project. An eight percent truck mix and the lane geometrics shown in Figure 3-7 were assumed to develop the delay and LOS values in Table 3-3.

The intersection of Whitewater Club Drive and Via Escuela is an all-way stop-controlled (AWSC) intersection. The HCM 2000 procedures for this type of intersection provide the overall intersection delay and level of service as well as delay and LOS determinations for the approach with the most delay. Before site traffic is added to the street network in the year 2020, this unsignalized all-way stop-controlled key intersection will provide LOS A operation during peak hours with average overall intersection control delays ranging from 8.17 to 9.36 seconds per vehicle. The approach with the highest average control delay (southbound) will also operate at LOS A during the peak hours, with control delays ranging from 8.34 to 9.97 seconds per vehicle.

As shown in Table 3-3, the addition of project-related traffic to the intersection of Whitewater Club Drive and Via Escuela will increase the overall intersection average control delay by 0.68 seconds per vehicle in the midday peak hour and 1.33 seconds per vehicle during the evening peak hour. Upon project completion, this intersection will continue to operate at LOS A during the midday peak hour but drop from LOS A to LOS B during the evening peak hour.

Following the addition of site traffic, the approach with the highest average control delay (southbound) will drop from LOS A to LOS B operation during the evening peak hour, but it will continue to operate at LOS A during the midday peak hour. Although site traffic will incrementally increase the control delay at the AWSC intersection of Whitewater Club Drive and Via Escuela, acceptable peak hour levels of service are projected to occur in the year 2020 without mitigation.

The approach with the most control delay at the intersection of Farrell Drive and Racquet Club Road will provide LOS B operation during the peak hours with and without site traffic in the year 2020. Project-related traffic is expected to change the peak hour control delay by up to 0.5 seconds per vehicle on the approach with the highest control delay at this intersection but not change the peak hour LOS.

Without site traffic, the southbound approach at the intersection of North Whitewater Club Drive and Vista Chino is projected to experience an average control delay during the mid-day and evening peak hours of 26.3 seconds/vehicle and 31.1 seconds/vehicle, respectively, in the year 2020. This level of control delay on the southbound approach is consistent with LOS D operation. Site traffic would reduce the average control delay on the southbound approach by adding traffic to the southbound right-turn movement which exhibits less control delay than the southbound left-turn movement. As a result, the LOS is projected to improve from LOS D to LOS C during the mid-day peak hour in the year 2020. Although site traffic is projected to decrease the southbound approach control delay during the evening peak hour by 0.8 seconds/vehicle, the LOS would remain unchanged (LOS D).

Table 3-3
Year 2020 Peak Hour Delay and LOS at the Unsignalized Key Intersections[a]

| Unsignalized Intersection | No-Project | | | With Project | | | Projected | |
|---|---|---|---|---|---|---|---|---|
| | Major Left Delay/LOS | Worst Approach Move | Worst Approach Delay/LOS | Major Left Delay/LOS | Worst Approach Move | Worst Approach Delay/LOS | Change In Delay | Change In LOS |
| ALL-WAY STOP CONTROL[b] | | | | | | | | |
| **Whitewater Club Dr. @ Via Escuela** | | | | | | | | |
| - Midday Peak Hour | [8.17/A] | WB | 8.34/A | [8.85/A] | SB | 9.11/A | [0.68] | [No] |
| - Evening Peak Hour | [9.36/A] | WB | 9.97/A | [10.69/B] | WB | 11.72/B | [1.33] | [A-B] |
| TWO-WAY STOP CONTROL[c] | | | | | | | | |
| **Farrell Drive @ Racquet Club Road** | | | | | | | | |
| - Midday Peak Hour | 8.2/A | SB | 11.3/B | 8.2/A | SB | 11.0/B | -0.3 | No |
| - Evening Peak Hour | 8.8/A | SB | 14.5/B | 9.0/A | SB | 15.0/B | 0.5 | No |
| **Whitewater Club Dr. @ Vista Chino** | | | | | | | | |
| - Midday Peak Hour | 13.0/B | SB | 26.3/D | 13.1/B | SB | 24.6/C | -1.7 | D-C |
| - Evening Peak Hour | 14.1/B | SB | 31.1/D | 14.5/B | SB | 30.3/D | -0.8 | No |

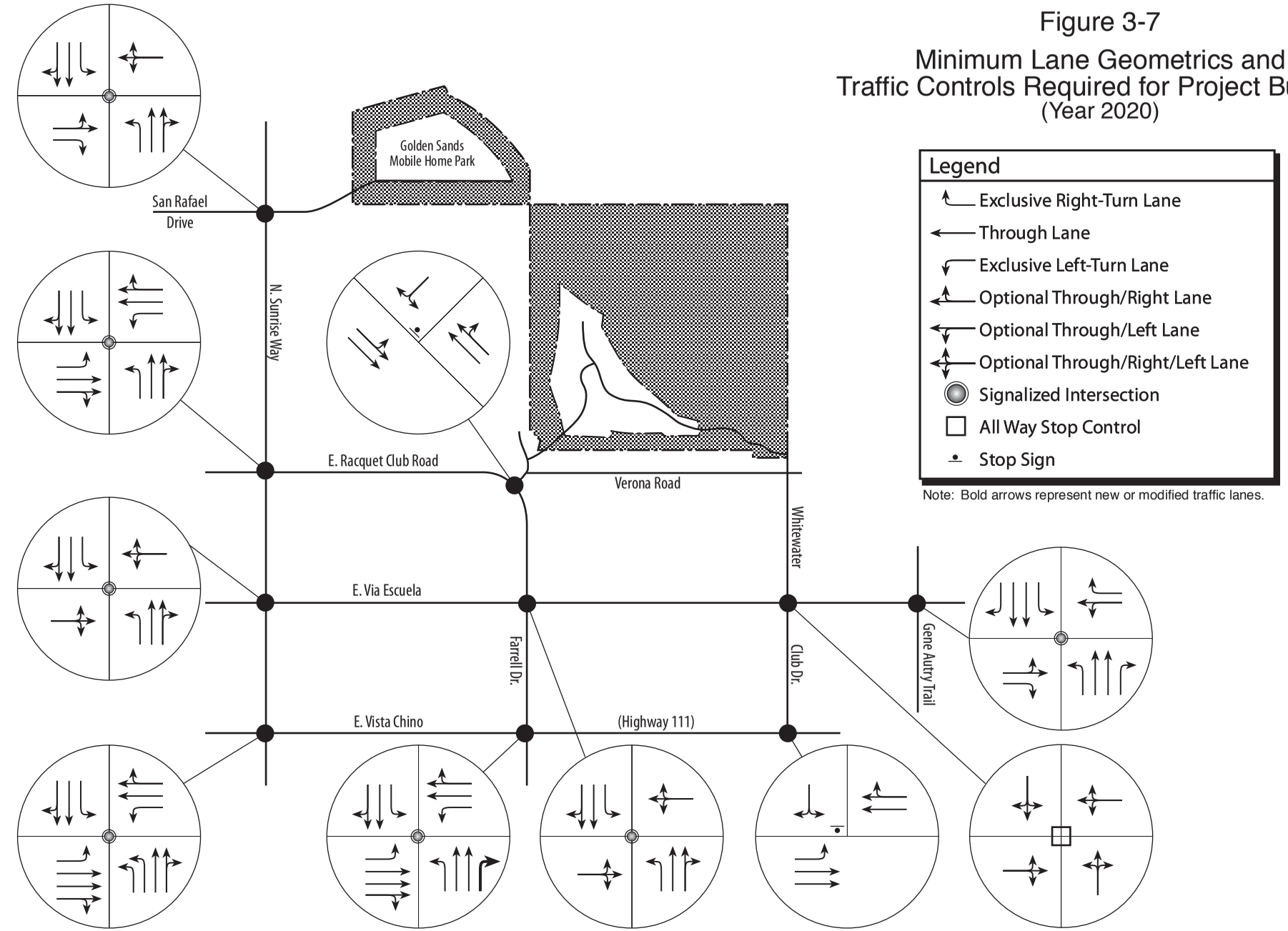
a. The HCS unsignalized intersection worksheets are included in Appendix B. The values shown assume a peak hour factor of 1.0, an eight percent heavy vehicle mix, and the intersection approach lanes shown in Figure 3-7. The Levels of Service were determined from the HCM 2000 (page 17-2 and 17-32). WB = Westbound Turning Movements. SB = Southbound Turning Movements.

b. The values shown in brackets represent the overall intersection control delay and LOS at the intersection with all-way stop control. The delay and LOS for the intersection approach with the most delay at the intersection with AWSC are shown under the heading "Worst Approach Delay/LOS."

c. For intersections with TWSC, the delay shown under the heading "Major Left Delay/LOS" is the average control delay (seconds/vehicle) for the left-turn move from the major street onto the minor street. The delay shown under the heading "Worst Approach Delay/LOS" and "Projected Change In Delay/LOS" is the average approach control delay (seconds/vehicle) for the approach that exhibits the most delay.

# Figure 3-7

## Minimum Lane Geometrics and Traffic Controls Required for Project Buildout (Year 2020)




Note: Bold arrows represent new or modified traffic lanes.

*Endo Engineering*

Scale: 1" = 1380'

*Signalized Intersection Analysis*

The year 2020 peak hour delay and levels of service were determined for the signalized key intersections with the methodology outlined in the *Highway Capacity Manual*. The peak hour intersection control delay, critical volume-to-capacity ratios, and levels of service at the signalized key intersections are provided in Table 3-4 for year 2020 conditions with and without project-related traffic.

An eight percent truck mix and the intersection approach lane geometrics depicted in Figure 3-7 were assumed to develop the delay and LOS values in Table 3-4. These lane geometrics reflect existing intersection approach lanes at six of the signalized key intersections. The construction of an exclusive northbound right-turn lane was assumed for the intersection of Farrell Drive and Vista Chino, as shown in Figure 3-7.

As shown in Table 3-4, all of the signalized key intersections are projected to operate at acceptable levels of service (LOS D or better) during the peak hours with year 2020 traffic volumes. The addition of site traffic will increase the signalized intersection control delay by up to 4.0 seconds per vehicle during the morning peak hour and up to 4.8 seconds per vehicle during the evening peak hour. Site traffic will reduce the peak hour level of service at three of the signalized key intersections evaluated from LOS A to LOS B.

***Year 2030 Traffic Conditions***

*Unsignalized Key Intersection Analysis*

Table 3-5 provides the horizon year 2030 overall intersection delay and level of service as well as delay and LOS determinations for the approach with the most delay at the all-way stop-controlled key intersection of Whitewater Club Drive and Via Escuela. Year 2030 delay and LOS values are shown therein for conditions with and without the proposed project. An eight percent truck mix and the lane geometrics shown in Figure 3-8 were assumed to develop the delay and LOS values in Table 3-5.

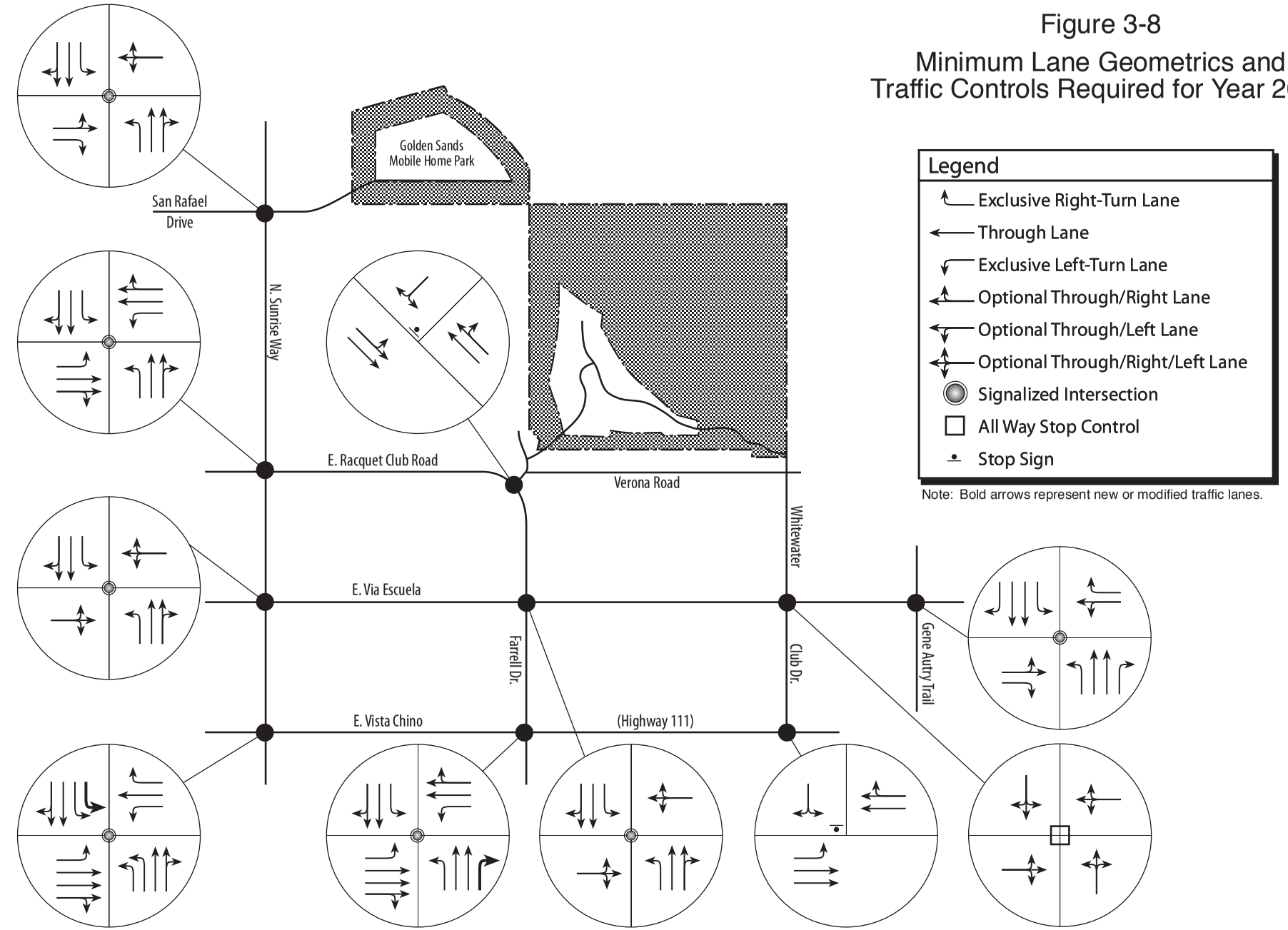
Before site traffic is added to the street network in the year 2030, this key intersection will provide LOS A operation during peak hours with an average overall intersection control delay ranging from 8.25 to 9.35 seconds per vehicle. The approach with the highest delay (southbound) will also operate at LOS A during the peak hours, with control delays ranging from 8.35 to 9.96 seconds per vehicle.

As shown in Table 3-5, the addition of project-related traffic to the intersection of Whitewater Club Drive and Via Escuela will increase the overall intersection average control delay by 0.83 seconds per vehicle in the midday peak hour and 2.61 seconds per vehicle in the evening peak hour. Site traffic will not change the peak hour LOS. Following the addition of site traffic, the southbound intersection approach (which has the highest control delay) will continue to operate at LOS A during the midday peak hour but drop from LOS B to LOS C during the evening peak hour

Site traffic is not projected to change the peak hour LOS at the intersection of Farrell Drive and Racquet Club Road. The southbound approach has the highest delay and will operate at LOS B in the midday peak hour and LOS C during the evening peak hour with and without site traffic in the year 2030.

# Figure 3-8

## Minimum Lane Geometrics and Traffic Controls Required for Year 2030




Note: Bold arrows represent new or modified traffic lanes.

*Endo Engineering*

Scale: 1" = 1380'

Table 3-4
Year 2020 Signalized Intersection Peak Hour Delay and LOS Summary[a]
(Peak Season Typical Weekday)

| Signalized Intersection | No-Project | | | With Project | | | Change In | |
|---|---|---|---|---|---|---|---|---|
| | Avg. Delay (Sec./Veh.) | Critical V/C | LOS | Avg. Delay (Sec./Veh.) | Critical V/C | LOS | Avg. Delay (Sec./Veh.) | LOS |
| **Sunrise Way @ San Rafael Dr.** | | | | | | | | |
| - Midday Peak Hour | 24.3 | 0.34 | C | 25.7 | 0.41 | C | 1.4 | No |
| - Evening Peak Hour | 21.9 | 0.37 | C | 23.2 | 0.42 | C | 1.3 | No |
| **Sunrise Way @ Racquet Club Rd.** | | | | | | | | |
| - Midday Peak Hour | 15.3 | 0.31 | B | 15.3 | 0.32 | B | 0.0 | No |
| - Evening Peak Hour | 15.2 | 0.39 | B | 15.6 | 0.43 | B | 0.4 | No |
| **Sunrise Way @ Via Escuela** | | | | | | | | |
| - Midday Peak Hour | 7.4 | 0.22 | A | 8.3 | 0.26 | A | 0.9 | No |
| - Evening Peak Hour | 8.1 | 0.30 | A | 8.9 | 0.34 | A | 0.8 | No |
| **Sunrise Way @ Vista Chino** | | | | | | | | |
| - Midday Peak Hour | 36.5 | 0.75 | D | 36.4 | 0.76 | D | -0.1 | No |
| - Evening Peak Hour | 39.6 | 0.84 | D | 41.1 | 0.84 | D | 1.5 | No |
| **Farrell Drive @ Via Escuela** | | | | | | | | |
| - Midday Peak Hour | 12.7 | 0.24 | B | 13.3 | 0.27 | B | 0.6 | No |
| - Evening Peak Hour | 12.6 | 0.35 | B | 13.5 | 0.38 | B | 0.9 | No |
| **Farrell Drive @ Vista Chino** | Add Exclusive NB Right-Turn Lane | | | Add Exclusive NB Right-Turn Lane | | | | |
| - Midday Peak Hour | 28.1 | 0.63 | C | 28.6 | 0.64 | C | 0.5 | No |
| - Evening Peak Hour | 33.8 | 0.79 | C | 34.6 | 0.80 | C | 0.8 | No |
| **Gene Autry Trail @ Via Escuela** | | | | | | | | |
| - Midday Peak Hour | 10.4 | 0.46 | B | 11.0 | 0.49 | B | 0.6 | No |
| - Evening Peak Hour | 14.3 | 0.60 | B | 14.8 | 0.62 | B | 0.5 | No |

a. Average Delay = Overall Average Intersection Control Delay (seconds per vehicle). Values shown assume an eight percent truck mix and the intersection approach lane geometrics shown in Figure 3-7. Based upon the HCM 2000 (page 10-16), the intersection LOS was determined from the delay (≤10 sec./veh. = LOS A; >10 and ≤20 sec./veh. = LOS B; >20 and ≤35 sec./veh. = LOS C; >35 and ≤55 sec./veh. = LOS D; >55 and ≤80 sec./veh. = LOS E; >80 sec./veh. = LOS F). The signalized intersection HCS worksheets are included in Appendix B.

Table 3-5
Year 2030 Unsignalized Intersection Peak Hour Delay and LOS Summary[a]

| Unsignalized Intersection | No-Project | | | With Project | | | Projected | |
|---|---|---|---|---|---|---|---|---|
| | Major Left Delay/LOS | Worst Approach Move | Worst Approach Delay/LOS | Major Left Delay/LOS | Worst Approach Move | Worst Approach Delay/LOS | Change In Delay | Change In LOS |
| ALL-WAY STOP CONTROL[b] | | | | | | | | |
| **Whitewater Club Dr. @ Via Escuela** | | | | | | | | |
| - Midday Peak Hour | [8.69/A] | WB | 9.06/A | [9.49/A] | WB | 9.88/A | [0.80] | [No] |
| - Evening Peak Hour | [11.19/B] | WB | 12.68/B | [13.80/B] | WB | 16.76/C | [2.61] | [No] |
| TWO-WAY STOP CONTROL[c] | | | | | | | | |
| **Farrell Drive @ Racquet Club Road** | | | | | | | | |
| - Midday Peak Hour | 8.2/A | SB | 11.7/B | 8.3/A | SB | 11.5/B | -0.2 | No |
| - Evening Peak Hour | 8.9/A | SB | 15.6/C | 9.1/A | SB | 16.3/C | 0.7 | No |
| **Whitewater Club Dr. @ Vista Chino** | | | | | | | | |
| - Midday Peak Hour | 18.0/C | SB | 52.2/F | 18.2/C | SB | 48.2/E | -4.0 | F-E |
| - Evening Peak Hour | 21.6/C | SB | 72.2/F | 22.1/C | SB | 73.4/F | 1.2 | No |

a. The HCS unsignalized intersection worksheets are included in Appendix B. The values shown assume a peak hour factor of 1.0, an eight percent heavy vehicle mix, and the intersection approach lanes shown in Figure 3-8. The Levels of Service were determined from the HCM 2000 (page 17-2 and 17-32). WB = Westbound Turning Movements. SB = Southbound Turning Movements.

b. The values shown in brackets represent the overall intersection control delay and LOS at the intersection with all-way stop control. The delay and LOS for the intersection approach with the most delay at the intersection with AWSC are shown under the heading "Worst Approach Delay/LOS."

c. For intersections with TWSC, the delay shown under the heading "Major Left Delay/LOS" is the average control delay (seconds/vehicle) for the left-turn move from the major street onto the minor street. The delay shown under the heading "Worst Approach Delay/LOS" and "Projected Change In Delay/LOS" is the average approach control delay (seconds/vehicle) for the intersection approach that exhibits the most delay.

The southbound approach on Whitewater Club Drive at Vista Chino is projected to experience excessive control delay with TWSC during the peak hours by the year 2030 with or without site traffic. During the midday peak hour, the average control delay is projected to be 52.2 seconds per vehicle (LOS F) without site traffic and 48.2 seconds per vehicle (LOS E) with site traffic. The average control delay at this intersection would decrease with the project because the proposed project would add southbound vehicles making right-turn movements with short delays, but no southbound vehicles making left-turn movements which have longer delays. Since the southbound vehicles on Whitewater Club Drive at Vista Chino occupy a single shared southbound lane, the project-related vehicles (that would be making only right turns onto Vista Chino) would experience less delay than southbound left-turning vehicles. They would reduce the overall average control delay on the southbound approach during the midday peak hour.

During the evening peak hour, the control delay is projected to increase from 72.2 seconds per vehicle (LOS F) to 73.4 seconds per vehicle (LOS F) following the addition of site traffic. The 2030+project peak hour volume on Whitewater Club Drive approaching this intersection would represent only 52 percent of the signal warrant threshold for consideration of traffic control signals.

Without mitigation, the peak hour control delay on the southbound approach to this unsignalized intersection would exceed the City of Palm Springs minimum performance standard of LOS D upon buildout of the General Plan. The projected growth in the traffic volume on Vista Chino between 2020 and 2030 would cause the level of service for the minor-street left-turn movement to drop to an unacceptable level with the existing intersection control and two-way left turn median. Without mitigation, the Whitewater Club Drive approach delay will result in a 95th-percentile southbound queue of only two vehicles upon buildout of the General Plan.

Although this intersection is projected to have an operational deficiency upon General Plan buildout, no additional approach lanes are recommended. If traffic safety becomes an issue over the long term, a raised median could eventually be constructed on Vista Chino, from Cerritos Drive to Gene Autry Trail that would eliminate the north/south through and left-turn movements across Vista Chino at unsignalized intersections. This would eliminate the movements with excessive delay and poor levels of service, but also reduce access.

The installation of traffic signals is not appropriate as a treatment option because none of the signal warrants were satisfied. In addition, signalization would increase the overall intersection delay, increase the frequency of crashes (especially rear-end crashes), increase congestion, and increase the long-term costs associated with the operation and maintenance of the traffic control equipment at this intersection.

*Signalized Intersection Analysis*

The peak hour intersection control delay and LOS values at the signalized key intersections for year 2030 conditions with and without site traffic are provided in Table 3-6. The minimum intersection approach lane geometrics and traffic controls assumed to achieve acceptable levels of service with the year 2030 traffic volumes are shown in Figure 3-8. The lane geometrics shown in Figure 3-8 reflect existing intersection approach lanes at five of the seven signalized key intersections. Approach lane improvements consistent General Plan roadway classifications were assumed at the intersections of (1) Sunrise Way with Vista Chino and (2) Farrell Drive with Vista Chino.[4]

4. Endo Engineering. *Palm Springs General Plan Update Peak Hour Intersection Level of Service Analysis*. September 20, 2006; (Figure 6).

Table 3-6

Year 2030 Signalized Intersection Peak Hour Delay and LOS Summary[a]

(Peak Season Typical Weekday)

| Signalized Intersection | No-Project | | | With Project | | | Change In | |
|---|---|---|---|---|---|---|---|---|
| | Avg. Delay (Sec./Veh.) | Critical V/C | LOS | Avg. Delay (Sec./Veh.) | Critical V/C | LOS | Avg. Delay (Sec./Veh.) | LOS |
| **Sunrise Way @ San Rafael Dr.** | | | | | | | | |
| - Midday Peak Hour | 27.2 | 0.55 | C | 28.1 | 0.62 | C | 0.9 | No |
| - Evening Peak Hour | 25.9 | 0.60 | C | 27.1 | 0.65 | C | 1.2 | No |
| **Sunrise Way @ Racquet Club Rd.** | | | | | | | | |
| - Midday Peak Hour | 15.6 | 0.45 | B | 15.8 | 0.48 | B | 0.2 | No |
| - Evening Peak Hour | 16.5 | 0.61 | B | 17.0 | 0.67 | B | 0.5 | No |
| **Sunrise Way @ Via Escuela** | | | | | | | | |
| - Midday Peak Hour | 7.4 | 0.30 | A | 8.3 | 0.33 | A | 0.9 | No |
| - Evening Peak Hour | 8.4 | 0.41 | A | 9.3 | 0.46 | A | 0.9 | No |
| **Sunrise Way @ Vista Chino** | Add Second SB Left-Turn Lane | | | Add Second SB Left-Turn Lane | | | | |
| - Midday Peak Hour | 35.6 | 0.77 | D | 36.1 | 0.78 | D | 0.5 | No |
| - Evening Peak Hour | 41.1 | 0.87 | D | 42.7 | 0.89 | D | 1.6 | No |
| **Farrell Drive @ Via Escuela** | | | | | | | | |
| - Midday Peak Hour | 14.2 | 0.30 | B | 14.8 | 0.33 | B | 0.6 | No |
| - Evening Peak Hour | 14.8 | 0.43 | B | 15.5 | 0.46 | B | 0.7 | No |
| **Farrell Drive @ Vista Chino** | Add NB Rt. Lane With 120-sec cycle | | | Add NB Rt. Lane With 120-sec cycle | | | | |
| - Midday Peak Hour | 34.7 | 0.74 | C | 35.4 | 0.75 | D | 0.7 | C-D |
| - Evening Peak Hour | 46.8 | 0.93 | D | 48.4 | 0.93 | D | 1.6 | No |
| **Gene Autry Trail @ Via Escuela** | | | | | | | | |
| - Midday Peak Hour | 12.0 | 0.53 | B | 12.4 | 0.56 | B | 0.4 | No |
| - Evening Peak Hour | 16.1 | 0.69 | B | 17.0 | 0.71 | B | 0.9 | No |

a. Average Delay = Intersection Control Delay (seconds per vehicle). The values shown assume an eight percent truck mix and the intersection geometrics shown in Figure 3-8. Based upon the HCM 2000 (page 10-16), the intersection level of service was determined from the delay (≤10 sec./veh. = LOS A; >10 and ≤20 sec./veh. = LOS B; >20 and ≤35 sec./veh. = LOS C; >35 and ≤55 sec./veh. = LOS D; >55 and ≤80 sec./veh. = LOS E; >80 sec./veh. = LOS F). The signalized intersection HCS worksheets are provided in Appendix B. SB = Southbound NB Rt. = Dedicated Northbound Right-Turn

The year 2030 intersection control delay values during the peak hours without site traffic are projected to range from 7.4 seconds per vehicle to 46.8 seconds per vehicle at the signalized key intersections. All of the signalized key intersections will provide LOS D or better operation during the midday and evening peak hours in the year 2030, prior to the addition of site traffic, with the lane geometrics shown in Figure 3-8.

The addition of project-related traffic volumes to year 2030 non-site volumes would increase the intersection control delay during the peak hours at the signalized key intersections by up to 0.9 seconds per vehicle during the midday peak hour and up to 1.6 seconds per vehicle during the evening peak hour. Year 2030+project intersection control delay values during the peak hours are projected to range from a low of 8.3 seconds per vehicle to a high of 48.4 seconds per vehicle. Following the addition of site traffic, all of the signalized key intersections are projected to operate at LOS D or better levels of service during the midday and evening peak hours with the lane geometrics shown in Figure 3-8.

Site traffic would cause the peak hour level of service in the year 2030 to drop at one signalized key intersection. The increase in average control delay of 0.7 seconds per vehicle at the signalized intersection of Farrell Drive and Vista Chino associated with site traffic is expected to degrade the quality of service from LOS C to LOS D during the midday peak hour on a typical weekday in the peak season. LOS D operation is considered acceptable, but does include the addition of an exclusive northbound right-turn lane on Farrell Drive at Vista Chino (assumed for the year 2020 analysis) as well as a 120-second cycle length (consistent with the General Plan Update Peak Hour Intersection LOS Analysis).

The need for an exclusive northbound right-turn lane on Farrell Drive at Vista Chino to accommodate 388 vehicles per hour (VPH) during the midday peak hour and 594 VPH during the evening peak hour making right turns in the year 2030 has been previously identified by Endo Engineering in other approved traffic impact studies (such as the *Palm Springs General Plan Update Peak Hour Intersection LOS Analysis* and the *Campus Park Specific Plan Traffic Impact Study*). In 2006, the northbound right-turn volume using the shared through/right-turn lane to turn from Farrell Drive onto Vista Chino was 247 VPH during the midday peak hour and 378 VPH during the evening peak hour. The 2013 peak season traffic volumes making this northbound right-turn movement (232 VPH during the midday peak hour and 400 VPH during the evening peak hour) have not changed substantially.

A second southbound left-turn lane would be required on Sunrise Way at Vista Chino to accommodate year 2030 peak hour traffic volumes at acceptable levels of service. The dual southbound left-turn lanes would align with the existing dual northbound left-turn lanes.

### *f. Traffic Signal Analysis*

When properly used, traffic control signals are valuable devices for the control of vehicular and pedestrian traffic. They assign the right-of-way to the various traffic movements and thereby profoundly influence traffic flow. However, traffic control signals do not always increase safety or reduce delay.

Determining the appropriate intersection control type requires careful consideration of information from various sources such as: traffic signal warrants, LOS analyses, accident data, and public complaints. The installation of a traffic signal should either: (1) improve traffic operations without being detrimental to traffic safety; (2) improve safety performance

without being detrimental to traffic operations; or (3) improve both safety and traffic operations.[5]

Traffic signal warrants have been established for special conditions that involve factors such as substantial numbers of pedestrians in a central business district, designated school crossings, coordinated signal systems, crash experience, roadway network considerations, and roadways near at-grade railroad crossings. However, the vast majority of traffic signals are installed based upon the three traffic volume warrants: (1) eight-hour vehicular volume, (2) four-hour vehicular volume, and (3) peak hour vehicular volume and delay. When asked if there is ever any justification for installing signals at an intersection where none of the numerical warrants are met, the FHWA issued the following statement :

> *"In the vast majority of cases, a signal should not be installed if the MUTCD signal warrants are not met. However, there can be very rare cases where the engineer's study finds no satisfaction of numerical warrants but finds other special conditions that cause him/her to conclude that a signal is the best solution (vs. other possible alternatives). An experienced and properly qualified traffic engineer has the ability to assess conditions and make this kind of a determination under the provisions of the MUTCD. Section 4C.01 says a signal should not be installed unless one or more of the warrants are satisfied. That's a "should not" rather than a "shall not", for the very reason discussed above. The decision and the engineering reasons for it should be clearly documented in the study. It is important to note that a politically dictated unwarranted signal installation (typically against the professional advice of the traffic engineer) is not what is contemplated by the MUTCD language."*[6]

The warrants established by the State of California identify the minimum conditions under which unsignalized intersections may be considered potentially viable candidates for signalization. Further investigation of the intersection should be initiated if one or more of the warrants are met to determine if signalization is justified based on an established traffic need. A traffic control signal should not be installed unless the minimum threshold criteria are met or exceeded for one or more of the warrants described in the *California Manual of Uniform Traffic Control Devices* (CA MUTCD) adopted on January 13, 2012.

The CA MUTCD identifies traffic signal warrants which represent guidance based on the collective professional consensus accumulated over many decades. The warrants are given in terms of the following factors: eight-hour vehicular volume, four-hour vehicle volume, peak hour, pedestrian volume, school crossing, coordinated signal system, crash experience, roadway network, and intersection near a grade crossing. The installation of a traffic signal should not be considered unless one or more of the factors described in the warrants is met. However, the satisfaction of a warrant, in and of itself, is not necessarily sufficient justification for the installation of traffic control signals.

Delay, congestion, approach conditions, driver confusion, future land use, or other evidence of the need for right-of-way assignment beyond that which could be provided by stop signs must be demonstrated. Improper or unwarranted signal installations may cause: (1) excessive delay; (2) disobedience of the signal indications; (3) circuitous travel on alternate routes; and (4) increased crash frequency. Consequently, a traffic control signal should not be installed unless an engineering study indicates that installing the traffic control signal

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5. Kell, James H., Iris J. Fullerton. *Manual of Traffic Signal Design*. Institute of Transportation Engineers. Prentice-Hall, Inc., Englewood Cliffs, New Jersey 07632. 1982.
6. http://mutcd.fhwa.dot.gov/knowledge/faqs/faq_part4.htm

would improve the overall safety and/or operation of the intersection. A traffic control signal should not be installed if it would seriously disrupt progressive traffic flow.

Peak hour signal warrants (see Appendix C) are used as a preliminary indication of the need for traffic signals in the future. These signal warrants should be considered in conjunction with the unsignalized intersection peak hour analysis to provide a more complete understanding of the need for signalization. The actual design and installation of signals should be based upon detailed studies which include extensive traffic counts.

Since the installation of traffic signals typically increases the accident rate and the total vehicular delay, a traffic signal should not be installed, even though the traffic volume thresholds for signalization are reached, unless there is evidence of the need for right-of-way assignment beyond that which could be provided by a STOP sign. Where traffic signals are not warranted, but increases in future traffic will cause an unsignalized intersection to fail to meet the applicable minimum intersection performance standard, less restrictive forms of mitigation should be identified to address the operational deficiency. Traffic signals should be installed only when one or more signal warrants is met, lesser measures have failed to remedy the deficiency, and no other solution or form of control would be effective in assuring traffic safety and efficiency. Traffic signals should be installed only where the net effect expected to occur would be an improvement in the overall safety and/or operations at an intersection.

Rural volume warrants (70 percent of the urban warrants) apply when the 85th percentile speed of traffic on the major street exceeds 40 mph in either an urban or a rural area, or when the intersection lies within the built-up area of an isolated community with a population under 10,000. All other areas are considered to be urban. Peak hour traffic signal volume warrants were evaluated for each of the three unsignalized key intersections.

***Farrell Drive and Racquet Club Road***

Rural peak hour signal warrants were checked for the intersection of Farrell Drive and Racquet Club Road, as shown in Appendix C. Rural peak hour signal warrants were not met by the peak hour traffic volumes with any of the scenarios evaluated. The approach with the most delay is expected to provide LOS C or better operation during the peak hours in the future without signalization. No change in the existing traffic control at this intersection is warranted or recommended.

***Whitewater Club Drive and Vista Chino***

The relatively high commuter traffic volumes on Vista Chino during the peak hours in the peak season encourage residents of the neighborhood served by North Whitewater Club Drive to use other roadways with traffic signal control to access Vista Chino. The signalized intersection of Via Escuela at Gene Autry Trail provides a convenient alternative route for residents who opt to avoid turning left across Vista Chino at the unsignalized intersection of Whitewater Club Drive during the peak commuter travel hours.

Vista Chino,east of Farrell Drive, has a posted speed limit of 50 mph. Therefore, rural peak hour signal warrants were checked for the intersection of Whitewater Club Drive and Vista Chino, as shown in the spreadsheets in Appendix C.

Peak hour signal warrants are not met at this intersection with existing, year 2020, or year 2030 traffic volumes. Motorists using the southbound approach at this intersection are projected to experience excessive control delay during the peak hours in the year 2030 with or without site traffic. The projected year 2030 southbound peak hour volume on

Whitewater Club Drive (39 VPH including vehicles turning both right and left onto Vista Chino) is projected to represent only 52 percent of the minimum threshold that would warrant consideration of installing traffic signals. No change in the existing traffic control at this intersection is warranted or recommended.

***Whitewater Club Drive and Via Escuela***

Urban peak hour signal warrants were checked for the intersection of Whitewater Club Drive and Via Escuela, as shown in Appendix C. The urban peak hour volume warrants were not met by the peak hour traffic volumes with any of the scenarios evaluated. This intersection is expected to provide LOS C or better operation during the peak hours in the future without signalization. No change in the existing traffic control at this intersection is warranted or recommended.

***g. Other Considerations***

***Year 2020 Conditions Without Sunrise Parkway Connection***

The extension of Sunrise Parkway between Indian Canyon Drive and Sunrise Way will be completed in conjunction with the construction of the adjacent residential development. With the recent economic downturn, the schedule of that development has been disrupted. In the event that Sunrise Parkway is not extended by the year 2020, traffic destined for the Indian Canyon Drive I-10 Interchange will use San Rafael Drive rather than Sunrise Parkway to reach Indian Canyon Drive. Year 2020 peak hour traffic volumes for the intersection of Sunrise Way and San Rafael Drive are shown in Figure 3-9 for conditions without Sunrise Parkway extended to Indian Canyon Drive from Sunrise Way.

With the existing lane geometrics shown in Figure 2-5 and traffic volumes shown in Figure 3-9, the intersection of Sunrise Way and San Rafael Drive is projected to operate at LOS B in the year 2020 with and without site traffic. Without site traffic, the overall intersection average control delay is projected to be 12.7 seconds per vehicle during both the midday and evening peak hours. With site traffic, the intersection control delay is projected to range from 15.0 seconds/vehicle during the midday peak hour to 14.2 seconds per vehicle during the evening peak hour.

***h. Project Alternatives***

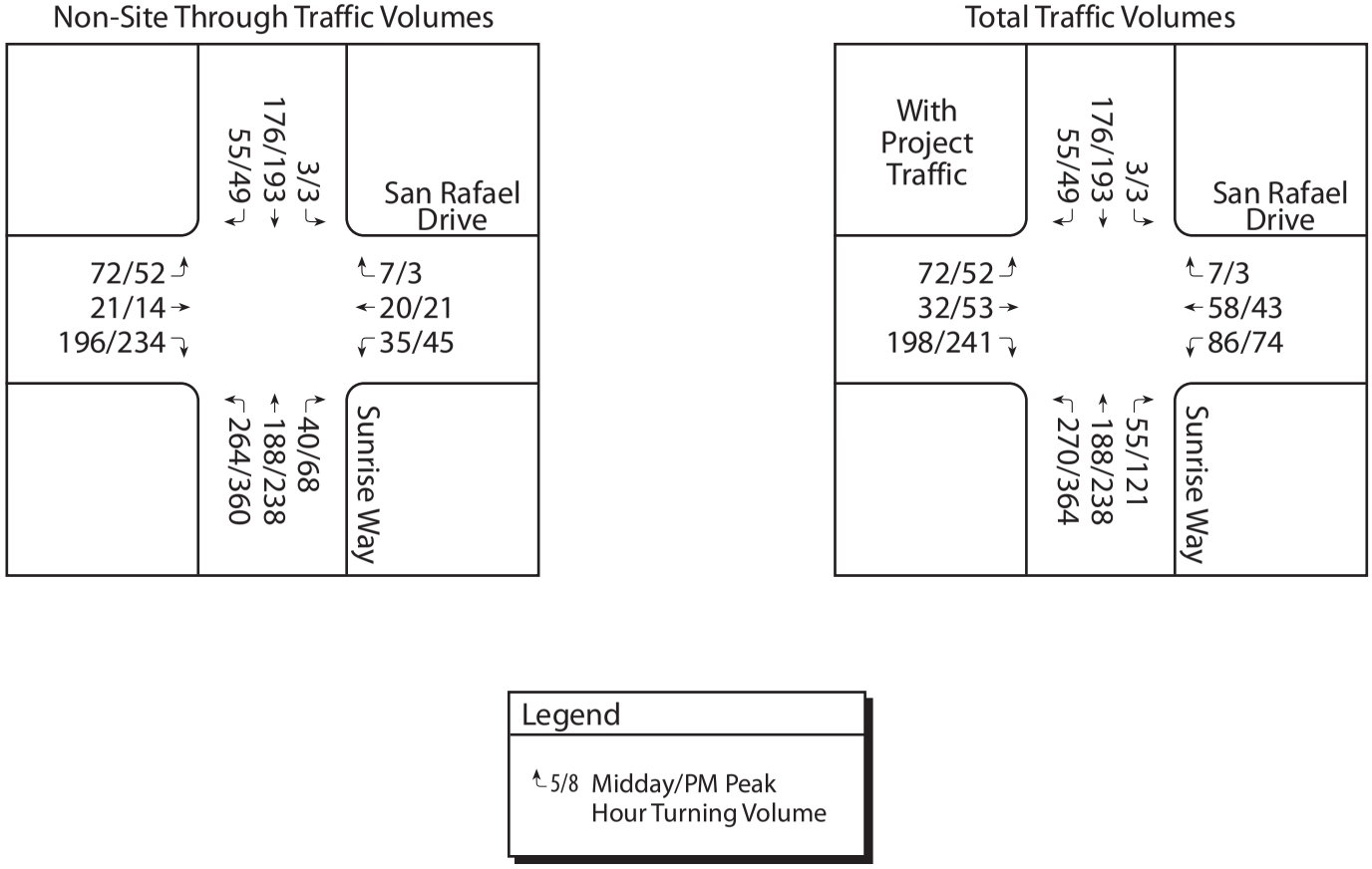
***Trip Generation of Project Alternatives***

There are three development alternatives for the proposed Palm Springs Country Club Repurposing Project. The Preferred Alternative would provide a mix of attached and detached residential products and a site for a future public park. Alternative 2 would replace some of the residential area in the South Village with a 20-acre soccer park. The soccer park would include parking located outside the gated residential areas. The North Village would not be gated with Alternative 2.

Alternative 3 would include the development of the entire site with 272 single-family detached houses on 10,000 square-foot lots. Alternative 4 would be a no development alternative where the site would remain vacant and would not generate any trips. The land uses associated with the three development alternatives would be residential, except that Alternative 2 would include a public 20-acre soccer park. Table 3-7 provides the trip generation associated with the Preferred Alternative, Alternative 2, and Alternative 3.

Figure 3-9

Year 2020 Traffic Volumes for the Intersection of
Sunrise Way and San Rafael Drive
(Without Completion of Sunrise Parkway)




Endo Engineering

Table 3-7
Weekday Trip-Generation Forecast
By Project Alternative[a]

| Land Use Category | Land Use Quantity[b] | Midday Peak Hour In | Midday Peak Hour Out | Midday Peak Hour Total | PM Peak Hour In | PM Peak Hour Out | PM Peak Hour Total | Daily 2-Way |
|---|---|---|---|---|---|---|---|---|
| **Preferred Alternative** | | | | | | | | |
| North Village | 137 DU | 12 | 53 | 65 | 52 | 26 | 78 | 850 |
| South Village | 304 DU | 59 | 167 | 226 | 180 | 106 | 286 | 2,890 |
| Total | | 71 | 220 | 291 | 232 | 132 | 364 | 3,740 |
| **Alternative 2** | | | | | | | | |
| Senior Housing Attached | 137 DU | 4 | 8 | 12 | 10 | 7 | 17 | 480 |
| Single-Family Detached | 213 DU | 42 | 119 | 161 | 131 | 77 | 208 | 2,080 |
| Soccer Complex | 8 Fields | 13 | 11 | 24 | 114 | 51 | 165 | 730 |
| Total | | 59 | 138 | 197 | 255 | 135 | 390 | 3,290 |
| **Alternative 3** | | | | | | | | |
| Single-Family Detached | 272 DU | 53 | 150 | 203 | 163 | 96 | 259 | 2,610 |

a. Based upon trip generation data published by the ITE in *Trip Generation* (8th Edition, December, 2008). The ITE Land Use Codes (LUC) assumed were: LUC 230 for the multi-family attached housing in the North Village; LUC 210 for the single-family detached housing in the South Village; LUC 252 for the senior housing attached units in the North Village; and LUC 488 for the soccer complex in the South Village.
b. DU = Dwelling Units. Fields = Soccer Fields.

The traffic impact associated with the Preferred Alternative would be similar to that of Alternative 2. Alternative 3 would generate fewer peak hour and daily trips and consequently have a smaller traffic impact. However, the off-site mitigation associated with all three development alternatives in Table 3-7 would be the same.

# 4. FINDINGS AND CONCLUSIONS

The proposed ingress and egress design appears to include adequate vehicle maneuvering and stacking space to avoid conflicts with internal and external traffic and circulation patterns. No changes to any traffic control devices at any of the key intersections are recommended for any of the scenarios evaluated. The proposed roundabouts appear to include appropriate geometric design features and provide adequate capacity to accommodate future traffic demands.

### *a. Traffic Impacts*

The following circulation impacts would be associated with the proposed project:

1. The proposed project would generate approximately 3,740 daily trip-ends, of which 291 would occur during the midday peak hour (71 inbound and 220 outbound) and 364 would occur during the evening peak hour (232 inbound and 132 outbound).

2. Nine of the ten key intersections evaluated are projected to operate at acceptable levels of service upon project buildout in the year 2020 with existing lane geometrics and traffic control devices. Seven of the ten key intersections are projected to provide acceptable levels of service in the year 2030 with existing lane geometrics and traffic control devices following the addition of site traffic.

3. One off-site signalized intersection improvement would be required in the year 2020 to maintain level of service D or better operation during the peak hours on weekdays in the peak season with or without site traffic. A dedicated northbound right-turn lane should be added to Farrell Drive at the intersection of Vista Chino to maintain LOS D. This mitigation was identified previously by Endo Engineering as being required in the year 2014 with the development of the initial phase of the College Park Specific Plan.

4. The intersection of Sunrise Way with Vista Chino should be improved by adding a second dedicated southbound left-turn lane to maintain acceptable levels of service by the year 2030 with or without site traffic. This mitigation was identified previously by Endo Engineering in the College Park Specific Plan traffic impact study as being required upon General Plan buildout (i.e., by the year 2030).

5. Although site traffic is projected to incrementally increase the control delay at the all-way stop-controlled intersection of Whitewater Club Drive and Via Escuela, acceptable peak hour levels of service are projected for the year 2020 and the year 2030 without mitigation. This impact is considered less than significant.

6. Site traffic will cause the peak hour level of service in the year 2030 to drop from LOS C to LOS D at the signalized intersection of Farrell Drive at Vista Chino. The City of Palm Springs considers LOS D to be acceptable; therefore, this impact is considered less than significant.

***Whitewater Club Drive @ Vista Chino***

By the year 2030, the southbound approach at the unsignalized intersection of Whitewater Club Drive and Vista Chino is projected to operate at LOS F during the peak hours, without site traffic. The projected year 2030 southbound approach volume (39 VPH) would

represent 52 percent of the minimum volume needed before traffic signal control would be considered. Site traffic is projected to reduce the southbound approach delay during the midday peak hour by 4.0 seconds per vehicle, thereby improving the LOS from "F" to "E". Site traffic would also increase the delay during the evening peak hour by 1.2 seconds per vehicle on the southbound approach which is projected to operate at LOS F during the midday and evening peak hours with or without site traffic. With an average control delay of 73.4 seconds per vehicle, the southbound approach at this intersection is not projected to achieve the City of Palm Springs minimum performance standard in the year 2030 with or without site traffic. Traffic signal control is not recommended for this intersection because the future southbound traffic projections would be insufficient to warrant traffic signal control. This is considered an unavoidable adverse impact.

On a typical weekday in the peak season following project completion, the site traffic passing through the intersection of Whitewater Club Drive and Vista Chino (28 VPH during the midday peak hour and 42 VPH during the evening peak hour) would be less than 50 vehicles per hour. Since the City of Palm Springs typically uses 50 peak hour project-related trips as the minimum threshold criteria for use in identifying key intersections for traffic impact analyses, this intersection would not normally be considered a key intersection. The intersection was evaluated herein in an effort to provide full disclosure.

Although this intersection is projected to have an operational deficiency upon General Plan buildout, no appropriate and feasible mitigation is recommended. Over the long term, if traffic safety becomes an issue, a raised median could eventually be constructed on Vista Chino, from Cerritos Drive to Gene Autry Trail, that would eliminate the north/south through and left-turn movements across Vista Chino at unsignalized intersections. However, while this would eliminate the movements with excessive delay and poor levels of service, it would not improve access.

***The Extension of Sunrise Parkway***

Sunrise Way will be connected to Sunrise Parkway in the future, northwest of the proposed project. When completed, Sunrise Parkway will provide a new connection to Indian Canyon Drive and Interstate 10. The timing of this connection is contingent upon the construction of the adjacent residential development and therefore uncertain at the present time. Sunrise Parkway may not be constructed between Sunrise Way and Indian Canyon Drive by the year 2020 when the proposed project is scheduled to be completed.

***Farrell Drive @ Vista Chino***

Based on the peak hour intersection analysis, a new dedicated northbound right-turn lane would be required on Farrell Drive at the intersection of Vista Chino to meet the City of Palm Springs minimum intersection performance standard in the year 2020 with or without site traffic. This mitigation was identified previously by Endo Engineering as being required in the year 2014 with the initial phase of the approved College Park Specific Plan Preferred Alternative development.

***Sunrise Way @ Vista Chino***

With or without site traffic, a second dedicated southbound left-turn lane would be required at the intersection of Sunrise Way and Vista Chino to maintain acceptable levels of service in the peak hours of the peak season by the year 2030. This mitigation was identified previously by Endo Engineering as being required by the year 2030 with the development of the College Park Specific Plan Preferred Alternative. Since the northbound approach currently includes dual left-turn lanes but the southbound approach does not, this

recommended improvement would result in a better alignment of the northbound and southbound travel lanes at this intersection.

### *b. Required Improvements*

#### *Traffic Signalization*

Signalization is not recommended at any of the three unsignalized key intersections to accommodate existing, year 2020, or year 2030 traffic volumes. Two of the unsignalized key intersections (Farrell Drive at Racquet Club Drive and Whitewater Club Drive at Via Escuela) are projected to operate at acceptable levels of service with all scenarios evaluated. The existing volumes and future traffic projections at these two intersections would not meet the applicable peak hour traffic signal volume warrants.

By the year 2030, the southbound approach at the unsignalized key intersection of Whitewater Club Drive and Vista Chino is projected to exhibit excessive delay and operate at LOS F in the peak hours. The southbound traffic on Whitewater Club Drive will only reach 52 percent of the minimum volume threshold for rural peak hour signal warrants. With alternative access available for nearby residential areas at signalized intersections along Via Escuela at Farrell Drive and at Gene Autry Trail, traffic signal control is not recommended for this intersection.

#### *Intersection Improvements*

To maintain acceptable levels of service for year 2020+project traffic volumes, the intersection of Farrell Drive and Vista Chino will require the addition of a dedicated northbound right-turn lane, as shown in Figure 3-7.

To provide acceptable levels of service for year 2030+project traffic volumes, one additional approach lane will be required at two key intersections (as shown in Figure 3-8). One required lane is the northbound right-turn lane at the intersection of Farrell Drive and Vista Chino that is required to mitigate year 2020 traffic volumes. The second required lane improvement is a second southbound left-turn lane at the intersection of Sunrise Way and Vista Chino.

Both of the off-site improvements required to maintain acceptable levels of service in the year 2030 involve an intersection with a roadway in the CMP System of Highways and Roadways. These improvements may or may not be funded through the applicant's participation in the TUMF program. The improvements needed may not be considered TUMF improvements, even if they are required at intersections involving streets in the CMP System. The Palm Springs City Engineer will make a determination regarding the project proponent's fair-share responsibility for off-site intersection improvements based upon: intersection location, whether the improvements occur on CMP facilities, benefits that may accrue to site access, improvements expected from cumulative developments, etc.

#### *Fair-Share Contribution to Improvements*

The Palm Springs Country Club contribution to the increase in evening peak hour traffic projected to occur by the year 2030 is shown beside each intersection in Table 4-1. The value of the Palm Springs Country Club traffic, as a percentage of future traffic growth shown in Table 4-1 was determined from all evening peak hour approach volumes at each key intersection where improvements are needed.

Table 4-1
Project-Related Fair-Share Contribution to
Required Intersection Improvements in the Year 2030

| Intersection | Project Contribution To Future Traffic Growth |
|---|---|
| Sunrise Way @ Vista Chino | 8.94 Percent |
| Farrell Drive @ Vista Chino | 2.70 Percent |

The formula utilized to determine the percentage contribution is shown below.

$$\text{Site Contribution To Future Growth (\%)} = \frac{\text{Site Traffic (Figure 3-2)} \times 100}{\text{Year 2030 Total Traffic (Figure 3-6) - Existing Traffic (Figure 2-4)}}$$

The project proponent will participate in the TUMF program, which funds roadway improvements of regional benefit. The project proponent may also be required to contribute on a fair-share basis to circulation improvements required on roadways and/or at intersections that are not part of the CMP System of Highways and Roadways. Vista Chino and Gene Autry Trail are part of the CMP system and are eligible for TUMF funding.

Both of the recommended improvements at intersections on Vista Chino are on intersection approach legs that are not part of the CMP System of Highways and Roadways. In identifying mitigation at intersections, a choice can be made regarding which intersection approach leg to mitigate. Throughout the analysis herein, the most effective mitigation was selected, irrespective of whether or not the improvements recommended were on a CMP roadway.

### *c. Compliance With City Standards and Policies*

There are no master planned roadways passing through or lying adjacent to the proposed project. The project will take access from San Rafael Drive (east of Sunrise Way) and Whitewater Club Drive (north of Verona Road), and will be required to modify these streets to City of Palm Springs public street improvement standards to facilitate access to the project site and maintain access to existing adjacent developments. The project proponent will comply with City requirements regarding master planned bikeways within or adjacent to the project site.

### *d. Transportation Uniform Mitigation Fee (TUMF) Program*

The Coachella Valley Association of Governments (CVAG) has developed a Transportation Uniform Mitigation Fee (TUMF) that compliments the objectives of the Congestion Management Program (CMP). In addition, the City of Palm Springs has adopted an approved TDM Ordinance. One of the Implementation Programs in the *Palm Springs General Plan* includes continuing the City's association with the Coachella Valley Association of Governments to achieve a regional transportation strategy that coordinates physical improvements, TUMF, TSM, TDM, public transit and issues of development

affecting circulation. The City of Palm Springs is in compliance with the Riverside County CMP, provided that all developments participate in the TUMF program. The proposed project will participate in the TUMF program. The requirements of the City of Palm Springs TDM Ordinance are not applicable to the proposed residential development.

## 5. RECOMMENDATIONS

The following items reflect *Palm Springs Municipal Code* or policy requirements that apply to all developments as conditions of approval.

1. All required off-site public and on-site private streets shall be designed in accordance with City of Palm Springs design standards, as required by the City Engineer.

2. The project developer/applicant shall submit street improvement plans for construction of required streets to the Palm Springs City Engineer for review and approval.

3. The controlled primary entryways to the site shall include provisions to facilitate access by emergency vehicles in a manner approved by the chief of police per *Palm Springs Municipal Code* Section 8.04.190. All power-operated controlled access devices shall have a radio-controlled override system capable of opening the gate or barrier when activated by a special transmitter located in emergency vehicles and be equipped to facilitate opening in the event of a power failure.

4. Sufficient off-street parking shall be provided on-site to meet the requirements of the *Palm Springs Municipal Code*.

5. The project proponent shall comply with City of Palm Springs requirements regarding the master planned bikeway and equestrian trail that transect the South Village site along the Whitewater River levee.

6. As required by the City of Palm Springs, the project proponent shall contribute on a fair-share basis to the cost of mitigation at two off-site key intersections.

7. The project proponent shall contribute traffic impact mitigation fees, by participating in the Traffic Uniform Mitigation Fee (TUMF) program prior to the issuance of building permits.

The mitigation measures below are recommended to reduce potential circulation and/or site access impacts associated with the proposed project. Specific mitigation strategies were identified to minimize the potential for future operational deficiencies at the key intersections and insure that the residents of the surrounding community, and all future road users at these intersections will continue to enjoy the benefits of safe and efficient access in the future.

8. As required by the City of Palm Springs, the project proponent shall contribute on a fair-share basis to the cost of the construction of street improvements (consisting of pavement widening, curb and gutter and sidewalks) which shall be constructed in conjunction with approved phasing plans for development and/or associated with an approved Final Map or Maps (if the development is phased) as follows:

    - Whitewater Club Drive, north of Verona Road: reconstruction of the northern terminus and access to the existing Palm Springs Country Club and Alexander Estates; and

- San Rafael Drive, east of Sunrise Way: reconstruction of the access road between Sunrise Way and the Golden Sands Mobile Home Park.

9. The project developer/applicant shall be responsible for construction of all private streets, in conjunction with approved phasing plans for development and/or as associated with an approved Final Map or Maps (if the development is phased).

10. The project applicant shall contribute on a fair-share basis to circulation improvements required on roadways and/or at intersections that are not in the TUMF program, as specified by the Palm Springs City Engineer.[1]

11. The project developer/applicant shall coordinate with SunLine Transit Agency regarding required public transit facilities on and adjacent to the project site. Any required public transit facilities shall be furnished, constructed and installed in conjunction with construction of the associated street improvements.

### *a. Roadway Improvements*

#### *Year 2020 Off-Site Improvements to Achieve LOS D*

All of the key intersections evaluated will operate at acceptable levels of service upon project buildout in the year 2020 with the intersection improvements shown in Figure 3-7. To provide acceptable levels of service with site traffic in the year 2020, the following intersection approach lane improvement is required:

- Farrell Drive at Vista Chino - add a dedicated northbound right-turn lane.

#### *Year 2030 Off-Site Improvements to Achieve LOS D*

No unsignalized key intersections will require signalization in the year 2030 with or without site traffic. All of the signalized key intersections evaluated will operate at acceptable levels of service in the year 2030 with the intersection improvements shown in Figure 3-8. Improvements to the existing intersection approach lanes will be required at two of the key intersections including:

- Farrell Drive at Vista Chino - add a dedicated northbound right-turn lane.
- Sunrise Way at Vista Chino - add a second dedicated southbound left-turn lane.

### *b. Transportation System Management Actions*

The City of Palm Springs has adopted a Transportation Demand Management (TDM) Ordinance. Since the project proposes residential land uses on-site, the provisions of the City's adopted TDM Ordinance do not appear to be applicable.

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1. The applicant's fair share contribution to the cost of improvements at intersections involving roadways that are not part of the CMP System is identified in Section 4b.

# *Appendices*

A. Traffic Count Data
B. HCM Intersection Analysis Methodology and Worksheets
C. Traffic Signal Warrant Worksheets
D. Traffic Glossary

# *Appendix A*

## TRAFFIC COUNT DATA

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Palm Springs
N/S: Sunrise Way
E/W: San Rafael Drive
Weather: Sunny

File Name : PLSSUSRAM
Site Code : 00000099
Start Date : 5/2/2013
Page No : 1

Groups Printed- Total Volume

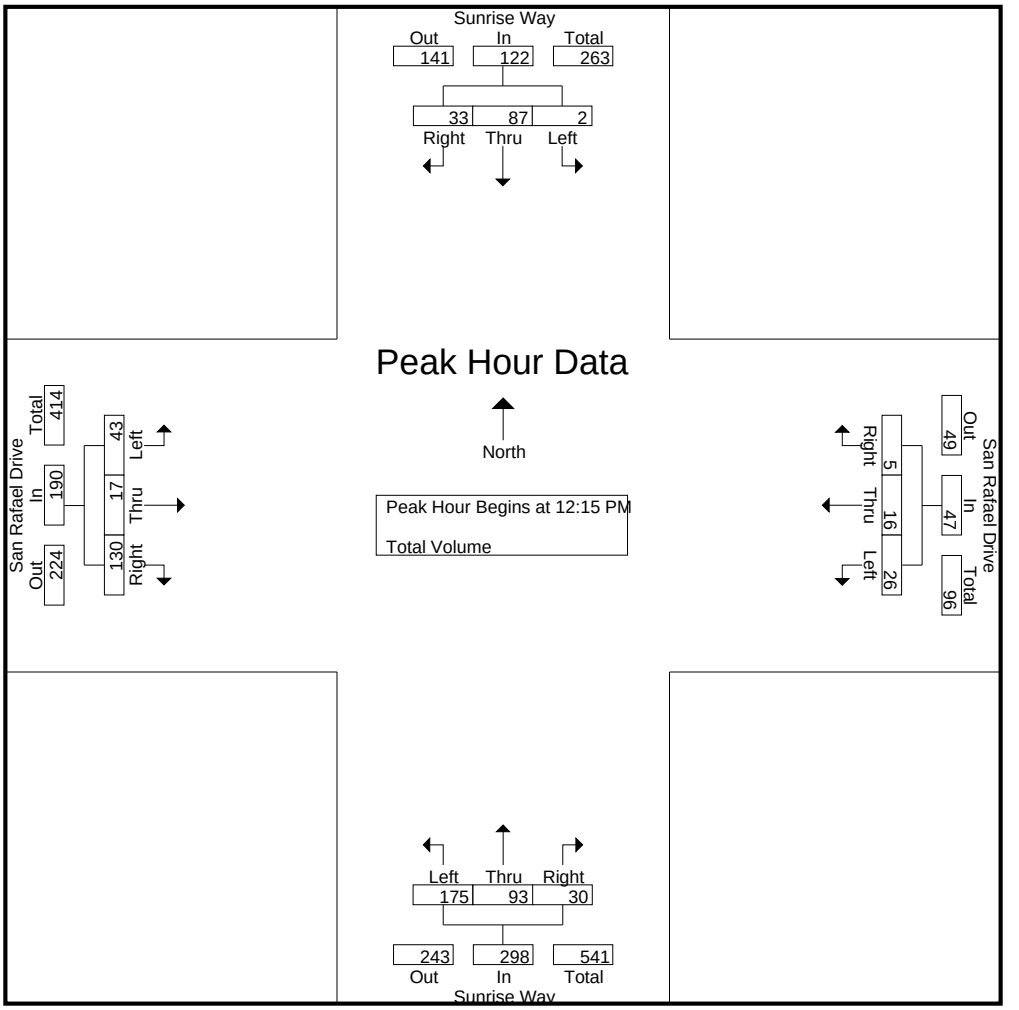
| | Sunrise Way Southbound | | | | San Rafael Drive Westbound | | | | Sunrise Way Northbound | | | | San Rafael Drive Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| 11:30 AM | 0 | 30 | 14 | 44 | 6 | 3 | 0 | 9 | 28 | 21 | 3 | 52 | 6 | 5 | 47 | 58 | 163 |
| 11:45 AM | 1 | 27 | 10 | 38 | 3 | 0 | 1 | 4 | 26 | 19 | 4 | 49 | 9 | 2 | 47 | 58 | 149 |
| Total | 1 | 57 | 24 | 82 | 9 | 3 | 1 | 13 | 54 | 40 | 7 | 101 | 15 | 7 | 94 | 116 | 312 |
| | | | | | | | | | | | | | | | | | |
| 12:00 PM | 0 | 14 | 7 | 21 | 5 | 0 | 0 | 5 | 35 | 29 | 2 | 66 | 5 | 3 | 34 | 42 | 134 |
| 12:15 PM | 1 | 19 | 6 | 26 | 9 | 0 | 1 | 10 | 46 | 29 | 9 | 84 | 8 | 1 | 41 | 50 | 170 |
| 12:30 PM | 0 | 28 | 5 | 33 | 6 | 5 | 1 | 12 | 43 | 13 | 7 | 63 | 8 | 1 | 38 | 47 | 155 |
| 12:45 PM | 1 | 20 | 16 | 37 | 3 | 8 | 1 | 12 | 44 | 26 | 7 | 77 | 7 | 3 | 29 | 39 | 165 |
| Total | 2 | 81 | 34 | 117 | 23 | 13 | 3 | 39 | 168 | 97 | 25 | 290 | 28 | 8 | 142 | 178 | 624 |
| | | | | | | | | | | | | | | | | | |
| 01:00 PM | 0 | 20 | 6 | 26 | 8 | 3 | 2 | 13 | 42 | 25 | 7 | 74 | 20 | 12 | 22 | 54 | 167 |
| 01:15 PM | 1 | 21 | 6 | 28 | 9 | 1 | 1 | 11 | 48 | 27 | 9 | 84 | 6 | 3 | 33 | 42 | 165 |
| Grand Total | 4 | 179 | 70 | 253 | 49 | 20 | 7 | 76 | 312 | 189 | 48 | 549 | 69 | 30 | 291 | 390 | 1268 |
| Apprch % | 1.6 | 70.8 | 27.7 | | 64.5 | 26.3 | 9.2 | | 56.8 | 34.4 | 8.7 | | 17.7 | 7.7 | 74.6 | | |
| Total % | 0.3 | 14.1 | 5.5 | 20 | 3.9 | 1.6 | 0.6 | 6 | 24.6 | 14.9 | 3.8 | 43.3 | 5.4 | 2.4 | 22.9 | 30.8 | |

| | Sunrise Way Southbound | | | | San Rafael Drive Westbound | | | | Sunrise Way Northbound | | | | San Rafael Drive Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 12:15 PM | | | | | | | | | | | | | | | | | |
| 12:15 PM | **1** | 19 | 6 | 26 | **9** | 0 | 1 | 10 | **46** | **29** | **9** | **84** | 8 | 1 | **41** | 50 | **170** |
| 12:30 PM | 0 | **28** | 5 | 33 | 6 | 5 | 1 | 12 | 43 | 13 | 7 | 63 | 8 | 1 | 38 | 47 | 155 |
| 12:45 PM | 1 | 20 | **16** | **37** | 3 | **8** | 1 | 12 | 44 | 26 | 7 | 77 | 7 | 3 | 29 | 39 | 165 |
| 01:00 PM | 0 | 20 | 6 | 26 | 8 | 3 | **2** | **13** | 42 | 25 | 7 | 74 | **20** | **12** | 22 | **54** | 167 |
| Total Volume | 2 | 87 | 33 | 122 | 26 | 16 | 5 | 47 | 175 | 93 | 30 | 298 | 43 | 17 | 130 | 190 | 657 |
| % App. Total | 1.6 | 71.3 | 27 | | 55.3 | 34 | 10.6 | | 58.7 | 31.2 | 10.1 | | 22.6 | 8.9 | 68.4 | | |
| PHF | .500 | .777 | .516 | .824 | .722 | .500 | .625 | .904 | .951 | .802 | .833 | .887 | .538 | .354 | .793 | .880 | .966 |

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Palm Springs
N/S: Sunrise Way
E/W: San Rafael Drive
Weather: Sunny

File Name : PLSSUSRAM
Site Code : 00000099
Start Date : 5/2/2013
Page No : 2




Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

| | 11:30 AM | | | | 12:30 PM | | | | 12:15 PM | | | | 11:30 AM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 0 | **30** | **14** | **44** | 6 | 5 | 1 | 12 | **46** | **29** | **9** | **84** | 6 | **5** | **47** | **58** |
| +15 mins. | **1** | 27 | 10 | 38 | 3 | **8** | 1 | 12 | 43 | 13 | 7 | 63 | **9** | 2 | 47 | 58 |
| +30 mins. | 0 | 14 | 7 | 21 | 8 | 3 | **2** | **13** | 44 | 26 | 7 | 77 | 5 | 3 | 34 | 42 |
| +45 mins. | 1 | 19 | 6 | 26 | **9** | 1 | 1 | 11 | 42 | 25 | 7 | 74 | 8 | 1 | 41 | 50 |
| Total Volume | 2 | 90 | 37 | 129 | 26 | 17 | 5 | 48 | 175 | 93 | 30 | 298 | 28 | 11 | 169 | 208 |
| % App. Total | 1.6 | 69.8 | 28.7 | | 54.2 | 35.4 | 10.4 | | 58.7 | 31.2 | 10.1 | | 13.5 | 5.3 | 81.2 | |
| PHF | .500 | .750 | .661 | .733 | .722 | .531 | .625 | .923 | .951 | .802 | .833 | .887 | .778 | .550 | .899 | .897 |

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Palm Springs
N/S: Sunrise Way
E/W: San Rafael Drive
Weather: Sunny

File Name : PLSSUSRPM
Site Code : 00000099
Start Date : 5/2/2013
Page No : 1

Groups Printed- Total Volume

| | Sunrise Way Southbound | | | | San Rafael Drive Westbound | | | | Sunrise Way Northbound | | | | San Rafael Drive Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| 04:00 PM | 0 | 22 | 5 | 27 | 11 | 4 | 0 | 15 | 57 | 32 | 16 | 105 | 7 | 5 | 41 | 53 | 200 |
| 04:15 PM | 0 | 25 | 14 | 39 | 3 | 4 | 2 | 9 | 72 | 36 | 12 | 120 | 10 | 4 | 37 | 51 | 219 |
| 04:30 PM | 1 | 21 | 4 | 26 | 13 | 5 | 0 | 18 | 49 | 25 | 14 | 88 | 5 | 0 | 41 | 46 | 178 |
| 04:45 PM | 1 | 27 | 6 | 34 | 5 | 4 | 0 | 9 | 60 | 24 | 8 | 92 | 9 | 2 | 36 | 47 | 182 |
| Total | 2 | 95 | 29 | 126 | 32 | 17 | 2 | 51 | 238 | 117 | 50 | 405 | 31 | 11 | 155 | 197 | 779 |
| | | | | | | | | | | | | | | | | | |
| 05:00 PM | 0 | 17 | 8 | 25 | 9 | 4 | 1 | 14 | 64 | 22 | 20 | 106 | 6 | 3 | 31 | 40 | 185 |
| 05:15 PM | 2 | 20 | 4 | 26 | 5 | 4 | 0 | 9 | 62 | 23 | 8 | 93 | 11 | 2 | 32 | 45 | 173 |
| 05:30 PM | 0 | 32 | 3 | 35 | 11 | 4 | 0 | 15 | 88 | 24 | 10 | 122 | 4 | 3 | 40 | 47 | 219 |
| 05:45 PM | 0 | 21 | 3 | 24 | 7 | 3 | 0 | 10 | 46 | 17 | 12 | 75 | 7 | 4 | 44 | 55 | 164 |
| Total | 2 | 90 | 18 | 110 | 32 | 15 | 1 | 48 | 260 | 86 | 50 | 396 | 28 | 12 | 147 | 187 | 741 |
| | | | | | | | | | | | | | | | | | |
| Grand Total | 4 | 185 | 47 | 236 | 64 | 32 | 3 | 99 | 498 | 203 | 100 | 801 | 59 | 23 | 302 | 384 | 1520 |
| Apprch % | 1.7 | 78.4 | 19.9 | | 64.6 | 32.3 | 3 | | 62.2 | 25.3 | 12.5 | | 15.4 | 6 | 78.6 | | |
| Total % | 0.3 | 12.2 | 3.1 | 15.5 | 4.2 | 2.1 | 0.2 | 6.5 | 32.8 | 13.4 | 6.6 | 52.7 | 3.9 | 1.5 | 19.9 | 25.3 | |

| | Sunrise Way Southbound | | | | San Rafael Drive Westbound | | | | Sunrise Way Northbound | | | | San Rafael Drive Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:00 PM | | | | | | | | | | | | | | | | | |
| 04:00 PM | 0 | 22 | 5 | 27 | 11 | 4 | 0 | 15 | 57 | 32 | **16** | 105 | 7 | **5** | **41** | **53** | 200 |
| 04:15 PM | 0 | 25 | **14** | **39** | 3 | 4 | **2** | 9 | **72** | **36** | 12 | **120** | **10** | 4 | 37 | 51 | **219** |
| 04:30 PM | **1** | 21 | 4 | 26 | **13** | **5** | 0 | **18** | 49 | 25 | 14 | 88 | 5 | 0 | 41 | 46 | 178 |
| 04:45 PM | 1 | **27** | 6 | 34 | 5 | 4 | 0 | 9 | 60 | 24 | 8 | 92 | 9 | 2 | 36 | 47 | 182 |
| Total Volume | 2 | 95 | 29 | 126 | 32 | 17 | 2 | 51 | 238 | 117 | 50 | 405 | 31 | 11 | 155 | 197 | 779 |
| % App. Total | 1.6 | 75.4 | 23 | | 62.7 | 33.3 | 3.9 | | 58.8 | 28.9 | 12.3 | | 15.7 | 5.6 | 78.7 | | |
| PHF | .500 | .880 | .518 | .808 | .615 | .850 | .250 | .708 | .826 | .813 | .781 | .844 | .775 | .550 | .945 | .929 | .889 |

Counts Unlimited, Inc.
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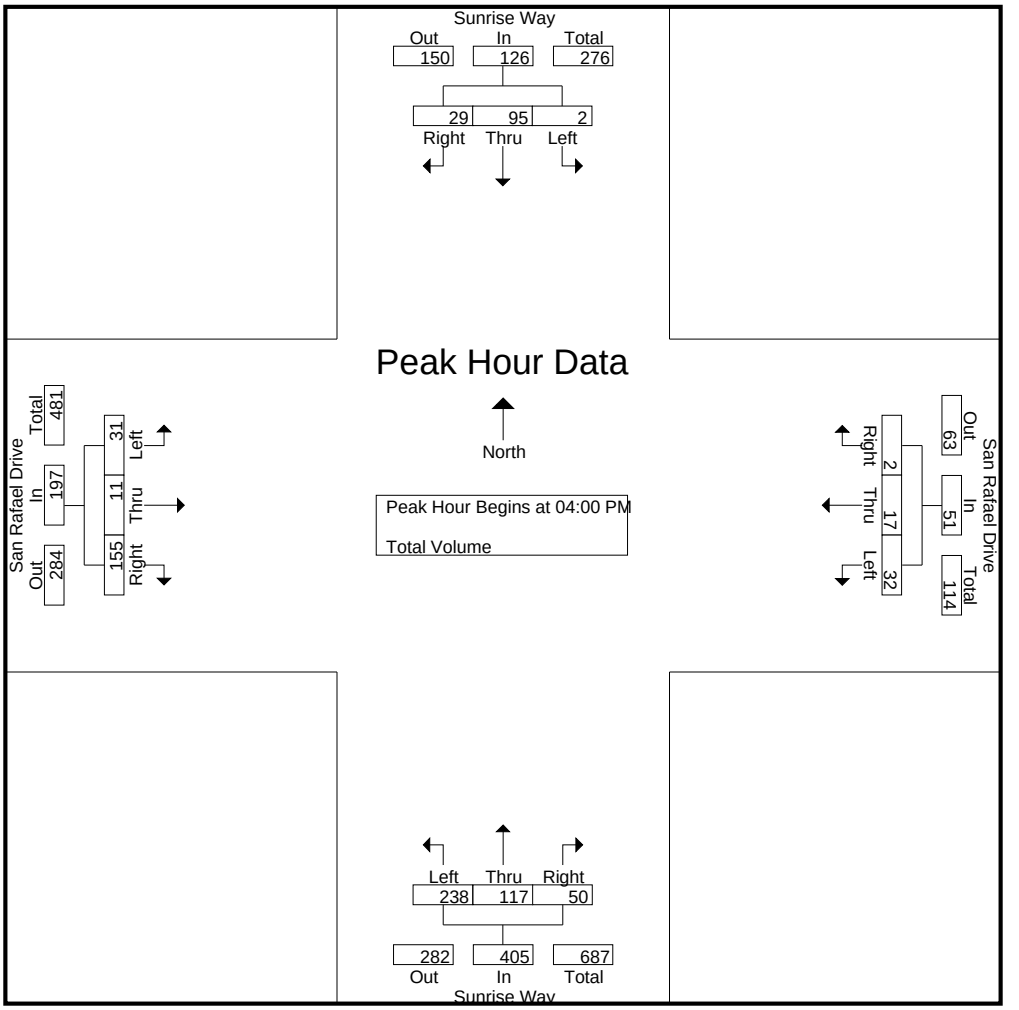
City of Palm Springs
N/S: Sunrise Way
E/W: San Rafael Drive
Weather: Sunny

File Name : PLSSUSRPM
Site Code : 00000099
Start Date : 5/2/2013
Page No : 2




Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

| | 04:00 PM | | | | 04:00 PM | | | | 04:45 PM | | | | 04:00 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 0 | 22 | 5 | 27 | 11 | 4 | 0 | 15 | 60 | **24** | 8 | 92 | 7 | **5** | **41** | **53** |
| +15 mins. | 0 | 25 | **14** | **39** | 3 | 4 | **2** | 9 | 64 | 22 | **20** | 106 | **10** | 4 | 37 | 51 |
| +30 mins. | **1** | 21 | 4 | 26 | **13** | **5** | 0 | **18** | 62 | 23 | 8 | 93 | 5 | 0 | 41 | 46 |
| +45 mins. | 1 | **27** | 6 | 34 | 5 | 4 | 0 | 9 | **88** | 24 | 10 | **122** | 9 | 2 | 36 | 47 |
| Total Volume | 2 | 95 | 29 | 126 | 32 | 17 | 2 | 51 | 274 | 93 | 46 | 413 | 31 | 11 | 155 | 197 |
| % App. Total | 1.6 | 75.4 | 23 | | 62.7 | 33.3 | 3.9 | | 66.3 | 22.5 | 11.1 | | 15.7 | 5.6 | 78.7 | |
| PHF | .500 | .880 | .518 | .808 | .615 | .850 | .250 | .708 | .778 | .969 | .575 | .846 | .775 | .550 | .945 | .929 |

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Palm Springs
N/S: Sunrise Way
E/W: Racquet Club Drive
Weather: Sunny

File Name : PLSSURCAM
Site Code : 00000066
Start Date : 5/2/2013


Groups Printed- Total Volume

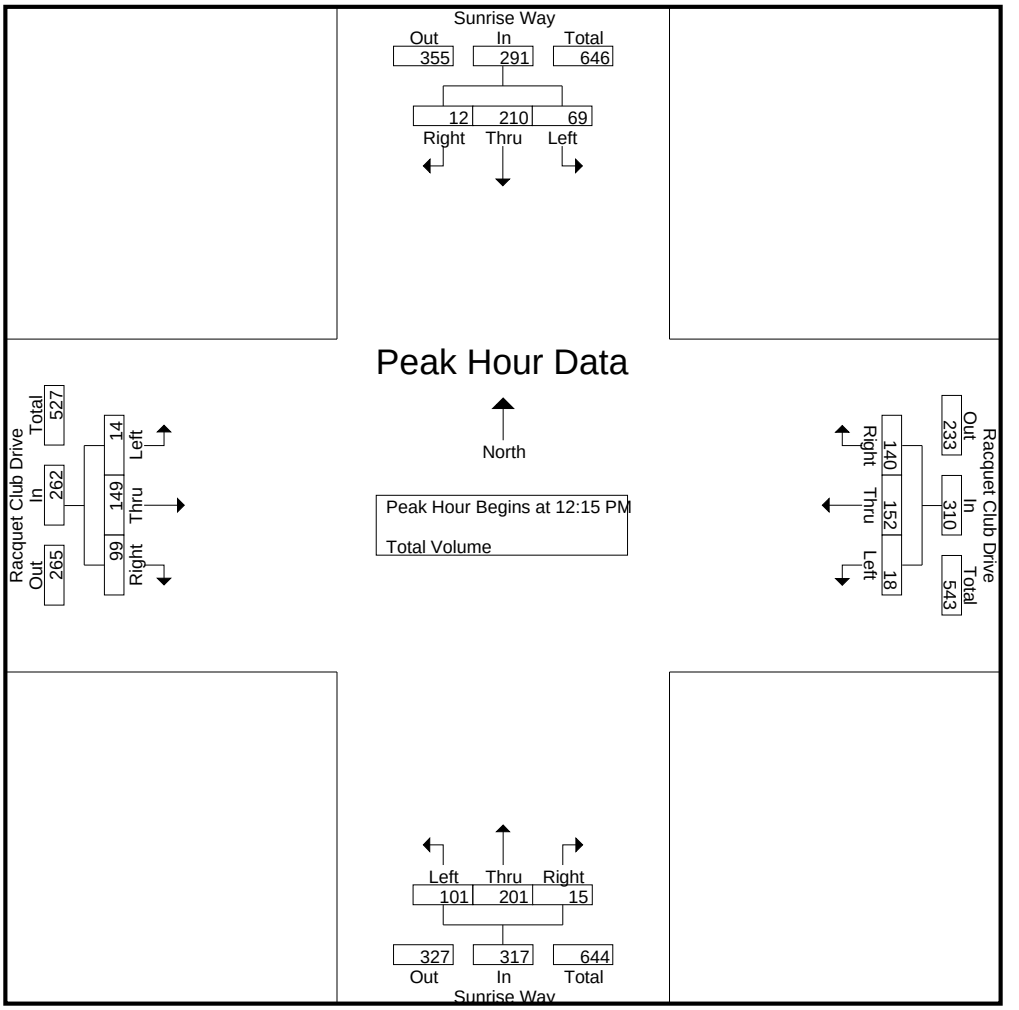
| | Sunrise Way Southbound | | | | Racquet Club Drive Westbound | | | | Sunrise Way Northbound | | | | Racquet Club Drive Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| 11:30 AM | 27 | 55 | 3 | 85 | 11 | 55 | 23 | 89 | 27 | 39 | 9 | 75 | 6 | 30 | 17 | 53 | 302 |
| 11:45 AM | 21 | 63 | 4 | 88 | 5 | 25 | 24 | 54 | 23 | 44 | 9 | 76 | 3 | 22 | 34 | 59 | 277 |
| Total | 48 | 118 | 7 | 173 | 16 | 80 | 47 | 143 | 50 | 83 | 18 | 151 | 9 | 52 | 51 | 112 | 579 |
| | | | | | | | | | | | | | | | | | |
| 12:00 PM | 28 | 43 | 0 | 71 | 6 | 29 | 19 | 54 | 26 | 52 | 8 | 86 | 2 | 22 | 27 | 51 | 262 |
| 12:15 PM | 22 | 59 | 0 | 81 | 5 | 24 | 29 | 58 | 23 | 62 | 2 | 87 | 3 | 32 | 20 | 55 | 281 |
| 12:30 PM | 18 | 49 | 6 | 73 | 4 | 45 | 36 | 85 | 26 | 36 | 3 | 65 | 1 | 36 | 16 | 53 | 276 |
| 12:45 PM | 13 | 50 | 2 | 65 | 3 | 50 | 38 | 91 | 37 | 61 | 6 | 104 | 3 | 37 | 22 | 62 | 322 |
| Total | 81 | 201 | 8 | 290 | 18 | 148 | 122 | 288 | 112 | 211 | 19 | 342 | 9 | 127 | 85 | 221 | 1141 |
| | | | | | | | | | | | | | | | | | |
| 01:00 PM | 16 | 52 | 4 | 72 | 6 | 33 | 37 | 76 | 15 | 42 | 4 | 61 | 7 | 44 | 41 | 92 | 301 |
| 01:15 PM | 18 | 45 | 7 | 70 | 6 | 42 | 26 | 74 | 21 | 52 | 2 | 75 | 3 | 28 | 16 | 47 | 266 |
| Grand Total | 163 | 416 | 26 | 605 | 46 | 303 | 232 | 581 | 198 | 388 | 43 | 629 | 28 | 251 | 193 | 472 | 2287 |
| Apprch % | 26.9 | 68.8 | 4.3 | | 7.9 | 52.2 | 39.9 | | 31.5 | 61.7 | 6.8 | | 5.9 | 53.2 | 40.9 | | |
| Total % | 7.1 | 18.2 | 1.1 | 26.5 | 2 | 13.2 | 10.1 | 25.4 | 8.7 | 17 | 1.9 | 27.5 | 1.2 | 11 | 8.4 | 20.6 | |

| | Sunrise Way Southbound | | | | Racquet Club Drive Westbound | | | | Sunrise Way Northbound | | | | Racquet Club Drive Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 12:15 PM | | | | | | | | | | | | | | | | | |
| 12:15 PM | **22** | **59** | 0 | **81** | 5 | 24 | 29 | 58 | 23 | **62** | 2 | 87 | 3 | 32 | 20 | 55 | 281 |
| 12:30 PM | 18 | 49 | **6** | 73 | 4 | 45 | 36 | 85 | 26 | 36 | 3 | 65 | 1 | 36 | 16 | 53 | 276 |
| 12:45 PM | 13 | 50 | 2 | 65 | 3 | **50** | **38** | **91** | **37** | 61 | **6** | **104** | 3 | 37 | 22 | 62 | **322** |
| 01:00 PM | 16 | 52 | 4 | 72 | **6** | 33 | 37 | 76 | 15 | 42 | 4 | 61 | **7** | **44** | **41** | **92** | 301 |
| Total Volume | 69 | 210 | 12 | 291 | 18 | 152 | 140 | 310 | 101 | 201 | 15 | 317 | 14 | 149 | 99 | 262 | 1180 |
| % App. Total | 23.7 | 72.2 | 4.1 | | 5.8 | 49 | 45.2 | | 31.9 | 63.4 | 4.7 | | 5.3 | 56.9 | 37.8 | | |
| PHF | .784 | .890 | .500 | .898 | .750 | .760 | .921 | .852 | .682 | .810 | .625 | .762 | .500 | .847 | .604 | .712 | .916 |

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Palm Springs
N/S: Sunrise Way
E/W: Racquet Club Drive
Weather: Sunny

File Name : PLSSURCAM
Site Code : 00000066
Start Date : 5/2/2013
Page No : 2




Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

| | 11:30 AM | | | | 12:30 PM | | | | 12:00 PM | | | | 12:15 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 27 | 55 | 3 | 85 | 4 | 45 | 36 | 85 | 26 | 52 | **8** | 86 | 3 | 32 | 20 | 55 |
| +15 mins. | 21 | **63** | **4** | **88** | 3 | **50** | **38** | **91** | 23 | **62** | 2 | 87 | 1 | 36 | 16 | 53 |
| +30 mins. | **28** | 43 | 0 | 71 | **6** | 33 | 37 | 76 | 26 | 36 | 3 | 65 | 3 | 37 | 22 | 62 |
| +45 mins. | 22 | 59 | 0 | 81 | 6 | 42 | 26 | 74 | **37** | 61 | 6 | **104** | **7** | **44** | **41** | **92** |
| Total Volume | 98 | 220 | 7 | 325 | 19 | 170 | 137 | 326 | 112 | 211 | 19 | 342 | 14 | 149 | 99 | 262 |
| % App. Total | 30.2 | 67.7 | 2.2 | | 5.8 | 52.1 | 42 | | 32.7 | 61.7 | 5.6 | | 5.3 | 56.9 | 37.8 | |
| PHF | .875 | .873 | .438 | .923 | .792 | .850 | .901 | .896 | .757 | .851 | .594 | .822 | .500 | .847 | .604 | .712 |

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Palm Springs
N/S: Sunrise Way
E/W: Racquet Club Drive
Weather: Sunny

File Name : PLSSURCPM
Site Code : 00000066
Start Date : 5/2/2013
Page No : 1

Groups Printed- Total Volume

| | Sunrise Way Southbound | | | | Racquet Club Drive Westbound | | | | Sunrise Way Northbound | | | | Racquet Club Drive Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| 04:00 PM | 26 | 56 | 1 | 83 | 6 | 38 | 30 | 74 | 27 | 79 | 6 | 112 | 8 | 21 | 22 | 51 | 320 |
| 04:15 PM | 27 | 41 | 2 | 70 | 3 | 50 | 46 | 99 | 29 | 75 | 4 | 108 | 7 | 35 | 13 | 55 | 332 |
| 04:30 PM | 31 | 64 | 2 | 97 | 8 | 51 | 31 | 90 | 32 | 74 | 6 | 112 | 2 | 41 | 18 | 61 | 360 |
| 04:45 PM | 20 | 47 | 2 | 69 | 6 | 48 | 43 | 97 | 22 | 82 | 7 | 111 | 2 | 23 | 20 | 45 | 322 |
| Total | 104 | 208 | 7 | 319 | 23 | 187 | 150 | 360 | 110 | 310 | 23 | 443 | 19 | 120 | 73 | 212 | 1334 |
| | | | | | | | | | | | | | | | | | |
| 05:00 PM | 23 | 33 | 1 | 57 | 8 | 64 | 54 | 126 | 43 | 59 | 4 | 106 | 3 | 27 | 13 | 43 | 332 |
| 05:15 PM | 27 | 38 | 0 | 65 | 3 | 56 | 40 | 99 | 31 | 62 | 7 | 100 | 3 | 27 | 19 | 49 | 313 |
| 05:30 PM | 33 | 53 | 0 | 86 | 11 | 61 | 45 | 117 | 31 | 70 | 11 | 112 | 1 | 26 | 13 | 40 | 355 |
| 05:45 PM | 24 | 55 | 5 | 84 | 9 | 35 | 34 | 78 | 23 | 66 | 6 | 95 | 4 | 44 | 30 | 78 | 335 |
| Total | 107 | 179 | 6 | 292 | 31 | 216 | 173 | 420 | 128 | 257 | 28 | 413 | 11 | 124 | 75 | 210 | 1335 |
| | | | | | | | | | | | | | | | | | |
| Grand Total | 211 | 387 | 13 | 611 | 54 | 403 | 323 | 780 | 238 | 567 | 51 | 856 | 30 | 244 | 148 | 422 | 2669 |
| Apprch % | 34.5 | 63.3 | 2.1 | | 6.9 | 51.7 | 41.4 | | 27.8 | 66.2 | 6 | | 7.1 | 57.8 | 35.1 | | |
| Total % | 7.9 | 14.5 | 0.5 | 22.9 | 2 | 15.1 | 12.1 | 29.2 | 8.9 | 21.2 | 1.9 | 32.1 | 1.1 | 9.1 | 5.5 | 15.8 | |

| | Sunrise Way Southbound | | | | Racquet Club Drive Westbound | | | | Sunrise Way Northbound | | | | Racquet Club Drive Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:15 PM | | | | | | | | | | | | | | | | | |
| 04:15 PM | 27 | 41 | **2** | 70 | 3 | 50 | 46 | 99 | 29 | 75 | 4 | 108 | **7** | 35 | 13 | 55 | 332 |
| 04:30 PM | **31** | **64** | 2 | **97** | **8** | 51 | 31 | 90 | 32 | 74 | 6 | **112** | 2 | **41** | 18 | **61** | **360** |
| 04:45 PM | 20 | 47 | 2 | 69 | 6 | 48 | 43 | 97 | 22 | **82** | **7** | 111 | 2 | 23 | **20** | 45 | 322 |
| 05:00 PM | 23 | 33 | 1 | 57 | 8 | **64** | **54** | **126** | **43** | 59 | 4 | 106 | 3 | 27 | 13 | 43 | 332 |
| Total Volume | 101 | 185 | 7 | 293 | 25 | 213 | 174 | 412 | 126 | 290 | 21 | 437 | 14 | 126 | 64 | 204 | 1346 |
| % App. Total | 34.5 | 63.1 | 2.4 | | 6.1 | 51.7 | 42.2 | | 28.8 | 66.4 | 4.8 | | 6.9 | 61.8 | 31.4 | | |
| PHF | .815 | .723 | .875 | .755 | .781 | .832 | .806 | .817 | .733 | .884 | .750 | .975 | .500 | .768 | .800 | .836 | .935 |

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
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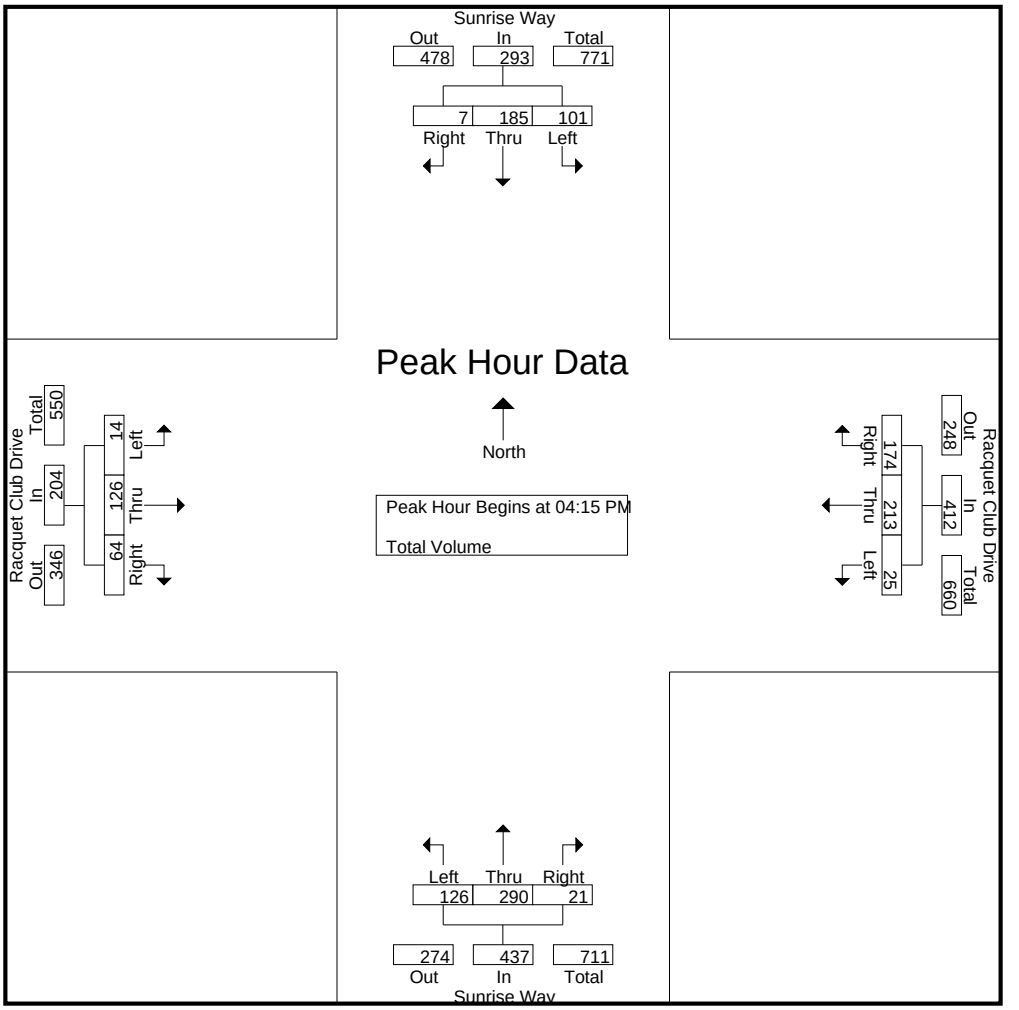
City of Palm Springs
N/S: Sunrise Way
E/W: Racquet Club Drive
Weather: Sunny

File Name : PLSSURCPM
Site Code : 00000066
Start Date : 5/2/2013
Page No : 2




Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

| | 04:00 PM | | | | 04:45 PM | | | | 04:00 PM | | | | 04:00 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 26 | 56 | 1 | 83 | 6 | 48 | 43 | 97 | 27 | 79 | 6 | **112** | **8** | 21 | **22** | 51 |
| +15 mins. | 27 | 41 | **2** | 70 | 8 | **64** | **54** | **126** | 29 | 75 | 4 | 108 | 7 | 35 | 13 | 55 |
| +30 mins. | **31** | **64** | 2 | **97** | 3 | 56 | 40 | 99 | **32** | 74 | 6 | 112 | 2 | **41** | 18 | **61** |
| +45 mins. | 20 | 47 | 2 | 69 | **11** | 61 | 45 | 117 | 22 | **82** | **7** | 111 | 2 | 23 | 20 | 45 |
| Total Volume | 104 | 208 | 7 | 319 | 28 | 229 | 182 | 439 | 110 | 310 | 23 | 443 | 19 | 120 | 73 | 212 |
| % App. Total | 32.6 | 65.2 | 2.2 | | 6.4 | 52.2 | 41.5 | | 24.8 | 70 | 5.2 | | 9 | 56.6 | 34.4 | |
| PHF | .839 | .813 | .875 | .822 | .636 | .895 | .843 | .871 | .859 | .945 | .821 | .989 | .594 | .732 | .830 | .869 |

Counts Unlimited, Inc.
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Corona, CA 92878
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City of Palm Springs
N/S: Sunrise Avenue
E/W: Via Escuela
Weather: Sunny

File Name : PLSSUVEAM
Site Code : 00000001
Start Date : 5/2/2013
Page No : 1

Groups Printed- Total Volume

| | Sunrise Avenue Southbound | | | | Via Escuela Westbound | | | | Sunrise Avenue Northbound | | | | Via Escuela Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| 11:30 AM | 1 | 81 | 2 | 84 | 8 | 6 | 0 | 14 | 12 | 67 | 8 | 87 | 1 | 7 | 6 | 14 | 199 |
| 11:45 AM | 1 | 90 | 2 | 93 | 5 | 6 | 2 | 13 | 10 | 67 | 8 | 85 | 7 | 8 | 12 | 27 | 218 |
| Total | 2 | 171 | 4 | 177 | 13 | 12 | 2 | 27 | 22 | 134 | 16 | 172 | 8 | 15 | 18 | 41 | 417 |
| 12:00 PM | 2 | 75 | 5 | 82 | 3 | 7 | 2 | 12 | 10 | 75 | 8 | 93 | 5 | 5 | 4 | 14 | 201 |
| 12:15 PM | 1 | 77 | 2 | 80 | 10 | 5 | 1 | 16 | 9 | 80 | 6 | 95 | 2 | 2 | 7 | 11 | 202 |
| 12:30 PM | 3 | 69 | 2 | 74 | 4 | 5 | 0 | 9 | 9 | 61 | 8 | 78 | 4 | 11 | 11 | 26 | 187 |
| 12:45 PM | 0 | 68 | 1 | 69 | 3 | 5 | 4 | 12 | 6 | 94 | 4 | 104 | 4 | 4 | 6 | 14 | 199 |
| Total | 6 | 289 | 10 | 305 | 20 | 22 | 7 | 49 | 34 | 310 | 26 | 370 | 15 | 22 | 28 | 65 | 789 |
| 01:00 PM | 4 | 86 | 1 | 91 | 8 | 7 | 3 | 18 | 10 | 49 | 5 | 64 | 6 | 8 | 10 | 24 | 197 |
| 01:15 PM | 1 | 70 | 2 | 73 | 8 | 3 | 3 | 14 | 12 | 74 | 5 | 91 | 3 | 3 | 11 | 17 | 195 |
| Grand Total | 13 | 616 | 17 | 646 | 49 | 44 | 15 | 108 | 78 | 567 | 52 | 697 | 32 | 48 | 67 | 147 | 1598 |
| Apprch % | 2 | 95.4 | 2.6 | | 45.4 | 40.7 | 13.9 | | 11.2 | 81.3 | 7.5 | | 21.8 | 32.7 | 45.6 | | |
| Total % | 0.8 | 38.5 | 1.1 | 40.4 | 3.1 | 2.8 | 0.9 | 6.8 | 4.9 | 35.5 | 3.3 | 43.6 | 2 | 3 | 4.2 | 9.2 | |

| | Sunrise Avenue Southbound | | | | Via Escuela Westbound | | | | Sunrise Avenue Northbound | | | | Via Escuela Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 11:30 AM | | | | | | | | | | | | | | | | | |
| 11:30 AM | 1 | 81 | 2 | 84 | 8 | 6 | 0 | 14 | **12** | 67 | **8** | 87 | 1 | 7 | 6 | 14 | 199 |
| 11:45 AM | 1 | **90** | 2 | **93** | 5 | 6 | **2** | 13 | 10 | 67 | 8 | 85 | **7** | **8** | **12** | **27** | **218** |
| 12:00 PM | **2** | 75 | **5** | 82 | 3 | **7** | 2 | 12 | 10 | 75 | 8 | 93 | 5 | 5 | 4 | 14 | 201 |
| 12:15 PM | 1 | 77 | 2 | 80 | **10** | 5 | 1 | **16** | 9 | **80** | 6 | **95** | 2 | 2 | 7 | 11 | 202 |
| Total Volume | 5 | 323 | 11 | 339 | 26 | 24 | 5 | 55 | 41 | 289 | 30 | 360 | 15 | 22 | 29 | 66 | 820 |
| % App. Total | 1.5 | 95.3 | 3.2 | | 47.3 | 43.6 | 9.1 | | 11.4 | 80.3 | 8.3 | | 22.7 | 33.3 | 43.9 | | |
| PHF | .625 | .897 | .550 | .911 | .650 | .857 | .625 | .859 | .854 | .903 | .938 | .947 | .536 | .688 | .604 | .611 | .940 |

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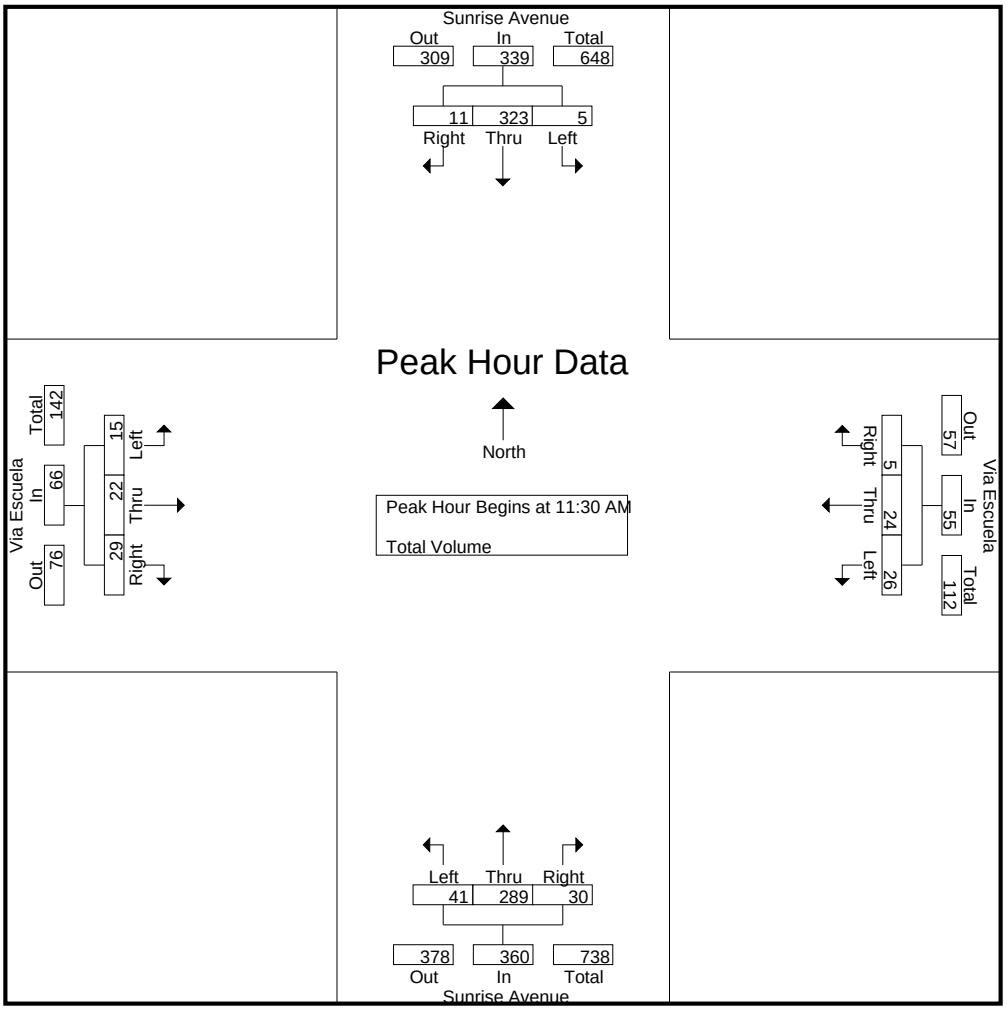
City of Palm Springs
N/S: Sunrise Avenue
E/W: Via Escuela
Weather: Sunny

File Name : PLSSUVEAM
Site Code : 00000001
Start Date : 5/2/2013
Page No : 2




Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 11:30 AM | | | | 11:30 AM | | | | 12:00 PM | | | | 12:30 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 1 | 81 | 2 | 84 | 8 | 6 | 0 | 14 | **10** | 75 | **8** | 93 | 4 | **11** | **11** | **26** |
| +15 mins. | 1 | **90** | 2 | **93** | 5 | 6 | **2** | 13 | 9 | 80 | 6 | 95 | 4 | 4 | 6 | 14 |
| +30 mins. | **2** | 75 | **5** | 82 | 3 | **7** | 2 | 12 | 9 | 61 | 8 | 78 | **6** | 8 | 10 | 24 |
| +45 mins. | 1 | 77 | 2 | 80 | **10** | 5 | 1 | **16** | 6 | **94** | 4 | **104** | 3 | 3 | 11 | 17 |
| Total Volume | 5 | 323 | 11 | 339 | 26 | 24 | 5 | 55 | 34 | 310 | 26 | 370 | 17 | 26 | 38 | 81 |
| % App. Total | 1.5 | 95.3 | 3.2 | | 47.3 | 43.6 | 9.1 | | 9.2 | 83.8 | 7 | | 21 | 32.1 | 46.9 | |
| PHF | .625 | .897 | .550 | .911 | .650 | .857 | .625 | .859 | .850 | .824 | .813 | .889 | .708 | .591 | .864 | .779 |

Counts Unlimited Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Palm Springs
N/S: Sunrise Avenue
E/W: Via Escuela
Weather: Sunny

File Name : PLSSUVEPM
Site Code : 00000001
Start Date : 5/2/2013


Groups Printed- Total Volume

| | Sunrise Avenue Southbound | | | | Via Escuela Westbound | | | | Sunrise Avenue Northbound | | | | Via Escuela Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| 04:00 PM | 0 | 79 | 3 | 82 | 9 | 8 | 4 | 21 | 17 | 106 | 7 | 130 | 2 | 5 | 6 | 13 | 246 |
| 04:15 PM | 2 | 56 | 1 | 59 | 6 | 7 | 1 | 14 | 14 | 111 | 10 | 135 | 2 | 9 | 10 | 21 | 229 |
| 04:30 PM | 1 | 81 | 3 | 85 | 7 | 15 | 0 | 22 | 4 | 110 | 14 | 128 | 3 | 5 | 10 | 18 | 253 |
| 04:45 PM | 0 | 76 | 2 | 78 | 7 | 11 | 2 | 20 | 12 | 90 | 11 | 113 | 3 | 6 | 14 | 23 | 234 |
| Total | 3 | 292 | 9 | 304 | 29 | 41 | 7 | 77 | 47 | 417 | 42 | 506 | 10 | 25 | 40 | 75 | 962 |
| | | | | | | | | | | | | | | | | | |
| 05:00 PM | 1 | 61 | 1 | 63 | 6 | 5 | 4 | 15 | 13 | 108 | 14 | 135 | 3 | 9 | 5 | 17 | 230 |
| 05:15 PM | 2 | 56 | 2 | 60 | 8 | 7 | 2 | 17 | 4 | 96 | 18 | 118 | 4 | 7 | 11 | 22 | 217 |
| 05:30 PM | 1 | 78 | 4 | 83 | 11 | 10 | 2 | 23 | 12 | 102 | 8 | 122 | 4 | 5 | 8 | 17 | 245 |
| 05:45 PM | 2 | 88 | 2 | 92 | 9 | 9 | 5 | 23 | 10 | 80 | 15 | 105 | 3 | 5 | 4 | 12 | 232 |
| Total | 6 | 283 | 9 | 298 | 34 | 31 | 13 | 78 | 39 | 386 | 55 | 480 | 14 | 26 | 28 | 68 | 924 |
| | | | | | | | | | | | | | | | | | |
| Grand Total | 9 | 575 | 18 | 602 | 63 | 72 | 20 | 155 | 86 | 803 | 97 | 986 | 24 | 51 | 68 | 143 | 1886 |
| Apprch % | 1.5 | 95.5 | 3 | | 40.6 | 46.5 | 12.9 | | 8.7 | 81.4 | 9.8 | | 16.8 | 35.7 | 47.6 | | |
| Total % | 0.5 | 30.5 | 1 | 31.9 | 3.3 | 3.8 | 1.1 | 8.2 | 4.6 | 42.6 | 5.1 | 52.3 | 1.3 | 2.7 | 3.6 | 7.6 | |

| | Sunrise Avenue Southbound | | | | Via Escuela Westbound | | | | Sunrise Avenue Northbound | | | | Via Escuela Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:00 PM | | | | | | | | | | | | | | | | | |
| 04:00 PM | 0 | 79 | **3** | 82 | **9** | 8 | **4** | 21 | **17** | 106 | 7 | 130 | 2 | 5 | 6 | 13 | 246 |
| 04:15 PM | **2** | 56 | 1 | 59 | 6 | 7 | 1 | 14 | 14 | **111** | 10 | **135** | 2 | **9** | 10 | 21 | 229 |
| 04:30 PM | 1 | **81** | 3 | **85** | 7 | **15** | 0 | **22** | 4 | 110 | **14** | 128 | **3** | 5 | 10 | 18 | **253** |
| 04:45 PM | 0 | 76 | 2 | 78 | 7 | 11 | 2 | 20 | 12 | 90 | 11 | 113 | 3 | 6 | **14** | **23** | 234 |
| Total Volume | 3 | 292 | 9 | 304 | 29 | 41 | 7 | 77 | 47 | 417 | 42 | 506 | 10 | 25 | 40 | 75 | 962 |
| % App. Total | 1 | 96.1 | 3 | | 37.7 | 53.2 | 9.1 | | 9.3 | 82.4 | 8.3 | | 13.3 | 33.3 | 53.3 | | |
| PHF | .375 | .901 | .750 | .894 | .806 | .683 | .438 | .875 | .691 | .939 | .750 | .937 | .833 | .694 | .714 | .815 | .951 |

Counts Unlimited Inc.
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City of Palm Springs
N/S: Sunrise Avenue
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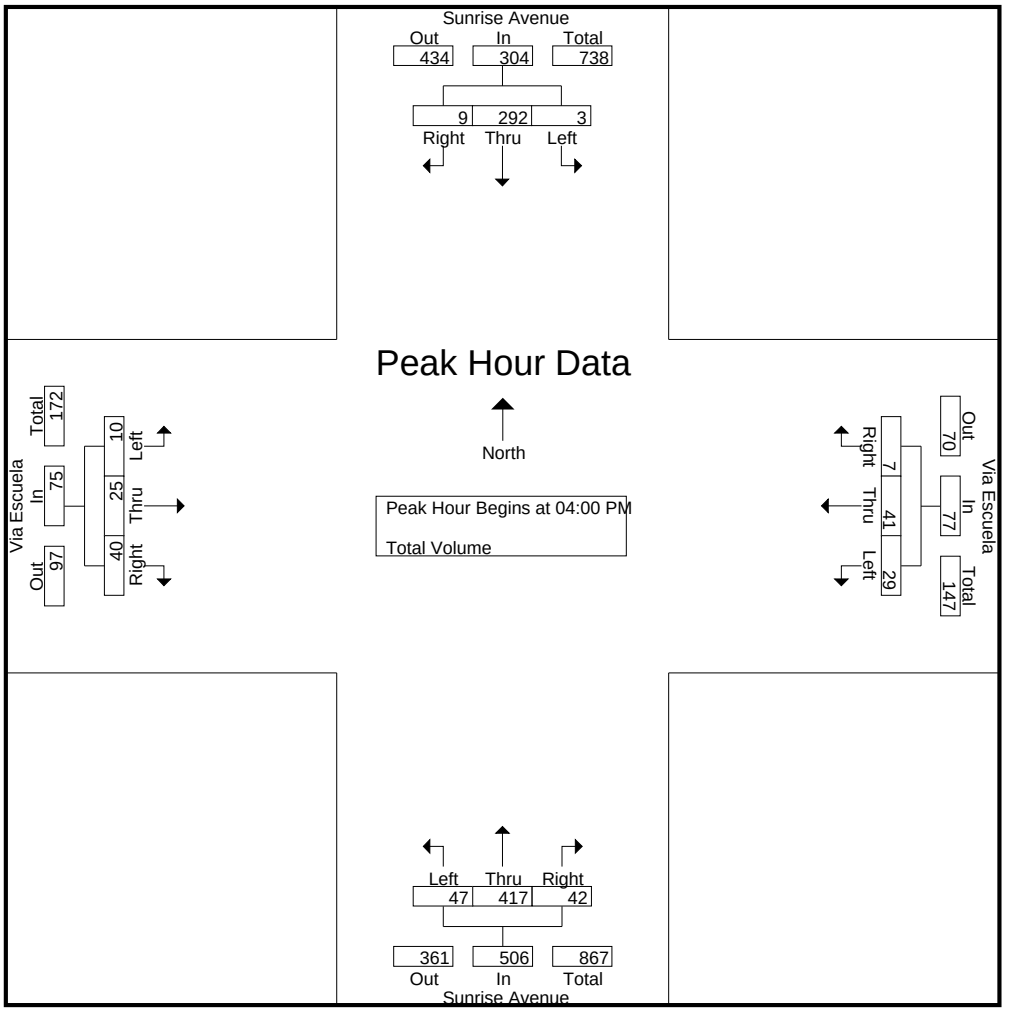
Weather: Sunny

File Name : PLSSUVEPM
Site Code : 00000001
Start Date : 5/2/2013
Page No : 2




Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 04:00 PM | | | | 05:00 PM | | | | 04:15 PM | | | | 04:30 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 0 | 79 | **3** | 82 | 6 | 5 | 4 | 15 | **14** | **111** | 10 | **135** | 3 | 5 | 10 | 18 |
| +15 mins. | **2** | 56 | 1 | 59 | 8 | 7 | 2 | 17 | 4 | 110 | **14** | 128 | 3 | 6 | **14** | **23** |
| +30 mins. | 1 | **81** | 3 | **85** | **11** | **10** | 2 | **23** | 12 | 90 | 11 | 113 | 3 | **9** | 5 | 17 |
| +45 mins. | 0 | 76 | 2 | 78 | 9 | 9 | **5** | 23 | 13 | 108 | 14 | 135 | **4** | 7 | 11 | 22 |
| Total Volume | 3 | 292 | 9 | 304 | 34 | 31 | 13 | 78 | 43 | 419 | 49 | 511 | 13 | 27 | 40 | 80 |
| % App. Total | 1 | 96.1 | 3 | | 43.6 | 39.7 | 16.7 | | 8.4 | 82 | 9.6 | | 16.2 | 33.8 | 50 | |
| PHF | .375 | .901 | .750 | .894 | .773 | .775 | .650 | .848 | .768 | .944 | .875 | .946 | .813 | .750 | .714 | .870 |

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(951) 268-6268

City of Palm Springs
N/S: Sunrise Way
E/W: Vista Chino
Weather: Sunny

File Name : PLSSUVCAM
Site Code : 00000001
Start Date : 5/2/2013
Page No : 1

Groups Printed- Pass Vehicle

| | Sunrise Way Southbound | | | | Vista Chino Westbound | | | | Sunrise Way Northbound | | | | Vista Chino Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| 11:30 AM | 34 | 74 | 6 | 114 | 34 | 101 | 16 | 151 | 42 | 72 | 22 | 136 | 8 | 107 | 29 | 144 | 545 |
| 11:45 AM | 40 | 74 | 8 | 122 | 36 | 86 | 10 | 132 | 45 | 68 | 31 | 144 | 6 | 105 | 37 | 148 | 546 |
| Total | 74 | 148 | 14 | 236 | 70 | 187 | 26 | 283 | 87 | 140 | 53 | 280 | 14 | 212 | 66 | 292 | 1091 |
| | | | | | | | | | | | | | | | | | |
| 12:00 PM | 52 | 57 | 4 | 113 | 31 | 70 | 13 | 114 | 57 | 91 | 43 | 191 | 14 | 92 | 26 | 132 | 550 |
| 12:15 PM | 37 | 64 | 6 | 107 | 37 | 106 | 12 | 155 | 69 | 87 | 32 | 188 | 6 | 121 | 32 | 159 | 609 |
| 12:30 PM | 57 | 47 | 8 | 112 | 38 | 93 | 10 | 141 | 58 | 65 | 31 | 154 | 7 | 111 | 25 | 143 | 550 |
| 12:45 PM | 33 | 42 | 8 | 83 | 54 | 94 | 19 | 167 | 64 | 68 | 37 | 169 | 6 | 109 | 32 | 147 | 566 |
| Total | 179 | 210 | 26 | 415 | 160 | 363 | 54 | 577 | 248 | 311 | 143 | 702 | 33 | 433 | 115 | 581 | 2275 |
| | | | | | | | | | | | | | | | | | |
| 01:00 PM | 49 | 60 | 6 | 115 | 26 | 88 | 5 | 119 | 60 | 64 | 38 | 162 | 6 | 120 | 19 | 145 | 541 |
| 01:15 PM | 37 | 58 | 8 | 103 | 41 | 103 | 10 | 154 | 46 | 59 | 22 | 127 | 10 | 136 | 31 | 177 | 561 |
| Grand Total | 339 | 476 | 54 | 869 | 297 | 741 | 95 | 1133 | 441 | 574 | 256 | 1271 | 63 | 901 | 231 | 1195 | 4468 |
| Apprch % | 39 | 54.8 | 6.2 | | 26.2 | 65.4 | 8.4 | | 34.7 | 45.2 | 20.1 | | 5.3 | 75.4 | 19.3 | | |
| Total % | 7.6 | 10.7 | 1.2 | 19.4 | 6.6 | 16.6 | 2.1 | 25.4 | 9.9 | 12.8 | 5.7 | 28.4 | 1.4 | 20.2 | 5.2 | 26.7 | |

| | Sunrise Way Southbound | | | | Vista Chino Westbound | | | | Sunrise Way Northbound | | | | Vista Chino Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 12:00 PM | | | | | | | | | | | | | | | | | |
| 12:00 PM | 52 | 57 | 4 | **113** | 31 | 70 | 13 | 114 | 57 | **91** | **43** | **191** | **14** | 92 | 26 | 132 | 550 |
| 12:15 PM | 37 | **64** | 6 | 107 | 37 | **106** | 12 | 155 | **69** | 87 | 32 | 188 | 6 | **121** | **32** | **159** | **609** |
| 12:30 PM | **57** | 47 | **8** | 112 | 38 | 93 | 10 | 141 | 58 | 65 | 31 | 154 | 7 | 111 | 25 | 143 | 550 |
| 12:45 PM | 33 | 42 | 8 | 83 | **54** | 94 | **19** | **167** | 64 | 68 | 37 | 169 | 6 | 109 | 32 | 147 | 566 |
| Total Volume | 179 | 210 | 26 | 415 | 160 | 363 | 54 | 577 | 248 | 311 | 143 | 702 | 33 | 433 | 115 | 581 | 2275 |
| % App. Total | 43.1 | 50.6 | 6.3 | | 27.7 | 62.9 | 9.4 | | 35.3 | 44.3 | 20.4 | | 5.7 | 74.5 | 19.8 | | |
| PHF | .785 | .820 | .813 | .918 | .741 | .856 | .711 | .864 | .899 | .854 | .831 | .919 | .589 | .895 | .898 | .914 | .934 |

Counts Unlimited, Inc.
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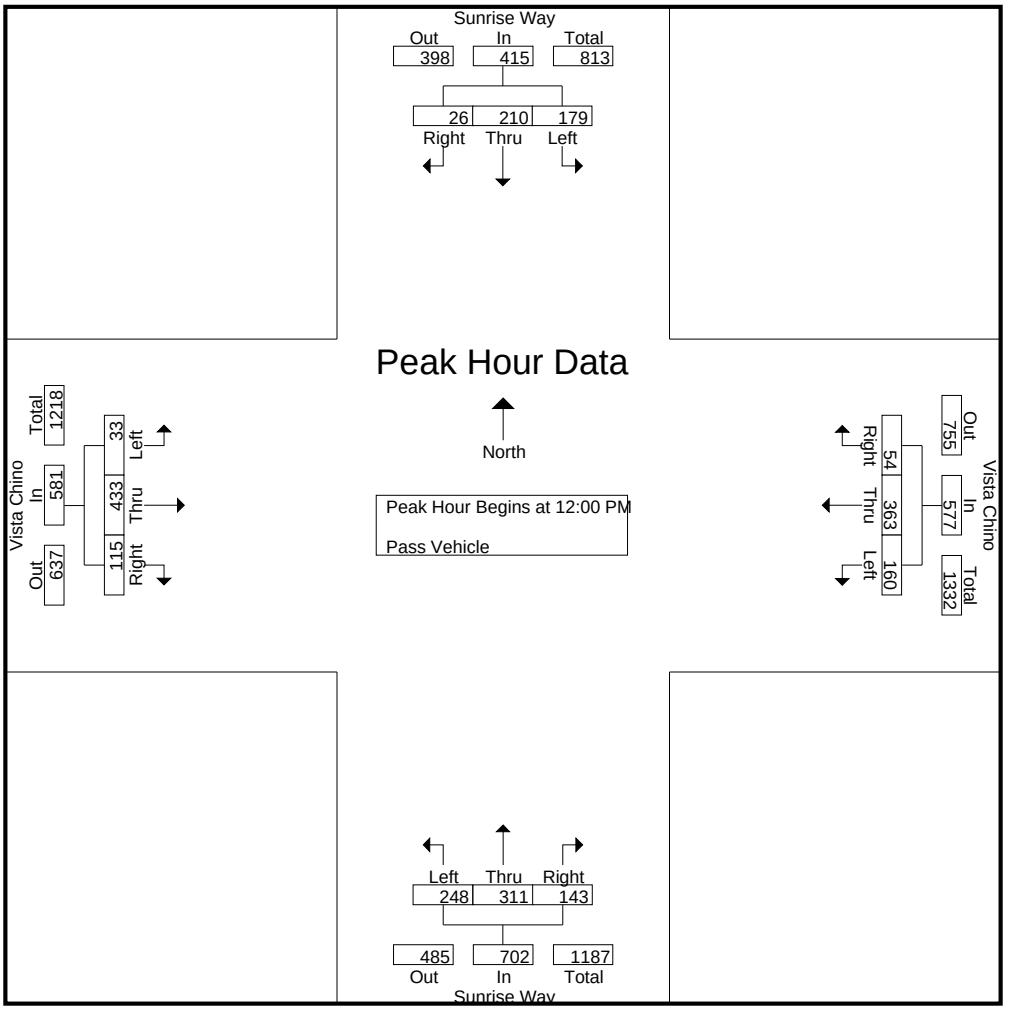
Corona, CA 92878
(951) 268-6268

City of Palm Springs
N/S: Sunrise Way
E/W: Vista Chino
Weather: Sunny

File Name : PLSSUVCAM
Site Code : 00000001
Start Date : 5/2/2013
Page No : 2




Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 11:30 AM | | | | 12:15 PM | | | | 12:00 PM | | | | 12:30 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 34 | **74** | 6 | 114 | 37 | **106** | 12 | 155 | 57 | **91** | **43** | **191** | 7 | 111 | 25 | 143 |
| +15 mins. | 40 | 74 | **8** | **122** | 38 | 93 | 10 | 141 | **69** | 87 | 32 | 188 | 6 | 109 | **32** | 147 |
| +30 mins. | **52** | 57 | 4 | 113 | **54** | 94 | **19** | **167** | 58 | 65 | 31 | 154 | 6 | 120 | 19 | 145 |
| +45 mins. | 37 | 64 | 6 | 107 | 26 | 88 | 5 | 119 | 64 | 68 | 37 | 169 | **10** | **136** | 31 | **177** |
| Total Volume | 163 | 269 | 24 | 456 | 155 | 381 | 46 | 582 | 248 | 311 | 143 | 702 | 29 | 476 | 107 | 612 |
| % App. Total | 35.7 | 59 | 5.3 | | 26.6 | 65.5 | 7.9 | | 35.3 | 44.3 | 20.4 | | 4.7 | 77.8 | 17.5 | |
| PHF | .784 | .909 | .750 | .934 | .718 | .899 | .605 | .871 | .899 | .854 | .831 | .919 | .725 | .875 | .836 | .864 |

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Palm Springs
N/S: Sunrise Way
E/W: Vista Chino
Weather: Sunny

File Name : PLSSUVCPM
Site Code : 00000001
Start Date : 5/2/2013
Page No : 1

Groups Printed- Pass Vehicle

| | Sunrise Way Southbound | | | | Vista Chino Westbound | | | | Sunrise Way Northbound | | | | Vista Chino Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| 04:00 PM | 39 | 54 | 15 | 108 | 51 | 91 | 18 | 160 | 47 | 121 | 42 | 210 | 7 | 153 | 29 | 189 | 667 |
| 04:15 PM | 48 | 44 | 6 | 98 | 36 | 89 | 17 | 142 | 48 | 116 | 34 | 198 | 11 | 114 | 33 | 158 | 596 |
| 04:30 PM | 39 | 74 | 3 | 116 | 49 | 86 | 22 | 157 | 64 | 102 | 53 | 219 | 15 | 179 | 30 | 224 | 716 |
| 04:45 PM | 39 | 79 | 6 | 124 | 48 | 89 | 11 | 148 | 56 | 93 | 29 | 178 | 19 | 125 | 21 | 165 | 615 |
| Total | 165 | 251 | 30 | 446 | 184 | 355 | 68 | 607 | 215 | 432 | 158 | 805 | 52 | 571 | 113 | 736 | 2594 |
| | | | | | | | | | | | | | | | | | |
| 05:00 PM | 31 | 50 | 4 | 85 | 41 | 82 | 20 | 143 | 77 | 106 | 68 | 251 | 23 | 146 | 30 | 199 | 678 |
| 05:15 PM | 33 | 43 | 10 | 86 | 45 | 92 | 21 | 158 | 40 | 85 | 41 | 166 | 14 | 131 | 37 | 182 | 592 |
| 05:30 PM | 47 | 59 | 5 | 111 | 54 | 111 | 12 | 177 | 65 | 97 | 44 | 206 | 8 | 112 | 21 | 141 | 635 |
| 05:45 PM | 26 | 67 | 8 | 101 | 44 | 99 | 18 | 161 | 45 | 101 | 34 | 180 | 8 | 104 | 24 | 136 | 578 |
| Total | 137 | 219 | 27 | 383 | 184 | 384 | 71 | 639 | 227 | 389 | 187 | 803 | 53 | 493 | 112 | 658 | 2483 |
| | | | | | | | | | | | | | | | | | |
| Grand Total | 302 | 470 | 57 | 829 | 368 | 739 | 139 | 1246 | 442 | 821 | 345 | 1608 | 105 | 1064 | 225 | 1394 | 5077 |
| Apprch % | 36.4 | 56.7 | 6.9 | | 29.5 | 59.3 | 11.2 | | 27.5 | 51.1 | 21.5 | | 7.5 | 76.3 | 16.1 | | |
| Total % | 5.9 | 9.3 | 1.1 | 16.3 | 7.2 | 14.6 | 2.7 | 24.5 | 8.7 | 16.2 | 6.8 | 31.7 | 2.1 | 21 | 4.4 | 27.5 | |

| | Sunrise Way Southbound | | | | Vista Chino Westbound | | | | Sunrise Way Northbound | | | | Vista Chino Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:15 PM | | | | | | | | | | | | | | | | | |
| 04:15 PM | **48** | 44 | **6** | 98 | 36 | **89** | 17 | 142 | 48 | **116** | 34 | 198 | 11 | 114 | **33** | 158 | 596 |
| 04:30 PM | 39 | 74 | 3 | 116 | **49** | 86 | **22** | **157** | 64 | 102 | 53 | 219 | 15 | **179** | 30 | **224** | **716** |
| 04:45 PM | 39 | **79** | 6 | **124** | 48 | 89 | 11 | 148 | 56 | 93 | 29 | 178 | 19 | 125 | 21 | 165 | 615 |
| 05:00 PM | 31 | 50 | 4 | 85 | 41 | 82 | 20 | 143 | **77** | 106 | **68** | **251** | **23** | 146 | 30 | 199 | 678 |
| Total Volume | 157 | 247 | 19 | 423 | 174 | 346 | 70 | 590 | 245 | 417 | 184 | 846 | 68 | 564 | 114 | 746 | 2605 |
| % App. Total | 37.1 | 58.4 | 4.5 | | 29.5 | 58.6 | 11.9 | | 29 | 49.3 | 21.7 | | 9.1 | 75.6 | 15.3 | | |
| PHF | .818 | .782 | .792 | .853 | .888 | .972 | .795 | .939 | .795 | .899 | .676 | .843 | .739 | .788 | .864 | .833 | .910 |

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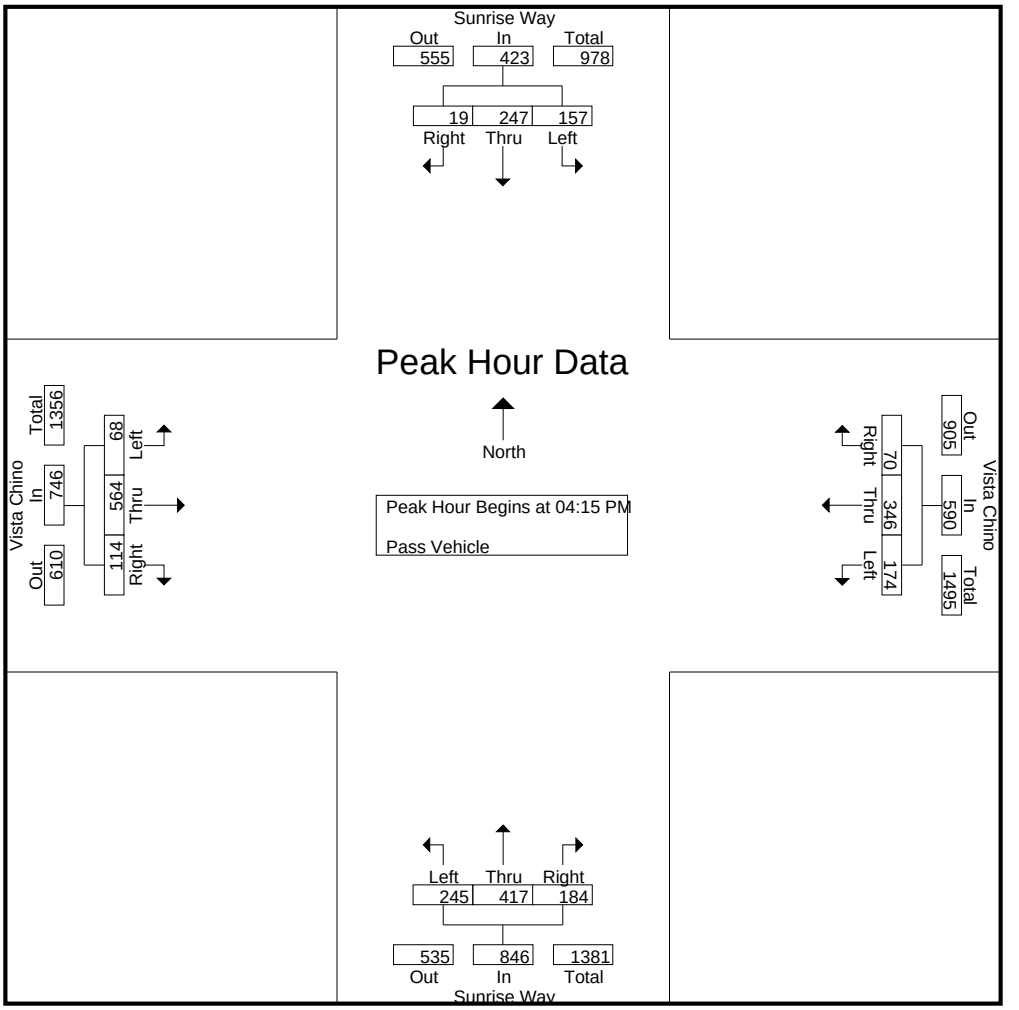
City of Palm Springs
N/S: Sunrise Way
E/W: Vista Chino
Weather: Sunny

File Name : PLSSUVCPM
Site Code : 00000001
Start Date : 5/2/2013
Page No : 2




Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 04:00 PM | | | | 05:00 PM | | | | 04:15 PM | | | | 04:30 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 39 | 54 | **15** | 108 | 41 | 82 | 20 | 143 | 48 | **116** | 34 | 198 | 15 | **179** | 30 | **224** |
| +15 mins. | **48** | 44 | 6 | 98 | 45 | 92 | **21** | 158 | 64 | 102 | 53 | 219 | 19 | 125 | 21 | 165 |
| +30 mins. | 39 | 74 | 3 | 116 | **54** | **111** | 12 | **177** | 56 | 93 | 29 | 178 | **23** | 146 | 30 | 199 |
| +45 mins. | 39 | **79** | 6 | **124** | 44 | 99 | 18 | 161 | **77** | 106 | **68** | **251** | 14 | 131 | **37** | 182 |
| Total Volume | 165 | 251 | 30 | 446 | 184 | 384 | 71 | 639 | 245 | 417 | 184 | 846 | 71 | 581 | 118 | 770 |
| % App. Total | 37 | 56.3 | 6.7 | | 28.8 | 60.1 | 11.1 | | 29 | 49.3 | 21.7 | | 9.2 | 75.5 | 15.3 | |
| PHF | .859 | .794 | .500 | .899 | .852 | .865 | .845 | .903 | .795 | .899 | .676 | .843 | .772 | .811 | .797 | .859 |

Counts Unlimited, Inc.
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Corona, CA 92878
(951) 268-6268

City of Palm Springs
N/S: Racquet Club Drive
E/W: Farrell Drive
Weather: Sunny

File Name : PLSFARCMD
Site Code : 00000001
Start Date : 5/2/2013
Page No : 1

Groups Printed- Pass Vehicle

| | Racquet Club Drive Southbound | | | Farrell Drive Westbound | | | Farrell Drive Northbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | App. Total | Left | Right | App. Total | Thru | Right | App. Total | Int. Total |
| 11:30 AM | 3 | 56 | 59 | 5 | 7 | 12 | 69 | 8 | 77 | 148 |
| 11:45 AM | 0 | 53 | 53 | 8 | 1 | 9 | 46 | 6 | 52 | 114 |
| Total | 3 | 109 | 112 | 13 | 8 | 21 | 115 | 14 | 129 | 262 |
| 12:00 PM | 2 | 46 | 48 | 6 | 3 | 9 | 56 | 10 | 66 | 123 |
| 12:15 PM | 4 | 51 | 55 | 9 | 5 | 14 | 55 | 8 | 63 | 132 |
| 12:30 PM | 2 | 50 | 52 | 9 | 7 | 16 | 67 | 11 | 78 | 146 |
| 12:45 PM | 0 | 53 | 53 | 8 | 4 | 12 | 75 | 2 | 77 | 142 |
| Total | 8 | 200 | 208 | 32 | 19 | 51 | 253 | 31 | 284 | 543 |
| 01:00 PM | 2 | 58 | 60 | 8 | 5 | 13 | 68 | 15 | 83 | 156 |
| 01:15 PM | 1 | 48 | 49 | 9 | 5 | 14 | 70 | 11 | 81 | 144 |
| Grand Total | 14 | 415 | 429 | 62 | 37 | 99 | 506 | 71 | 577 | 1105 |
| Apprch % | 3.3 | 96.7 | | 62.6 | 37.4 | | 87.7 | 12.3 | | |
| Total % | 1.3 | 37.6 | 38.8 | 5.6 | 3.3 | 9 | 45.8 | 6.4 | 52.2 | |

| | Racquet Club Drive Southbound | | | Farrell Drive Westbound | | | Farrell Drive Northbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | App. Total | Left | Right | App. Total | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1 | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 12:30 PM | | | | | | | | | | |
| 12:30 PM | **2** | 50 | 52 | **9** | **7** | **16** | 67 | 11 | 78 | 146 |
| 12:45 PM | 0 | 53 | 53 | 8 | 4 | 12 | **75** | 2 | 77 | 142 |
| 01:00 PM | 2 | **58** | **60** | 8 | 5 | 13 | 68 | **15** | **83** | **156** |
| 01:15 PM | 1 | 48 | 49 | 9 | 5 | 14 | 70 | 11 | 81 | 144 |
| Total Volume | 5 | 209 | 214 | 34 | 21 | 55 | 280 | 39 | 319 | 588 |
| % App. Total | 2.3 | 97.7 | | 61.8 | 38.2 | | 87.8 | 12.2 | | |
| PHF | .625 | .901 | .892 | .944 | .750 | .859 | .933 | .650 | .961 | .942 |

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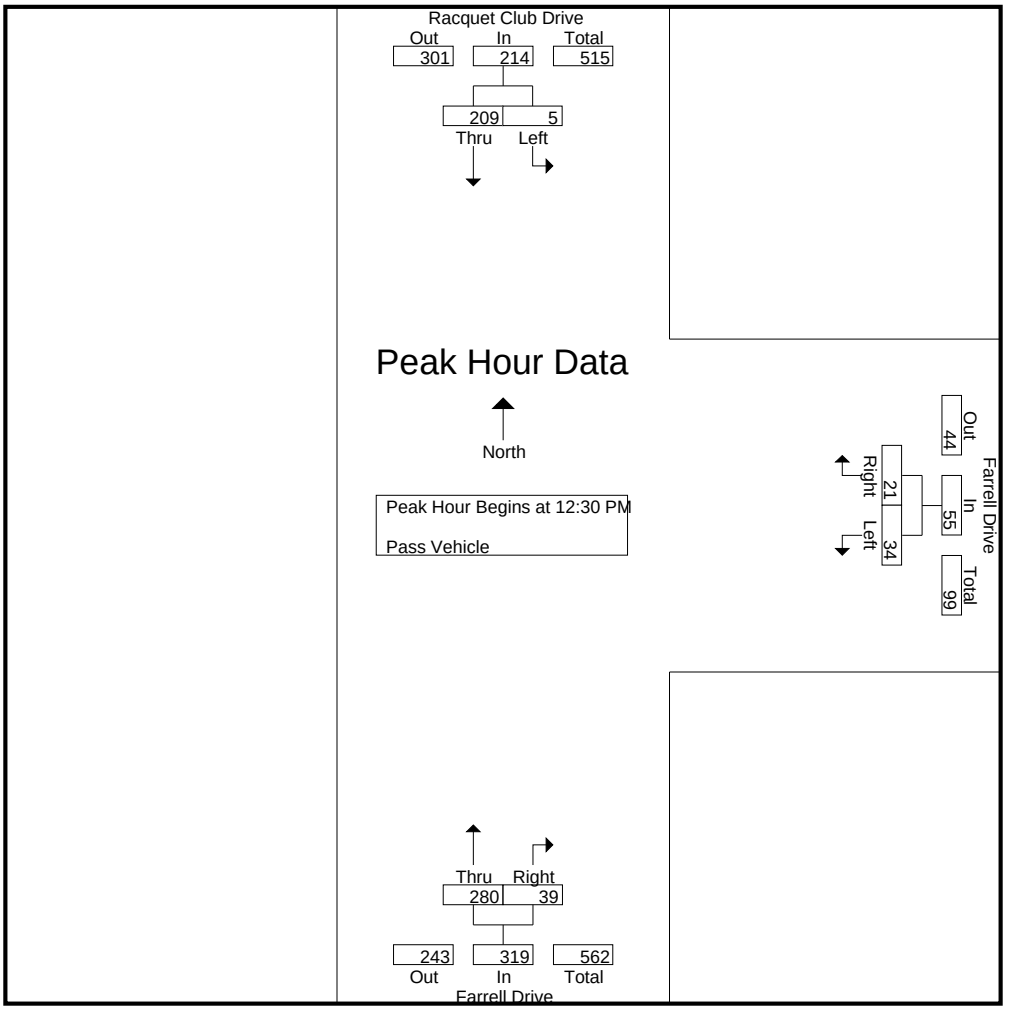
City of Palm Springs
N/S: Racquet Club Drive
E/W: Farrell Drive
Weather: Sunny

File Name : PLSFARCMD
Site Code : 00000001
Start Date : 5/2/2013
Page No : 2




Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 12:15 PM | | | 12:15 PM | | | 12:30 PM | | |
|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | **4** | 51 | 55 | **9** | 5 | 14 | 67 | 11 | 78 |
| +15 mins. | 2 | 50 | 52 | 9 | **7** | **16** | **75** | 2 | 77 |
| +30 mins. | 0 | 53 | 53 | 8 | 4 | 12 | 68 | **15** | **83** |
| +45 mins. | 2 | **58** | **60** | 8 | 5 | 13 | 70 | 11 | 81 |
| Total Volume | 8 | 212 | 220 | 34 | 21 | 55 | 280 | 39 | 319 |
| % App. Total | 3.6 | 96.4 | | 61.8 | 38.2 | | 87.8 | 12.2 | |
| PHF | .500 | .914 | .917 | .944 | .750 | .859 | .933 | .650 | .961 |

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Palm Springs
N/S: Racquet Club Drive
E/W: Farrell Drive
Weather: Sunny

File Name : PLSFARCPM
Site Code : 00000001
Start Date : 5/2/2013
Page No : 1

Groups Printed- Pass Vehicle

| | Racquet Club Drive Southbound | | | Farrell Drive Westbound | | | Farrell Drive Northbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | App. Total | Left | Right | App. Total | Thru | Right | App. Total | Int. Total |
| 04:00 PM | 1 | 50 | 51 | 5 | 3 | 8 | 80 | 4 | 84 | 143 |
| 04:15 PM | 2 | 56 | 58 | 4 | 1 | 5 | 96 | 9 | 105 | 168 |
| 04:30 PM | 4 | 71 | 75 | 5 | 4 | 9 | 85 | 6 | 91 | 175 |
| 04:45 PM | 3 | 44 | 47 | 12 | 2 | 14 | 98 | 12 | 110 | 171 |
| Total | 10 | 221 | 231 | 26 | 10 | 36 | 359 | 31 | 390 | 657 |
| 05:00 PM | 1 | 52 | 53 | 10 | 3 | 13 | 142 | 8 | 150 | 216 |
| 05:15 PM | 4 | 53 | 57 | 7 | 2 | 9 | 97 | 21 | 118 | 184 |
| 05:30 PM | 1 | 70 | 71 | 6 | 7 | 13 | 105 | 12 | 117 | 201 |
| 05:45 PM | 4 | 64 | 68 | 8 | 1 | 9 | 69 | 11 | 80 | 157 |
| Total | 10 | 239 | 249 | 31 | 13 | 44 | 413 | 52 | 465 | 758 |
| Grand Total | 20 | 460 | 480 | 57 | 23 | 80 | 772 | 83 | 855 | 1415 |
| Apprch % | 4.2 | 95.8 | | 71.2 | 28.8 | | 90.3 | 9.7 | | |
| Total % | 1.4 | 32.5 | 33.9 | 4 | 1.6 | 5.7 | 54.6 | 5.9 | 60.4 | |

| | Racquet Club Drive Southbound | | | Farrell Drive Westbound | | | Farrell Drive Northbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | App. Total | Left | Right | App. Total | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:45 PM | | | | | | | | | | |
| 04:45 PM | 3 | 44 | 47 | **12** | 2 | **14** | 98 | 12 | 110 | 171 |
| 05:00 PM | 1 | 52 | 53 | 10 | 3 | 13 | **142** | 8 | **150** | **216** |
| 05:15 PM | **4** | 53 | 57 | 7 | 2 | 9 | 97 | **21** | 118 | 184 |
| 05:30 PM | 1 | **70** | **71** | 6 | **7** | 13 | 105 | 12 | 117 | 201 |
| Total Volume | 9 | 219 | 228 | 35 | 14 | 49 | 442 | 53 | 495 | 772 |
| % App. Total | 3.9 | 96.1 | | 71.4 | 28.6 | | 89.3 | 10.7 | | |
| PHF | .563 | .782 | .803 | .729 | .500 | .875 | .778 | .631 | .825 | .894 |

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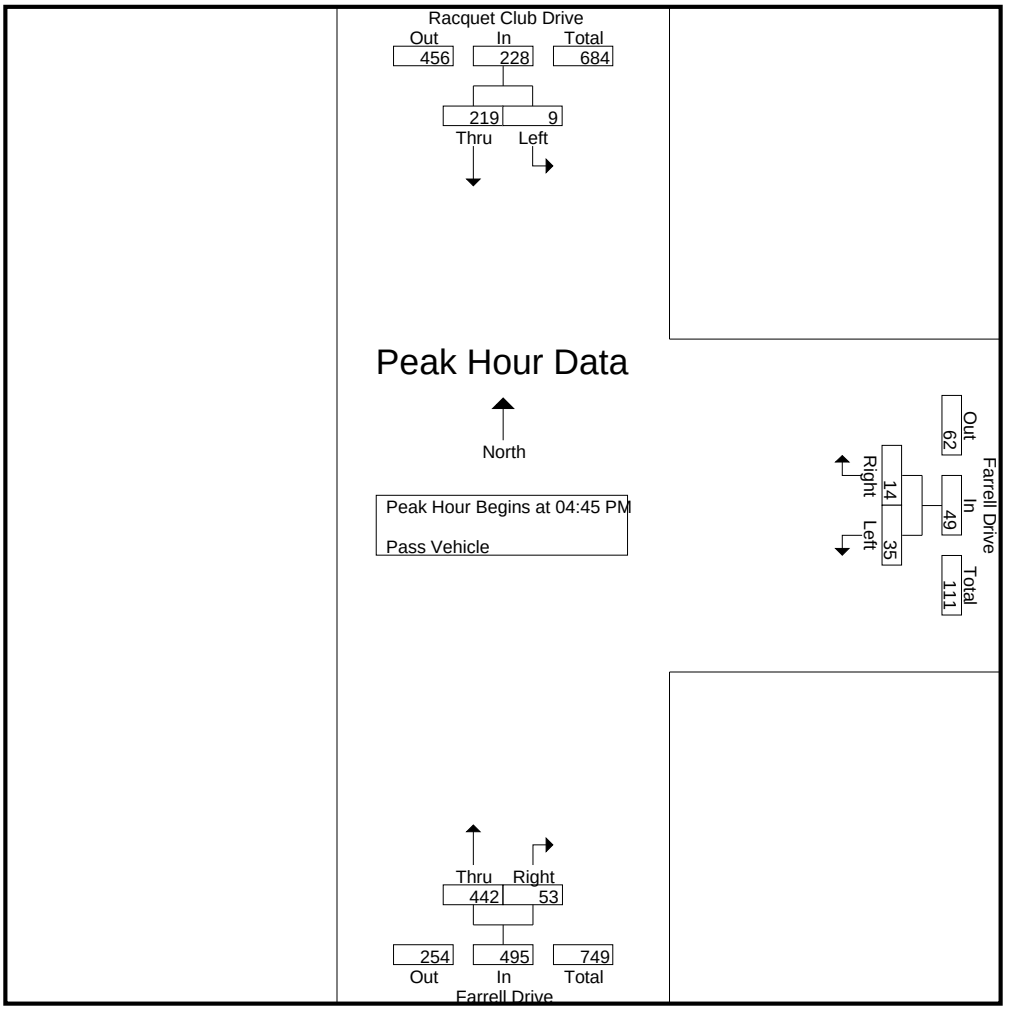
City of Palm Springs
N/S: Racquet Club Drive
E/W: Farrell Drive
Weather: Sunny

File Name : PLSFARCPM
Site Code : 00000001
Start Date : 5/2/2013
Page No : 2




Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 05:00 PM | | | 04:45 PM | | | 04:45 PM | | |
|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 1 | 52 | 53 | **12** | 2 | **14** | 98 | 12 | 110 |
| +15 mins. | **4** | 53 | 57 | 10 | 3 | 13 | **142** | 8 | **150** |
| +30 mins. | 1 | **70** | **71** | 7 | 2 | 9 | 97 | **21** | 118 |
| +45 mins. | 4 | 64 | 68 | 6 | **7** | 13 | 105 | 12 | 117 |
| Total Volume | 10 | 239 | 249 | 35 | 14 | 49 | 442 | 53 | 495 |
| % App. Total | 4 | 96 | | 71.4 | 28.6 | | 89.3 | 10.7 | |
| PHF | .625 | .854 | .877 | .729 | .500 | .875 | .778 | .631 | .825 |

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City of Palm Springs
N/S: Farrell Drive
E/W: Via Escuela
Weather: Sunny

File Name : PLSFAVEMD
Site Code : 00000001
Start Date : 5/2/2013
Page No : 1

Groups Printed- Pass Vehicle

| | Farrell Drive Southbound | | | | Via Escuela Westbound | | | | Farrell Drive Northbound | | | | Via Escuela Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| 11:30 AM | 11 | 48 | 0 | 59 | 4 | 12 | 21 | 37 | 5 | 68 | 6 | 79 | 1 | 10 | 9 | 20 | 195 |
| 11:45 AM | 5 | 55 | 0 | 60 | 6 | 14 | 2 | 22 | 0 | 51 | 6 | 57 | 1 | 15 | 1 | 17 | 156 |
| Total | 16 | 103 | 0 | 119 | 10 | 26 | 23 | 59 | 5 | 119 | 12 | 136 | 2 | 25 | 10 | 37 | 351 |
| 12:00 PM | 6 | 52 | 2 | 60 | 5 | 9 | 7 | 21 | 2 | 52 | 6 | 60 | 1 | 8 | 3 | 12 | 153 |
| 12:15 PM | 4 | 53 | 2 | 59 | 5 | 12 | 12 | 29 | 3 | 56 | 3 | 62 | 0 | 7 | 5 | 12 | 162 |
| 12:30 PM | 5 | 52 | 1 | 58 | 7 | 8 | 14 | 29 | 5 | 62 | 7 | 74 | 1 | 19 | 7 | 27 | 188 |
| 12:45 PM | 7 | 51 | 1 | 59 | 3 | 7 | 14 | 24 | 5 | 70 | 8 | 83 | 0 | 4 | 6 | 10 | 176 |
| Total | 22 | 208 | 6 | 236 | 20 | 36 | 47 | 103 | 15 | 240 | 24 | 279 | 2 | 38 | 21 | 61 | 679 |
| 01:00 PM | 9 | 66 | 0 | 75 | 8 | 14 | 13 | 35 | 1 | 65 | 5 | 71 | 1 | 6 | 7 | 14 | 195 |
| 01:15 PM | 9 | 49 | 0 | 58 | 5 | 10 | 16 | 31 | 1 | 73 | 6 | 80 | 0 | 12 | 5 | 17 | 186 |
| Grand Total | 56 | 426 | 6 | 488 | 43 | 86 | 99 | 228 | 22 | 497 | 47 | 566 | 5 | 81 | 43 | 129 | 1411 |
| Apprch % | 11.5 | 87.3 | 1.2 | | 18.9 | 37.7 | 43.4 | | 3.9 | 87.8 | 8.3 | | 3.9 | 62.8 | 33.3 | | |
| Total % | 4 | 30.2 | 0.4 | 34.6 | 3 | 6.1 | 7 | 16.2 | 1.6 | 35.2 | 3.3 | 40.1 | 0.4 | 5.7 | 3 | 9.1 | |

| | Farrell Drive Southbound | | | | Via Escuela Westbound | | | | Farrell Drive Northbound | | | | Via Escuela Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 12:30 PM | | | | | | | | | | | | | | | | | |
| 12:30 PM | 5 | 52 | **1** | 58 | 7 | 8 | 14 | 29 | **5** | 62 | 7 | 74 | **1** | **19** | **7** | **27** | 188 |
| 12:45 PM | 7 | 51 | 1 | 59 | 3 | 7 | 14 | 24 | 5 | 70 | **8** | **83** | 0 | 4 | 6 | 10 | 176 |
| 01:00 PM | **9** | **66** | 0 | **75** | **8** | **14** | 13 | **35** | 1 | 65 | 5 | 71 | 1 | 6 | 7 | 14 | **195** |
| 01:15 PM | 9 | 49 | 0 | 58 | 5 | 10 | **16** | 31 | 1 | **73** | 6 | 80 | 0 | 12 | 5 | 17 | 186 |
| Total Volume | 30 | 218 | 2 | 250 | 23 | 39 | 57 | 119 | 12 | 270 | 26 | 308 | 2 | 41 | 25 | 68 | 745 |
| % App. Total | 12 | 87.2 | 0.8 | | 19.3 | 32.8 | 47.9 | | 3.9 | 87.7 | 8.4 | | 2.9 | 60.3 | 36.8 | | |
| PHF | .833 | .826 | .500 | .833 | .719 | .696 | .891 | .850 | .600 | .925 | .813 | .928 | .500 | .539 | .893 | .630 | .955 |

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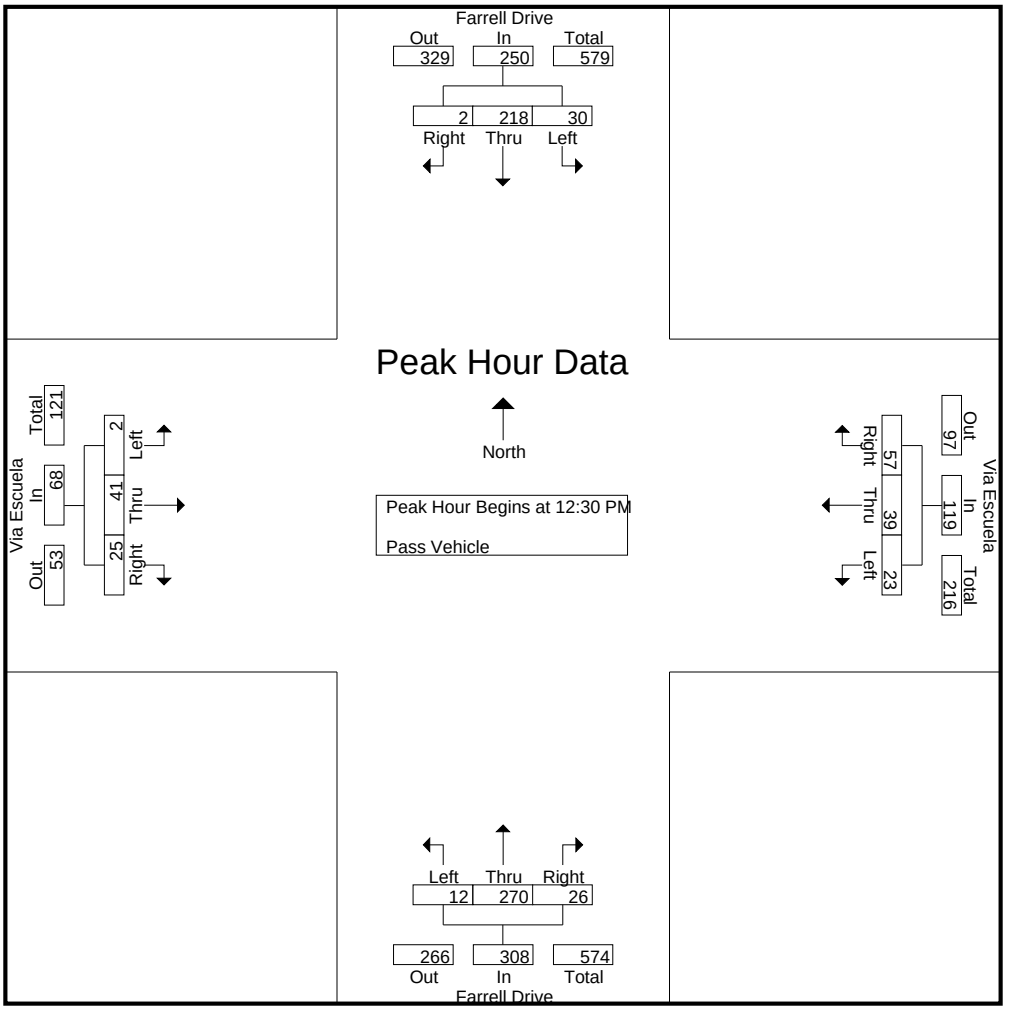
City of Palm Springs
N/S: Farrell Drive
E/W: Via Escuela
Weather: Sunny

File Name : PLSFAVEMD
Site Code : 00000001
Start Date : 5/2/2013
Page No : 2




Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 12:15 PM | | | | 12:30 PM | | | | 12:30 PM | | | | 11:45 AM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 4 | 53 | **2** | 59 | 7 | 8 | 14 | 29 | **5** | 62 | 7 | 74 | **1** | 15 | 1 | 17 |
| +15 mins. | 5 | 52 | 1 | 58 | 3 | 7 | 14 | 24 | 5 | 70 | **8** | **83** | 1 | 8 | 3 | 12 |
| +30 mins. | 7 | 51 | 1 | 59 | **8** | **14** | 13 | **35** | 1 | 65 | 5 | 71 | 0 | 7 | 5 | 12 |
| +45 mins. | **9** | **66** | 0 | **75** | 5 | 10 | **16** | 31 | 1 | **73** | 6 | 80 | 1 | **19** | **7** | **27** |
| Total Volume | 25 | 222 | 4 | 251 | 23 | 39 | 57 | 119 | 12 | 270 | 26 | 308 | 3 | 49 | 16 | 68 |
| % App. Total | 10 | 88.4 | 1.6 | | 19.3 | 32.8 | 47.9 | | 3.9 | 87.7 | 8.4 | | 4.4 | 72.1 | 23.5 | |
| PHF | .694 | .841 | .500 | .837 | .719 | .696 | .891 | .850 | .600 | .925 | .813 | .928 | .750 | .645 | .571 | .630 |

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City of Palm Springs
N/S: Farrell Drive
E/W: Via Escuela
Weather: Sunny

File Name : PLSFAVEpm
Site Code : 00000001
Start Date : 5/2/2013
Page No : 1

Groups Printed- Pass Vehicle

| | Farrell Drive Southbound | | | | Via Escuela Westbound | | | | Farrell Drive Northbound | | | | Via Escuela Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| 04:00 PM | 9 | 49 | 1 | 59 | 7 | 14 | 16 | 37 | 0 | 63 | 3 | 66 | 0 | 8 | 5 | 13 | 175 |
| 04:15 PM | 5 | 56 | 0 | 61 | 4 | 18 | 22 | 44 | 4 | 86 | 8 | 98 | 0 | 15 | 6 | 21 | 224 |
| 04:30 PM | 10 | 65 | 0 | 75 | 8 | 17 | 16 | 41 | 4 | 77 | 11 | 92 | 1 | 13 | 7 | 21 | 229 |
| 04:45 PM | 6 | 45 | 2 | 53 | 9 | 15 | 16 | 40 | 5 | 94 | 11 | 110 | 1 | 15 | 2 | 18 | 221 |
| Total | 30 | 215 | 3 | 248 | 28 | 64 | 70 | 162 | 13 | 320 | 33 | 366 | 2 | 51 | 20 | 73 | 849 |
| | | | | | | | | | | | | | | | | | |
| 05:00 PM | 4 | 54 | 0 | 58 | 3 | 14 | 20 | 37 | 7 | 122 | 21 | 150 | 1 | 12 | 3 | 16 | 261 |
| 05:15 PM | 6 | 53 | 0 | 59 | 7 | 10 | 18 | 35 | 5 | 95 | 26 | 126 | 3 | 14 | 6 | 23 | 243 |
| 05:30 PM | 13 | 67 | 0 | 80 | 5 | 17 | 24 | 46 | 4 | 97 | 7 | 108 | 0 | 12 | 3 | 15 | 249 |
| 05:45 PM | 7 | 64 | 1 | 72 | 5 | 13 | 15 | 33 | 7 | 64 | 6 | 77 | 1 | 9 | 3 | 13 | 195 |
| Total | 30 | 238 | 1 | 269 | 20 | 54 | 77 | 151 | 23 | 378 | 60 | 461 | 5 | 47 | 15 | 67 | 948 |
| | | | | | | | | | | | | | | | | | |
| Grand Total | 60 | 453 | 4 | 517 | 48 | 118 | 147 | 313 | 36 | 698 | 93 | 827 | 7 | 98 | 35 | 140 | 1797 |
| Apprch % | 11.6 | 87.6 | 0.8 | | 15.3 | 37.7 | 47 | | 4.4 | 84.4 | 11.2 | | 5 | 70 | 25 | | |
| Total % | 3.3 | 25.2 | 0.2 | 28.8 | 2.7 | 6.6 | 8.2 | 17.4 | 2 | 38.8 | 5.2 | 46 | 0.4 | 5.5 | 1.9 | 7.8 | |

| | Farrell Drive Southbound | | | | Via Escuela Westbound | | | | Farrell Drive Northbound | | | | Via Escuela Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:45 PM | | | | | | | | | | | | | | | | | |
| 04:45 PM | 6 | 45 | **2** | 53 | **9** | 15 | 16 | 40 | 5 | 94 | 11 | 110 | 1 | **15** | 2 | 18 | 221 |
| 05:00 PM | 4 | 54 | 0 | 58 | 3 | 14 | 20 | 37 | **7** | **122** | 21 | **150** | 1 | 12 | 3 | 16 | **261** |
| 05:15 PM | 6 | 53 | 0 | 59 | 7 | 10 | 18 | 35 | 5 | 95 | **26** | 126 | **3** | 14 | **6** | **23** | 243 |
| 05:30 PM | **13** | **67** | 0 | **80** | 5 | **17** | **24** | **46** | 4 | 97 | 7 | 108 | 0 | 12 | 3 | 15 | 249 |
| Total Volume | 29 | 219 | 2 | 250 | 24 | 56 | 78 | 158 | 21 | 408 | 65 | 494 | 5 | 53 | 14 | 72 | 974 |
| % App. Total | 11.6 | 87.6 | 0.8 | | 15.2 | 35.4 | 49.4 | | 4.3 | 82.6 | 13.2 | | 6.9 | 73.6 | 19.4 | | |
| PHF | .558 | .817 | .250 | .781 | .667 | .824 | .813 | .859 | .750 | .836 | .625 | .823 | .417 | .883 | .583 | .783 | .933 |

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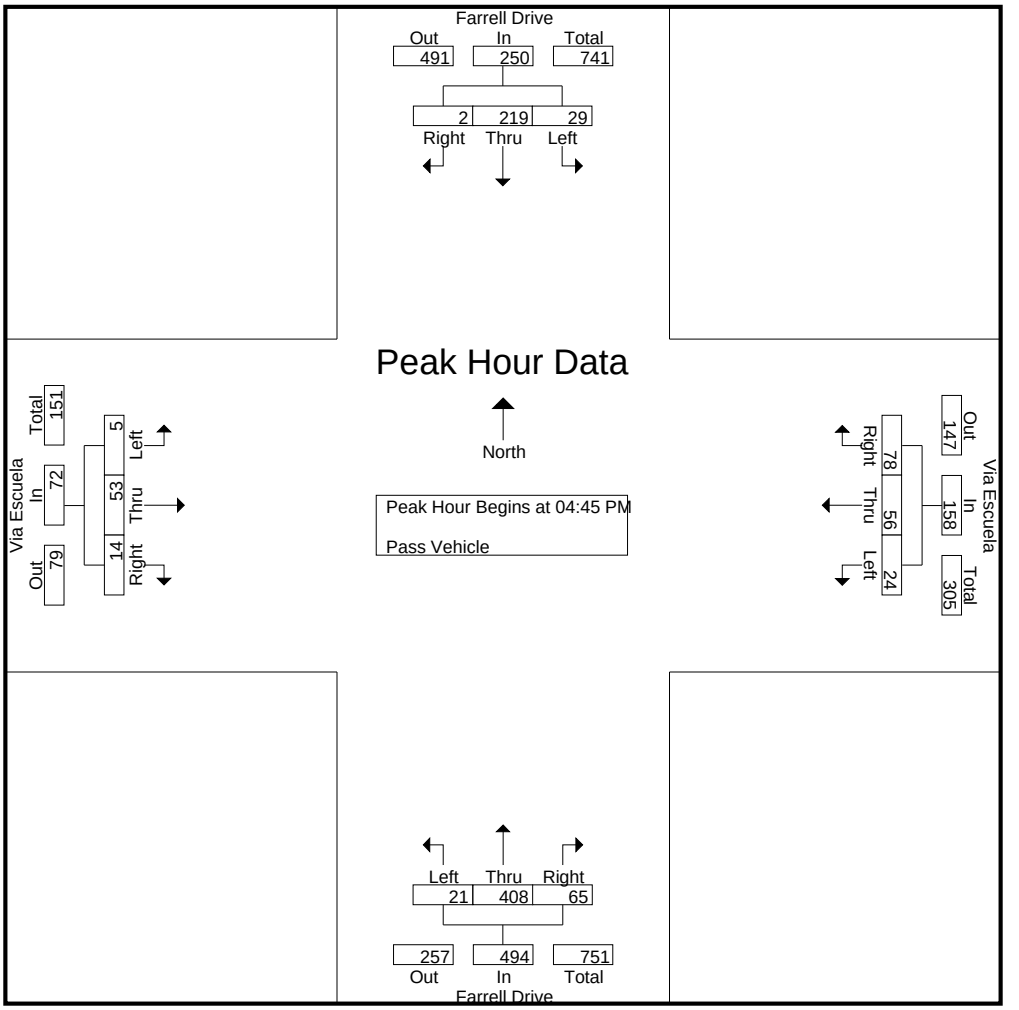
City of Palm Springs
N/S: Farrell Drive
E/W: Via Escuela
Weather: Sunny

File Name : PLSFAVEpm
Site Code : 00000001
Start Date : 5/2/2013
Page No : 2




Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 05:00 PM | | | | 04:00 PM | | | | 04:45 PM | | | | 04:30 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 4 | 54 | 0 | 58 | 7 | 14 | 16 | 37 | 5 | 94 | 11 | 110 | 1 | 13 | **7** | 21 |
| +15 mins. | 6 | 53 | 0 | 59 | 4 | **18** | **22** | **44** | **7** | **122** | 21 | **150** | 1 | **15** | 2 | 18 |
| +30 mins. | **13** | **67** | 0 | **80** | 8 | 17 | 16 | 41 | 5 | 95 | **26** | 126 | 1 | 12 | 3 | 16 |
| +45 mins. | 7 | 64 | **1** | 72 | **9** | 15 | 16 | 40 | 4 | 97 | 7 | 108 | **3** | 14 | 6 | **23** |
| Total Volume | 30 | 238 | 1 | 269 | 28 | 64 | 70 | 162 | 21 | 408 | 65 | 494 | 6 | 54 | 18 | 78 |
| % App. Total | 11.2 | 88.5 | 0.4 | | 17.3 | 39.5 | 43.2 | | 4.3 | 82.6 | 13.2 | | 7.7 | 69.2 | 23.1 | |
| PHF | .577 | .888 | .250 | .841 | .778 | .889 | .795 | .920 | .750 | .836 | .625 | .823 | .500 | .900 | .643 | .848 |

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City of Palm Springs
N/S: Farrell Drive
E/W: Vista Chino
Weather: Sunny

File Name : PLSFAVCMD
Site Code : 00000001
Start Date : 5/2/2013
Page No : 1

Groups Printed- Pass Vehicle

| | Farrell Drive Southbound | | | | Vista Chino Westbound | | | | Farrell Drive Northbound | | | | Vista Chino Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| 11:30 AM | 32 | 25 | 1 | 58 | 37 | 153 | 36 | 226 | 15 | 40 | 41 | 96 | 3 | 139 | 18 | 160 | 540 |
| 11:45 AM | 34 | 16 | 7 | 57 | 38 | 152 | 26 | 216 | 12 | 32 | 46 | 90 | 3 | 143 | 14 | 160 | 523 |
| Total | 66 | 41 | 8 | 115 | 75 | 305 | 62 | 442 | 27 | 72 | 87 | 186 | 6 | 282 | 32 | 320 | 1063 |
| 12:00 PM | 33 | 18 | 3 | 54 | 24 | 116 | 24 | 164 | 21 | 30 | 48 | 99 | 6 | 154 | 22 | 182 | 499 |
| 12:15 PM | 36 | 29 | 3 | 68 | 31 | 160 | 23 | 214 | 21 | 39 | 40 | 100 | 2 | 161 | 18 | 181 | 563 |
| 12:30 PM | 41 | 30 | 3 | 74 | 47 | 160 | 41 | 248 | 10 | 34 | 46 | 90 | 2 | 158 | 23 | 183 | 595 |
| 12:45 PM | 27 | 28 | 4 | 59 | 44 | 173 | 49 | 266 | 24 | 26 | 49 | 99 | 3 | 151 | 20 | 174 | 598 |
| Total | 137 | 105 | 13 | 255 | 146 | 609 | 137 | 892 | 76 | 129 | 183 | 388 | 13 | 624 | 83 | 720 | 2255 |
| 01:00 PM | 47 | 33 | 4 | 84 | 45 | 133 | 34 | 212 | 24 | 35 | 58 | 117 | 4 | 132 | 23 | 159 | 572 |
| 01:15 PM | 21 | 27 | 5 | 53 | 49 | 150 | 28 | 227 | 10 | 45 | 49 | 104 | 5 | 174 | 18 | 197 | 581 |
| Grand Total | 271 | 206 | 30 | 507 | 315 | 1197 | 261 | 1773 | 137 | 281 | 377 | 795 | 28 | 1212 | 156 | 1396 | 4471 |
| Apprch % | 53.5 | 40.6 | 5.9 | | 17.8 | 67.5 | 14.7 | | 17.2 | 35.3 | 47.4 | | 2 | 86.8 | 11.2 | | |
| Total % | 6.1 | 4.6 | 0.7 | 11.3 | 7 | 26.8 | 5.8 | 39.7 | 3.1 | 6.3 | 8.4 | 17.8 | 0.6 | 27.1 | 3.5 | 31.2 | |

| | Farrell Drive Southbound | | | | Vista Chino Westbound | | | | Farrell Drive Northbound | | | | Vista Chino Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 12:30 PM | | | | | | | | | | | | | | | | | |
| 12:30 PM | 41 | 30 | 3 | 74 | 47 | 160 | 41 | 248 | 10 | 34 | 46 | 90 | 2 | 158 | **23** | 183 | 595 |
| 12:45 PM | 27 | 28 | 4 | 59 | 44 | **173** | **49** | **266** | **24** | 26 | 49 | 99 | 3 | 151 | 20 | 174 | **598** |
| 01:00 PM | **47** | **33** | 4 | **84** | 45 | 133 | 34 | 212 | 24 | 35 | **58** | **117** | 4 | 132 | 23 | 159 | 572 |
| 01:15 PM | 21 | 27 | **5** | 53 | **49** | 150 | 28 | 227 | 10 | **45** | 49 | 104 | **5** | **174** | 18 | **197** | 581 |
| Total Volume | 136 | 118 | 16 | 270 | 185 | 616 | 152 | 953 | 68 | 140 | 202 | 410 | 14 | 615 | 84 | 713 | 2346 |
| % App. Total | 50.4 | 43.7 | 5.9 | | 19.4 | 64.6 | 15.9 | | 16.6 | 34.1 | 49.3 | | 2 | 86.3 | 11.8 | | |
| PHF | .723 | .894 | .800 | .804 | .944 | .890 | .776 | .896 | .708 | .778 | .871 | .876 | .700 | .884 | .913 | .905 | .981 |

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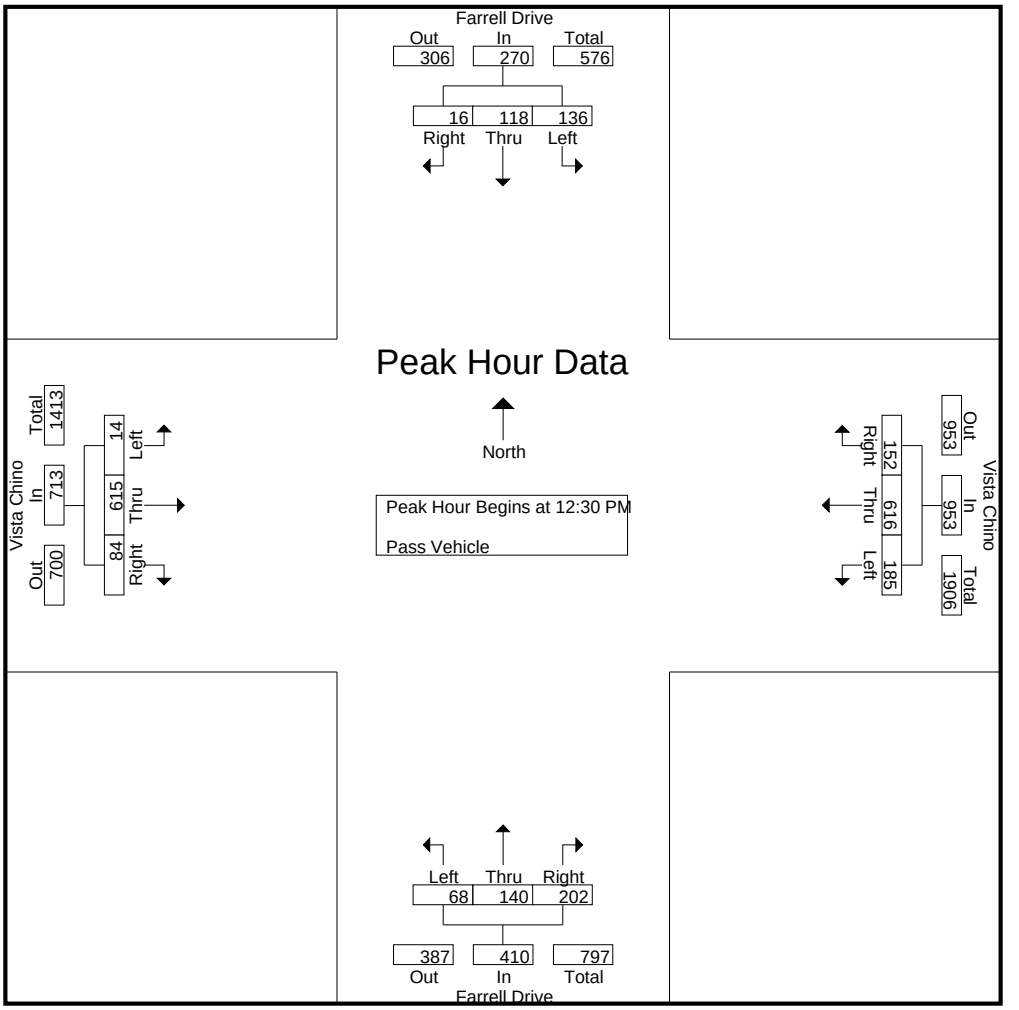
City of Palm Springs
N/S: Farrell Drive
E/W: Vista Chino
Weather: Sunny

File Name : PLSFAVCMD
Site Code : 00000001
Start Date : 5/2/2013
Page No : 2




Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 12:15 PM | | | | 12:30 PM | | | | 12:30 PM | | | | 12:00 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 36 | 29 | 3 | 68 | 47 | 160 | 41 | 248 | 10 | 34 | 46 | 90 | **6** | 154 | 22 | 182 |
| +15 mins. | 41 | 30 | 3 | 74 | 44 | **173** | **49** | **266** | **24** | 26 | 49 | 99 | 2 | **161** | 18 | 181 |
| +30 mins. | 27 | 28 | **4** | 59 | 45 | 133 | 34 | 212 | 24 | 35 | **58** | **117** | 2 | 158 | **23** | **183** |
| +45 mins. | **47** | **33** | 4 | **84** | **49** | 150 | 28 | 227 | 10 | **45** | 49 | 104 | 3 | 151 | 20 | 174 |
| Total Volume | 151 | 120 | 14 | 285 | 185 | 616 | 152 | 953 | 68 | 140 | 202 | 410 | 13 | 624 | 83 | 720 |
| % App. Total | 53 | 42.1 | 4.9 | | 19.4 | 64.6 | 15.9 | | 16.6 | 34.1 | 49.3 | | 1.8 | 86.7 | 11.5 | |
| PHF | .803 | .909 | .875 | .848 | .944 | .890 | .776 | .896 | .708 | .778 | .871 | .876 | .542 | .969 | .902 | .984 |

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City of Palm Springs
N/S: Farrell Drive
E/W: Vista Chino
Weather: Sunny

File Name : PLSFAVCPM
Site Code : 00000001
Start Date : 5/2/2013
Page No : 1

Groups Printed- Pass Vehicle

| | Farrell Drive Southbound | | | | Vista Chino Westbound | | | | Farrell Drive Northbound | | | | Vista Chino Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| 04:00 PM | 27 | 24 | 3 | 54 | 42 | 175 | 35 | 252 | 16 | 35 | 91 | 142 | 0 | 210 | 23 | 233 | 681 |
| 04:15 PM | 42 | 28 | 3 | 73 | 52 | 161 | 46 | 259 | 15 | 45 | 62 | 122 | 5 | 170 | 13 | 188 | 642 |
| 04:30 PM | 39 | 30 | 2 | 71 | 44 | 171 | 46 | 261 | 14 | 46 | 91 | 151 | 3 | 217 | 22 | 242 | 725 |
| 04:45 PM | 37 | 28 | 3 | 68 | 56 | 140 | 51 | 247 | 24 | 55 | 83 | 162 | 2 | 183 | 21 | 206 | 683 |
| Total | 145 | 110 | 11 | 266 | 194 | 647 | 178 | 1019 | 69 | 181 | 327 | 577 | 10 | 780 | 79 | 869 | 2731 |
| | | | | | | | | | | | | | | | | | |
| 05:00 PM | 32 | 23 | 7 | 62 | 39 | 140 | 65 | 244 | 23 | 92 | 96 | 211 | 4 | 219 | 19 | 242 | 759 |
| 05:15 PM | 42 | 22 | 6 | 70 | 57 | 160 | 49 | 266 | 21 | 68 | 78 | 167 | 8 | 204 | 18 | 230 | 733 |
| 05:30 PM | 56 | 20 | 4 | 80 | 54 | 182 | 51 | 287 | 16 | 52 | 57 | 125 | 6 | 148 | 14 | 168 | 660 |
| 05:45 PM | 39 | 32 | 0 | 71 | 74 | 178 | 47 | 299 | 14 | 26 | 48 | 88 | 7 | 164 | 20 | 191 | 649 |
| Total | 169 | 97 | 17 | 283 | 224 | 660 | 212 | 1096 | 74 | 238 | 279 | 591 | 25 | 735 | 71 | 831 | 2801 |
| | | | | | | | | | | | | | | | | | |
| Grand Total | 314 | 207 | 28 | 549 | 418 | 1307 | 390 | 2115 | 143 | 419 | 606 | 1168 | 35 | 1515 | 150 | 1700 | 5532 |
| Apprch % | 57.2 | 37.7 | 5.1 | | 19.8 | 61.8 | 18.4 | | 12.2 | 35.9 | 51.9 | | 2.1 | 89.1 | 8.8 | | |
| Total % | 5.7 | 3.7 | 0.5 | 9.9 | 7.6 | 23.6 | 7 | 38.2 | 2.6 | 7.6 | 11 | 21.1 | 0.6 | 27.4 | 2.7 | 30.7 | |

| | Farrell Drive Southbound | | | | Vista Chino Westbound | | | | Farrell Drive Northbound | | | | Vista Chino Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:30 PM | | | | | | | | | | | | | | | | | |
| 04:30 PM | 39 | **30** | 2 | **71** | 44 | **171** | 46 | 261 | 14 | 46 | 91 | 151 | 3 | 217 | **22** | **242** | 725 |
| 04:45 PM | 37 | 28 | 3 | 68 | 56 | 140 | 51 | 247 | **24** | 55 | 83 | 162 | 2 | 183 | 21 | 206 | 683 |
| 05:00 PM | 32 | 23 | **7** | 62 | 39 | 140 | **65** | 244 | 23 | **92** | **96** | **211** | 4 | **219** | 19 | 242 | **759** |
| 05:15 PM | **42** | 22 | 6 | 70 | **57** | 160 | 49 | **266** | 21 | 68 | 78 | 167 | **8** | 204 | 18 | 230 | 733 |
| Total Volume | 150 | 103 | 18 | 271 | 196 | 611 | 211 | 1018 | 82 | 261 | 348 | 691 | 17 | 823 | 80 | 920 | 2900 |
| % App. Total | 55.4 | 38 | 6.6 | | 19.3 | 60 | 20.7 | | 11.9 | 37.8 | 50.4 | | 1.8 | 89.5 | 8.7 | | |
| PHF | .893 | .858 | .643 | .954 | .860 | .893 | .812 | .957 | .854 | .709 | .906 | .819 | .531 | .939 | .909 | .950 | .955 |

Counts Unlimited, Inc.
PO Box 1178
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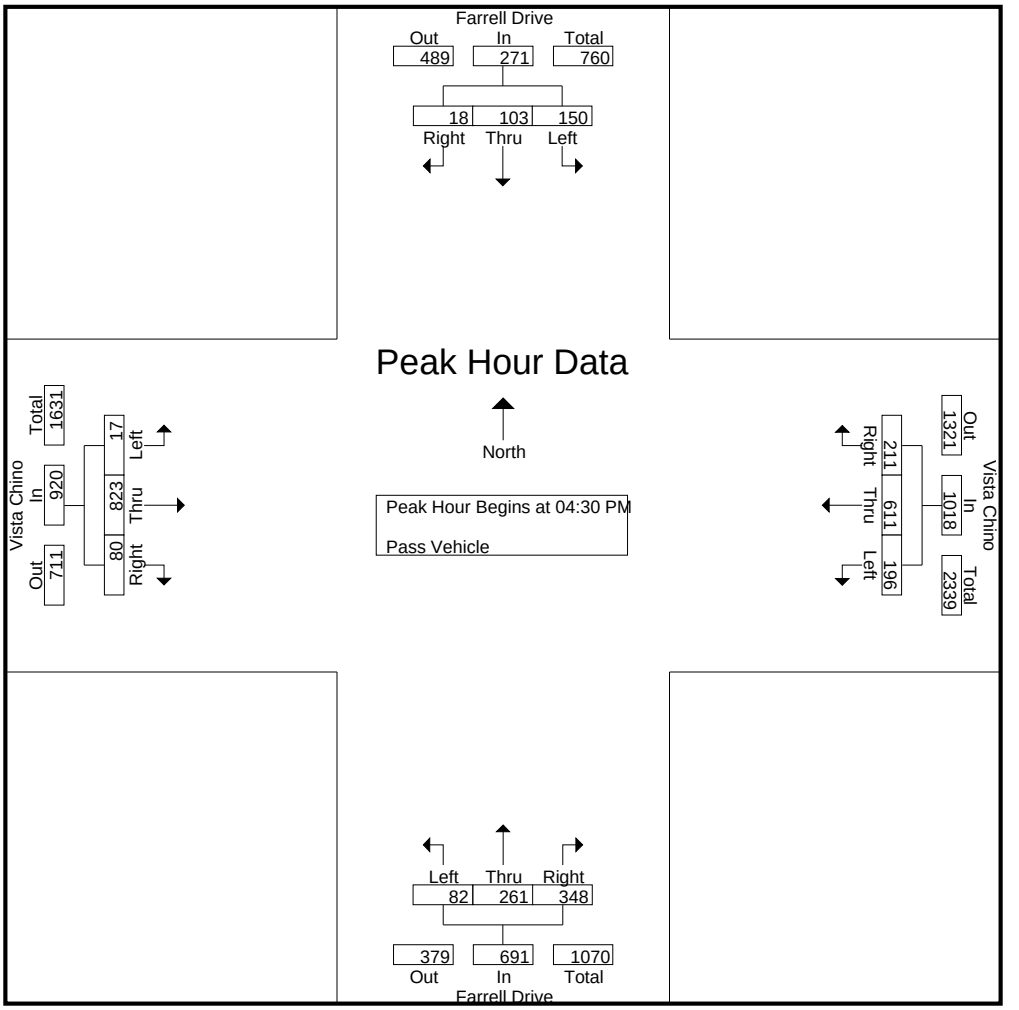
(951) 268-6268

City of Palm Springs
N/S: Farrell Drive
E/W: Vista Chino
Weather: Sunny

File Name : PLSFAVCPM
Site Code : 00000001
Start Date : 5/2/2013
Page No : 2




Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 05:00 PM | | | | 05:00 PM | | | | 04:30 PM | | | | 04:30 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 32 | 23 | **7** | 62 | 39 | 140 | **65** | 244 | 14 | 46 | 91 | 151 | 3 | 217 | **22** | **242** |
| +15 mins. | 42 | 22 | 6 | 70 | 57 | 160 | 49 | 266 | **24** | 55 | 83 | 162 | 2 | 183 | 21 | 206 |
| +30 mins. | **56** | 20 | 4 | **80** | 54 | **182** | 51 | 287 | 23 | **92** | **96** | **211** | 4 | **219** | 19 | 242 |
| +45 mins. | 39 | **32** | 0 | 71 | **74** | 178 | 47 | **299** | 21 | 68 | 78 | 167 | **8** | 204 | 18 | 230 |
| Total Volume | 169 | 97 | 17 | 283 | 224 | 660 | 212 | 1096 | 82 | 261 | 348 | 691 | 17 | 823 | 80 | 920 |
| % App. Total | 59.7 | 34.3 | 6 | | 20.4 | 60.2 | 19.3 | | 11.9 | 37.8 | 50.4 | | 1.8 | 89.5 | 8.7 | |
| PHF | .754 | .758 | .607 | .884 | .757 | .907 | .815 | .916 | .854 | .709 | .906 | .819 | .531 | .939 | .909 | .950 |

Counts Unlimited Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Palm Springs
N/S: Whitewater Club Drive
E/W: Via Escuela
Weather: Sunny

File Name : PLSWHVEAM
Site Code : 00000001
Start Date : 5/2/2013
Page No : 1

Groups Printed- Pass Vehicle

| | Whitewater Club Drive Southbound | | | | Via Escuela Westbound | | | | Whitewater Club Drive Northbound | | | | Via Escuela Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| 11:30 AM | 7 | 0 | 1 | 8 | 0 | 23 | 6 | 29 | 0 | 0 | 2 | 2 | 0 | 21 | 0 | 21 | 60 |
| 11:45 AM | 3 | 2 | 1 | 6 | 0 | 15 | 2 | 17 | 0 | 3 | 3 | 6 | 1 | 19 | 1 | 21 | 50 |
| Total | 10 | 2 | 2 | 14 | 0 | 38 | 8 | 46 | 0 | 3 | 5 | 8 | 1 | 40 | 1 | 42 | 110 |
| | | | | | | | | | | | | | | | | | |
| 12:00 PM | 3 | 0 | 0 | 3 | 1 | 20 | 4 | 25 | 1 | 1 | 5 | 7 | 1 | 11 | 2 | 14 | 49 |
| 12:15 PM | 9 | 2 | 1 | 12 | 2 | 19 | 2 | 23 | 1 | 2 | 1 | 4 | 0 | 14 | 0 | 14 | 53 |
| 12:30 PM | 5 | 1 | 0 | 6 | 0 | 24 | 5 | 29 | 1 | 3 | 3 | 7 | 1 | 23 | 0 | 24 | 66 |
| 12:45 PM | 7 | 1 | 0 | 8 | 1 | 26 | 4 | 31 | 1 | 3 | 2 | 6 | 1 | 13 | 0 | 14 | 59 |
| Total | 24 | 4 | 1 | 29 | 4 | 89 | 15 | 108 | 4 | 9 | 11 | 24 | 3 | 61 | 2 | 66 | 227 |
| | | | | | | | | | | | | | | | | | |
| 01:00 PM | 6 | 2 | 0 | 8 | 2 | 20 | 8 | 30 | 0 | 2 | 1 | 3 | 1 | 14 | 1 | 16 | 57 |
| 01:15 PM | 6 | 1 | 1 | 8 | 2 | 22 | 3 | 27 | 0 | 5 | 2 | 7 | 1 | 19 | 1 | 21 | 63 |
| Grand Total | 46 | 9 | 4 | 59 | 8 | 169 | 34 | 211 | 4 | 19 | 19 | 42 | 6 | 134 | 5 | 145 | 457 |
| Apprch % | 78 | 15.3 | 6.8 | | 3.8 | 80.1 | 16.1 | | 9.5 | 45.2 | 45.2 | | 4.1 | 92.4 | 3.4 | | |
| Total % | 10.1 | 2 | 0.9 | 12.9 | 1.8 | 37 | 7.4 | 46.2 | 0.9 | 4.2 | 4.2 | 9.2 | 1.3 | 29.3 | 1.1 | 31.7 | |

| | Whitewater Club Drive Southbound | | | | Via Escuela Westbound | | | | Whitewater Club Drive Northbound | | | | Via Escuela Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 12:30 PM | | | | | | | | | | | | | | | | | |
| 12:30 PM | 5 | 1 | 0 | 6 | 0 | 24 | 5 | 29 | **1** | 3 | **3** | **7** | **1** | **23** | 0 | **24** | **66** |
| 12:45 PM | **7** | 1 | 0 | **8** | 1 | **26** | 4 | **31** | 1 | 3 | 2 | 6 | 1 | 13 | 0 | 14 | 59 |
| 01:00 PM | 6 | **2** | 0 | 8 | **2** | 20 | **8** | 30 | 0 | 2 | 1 | 3 | 1 | 14 | **1** | 16 | 57 |
| 01:15 PM | 6 | 1 | **1** | 8 | 2 | 22 | 3 | 27 | 0 | **5** | 2 | 7 | 1 | 19 | 1 | 21 | 63 |
| Total Volume | 24 | 5 | 1 | 30 | 5 | 92 | 20 | 117 | 2 | 13 | 8 | 23 | 4 | 69 | 2 | 75 | 245 |
| % App. Total | 80 | 16.7 | 3.3 | | 4.3 | 78.6 | 17.1 | | 8.7 | 56.5 | 34.8 | | 5.3 | 92 | 2.7 | | |
| PHF | .857 | .625 | .250 | .938 | .625 | .885 | .625 | .944 | .500 | .650 | .667 | .821 | 1.00 | .750 | .500 | .781 | .928 |

Counts Unlimited Inc.
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Corona, CA 92878
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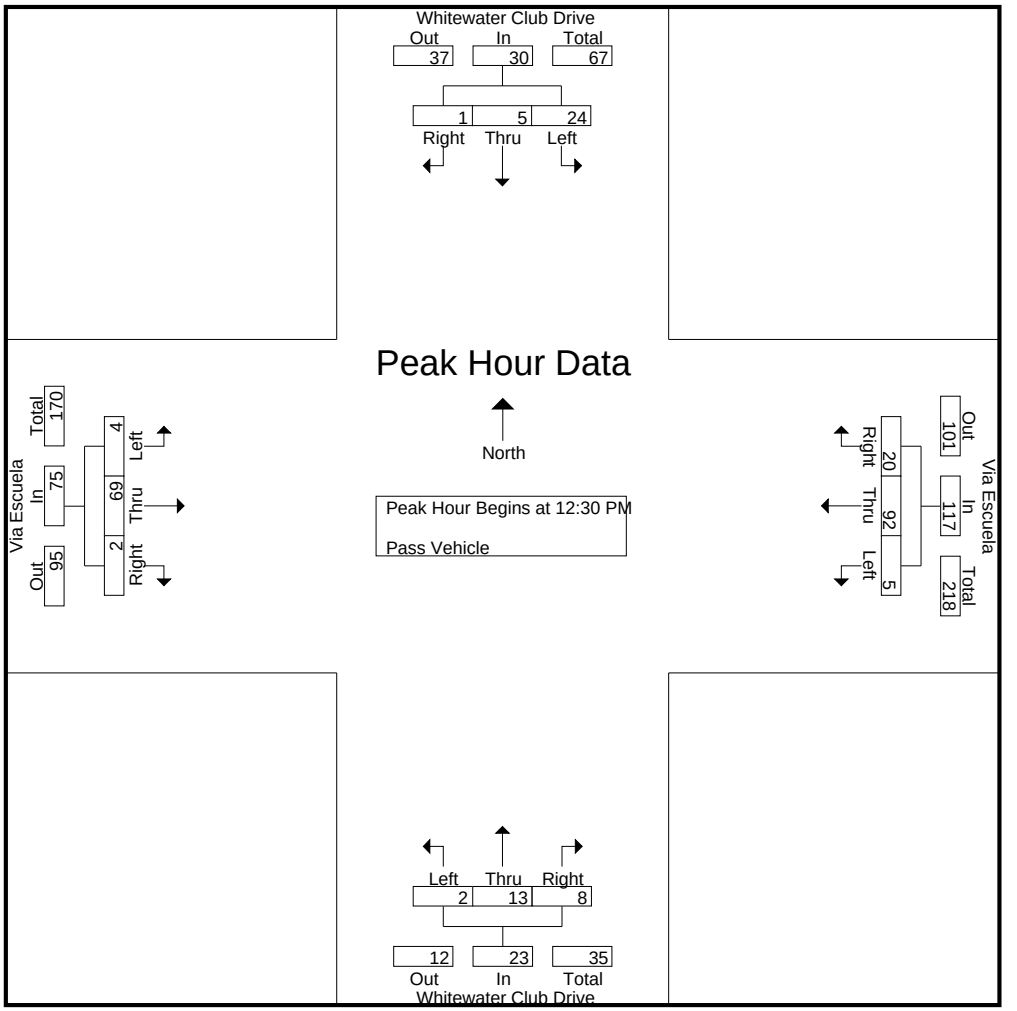
City of Palm Springs
N/S: Whitewater Club Drive
E/W: Via Escuela
Weather: Sunny

File Name : PLSWHVEAM
Site Code : 00000001
Start Date : 5/2/2013
Page No : 2




Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 12:15 PM | | | | 12:30 PM | | | | 11:45 AM | | | | 12:30 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | **9** | **2** | **1** | **12** | 0 | 24 | 5 | 29 | 0 | **3** | 3 | 6 | **1** | **23** | 0 | **24** |
| +15 mins. | 5 | 1 | 0 | 6 | 1 | **26** | 4 | **31** | **1** | 1 | **5** | **7** | 1 | 13 | 0 | 14 |
| +30 mins. | 7 | 1 | 0 | 8 | **2** | 20 | **8** | 30 | 1 | 2 | 1 | 4 | 1 | 14 | **1** | 16 |
| +45 mins. | 6 | 2 | 0 | 8 | 2 | 22 | 3 | 27 | 1 | 3 | 3 | 7 | 1 | 19 | 1 | 21 |
| Total Volume | 27 | 6 | 1 | 34 | 5 | 92 | 20 | 117 | 3 | 9 | 12 | 24 | 4 | 69 | 2 | 75 |
| % App. Total | 79.4 | 17.6 | 2.9 | | 4.3 | 78.6 | 17.1 | | 12.5 | 37.5 | 50 | | 5.3 | 92 | 2.7 | |
| PHF | .750 | .750 | .250 | .708 | .625 | .885 | .625 | .944 | .750 | .750 | .600 | .857 | 1.000 | .750 | .500 | .781 |

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PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Palm Springs
N/S: Whitewater Club Drive
E/W: Via Escuela
Weather: Sunny

File Name : PLSWHVEPM
Site Code : 00000001
Start Date : 5/2/2013
Page No : 1

Groups Printed- Total Volume

| | Whitewater Club Drive Southbound | | | | Via Escuela Westbound | | | | Whitewater Club Drive Northbound | | | | Via Escuela Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| 04:00 PM | 8 | 1 | 1 | 10 | 3 | 38 | 9 | 50 | 0 | 1 | 5 | 6 | 2 | 19 | 0 | 21 | 87 |
| 04:15 PM | 1 | 0 | 1 | 2 | 2 | 42 | 6 | 50 | 0 | 0 | 3 | 3 | 0 | 21 | 2 | 23 | 78 |
| 04:30 PM | 4 | 1 | 0 | 5 | 2 | 41 | 2 | 45 | 1 | 2 | 9 | 12 | 0 | 23 | 0 | 23 | 85 |
| 04:45 PM | 9 | 1 | 0 | 10 | 1 | 43 | 10 | 54 | 1 | 2 | 8 | 11 | 1 | 26 | 0 | 27 | 102 |
| Total | 22 | 3 | 2 | 27 | 8 | 164 | 27 | 199 | 2 | 5 | 25 | 32 | 3 | 89 | 2 | 94 | 352 |
| 05:00 PM | 5 | 0 | 0 | 5 | 4 | 29 | 10 | 43 | 0 | 2 | 5 | 7 | 1 | 23 | 1 | 25 | 80 |
| 05:15 PM | 6 | 2 | 1 | 9 | 5 | 36 | 10 | 51 | 0 | 2 | 7 | 9 | 3 | 33 | 0 | 36 | 105 |
| 05:30 PM | 5 | 3 | 0 | 8 | 7 | 45 | 12 | 64 | 0 | 0 | 8 | 8 | 2 | 27 | 1 | 30 | 110 |
| 05:45 PM | 5 | 1 | 0 | 6 | 7 | 27 | 12 | 46 | 0 | 4 | 4 | 8 | 0 | 16 | 2 | 18 | 78 |
| Total | 21 | 6 | 1 | 28 | 23 | 137 | 44 | 204 | 0 | 8 | 24 | 32 | 6 | 99 | 4 | 109 | 373 |
| Grand Total | 43 | 9 | 3 | 55 | 31 | 301 | 71 | 403 | 2 | 13 | 49 | 64 | 9 | 188 | 6 | 203 | 725 |
| Apprch % | 78.2 | 16.4 | 5.5 | | 7.7 | 74.7 | 17.6 | | 3.1 | 20.3 | 76.6 | | 4.4 | 92.6 | 3 | | |
| Total % | 5.9 | 1.2 | 0.4 | 7.6 | 4.3 | 41.5 | 9.8 | 55.6 | 0.3 | 1.8 | 6.8 | 8.8 | 1.2 | 25.9 | 0.8 | 28 | |

| | Whitewater Club Drive Southbound | | | | Via Escuela Westbound | | | | Whitewater Club Drive Northbound | | | | Via Escuela Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:45 PM | | | | | | | | | | | | | | | | | |
| 04:45 PM | **9** | 1 | 0 | **10** | 1 | 43 | 10 | 54 | **1** | **2** | **8** | **11** | 1 | 26 | 0 | 27 | 102 |
| 05:00 PM | 5 | 0 | 0 | 5 | 4 | 29 | 10 | 43 | 0 | 2 | 5 | 7 | 1 | 23 | **1** | 25 | 80 |
| 05:15 PM | 6 | 2 | **1** | 9 | 5 | 36 | 10 | 51 | 0 | 2 | 7 | 9 | **3** | **33** | 0 | **36** | 105 |
| 05:30 PM | 5 | **3** | 0 | 8 | **7** | **45** | **12** | **64** | 0 | 0 | 8 | 8 | 2 | 27 | 1 | 30 | **110** |
| Total Volume | 25 | 6 | 1 | 32 | 17 | 153 | 42 | 212 | 1 | 6 | 28 | 35 | 7 | 109 | 2 | 118 | 397 |
| % App. Total | 78.1 | 18.8 | 3.1 | | 8 | 72.2 | 19.8 | | 2.9 | 17.1 | 80 | | 5.9 | 92.4 | 1.7 | | |
| PHF | .694 | .500 | .250 | .800 | .607 | .850 | .875 | .828 | .250 | .750 | .875 | .795 | .583 | .826 | .500 | .819 | .902 |

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Corona, CA 92878
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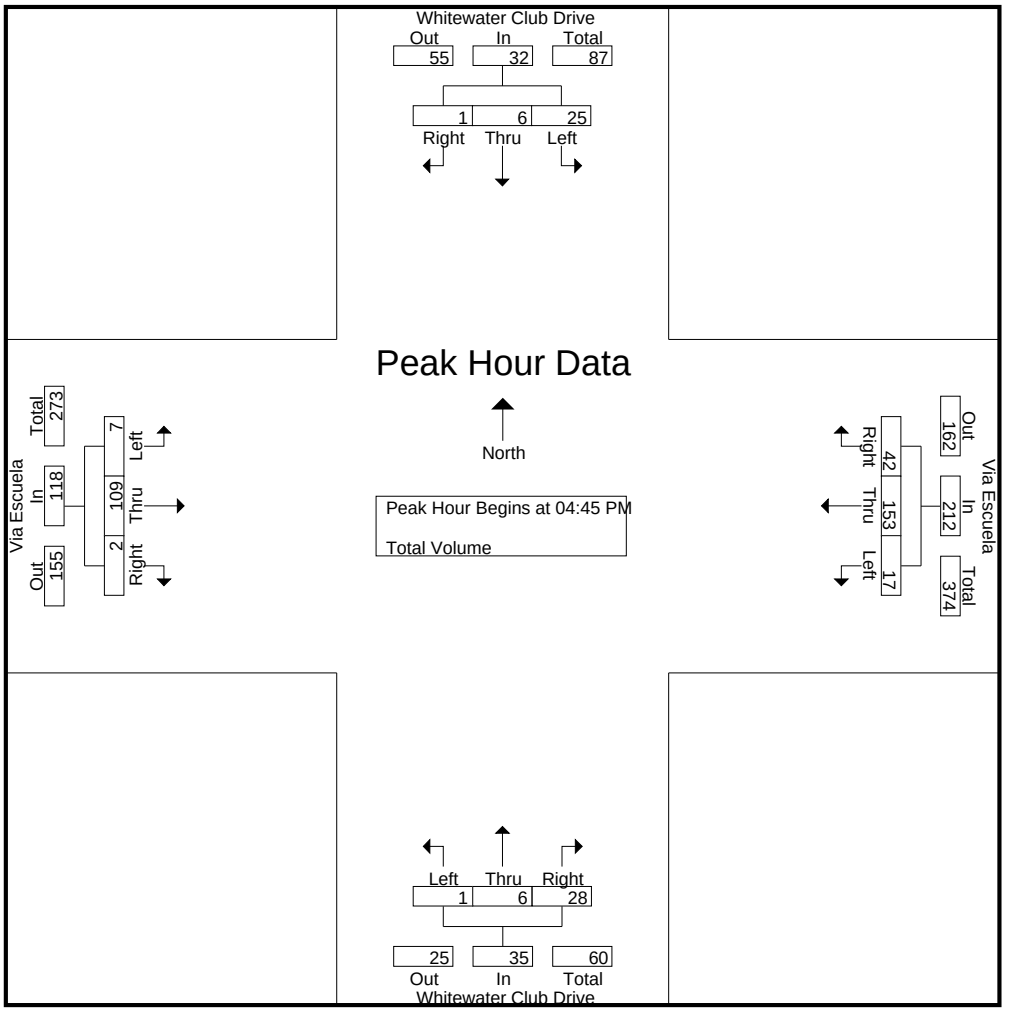
City of Palm Springs
N/S: Whitewater Club Drive
E/W: Via Escuela
Weather: Sunny

File Name : PLSWHVEPM
Site Code : 00000001
Start Date : 5/2/2013
Page No : 2




Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 04:45 PM | | | | 04:45 PM | | | | 04:30 PM | | | | 04:45 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | **9** | 1 | 0 | **10** | 1 | 43 | 10 | 54 | **1** | **2** | **9** | **12** | 1 | 26 | 0 | 27 |
| +15 mins. | 5 | 0 | 0 | 5 | 4 | 29 | 10 | 43 | 1 | 2 | 8 | 11 | 1 | 23 | **1** | 25 |
| +30 mins. | 6 | 2 | **1** | 9 | 5 | 36 | 10 | 51 | 0 | 2 | 5 | 7 | **3** | **33** | 0 | **36** |
| +45 mins. | 5 | **3** | 0 | 8 | **7** | **45** | **12** | **64** | 0 | 2 | 7 | 9 | 2 | 27 | 1 | 30 |
| Total Volume | 25 | 6 | 1 | 32 | 17 | 153 | 42 | 212 | 2 | 8 | 29 | 39 | 7 | 109 | 2 | 118 |
| % App. Total | 78.1 | 18.8 | 3.1 | | 8 | 72.2 | 19.8 | | 5.1 | 20.5 | 74.4 | | 5.9 | 92.4 | 1.7 | |
| PHF | .694 | .500 | .250 | .800 | .607 | .850 | .875 | .828 | .500 | 1.000 | .806 | .813 | .583 | .826 | .500 | .819 |

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Palm Springs
N/S: Whitewater Club Drive
E/W: Vista Chino
Weather: Sunny

File Name : PLSWHVCMD
Site Code : 00000001
Start Date : 5/2/2013


Groups Printed- Pass Vehicle

| | Whitewater Club Drive Southbound | | | Vista Chino Westbound | | | Vista Chino Eastbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | Int. Total |
| 11:30 AM | 2 | 3 | 5 | 230 | 1 | 231 | 0 | 205 | 205 | 441 |
| 11:45 AM | 5 | 2 | 7 | 215 | 6 | 221 | 3 | 209 | 212 | 440 |
| Total | 7 | 5 | 12 | 445 | 7 | 452 | 3 | 414 | 417 | 881 |
| | | | | | | | | | | |
| 12:00 PM | 4 | 2 | 6 | 169 | 2 | 171 | 5 | 233 | 238 | 415 |
| 12:15 PM | 3 | 4 | 7 | 222 | 5 | 227 | 7 | 235 | 242 | 476 |
| 12:30 PM | 4 | 0 | 4 | 236 | 6 | 242 | 4 | 244 | 248 | 494 |
| 12:45 PM | 1 | 0 | 1 | 250 | 7 | 257 | 2 | 211 | 213 | 471 |
| Total | 12 | 6 | 18 | 877 | 20 | 897 | 18 | 923 | 941 | 1856 |
| | | | | | | | | | | |
| 01:00 PM | 4 | 4 | 8 | 208 | 6 | 214 | 1 | 246 | 247 | 469 |
| 01:15 PM | 3 | 4 | 7 | 230 | 6 | 236 | 5 | 239 | 244 | 487 |
| Grand Total | 26 | 19 | 45 | 1760 | 39 | 1799 | 27 | 1822 | 1849 | 3693 |
| Apprch % | 57.8 | 42.2 | | 97.8 | 2.2 | | 1.5 | 98.5 | | |
| Total % | 0.7 | 0.5 | 1.2 | 47.7 | 1.1 | 48.7 | 0.7 | 49.3 | 50.1 | |

| | Whitewater Club Drive Southbound | | | Vista Chino Westbound | | | Vista Chino Eastbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | Int. Total |
| Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1 | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 12:30 PM | | | | | | | | | | |
| 12:30 PM | **4** | 0 | 4 | 236 | 6 | 242 | 4 | 244 | **248** | **494** |
| 12:45 PM | 1 | 0 | 1 | **250** | **7** | **257** | 2 | 211 | 213 | 471 |
| 01:00 PM | 4 | **4** | **8** | 208 | 6 | 214 | 1 | **246** | 247 | 469 |
| 01:15 PM | 3 | 4 | 7 | 230 | 6 | 236 | **5** | 239 | 244 | 487 |
| Total Volume | 12 | 8 | 20 | 924 | 25 | 949 | 12 | 940 | 952 | 1921 |
| % App. Total | 60 | 40 | | 97.4 | 2.6 | | 1.3 | 98.7 | | |
| PHF | .750 | .500 | .625 | .924 | .893 | .923 | .600 | .955 | .960 | .972 |

Counts Unlimited, Inc.
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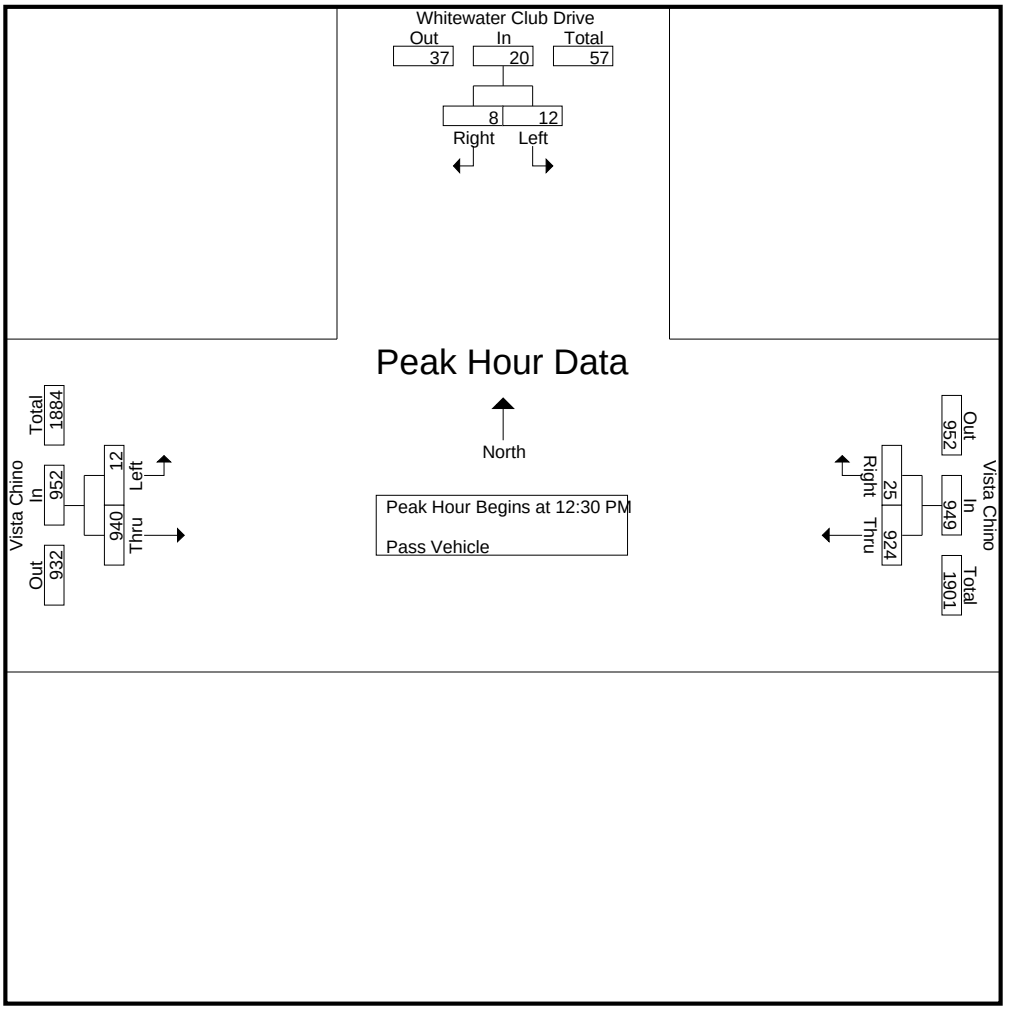
City of Palm Springs
N/S: Whitewater Club Drive
E/W: Vista Chino
Weather: Sunny

File Name : PLSWHVCMD
Site Code : 00000001
Start Date : 5/2/2013
Page No : 2




Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 11:30 AM | | | 12:30 PM | | | 12:30 PM | | |
|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 2 | 3 | 5 | 236 | 6 | 242 | 4 | 244 | **248** |
| +15 mins. | **5** | 2 | **7** | **250** | **7** | **257** | 2 | 211 | 213 |
| +30 mins. | 4 | 2 | 6 | 208 | 6 | 214 | 1 | **246** | 247 |
| +45 mins. | 3 | **4** | 7 | 230 | 6 | 236 | **5** | 239 | 244 |
| Total Volume | 14 | 11 | 25 | 924 | 25 | 949 | 12 | 940 | 952 |
| % App. Total | 56 | 44 | | 97.4 | 2.6 | | 1.3 | 98.7 | |
| PHF | .700 | .688 | .893 | .924 | .893 | .923 | .600 | .955 | .960 |

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Palm Springs
N/S: Whitewater Club Drive
E/W: Vista Chino
Weather: Sunny

File Name : PLSWHVCPM
Site Code : 00000001
Start Date : 5/2/2013
Page No : 1

Groups Printed- Pass Vehicle

| | Whitewater Club Drive Southbound | | | Vista Chino Westbound | | | Vista Chino Eastbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | Int. Total |
| 04:00 PM | 2 | 3 | 5 | 254 | 2 | 256 | 3 | 304 | 307 | 568 |
| 04:15 PM | 5 | 2 | 7 | 251 | 1 | 252 | 1 | 284 | 285 | 544 |
| 04:30 PM | 2 | 5 | 7 | 257 | 4 | 261 | 6 | 303 | 309 | 577 |
| 04:45 PM | 6 | 1 | 7 | 243 | 6 | 249 | 12 | 327 | 339 | 595 |
| Total | 15 | 11 | 26 | 1005 | 13 | 1018 | 22 | 1218 | 1240 | 2284 |
| | | | | | | | | | | |
| 05:00 PM | 2 | 0 | 2 | 247 | 6 | 253 | 2 | 313 | 315 | 570 |
| 05:15 PM | 2 | 5 | 7 | 245 | 4 | 249 | 5 | 343 | 348 | 604 |
| 05:30 PM | 6 | 5 | 11 | 280 | 7 | 287 | 3 | 273 | 276 | 574 |
| 05:45 PM | 6 | 5 | 11 | 297 | 5 | 302 | 3 | 239 | 242 | 555 |
| Total | 16 | 15 | 31 | 1069 | 22 | 1091 | 13 | 1168 | 1181 | 2303 |
| | | | | | | | | | | |
| Grand Total | 31 | 26 | 57 | 2074 | 35 | 2109 | 35 | 2386 | 2421 | 4587 |
| Apprch % | 54.4 | 45.6 | | 98.3 | 1.7 | | 1.4 | 98.6 | | |
| Total % | 0.7 | 0.6 | 1.2 | 45.2 | 0.8 | 46 | 0.8 | 52 | 52.8 | |

| | Whitewater Club Drive Southbound | | | Vista Chino Westbound | | | Vista Chino Eastbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | Int. Total |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:30 PM | | | | | | | | | | |
| 04:30 PM | 2 | **5** | **7** | **257** | 4 | **261** | 6 | 303 | 309 | 577 |
| 04:45 PM | **6** | 1 | 7 | 243 | **6** | 249 | **12** | 327 | 339 | 595 |
| 05:00 PM | 2 | 0 | 2 | 247 | 6 | 253 | 2 | 313 | 315 | 570 |
| 05:15 PM | 2 | 5 | 7 | 245 | 4 | 249 | 5 | **343** | **348** | **604** |
| Total Volume | 12 | 11 | 23 | 992 | 20 | 1012 | 25 | 1286 | 1311 | 2346 |
| % App. Total | 52.2 | 47.8 | | 98 | 2 | | 1.9 | 98.1 | | |
| PHF | .500 | .550 | .821 | .965 | .833 | .969 | .521 | .937 | .942 | .971 |

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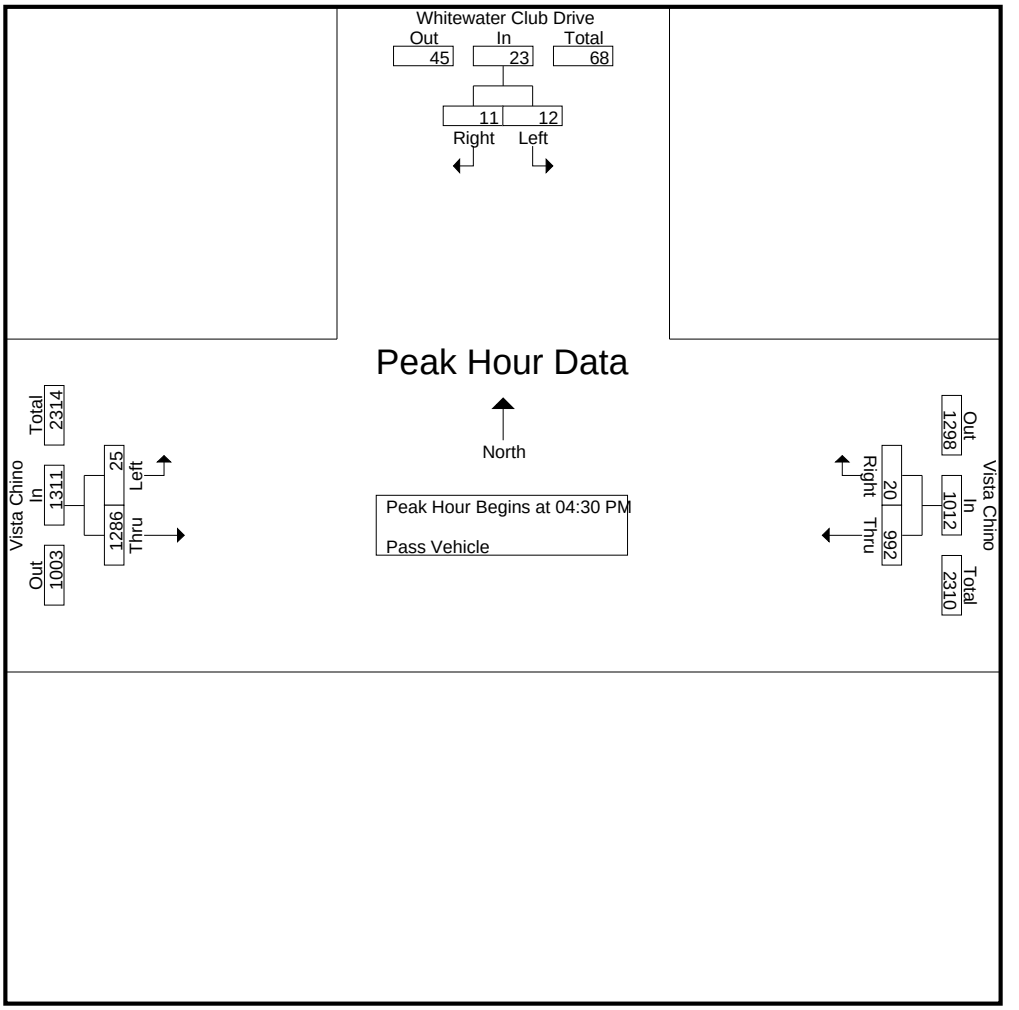
City of Palm Springs
N/S: Whitewater Club Drive
E/W: Vista Chino
Weather: Sunny

File Name : PLSWHVCPM
Site Code : 00000001
Start Date : 5/2/2013
Page No : 2




Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 05:00 PM | | | 05:00 PM | | | 04:30 PM | | |
|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 2 | 0 | 2 | 247 | 6 | 253 | 6 | 303 | 309 |
| +15 mins. | 2 | **5** | 7 | 245 | 4 | 249 | **12** | 327 | 339 |
| +30 mins. | **6** | 5 | **11** | 280 | **7** | 287 | 2 | 313 | 315 |
| +45 mins. | 6 | 5 | 11 | **297** | 5 | **302** | 5 | **343** | **348** |
| Total Volume | 16 | 15 | 31 | 1069 | 22 | 1091 | 25 | 1286 | 1311 |
| % App. Total | 51.6 | 48.4 | | 98 | 2 | | 1.9 | 98.1 | |
| PHF | .667 | .750 | .705 | .900 | .786 | .903 | .521 | .937 | .942 |

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City of Palm Springs
N/S: Gene Autry Trail
E/W: Via Escuela
Weather: Sunny

File Name : PLSGAVEMD
Site Code : 00000001
Start Date : 5/2/2013
Page No : 1

Groups Printed- Pass Vehicle

| | Gene Autry Trail Southbound | | | | Via Escuela Westbound | | | | Gene Autry Trail Northbound | | | | Via Escuela Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| 11:30 AM | 1 | 218 | 19 | 238 | 1 | 2 | 4 | 7 | 12 | 198 | 1 | 211 | 11 | 0 | 15 | 26 | 482 |
| 11:45 AM | 1 | 193 | 15 | 209 | 0 | 0 | 1 | 1 | 11 | 188 | 2 | 201 | 10 | 1 | 19 | 30 | 441 |
| Total | 2 | 411 | 34 | 447 | 1 | 2 | 5 | 8 | 23 | 386 | 3 | 412 | 21 | 1 | 34 | 56 | 923 |
| 12:00 PM | 4 | 193 | 10 | 207 | 1 | 0 | 5 | 6 | 8 | 203 | 1 | 212 | 9 | 1 | 8 | 18 | 443 |
| 12:15 PM | 1 | 224 | 15 | 240 | 0 | 0 | 0 | 0 | 11 | 207 | 2 | 220 | 10 | 1 | 16 | 27 | 487 |
| 12:30 PM | 2 | 238 | 17 | 257 | 0 | 1 | 2 | 3 | 13 | 208 | 3 | 224 | 12 | 0 | 14 | 26 | 510 |
| 12:45 PM | 1 | 222 | 11 | 234 | 0 | 1 | 4 | 5 | 15 | 178 | 2 | 195 | 12 | 0 | 23 | 35 | 469 |
| Total | 8 | 877 | 53 | 938 | 1 | 2 | 11 | 14 | 47 | 796 | 8 | 851 | 43 | 2 | 61 | 106 | 1909 |
| 01:00 PM | 1 | 210 | 21 | 232 | 1 | 0 | 4 | 5 | 11 | 208 | 2 | 221 | 11 | 0 | 12 | 23 | 481 |
| 01:15 PM | 3 | 182 | 20 | 205 | 2 | 0 | 4 | 6 | 13 | 221 | 3 | 237 | 14 | 1 | 11 | 26 | 474 |
| Grand Total | 14 | 1680 | 128 | 1822 | 5 | 4 | 24 | 33 | 94 | 1611 | 16 | 1721 | 89 | 4 | 118 | 211 | 3787 |
| Apprch % | 0.8 | 92.2 | 7 | | 15.2 | 12.1 | 72.7 | | 5.5 | 93.6 | 0.9 | | 42.2 | 1.9 | 55.9 | | |
| Total % | 0.4 | 44.4 | 3.4 | 48.1 | 0.1 | 0.1 | 0.6 | 0.9 | 2.5 | 42.5 | 0.4 | 45.4 | 2.4 | 0.1 | 3.1 | 5.6 | |

| | Gene Autry Trail Southbound | | | | Via Escuela Westbound | | | | Gene Autry Trail Northbound | | | | Via Escuela Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 12:15 PM | | | | | | | | | | | | | | | | | |
| 12:15 PM | 1 | 224 | 15 | 240 | 0 | 0 | 0 | 0 | 11 | 207 | 2 | 220 | 10 | **1** | 16 | 27 | 487 |
| 12:30 PM | **2** | **238** | 17 | **257** | 0 | **1** | 2 | 3 | 13 | **208** | **3** | **224** | **12** | 0 | 14 | 26 | **510** |
| 12:45 PM | 1 | 222 | 11 | 234 | 0 | 1 | **4** | **5** | **15** | 178 | 2 | 195 | 12 | 0 | **23** | **35** | 469 |
| 01:00 PM | 1 | 210 | **21** | 232 | **1** | 0 | 4 | 5 | 11 | 208 | 2 | 221 | 11 | 0 | 12 | 23 | 481 |
| Total Volume | 5 | 894 | 64 | 963 | 1 | 2 | 10 | 13 | 50 | 801 | 9 | 860 | 45 | 1 | 65 | 111 | 1947 |
| % App. Total | 0.5 | 92.8 | 6.6 | | 7.7 | 15.4 | 76.9 | | 5.8 | 93.1 | 1 | | 40.5 | 0.9 | 58.6 | | |
| PHF | .625 | .939 | .762 | .937 | .250 | .500 | .625 | .650 | .833 | .963 | .750 | .960 | .938 | .250 | .707 | .793 | .954 |

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City of Palm Springs
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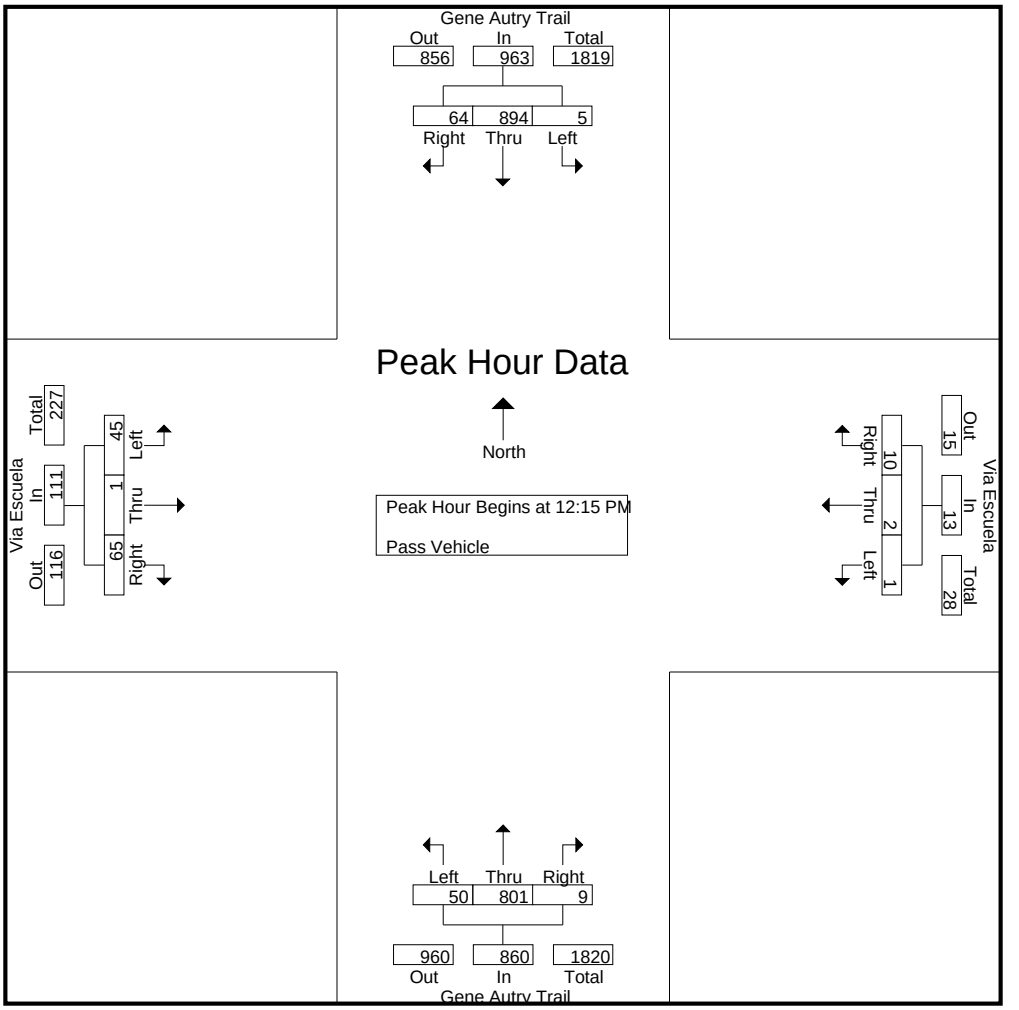
E/W: Via Escuela
Weather: Sunny

File Name : PLSGAVEMD
Site Code : 00000001
Start Date : 5/2/2013
Page No : 2




Peak Hour Analysis From 11:30 AM to 01:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 12:15 PM | | | | 12:30 PM | | | | 12:30 PM | | | | 12:15 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 1 | 224 | 15 | 240 | 0 | **1** | 2 | 3 | 13 | 208 | **3** | 224 | 10 | **1** | 16 | 27 |
| +15 mins. | **2** | **238** | 17 | **257** | 0 | 1 | **4** | 5 | **15** | 178 | 2 | 195 | **12** | 0 | 14 | 26 |
| +30 mins. | 1 | 222 | 11 | 234 | 1 | 0 | 4 | 5 | 11 | 208 | 2 | 221 | 12 | 0 | **23** | **35** |
| +45 mins. | 1 | 210 | **21** | 232 | **2** | 0 | 4 | **6** | 13 | **221** | 3 | **237** | 11 | 0 | 12 | 23 |
| Total Volume | 5 | 894 | 64 | 963 | 3 | 2 | 14 | 19 | 52 | 815 | 10 | 877 | 45 | 1 | 65 | 111 |
| % App. Total | 0.5 | 92.8 | 6.6 | | 15.8 | 10.5 | 73.7 | | 5.9 | 92.9 | 1.1 | | 40.5 | 0.9 | 58.6 | |
| PHF | .625 | .939 | .762 | .937 | .375 | .500 | .875 | .792 | .867 | .922 | .833 | .925 | .938 | .250 | .707 | .793 |

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City of Palm Springs
N/S: Gene Autry Trail
E/W: Via Escuela
Weather: Sunny

File Name : PLSGAVEPM
Site Code : 00000001
Start Date : 5/2/2013
Page No : 1

Groups Printed- Pass Vehicle

| | Gene Autry Trail Southbound | | | | Via Escuela Westbound | | | | Gene Autry Trail Northbound | | | | Via Escuela Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| 04:00 PM | 3 | 241 | 30 | 274 | 1 | 1 | 8 | 10 | 15 | 298 | 1 | 314 | 18 | 2 | 17 | 37 | 635 |
| 04:15 PM | 1 | 217 | 33 | 251 | 1 | 2 | 7 | 10 | 23 | 349 | 0 | 372 | 7 | 1 | 10 | 18 | 651 |
| 04:30 PM | 3 | 224 | 29 | 256 | 1 | 1 | 4 | 6 | 17 | 325 | 1 | 343 | 27 | 1 | 6 | 34 | 639 |
| 04:45 PM | 3 | 237 | 39 | 279 | 0 | 1 | 4 | 5 | 9 | 332 | 0 | 341 | 18 | 0 | 20 | 38 | 663 |
| Total | 10 | 919 | 131 | 1060 | 3 | 5 | 23 | 31 | 64 | 1304 | 2 | 1370 | 70 | 4 | 53 | 127 | 2588 |
| | | | | | | | | | | | | | | | | | |
| 05:00 PM | 4 | 189 | 19 | 212 | 0 | 0 | 8 | 8 | 32 | 284 | 2 | 318 | 21 | 0 | 11 | 32 | 570 |
| 05:15 PM | 1 | 238 | 31 | 270 | 1 | 1 | 5 | 7 | 20 | 333 | 1 | 354 | 38 | 0 | 8 | 46 | 677 |
| 05:30 PM | 1 | 254 | 36 | 291 | 2 | 4 | 9 | 15 | 35 | 329 | 2 | 366 | 18 | 2 | 20 | 40 | 712 |
| 05:45 PM | 1 | 256 | 25 | 282 | 1 | 0 | 5 | 6 | 20 | 289 | 1 | 310 | 12 | 1 | 12 | 25 | 623 |
| Total | 7 | 937 | 111 | 1055 | 4 | 5 | 27 | 36 | 107 | 1235 | 6 | 1348 | 89 | 3 | 51 | 143 | 2582 |
| | | | | | | | | | | | | | | | | | |
| Grand Total | 17 | 1856 | 242 | 2115 | 7 | 10 | 50 | 67 | 171 | 2539 | 8 | 2718 | 159 | 7 | 104 | 270 | 5170 |
| Apprch % | 0.8 | 87.8 | 11.4 | | 10.4 | 14.9 | 74.6 | | 6.3 | 93.4 | 0.3 | | 58.9 | 2.6 | 38.5 | | |
| Total % | 0.3 | 35.9 | 4.7 | 40.9 | 0.1 | 0.2 | 1 | 1.3 | 3.3 | 49.1 | 0.2 | 52.6 | 3.1 | 0.1 | 2 | 5.2 | |

| | Gene Autry Trail Southbound | | | | Via Escuela Westbound | | | | Gene Autry Trail Northbound | | | | Via Escuela Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:45 PM | | | | | | | | | | | | | | | | | |
| 04:45 PM | 3 | 237 | **39** | 279 | 0 | 1 | 4 | 5 | 9 | 332 | 0 | 341 | 18 | 0 | **20** | 38 | 663 |
| 05:00 PM | **4** | 189 | 19 | 212 | 0 | 0 | 8 | 8 | 32 | 284 | **2** | 318 | 21 | 0 | 11 | 32 | 570 |
| 05:15 PM | 1 | 238 | 31 | 270 | 1 | 1 | 5 | 7 | 20 | **333** | 1 | 354 | **38** | 0 | 8 | **46** | 677 |
| 05:30 PM | 1 | **254** | 36 | **291** | **2** | **4** | **9** | **15** | **35** | 329 | 2 | **366** | 18 | **2** | 20 | 40 | **712** |
| Total Volume | 9 | 918 | 125 | 1052 | 3 | 6 | 26 | 35 | 96 | 1278 | 5 | 1379 | 95 | 2 | 59 | 156 | 2622 |
| % App. Total | 0.9 | 87.3 | 11.9 | | 8.6 | 17.1 | 74.3 | | 7 | 92.7 | 0.4 | | 60.9 | 1.3 | 37.8 | | |
| PHF | .563 | .904 | .801 | .904 | .375 | .375 | .722 | .583 | .686 | .959 | .625 | .942 | .625 | .250 | .738 | .848 | .921 |

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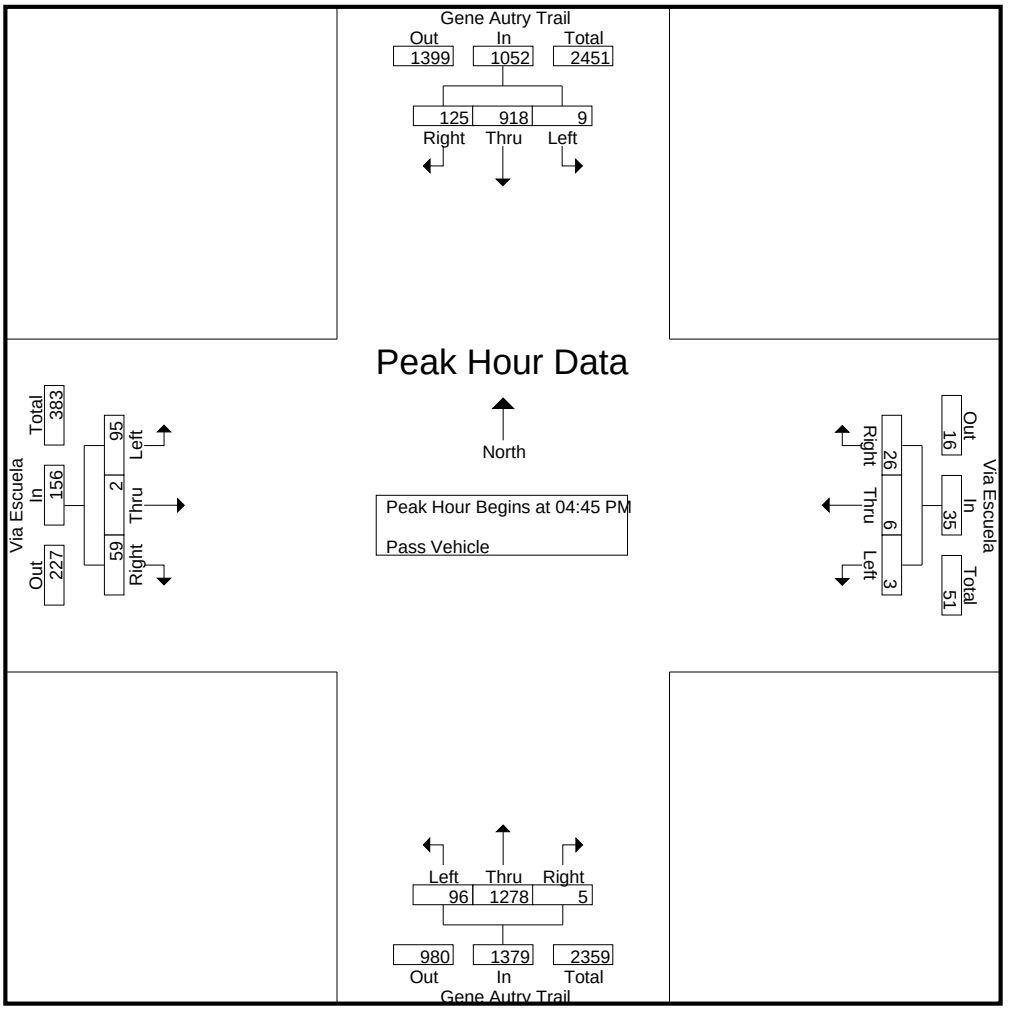
City of Palm Springs
N/S: Gene Autry Trail
E/W: Via Escuela
Weather: Sunny

File Name : PLSGAVEPM
Site Code : 00000001
Start Date : 5/2/2013
Page No : 2




Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 04:00 PM | | | | 05:00 PM | | | | 04:45 PM | | | | 04:45 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | **3** | **241** | 30 | 274 | 0 | 0 | 8 | 8 | 9 | 332 | 0 | 341 | 18 | 0 | **20** | 38 |
| +15 mins. | 1 | 217 | 33 | 251 | 1 | 1 | 5 | 7 | 32 | 284 | **2** | 318 | 21 | 0 | 11 | 32 |
| +30 mins. | 3 | 224 | 29 | 256 | **2** | **4** | **9** | **15** | 20 | **333** | 1 | 354 | **38** | 0 | 8 | **46** |
| +45 mins. | 3 | 237 | **39** | **279** | 1 | 0 | 5 | 6 | **35** | 329 | 2 | **366** | 18 | **2** | 20 | 40 |
| Total Volume | 10 | 919 | 131 | 1060 | 4 | 5 | 27 | 36 | 96 | 1278 | 5 | 1379 | 95 | 2 | 59 | 156 |
| % App. Total | 0.9 | 86.7 | 12.4 | | 11.1 | 13.9 | 75 | | 7 | 92.7 | 0.4 | | 60.9 | 1.3 | 37.8 | |
| PHF | .833 | .953 | .840 | .950 | .500 | .313 | .750 | .600 | .686 | .959 | .625 | .942 | .625 | .250 | .738 | .848 |

# *Appendix B*

## HCM INTERSECTION DELAY AND LOS WORKSHEETS

HCM Methodology
HCM Worksheets

# Appendix B
# Highway Capacity Manual 2000
# Unsignalized Intersection Methodology

Some of the key intersections in the study area are unsignalized and controlled by stop signs on one or more of the approaches. Unsignalized intersections are typically categorized as either two-way stop-controlled (TWSC) or all-way stop-controlled (AWSC) intersections. At TWSC intersections, the approaches controlled by the stop sign are referred to as the minor street approaches. Minor street approaches can be either public streets or private driveways. The intersection approaches that are not controlled by stop signs are called the major street approaches.

To evaluate the ability of these intersections to serve traffic demands during peak hours, the capacity is determined for each minor approach movement and the left-turn movements from the major street onto the minor street, and then compared to the demand for each movement. In this manner, the probable control delay and level of service can be estimated during the peak hour from Table B-1.

## Table B-1
## HCM 2000 Unsignalized Intersection
## Level of Service Criteria[a]

| Level of Service[b] | Average Control Delay (Seconds/Vehicle) |
|---|---|
| A | ≤ 10.0 |
| B | >10.0 and ≤15.0 |
| C | >15.0 and ≤25.0 |
| D | >25.0 and ≤35.0 |
| E | >35.0 and ≤50.0 |
| F | > 50.0 |

a. Source: *Highway Capacity Manual,* Special Report 209", Transportation Research Board, 2000; pg. 17-2 and 17-32.

b. Note that a level of service is not defined for the overall TWSC intersection, but rather for individual movements and intersection approaches.

The methodology utilized to determine the maximum capacity of the minor approach movements and the left turn onto the minor street (in passenger car equivalents per hour or PCPH) accounts for approach grade and speed, heavy vehicle mix, lane configuration, and type of traffic control. It allows the maximum potential capacity to be determined from the conflicting volumes and the critical gap associated with each type of vehicle maneuver. Once the capacity of each of the critical movements is calculated, the anticipated delay and the level of service for each of the intersection movements and each minor approach can be evaluated.

Typically, the movement with the longest average control delay or worst level or service defines the overall intersection evaluation; however, this may be tempered by engineering judgment, when conditions warrant it. Although the level of service is primarily related to the average control delay, which is given in terms of seconds of delay per vehicle by minor movement and intersection approach, other performance measures for TWSC and AWSC intersections include: delay to major street through vehicles, queue length, and volume-to-capacity ratio.

For example, left turns from the minor leg may experience delay consistent with LOS F operation, while the major street through movements experience little or no delay and LOS A. Since the major street through movements represent the majority of the traffic demand at the intersection, the overall intersection LOS would most likely be LOS A or LOS B. If the delay for the traffic on the minor leg is reduced by installing a traffic signal, the overall intersection delay will increase, as large numbers of vehicles on the major through moves are delayed by the new signal. The increase in total delay may lower the overall intersection LOS. For this reason, excessive delays on the minor legs of two-way stop intersections are only mitigated with a traffic signal when the minor street can no longer effectively provide access, as evidenced by traffic signal warrants being met. This eliminates situations where a large number of motorists are delayed for the benefit of only a few cars.

***Capacity Considerations***

A two-way left-turn lane (TWLTL) or a raised or striped median allows a minor stream vehicle to cross one major traffic stream at a time. It results in two-stage gap acceptance, provided that sufficient storage space is available in the median or TWLTL to store vehicles. It reduces the critical gap (the minimum gap that would be acceptable to a driver on the minor approach) in the stream of traffic on the major street and increases the capacity of the minor approach.

The grade of the approach directly affects the capacity of each minor movement. Compared to a level approach, downgrades increase capacity and upgrades decrease the approach capacity.

A flared approach on the minor street increases the capacity of the minor street approach. It allows more vehicles to be served simultaneously. Increasing the length of the flared pavement improves access to the additional lane. Even with a flared approach, vehicles seeking to use the flared lane may be delayed by queued vehicles blocking access to the additional lane. Therefore, flaring does not increase the capacity of the approach to the extent that an additional lane would.

The presence of traffic signals upstream from the intersection on the major street will produce platoons and affect the capacity of the minor street approaches if the signal is located within 0.25 mile of the intersection. Four flow regimes can result: no platoons, platoons from the left only, platoons from the right only and platoons from both directions.

# Appendix B
# Highway Capacity Manual
# Signalized Intersection Methodology

The *Highway Capacity Manual* (HCM 2000) signalized intersection capacity and level of service methodology addresses the capacity and level of service of intersection approach land groups as well as the level of service of the intersection as a whole. The analysis is undertaken in terms of the ratio of demand flow rate to capacity (V/C ratio) for individual movements during a peak 15-minute interval and the composite V/C ratio for the sum of critical movements or lane groups within the intersection. The level of service is determined based upon average control delay per vehicle, as shown in Table B-2 below.

## Table B-2
## 2000 HCM Signalized Intersection LOS Criteria

| Level of Service | Traffic Flow Characteristics | Avg. Control Delay (Seconds/Vehicle) |
|---|---|---|
| **A** | Extremely favorable progression with very low control delay. Most vehicles arrive during the green phase and do not stop. | ≤ 10 |
| **B** | Good progression and short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average delay. | > 10 and ≤ 20 |
| **C** | Satisfactory operation with fair progression and longer cycle lengths. Individual cycle failures may begin to appear. A significant number of vehicles stop but many pass through without stopping. | > 20 and ≤ 35 |
| **D** | Tolerable delay where congestion becomes more noticeable and many vehicles stop. Many vehicles stop. Individual cycle failures are noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high V/C ratios. | > 35 and ≤ 55 |
| **E** | Unstable flow with poor progression, frequent cycle failures, long cycle lengths and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered the limit of acceptable delay by many agencies. | > 55 and ≤ 80 |
| **F** | Oversaturation with arrival flow rates exceeding the capacity of the intersection and many individual cycle failures. Poor progression and long cycle lengths as well as high V/C ratios and high delay values occur at LOS F. Considered unacceptable to most drivers. | > 80 |

Source: *Highway Capacity Manual,* Special Report 209, Transportation Research Board, Fourth Edition, 2000; pp. 10-16.

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ San Rafael Drive* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/14* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Existing* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *1* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LT* | *R* | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *49* | *20* | *150* | *30* | *18* | *6* | *201* | *107* | *35* | *2* | *100* | *38* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | *3* | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | *3.0* | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | *12.0* | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | *0* | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EB Only | WB Only | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *14.0* | G = *14.0* | G = | G = | G = *50.0* | G = | G = | G = |
| | Y = *4* | Y = *4* | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *69* | *150* | | *54* | | *201* | *142* | | *2* | *138* | |
| Lane Group Capacity | | *264* | *1130* | | *262* | | *649* | *1792* | | *647* | *1784* | |
| v/c Ratio | | *0.26* | *0.13* | | *0.21* | | *0.31* | *0.08* | | *0.00* | *0.08* | |
| Green Ratio | | *0.16* | *0.76* | | *0.16* | | *0.56* | *0.56* | | *0.56* | *0.56* | |
| Uniform Delay $d_1$ | | *33.4* | *3.0* | | *33.2* | | *10.7* | *9.3* | | *8.9* | *9.3* | |
| Delay Factor k | | *0.11* | *0.11* | | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *0.5* | *0.1* | | *0.4* | | *0.3* | *0.0* | | *0.0* | *0.0* | |
| PF Factor | | *1.000* | *1.000* | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *34.0* | *3.0* | | *33.5* | | *11.0* | *9.3* | | *8.9* | *9.3* | |
| Lane Group LOS | | *C* | *A* | | *C* | | *B* | *A* | | *A* | *A* | |
| Approach Delay | | *12.8* | | | *33.5* | | | *10.3* | | | *9.3* | |
| Approach LOS | | *B* | | | *C* | | | *B* | | | *A* | |
| Intersection Delay | | *12.5* | | | Intersection LOS | | | | | | *B* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ San Rafael Drive* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/14* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Existing* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *1* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LT* | *R* | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *36* | *13* | *178* | *38* | *20* | *2* | *274* | *135* | *58* | *2* | *109* | *33* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | *3* | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | *3.0* | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | *12.0* | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | *0* | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EB Only | WB Only | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *14.0* | G = *14.0* | G = | G = | G = *50.0* | G = | G = | G = |
| | Y = *4* | Y = *4* | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *49* | *178* | | *60* | | *274* | *193* | | *2* | *142* | |
| Lane Group Capacity | | *264* | *1130* | | *264* | | *647* | *1777* | | *616* | *1796* | |
| v/c Ratio | | *0.19* | *0.16* | | *0.23* | | *0.42* | *0.11* | | *0.00* | *0.08* | |
| Green Ratio | | *0.16* | *0.76* | | *0.16* | | *0.56* | *0.56* | | *0.56* | *0.56* | |
| Uniform Delay $d_1$ | | *33.0* | *3.1* | | *33.3* | | *11.6* | *9.5* | | *8.9* | *9.3* | |
| Delay Factor k | | *0.11* | *0.11* | | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *0.3* | *0.1* | | *0.4* | | *0.4* | *0.0* | | *0.0* | *0.0* | |
| PF Factor | | *1.000* | *1.000* | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *33.4* | *3.1* | | *33.7* | | *12.1* | *9.5* | | *8.9* | *9.3* | |
| Lane Group LOS | | *C* | *A* | | *C* | | *B* | *A* | | *A* | *A* | |
| Approach Delay | | *9.7* | | | *33.7* | | | *11.0* | | | *9.3* | |
| Approach LOS | | *A* | | | *C* | | | *B* | | | *A* | |
| Intersection Delay | | *11.9* | | | Intersection LOS | | | | | | *B* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ San Rafael Drive* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/14* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2020 - No Project No Ext* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *1* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LT* | *R* | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *72* | *21* | *196* | *35* | *20* | *7* | *264* | *188* | *40* | *3* | *176* | *55* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | *3* | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | *3.0* | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | *12.0* | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | *0* | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EB Only | WB Only | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *14.0* | G = *14.0* | G = | G = | G = *50.0* | G = | G = | G = |
| | Y = *4* | Y = *4* | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *93* | *196* | | *62* | | *264* | *228* | | *3* | *231* | |
| Lane Group Capacity | | *264* | *1130* | | *262* | | *594* | *1812* | | *596* | *1794* | |
| v/c Ratio | | *0.35* | *0.17* | | *0.24* | | *0.44* | *0.13* | | *0.01* | *0.13* | |
| Green Ratio | | *0.16* | *0.76* | | *0.16* | | *0.56* | *0.56* | | *0.56* | *0.56* | |
| Uniform Delay $d_1$ | | *33.9* | *3.1* | | *33.3* | | *11.8* | *9.6* | | *8.9* | *9.6* | |
| Delay Factor k | | *0.11* | *0.11* | | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *0.8* | *0.1* | | *0.5* | | *0.5* | *0.0* | | *0.0* | *0.0* | |
| PF Factor | | *1.000* | *1.000* | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *34.8* | *3.2* | | *33.8* | | *12.3* | *9.6* | | *8.9* | *9.6* | |
| Lane Group LOS | | *C* | *A* | | *C* | | *B* | *A* | | *A* | *A* | |
| Approach Delay | | *13.3* | | | *33.8* | | | *11.1* | | | *9.6* | |
| Approach LOS | | *B* | | | *C* | | | *B* | | | *A* | |
| Intersection Delay | | *12.7* | | | Intersection LOS | | | | | | *B* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ San Rafael Drive* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/14* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2020 - No Project No Ext* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *1* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LT* | *R* | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *52* | *14* | *234* | *45* | *21* | *3* | *360* | *238* | *68* | *3* | *193* | *49* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | *3* | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | *3.0* | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | *12.0* | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | *0* | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EB Only | WB Only | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *14.0* | G = *14.0* | G = | G = | G = *50.0* | G = | G = | G = |
| | Y = *4* | Y = *4* | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *66* | *234* | | *69* | | *360* | *306* | | *3* | *242* | |
| Lane Group Capacity | | *263* | *1130* | | *264* | | *588* | *1799* | | *553* | *1804* | |
| v/c Ratio | | *0.25* | *0.21* | | *0.26* | | *0.61* | *0.17* | | *0.01* | *0.13* | |
| Green Ratio | | *0.16* | *0.76* | | *0.16* | | *0.56* | *0.56* | | *0.56* | *0.56* | |
| Uniform Delay $d_1$ | | *33.4* | *3.2* | | *33.4* | | *13.5* | *9.8* | | *8.9* | *9.6* | |
| Delay Factor k | | *0.11* | *0.11* | | *0.11* | | *0.20* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *0.5* | *0.1* | | *0.5* | | *1.9* | *0.0* | | *0.0* | *0.0* | |
| PF Factor | | *1.000* | *1.000* | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *33.9* | *3.3* | | *34.0* | | *15.4* | *9.9* | | *8.9* | *9.6* | |
| Lane Group LOS | | *C* | *A* | | *C* | | *B* | *A* | | *A* | *A* | |
| Approach Delay | | *10.0* | | | *34.0* | | | *12.8* | | | *9.6* | |
| Approach LOS | | *B* | | | *C* | | | *B* | | | *A* | |
| Intersection Delay | | *12.7* | | | Intersection LOS | | | | | | *B* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ San Rafael Drive* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/14* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2020 - W/ Project No Ext* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *1* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LT* | *R* | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *72* | *32* | *198* | *86* | *58* | *7* | *270* | *188* | *55* | *3* | *176* | *55* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | *3* | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | *3.0* | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | *12.0* | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | *0* | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EB Only | WB Only | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *14.0* | G = *14.0* | G = | G = | G = *50.0* | G = | G = | G = |
| | Y = *4* | Y = *4* | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *104* | *198* | | *151* | | *270* | *243* | | *3* | *231* | |
| Lane Group Capacity | | *264* | *1130* | | *264* | | *594* | *1798* | | *588* | *1794* | |
| v/c Ratio | | *0.39* | *0.18* | | *0.57* | | *0.45* | *0.14* | | *0.01* | *0.13* | |
| Green Ratio | | *0.16* | *0.76* | | *0.16* | | *0.56* | *0.56* | | *0.56* | *0.56* | |
| Uniform Delay $d_1$ | | *34.2* | *3.1* | | *35.2* | | *11.9* | *9.6* | | *8.9* | *9.6* | |
| Delay Factor k | | *0.11* | *0.11* | | *0.17* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *1.0* | *0.1* | | *3.0* | | *0.6* | *0.0* | | *0.0* | *0.0* | |
| PF Factor | | *1.000* | *1.000* | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *35.2* | *3.2* | | *38.2* | | *12.4* | *9.6* | | *8.9* | *9.6* | |
| Lane Group LOS | | *D* | *A* | | *D* | | *B* | *A* | | *A* | *A* | |
| Approach Delay | | *14.2* | | | *38.2* | | | *11.1* | | | *9.6* | |
| Approach LOS | | *B* | | | *D* | | | *B* | | | *A* | |
| Intersection Delay | | *15.0* | | | Intersection LOS | | | | | | *B* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ San Rafael Drive* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/14* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2020 - W/ Project No Ext* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *1* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LT* | *R* | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *52* | *53* | *241* | *74* | *43* | *3* | *364* | *238* | *121* | *3* | *193* | *49* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | *3* | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | *3.0* | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | *12.0* | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | *0* | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EB Only | WB Only | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *14.0* | G = *14.0* | G = | G = | G = *50.0* | G = | G = | G = |
| | Y = *4* | Y = *4* | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *105* | *241* | | *120* | | *364* | *359* | | *3* | *242* | |
| Lane Group Capacity | | *267* | *1130* | | *265* | | *588* | *1767* | | *518* | *1804* | |
| v/c Ratio | | *0.39* | *0.21* | | *0.45* | | *0.62* | *0.20* | | *0.01* | *0.13* | |
| Green Ratio | | *0.16* | *0.76* | | *0.16* | | *0.56* | *0.56* | | *0.56* | *0.56* | |
| Uniform Delay $d_1$ | | *34.2* | *3.2* | | *34.5* | | *13.5* | *10.0* | | *8.9* | *9.6* | |
| Delay Factor k | | *0.11* | *0.11* | | *0.11* | | *0.20* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *1.0* | *0.1* | | *1.2* | | *2.0* | *0.1* | | *0.0* | *0.0* | |
| PF Factor | | *1.000* | *1.000* | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *35.1* | *3.3* | | *35.8* | | *15.6* | *10.1* | | *8.9* | *9.6* | |
| Lane Group LOS | | *D* | *A* | | *D* | | *B* | *B* | | *A* | *A* | |
| Approach Delay | | *13.0* | | | *35.8* | | | *12.8* | | | *9.6* | |
| Approach LOS | | *B* | | | *D* | | | *B* | | | *A* | |
| Intersection Delay | | *14.2* | | | Intersection LOS | | | | | | *B* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ San Rafael Drive* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/14* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2020 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *1* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LT* | *R* | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *74* | *22* | *108* | *34* | *21* | *7* | *147* | *313* | *40* | *3* | *264* | *57* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | *3* | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | *3.0* | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | *12.0* | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | *0* | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EB Only | WB Only | 03 | 04 | Excl. Left | NB Only | Thru & RT | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *14.0* | G = *14.0* | G = | G = | G = *5.0* | G = *8.0* | G = *29.0* | G = |
| | Y = *4* | Y = *4* | Y = | Y = | Y = *4* | Y = *4* | Y = *4* | Y = |

Duration of Analysis (hrs) = *1.00* | Cycle Length C = *90.0*

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *96* | *108* | | *62* | | *147* | *353* | | *3* | *321* | |
| Lane Group Capacity | | *264* | *316* | | *262* | | *316* | *1500* | | *93* | *1050* | |
| v/c Ratio | | *0.36* | *0.34* | | *0.24* | | *0.47* | *0.24* | | *0.03* | *0.31* | |
| Green Ratio | | *0.16* | *0.21* | | *0.16* | | *0.19* | *0.46* | | *0.06* | *0.32* | |
| Uniform Delay $d_1$ | | *34.0* | *30.2* | | *33.3* | | *32.5* | *14.9* | | *40.2* | *22.9* | |
| Delay Factor k | | *0.11* | *0.11* | | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *0.9* | *0.7* | | *0.5* | | *1.1* | *0.1* | | *0.1* | *0.2* | |
| PF Factor | | *1.000* | *1.000* | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *34.9* | *30.8* | | *33.8* | | *33.5* | *15.0* | | *40.4* | *23.1* | |
| Lane Group LOS | | *C* | *C* | | *C* | | *C* | *B* | | *D* | *C* | |
| Approach Delay | | *32.7* | | | *33.8* | | | *20.5* | | | *23.3* | |
| Approach LOS | | *C* | | | *C* | | | *C* | | | *C* | |
| Intersection Delay | | *24.3* | | | Intersection LOS | | | | | | *C* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ San Rafael Drive* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/14* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2020 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *1* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LT* | *R* | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *53* | *14* | *130* | *44* | *22* | *3* | *199* | *411* | *66* | *3* | *299* | *50* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | *3* | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | *3.0* | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | *12.0* | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | *0* | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EB Only | WB Only | 03 | 04 | Excl. Left | NB Only | Thru & RT | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *14.0* | G = *14.0* | G = | G = | G = *5.0* | G = *14.0* | G = *23.0* | G = |
| | Y = *4* | Y = *4* | Y = | Y = | Y = *4* | Y = *4* | Y = *4* | Y = |

Duration of Analysis (hrs) = *1.00* — Cycle Length C = *90.0*

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *67* | *130* | | *69* | | *199* | *477* | | *3* | *349* | |
| Lane Group Capacity | | *263* | *1130* | | *264* | | *427* | *1494* | | *93* | *838* | |
| v/c Ratio | | *0.25* | *0.12* | | *0.26* | | *0.47* | *0.32* | | *0.03* | *0.42* | |
| Green Ratio | | *0.16* | *0.76* | | *0.16* | | *0.26* | *0.46* | | *0.06* | *0.26* | |
| Uniform Delay $d_1$ | | *33.4* | *2.9* | | *33.4* | | *28.3* | *15.6* | | *40.2* | *27.9* | |
| Delay Factor k | | *0.11* | *0.11* | | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *0.5* | *0.0* | | *0.5* | | *0.8* | *0.1* | | *0.1* | *0.3* | |
| PF Factor | | *1.000* | *1.000* | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *33.9* | *3.0* | | *34.0* | | *29.1* | *15.7* | | *40.4* | *28.2* | |
| Lane Group LOS | | *C* | *A* | | *C* | | *C* | *B* | | *D* | *C* | |
| Approach Delay | | *13.5* | | | *34.0* | | | *19.7* | | | *28.3* | |
| Approach LOS | | *B* | | | *C* | | | *B* | | | *C* | |
| Intersection Delay | | *21.9* | | | Intersection LOS | | | | | | *C* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ San Rafael Drive* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/14* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2020 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *1* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LT* | *R* | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *74* | *26* | *109* | *85* | *34* | *32* | *149* | *317* | *55* | *10* | *265* | *57* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | *3* | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | *3.0* | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | *12.0* | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | *0* | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EB Only | WB Only | 03 | 04 | Excl. Left | NB Only | Thru & RT | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *14.0* | G = *14.0* | G = | G = | G = *5.0* | G = *7.0* | G = *30.0* | G = |
| | Y = *4* | Y = *4* | Y = | Y = | Y = *4* | Y = *4* | Y = *4* | Y = |

Duration of Analysis (hrs) = *1.00* — Cycle Length C = *90.0*

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *100* | *109* | | *151* | | *149* | *372* | | *10* | *322* | |
| Lane Group Capacity | | *264* | *316* | | *259* | | *297* | *1492* | | *93* | *1087* | |
| v/c Ratio | | *0.38* | *0.34* | | *0.58* | | *0.50* | *0.25* | | *0.11* | *0.30* | |
| Green Ratio | | *0.16* | *0.21* | | *0.16* | | *0.18* | *0.46* | | *0.06* | *0.33* | |
| Uniform Delay $d_1$ | | *34.1* | *30.2* | | *35.3* | | *33.4* | *15.0* | | *40.4* | *22.2* | |
| Delay Factor k | | *0.11* | *0.11* | | *0.17* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *0.9* | *0.7* | | *3.4* | | *1.4* | *0.1* | | *0.5* | *0.2* | |
| PF Factor | | *1.000* | *1.000* | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *35.0* | *30.9* | | *38.7* | | *34.8* | *15.1* | | *40.9* | *22.3* | |
| Lane Group LOS | | *D* | *C* | | *D* | | *C* | *B* | | *D* | *C* | |
| Approach Delay | | *32.8* | | | *38.7* | | | *20.7* | | | *22.9* | |
| Approach LOS | | *C* | | | *D* | | | *C* | | | *C* | |
| Intersection Delay | | *25.7* | | | Intersection LOS | | | | | | *C* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ San Rafael Drive* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/14* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2020 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *1* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LT* | *R* | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *53* | *28* | *132* | *73* | *30* | *17* | *200* | *414* | *119* | *28* | *304* | *50* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | *3* | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | *3.0* | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | *12.0* | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | *0* | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EB Only | WB Only | 03 | 04 | Excl. Left | NB Only | Thru & RT | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *14.0* | G = *14.0* | G = | G = | G = *5.0* | G = *17.0* | G = *20.0* | G = |
| | Y = *4* | Y = *4* | Y = | Y = | Y = *4* | Y = *4* | Y = *4* | Y = |

Duration of Analysis (hrs) = *1.00* — Cycle Length C = *90.0*

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *81* | *132* | | *120* | | *200* | *533* | | *28* | *354* | |
| Lane Group Capacity | | *265* | *1130* | | *261* | | *483* | *1475* | | *93* | *729* | |
| v/c Ratio | | *0.31* | *0.12* | | *0.46* | | *0.41* | *0.36* | | *0.30* | *0.49* | |
| Green Ratio | | *0.16* | *0.76* | | *0.16* | | *0.29* | *0.46* | | *0.06* | *0.22* | |
| Uniform Delay $d_1$ | | *33.7* | *2.9* | | *34.6* | | *25.8* | *16.0* | | *40.8* | *30.5* | |
| Delay Factor k | | *0.11* | *0.11* | | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *0.7* | *0.0* | | *1.3* | | *0.6* | *0.2* | | *1.8* | *0.5* | |
| PF Factor | | *1.000* | *1.000* | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *34.3* | *3.0* | | *35.9* | | *26.4* | *16.1* | | *42.7* | *31.0* | |
| Lane Group LOS | | *C* | *A* | | *D* | | *C* | *B* | | *D* | *C* | |
| Approach Delay | | *14.9* | | | *35.9* | | | *18.9* | | | *31.9* | |
| Approach LOS | | *B* | | | *D* | | | *B* | | | *C* | |
| Intersection Delay | | *23.2* | | | Intersection LOS | | | | | | *C* | |



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# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ San Rafael Drive* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/14* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2030 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *1* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LT* | *R* | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *131* | *27* | *184* | *42* | *26* | *8* | *249* | *565* | *49* | *3* | *477* | *101* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | *3* | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | *3.0* | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | *12.0* | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | *0* | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EB Only | WB Only | 03 | 04 | Excl. Left | NB Only | Thru & RT | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *14.0* | G = *14.0* | G = | G = | G = *5.0* | G = *11.0* | G = *26.0* | G = |
| | Y = *4* | Y = *4* | Y = | Y = | Y = *4* | Y = *4* | Y = *4* | Y = |

Duration of Analysis (hrs) = *1.00* — Cycle Length C = *90.0*

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *158* | *184* | | *76* | | *249* | *614* | | *3* | *578* | |
| Lane Group Capacity | | *270* | *325* | | *270* | | *382* | *1551* | | *96* | *969* | |
| v/c Ratio | | *0.59* | *0.57* | | *0.28* | | *0.65* | *0.40* | | *0.03* | *0.60* | |
| Green Ratio | | *0.16* | *0.21* | | *0.16* | | *0.22* | *0.46* | | *0.06* | *0.29* | |
| Uniform Delay $d_1$ | | *35.3* | *31.8* | | *33.6* | | *31.8* | *16.3* | | *40.2* | *27.5* | |
| Delay Factor k | | *0.18* | *0.16* | | *0.11* | | *0.23* | *0.11* | | *0.11* | *0.19* | |
| Incremental Delay $d_2$ | | *3.3* | *2.3* | | *0.6* | | *4.0* | *0.2* | | *0.1* | *1.0* | |
| PF Factor | | *1.000* | *1.000* | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *38.6* | *34.1* | | *34.1* | | *35.8* | *16.4* | | *40.3* | *28.5* | |
| Lane Group LOS | | *D* | *C* | | *C* | | *D* | *B* | | *D* | *C* | |
| Approach Delay | | *36.2* | | | *34.1* | | | *22.0* | | | *28.6* | |
| Approach LOS | | *D* | | | *C* | | | *C* | | | *C* | |
| Intersection Delay | | *27.2* | | | Intersection LOS | | | | | | *C* | |



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# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ San Rafael Drive* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/14* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2030 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *1* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LT* | *R* | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *95* | *18* | *222* | *53* | *27* | *3* | *338* | *742* | *81* | *3* | *541* | *89* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | *3* | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | *3.0* | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | *12.0* | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | *0* | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EB Only | WB Only | 03 | 04 | Excl. Left | NB Only | Thru & RT | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *14.0* | G = *14.0* | G = | G = | G = *5.0* | G = *14.0* | G = *23.0* | G = |
| | Y = *4* | Y = *4* | Y = | Y = | Y = *4* | Y = *4* | Y = *4* | Y = |

Duration of Analysis (hrs) = *1.00* — Cycle Length C = *90.0*

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *113* | *222* | | *83* | | *338* | *823* | | *3* | *630* | |
| Lane Group Capacity | | *270* | *1162* | | *271* | | *439* | *1546* | | *96* | *862* | |
| v/c Ratio | | *0.42* | *0.19* | | *0.31* | | *0.77* | *0.53* | | *0.03* | *0.73* | |
| Green Ratio | | *0.16* | *0.76* | | *0.16* | | *0.26* | *0.46* | | *0.06* | *0.26* | |
| Uniform Delay $d_1$ | | *34.3* | *3.1* | | *33.7* | | *31.0* | *17.6* | | *40.2* | *30.7* | |
| Delay Factor k | | *0.11* | *0.11* | | *0.11* | | *0.32* | *0.14* | | *0.11* | *0.29* | |
| Incremental Delay $d_2$ | | *1.1* | *0.1* | | *0.6* | | *8.6* | *0.4* | | *0.1* | *3.3* | |
| PF Factor | | *1.000* | *1.000* | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *35.4* | *3.2* | | *34.3* | | *39.7* | *18.0* | | *40.3* | *33.9* | |
| Lane Group LOS | | *D* | *A* | | *C* | | *D* | *B* | | *D* | *C* | |
| Approach Delay | | *14.1* | | | *34.3* | | | *24.3* | | | *34.0* | |
| Approach LOS | | *B* | | | *C* | | | *C* | | | *C* | |
| Intersection Delay | | *25.9* | | | Intersection LOS | | | | | | *C* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ San Rafael Drive* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/14* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2030 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *1* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LT* | *R* | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *131* | *31* | *185* | *93* | *39* | *33* | *251* | *569* | *64* | *10* | *478* | *101* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | *3* | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | *3.0* | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | *12.0* | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | *0* | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EB Only | WB Only | 03 | 04 | Excl. Left | NB Only | Thru & RT | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *14.0* | G = *14.0* | G = | G = | G = *5.0* | G = *11.0* | G = *26.0* | G = |
| | Y = *4* | Y = *4* | Y = | Y = | Y = *4* | Y = *4* | Y = *4* | Y = |

Duration of Analysis (hrs) = *1.00* — Cycle Length C = *90.0*

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *162* | *185* | | *165* | | *251* | *633* | | *10* | *579* | |
| Lane Group Capacity | | *271* | *325* | | *266* | | *382* | *1546* | | *96* | *969* | |
| v/c Ratio | | *0.60* | *0.57* | | *0.62* | | *0.66* | *0.41* | | *0.10* | *0.60* | |
| Green Ratio | | *0.16* | *0.21* | | *0.16* | | *0.22* | *0.46* | | *0.06* | *0.29* | |
| Uniform Delay $d_1$ | | *35.4* | *31.8* | | *35.5* | | *31.9* | *16.4* | | *40.4* | *27.5* | |
| Delay Factor k | | *0.19* | *0.16* | | *0.20* | | *0.23* | *0.11* | | *0.11* | *0.19* | |
| Incremental Delay $d_2$ | | *3.7* | *2.4* | | *4.5* | | *4.2* | *0.2* | | *0.5* | *1.0* | |
| PF Factor | | *1.000* | *1.000* | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *39.0* | *34.2* | | *40.0* | | *36.0* | *16.6* | | *40.9* | *28.5* | |
| Lane Group LOS | | *D* | *C* | | *D* | | *D* | *B* | | *D* | *C* | |
| Approach Delay | | *36.5* | | | *40.0* | | | *22.1* | | | *28.7* | |
| Approach LOS | | *D* | | | *D* | | | *C* | | | *C* | |
| Intersection Delay | | *28.1* | | | Intersection LOS | | | | | | *C* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ San Rafael Drive* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/14* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2030 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *1* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LT* | *R* | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *95* | *32* | *224* | *82* | *35* | *17* | *339* | *745* | *134* | *28* | *546* | *89* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | *2.0* | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | *3* | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | *3.0* | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | *12.0* | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | *0* | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EB Only | WB Only | 03 | 04 | Excl. Left | NB Only | Thru & RT | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *14.0* | G = *14.0* | G = | G = | G = *5.0* | G = *16.0* | G = *21.0* | G = |
| | Y = *4* | Y = *4* | Y = | Y = | Y = *4* | Y = *4* | Y = *4* | Y = |

Duration of Analysis (hrs) = *1.00* — Cycle Length C = *90.0*

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *127* | *224* | | *134* | | *339* | *879* | | *28* | *635* | |
| Lane Group Capacity | | *271* | *1162* | | *268* | | *478* | *1534* | | *96* | *787* | |
| v/c Ratio | | *0.47* | *0.19* | | *0.50* | | *0.71* | *0.57* | | *0.29* | *0.81* | |
| Green Ratio | | *0.16* | *0.76* | | *0.16* | | *0.28* | *0.46* | | *0.06* | *0.23* | |
| Uniform Delay $d_1$ | | *34.6* | *3.1* | | *34.8* | | *29.2* | *18.1* | | *40.8* | *32.6* | |
| Delay Factor k | | *0.11* | *0.11* | | *0.11* | | *0.27* | *0.17* | | *0.11* | *0.35* | |
| Incremental Delay $d_2$ | | *1.3* | *0.1* | | *1.5* | | *5.0* | *0.5* | | *1.7* | *6.6* | |
| PF Factor | | *1.000* | *1.000* | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *35.9* | *3.2* | | *36.3* | | *34.2* | *18.6* | | *42.5* | *39.1* | |
| Lane Group LOS | | *D* | *A* | | *D* | | *C* | *B* | | *D* | *D* | |
| Approach Delay | | *15.0* | | | *36.3* | | | *22.9* | | | *39.3* | |
| Approach LOS | | *B* | | | *D* | | | *C* | | | *D* | |
| Intersection Delay | | *27.1* | | | Intersection LOS | | | | | | *C* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Racquet Club Dr.* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Existing* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *2* | *0* | *1* | *2* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *16* | *171* | *114* | *21* | *175* | *161* | *116* | *231* | *17* | *79* | *242* | *14* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *37.0* | G = | G = | G = | G = *45.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *16* | *285* | | *21* | *336* | | *116* | *248* | | *79* | *256* | |
| Lane Group Capacity | *379* | *1295* | | *409* | *1278* | | *522* | *1658* | | *526* | *1661* | |
| v/c Ratio | *0.04* | *0.22* | | *0.05* | *0.26* | | *0.22* | *0.15* | | *0.15* | *0.15* | |
| Green Ratio | *0.41* | *0.41* | | *0.41* | *0.41* | | *0.50* | *0.50* | | *0.50* | *0.50* | |
| Uniform Delay $d_1$ | *15.9* | *17.2* | | *15.9* | *17.5* | | *12.7* | *12.2* | | *12.2* | *12.2* | |
| Delay Factor k | *0.11* | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | *0.0* | *0.1* | | *0.1* | *0.1* | | *0.2* | *0.0* | | *0.1* | *0.0* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | *15.9* | *17.2* | | *16.0* | *17.6* | | *12.9* | *12.2* | | *12.3* | *12.2* | |
| Lane Group LOS | *B* | *B* | | *B* | *B* | | *B* | *B* | | *B* | *B* | |
| Approach Delay | *17.2* | | | *17.5* | | | *12.4* | | | *12.2* | | |
| Approach LOS | *B* | | | *B* | | | *B* | | | *B* | | |
| Intersection Delay | *14.8* | | | Intersection LOS | | | | | | *B* | | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Racquet Club Dr.* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Existing* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *2* | *0* | *1* | *2* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *16* | *145* | *74* | *29* | *245* | *200* | *145* | *334* | *24* | *116* | *213* | *8* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *37.0* | G = | G = | G = | G = *45.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *16* | *219* | | *29* | *445* | | *145* | *358* | | *116* | *221* | |
| Lane Group Capacity | *320* | *1307* | | *445* | *1284* | | *540* | *1658* | | *461* | *1666* | |
| v/c Ratio | *0.05* | *0.17* | | *0.07* | *0.35* | | *0.27* | *0.22* | | *0.25* | *0.13* | |
| Green Ratio | *0.41* | *0.41* | | *0.41* | *0.41* | | *0.50* | *0.50* | | *0.50* | *0.50* | |
| Uniform Delay $d_1$ | *15.9* | *16.8* | | *16.0* | *18.2* | | *13.0* | *12.6* | | *12.9* | *12.0* | |
| Delay Factor k | *0.11* | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | *0.1* | *0.1* | | *0.1* | *0.2* | | *0.3* | *0.1* | | *0.3* | *0.0* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | *16.0* | *16.8* | | *16.1* | *18.4* | | *13.3* | *12.7* | | *13.2* | *12.1* | |
| Lane Group LOS | *B* | *B* | | *B* | *B* | | *B* | *B* | | *B* | *B* | |
| Approach Delay | *16.8* | | | *18.2* | | | *12.8* | | | *12.5* | | |
| Approach LOS | *B* | | | *B* | | | *B* | | | *B* | | |
| Intersection Delay | *15.0* | | | Intersection LOS | | | | | | *B* | | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Racquet Club Dr.* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2020 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *2* | *0* | *1* | *2* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *20* | *196* | *139* | *20* | *200* | *201* | *142* | *317* | *20* | *99* | *331* | *17* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *31.0* | G = | G = | G = | G = *51.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *20* | *335* | | *20* | *401* | | *142* | *337* | | *99* | *348* | |
| Lane Group Capacity | *274* | *1082* | | *308* | *1067* | | *537* | *1881* | | *545* | *1884* | |
| v/c Ratio | *0.07* | *0.31* | | *0.06* | *0.38* | | *0.26* | *0.18* | | *0.18* | *0.18* | |
| Green Ratio | *0.34* | *0.34* | | *0.34* | *0.34* | | *0.57* | *0.57* | | *0.57* | *0.57* | |
| Uniform Delay $d_1$ | *19.8* | *21.6* | | *19.8* | *22.2* | | *9.9* | *9.4* | | *9.4* | *9.4* | |
| Delay Factor k | *0.11* | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | *0.1* | *0.2* | | *0.1* | *0.2* | | *0.3* | *0.0* | | *0.2* | *0.0* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | *20.0* | *21.8* | | *19.9* | *22.4* | | *10.2* | *9.5* | | *9.6* | *9.5* | |
| Lane Group LOS | *B* | *C* | | *B* | *C* | | *B* | *A* | | *A* | *A* | |
| Approach Delay | *21.7* | | | *22.3* | | | *9.7* | | | *9.5* | | |
| Approach LOS | *C* | | | *C* | | | *A* | | | *A* | | |
| Intersection Delay | *15.3* | | | Intersection LOS | | | | | | *B* | | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Racquet Club Dr.* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2020 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *2* | *0* | *1* | *2* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *20* | *166* | *90* | *33* | *280* | *250* | *177* | *456* | *24* | *145* | *291* | *10* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *30.0* | G = | G = | G = | G = *50.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *88.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *20* | *256* | | *33* | *530* | | *177* | *480* | | *145* | *301* | |
| Lane Group Capacity | *213* | *1082* | | *348* | *1061* | | *568* | *1889* | | *457* | *1894* | |
| v/c Ratio | *0.09* | *0.24* | | *0.09* | *0.50* | | *0.31* | *0.25* | | *0.32* | *0.16* | |
| Green Ratio | *0.34* | *0.34* | | *0.34* | *0.34* | | *0.57* | *0.57* | | *0.57* | *0.57* | |
| Uniform Delay $d_1$ | *19.7* | *20.8* | | *19.8* | *23.0* | | *10.0* | *9.6* | | *10.0* | *9.0* | |
| Delay Factor k | *0.11* | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | *0.2* | *0.1* | | *0.1* | *0.4* | | *0.3* | *0.1* | | *0.4* | *0.0* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | *19.9* | *20.9* | | *19.9* | *23.4* | | *10.3* | *9.7* | | *10.4* | *9.1* | |
| Lane Group LOS | *B* | *C* | | *B* | *C* | | *B* | *A* | | *B* | *A* | |
| Approach Delay | *20.8* | | | *23.2* | | | *9.8* | | | *9.5* | | |
| Approach LOS | *C* | | | *C* | | | *A* | | | *A* | | |
| Intersection Delay | *15.2* | | | Intersection LOS | | | | | | *B* | | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Racquet Club Dr.* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2020 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *2* | *0* | *1* | *2* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *23* | *200* | *139* | *33* | *213* | *211* | *142* | *326* | *24* | *112* | *362* | *26* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *31.0* | G = | G = | G = | G = *51.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *23* | *339* | | *33* | *424* | | *142* | *350* | | *112* | *388* | |
| Lane Group Capacity | *263* | *1083* | | *306* | *1068* | | *511* | *1878* | | *536* | *1879* | |
| v/c Ratio | *0.09* | *0.31* | | *0.11* | *0.40* | | *0.28* | *0.19* | | *0.21* | *0.21* | |
| Green Ratio | *0.34* | *0.34* | | *0.34* | *0.34* | | *0.57* | *0.57* | | *0.57* | *0.57* | |
| Uniform Delay $d_1$ | *19.9* | *21.7* | | *20.1* | *22.4* | | *10.0* | *9.4* | | *9.6* | *9.6* | |
| Delay Factor k | *0.11* | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | *0.1* | *0.2* | | *0.2* | *0.2* | | *0.3* | *0.0* | | *0.2* | *0.1* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | *20.1* | *21.8* | | *20.2* | *22.6* | | *10.3* | *9.5* | | *9.8* | *9.6* | |
| Lane Group LOS | *C* | *C* | | *C* | *C* | | *B* | *A* | | *A* | *A* | |
| Approach Delay | *21.7* | | | *22.5* | | | *9.7* | | | *9.7* | | |
| Approach LOS | *C* | | | *C* | | | *A* | | | *A* | | |
| Intersection Delay | *15.3* | | | Intersection LOS | | | | | | *B* | | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Racquet Club Dr.* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2020 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *2* | *0* | *1* | *2* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *29* | *180* | *90* | *41* | *288* | *266* | *177* | *488* | *38* | *158* | *309* | *15* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *31.0* | G = | G = | G = | G = *51.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *29* | *270* | | *41* | *554* | | *177* | *526* | | *158* | *324* | |
| Lane Group Capacity | *206* | *1096* | | *343* | *1071* | | *554* | *1877* | | *428* | *1885* | |
| v/c Ratio | *0.14* | *0.25* | | *0.12* | *0.52* | | *0.32* | *0.28* | | *0.37* | *0.17* | |
| Green Ratio | *0.34* | *0.34* | | *0.34* | *0.34* | | *0.57* | *0.57* | | *0.57* | *0.57* | |
| Uniform Delay $d_1$ | *20.3* | *21.1* | | *20.2* | *23.5* | | *10.3* | *10.0* | | *10.7* | *9.4* | |
| Delay Factor k | *0.11* | *0.11* | | *0.11* | *0.12* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | *0.3* | *0.1* | | *0.2* | *0.4* | | *0.3* | *0.1* | | *0.5* | *0.0* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | *20.6* | *21.3* | | *20.3* | *24.0* | | *10.7* | *10.1* | | *11.2* | *9.4* | |
| Lane Group LOS | *C* | *C* | | *C* | *C* | | *B* | *B* | | *B* | *A* | |
| Approach Delay | *21.2* | | | *23.7* | | | *10.3* | | | *10.0* | | |
| Approach LOS | *C* | | | *C* | | | *B* | | | *B* | | |
| Intersection Delay | *15.6* | | | Intersection LOS | | | | | | *B* | | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Racquet Club Dr.* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2030 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *2* | *0* | *1* | *2* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *27* | *239* | *185* | *29* | *243* | *278* | *188* | *497* | *27* | *137* | *519* | *23* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *31.0* | G = | G = | G = | G = *51.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *27* | *424* | | *29* | *521* | | *188* | *524* | | *137* | *542* | |
| Lane Group Capacity | *226* | *1109* | | *271* | *1092* | | *432* | *1937* | | *442* | *1940* | |
| v/c Ratio | *0.12* | *0.38* | | *0.11* | *0.48* | | *0.44* | *0.27* | | *0.31* | *0.28* | |
| Green Ratio | *0.34* | *0.34* | | *0.34* | *0.34* | | *0.57* | *0.57* | | *0.57* | *0.57* | |
| Uniform Delay $d_1$ | *20.2* | *22.3* | | *20.1* | *23.1* | | *11.2* | *10.0* | | *10.3* | *10.0* | |
| Delay Factor k | *0.11* | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | *0.2* | *0.2* | | *0.2* | *0.3* | | *0.7* | *0.1* | | *0.4* | *0.1* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | *20.4* | *22.5* | | *20.3* | *23.5* | | *11.9* | *10.1* | | *10.7* | *10.1* | |
| Lane Group LOS | *C* | *C* | | *C* | *C* | | *B* | *B* | | *B* | *B* | |
| Approach Delay | *22.4* | | | *23.3* | | | *10.5* | | | *10.2* | | |
| Approach LOS | *C* | | | *C* | | | *B* | | | *B* | | |
| Intersection Delay | *15.6* | | | Intersection LOS | | | | | | *B* | | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Racquet Club Dr.* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2030 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *2* | *0* | *1* | *2* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *27* | *201* | *119* | *45* | *340* | *344* | *234* | *714* | *35* | *200* | *455* | *14* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *30.0* | G = | G = | G = | G = *52.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *27* | *320* | | *45* | *684* | | *234* | *749* | | *200* | *469* | |
| Lane Group Capacity | *150* | *1084* | | *312* | *1062* | | *486* | *1977* | | *336* | *1982* | |
| v/c Ratio | *0.18* | *0.30* | | *0.14* | *0.64* | | *0.48* | *0.38* | | *0.60* | *0.24* | |
| Green Ratio | *0.33* | *0.33* | | *0.33* | *0.33* | | *0.58* | *0.58* | | *0.58* | *0.58* | |
| Uniform Delay $d_1$ | *21.3* | *22.2* | | *21.0* | *25.5* | | *11.1* | *10.3* | | *12.2* | *9.3* | |
| Delay Factor k | *0.11* | *0.11* | | *0.11* | *0.22* | | *0.11* | *0.11* | | *0.18* | *0.11* | |
| Incremental Delay $d_2$ | *0.6* | *0.2* | | *0.2* | *1.4* | | *0.8* | *0.1* | | *2.9* | *0.1* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | *21.9* | *22.3* | | *21.2* | *26.8* | | *11.9* | *10.4* | | *15.1* | *9.4* | |
| Lane Group LOS | *C* | *C* | | *C* | *C* | | *B* | *B* | | *B* | *A* | |
| Approach Delay | *22.3* | | | *26.5* | | | *10.7* | | | *11.1* | | |
| Approach LOS | *C* | | | *C* | | | *B* | | | *B* | | |
| Intersection Delay | *16.5* | | | Intersection LOS | | | | | | *B* | | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Racquet Club Dr.* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2030 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *2* | *0* | *1* | *2* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *30* | *243* | *185* | *42* | *256* | *288* | *188* | *506* | *31* | *150* | *550* | *32* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *34.0* | G = | G = | G = | G = *48.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *30* | *428* | | *42* | *544* | | *188* | *537* | | *150* | *582* | |
| Lane Group Capacity | *248* | *1217* | | *303* | *1198* | | *378* | *1821* | | *402* | *1822* | |
| v/c Ratio | *0.12* | *0.35* | | *0.14* | *0.45* | | *0.50* | *0.29* | | *0.37* | *0.32* | |
| Green Ratio | *0.38* | *0.38* | | *0.38* | *0.38* | | *0.53* | *0.53* | | *0.53* | *0.53* | |
| Uniform Delay $d_1$ | *18.3* | *20.1* | | *18.4* | *21.0* | | *13.3* | *11.6* | | *12.2* | *11.8* | |
| Delay Factor k | *0.11* | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | *0.2* | *0.2* | | *0.2* | *0.3* | | *1.0* | *0.1* | | *0.6* | *0.1* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | *18.5* | *20.3* | | *18.6* | *21.3* | | *14.4* | *11.7* | | *12.8* | *11.9* | |
| Lane Group LOS | *B* | *C* | | *B* | *C* | | *B* | *B* | | *B* | *B* | |
| Approach Delay | *20.2* | | | *21.1* | | | *12.4* | | | *12.1* | | |
| Approach LOS | *C* | | | *C* | | | *B* | | | *B* | | |
| Intersection Delay | *15.8* | | | Intersection LOS | | | | | | *B* | | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Racquet Club Dr.* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2030 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *2* | *0* | *1* | *2* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *36* | *215* | *119* | *53* | *348* | *360* | *234* | *746* | *49* | *213* | *473* | *19* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *30.0* | G = | G = | G = | G = *52.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *36* | *334* | | *53* | *708* | | *234* | *795* | | *213* | *492* | |
| Lane Group Capacity | *142* | *1087* | | *305* | *1061* | | *472* | *1972* | | *315* | *1979* | |
| v/c Ratio | *0.25* | *0.31* | | *0.17* | *0.67* | | *0.50* | *0.40* | | *0.68* | *0.25* | |
| Green Ratio | *0.33* | *0.33* | | *0.33* | *0.33* | | *0.58* | *0.58* | | *0.58* | *0.58* | |
| Uniform Delay $d_1$ | *21.8* | *22.3* | | *21.2* | *25.7* | | *11.2* | *10.5* | | *13.2* | *9.4* | |
| Delay Factor k | *0.11* | *0.11* | | *0.11* | *0.24* | | *0.11* | *0.11* | | *0.25* | *0.11* | |
| Incremental Delay $d_2$ | *0.9* | *0.2* | | *0.3* | *1.6* | | *0.8* | *0.1* | | *5.8* | *0.1* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | *22.8* | *22.4* | | *21.5* | *27.4* | | *12.1* | *10.6* | | *19.0* | *9.4* | |
| Lane Group LOS | *C* | *C* | | *C* | *C* | | *B* | *B* | | *B* | *A* | |
| Approach Delay | *22.5* | | | *26.9* | | | *10.9* | | | *12.3* | | |
| Approach LOS | *C* | | | *C* | | | *B* | | | *B* | | |
| Intersection Delay | *17.0* | | | Intersection LOS | | | | | | *B* | | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Existing* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *0* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LTR* | | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *17* | *25* | *33* | *30* | *28* | *6* | *47* | *332* | *35* | *6* | *371* | *13* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *14.0* | G = | G = | G = | G = *68.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *75* | | | *64* | | *47* | *367* | | *6* | *384* | |
| Lane Group Capacity | | *240* | | | *230* | | *697* | *2495* | | *709* | *2518* | |
| v/c Ratio | | *0.31* | | | *0.28* | | *0.07* | *0.15* | | *0.01* | *0.15* | |
| Green Ratio | | *0.16* | | | *0.16* | | *0.76* | *0.76* | | *0.76* | *0.76* | |
| Uniform Delay $d_1$ | | *33.7* | | | *33.5* | | *2.8* | *3.0* | | *2.7* | *3.0* | |
| Delay Factor k | | *0.11* | | | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *0.7* | | | *0.7* | | *0.0* | *0.0* | | *0.0* | *0.0* | |
| PF Factor | | *1.000* | | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *34.5* | | | *34.2* | | *2.9* | *3.1* | | *2.7* | *3.1* | |
| Lane Group LOS | | *C* | | | *C* | | *A* | *A* | | *A* | *A* | |
| Approach Delay | | *34.5* | | | *34.2* | | | *3.0* | | | *3.1* | |
| Approach LOS | | *C* | | | *C* | | | *A* | | | *A* | |
| Intersection Delay | | *7.7* | | | Intersection LOS | | | | | | *A* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Existing* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *0* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LTR* | | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *12* | *29* | *46* | *33* | *47* | *8* | *54* | *480* | *48* | *3* | *336* | *10* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *14.0* | G = | G = | G = | G = *68.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *87* | | | *88* | | *54* | *528* | | *3* | *346* | |
| Lane Group Capacity | | *244* | | | *238* | | *724* | *2496* | | *607* | *2520* | |
| v/c Ratio | | *0.36* | | | *0.37* | | *0.07* | *0.21* | | *0.00* | *0.14* | |
| Green Ratio | | *0.16* | | | *0.16* | | *0.76* | *0.76* | | *0.76* | *0.76* | |
| Uniform Delay $d_1$ | | *34.0* | | | *34.0* | | *2.8* | *3.2* | | *2.7* | *3.0* | |
| Delay Factor k | | *0.11* | | | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *0.9* | | | *1.0* | | *0.0* | *0.0* | | *0.0* | *0.0* | |
| PF Factor | | *1.000* | | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *34.9* | | | *35.0* | | *2.9* | *3.2* | | *2.7* | *3.0* | |
| Lane Group LOS | | *C* | | | *D* | | *A* | *A* | | *A* | *A* | |
| Approach Delay | | *34.9* | | | *35.0* | | | *3.2* | | | *3.0* | |
| Approach LOS | | *C* | | | *D* | | | *A* | | | *A* | |
| Intersection Delay | | *8.2* | | | Intersection LOS | | | | | | *A* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2020 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *0* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LTR* | | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *19* | *29* | *37* | *39* | *32* | *8* | *52* | *421* | *45* | *8* | *468* | *13* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *12.0* | G = | G = | G = | G = *70.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *85* | | | *79* | | *52* | *466* | | *8* | *481* | |
| Lane Group Capacity | | *205* | | | *195* | | *654* | *2567* | | *663* | *2595* | |
| v/c Ratio | | *0.41* | | | *0.41* | | *0.08* | *0.18* | | *0.01* | *0.19* | |
| Green Ratio | | *0.13* | | | *0.13* | | *0.78* | *0.78* | | *0.78* | *0.78* | |
| Uniform Delay $d_1$ | | *35.8* | | | *35.7* | | *2.4* | *2.6* | | *2.2* | *2.6* | |
| Delay Factor k | | *0.11* | | | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *1.4* | | | *1.4* | | *0.1* | *0.0* | | *0.0* | *0.0* | |
| PF Factor | | *1.000* | | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *37.1* | | | *37.1* | | *2.4* | *2.6* | | *2.3* | *2.6* | |
| Lane Group LOS | | *D* | | | *D* | | *A* | *A* | | *A* | *A* | |
| Approach Delay | | *37.1* | | | *37.1* | | | *2.6* | | | *2.6* | |
| Approach LOS | | *D* | | | *D* | | | *A* | | | *A* | |
| Intersection Delay | | *7.4* | | | Intersection LOS | | | | | | *A* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2020 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *0* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LTR* | | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *12* | *34* | *51* | *43* | *54* | *11* | *60* | *606* | *62* | *5* | *425* | *11* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *13.0* | G = | G = | G = | G = *69.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *97* | | | *108* | | *60* | *668* | | *5* | *436* | |
| Lane Group Capacity | | *227* | | | *213* | | *673* | *2532* | | *529* | *2558* | |
| v/c Ratio | | *0.43* | | | *0.51* | | *0.09* | *0.26* | | *0.01* | *0.17* | |
| Green Ratio | | *0.14* | | | *0.14* | | *0.77* | *0.77* | | *0.77* | *0.77* | |
| Uniform Delay $d_1$ | | *35.1* | | | *35.5* | | *2.6* | *3.1* | | *2.5* | *2.8* | |
| Delay Factor k | | *0.11* | | | *0.12* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *1.3* | | | *2.0* | | *0.1* | *0.1* | | *0.0* | *0.0* | |
| PF Factor | | *1.000* | | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *36.4* | | | *37.5* | | *2.7* | *3.1* | | *2.5* | *2.9* | |
| Lane Group LOS | | *D* | | | *D* | | *A* | *A* | | *A* | *A* | |
| Approach Delay | | *36.4* | | | *37.5* | | | *3.1* | | | *2.8* | |
| Approach LOS | | *D* | | | *D* | | | *A* | | | *A* | |
| Intersection Delay | | *8.1* | | | Intersection LOS | | | | | | *A* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2020 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *0* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LTR* | | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *20* | *32* | *37* | *56* | *41* | *10* | *52* | *431* | *51* | *15* | *501* | *17* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *13.0* | G = | G = | G = | G = *69.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *89* | | | *107* | | *52* | *482* | | *15* | *518* | |
| Lane Group Capacity | | *224* | | | *200* | | *622* | *2527* | | *644* | *2555* | |
| v/c Ratio | | *0.40* | | | *0.54* | | *0.08* | *0.19* | | *0.02* | *0.20* | |
| Green Ratio | | *0.14* | | | *0.14* | | *0.77* | *0.77* | | *0.77* | *0.77* | |
| Uniform Delay $d_1$ | | *34.9* | | | *35.7* | | *2.6* | *2.9* | | *2.5* | *2.9* | |
| Delay Factor k | | *0.11* | | | *0.14* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *1.2* | | | *2.8* | | *0.1* | *0.0* | | *0.0* | *0.0* | |
| PF Factor | | *1.000* | | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *36.1* | | | *38.5* | | *2.7* | *2.9* | | *2.5* | *2.9* | |
| Lane Group LOS | | *D* | | | *D* | | *A* | *A* | | *A* | *A* | |
| Approach Delay | | *36.1* | | | *38.5* | | | *2.9* | | | *2.9* | |
| Approach LOS | | *D* | | | *D* | | | *A* | | | *A* | |
| Intersection Delay | | *8.3* | | | Intersection LOS | | | | | | *A* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2020 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *0* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LTR* | | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *17* | *43* | *51* | *54* | *59* | *18* | *60* | *641* | *81* | *9* | *444* | *14* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *16.0* | G = | G = | G = | G = *66.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *111* | | | *131* | | *60* | *722* | | *9* | *458* | |
| Lane Group Capacity | | *278* | | | *258* | | *631* | *2415* | | *469* | *2445* | |
| v/c Ratio | | *0.40* | | | *0.51* | | *0.10* | *0.30* | | *0.02* | *0.19* | |
| Green Ratio | | *0.18* | | | *0.18* | | *0.73* | *0.73* | | *0.73* | *0.73* | |
| Uniform Delay $d_1$ | | *32.7* | | | *33.4* | | *3.4* | *4.1* | | *3.2* | *3.7* | |
| Delay Factor k | | *0.11* | | | *0.12* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *0.9* | | | *1.7* | | *0.1* | *0.1* | | *0.0* | *0.0* | |
| PF Factor | | *1.000* | | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *33.7* | | | *35.1* | | *3.5* | *4.2* | | *3.3* | *3.7* | |
| Lane Group LOS | | *C* | | | *D* | | *A* | *A* | | *A* | *A* | |
| Approach Delay | | *33.7* | | | *35.1* | | | *4.1* | | | *3.7* | |
| Approach LOS | | *C* | | | *D* | | | *A* | | | *A* | |
| Intersection Delay | | *8.9* | | | Intersection LOS | | | | | | *A* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2030 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *0* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LTR* | | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *22* | *34* | *42* | *56* | *38* | *12* | *60* | *594* | *64* | *12* | *661* | *16* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *13.0* | G = | G = | G = | G = *69.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *98* | | | *106* | | *60* | *658* | | *12* | *677* | |
| Lane Group Capacity | | *230* | | | *199* | | *538* | *2603* | | *550* | *2632* | |
| v/c Ratio | | *0.43* | | | *0.53* | | *0.11* | *0.25* | | *0.02* | *0.26* | |
| Green Ratio | | *0.14* | | | *0.14* | | *0.77* | *0.77* | | *0.77* | *0.77* | |
| Uniform Delay $d_1$ | | *35.1* | | | *35.7* | | *2.7* | *3.0* | | *2.5* | *3.1* | |
| Delay Factor k | | *0.11* | | | *0.14* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *1.3* | | | *2.8* | | *0.1* | *0.1* | | *0.0* | *0.1* | |
| PF Factor | | *1.000* | | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *36.4* | | | *38.5* | | *2.8* | *3.1* | | *2.5* | *3.1* | |
| Lane Group LOS | | *D* | | | *D* | | *A* | *A* | | *A* | *A* | |
| Approach Delay | | *36.4* | | | *38.5* | | | *3.1* | | | *3.1* | |
| Approach LOS | | *D* | | | *D* | | | *A* | | | *A* | |
| Intersection Delay | | *7.4* | | | Intersection LOS | | | | | | *A* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2030 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *0* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LTR* | | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *14* | *40* | *58* | *62* | *64* | *17* | *68* | *856* | *90* | *7* | *600* | *13* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *16.0* | G = | G = | G = | G = *66.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *112* | | | *143* | | *68* | *946* | | *7* | *613* | |
| Lane Group Capacity | | *287* | | | *257* | | *547* | *2490* | | *370* | *2518* | |
| v/c Ratio | | *0.39* | | | *0.56* | | *0.12* | *0.38* | | *0.02* | *0.24* | |
| Green Ratio | | *0.18* | | | *0.18* | | *0.73* | *0.73* | | *0.73* | *0.73* | |
| Uniform Delay $d_1$ | | *32.7* | | | *33.8* | | *3.5* | *4.4* | | *3.2* | *3.9* | |
| Delay Factor k | | *0.11* | | | *0.15* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *0.9* | | | *2.7* | | *0.1* | *0.1* | | *0.0* | *0.1* | |
| PF Factor | | *1.000* | | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *33.6* | | | *36.5* | | *3.6* | *4.5* | | *3.3* | *3.9* | |
| Lane Group LOS | | *C* | | | *D* | | *A* | *A* | | *A* | *A* | |
| Approach Delay | | *33.6* | | | *36.5* | | | *4.5* | | | *3.9* | |
| Approach LOS | | *C* | | | *D* | | | *A* | | | *A* | |
| Intersection Delay | | *8.4* | | | Intersection LOS | | | | | | *A* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2030 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *0* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LTR* | | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *23* | *37* | *42* | *73* | *47* | *14* | *60* | *604* | *70* | *19* | *694* | *20* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *16.0* | G = | G = | G = | G = *66.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *102* | | | *134* | | *60* | *674* | | *19* | *714* | |
| Lane Group Capacity | | *282* | | | *246* | | *488* | *2487* | | *510* | *2516* | |
| v/c Ratio | | *0.36* | | | *0.54* | | *0.12* | *0.27* | | *0.04* | *0.28* | |
| Green Ratio | | *0.18* | | | *0.18* | | *0.73* | *0.73* | | *0.73* | *0.73* | |
| Uniform Delay $d_1$ | | *32.5* | | | *33.7* | | *3.5* | *4.0* | | *3.3* | *4.0* | |
| Delay Factor k | | *0.11* | | | *0.14* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *0.8* | | | *2.5* | | *0.1* | *0.1* | | *0.0* | *0.1* | |
| PF Factor | | *1.000* | | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *33.3* | | | *36.2* | | *3.6* | *4.1* | | *3.3* | *4.1* | |
| Lane Group LOS | | *C* | | | *D* | | *A* | *A* | | *A* | *A* | |
| Approach Delay | | *33.3* | | | *36.2* | | | *4.0* | | | *4.1* | |
| Approach LOS | | *C* | | | *D* | | | *A* | | | *A* | |
| Intersection Delay | | *8.3* | | | Intersection LOS | | | | | | *A* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2030 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *0* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LTR* | | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *19* | *49* | *58* | *73* | *69* | *24* | *68* | *891* | *109* | *11* | *619* | *16* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *17.0* | G = | G = | G = | G = *65.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *126* | | | *166* | | *68* | *1000* | | *11* | *635* | |
| Lane Group Capacity | | *305* | | | *260* | | *524* | *2448* | | *339* | *2479* | |
| v/c Ratio | | *0.41* | | | *0.64* | | *0.13* | *0.41* | | *0.03* | *0.26* | |
| Green Ratio | | *0.19* | | | *0.19* | | *0.72* | *0.72* | | *0.72* | *0.72* | |
| Uniform Delay $d_1$ | | *32.1* | | | *33.7* | | *3.8* | *4.9* | | *3.6* | *4.3* | |
| Delay Factor k | | *0.11* | | | *0.22* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *0.9* | | | *5.3* | | *0.1* | *0.1* | | *0.0* | *0.1* | |
| PF Factor | | *1.000* | | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *33.0* | | | *39.0* | | *3.9* | *5.0* | | *3.6* | *4.3* | |
| Lane Group LOS | | *C* | | | *D* | | *A* | *A* | | *A* | *A* | |
| Approach Delay | | *33.0* | | | *39.0* | | | *5.0* | | | *4.3* | |
| Approach LOS | | *C* | | | *D* | | | *A* | | | *A* | |
| Intersection Delay | | *9.3* | | | Intersection LOS | | | | | | *A* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Vista Chino* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Existing* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *3* | *0* | *1* | *2* | *0* | *2* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *38* | *498* | *132* | *184* | *417* | *62* | *285* | *358* | *164* | *206* | *242* | *30* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *13.0* | G = *25.0* | G = | G = | G = *15.0* | G = *21.0* | G = | G = |
| | Y = *4* | Y = *4* | Y = | Y = | Y = *4* | Y = *4* | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *38* | *630* | | *184* | *479* | | *285* | *522* | | *206* | *272* | |
| Lane Group Capacity | *241* | *1289* | | *241* | *913* | | *541* | *745* | | *279* | *769* | |
| v/c Ratio | *0.16* | *0.49* | | *0.76* | *0.52* | | *0.53* | *0.70* | | *0.74* | *0.35* | |
| Green Ratio | *0.14* | *0.28* | | *0.14* | *0.28* | | *0.17* | *0.23* | | *0.17* | *0.23* | |
| Uniform Delay $d_1$ | *33.7* | *27.2* | | *37.0* | *27.5* | | *34.3* | *31.6* | | *35.6* | *28.8* | |
| Delay Factor k | *0.11* | *0.11* | | *0.32* | *0.13* | | *0.13* | *0.27* | | *0.30* | *0.11* | |
| Incremental Delay $d_2$ | *0.3* | *0.3* | | *14.7* | *0.6* | | *1.0* | *3.0* | | *10.5* | *0.3* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | *34.0* | *27.5* | | *51.7* | *28.0* | | *35.2* | *34.6* | | *46.2* | *29.1* | |
| Lane Group LOS | *C* | *C* | | *D* | *C* | | *D* | *C* | | *D* | *C* | |
| Approach Delay | *27.8* | | | *34.6* | | | *34.8* | | | *36.5* | | |
| Approach LOS | *C* | | | *C* | | | *C* | | | *D* | | |
| Intersection Delay | *33.3* | | | Intersection LOS | | | | | | *C* | | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Vista Chino* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Existing* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *3* | *0* | *1* | *2* | *0* | *2* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *76* | *649* | *131* | *200* | *398* | *81* | *282* | *480* | *212* | *181* | *284* | *22* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *13.0* | G = *26.0* | G = | G = | G = *12.0* | G = *23.0* | G = | G = |
| | Y = *4* | Y = *4* | Y = | Y = | Y = *4* | Y = *4* | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *76* | *780* | | *200* | *479* | | *282* | *692* | | *181* | *306* | |
| Lane Group Capacity | *241* | *1349* | | *241* | *943* | | *433* | *817* | | *223* | *847* | |
| v/c Ratio | *0.32* | *0.58* | | *0.83* | *0.51* | | *0.65* | *0.85* | | *0.81* | *0.36* | |
| Green Ratio | *0.14* | *0.29* | | *0.14* | *0.29* | | *0.13* | *0.26* | | *0.13* | *0.26* | |
| Uniform Delay $d_1$ | *34.5* | *27.3* | | *37.4* | *26.7* | | *37.0* | *31.8* | | *37.9* | *27.5* | |
| Delay Factor k | *0.11* | *0.17* | | *0.37* | *0.12* | | *0.23* | *0.38* | | *0.35* | *0.11* | |
| Incremental Delay $d_2$ | *0.8* | *0.6* | | *24.8* | *0.5* | | *3.5* | *9.0* | | *23.0* | *0.3* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | *35.3* | *27.9* | | *62.2* | *27.1* | | *40.5* | *40.8* | | *60.9* | *27.7* | |
| Lane Group LOS | *D* | *C* | | *E* | *C* | | *D* | *D* | | *E* | *C* | |
| Approach Delay | *28.6* | | | *37.5* | | | *40.7* | | | *40.1* | | |
| Approach LOS | *C* | | | *D* | | | *D* | | | *D* | | |
| Intersection Delay | *36.4* | | | Intersection LOS | | | | | | *D* | | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Vista Chino* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2020 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *3* | *0* | *1* | *2* | *0* | *2* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *44* | *581* | *143* | *204* | *488* | *73* | *308* | *388* | *180* | *243* | *260* | *34* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *13.0* | G = *22.0* | G = | G = | G = *16.0* | G = *23.0* | G = | G = |
| | Y = *4* | Y = *4* | Y = | Y = | Y = *4* | Y = *4* | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *44* | *724* | | *204* | *561* | | *308* | *568* | | *243* | *294* | |
| Lane Group Capacity | *241* | *1137* | | *241* | *803* | | *577* | *815* | | *297* | *841* | |
| v/c Ratio | *0.18* | *0.64* | | *0.85* | *0.70* | | *0.53* | *0.70* | | *0.82* | *0.35* | |
| Green Ratio | *0.14* | *0.24* | | *0.14* | *0.24* | | *0.18* | *0.26* | | *0.18* | *0.26* | |
| Uniform Delay $d_1$ | *33.8* | *30.4* | | *37.5* | *31.0* | | *33.6* | *30.3* | | *35.6* | *27.4* | |
| Delay Factor k | *0.11* | *0.22* | | *0.38* | *0.26* | | *0.14* | *0.26* | | *0.36* | *0.11* | |
| Incremental Delay $d_2$ | *0.4* | *1.2* | | *28.4* | *2.7* | | *1.0* | *2.7* | | *18.5* | *0.3* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | *34.2* | *31.6* | | *65.9* | *33.7* | | *34.6* | *33.0* | | *54.1* | *27.6* | |
| Lane Group LOS | *C* | *C* | | *E* | *C* | | *C* | *C* | | *D* | *C* | |
| Approach Delay | *31.8* | | | *42.3* | | | *33.6* | | | *39.6* | | |
| Approach LOS | *C* | | | *D* | | | *C* | | | *D* | | |
| Intersection Delay | *36.5* | | | Intersection LOS | | | *D* | | | | | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Vista Chino* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2020 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *3* | *0* | *1* | *2* | *0* | *2* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *87* | *758* | *142* | *220* | *465* | *95* | *305* | *519* | *234* | *213* | *308* | *25* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *14.0* | G = *21.0* | G = | G = | G = *14.0* | G = *25.0* | G = | G = |
| | Y = *4* | Y = *4* | Y = | Y = | Y = *4* | Y = *4* | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *87* | *900* | | *220* | *560* | | *305* | *753* | | *213* | *333* | |
| Lane Group Capacity | *260* | *1092* | | *260* | *762* | | *505* | *887* | | *260* | *920* | |
| v/c Ratio | *0.33* | *0.82* | | *0.85* | *0.73* | | *0.60* | *0.85* | | *0.82* | *0.36* | |
| Green Ratio | *0.16* | *0.23* | | *0.16* | *0.23* | | *0.16* | *0.28* | | *0.16* | *0.28* | |
| Uniform Delay $d_1$ | *33.9* | *32.7* | | *37.0* | *31.9* | | *35.4* | *30.7* | | *36.8* | *26.1* | |
| Delay Factor k | *0.11* | *0.36* | | *0.38* | *0.29* | | *0.19* | *0.38* | | *0.36* | *0.11* | |
| Incremental Delay $d_2$ | *0.8* | *5.5* | | *26.4* | *3.8* | | *2.1* | *8.5* | | *21.2* | *0.2* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | *34.6* | *38.3* | | *63.4* | *35.7* | | *37.5* | *39.2* | | *57.9* | *26.3* | |
| Lane Group LOS | *C* | *D* | | *E* | *D* | | *D* | *D* | | *E* | *C* | |
| Approach Delay | *37.9* | | | *43.5* | | | *38.7* | | | *38.7* | | |
| Approach LOS | *D* | | | *D* | | | *D* | | | *D* | | |
| Intersection Delay | *39.6* | | | Intersection LOS | | | | | | *D* | | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Vista Chino* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2020 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *3* | *0* | *1* | *2* | *0* | *2* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *49* | *582* | *143* | *208* | *492* | *75* | *308* | *397* | *181* | *250* | *289* | *49* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *14.0* | G = *21.0* | G = | G = | G = *17.0* | G = *22.0* | G = | G = |
| | Y = *4* | Y = *4* | Y = | Y = | Y = *4* | Y = *4* | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *49* | *725* | | *208* | *567* | | *308* | *578* | | *250* | *338* | |
| Lane Group Capacity | *260* | *1085* | | *260* | *766* | | *613* | *780* | | *316* | *801* | |
| v/c Ratio | *0.19* | *0.67* | | *0.80* | *0.74* | | *0.50* | *0.74* | | *0.79* | *0.42* | |
| Green Ratio | *0.16* | *0.23* | | *0.16* | *0.23* | | *0.19* | *0.24* | | *0.19* | *0.24* | |
| Uniform Delay $d_1$ | *33.1* | *31.3* | | *36.6* | *32.0* | | *32.7* | *31.4* | | *34.8* | *28.6* | |
| Delay Factor k | *0.11* | *0.24* | | *0.34* | *0.30* | | *0.11* | *0.30* | | *0.34* | *0.11* | |
| Incremental Delay $d_2$ | *0.4* | *1.6* | | *18.1* | *3.9* | | *0.7* | *3.9* | | *14.0* | *0.4* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | *33.4* | *32.9* | | *54.8* | *35.9* | | *33.4* | *35.3* | | *48.8* | *29.0* | |
| Lane Group LOS | *C* | *C* | | *D* | *D* | | *C* | *D* | | *D* | *C* | |
| Approach Delay | *33.0* | | | *41.0* | | | *34.6* | | | *37.4* | | |
| Approach LOS | *C* | | | *D* | | | *C* | | | *D* | | |
| Intersection Delay | *36.4* | | | Intersection LOS | | | | | | *D* | | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Vista Chino* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2020 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *3* | *0* | *1* | *2* | *0* | *2* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *103* | *763* | *142* | *223* | *468* | *102* | *305* | *549* | *239* | *217* | *325* | *34* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *14.0* | G = *21.0* | G = | G = | G = *14.0* | G = *25.0* | G = | G = |
| | Y = *4* | Y = *4* | Y = | Y = | Y = *4* | Y = *4* | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *103* | *905* | | *223* | *570* | | *305* | *788* | | *217* | *359* | |
| Lane Group Capacity | *260* | *1092* | | *260* | *761* | | *505* | *888* | | *260* | *917* | |
| v/c Ratio | *0.40* | *0.83* | | *0.86* | *0.75* | | *0.60* | *0.89* | | *0.83* | *0.39* | |
| Green Ratio | *0.16* | *0.23* | | *0.16* | *0.23* | | *0.16* | *0.28* | | *0.16* | *0.28* | |
| Uniform Delay $d_1$ | *34.2* | *32.8* | | *37.0* | *32.1* | | *35.4* | *31.2* | | *36.9* | *26.3* | |
| Delay Factor k | *0.11* | *0.37* | | *0.39* | *0.30* | | *0.19* | *0.41* | | *0.37* | *0.11* | |
| Incremental Delay $d_2$ | *1.0* | *5.7* | | *29.1* | *4.3* | | *2.1* | *12.4* | | *24.0* | *0.3* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | *35.2* | *38.5* | | *66.2* | *36.3* | | *37.5* | *43.6* | | *60.9* | *26.6* | |
| Lane Group LOS | *D* | *D* | | *E* | *D* | | *D* | *D* | | *E* | *C* | |
| Approach Delay | *38.2* | | | *44.7* | | | *41.9* | | | *39.5* | | |
| Approach LOS | *D* | | | *D* | | | *D* | | | *D* | | |
| Intersection Delay | *41.1* | | | Intersection LOS | | | | | | *D* | | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Vista Chino* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2030 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *3* | *0* | *1* | *2* | *0* | *2* | *2* | *0* | *2* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *54* | *723* | *160* | *231* | *607* | *93* | *345* | *439* | *204* | *307* | *293* | *42* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | NB Only | Thru & RT | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *15.0* | G = *24.0* | G = | G = | G = *11.0* | G = *3.0* | G = *17.0* | G = |
| | Y = *4* | Y = *4* | Y = | Y = | Y = *4* | Y = *4* | Y = *4* | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *54* | *883* | | *231* | *700* | | *345* | *643* | | *307* | *335* | |
| Lane Group Capacity | *287* | *1279* | | *287* | *901* | | *668* | *875* | | *408* | *639* | |
| v/c Ratio | *0.19* | *0.69* | | *0.80* | *0.78* | | *0.52* | *0.73* | | *0.75* | *0.52* | |
| Green Ratio | *0.17* | *0.27* | | *0.17* | *0.27* | | *0.20* | *0.27* | | *0.12* | *0.19* | |
| Uniform Delay $d_1$ | *32.3* | *29.7* | | *36.1* | *30.5* | | *32.1* | *30.1* | | *38.2* | *32.9* | |
| Delay Factor k | *0.11* | *0.26* | | *0.35* | *0.33* | | *0.12* | *0.29* | | *0.31* | *0.13* | |
| Incremental Delay $d_2$ | *0.3* | *1.6* | | *17.2* | *4.5* | | *0.7* | *3.3* | | *8.1* | *0.8* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | *32.6* | *31.3* | | *53.2* | *35.0* | | *32.8* | *33.4* | | *46.3* | *33.7* | |
| Lane Group LOS | *C* | *C* | | *D* | *D* | | *C* | *C* | | *D* | *C* | |
| Approach Delay | *31.4* | | | *39.5* | | | *33.2* | | | *39.7* | | |
| Approach LOS | *C* | | | *D* | | | *C* | | | *D* | | |
| Intersection Delay | *35.6* | | | Intersection LOS | | | | | | *D* | | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Vista Chino* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2030 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *3* | *0* | *1* | *2* | *0* | *2* | *2* | *0* | *2* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *108* | *944* | *159* | *249* | *579* | *120* | *341* | *587* | *265* | *270* | *348* | *31* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | NB Only | Thru & RT | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *15.0* | G = *23.0* | G = | G = | G = *9.0* | G = *4.0* | G = *19.0* | G = |
| | Y = *4* | Y = *4* | Y = | Y = | Y = *4* | Y = *4* | Y = *4* | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *108* | *1103* | | *249* | *699* | | *341* | *852* | | *270* | *379* | |
| Lane Group Capacity | *287* | *1233* | | *287* | *858* | | *631* | *986* | | *334* | *718* | |
| v/c Ratio | *0.38* | *0.89* | | *0.87* | *0.81* | | *0.54* | *0.86* | | *0.81* | *0.53* | |
| Green Ratio | *0.17* | *0.26* | | *0.17* | *0.26* | | *0.19* | *0.30* | | *0.10* | *0.21* | |
| Uniform Delay $d_1$ | *33.3* | *32.3* | | *36.5* | *31.5* | | *33.0* | *29.8* | | *39.7* | *31.5* | |
| Delay Factor k | *0.11* | *0.42* | | *0.40* | *0.36* | | *0.14* | *0.39* | | *0.35* | *0.13* | |
| Incremental Delay $d_2$ | *0.8* | *9.8* | | *29.1* | *6.4* | | *0.9* | *8.8* | | *15.3* | *0.7* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | *34.2* | *42.2* | | *65.6* | *37.9* | | *33.9* | *38.6* | | *54.9* | *32.3* | |
| Lane Group LOS | *C* | *D* | | *E* | *D* | | *C* | *D* | | *D* | *C* | |
| Approach Delay | *41.5* | | | *45.2* | | | *37.3* | | | *41.7* | | |
| Approach LOS | *D* | | | *D* | | | *D* | | | *D* | | |
| Intersection Delay | *41.1* | | | Intersection LOS | | | | | | *D* | | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Vista Chino* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2030 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *3* | *0* | *1* | *2* | *0* | *2* | *2* | *0* | *2* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *59* | *724* | *160* | *235* | *611* | *95* | *345* | *448* | *205* | *314* | *322* | *57* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | NB Only | Thru & RT | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *15.0* | G = *24.0* | G = | G = | G = *11.0* | G = *3.0* | G = *17.0* | G = |
| | Y = *4* | Y = *4* | Y = | Y = | Y = *4* | Y = *4* | Y = *4* | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *59* | *884* | | *235* | *706* | | *345* | *653* | | *314* | *379* | |
| Lane Group Capacity | *287* | *1279* | | *287* | *900* | | *668* | *875* | | *408* | *636* | |
| v/c Ratio | *0.21* | *0.69* | | *0.82* | *0.78* | | *0.52* | *0.75* | | *0.77* | *0.60* | |
| Green Ratio | *0.17* | *0.27* | | *0.17* | *0.27* | | *0.20* | *0.27* | | *0.12* | *0.19* | |
| Uniform Delay $d_1$ | *32.4* | *29.7* | | *36.2* | *30.6* | | *32.1* | *30.2* | | *38.3* | *33.4* | |
| Delay Factor k | *0.11* | *0.26* | | *0.36* | *0.33* | | *0.12* | *0.30* | | *0.32* | *0.18* | |
| Incremental Delay $d_2$ | *0.4* | *1.6* | | *19.2* | *4.8* | | *0.7* | *3.6* | | *9.2* | *1.5* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | *32.7* | *31.3* | | *55.4* | *35.4* | | *32.8* | *33.8* | | *47.5* | *34.9* | |
| Lane Group LOS | *C* | *C* | | *E* | *D* | | *C* | *C* | | *D* | *C* | |
| Approach Delay | *31.4* | | | *40.4* | | | *33.5* | | | *40.6* | | |
| Approach LOS | *C* | | | *D* | | | *C* | | | *D* | | |
| Intersection Delay | *36.1* | | | Intersection LOS | | | | | | *D* | | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Sunrise Way @ Vista Chino* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2030 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *3* | *0* | *1* | *2* | *0* | *2* | *2* | *0* | *2* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *124* | *949* | *159* | *252* | *582* | *127* | *341* | *617* | *270* | *274* | *365* | *40* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | NB Only | Thru & RT | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *15.0* | G = *23.0* | G = | G = | G = *9.0* | G = *4.0* | G = *19.0* | G = |
| | Y = *4* | Y = *4* | Y = | Y = | Y = *4* | Y = *4* | Y = *4* | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *124* | *1108* | | *252* | *709* | | *341* | *887* | | *274* | *405* | |
| Lane Group Capacity | *287* | *1233* | | *287* | *857* | | *631* | *986* | | *334* | *717* | |
| v/c Ratio | *0.43* | *0.90* | | *0.88* | *0.83* | | *0.54* | *0.90* | | *0.82* | *0.56* | |
| Green Ratio | *0.17* | *0.26* | | *0.17* | *0.26* | | *0.19* | *0.30* | | *0.10* | *0.21* | |
| Uniform Delay $d_1$ | *33.7* | *32.4* | | *36.6* | *31.6* | | *33.0* | *30.2* | | *39.7* | *31.8* | |
| Delay Factor k | *0.11* | *0.42* | | *0.40* | *0.37* | | *0.14* | *0.42* | | *0.36* | *0.16* | |
| Incremental Delay $d_2$ | *1.0* | *10.3* | | *31.9* | *7.2* | | *0.9* | *12.9* | | *16.8* | *1.0* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | *34.7* | *42.7* | | *68.5* | *38.8* | | *33.9* | *43.1* | | *56.5* | *32.8* | |
| Lane Group LOS | *C* | *D* | | *E* | *D* | | *C* | *D* | | *E* | *C* | |
| Approach Delay | *41.9* | | | *46.6* | | | *40.5* | | | *42.4* | | |
| Approach LOS | *D* | | | *D* | | | *D* | | | *D* | | |
| Intersection Delay | *42.7* | | | Intersection LOS | | | *D* | | | | | |

# TWO-WAY STOP CONTROL SUMMARY

## General Information

| | |
|---|---|
| Analyst | *Greg* |
| Agency/Co. | *Endo Engineering* |
| Date Performed | *1/17/2014* |
| Analysis Time Period | *Midday Peak Hour* |

## Site Information

| | |
|---|---|
| Intersection | *Farrell Dr @ Racquet Club Rd* |
| Jurisdiction | *Palm Springs* |
| Analysis Year | *Existing* |

Project Description *PS Country Club*

East/West Street: *Racquet Club Drive* | North/South Street: *Farrell Drive*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

## Vehicle Volumes and Adjustments

| **Major Street** | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume (veh/h) | *6* | *240* | | | *322* | *45* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *6* | *240* | *0* | *0* | *322* | *45* |
| Percent Heavy Vehicles | *8* | -- | -- | *0* | -- | -- |
| Median Type | *Undivided* | | | | | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *2* | *0* | *0* | *2* | *0* |
| Configuration | *LT* | *T* | | | *T* | *TR* |
| Upstream Signal | | *0* | | | *0* | |

| **Minor Street** | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume (veh/h) | | | | *39* | | *24* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *0* | *0* | *0* | *39* | *0* | *24* |
| Percent Heavy Vehicles | *0* | *0* | *0* | *8* | *0* | *8* |
| Percent Grade (%) | | *0* | | | *0* | |
| Flared Approach | | *N* | | | *N* | |
| Storage | | *0* | | | *0* | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *0* | *0* | *0* | *0* | *0* |
| Configuration | | | | | *LR* | |

## Delay, Queue Length, and Level of Service

| Approach | Eastbound | Westbound | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | *LT* | | | | | | *LR* | |
| v (veh/h) | *6* | | | | | | *63* | |
| C (m) (veh/h) | *1146* | | | | | | *591* | |
| v/c | *0.01* | | | | | | *0.11* | |
| 95% queue length | *0.02* | | | | | | *0.36* | |
| Control Delay (s/veh) | *8.2* | | | | | | *11.8* | |
| LOS | *A* | | | | | | *B* | |
| Approach Delay (s/veh) | -- | -- | | | | *11.8* | | |
| Approach LOS | -- | -- | | | | *B* | | |



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# TWO-WAY STOP CONTROL SUMMARY

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Farrell Dr @ Racquet Club Rd* |
| Agency/Co. | *Endo Engineering* | Jurisdiction | *Palm Springs* |
| Date Performed | *1/17/2014* | Analysis Year | *Existing* |
| Analysis Time Period | *PM Peak Hour* | | |

Project Description *PS Country Club*

East/West Street: *Racquet Club Drive* | North/South Street: *Farrell Drive*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

## Vehicle Volumes and Adjustments

| **Major Street** | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume (veh/h) | *10* | *252* | | | *508* | *61* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *10* | *252* | *0* | *0* | *508* | *61* |
| Percent Heavy Vehicles | *8* | -- | -- | *0* | -- | -- |
| Median Type | *Undivided* | | | | | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *2* | *0* | *0* | *2* | *0* |
| Configuration | *LT* | *T* | | | *T* | *TR* |
| Upstream Signal | | *0* | | | *0* | |

| **Minor Street** | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume (veh/h) | | | | *40* | | *16* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *0* | *0* | *0* | *40* | *0* | *16* |
| Percent Heavy Vehicles | *0* | *0* | *0* | *8* | *0* | *8* |
| Percent Grade (%) | | *0* | | | *0* | |
| Flared Approach | | *N* | | | *N* | |
| Storage | | *0* | | | *0* | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *0* | *0* | *0* | *0* | *0* |
| Configuration | | | | | *LR* | |

## Delay, Queue Length, and Level of Service

| Approach | Eastbound | Westbound | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | *LT* | | | | | | *LR* | |
| v (veh/h) | *10* | | | | | | *56* | |
| C (m) (veh/h) | *959* | | | | | | *426* | |
| v/c | *0.01* | | | | | | *0.13* | |
| 95% queue length | *0.03* | | | | | | *0.45* | |
| Control Delay (s/veh) | *8.8* | | | | | | *14.7* | |
| LOS | *A* | | | | | | *B* | |
| Approach Delay (s/veh) | -- | -- | | | | | *14.7* | |
| Approach LOS | -- | -- | | | | | *B* | |

# TWO-WAY STOP CONTROL SUMMARY

## General Information

| | |
|---|---|
| Analyst | *Greg* |
| Agency/Co. | *Endo Engineering* |
| Date Performed | *1/17/2014* |
| Analysis Time Period | *Midday Peak Hour* |

## Site Information

| | |
|---|---|
| Intersection | *Farrell Dr @ Racquet Club Rd* |
| Jurisdiction | *Palm Springs* |
| Analysis Year | *Year 2020 - No Project* |

Project Description *PS Country Club*

East/West Street: *Racquet Club Drive* | North/South Street: *Farrell Drive*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

## Vehicle Volumes and Adjustments

| **Major Street** | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume (veh/h) | *5* | *251* | | | *336* | *44* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *5* | *251* | *0* | *0* | *336* | *44* |
| Percent Heavy Vehicles | *8* | -- | -- | *0* | -- | -- |
| Median Type | *Undivided* | | | | | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *2* | *0* | *0* | *2* | *0* |
| Configuration | *LT* | *T* | | | *T* | *TR* |
| Upstream Signal | | *0* | | | *0* | |

| **Minor Street** | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume (veh/h) | | | | *21* | | *21* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *0* | *0* | *0* | *21* | *0* | *21* |
| Percent Heavy Vehicles | *0* | *0* | *0* | *8* | *0* | *8* |
| Percent Grade (%) | | *0* | | | *0* | |
| Flared Approach | | *N* | | | *N* | |
| Storage | | *0* | | | *0* | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *0* | *0* | *0* | *0* | *0* |
| Configuration | | | | | *LR* | |

## Delay, Queue Length, and Level of Service

| Approach | Eastbound | Westbound | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | *LT* | | | | | | *LR* | |
| v (veh/h) | *5* | | | | | | *42* | |
| C (m) (veh/h) | *1133* | | | | | | *615* | |
| v/c | *0.00* | | | | | | *0.07* | |
| 95% queue length | *0.01* | | | | | | *0.22* | |
| Control Delay (s/veh) | *8.2* | | | | | | *11.3* | |
| LOS | *A* | | | | | | *B* | |
| Approach Delay (s/veh) | -- | -- | | | | *11.3* | | |
| Approach LOS | -- | -- | | | | *B* | | |



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# TWO-WAY STOP CONTROL SUMMARY

## General Information

| | |
|---|---|
| Analyst | *Greg* |
| Agency/Co. | *Endo Engineering* |
| Date Performed | *1/17/2014* |
| Analysis Time Period | *PM Peak Hour* |

## Site Information

| | |
|---|---|
| Intersection | *Farrell Dr @ Racquet Club Rd* |
| Jurisdiction | *Palm Springs* |
| Analysis Year | *Year 2020 - No Project* |

Project Description *PS Country Club*

East/West Street: *Racquet Club Drive* | North/South Street: *Farrell Drive*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

## Vehicle Volumes and Adjustments

| **Major Street** | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume (veh/h) | *6* | *263* | | | *531* | *47* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *6* | *263* | *0* | *0* | *531* | *47* |
| Percent Heavy Vehicles | *8* | -- | -- | *0* | -- | -- |
| Median Type | *Undivided* | | | | | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *2* | *0* | *0* | *2* | *0* |
| Configuration | *LT* | *T* | | | *T* | *TR* |
| Upstream Signal | | *0* | | | *0* | |

| **Minor Street** | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume (veh/h) | | | | *34* | | *15* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *0* | *0* | *0* | *34* | *0* | *15* |
| Percent Heavy Vehicles | *0* | *0* | *0* | *8* | *0* | *8* |
| Percent Grade (%) | | *0* | | | *0* | |
| Flared Approach | | *N* | | | *N* | |
| Storage | | *0* | | | *0* | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *0* | *0* | *0* | *0* | *0* |
| Configuration | | | | | *LR* | |

## Delay, Queue Length, and Level of Service

| Approach | Eastbound | Westbound | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | *LT* | | | | | | *LR* | |
| v (veh/h) | *6* | | | | | | *49* | |
| C (m) (veh/h) | *951* | | | | | | *426* | |
| v/c | *0.01* | | | | | | *0.12* | |
| 95% queue length | *0.02* | | | | | | *0.39* | |
| Control Delay (s/veh) | *8.8* | | | | | | *14.5* | |
| LOS | *A* | | | | | | *B* | |
| Approach Delay (s/veh) | -- | -- | | | | *14.5* | | |
| Approach LOS | -- | -- | | | | *B* | | |



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# TWO-WAY STOP CONTROL SUMMARY

## General Information

| | |
|---|---|
| Analyst | *Greg* |
| Agency/Co. | *Endo Engineering* |
| Date Performed | *1/17/2014* |
| Analysis Time Period | *Midday Peak Hour* |

## Site Information

| | |
|---|---|
| Intersection | *Farrell Dr @ Racquet Club Rd* |
| Jurisdiction | *Palm Springs* |
| Analysis Year | *Year 2020 - W/ Project* |

Project Description *PS Country Club*

East/West Street: *Racquet Club Drive* | North/South Street: *Farrell Drive*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

## Vehicle Volumes and Adjustments

| **Major Street** | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume (veh/h) | *16* | *262* | | | *339* | *45* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *16* | *262* | *0* | *0* | *339* | *45* |
| Percent Heavy Vehicles | *8* | -- | -- | *0* | -- | -- |
| Median Type | *Undivided* | | | | | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *2* | *0* | *0* | *2* | *0* |
| Configuration | *LT* | *T* | | | *T* | *TR* |
| Upstream Signal | | *0* | | | *0* | |

| **Minor Street** | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume (veh/h) | | | | *21* | | *54* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *0* | *0* | *0* | *21* | *0* | *54* |
| Percent Heavy Vehicles | *0* | *0* | *0* | *8* | *0* | *8* |
| Percent Grade (%) | | *0* | | | *0* | |
| Flared Approach | | *N* | | | *N* | |
| Storage | | *0* | | | *0* | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *0* | *0* | *0* | *0* | *0* |
| Configuration | | | | | *LR* | |

## Delay, Queue Length, and Level of Service

| Approach | Eastbound | Westbound | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | *LT* | | | | | | *LR* | |
| v (veh/h) | *16* | | | | | | *75* | |
| C (m) (veh/h) | *1129* | | | | | | *678* | |
| v/c | *0.01* | | | | | | *0.11* | |
| 95% queue length | *0.04* | | | | | | *0.37* | |
| Control Delay (s/veh) | *8.2* | | | | | | *11.0* | |
| LOS | *A* | | | | | | *B* | |
| Approach Delay (s/veh) | -- | -- | | | | *11.0* | | |
| Approach LOS | -- | -- | | | | *B* | | |



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# TWO-WAY STOP CONTROL SUMMARY

## General Information

| | |
|---|---|
| Analyst | *Greg* |
| Agency/Co. | *Endo Engineering* |
| Date Performed | *1/17/2014* |
| Analysis Time Period | *PM Peak Hour* |

## Site Information

| | |
|---|---|
| Intersection | *Farrell Dr @ Racquet Club Rd* |
| Jurisdiction | *Palm Springs* |
| Analysis Year | *Year 2020 - W/ Project* |

Project Description *PS Country Club*

East/West Street: *Racquet Club Drive* | North/South Street: *Farrell Drive*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

## Vehicle Volumes and Adjustments

| **Major Street** | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume (veh/h) | *41* | *269* | | | *543* | *52* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *41* | *269* | *0* | *0* | *543* | *52* |
| Percent Heavy Vehicles | *8* | -- | -- | *0* | -- | -- |
| Median Type | *Undivided* | | | | | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *2* | *0* | *0* | *2* | *0* |
| Configuration | *LT* | *T* | | | *T* | *TR* |
| Upstream Signal | | *0* | | | *0* | |

| **Minor Street** | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume (veh/h) | | | | *34* | | *35* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *0* | *0* | *0* | *34* | *0* | *35* |
| Percent Heavy Vehicles | *0* | *0* | *0* | *8* | *0* | *8* |
| Percent Grade (%) | | *0* | | | *0* | |
| Flared Approach | | *N* | | | *N* | |
| Storage | | *0* | | | *0* | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *0* | *0* | *0* | *0* | *0* |
| Configuration | | | | | *LR* | |

## Delay, Queue Length, and Level of Service

| Approach | Eastbound | Westbound | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | *LT* | | | | | | *LR* | |
| v (veh/h) | *41* | | | | | | *69* | |
| C (m) (veh/h) | *937* | | | | | | *430* | |
| v/c | *0.04* | | | | | | *0.16* | |
| 95% queue length | *0.14* | | | | | | *0.57* | |
| Control Delay (s/veh) | *9.0* | | | | | | *15.0* | |
| LOS | *A* | | | | | | *B* | |
| Approach Delay (s/veh) | -- | -- | | | | *15.0* | | |
| Approach LOS | -- | -- | | | | *B* | | |



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# TWO-WAY STOP CONTROL SUMMARY

## General Information

| | |
|---|---|
| Analyst | *Greg* |
| Agency/Co. | *Endo Engineering* |
| Date Performed | *1/17/2014* |
| Analysis Time Period | *Midday Peak Hour* |

## Site Information

| | |
|---|---|
| Intersection | *Farrell Dr @ Racquet Club Rd* |
| Jurisdiction | *Palm Springs* |
| Analysis Year | *Year 2030 - No Project* |

Project Description *PS Country Club*

East/West Street: *Racquet Club Drive* | North/South Street: *Farrell Drive*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

## Vehicle Volumes and Adjustments

| **Major Street** | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume (veh/h) | *6* | *267* | | | *358* | *52* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *6* | *267* | *0* | *0* | *358* | *52* |
| Percent Heavy Vehicles | *5* | -- | -- | *0* | -- | -- |
| Median Type | *Undivided* | | | | | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *2* | *0* | *0* | *2* | *0* |
| Configuration | *LT* | *T* | | | *T* | *TR* |
| Upstream Signal | | *0* | | | *0* | |

| **Minor Street** | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume (veh/h) | | | | *28* | | *25* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *0* | *0* | *0* | *28* | *0* | *25* |
| Percent Heavy Vehicles | *0* | *0* | *0* | *5* | *0* | *5* |
| Percent Grade (%) | | *0* | | | *0* | |
| Flared Approach | | *N* | | | *N* | |
| Storage | | *0* | | | *0* | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *0* | *0* | *0* | *0* | *0* |
| Configuration | | | | | *LR* | |

## Delay, Queue Length, and Level of Service

| Approach | Eastbound | Westbound | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | *LT* | | | | | | *LR* | |
| v (veh/h) | *6* | | | | | | *53* | |
| C (m) (veh/h) | *1124* | | | | | | *589* | |
| v/c | *0.01* | | | | | | *0.09* | |
| 95% queue length | *0.02* | | | | | | *0.30* | |
| Control Delay (s/veh) | *8.2* | | | | | | *11.7* | |
| LOS | *A* | | | | | | *B* | |
| Approach Delay (s/veh) | -- | -- | | | | *11.7* | | |
| Approach LOS | -- | -- | | | | *B* | | |



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# TWO-WAY STOP CONTROL SUMMARY

## General Information

| | |
|---|---|
| Analyst | *Greg* |
| Agency/Co. | *Endo Engineering* |
| Date Performed | *1/17/2014* |
| Analysis Time Period | *PM Peak Hour* |

## Site Information

| | |
|---|---|
| Intersection | *Farrell Dr @ Racquet Club Rd* |
| Jurisdiction | *Palm Springs* |
| Analysis Year | *Year 2030 - No Project* |

Project Description *PS Country Club*

East/West Street: *Racquet Club Drive* | North/South Street: *Farrell Drive*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

## Vehicle Volumes and Adjustments

| **Major Street** | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume (veh/h) | *8* | *281* | | | *566* | *58* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *8* | *281* | *0* | *0* | *566* | *58* |
| Percent Heavy Vehicles | *5* | -- | -- | *0* | -- | -- |
| Median Type | *Undivided* | | | | | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *2* | *0* | *0* | *2* | *0* |
| Configuration | *LT* | *T* | | | *T* | *TR* |
| Upstream Signal | | *0* | | | *0* | |

| **Minor Street** | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume (veh/h) | | | | *42* | | *18* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *0* | *0* | *0* | *42* | *0* | *18* |
| Percent Heavy Vehicles | *0* | *0* | *0* | *5* | *0* | *5* |
| Percent Grade (%) | | *0* | | | *0* | |
| Flared Approach | | *N* | | | *N* | |
| Storage | | *0* | | | *0* | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *0* | *0* | *0* | *0* | *0* |
| Configuration | | | | | *LR* | |

## Delay, Queue Length, and Level of Service

| Approach | Eastbound | Westbound | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | *LT* | | | | | | *LR* | |
| v (veh/h) | *8* | | | | | | *60* | |
| C (m) (veh/h) | *933* | | | | | | *401* | |
| v/c | *0.01* | | | | | | *0.15* | |
| 95% queue length | *0.03* | | | | | | *0.53* | |
| Control Delay (s/veh) | *8.9* | | | | | | *15.6* | |
| LOS | *A* | | | | | | *C* | |
| Approach Delay (s/veh) | -- | -- | | | | | *15.6* | |
| Approach LOS | -- | -- | | | | | *C* | |



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# TWO-WAY STOP CONTROL SUMMARY

## General Information

| | |
|---|---|
| Analyst | *Greg* |
| Agency/Co. | *Endo Engineering* |
| Date Performed | *1/17/2014* |
| Analysis Time Period | *Midday Peak Hour* |

## Site Information

| | |
|---|---|
| Intersection | *Farrell Dr @ Racquet Club Rd* |
| Jurisdiction | *Palm Springs* |
| Analysis Year | *Year 2030 - W/ Project* |

Project Description *PS Country Club*

East/West Street: *Racquet Club Drive* | North/South Street: *Farrell Drive*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

## Vehicle Volumes and Adjustments

| **Major Street** | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume (veh/h) | *17* | *278* | | | *361* | *53* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *17* | *278* | *0* | *0* | *361* | *53* |
| Percent Heavy Vehicles | *5* | -- | -- | *0* | -- | -- |
| Median Type | *Undivided* | | | | | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *2* | *0* | *0* | *2* | *0* |
| Configuration | *LT* | *T* | | | *T* | *TR* |
| Upstream Signal | | *0* | | | *0* | |

| **Minor Street** | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume (veh/h) | | | | *28* | | *58* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *0* | *0* | *0* | *28* | *0* | *58* |
| Percent Heavy Vehicles | *0* | *0* | *0* | *5* | *0* | *5* |
| Percent Grade (%) | | *0* | | | *0* | |
| Flared Approach | | *N* | | | *N* | |
| Storage | | *0* | | | *0* | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *0* | *0* | *0* | *0* | *0* |
| Configuration | | | | | *LR* | |

## Delay, Queue Length, and Level of Service

| Approach | Eastbound | Westbound | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | *LT* | | | | | | *LR* | |
| v (veh/h) | *17* | | | | | | *86* | |
| C (m) (veh/h) | *1120* | | | | | | *644* | |
| v/c | *0.02* | | | | | | *0.13* | |
| 95% queue length | *0.05* | | | | | | *0.46* | |
| Control Delay (s/veh) | *8.3* | | | | | | *11.5* | |
| LOS | *A* | | | | | | *B* | |
| Approach Delay (s/veh) | -- | -- | | | | *11.5* | | |
| Approach LOS | -- | -- | | | | *B* | | |



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# TWO-WAY STOP CONTROL SUMMARY

## General Information

| | |
|---|---|
| Analyst | *Greg* |
| Agency/Co. | *Endo Engineering* |
| Date Performed | *1/17/2014* |
| Analysis Time Period | *PM Peak Hour* |

## Site Information

| | |
|---|---|
| Intersection | *Farrell Dr @ Racquet Club Rd* |
| Jurisdiction | *Palm Springs* |
| Analysis Year | *Year 2030 - W/ Project* |

Project Description *PS Country Club*

East/West Street: *Racquet Club Drive* | North/South Street: *Farrell Drive*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

## Vehicle Volumes and Adjustments

| **Major Street** | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume (veh/h) | *43* | *287* | | | *578* | *63* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *43* | *287* | *0* | *0* | *578* | *63* |
| Percent Heavy Vehicles | *5* | -- | -- | *0* | -- | -- |
| Median Type | *Undivided* | | | | | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *2* | *0* | *0* | *2* | *0* |
| Configuration | *LT* | *T* | | | *T* | *TR* |
| Upstream Signal | | *0* | | | *0* | |

| **Minor Street** | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume (veh/h) | | | | *42* | | *38* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *0* | *0* | *0* | *42* | *0* | *38* |
| Percent Heavy Vehicles | *0* | *0* | *0* | *5* | *0* | *5* |
| Percent Grade (%) | | *0* | | | *0* | |
| Flared Approach | | *N* | | | *N* | |
| Storage | | *0* | | | *0* | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *0* | *0* | *0* | *0* | *0* |
| Configuration | | | | | *LR* | |

## Delay, Queue Length, and Level of Service

| Approach | Eastbound | Westbound | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | *LT* | | | | | | *LR* | |
| v (veh/h) | *43* | | | | | | *80* | |
| C (m) (veh/h) | *919* | | | | | | *398* | |
| v/c | *0.05* | | | | | | *0.20* | |
| 95% queue length | *0.15* | | | | | | *0.75* | |
| Control Delay (s/veh) | *9.1* | | | | | | *16.3* | |
| LOS | *A* | | | | | | *C* | |
| Approach Delay (s/veh) | -- | -- | | | | *16.3* | | |
| Approach LOS | -- | -- | | | | *C* | | |



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# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Farrell Drive @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Existing* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *0* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LTR* | | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *2* | *47* | *29* | *26* | *45* | *66* | *14* | *311* | *30* | *35* | *251* | *2* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *20.0* | G = | G = | G = | G = *62.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *78* | | | *137* | | *14* | *341* | | *35* | *253* | |
| Lane Group Capacity | | *370* | | | *344* | | *721* | *2277* | | *663* | *2305* | |
| v/c Ratio | | *0.21* | | | *0.40* | | *0.02* | *0.15* | | *0.05* | *0.11* | |
| Green Ratio | | *0.22* | | | *0.22* | | *0.69* | *0.69* | | *0.69* | *0.69* | |
| Uniform Delay $d_1$ | | *28.6* | | | *29.9* | | *4.4* | *4.9* | | *4.5* | *4.7* | |
| Delay Factor k | | *0.11* | | | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *0.3* | | | *0.8* | | *0.0* | *0.0* | | *0.0* | *0.0* | |
| PF Factor | | *1.000* | | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *28.8* | | | *30.6* | | *4.4* | *4.9* | | *4.6* | *4.7* | |
| Lane Group LOS | | *C* | | | *C* | | *A* | *A* | | *A* | *A* | |
| Approach Delay | | *28.8* | | | *30.6* | | | *4.9* | | | *4.7* | |
| Approach LOS | | *C* | | | *C* | | | *A* | | | *A* | |
| Intersection Delay | | *11.1* | | | Intersection LOS | | | | | | *B* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Farrell Drive @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Existing* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *0* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LTR* | | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *6* | *61* | *16* | *28* | *64* | *90* | *24* | *469* | *75* | *33* | *252* | *2* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *21.0* | G = | G = | G = | G = *61.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *83* | | | *182* | | *24* | *544* | | *33* | *254* | |
| Lane Group Capacity | | *392* | | | *364* | | *709* | *2223* | | *523* | *2268* | |
| v/c Ratio | | *0.21* | | | *0.50* | | *0.03* | *0.24* | | *0.06* | *0.11* | |
| Green Ratio | | *0.23* | | | *0.23* | | *0.68* | *0.68* | | *0.68* | *0.68* | |
| Uniform Delay $d_1$ | | *27.8* | | | *29.9* | | *4.8* | *5.6* | | *4.9* | *5.1* | |
| Delay Factor k | | *0.11* | | | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *0.3* | | | *1.1* | | *0.0* | *0.1* | | *0.1* | *0.0* | |
| PF Factor | | *1.000* | | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *28.1* | | | *31.0* | | *4.8* | *5.7* | | *4.9* | *5.1* | |
| Lane Group LOS | | *C* | | | *C* | | *A* | *A* | | *A* | *A* | |
| Approach Delay | | *28.1* | | | *31.0* | | | *5.6* | | | *5.1* | |
| Approach LOS | | *C* | | | *C* | | | *A* | | | *A* | |
| Intersection Delay | | *11.3* | | | Intersection LOS | | | | | | *B* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Farrell Drive @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2020 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *0* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LTR* | | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *2* | *70* | *33* | *33* | *69* | *73* | *16* | *326* | *36* | *21* | *264* | *1* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *28.0* | G = | G = | G = | G = *54.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *105* | | | *175* | | *16* | *362* | | *21* | *265* | |
| Lane Group Capacity | | *522* | | | *484* | | *621* | *1980* | | *563* | *2009* | |
| v/c Ratio | | *0.20* | | | *0.36* | | *0.03* | *0.18* | | *0.04* | *0.13* | |
| Green Ratio | | *0.31* | | | *0.31* | | *0.60* | *0.60* | | *0.60* | *0.60* | |
| Uniform Delay $d_1$ | | *22.8* | | | *24.1* | | *7.3* | *8.1* | | *7.4* | *7.8* | |
| Delay Factor k | | *0.11* | | | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *0.2* | | | *0.5* | | *0.0* | *0.0* | | *0.0* | *0.0* | |
| PF Factor | | *1.000* | | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *23.0* | | | *24.5* | | *7.3* | *8.1* | | *7.4* | *7.8* | |
| Lane Group LOS | | *C* | | | *C* | | *A* | *A* | | *A* | *A* | |
| Approach Delay | | *23.0* | | | *24.5* | | | *8.1* | | | *7.8* | |
| Approach LOS | | *C* | | | *C* | | | *A* | | | *A* | |
| Intersection Delay | | *12.7* | | | Intersection LOS | | | | | | *B* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Farrell Drive @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2020 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *0* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LTR* | | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *5* | *92* | *19* | *33* | *96* | *90* | *28* | *490* | *90* | *30* | *265* | *2* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *25.0* | G = | G = | G = | G = *57.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *116* | | | *219* | | *28* | *580* | | *30* | *267* | |
| Lane Group Capacity | | *473* | | | *437* | | *654* | *2072* | | *460* | *2119* | |
| v/c Ratio | | *0.25* | | | *0.50* | | *0.04* | *0.28* | | *0.07* | *0.13* | |
| Green Ratio | | *0.28* | | | *0.28* | | *0.63* | *0.63* | | *0.63* | *0.63* | |
| Uniform Delay $d_1$ | | *25.2* | | | *27.3* | | *6.2* | *7.4* | | *6.3* | *6.6* | |
| Delay Factor k | | *0.11* | | | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *0.3* | | | *0.9* | | *0.0* | *0.1* | | *0.1* | *0.0* | |
| PF Factor | | *1.000* | | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *25.5* | | | *28.2* | | *6.2* | *7.4* | | *6.4* | *6.6* | |
| Lane Group LOS | | *C* | | | *C* | | *A* | *A* | | *A* | *A* | |
| Approach Delay | | *25.5* | | | *28.2* | | | *7.4* | | | *6.6* | |
| Approach LOS | | *C* | | | *C* | | | *A* | | | *A* | |
| Intersection Delay | | *12.6* | | | Intersection LOS | | | | | | *B* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Farrell Drive @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2020 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *0* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LTR* | | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *2* | *83* | *35* | *44* | *96* | *74* | *17* | *329* | *38* | *25* | *271* | *1* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *27.0* | G = | G = | G = | G = *54.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *89.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *120* | | | *214* | | *17* | *367* | | *25* | *272* | |
| Lane Group Capacity | | *511* | | | *470* | | *624* | *2001* | | *567* | *2031* | |
| v/c Ratio | | *0.23* | | | *0.46* | | *0.03* | *0.18* | | *0.04* | *0.13* | |
| Green Ratio | | *0.30* | | | *0.30* | | *0.61* | *0.61* | | *0.61* | *0.61* | |
| Uniform Delay $d_1$ | | *23.3* | | | *25.1* | | *7.0* | *7.7* | | *7.1* | *7.5* | |
| Delay Factor k | | *0.11* | | | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *0.2* | | | *0.7* | | *0.0* | *0.0* | | *0.0* | *0.0* | |
| PF Factor | | *1.000* | | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *23.5* | | | *25.8* | | *7.0* | *7.8* | | *7.1* | *7.5* | |
| Lane Group LOS | | *C* | | | *C* | | *A* | *A* | | *A* | *A* | |
| Approach Delay | | *23.5* | | | *25.8* | | | *7.8* | | | *7.5* | |
| Approach LOS | | *C* | | | *C* | | | *A* | | | *A* | |
| Intersection Delay | | *13.3* | | | Intersection LOS | | | | | | *B* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Farrell Drive @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2020 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *0* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LTR* | | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *5* | *123* | *20* | *40* | *117* | *95* | *30* | *502* | *97* | *33* | *269* | *2* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *27.0* | G = | G = | G = | G = *55.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *148* | | | *252* | | *30* | *599* | | *33* | *271* | |
| Lane Group Capacity | | *513* | | | *469* | | *629* | *1997* | | *430* | *2045* | |
| v/c Ratio | | *0.29* | | | *0.54* | | *0.05* | *0.30* | | *0.08* | *0.13* | |
| Green Ratio | | *0.30* | | | *0.30* | | *0.61* | *0.61* | | *0.61* | *0.61* | |
| Uniform Delay $d_1$ | | *24.1* | | | *26.3* | | *7.0* | *8.3* | | *7.1* | *7.4* | |
| Delay Factor k | | *0.11* | | | *0.14* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *0.3* | | | *1.2* | | *0.0* | *0.1* | | *0.1* | *0.0* | |
| PF Factor | | *1.000* | | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *24.5* | | | *27.5* | | *7.0* | *8.4* | | *7.2* | *7.4* | |
| Lane Group LOS | | *C* | | | *C* | | *A* | *A* | | *A* | *A* | |
| Approach Delay | | *24.5* | | | *27.5* | | | *8.4* | | | *7.4* | |
| Approach LOS | | *C* | | | *C* | | | *A* | | | *A* | |
| Intersection Delay | | *13.5* | | | Intersection LOS | | | | | | *B* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Farrell Drive @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2030 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *0* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LTR* | | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *3* | *121* | *41* | *41* | *117* | *93* | *20* | *351* | *45* | *32* | *284* | *1* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *31.0* | G = | G = | G = | G = *51.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | Cycle Length C = *90.0* | | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *165* | | | *251* | | *20* | *396* | | *32* | *285* | |
| Lane Group Capacity | | *600* | | | *552* | | *592* | *1919* | | *521* | *1952* | |
| v/c Ratio | | *0.28* | | | *0.45* | | *0.03* | *0.21* | | *0.06* | *0.15* | |
| Green Ratio | | *0.34* | | | *0.34* | | *0.57* | *0.57* | | *0.57* | *0.57* | |
| Uniform Delay $d_1$ | | *21.4* | | | *22.9* | | *8.6* | *9.6* | | *8.8* | *9.2* | |
| Delay Factor k | | *0.11* | | | *0.11* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *0.3* | | | *0.6* | | *0.0* | *0.1* | | *0.0* | *0.0* | |
| PF Factor | | *1.000* | | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *21.6* | | | *23.5* | | *8.6* | *9.6* | | *8.8* | *9.2* | |
| Lane Group LOS | | *C* | | | *C* | | *A* | *A* | | *A* | *A* | |
| Approach Delay | | *21.6* | | | *23.5* | | | *9.6* | | | *9.2* | |
| Approach LOS | | *C* | | | *C* | | | *A* | | | *A* | |
| Intersection Delay | | *14.2* | | | Intersection LOS | | | | | | *B* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Farrell Drive @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2030 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *0* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LTR* | | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *6* | *156* | *23* | *42* | *163* | *116* | *34* | *527* | *112* | *40* | *284* | *2* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *32.0* | G = | G = | G = | G = *50.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *185* | | | *321* | | *34* | *639* | | *40* | *286* | |
| Lane Group Capacity | | *626* | | | *577* | | *580* | *1864* | | *369* | *1912* | |
| v/c Ratio | | *0.30* | | | *0.56* | | *0.06* | *0.34* | | *0.11* | *0.15* | |
| Green Ratio | | *0.36* | | | *0.36* | | *0.56* | *0.56* | | *0.56* | *0.56* | |
| Uniform Delay $d_1$ | | *20.9* | | | *23.3* | | *9.2* | *11.0* | | *9.5* | *9.7* | |
| Delay Factor k | | *0.11* | | | *0.15* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *0.3* | | | *1.2* | | *0.0* | *0.1* | | *0.1* | *0.0* | |
| PF Factor | | *1.000* | | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *21.1* | | | *24.5* | | *9.2* | *11.1* | | *9.6* | *9.7* | |
| Lane Group LOS | | *C* | | | *C* | | *A* | *B* | | *A* | *A* | |
| Approach Delay | | *21.1* | | | *24.5* | | | *11.0* | | | *9.7* | |
| Approach LOS | | *C* | | | *C* | | | *B* | | | *A* | |
| Intersection Delay | | *14.8* | | | Intersection LOS | | | | | | *B* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Farrell Drive @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2030 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *0* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LTR* | | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *3* | *134* | *43* | *52* | *144* | *94* | *21* | *354* | *47* | *36* | *291* | *1* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *32.0* | G = | G = | G = | G = *50.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *180* | | | *290* | | *21* | *401* | | *36* | *292* | |
| Lane Group Capacity | | *620* | | | *565* | | *577* | *1881* | | *506* | *1913* | |
| v/c Ratio | | *0.29* | | | *0.51* | | *0.04* | *0.21* | | *0.07* | *0.15* | |
| Green Ratio | | *0.36* | | | *0.36* | | *0.56* | *0.56* | | *0.56* | *0.56* | |
| Uniform Delay $d_1$ | | *20.8* | | | *22.9* | | *9.1* | *10.1* | | *9.3* | *9.7* | |
| Delay Factor k | | *0.11* | | | *0.12* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *0.3* | | | *0.8* | | *0.0* | *0.1* | | *0.1* | *0.0* | |
| PF Factor | | *1.000* | | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *21.1* | | | *23.7* | | *9.1* | *10.1* | | *9.3* | *9.7* | |
| Lane Group LOS | | *C* | | | *C* | | *A* | *B* | | *A* | *A* | |
| Approach Delay | | *21.1* | | | *23.7* | | | *10.1* | | | *9.7* | |
| Approach LOS | | *C* | | | *C* | | | *B* | | | *A* | |
| Intersection Delay | | *14.8* | | | Intersection LOS | | | | | | *B* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Farrell Drive @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2030 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *0* | *0* | *1* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | | *LTR* | | | *LTR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *6* | *187* | *24* | *49* | *184* | *121* | *36* | *539* | *119* | *43* | *288* | *2* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | | *2.0* | | | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | | *3* | | | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | | *3.0* | | | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | | | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | | | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | NS Perm | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *33.0* | G = | G = | G = | G = *49.0* | G = | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *217* | | | *354* | | *36* | *658* | | *43* | *290* | |
| Lane Group Capacity | | *648* | | | *590* | | *566* | *1825* | | *350* | *1874* | |
| v/c Ratio | | *0.33* | | | *0.60* | | *0.06* | *0.36* | | *0.12* | *0.15* | |
| Green Ratio | | *0.37* | | | *0.37* | | *0.54* | *0.54* | | *0.54* | *0.54* | |
| Uniform Delay $d_1$ | | *20.6* | | | *23.1* | | *9.7* | *11.6* | | *10.0* | *10.2* | |
| Delay Factor k | | *0.11* | | | *0.19* | | *0.11* | *0.11* | | *0.11* | *0.11* | |
| Incremental Delay $d_2$ | | *0.3* | | | *1.7* | | *0.0* | *0.1* | | *0.2* | *0.0* | |
| PF Factor | | *1.000* | | | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | | *20.9* | | | *24.9* | | *9.7* | *11.7* | | *10.2* | *10.2* | |
| Lane Group LOS | | *C* | | | *C* | | *A* | *B* | | *B* | *B* | |
| Approach Delay | | *20.9* | | | *24.9* | | | *11.6* | | | *10.2* | |
| Approach LOS | | *C* | | | *C* | | | *B* | | | *B* | |
| Intersection Delay | | *15.5* | | | Intersection LOS | | | | | | *B* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Farrell Drive @ Vista Chino* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Existing* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *3* | *0* | *1* | *2* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *16* | *707* | *97* | *213* | *708* | *175* | *78* | *161* | *232* | *156* | *136* | *18* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | Excl. Left | WB Only | Thru & RT | 04 | Excl. Left | Thru & RT | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *5.0* | G = *8.0* | G = *27.0* | G = | G = *12.0* | G = *18.0* | G = | G = |
| | Y = *4* | Y = *4* | Y = *4* | Y = | Y = *4* | Y = *4* | Y = | Y = |

Duration of Analysis (hrs) = *1.00* — Cycle Length C = *90.0*

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *16* | *804* | | *213* | *883* | | *78* | *393* | | *156* | *154* | |
| Lane Group Capacity | *93* | *1412* | | *316* | *1408* | | *223* | *611* | | *223* | *658* | |
| v/c Ratio | *0.17* | *0.57* | | *0.67* | *0.63* | | *0.35* | *0.64* | | *0.70* | *0.23* | |
| Green Ratio | *0.06* | *0.30* | | *0.19* | *0.43* | | *0.13* | *0.20* | | *0.13* | *0.20* | |
| Uniform Delay $d_1$ | *40.5* | *26.6* | | *33.9* | *19.8* | | *35.5* | *33.1* | | *37.3* | *30.2* | |
| Delay Factor k | *0.11* | *0.16* | | *0.25* | *0.21* | | *0.11* | *0.22* | | *0.27* | *0.11* | |
| Incremental Delay $d_2$ | *0.9* | *0.6* | | *5.7* | *0.9* | | *1.0* | *2.3* | | *9.8* | *0.2* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | *41.4* | *27.1* | | *39.7* | *20.7* | | *36.4* | *35.4* | | *47.1* | *30.4* | |
| Lane Group LOS | *D* | *C* | | *D* | *C* | | *D* | *D* | | *D* | *C* | |
| Approach Delay | *27.4* | | | *24.4* | | | *35.6* | | | *38.8* | | |
| Approach LOS | *C* | | | *C* | | | *D* | | | *D* | | |
| Intersection Delay | *28.9* | | | Intersection LOS | | | | | | *C* | | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Farrell Drive @ Vista Chino* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Existing* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *3* | *0* | *1* | *2* | *0* | *1* | *2* | *0* | *1* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | | *L* | *TR* | |
| Volume (vph) | *20* | *946* | *92* | *225* | *703* | *243* | *94* | *300* | *400* | *173* | *118* | *21* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | Excl. Left | WB Only | Thru & RT | 04 | Excl. Left | Thru & RT | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *9.0* | G = *1.0* | G = *26.0* | G = | G = *11.0* | G = *23.0* | G = | G = |
| | Y = *4* | Y = *4* | Y = *4* | Y = | Y = *4* | Y = *4* | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *20* | *1038* | | *225* | *946* | | *94* | *700* | | *173* | *139* | |
| Lane Group Capacity | *167* | *1366* | | *260* | *1109* | | *204* | *783* | | *204* | *837* | |
| v/c Ratio | *0.12* | *0.76* | | *0.87* | *0.85* | | *0.46* | *0.89* | | *0.85* | *0.17* | |
| Green Ratio | *0.10* | *0.29* | | *0.16* | *0.34* | | *0.12* | *0.26* | | *0.12* | *0.26* | |
| Uniform Delay $d_1$ | *36.9* | *29.2* | | *37.1* | *27.4* | | *36.7* | *32.3* | | *38.7* | *26.0* | |
| Delay Factor k | *0.11* | *0.31* | | *0.40* | *0.39* | | *0.11* | *0.42* | | *0.38* | *0.11* | |
| Incremental Delay $d_2$ | *0.3* | *2.6* | | *31.2* | *7.1* | | *1.7* | *15.0* | | *33.5* | *0.1* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | |
| Control Delay | *37.2* | *31.7* | | *68.2* | *34.5* | | *38.4* | *47.3* | | *72.2* | *26.1* | |
| Lane Group LOS | *D* | *C* | | *E* | *C* | | *D* | *D* | | *E* | *C* | |
| Approach Delay | *31.9* | | | *40.9* | | | *46.3* | | | *51.7* | | |
| Approach LOS | *C* | | | *D* | | | *D* | | | *D* | | |
| Intersection Delay | *40.3* | | | Intersection LOS | | | | | | *D* | | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Farrell Drive @ Vista Chino* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2020 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *3* | *0* | *1* | *2* | *0* | *1* | *2* | *1* | *1* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *T* | *R* | *L* | *TR* | |
| Volume (vph) | *19* | *891* | *119* | *251* | *894* | *190* | *96* | *174* | *273* | *171* | *146* | *24* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | *3* | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | *0* | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | Excl. Left | WB Only | Thru & RT | 04 | Excl. Left | Thru & RT | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *5.0* | G = *8.0* | G = *28.0* | G = | G = *12.0* | G = *17.0* | G = | G = |
| | Y = *4* | Y = *4* | Y = *4* | Y = | Y = *4* | Y = *4* | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *19* | *1010* | | *251* | *1084* | | *96* | *174* | *273* | *171* | *170* | |
| Lane Group Capacity | *93* | *1465* | | *316* | *1450* | | *223* | *633* | *1163* | *223* | *619* | |
| v/c Ratio | *0.20* | *0.69* | | *0.79* | *0.75* | | *0.43* | *0.27* | *0.23* | *0.77* | *0.27* | |
| Green Ratio | *0.06* | *0.31* | | *0.19* | *0.44* | | *0.13* | *0.19* | *0.78* | *0.13* | *0.19* | |
| Uniform Delay $d_1$ | *40.6* | *27.2* | | *34.8* | *20.8* | | *35.9* | *31.2* | *2.7* | *37.6* | *31.2* | |
| Delay Factor k | *0.11* | *0.26* | | *0.34* | *0.30* | | *0.11* | *0.11* | *0.11* | *0.32* | *0.11* | |
| Incremental Delay $d_2$ | *1.1* | *1.4* | | *14.4* | *2.2* | | *1.3* | *0.2* | *0.1* | *16.3* | *0.2* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | |
| Control Delay | *41.7* | *28.6* | | *49.2* | *23.0* | | *37.2* | *31.5* | *2.8* | *53.9* | *31.5* | |
| Lane Group LOS | *D* | *C* | | *D* | *C* | | *D* | *C* | *A* | *D* | *C* | |
| Approach Delay | *28.8* | | | *27.9* | | | *18.1* | | | *42.7* | | |
| Approach LOS | *C* | | | *C* | | | *B* | | | *D* | | |
| Intersection Delay | *28.1* | | | Intersection LOS | | | | | | *C* | | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Farrell Drive @ Vista Chino* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2020 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *3* | *0* | *1* | *2* | *0* | *1* | *2* | *1* | *1* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *T* | *R* | *L* | *TR* | |
| Volume (vph) | *25* | *1199* | *113* | *266* | *890* | *263* | *116* | *324* | *473* | *189* | *128* | *25* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | *3* | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | *0* | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | Excl. Left | WB Only | Thru & RT | 04 | Excl. Left | Thru & RT | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *8.0* | G = *4.0* | G = *29.0* | G = | G = *12.0* | G = *17.0* | G = | G = |
| | Y = *4* | Y = *4* | Y = *4* | Y = | Y = *4* | Y = *4* | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *25* | *1312* | | *266* | *1153* | | *116* | *324* | *473* | *189* | *153* | |
| Lane Group Capacity | *149* | *1524* | | *297* | *1330* | | *223* | *633* | *1163* | *223* | *617* | |
| v/c Ratio | *0.17* | *0.86* | | *0.90* | *0.87* | | *0.52* | *0.51* | *0.41* | *0.85* | *0.25* | |
| Green Ratio | *0.09* | *0.32* | | *0.18* | *0.41* | | *0.13* | *0.19* | *0.78* | *0.13* | *0.19* | |
| Uniform Delay $d_1$ | *37.9* | *28.6* | | *36.2* | *24.2* | | *36.3* | *32.8* | *3.3* | *38.1* | *31.1* | |
| Delay Factor k | *0.11* | *0.39* | | *0.42* | *0.40* | | *0.13* | *0.12* | *0.11* | *0.38* | *0.11* | |
| Incremental Delay $d_2$ | *0.5* | *5.6* | | *36.5* | *6.8* | | *2.2* | *0.7* | *0.2* | *30.8* | *0.2* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | |
| Control Delay | *38.5* | *34.2* | | *72.6* | *31.0* | | *38.5* | *33.5* | *3.5* | *68.9* | *31.3* | |
| Lane Group LOS | *D* | *C* | | *E* | *C* | | *D* | *C* | *A* | *E* | *C* | |
| Approach Delay | *34.3* | | | *38.8* | | | *18.6* | | | *52.0* | | |
| Approach LOS | *C* | | | *D* | | | *B* | | | *D* | | |
| Intersection Delay | *33.8* | | | Intersection LOS | | | | | | *C* | | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Farrell Drive @ Vista Chino* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2020 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *3* | *0* | *1* | *2* | *0* | *1* | *2* | *1* | *1* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *T* | *R* | *L* | *TR* | |
| Volume (vph) | *20* | *897* | *121* | *253* | *900* | *192* | *97* | *177* | *274* | *178* | *155* | *28* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | *3* | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | *0* | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | Excl. Left | WB Only | Thru & RT | 04 | Excl. Left | Thru & RT | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *5.0* | G = *8.0* | G = *28.0* | G = | G = *12.0* | G = *17.0* | G = | G = |
| | Y = *4* | Y = *4* | Y = *4* | Y = | Y = *4* | Y = *4* | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *20* | *1018* | | *253* | *1092* | | *97* | *177* | *274* | *178* | *183* | |
| Lane Group Capacity | *93* | *1464* | | *316* | *1449* | | *223* | *633* | *1163* | *223* | *618* | |
| v/c Ratio | *0.22* | *0.70* | | *0.80* | *0.75* | | *0.43* | *0.28* | *0.24* | *0.80* | *0.30* | |
| Green Ratio | *0.06* | *0.31* | | *0.19* | *0.44* | | *0.13* | *0.19* | *0.78* | *0.13* | *0.19* | |
| Uniform Delay $d_1$ | *40.6* | *27.3* | | *34.9* | *20.9* | | *35.9* | *31.3* | *2.7* | *37.8* | *31.4* | |
| Delay Factor k | *0.11* | *0.26* | | *0.34* | *0.31* | | *0.11* | *0.11* | *0.11* | *0.34* | *0.11* | |
| Incremental Delay $d_2$ | *1.2* | *1.5* | | *15.1* | *2.3* | | *1.4* | *0.2* | *0.1* | *20.7* | *0.3* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | |
| Control Delay | *41.8* | *28.7* | | *50.0* | *23.2* | | *37.2* | *31.5* | *2.8* | *58.5* | *31.6* | |
| Lane Group LOS | *D* | *C* | | *D* | *C* | | *D* | *C* | *A* | *E* | *C* | |
| Approach Delay | *29.0* | | | *28.3* | | | *18.2* | | | *44.9* | | |
| Approach LOS | *C* | | | *C* | | | *B* | | | *D* | | |
| Intersection Delay | *28.6* | | | Intersection LOS | | | | | | *C* | | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Farrell Drive @ Vista Chino* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/16/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2020 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *3* | *0* | *1* | *2* | *0* | *1* | *2* | *1* | *1* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *T* | *R* | *L* | *TR* | |
| Volume (vph) | *30* | *1206* | *114* | *267* | *897* | *270* | *118* | *333* | *475* | *193* | *133* | *28* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | *3* | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | *0* | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | Excl. Left | WB Only | Thru & RT | 04 | Excl. Left | Thru & RT | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *8.0* | G = *4.0* | G = *29.0* | G = | G = *12.0* | G = *17.0* | G = | G = |
| | Y = *4* | Y = *4* | Y = *4* | Y = | Y = *4* | Y = *4* | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *30* | *1320* | | *267* | *1167* | | *118* | *333* | *475* | *193* | *161* | |
| Lane Group Capacity | *149* | *1524* | | *297* | *1329* | | *223* | *633* | *1163* | *223* | *616* | |
| v/c Ratio | *0.20* | *0.87* | | *0.90* | *0.88* | | *0.53* | *0.53* | *0.41* | *0.87* | *0.26* | |
| Green Ratio | *0.09* | *0.32* | | *0.18* | *0.41* | | *0.13* | *0.19* | *0.78* | *0.13* | *0.19* | |
| Uniform Delay $d_1$ | *38.0* | *28.7* | | *36.2* | *24.4* | | *36.4* | *32.9* | *3.3* | *38.2* | *31.1* | |
| Delay Factor k | *0.11* | *0.40* | | *0.42* | *0.40* | | *0.13* | *0.13* | *0.11* | *0.40* | *0.11* | |
| Incremental Delay $d_2$ | *0.7* | *5.9* | | *37.6* | *7.6* | | *2.4* | *0.8* | *0.2* | *35.8* | *0.2* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | |
| Control Delay | *38.7* | *34.6* | | *73.9* | *32.1* | | *38.8* | *33.7* | *3.5* | *74.0* | *31.4* | |
| Lane Group LOS | *D* | *C* | | *E* | *C* | | *D* | *C* | *A* | *E* | *C* | |
| Approach Delay | *34.7* | | | *39.8* | | | *18.8* | | | *54.6* | | |
| Approach LOS | *C* | | | *D* | | | *B* | | | *D* | | |
| Intersection Delay | *34.6* | | | Intersection LOS | | | | | | *C* | | |



*HCS+*™ Version 5.3

Generated: 1/19/2014 10:07 AM

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Farrell Drive @ Vista Chino* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2030 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *3* | *0* | *1* | *2* | *0* | *1* | *2* | *1* | *1* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *T* | *R* | *L* | *TR* | |
| Volume (vph) | *22* | *1240* | *159* | *316* | *1242* | *216* | *129* | *194* | *344* | *194* | *163* | *28* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | *3* | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | *0* | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | Excl. Left | WB Only | Thru & RT | 04 | Excl. Left | Thru & RT | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *5.0* | G = *17.0* | G = *45.0* | G = | G = *16.0* | G = *17.0* | G = | G = |
| | Y = *4* | Y = *4* | Y = *4* | Y = | Y = *4* | Y = *4* | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *120.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *22* | *1399* | | *316* | *1458* | | *129* | *194* | *344* | *194* | *191* | |
| Lane Group Capacity | *72* | *1817* | | *372* | *1853* | | *229* | *488* | *1230* | *229* | *477* | |
| v/c Ratio | *0.31* | *0.77* | | *0.85* | *0.79* | | *0.56* | *0.40* | *0.28* | *0.85* | *0.40* | |
| Green Ratio | *0.04* | *0.38* | | *0.22* | *0.55* | | *0.13* | *0.14* | *0.80* | *0.13* | *0.14* | |
| Uniform Delay $d_1$ | *55.8* | *33.0* | | *45.1* | *21.4* | | *48.7* | *46.8* | *3.1* | *50.8* | *46.9* | |
| Delay Factor k | *0.11* | *0.32* | | *0.38* | *0.33* | | *0.16* | *0.11* | *0.11* | *0.38* | *0.11* | |
| Incremental Delay $d_2$ | *2.4* | *2.1* | | *19.5* | *2.4* | | *3.2* | *0.5* | *0.1* | *29.9* | *0.6* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | |
| Control Delay | *58.2* | *35.1* | | *64.6* | *23.8* | | *51.9* | *47.4* | *3.2* | *80.7* | *47.4* | |
| Lane Group LOS | *E* | *D* | | *E* | *C* | | *D* | *D* | *A* | *F* | *D* | |
| Approach Delay | *35.4* | | | *31.1* | | | *25.5* | | | *64.2* | | |
| Approach LOS | *D* | | | *C* | | | *C* | | | *E* | | |
| Intersection Delay | *34.7* | | | Intersection LOS | | | | | | *C* | | |



*HCS+*™ Version 5.3 Generated: 1/19/2014 10:04 AM

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Farrell Drive @ Vista Chino* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2030 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *3* | *0* | *1* | *2* | *0* | *1* | *2* | *1* | *1* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *T* | *R* | *L* | *TR* | |
| Volume (vph) | *29* | *1678* | *153* | *336* | *1245* | *300* | *157* | *363* | *598* | *215* | *143* | *29* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | *3* | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | *0* | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | Excl. Left | WB Only | Thru & RT | 04 | Excl. Left | Thru & RT | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *5.0* | G = *15.0* | G = *48.0* | G = | G = *15.0* | G = *17.0* | G = | G = |
| | Y = *4* | Y = *4* | Y = *4* | Y = | Y = *4* | Y = *4* | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *120.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *29* | *1831* | | *336* | *1545* | | *157* | *363* | *598* | *215* | *172* | |
| Lane Group Capacity | *72* | *1947* | | *344* | *1868* | | *215* | *488* | *1243* | *215* | *476* | |
| v/c Ratio | *0.40* | *0.94* | | *0.98* | *0.83* | | *0.73* | *0.74* | *0.48* | *1.00* | *0.36* | |
| Green Ratio | *0.04* | *0.40* | | *0.20* | *0.56* | | *0.13* | *0.14* | *0.81* | *0.13* | *0.14* | |
| Uniform Delay $d_1$ | *56.0* | *34.6* | | *47.7* | *21.7* | | *50.6* | *49.4* | *3.6* | *52.5* | *46.6* | |
| Delay Factor k | *0.11* | *0.45* | | *0.48* | *0.37* | | *0.29* | *0.30* | *0.11* | *0.50* | *0.11* | |
| Incremental Delay $d_2$ | *3.7* | *11.9* | | *75.5* | *3.3* | | *12.8* | *6.3* | *0.3* | *122.8* | *0.5* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | |
| Control Delay | *59.7* | *46.5* | | *123.2* | *25.1* | | *63.3* | *55.8* | *3.9* | *175.3* | *47.1* | |
| Lane Group LOS | *E* | *D* | | *F* | *C* | | *E* | *E* | *A* | *F* | *D* | |
| Approach Delay | *46.7* | | | *42.6* | | | *29.1* | | | *118.3* | | |
| Approach LOS | *D* | | | *D* | | | *C* | | | *F* | | |
| Intersection Delay | *46.8* | | | Intersection LOS | | | | | | *D* | | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Farrell Drive @ Vista Chino* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2030 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *3* | *0* | *1* | *2* | *0* | *1* | *2* | *1* | *1* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *T* | *R* | *L* | *TR* | |
| Volume (vph) | *23* | *1246* | *161* | *318* | *1248* | *218* | *130* | *197* | *345* | *201* | *172* | *32* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | *3* | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | *0* | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | Excl. Left | WB Only | Thru & RT | 04 | Excl. Left | Thru & RT | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *5.0* | G = *17.0* | G = *45.0* | G = | G = *16.0* | G = *17.0* | G = | G = |
| | Y = *4* | Y = *4* | Y = *4* | Y = | Y = *4* | Y = *4* | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *120.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *23* | *1407* | | *318* | *1466* | | *130* | *197* | *345* | *201* | *204* | |
| Lane Group Capacity | *72* | *1817* | | *372* | *1852* | | *229* | *488* | *1230* | *229* | *477* | |
| v/c Ratio | *0.32* | *0.77* | | *0.85* | *0.79* | | *0.57* | *0.40* | *0.28* | *0.88* | *0.43* | |
| Green Ratio | *0.04* | *0.38* | | *0.22* | *0.55* | | *0.13* | *0.14* | *0.80* | *0.13* | *0.14* | |
| Uniform Delay $d_1$ | *55.8* | *33.0* | | *45.2* | *21.5* | | *48.8* | *46.9* | *3.1* | *51.0* | *47.1* | |
| Delay Factor k | *0.11* | *0.32* | | *0.39* | *0.34* | | *0.16* | *0.11* | *0.11* | *0.40* | *0.11* | |
| Incremental Delay $d_2$ | *2.6* | *2.2* | | *20.4* | *2.5* | | *3.3* | *0.5* | *0.1* | *38.8* | *0.6* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | |
| Control Delay | *58.4* | *35.2* | | *65.6* | *24.0* | | *52.1* | *47.4* | *3.2* | *89.9* | *47.7* | |
| Lane Group LOS | *E* | *D* | | *E* | *C* | | *D* | *D* | *A* | *F* | *D* | |
| Approach Delay | *35.6* | | | *31.4* | | | *25.6* | | | *68.6* | | |
| Approach LOS | *D* | | | *C* | | | *C* | | | *E* | | |
| Intersection Delay | *35.4* | | | Intersection LOS | | | *D* | | | | | |



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# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Farrell Drive @ Vista Chino* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2030 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *1* | *3* | *0* | *1* | *2* | *0* | *1* | *2* | *1* | *1* | *2* | *0* |
| Lane Group | *L* | *TR* | | *L* | *TR* | | *L* | *T* | *R* | *L* | *TR* | |
| Volume (vph) | *34* | *1685* | *154* | *337* | *1252* | *307* | *159* | *372* | *600* | *219* | *148* | *32* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | |
| Extension of Effective Green | *2.0* | *2.0* | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | |
| Arrival Type | *3* | *3* | | *3* | *3* | | *3* | *3* | *3* | *3* | *3* | |
| Unit Extension | *3.0* | *3.0* | | *3.0* | *3.0* | | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | *12.0* | *12.0* | | *12.0* | *12.0* | | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | *0* | *0* | | *0* | *0* | | *0* | *0* | *0* | *0* | *0* | |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | Excl. Left | WB Only | Thru & RT | 04 | Excl. Left | Thru & RT | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *5.0* | G = *15.0* | G = *48.0* | G = | G = *15.0* | G = *17.0* | G = | G = |
| | Y = *4* | Y = *4* | Y = *4* | Y = | Y = *4* | Y = *4* | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *120.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | *34* | *1839* | | *337* | *1559* | | *159* | *372* | *600* | *219* | *180* | |
| Lane Group Capacity | *72* | *1947* | | *344* | *1867* | | *215* | *488* | *1243* | *215* | *475* | |
| v/c Ratio | *0.47* | *0.94* | | *0.98* | *0.84* | | *0.74* | *0.76* | *0.48* | *1.02* | *0.38* | |
| Green Ratio | *0.04* | *0.40* | | *0.20* | *0.56* | | *0.13* | *0.14* | *0.81* | *0.13* | *0.14* | |
| Uniform Delay $d_1$ | *56.2* | *34.7* | | *47.8* | *21.9* | | *50.6* | *49.6* | *3.6* | *52.5* | *46.7* | |
| Delay Factor k | *0.11* | *0.46* | | *0.48* | *0.37* | | *0.30* | *0.31* | *0.11* | *0.50* | *0.11* | |
| Incremental Delay $d_2$ | *4.9* | *12.8* | | *78.0* | *3.6* | | *13.7* | *7.3* | *0.3* | *141.8* | *0.5* | |
| PF Factor | *1.000* | *1.000* | | *1.000* | *1.000* | | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | |
| Control Delay | *61.1* | *47.5* | | *125.7* | *25.5* | | *64.3* | *56.9* | *3.9* | *194.3* | *47.2* | |
| Lane Group LOS | *E* | *D* | | *F* | *C* | | *E* | *E* | *A* | *F* | *D* | |
| Approach Delay | *47.7* | | | *43.3* | | | *29.8* | | | *127.9* | | |
| Approach LOS | *D* | | | *D* | | | *C* | | | *F* | | |
| Intersection Delay | *48.4* | | | Intersection LOS | | | | | | *D* | | |

# ALL-WAY STOP CONTROL ANALYSIS

## General Information

| | |
|---|---|
| Analyst | *Greg* |
| Agency/Co. | *Endo Engineering* |
| Date Performed | *1/17/2014* |
| Analysis Time Period | *Midday Peak Hour* |

## Site Information

| | |
|---|---|
| Intersection | *Whitewater Club @ Via Escuela* |
| Jurisdiction | *Palm Springs* |
| Analysis Year | *Existing* |

Project ID *PS Country Club*

East/West Street: *Via Escuela* | North/South Street: *Whitewater Club Drive*

## Volume Adjustments and Site Characteristics

| Approach | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | L | T | R | L | T | R |
| Volume (veh/h) | 5 | 79 | 2 | 6 | 106 | 23 |
| %Thrus Left Lane | | | | | | |

| Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | L | T | R | L | T | R |
| Volume (veh/h) | 2 | 15 | 9 | 28 | 6 | 1 |
| %Thrus Left Lane | | | | | | |

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| | L1 | L2 | L1 | L2 | L1 | L2 | L1 | L2 |
| Configuration | LTR | | LTR | | LTR | | LTR | |
| PHF | 1.00 | | 1.00 | | 1.00 | | 1.00 | |
| Flow Rate (veh/h) | 86 | | 135 | | 26 | | 35 | |
| % Heavy Vehicles | 8 | | 8 | | 8 | | 8 | |
| No. Lanes | 1 | | 1 | | 1 | | 1 | |
| Geometry Group | 1 | | 1 | | 1 | | 1 | |
| Duration, T | 1.00 | | | | | | | |

## Saturation Headway Adjustment Worksheet

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| Prop. Left-Turns | 0.1 | | 0.0 | | 0.1 | | 0.8 | |
| Prop. Right-Turns | 0.0 | | 0.2 | | 0.3 | | 0.0 | |
| Prop. Heavy Vehicle | 0.1 | | 0.1 | | 0.1 | | 0.1 | |
| hLT-adj | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| hRT-adj | -0.6 | -0.6 | -0.6 | -0.6 | -0.6 | -0.6 | -0.6 | -0.6 |
| hHV-adj | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 |
| hadj, computed | 0.1 | | 0.0 | | -0.1 | | 0.3 | |

## Departure Headway and Service Time

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| hd, initial value (s) | 3.20 | | 3.20 | | 3.20 | | 3.20 | |
| x, initial | 0.08 | | 0.12 | | 0.02 | | 0.03 | |
| hd, final value (s) | 4.32 | | 4.18 | | 4.38 | | 4.70 | |
| x, final value | 0.10 | | 0.16 | | 0.03 | | 0.05 | |
| Move-up time, m (s) | 2.0 | | 2.0 | | 2.0 | | 2.0 | |
| Service Time, $t_s$ (s) | 2.3 | | 2.2 | | 2.4 | | 2.7 | |

## Capacity and Level of Service

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| | L1 | L2 | L1 | L2 | L1 | L2 | L1 | L2 |
| Capacity (veh/h) | 336 | | 385 | | 276 | | 285 | |
| Delay (s/veh) | 7.81 | | 7.96 | | 7.52 | | 7.93 | |
| LOS | A | | A | | A | | A | |
| Approach: Delay (s/veh) | 7.81 | | 7.96 | | 7.52 | | 7.93 | |
| LOS | A | | A | | A | | A | |
| Intersection Delay (s/veh) | 7.87 | | | | | | | |
| Intersection LOS | A | | | | | | | |

# ALL-WAY STOP CONTROL ANALYSIS

## General Information

| | |
|---|---|
| Analyst | *Greg* |
| Agency/Co. | *Endo Engineering* |
| Date Performed | *1/17/2014* |
| Analysis Time Period | *PM Peak Hour* |

## Site Information

| | |
|---|---|
| Intersection | *Whitewater Club @ Via Escuela* |
| Jurisdiction | *Palm Springs* |
| Analysis Year | *Existing* |

Project ID *PS Country Club*

East/West Street: *Via Escuela* | North/South Street: *Whitewater Club Drive*

## Volume Adjustments and Site Characteristics

| Approach | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | L | T | R | L | T | R |
| Volume (veh/h) | *8* | *125* | *2* | *20* | *176* | *48* |
| %Thrus Left Lane | | | | | | |

| Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | L | T | R | L | T | R |
| Volume (veh/h) | *1* | *7* | *32* | *29* | *7* | *1* |
| %Thrus Left Lane | | | | | | |

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| | L1 | L2 | L1 | L2 | L1 | L2 | L1 | L2 |
| Configuration | *LTR* | | *LTR* | | *LTR* | | *LTR* | |
| PHF | *1.00* | | *1.00* | | *1.00* | | *1.00* | |
| Flow Rate (veh/h) | *135* | | *244* | | *40* | | *37* | |
| % Heavy Vehicles | *8* | | *8* | | *8* | | *8* | |
| No. Lanes | *1* | | *1* | | *1* | | *1* | |
| Geometry Group | *1* | | *1* | | *1* | | *1* | |
| Duration, T | *1.00* | | | | | | | |

## Saturation Headway Adjustment Worksheet

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| Prop. Left-Turns | *0.1* | | *0.1* | | *0.0* | | *0.8* | |
| Prop. Right-Turns | *0.0* | | *0.2* | | *0.8* | | *0.0* | |
| Prop. Heavy Vehicle | *0.1* | | *0.1* | | *0.1* | | *0.1* | |
| hLT-adj | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* |
| hRT-adj | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* |
| hHV-adj | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* |
| hadj, computed | *0.1* | | *0.0* | | *-0.3* | | *0.3* | |

## Departure Headway and Service Time

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| hd, initial value (s) | *3.20* | | *3.20* | | *3.20* | | *3.20* | |
| x, initial | *0.12* | | *0.22* | | *0.04* | | *0.03* | |
| hd, final value (s) | *4.49* | | *4.28* | | *4.47* | | *5.09* | |
| x, final value | *0.17* | | *0.29* | | *0.05* | | *0.05* | |
| Move-up time, m (s) | *2.0* | | *2.0* | | *2.0* | | *2.0* | |
| Service Time, $t_s$ (s) | *2.5* | | *2.3* | | *2.5* | | *3.1* | |

## Capacity and Level of Service

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| | L1 | L2 | L1 | L2 | L1 | L2 | L1 | L2 |
| Capacity (veh/h) | *385* | | *494* | | *290* | | *287* | |
| Delay (s/veh) | *8.40* | | *9.02* | | *7.70* | | *8.37* | |
| LOS | *A* | | *A* | | *A* | | *A* | |
| Approach: Delay (s/veh) | *8.40* | | *9.02* | | *7.70* | | *8.37* | |
| LOS | *A* | | *A* | | *A* | | *A* | |
| Intersection Delay (s/veh) | *8.67* | | | | | | | |
| Intersection LOS | *A* | | | | | | | |



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# ALL-WAY STOP CONTROL ANALYSIS

## General Information

| | |
|---|---|
| Analyst | *Greg* |
| Agency/Co. | *Endo Engineering* |
| Date Performed | *1/17/2014* |
| Analysis Time Period | *Midday Peak Hour* |

## Site Information

| | |
|---|---|
| Intersection | *Whitewater Club @ Via Escuela* |
| Jurisdiction | *Palm Springs* |
| Analysis Year | *Year 2020 - No Project* |

Project ID *PS Country Club*

East/West Street: *Via Escuela* | North/South Street: *Whitewater Club Drive*

## Volume Adjustments and Site Characteristics

| Approach | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | L | T | R | L | T | R |
| Volume (veh/h) | 6 | 78 | 3 | 9 | 125 | 30 |
| %Thrus Left Lane | | | | | | |

| Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | L | T | R | L | T | R |
| Volume (veh/h) | 3 | 21 | 15 | 51 | 10 | 7 |
| %Thrus Left Lane | | | | | | |

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| | L1 | L2 | L1 | L2 | L1 | L2 | L1 | L2 |
| Configuration | LTR | | LTR | | LTR | | LTR | |
| PHF | 1.00 | | 1.00 | | 1.00 | | 1.00 | |
| Flow Rate (veh/h) | 87 | | 164 | | 39 | | 68 | |
| % Heavy Vehicles | 8 | | 8 | | 8 | | 8 | |
| No. Lanes | 1 | | 1 | | 1 | | 1 | |
| Geometry Group | 1 | | 1 | | 1 | | 1 | |
| Duration, T | 1.00 | | | | | | | |

## Saturation Headway Adjustment Worksheet

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| Prop. Left-Turns | 0.1 | | 0.1 | | 0.1 | | 0.8 | |
| Prop. Right-Turns | 0.0 | | 0.2 | | 0.4 | | 0.1 | |
| Prop. Heavy Vehicle | 0.1 | | 0.1 | | 0.1 | | 0.1 | |
| hLT-adj | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| hRT-adj | -0.6 | -0.6 | -0.6 | -0.6 | -0.6 | -0.6 | -0.6 | -0.6 |
| hHV-adj | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 |
| hadj, computed | 0.1 | | 0.0 | | -0.1 | | 0.2 | |

## Departure Headway and Service Time

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| hd, initial value (s) | 3.20 | | 3.20 | | 3.20 | | 3.20 | |
| x, initial | 0.08 | | 0.15 | | 0.03 | | 0.06 | |
| hd, final value (s) | 4.47 | | 4.30 | | 4.48 | | 4.75 | |
| x, final value | 0.11 | | 0.20 | | 0.05 | | 0.09 | |
| Move-up time, m (s) | 2.0 | | 2.0 | | 2.0 | | 2.0 | |
| Service Time, $t_s$ (s) | 2.5 | | 2.3 | | 2.5 | | 2.7 | |

## Capacity and Level of Service

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| | L1 | L2 | L1 | L2 | L1 | L2 | L1 | L2 |
| Capacity (veh/h) | 337 | | 414 | | 289 | | 318 | |
| Delay (s/veh) | 8.01 | | 8.34 | | 7.71 | | 8.21 | |
| LOS | A | | A | | A | | A | |
| Approach: Delay (s/veh) | 8.01 | | 8.34 | | 7.71 | | 8.21 | |
| LOS | A | | A | | A | | A | |
| Intersection Delay (s/veh) | 8.17 | | | | | | | |
| Intersection LOS | A | | | | | | | |

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# ALL-WAY STOP CONTROL ANALYSIS

## General Information

| | |
|---|---|
| Analyst | *Greg* |
| Agency/Co. | *Endo Engineering* |
| Date Performed | *1/17/2014* |
| Analysis Time Period | *PM Peak Hour* |

## Site Information

| | |
|---|---|
| Intersection | *Whitewater Club @ Via Escuela* |
| Jurisdiction | *Palm Springs* |
| Analysis Year | *Year 2020 - No Project* |

Project ID *PS Country Club*

East/West Street: *Via Escuela* | North/South Street: *Whitewater Club Drive*

## Volume Adjustments and Site Characteristics

| Approach | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | L | T | R | L | T | R |
| Volume (veh/h) | *14* | *142* | *3* | *30* | *197* | *70* |
| %Thrus Left Lane | | | | | | |

| Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | L | T | R | L | T | R |
| Volume (veh/h) | *2* | *14* | *50* | *42* | *10* | *4* |
| %Thrus Left Lane | | | | | | |

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| | L1 | L2 | L1 | L2 | L1 | L2 | L1 | L2 |
| Configuration | *LTR* | | *LTR* | | *LTR* | | *LTR* | |
| PHF | *1.00* | | *1.00* | | *1.00* | | *1.00* | |
| Flow Rate (veh/h) | *159* | | *297* | | *66* | | *56* | |
| % Heavy Vehicles | *8* | | *8* | | *8* | | *8* | |
| No. Lanes | *1* | | *1* | | *1* | | *1* | |
| Geometry Group | *1* | | *1* | | *1* | | *1* | |
| Duration, T | *1.00* | | | | | | | |

## Saturation Headway Adjustment Worksheet

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| Prop. Left-Turns | *0.1* | | *0.1* | | *0.0* | | *0.8* | |
| Prop. Right-Turns | *0.0* | | *0.2* | | *0.8* | | *0.1* | |
| Prop. Heavy Vehicle | *0.1* | | *0.1* | | *0.1* | | *0.1* | |
| hLT-adj | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* |
| hRT-adj | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* |
| hHV-adj | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* |
| hadj, computed | *0.1* | | *0.0* | | *-0.3* | | *0.2* | |

## Departure Headway and Service Time

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| hd, initial value (s) | *3.20* | | *3.20* | | *3.20* | | *3.20* | |
| x, initial | *0.14* | | *0.26* | | *0.06* | | *0.05* | |
| hd, final value (s) | *4.70* | | *4.43* | | *4.74* | | *5.30* | |
| x, final value | *0.21* | | *0.37* | | *0.09* | | *0.08* | |
| Move-up time, m (s) | *2.0* | | *2.0* | | *2.0* | | *2.0* | |
| Service Time, $t_s$ (s) | *2.7* | | *2.4* | | *2.7* | | *3.3* | |

## Capacity and Level of Service

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| | L1 | L2 | L1 | L2 | L1 | L2 | L1 | L2 |
| Capacity (veh/h) | *409* | | *547* | | *316* | | *306* | |
| Delay (s/veh) | *8.93* | | *9.97* | | *8.19* | | *8.78* | |
| LOS | *A* | | *A* | | *A* | | *A* | |
| Approach: Delay (s/veh) | *8.93* | | *9.97* | | *8.19* | | *8.78* | |
| LOS | *A* | | *A* | | *A* | | *A* | |
| Intersection Delay (s/veh) | *9.36* | | | | | | | |
| Intersection LOS | *A* | | | | | | | |



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# ALL-WAY STOP CONTROL ANALYSIS

## General Information

| | |
|---|---|
| Analyst | *Greg* |
| Agency/Co. | *Endo Engineering* |
| Date Performed | *1/17/2014* |
| Analysis Time Period | *Midday Peak Hour* |

## Site Information

| | |
|---|---|
| Intersection | *Whitewater Club @ Via Escuela* |
| Jurisdiction | *Palm Springs* |
| Analysis Year | *Year 2020 - W/ Project* |

Project ID *PS Country Club*

East/West Street: *Via Escuela* | North/South Street: *Whitewater Club Drive*

## Volume Adjustments and Site Characteristics

| Approach | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | L | T | R | L | T | R |
| Volume (veh/h) | *17* | *87* | *3* | *9* | *128* | *45* |
| %Thrus Left Lane | | | | | | |

| Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | L | T | R | L | T | R |
| Volume (veh/h) | *3* | *27* | *15* | *105* | *17* | *44* |
| %Thrus Left Lane | | | | | | |

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| | L1 | L2 | L1 | L2 | L1 | L2 | L1 | L2 |
| Configuration | *LTR* | | *LTR* | | *LTR* | | *LTR* | |
| PHF | *1.00* | | *1.00* | | *1.00* | | *1.00* | |
| Flow Rate (veh/h) | *107* | | *182* | | *45* | | *166* | |
| % Heavy Vehicles | *8* | | *8* | | *8* | | *8* | |
| No. Lanes | *1* | | *1* | | *1* | | *1* | |
| Geometry Group | *1* | | *1* | | *1* | | *1* | |
| Duration, T | *1.00* | | | | | | | |

## Saturation Headway Adjustment Worksheet

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| Prop. Left-Turns | *0.2* | | *0.0* | | *0.1* | | *0.6* | |
| Prop. Right-Turns | *0.0* | | *0.2* | | *0.3* | | *0.3* | |
| Prop. Heavy Vehicle | *0.1* | | *0.1* | | *0.1* | | *0.1* | |
| hLT-adj | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* |
| hRT-adj | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* |
| hHV-adj | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* |
| hadj, computed | *0.2* | | *-0.0* | | *-0.1* | | *0.1* | |

## Departure Headway and Service Time

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| hd, initial value (s) | *3.20* | | *3.20* | | *3.20* | | *3.20* | |
| x, initial | *0.10* | | *0.16* | | *0.04* | | *0.15* | |
| hd, final value (s) | *4.81* | | *4.57* | | *4.78* | | *4.77* | |
| x, final value | *0.14* | | *0.23* | | *0.06* | | *0.22* | |
| Move-up time, m (s) | *2.0* | | *2.0* | | *2.0* | | *2.0* | |
| Service Time, $t_s$ (s) | *2.8* | | *2.6* | | *2.8* | | *2.8* | |

## Capacity and Level of Service

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| | L1 | L2 | L1 | L2 | L1 | L2 | L1 | L2 |
| Capacity (veh/h) | *357* | | *432* | | *295* | | *416* | |
| Delay (s/veh) | *8.61* | | *8.94* | | *8.08* | | *9.11* | |
| LOS | *A* | | *A* | | *A* | | *A* | |
| Approach: Delay (s/veh) | *8.61* | | *8.94* | | *8.08* | | *9.11* | |
| LOS | *A* | | *A* | | *A* | | *A* | |
| Intersection Delay (s/veh) | *8.85* | | | | | | | |
| Intersection LOS | *A* | | | | | | | |



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# ALL-WAY STOP CONTROL ANALYSIS

## General Information

| | |
|---|---|
| Analyst | *Greg* |
| Agency/Co. | *Endo Engineering* |
| Date Performed | *1/17/2014* |
| Analysis Time Period | *PM Peak Hour* |

## Site Information

| | |
|---|---|
| Intersection | *Whitewater Club @ Via Escuela* |
| Jurisdiction | *Palm Springs* |
| Analysis Year | *Year 2020 - W/ Project* |

Project ID *PS Country Club*

East/West Street: *Via Escuela* | North/South Street: *Whitewater Club Drive*

## Volume Adjustments and Site Characteristics

| Approach | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | L | T | R | L | T | R |
| Volume (veh/h) | *49* | *147* | *3* | *30* | *206* | *117* |
| %Thrus Left Lane | | | | | | |

| Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | L | T | R | L | T | R |
| Volume (veh/h) | *2* | *33* | *50* | *76* | *14* | *27* |
| %Thrus Left Lane | | | | | | |

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| | L1 | L2 | L1 | L2 | L1 | L2 | L1 | L2 |
| Configuration | *LTR* | | *LTR* | | *LTR* | | *LTR* | |
| PHF | *1.00* | | *1.00* | | *1.00* | | *1.00* | |
| Flow Rate (veh/h) | *199* | | *353* | | *85* | | *117* | |
| % Heavy Vehicles | *8* | | *8* | | *8* | | *8* | |
| No. Lanes | *1* | | *1* | | *1* | | *1* | |
| Geometry Group | *1* | | *1* | | *1* | | *1* | |
| Duration, T | *1.00* | | | | | | | |

## Saturation Headway Adjustment Worksheet

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| Prop. Left-Turns | *0.2* | | *0.1* | | *0.0* | | *0.6* | |
| Prop. Right-Turns | *0.0* | | *0.3* | | *0.6* | | *0.2* | |
| Prop. Heavy Vehicle | *0.1* | | *0.1* | | *0.1* | | *0.1* | |
| hLT-adj | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* |
| hRT-adj | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* |
| hHV-adj | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* |
| hadj, computed | *0.2* | | *-0.0* | | *-0.2* | | *0.1* | |

## Departure Headway and Service Time

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| hd, initial value (s) | *3.20* | | *3.20* | | *3.20* | | *3.20* | |
| x, initial | *0.18* | | *0.31* | | *0.08* | | *0.10* | |
| hd, final value (s) | *5.11* | | *4.71* | | *5.27* | | *5.54* | |
| x, final value | *0.28* | | *0.46* | | *0.12* | | *0.18* | |
| Move-up time, m (s) | *2.0* | | *2.0* | | *2.0* | | *2.0* | |
| Service Time, $t_s$ (s) | *3.1* | | *2.7* | | *3.3* | | *3.5* | |

## Capacity and Level of Service

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| | L1 | L2 | L1 | L2 | L1 | L2 | L1 | L2 |
| Capacity (veh/h) | *449* | | *603* | | *335* | | *367* | |
| Delay (s/veh) | *10.11* | | *11.72* | | *9.02* | | *9.76* | |
| LOS | *B* | | *B* | | *A* | | *A* | |
| Approach: Delay (s/veh) | *10.11* | | *11.72* | | *9.02* | | *9.76* | |
| LOS | *B* | | *B* | | *A* | | *A* | |
| Intersection Delay (s/veh) | *10.69* | | | | | | | |
| Intersection LOS | *B* | | | | | | | |



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# ALL-WAY STOP CONTROL ANALYSIS

## General Information

| | |
|---|---|
| Analyst | *Greg* |
| Agency/Co. | *Endo Engineering* |
| Date Performed | *1/17/2014* |
| Analysis Time Period | *Midday Peak Hour* |

## Site Information

| | |
|---|---|
| Intersection | *Whitewater Club @ Via Escuela* |
| Jurisdiction | *Palm Springs* |
| Analysis Year | *Year 2030 - No Project* |

Project ID *PS Country Club*

East/West Street: *Via Escuela* | North/South Street: *Whitewater Club Drive*

## Volume Adjustments and Site Characteristics

| Approach | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | L | T | R | L | T | R |
| Volume (veh/h) | 7 | 110 | 6 | 18 | 169 | 35 |
| %Thrus Left Lane | | | | | | |

| Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | L | T | R | L | T | R |
| Volume (veh/h) | 6 | 30 | 29 | 57 | 13 | 7 |
| %Thrus Left Lane | | | | | | |

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| | L1 | L2 | L1 | L2 | L1 | L2 | L1 | L2 |
| Configuration | LTR | | LTR | | LTR | | LTR | |
| PHF | 1.00 | | 1.00 | | 1.00 | | 1.00 | |
| Flow Rate (veh/h) | 123 | | 222 | | 65 | | 77 | |
| % Heavy Vehicles | 5 | | 5 | | 5 | | 5 | |
| No. Lanes | 1 | | 1 | | 1 | | 1 | |
| Geometry Group | 1 | | 1 | | 1 | | 1 | |
| Duration, T | 1.00 | | | | | | | |

## Saturation Headway Adjustment Worksheet

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| Prop. Left-Turns | 0.1 | | 0.1 | | 0.1 | | 0.7 | |
| Prop. Right-Turns | 0.0 | | 0.2 | | 0.4 | | 0.1 | |
| Prop. Heavy Vehicle | 0.0 | | 0.0 | | 0.0 | | 0.0 | |
| hLT-adj | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| hRT-adj | -0.6 | -0.6 | -0.6 | -0.6 | -0.6 | -0.6 | -0.6 | -0.6 |
| hHV-adj | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 |
| hadj, computed | 0.1 | | 0.0 | | -0.2 | | 0.2 | |

## Departure Headway and Service Time

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| hd, initial value (s) | 3.20 | | 3.20 | | 3.20 | | 3.20 | |
| x, initial | 0.11 | | 0.20 | | 0.06 | | 0.07 | |
| hd, final value (s) | 4.58 | | 4.41 | | 4.65 | | 4.97 | |
| x, final value | 0.16 | | 0.27 | | 0.08 | | 0.11 | |
| Move-up time, m (s) | 2.0 | | 2.0 | | 2.0 | | 2.0 | |
| Service Time, $t_s$ (s) | 2.6 | | 2.4 | | 2.6 | | 3.0 | |

## Capacity and Level of Service

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| | L1 | L2 | L1 | L2 | L1 | L2 | L1 | L2 |
| Capacity (veh/h) | 373 | | 472 | | 315 | | 327 | |
| Delay (s/veh) | 8.43 | | 9.06 | | 8.07 | | 8.56 | |
| LOS | A | | A | | A | | A | |
| Approach: Delay (s/veh) | 8.43 | | 9.06 | | 8.07 | | 8.56 | |
| LOS | A | | A | | A | | A | |
| Intersection Delay (s/veh) | 8.69 | | | | | | | |
| Intersection LOS | A | | | | | | | |

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# ALL-WAY STOP CONTROL ANALYSIS

## General Information

| | |
|---|---|
| Analyst | *Greg* |
| Agency/Co. | *Endo Engineering* |
| Date Performed | *1/17/2014* |
| Analysis Time Period | *PM Peak Hour* |

## Site Information

| | |
|---|---|
| Intersection | *Whitewater Club @ Via Escuela* |
| Jurisdiction | *Palm Springs* |
| Analysis Year | *Year 2030 - No Project* |

Project ID *PS Country Club*

East/West Street: *Via Escuela* | North/South Street: *Whitewater Club Drive*

## Volume Adjustments and Site Characteristics

| Approach | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | L | T | R | L | T | R |
| Volume (veh/h) | *15* | *189* | *6* | *57* | *262* | *79* |
| %Thrus Left Lane | | | | | | |

| Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | L | T | R | L | T | R |
| Volume (veh/h) | *3* | *18* | *95* | *47* | *14* | *4* |
| %Thrus Left Lane | | | | | | |

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| | L1 | L2 | L1 | L2 | L1 | L2 | L1 | L2 |
| Configuration | *LTR* | | *LTR* | | *LTR* | | *LTR* | |
| PHF | *1.00* | | *1.00* | | *1.00* | | *1.00* | |
| Flow Rate (veh/h) | *210* | | *398* | | *116* | | *65* | |
| % Heavy Vehicles | *5* | | *5* | | *5* | | *5* | |
| No. Lanes | *1* | | *1* | | *1* | | *1* | |
| Geometry Group | *1* | | *1* | | *1* | | *1* | |
| Duration, T | *1.00* | | | | | | | |

## Saturation Headway Adjustment Worksheet

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| Prop. Left-Turns | *0.1* | | *0.1* | | *0.0* | | *0.7* | |
| Prop. Right-Turns | *0.0* | | *0.2* | | *0.8* | | *0.1* | |
| Prop. Heavy Vehicle | *0.0* | | *0.0* | | *0.0* | | *0.0* | |
| hLT-adj | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* |
| hRT-adj | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* |
| hHV-adj | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* |
| hadj, computed | *0.1* | | *-0.0* | | *-0.4* | | *0.2* | |

## Departure Headway and Service Time

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| hd, initial value (s) | *3.20* | | *3.20* | | *3.20* | | *3.20* | |
| x, initial | *0.19* | | *0.35* | | *0.10* | | *0.06* | |
| hd, final value (s) | *4.99* | | *4.68* | | *5.10* | | *5.78* | |
| x, final value | *0.29* | | *0.52* | | *0.16* | | *0.10* | |
| Move-up time, m (s) | *2.0* | | *2.0* | | *2.0* | | *2.0* | |
| Service Time, $t_s$ (s) | *3.0* | | *2.7* | | *3.1* | | *3.8* | |

## Capacity and Level of Service

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| | L1 | L2 | L1 | L2 | L1 | L2 | L1 | L2 |
| Capacity (veh/h) | *460* | | *648* | | *366* | | *315* | |
| Delay (s/veh) | *10.04* | | *12.68* | | *9.10* | | *9.46* | |
| LOS | *B* | | *B* | | *A* | | *A* | |
| Approach: Delay (s/veh) | *10.04* | | *12.68* | | *9.10* | | *9.46* | |
| LOS | *B* | | *B* | | *A* | | *A* | |
| Intersection Delay (s/veh) | *11.19* | | | | | | | |
| Intersection LOS | *B* | | | | | | | |

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# ALL-WAY STOP CONTROL ANALYSIS

## General Information

| | |
|---|---|
| Analyst | *Greg* |
| Agency/Co. | *Endo Engineering* |
| Date Performed | *1/17/2014* |
| Analysis Time Period | *Midday Peak Hour* |

## Site Information

| | |
|---|---|
| Intersection | *Whitewater Club @ Via Escuela* |
| Jurisdiction | *Palm Springs* |
| Analysis Year | *Year 2030 - W/ Project* |

Project ID *PS Country Club*

East/West Street: *Via Escuela* | North/South Street: *Whitewater Club Drive*

## Volume Adjustments and Site Characteristics

| Approach | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | L | T | R | L | T | R |
| Volume (veh/h) | *18* | *119* | *6* | *18* | *172* | *50* |
| %Thrus Left Lane | | | | | | |

| Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | L | T | R | L | T | R |
| Volume (veh/h) | *6* | *36* | *29* | *111* | *20* | *44* |
| %Thrus Left Lane | | | | | | |

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| | L1 | L2 | L1 | L2 | L1 | L2 | L1 | L2 |
| Configuration | *LTR* | | *LTR* | | *LTR* | | *LTR* | |
| PHF | *1.00* | | *1.00* | | *1.00* | | *1.00* | |
| Flow Rate (veh/h) | *143* | | *240* | | *71* | | *175* | |
| % Heavy Vehicles | *5* | | *5* | | *5* | | *5* | |
| No. Lanes | *1* | | *1* | | *1* | | *1* | |
| Geometry Group | *1* | | *1* | | *1* | | *1* | |
| Duration, T | *1.00* | | | | | | | |

## Saturation Headway Adjustment Worksheet

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| Prop. Left-Turns | *0.1* | | *0.1* | | *0.1* | | *0.6* | |
| Prop. Right-Turns | *0.0* | | *0.2* | | *0.4* | | *0.3* | |
| Prop. Heavy Vehicle | *0.0* | | *0.0* | | *0.0* | | *0.0* | |
| hLT-adj | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* |
| hRT-adj | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* |
| hHV-adj | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* |
| hadj, computed | *0.1* | | *-0.0* | | *-0.1* | | *0.1* | |

## Departure Headway and Service Time

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| hd, initial value (s) | *3.20* | | *3.20* | | *3.20* | | *3.20* | |
| x, initial | *0.13* | | *0.21* | | *0.06* | | *0.16* | |
| hd, final value (s) | *4.95* | | *4.72* | | *4.98* | | *5.02* | |
| x, final value | *0.20* | | *0.31* | | *0.10* | | *0.24* | |
| Move-up time, m (s) | *2.0* | | *2.0* | | *2.0* | | *2.0* | |
| Service Time, $t_s$ (s) | *2.9* | | *2.7* | | *3.0* | | *3.0* | |

## Capacity and Level of Service

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| | L1 | L2 | L1 | L2 | L1 | L2 | L1 | L2 |
| Capacity (veh/h) | *393* | | *490* | | *321* | | *425* | |
| Delay (s/veh) | *9.16* | | *9.88* | | *8.52* | | *9.64* | |
| LOS | *A* | | *A* | | *A* | | *A* | |
| Approach: Delay (s/veh) | *9.16* | | *9.88* | | *8.52* | | *9.64* | |
| LOS | *A* | | *A* | | *A* | | *A* | |
| Intersection Delay (s/veh) | *9.49* | | | | | | | |
| Intersection LOS | *A* | | | | | | | |



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# ALL-WAY STOP CONTROL ANALYSIS

## General Information

| | |
|---|---|
| Analyst | *Greg* |
| Agency/Co. | *Endo Engineering* |
| Date Performed | *1/17/2014* |
| Analysis Time Period | *PM Peak Hour* |

## Site Information

| | |
|---|---|
| Intersection | *Whitewater Club @ Via Escuela* |
| Jurisdiction | *Palm Springs* |
| Analysis Year | *Year 2030 - W/ Project* |

Project ID *PS Country Club*

East/West Street: *Via Escuela* | North/South Street: *Whitewater Club Drive*

## Volume Adjustments and Site Characteristics

| Approach | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | L | T | R | L | T | R |
| Volume (veh/h) | *50* | *194* | *6* | *57* | *271* | *126* |
| %Thrus Left Lane | | | | | | |

| Approach | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | L | T | R | L | T | R |
| Volume (veh/h) | *3* | *37* | *95* | *81* | *18* | *27* |
| %Thrus Left Lane | | | | | | |

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| | L1 | L2 | L1 | L2 | L1 | L2 | L1 | L2 |
| Configuration | *LTR* | | *LTR* | | *LTR* | | *LTR* | |
| PHF | *1.00* | | *1.00* | | *1.00* | | *1.00* | |
| Flow Rate (veh/h) | *250* | | *454* | | *135* | | *126* | |
| % Heavy Vehicles | *5* | | *5* | | *5* | | *5* | |
| No. Lanes | *1* | | *1* | | *1* | | *1* | |
| Geometry Group | *1* | | *1* | | *1* | | *1* | |
| Duration, T | *1.00* | | | | | | | |

## Saturation Headway Adjustment Worksheet

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| Prop. Left-Turns | *0.2* | | *0.1* | | *0.0* | | *0.6* | |
| Prop. Right-Turns | *0.0* | | *0.3* | | *0.7* | | *0.2* | |
| Prop. Heavy Vehicle | *0.0* | | *0.0* | | *0.0* | | *0.0* | |
| hLT-adj | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* |
| hRT-adj | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* | *-0.6* |
| hHV-adj | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* | *1.7* |
| hadj, computed | *0.1* | | *-0.1* | | *-0.3* | | *0.1* | |

## Departure Headway and Service Time

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| hd, initial value (s) | *3.20* | | *3.20* | | *3.20* | | *3.20* | |
| x, initial | *0.22* | | *0.40* | | *0.12* | | *0.11* | |
| hd, final value (s) | *5.49* | | *5.05* | | *5.70* | | *6.12* | |
| x, final value | *0.38* | | *0.64* | | *0.21* | | *0.21* | |
| Move-up time, m (s) | *2.0* | | *2.0* | | *2.0* | | *2.0* | |
| Service Time, $t_s$ (s) | *3.5* | | *3.0* | | *3.7* | | *4.1* | |

## Capacity and Level of Service

| | Eastbound | | Westbound | | Northbound | | Southbound | |
|---|---|---|---|---|---|---|---|---|
| | L1 | L2 | L1 | L2 | L1 | L2 | L1 | L2 |
| Capacity (veh/h) | *500* | | *692* | | *385* | | *376* | |
| Delay (s/veh) | *11.85* | | *16.76* | | *10.24* | | *10.79* | |
| LOS | *B* | | *C* | | *B* | | *B* | |
| Approach: Delay (s/veh) | *11.85* | | *16.76* | | *10.24* | | *10.79* | |
| LOS | *B* | | *C* | | *B* | | *B* | |
| Intersection Delay (s/veh) | *13.80* | | | | | | | |
| Intersection LOS | *B* | | | | | | | |



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# TWO-WAY STOP CONTROL SUMMARY

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Whitewater Club @ Vista Chino* |
| Agency/Co. | *Endo Engineering* | Jurisdiction | *Palm Springs* |
| Date Performed | *1/17/2014* | Analysis Year | *Existing* |
| Analysis Time Period | *Midday Peak Hour* | | |

Project Description *PS Country Club*

East/West Street: *Vista Chino* | North/South Street: *Whitewater Club Drive*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

## Vehicle Volumes and Adjustments

| **Major Street** | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume (veh/h) | *14* | *1081* | | | *1063* | *29* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *14* | *1081* | *0* | *0* | *1063* | *29* |
| Percent Heavy Vehicles | *8* | -- | -- | *0* | -- | -- |
| Median Type | *Two Way Left Turn Lane* | | | | | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *1* | *2* | *0* | *0* | *2* | *0* |
| Configuration | *L* | *T* | | | *T* | *TR* |
| Upstream Signal | | *0* | | | *0* | |

| **Minor Street** | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume (veh/h) | | | | *14* | | *9* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *0* | *0* | *0* | *14* | *0* | *9* |
| Percent Heavy Vehicles | *0* | *0* | *0* | *8* | *0* | *8* |
| Percent Grade (%) | | *0* | | | *0* | |
| Flared Approach | | *N* | | | *N* | |
| Storage | | *0* | | | *0* | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *0* | *0* | *0* | *0* | *0* |
| Configuration | | | | | *LR* | |

## Delay, Queue Length, and Level of Service

| Approach | Eastbound | Westbound | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | *L* | | | | | | *LR* | |
| v (veh/h) | *14* | | | | | | *23* | |
| C (m) (veh/h) | *601* | | | | | | *259* | |
| v/c | *0.02* | | | | | | *0.09* | |
| 95% queue length | *0.07* | | | | | | *0.29* | |
| Control Delay (s/veh) | *11.1* | | | | | | *20.3* | |
| LOS | *B* | | | | | | *C* | |
| Approach Delay (s/veh) | -- | -- | | | | | *20.3* | |
| Approach LOS | -- | -- | | | | | *C* | |



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# TWO-WAY STOP CONTROL SUMMARY

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Whitewater Club @ Vista Chino* |
| Agency/Co. | *Endo Engineering* | Jurisdiction | *Palm Springs* |
| Date Performed | *1/17/2014* | Analysis Year | *Existing* |
| Analysis Time Period | *PM Peak Hour* | | |

Project Description *PS Country Club*

East/West Street: *Vista Chino* | North/South Street: *Whitewater Club Drive*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

## Vehicle Volumes and Adjustments

| **Major Street** | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume (veh/h) | *29* | *1479* | | | *1141* | *23* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *29* | *1479* | *0* | *0* | *1141* | *23* |
| Percent Heavy Vehicles | *8* | -- | -- | *0* | -- | -- |
| Median Type | *Two Way Left Turn Lane* | | | | | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *1* | *2* | *0* | *0* | *2* | *0* |
| Configuration | *L* | *T* | | | *T* | *TR* |
| Upstream Signal | | *0* | | | *0* | |

| **Minor Street** | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume (veh/h) | | | | *14* | | *13* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *0* | *0* | *0* | *14* | *0* | *13* |
| Percent Heavy Vehicles | *0* | *0* | *0* | *8* | *0* | *8* |
| Percent Grade (%) | | *0* | | | *0* | |
| Flared Approach | | *N* | | | *N* | |
| Storage | | *0* | | | *0* | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *0* | *0* | *0* | *0* | *0* |
| Configuration | | | | | *LR* | |

## Delay, Queue Length, and Level of Service

| Approach | Eastbound | Westbound | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | *L* | | | | | | *LR* | |
| v (veh/h) | *29* | | | | | | *27* | |
| C (m) (veh/h) | *563* | | | | | | *235* | |
| v/c | *0.05* | | | | | | *0.11* | |
| 95% queue length | *0.16* | | | | | | *0.39* | |
| Control Delay (s/veh) | *11.7* | | | | | | *22.3* | |
| LOS | *B* | | | | | | *C* | |
| Approach Delay (s/veh) | -- | -- | | | | | *22.3* | |
| Approach LOS | -- | -- | | | | | *C* | |



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# TWO-WAY STOP CONTROL SUMMARY

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Whitewater Club @ Vista Chino* |
| Agency/Co. | *Endo Engineering* | Jurisdiction | *Palm Springs* |
| Date Performed | *1/17/2014* | Analysis Year | *Year 2020 - No Project* |
| Analysis Time Period | *Midday Peak Hour* | | |

Project Description *PS Country Club*

East/West Street: *Vista Chino* | North/South Street: *Whitewater Club Drive*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

## Vehicle Volumes and Adjustments

| **Major Street** | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume (veh/h) | *16* | *1365* | | | *1341* | *33* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *16* | *1365* | *0* | *0* | *1341* | *33* |
| Percent Heavy Vehicles | *8* | -- | -- | *0* | -- | -- |
| Median Type | *Two Way Left Turn Lane* | | | | | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *1* | *2* | *0* | *0* | *2* | *0* |
| Configuration | *L* | *T* | | | *T* | *TR* |
| Upstream Signal | | *0* | | | *0* | |

| **Minor Street** | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume (veh/h) | | | | *15* | | *12* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *0* | *0* | *0* | *15* | *0* | *12* |
| Percent Heavy Vehicles | *0* | *0* | *0* | *8* | *0* | *8* |
| Percent Grade (%) | | *0* | | | *0* | |
| Flared Approach | | *N* | | | *N* | |
| Storage | | *0* | | | *0* | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *0* | *0* | *0* | *0* | *0* |
| Configuration | | | | | *LR* | |

## Delay, Queue Length, and Level of Service

| Approach | Eastbound | Westbound | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | *L* | | | | | | *LR* | |
| v (veh/h) | *16* | | | | | | *27* | |
| C (m) (veh/h) | *465* | | | | | | *196* | |
| v/c | *0.03* | | | | | | *0.14* | |
| 95% queue length | *0.11* | | | | | | *0.48* | |
| Control Delay (s/veh) | *13.0* | | | | | | *26.3* | |
| LOS | *B* | | | | | | *D* | |
| Approach Delay (s/veh) | -- | -- | | | | *26.3* | | |
| Approach LOS | -- | -- | | | | *D* | | |



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# TWO-WAY STOP CONTROL SUMMARY

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Whitewater Club @ Vista Chino* |
| Agency/Co. | *Endo Engineering* | Jurisdiction | *Palm Springs* |
| Date Performed | *1/17/2014* | Analysis Year | *Year 2020 - No Project* |
| Analysis Time Period | *PM Peak Hour* | | |

Project Description *PS Country Club*

East/West Street: *Vista Chino* | North/South Street: *Whitewater Club Drive*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

## Vehicle Volumes and Adjustments

| **Major Street** | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume (veh/h) | *34* | *1867* | | | *1437* | *29* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *34* | *1867* | *0* | *0* | *1437* | *29* |
| Percent Heavy Vehicles | *8* | -- | -- | *0* | -- | -- |
| Median Type | *Two Way Left Turn Lane* | | | | | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *1* | *2* | *0* | *0* | *2* | *0* |
| Configuration | *L* | *T* | | | *T* | *TR* |
| Upstream Signal | | *0* | | | *0* | |

| **Minor Street** | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume (veh/h) | | | | *15* | | *15* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *0* | *0* | *0* | *15* | *0* | *15* |
| Percent Heavy Vehicles | *0* | *0* | *0* | *8* | *0* | *8* |
| Percent Grade (%) | | *0* | | | *0* | |
| Flared Approach | | *N* | | | *N* | |
| Storage | | *0* | | | *0* | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *0* | *0* | *0* | *0* | *0* |
| Configuration | | | | | *LR* | |

## Delay, Queue Length, and Level of Service

| Approach | Eastbound | Westbound | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | *L* | | | | | | *LR* | |
| v (veh/h) | *34* | | | | | | *30* | |
| C (m) (veh/h) | *428* | | | | | | *168* | |
| v/c | *0.08* | | | | | | *0.18* | |
| 95% queue length | *0.26* | | | | | | *0.65* | |
| Control Delay (s/veh) | *14.1* | | | | | | *31.1* | |
| LOS | *B* | | | | | | *D* | |
| Approach Delay (s/veh) | -- | -- | | | | | *31.1* | |
| Approach LOS | -- | -- | | | | | *D* | |



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# TWO-WAY STOP CONTROL SUMMARY

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Whitewater Club @ Vista Chino* |
| Agency/Co. | *Endo Engineering* | Jurisdiction | *Palm Springs* |
| Date Performed | *1/17/2014* | Analysis Year | *Year 2020 - W/ Project* |
| Analysis Time Period | *Midday Peak Hour* | | |

Project Description *PS Country Club*

East/West Street: *Vista Chino* | North/South Street: *Whitewater Club Drive*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

## Vehicle Volumes and Adjustments

| **Major Street** | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume (veh/h) | *18* | *1376* | | | *1345* | *37* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *18* | *1376* | *0* | *0* | *1345* | *37* |
| Percent Heavy Vehicles | *8* | -- | -- | *0* | -- | -- |
| Median Type | *Two Way Left Turn Lane* | | | | | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *1* | *2* | *0* | *0* | *2* | *0* |
| Configuration | *L* | *T* | | | *T* | *TR* |
| Upstream Signal | | *0* | | | *0* | |

| **Minor Street** | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume (veh/h) | | | | *15* | | *19* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *0* | *0* | *0* | *15* | *0* | *19* |
| Percent Heavy Vehicles | *0* | *0* | *0* | *8* | *0* | *8* |
| Percent Grade (%) | | *0* | | | *0* | |
| Flared Approach | | *N* | | | *N* | |
| Storage | | *0* | | | *0* | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *0* | *0* | *0* | *0* | *0* |
| Configuration | | | | | *LR* | |

## Delay, Queue Length, and Level of Service

| Approach | Eastbound | Westbound | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | *L* | | | | | | *LR* | |
| v (veh/h) | *18* | | | | | | *34* | |
| C (m) (veh/h) | *462* | | | | | | *218* | |
| v/c | *0.04* | | | | | | *0.16* | |
| 95% queue length | *0.12* | | | | | | *0.55* | |
| Control Delay (s/veh) | *13.1* | | | | | | *24.6* | |
| LOS | *B* | | | | | | *C* | |
| Approach Delay (s/veh) | -- | -- | | | | | *24.6* | |
| Approach LOS | -- | -- | | | | | *C* | |



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# TWO-WAY STOP CONTROL SUMMARY

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Whitewater Club @ Vista Chino* |
| Agency/Co. | *Endo Engineering* | Jurisdiction | *Palm Springs* |
| Date Performed | *1/17/2014* | Analysis Year | *Year 2020 - W/ Project* |
| Analysis Time Period | *PM Peak Hour* | | |

Project Description *PS Country Club*

East/West Street: *Vista Chino* | North/South Street: *Whitewater Club Drive*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

## Vehicle Volumes and Adjustments

| **Major Street** | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume (veh/h) | *41* | *1874* | | | *1449* | *41* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *41* | *1874* | *0* | *0* | *1449* | *41* |
| Percent Heavy Vehicles | *8* | -- | -- | *0* | -- | -- |
| Median Type | *Two Way Left Turn Lane* | | | | | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *1* | *2* | *0* | *0* | *2* | *0* |
| Configuration | *L* | *T* | | | *T* | *TR* |
| Upstream Signal | | *0* | | | *0* | |

| **Minor Street** | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume (veh/h) | | | | *15* | | *19* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *0* | *0* | *0* | *15* | *0* | *19* |
| Percent Heavy Vehicles | *0* | *0* | *0* | *8* | *0* | *8* |
| Percent Grade (%) | | *0* | | | *0* | |
| Flared Approach | | *N* | | | *N* | |
| Storage | | *0* | | | *0* | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *0* | *0* | *0* | *0* | *0* |
| Configuration | | | | | *LR* | |

## Delay, Queue Length, and Level of Service

| Approach | Eastbound | Westbound | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | *L* | | | | | | *LR* | |
| v (veh/h) | *41* | | | | | | *34* | |
| C (m) (veh/h) | *418* | | | | | | *176* | |
| v/c | *0.10* | | | | | | *0.19* | |
| 95% queue length | *0.33* | | | | | | *0.71* | |
| Control Delay (s/veh) | *14.5* | | | | | | *30.3* | |
| LOS | *B* | | | | | | *D* | |
| Approach Delay (s/veh) | -- | -- | | | | *30.3* | | |
| Approach LOS | -- | -- | | | | *D* | | |



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# TWO-WAY STOP CONTROL SUMMARY

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Whitewater Club @ Vista Chino* |
| Agency/Co. | *Endo Engineering* | Jurisdiction | *Palm Springs* |
| Date Performed | *1/17/2014* | Analysis Year | *Year 2030 - No Project* |
| Analysis Time Period | *Midday Peak Hour* | | |

Project Description *PS Country Club*

East/West Street: *Vista Chino* | North/South Street: *Whitewater Club Drive*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

## Vehicle Volumes and Adjustments

| **Major Street** | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume (veh/h) | *18* | *1905* | | | *1871* | *38* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *18* | *1905* | *0* | *0* | *1871* | *38* |
| Percent Heavy Vehicles | *5* | -- | -- | *0* | -- | -- |
| Median Type | *Two Way Left Turn Lane* | | | | | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *1* | *2* | *0* | *0* | *2* | *0* |
| Configuration | *L* | *T* | | | *T* | *TR* |
| Upstream Signal | | *0* | | | *0* | |

| **Minor Street** | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume (veh/h) | | | | *18* | | *14* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *0* | *0* | *0* | *18* | *0* | *14* |
| Percent Heavy Vehicles | *0* | *0* | *0* | *5* | *0* | *5* |
| Percent Grade (%) | | *0* | | | *0* | |
| Flared Approach | | *N* | | | *N* | |
| Storage | | *0* | | | *0* | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *0* | *0* | *0* | *0* | *0* |
| Configuration | | | | | *LR* | |

## Delay, Queue Length, and Level of Service

| Approach | Eastbound | Westbound | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | *L* | | | | | | *LR* | |
| v (veh/h) | *18* | | | | | | *32* | |
| C (m) (veh/h) | *295* | | | | | | *108* | |
| v/c | *0.06* | | | | | | *0.30* | |
| 95% queue length | *0.19* | | | | | | *1.22* | |
| Control Delay (s/veh) | *18.0* | | | | | | *52.2* | |
| LOS | *C* | | | | | | *F* | |
| Approach Delay (s/veh) | -- | -- | | | | *52.2* | | |
| Approach LOS | -- | -- | | | | *F* | | |

# TWO-WAY STOP CONTROL SUMMARY

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Whitewater Club @ Vista Chino* |
| Agency/Co. | *Endo Engineering* | Jurisdiction | *Palm Springs* |
| Date Performed | *1/17/2014* | Analysis Year | *Year 2030 - No Project* |
| Analysis Time Period | *PM Peak Hour* | | |

Project Description *PS Country Club*

East/West Street: *Vista Chino* | North/South Street: *Whitewater Club Drive*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

## Vehicle Volumes and Adjustments

| **Major Street** | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume (veh/h) | *39* | *2612* | | | *2019* | *45* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *39* | *2612* | *0* | *0* | *2019* | *45* |
| Percent Heavy Vehicles | *5* | -- | -- | *0* | -- | -- |
| Median Type | *Two Way Left Turn Lane* | | | | | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *1* | *2* | *0* | *0* | *2* | *0* |
| Configuration | *L* | *T* | | | *T* | *TR* |
| Upstream Signal | | *0* | | | *0* | |

| **Minor Street** | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume (veh/h) | | | | *18* | | *21* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *0* | *0* | *0* | *18* | *0* | *21* |
| Percent Heavy Vehicles | *0* | *0* | *0* | *5* | *0* | *5* |
| Percent Grade (%) | | *0* | | | *0* | |
| Flared Approach | | *N* | | | *N* | |
| Storage | | *0* | | | *0* | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *0* | *0* | *0* | *0* | *0* |
| Configuration | | | | | *LR* | |

## Delay, Queue Length, and Level of Service

| Approach | Eastbound | Westbound | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | *L* | | | | | | *LR* | |
| v (veh/h) | *39* | | | | | | *39* | |
| C (m) (veh/h) | *256* | | | | | | *92* | |
| v/c | *0.15* | | | | | | *0.42* | |
| 95% queue length | *0.54* | | | | | | *2.05* | |
| Control Delay (s/veh) | *21.6* | | | | | | *72.2* | |
| LOS | *C* | | | | | | *F* | |
| Approach Delay (s/veh) | -- | -- | | | | *72.2* | | |
| Approach LOS | -- | -- | | | | *F* | | |



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# TWO-WAY STOP CONTROL SUMMARY

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Whitewater Club @ Vista Chino* |
| Agency/Co. | *Endo Engineering* | Jurisdiction | *Palm Springs* |
| Date Performed | *1/17/2014* | Analysis Year | *Year 2030 - W/ Project* |
| Analysis Time Period | *Midday Peak Hour* | | |

Project Description *PS Country Club*

East/West Street: *Vista Chino* | North/South Street: *Whitewater Club Drive*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

## Vehicle Volumes and Adjustments

| **Major Street** | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume (veh/h) | *20* | *1916* | | | *1875* | *42* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *20* | *1916* | *0* | *0* | *1875* | *42* |
| Percent Heavy Vehicles | *5* | -- | -- | *0* | -- | -- |
| Median Type | *Two Way Left Turn Lane* | | | | | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *1* | *2* | *0* | *0* | *2* | *0* |
| Configuration | *L* | *T* | | | *T* | *TR* |
| Upstream Signal | | *0* | | | *0* | |

| **Minor Street** | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume (veh/h) | | | | *18* | | *21* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *0* | *0* | *0* | *18* | *0* | *21* |
| Percent Heavy Vehicles | *0* | *0* | *0* | *5* | *0* | *5* |
| Percent Grade (%) | | *0* | | | *0* | |
| Flared Approach | | *N* | | | *N* | |
| Storage | | *0* | | | *0* | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *0* | *0* | *0* | *0* | *0* |
| Configuration | | | | | *LR* | |

## Delay, Queue Length, and Level of Service

| Approach | Eastbound | Westbound | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | *L* | | | | | | *LR* | |
| v (veh/h) | *20* | | | | | | *39* | |
| C (m) (veh/h) | *293* | | | | | | *122* | |
| v/c | *0.07* | | | | | | *0.32* | |
| 95% queue length | *0.22* | | | | | | *1.36* | |
| Control Delay (s/veh) | *18.2* | | | | | | *48.2* | |
| LOS | *C* | | | | | | *E* | |
| Approach Delay (s/veh) | -- | -- | | | | *48.2* | | |
| Approach LOS | -- | -- | | | | *E* | | |



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# TWO-WAY STOP CONTROL SUMMARY

## General Information

| | |
|---|---|
| Analyst | *Greg* |
| Agency/Co. | *Endo Engineering* |
| Date Performed | *1/17/2014* |
| Analysis Time Period | *PM Peak Hour* |

## Site Information

| | |
|---|---|
| Intersection | *Whitewater Club @ Vista Chino* |
| Jurisdiction | *Palm Springs* |
| Analysis Year | *Year 2030 - W/ Project* |

Project Description *PS Country Club*

East/West Street: *Vista Chino* | North/South Street: *Whitewater Club Drive*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

## Vehicle Volumes and Adjustments

| **Major Street** | Eastbound | | | Westbound | | |
|---|---|---|---|---|---|---|
| Movement | 1 | 2 | 3 | 4 | 5 | 6 |
| | L | T | R | L | T | R |
| Volume (veh/h) | *46* | *2612* | | | *2019* | *45* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *46* | *2612* | *0* | *0* | *2019* | *45* |
| Percent Heavy Vehicles | *5* | -- | -- | *0* | -- | -- |
| Median Type | *Two Way Left Turn Lane* | | | | | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *1* | *2* | *0* | *0* | *2* | *0* |
| Configuration | *L* | *T* | | | *T* | *TR* |
| Upstream Signal | | *0* | | | *0* | |

| **Minor Street** | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|
| Movement | 7 | 8 | 9 | 10 | 11 | 12 |
| | L | T | R | L | T | R |
| Volume (veh/h) | | | | *18* | | *21* |
| Peak-Hour Factor, PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Hourly Flow Rate, HFR (veh/h) | *0* | *0* | *0* | *18* | *0* | *21* |
| Percent Heavy Vehicles | *0* | *0* | *0* | *5* | *0* | *5* |
| Percent Grade (%) | | *0* | | | *0* | |
| Flared Approach | | *N* | | | *N* | |
| Storage | | *0* | | | *0* | |
| RT Channelized | | | *0* | | | *0* |
| Lanes | *0* | *0* | *0* | *0* | *0* | *0* |
| Configuration | | | | | *LR* | |

## Delay, Queue Length, and Level of Service

| Approach | Eastbound | Westbound | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|---|---|
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | *L* | | | | | | *LR* | |
| v (veh/h) | *46* | | | | | | *39* | |
| C (m) (veh/h) | *256* | | | | | | *91* | |
| v/c | *0.18* | | | | | | *0.43* | |
| 95% queue length | *0.65* | | | | | | *2.08* | |
| Control Delay (s/veh) | *22.1* | | | | | | *73.4* | |
| LOS | *C* | | | | | | *F* | |
| Approach Delay (s/veh) | -- | -- | | | | *73.4* | | |
| Approach LOS | -- | -- | | | | *F* | | |



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# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Gene Autry Trail @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Existing* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *1* | *0* | *1* | *1* | *1* | *2* | *1* | *1* | *2* | *1* |
| Lane Group | | *LT* | *R* | | *LT* | *R* | *L* | *T* | *R* | *L* | *T* | *R* |
| Volume (vph) | *45* | *1* | *65* | *1* | *2* | *10* | *50* | *801* | *9* | *5* | *963* | *64* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* |
| Extension of Effective Green | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* |
| Arrival Type | | *3* | *3* | | *3* | *3* | *3* | *3* | *3* | *3* | *3* | *3* |
| Unit Extension | | *3.0* | *3.0* | | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | *12.0* | | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | *0* | | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *17.0* | G = | G = | G = | G = *5.0* | G = *56.0* | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = *4* | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *46* | *65* | | *3* | *10* | *50* | *801* | *9* | *5* | *963* | *64* |
| Lane Group Capacity | | *256* | *1495* | | *320* | *1495* | *93* | *2084* | *1279* | *93* | *2084* | *1279* |
| v/c Ratio | | *0.18* | *0.04* | | *0.01* | *0.01* | *0.54* | *0.38* | *0.01* | *0.05* | *0.46* | *0.05* |
| Green Ratio | | *0.19* | *1.00* | | *0.19* | *1.00* | *0.06* | *0.62* | *0.86* | *0.06* | *0.62* | *0.86* |
| Uniform Delay $d_1$ | | *30.6* | *0.0* | | *29.7* | *0.0* | *41.4* | *8.4* | *0.9* | *40.3* | *9.0* | *1.0* |
| Delay Factor k | | *0.11* | *0.11* | | *0.11* | *0.11* | *0.14* | *0.11* | *0.11* | *0.11* | *0.11* | *0.11* |
| Incremental Delay $d_2$ | | *0.3* | *0.0* | | *0.0* | *0.0* | *6.2* | *0.1* | *0.0* | *0.2* | *0.2* | *0.0* |
| PF Factor | | *1.000* | *0.950* | | *1.000* | *0.950* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* |
| Control Delay | | *31.0* | *0.0* | | *29.7* | *0.0* | *47.6* | *8.6* | *0.9* | *40.5* | *9.2* | *1.0* |
| Lane Group LOS | | *C* | *A* | | *C* | *A* | *D* | *A* | *A* | *D* | *A* | *A* |
| Approach Delay | | *12.8* | | | *6.8* | | | *10.7* | | | *8.8* | |
| Approach LOS | | *B* | | | *A* | | | *B* | | | *A* | |
| Intersection Delay | | *9.9* | | | Intersection LOS | | | | | | *A* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Gene Autry Trail @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Existing* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *1* | *0* | *1* | *1* | *1* | *2* | *1* | *1* | *2* | *1* |
| Lane Group | | *LT* | *R* | | *LT* | *R* | *L* | *T* | *R* | *L* | *T* | *R* |
| Volume (vph) | *95* | *2* | *59* | *3* | *6* | *26* | *96* | *1278* | *5* | *9* | *918* | *125* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* |
| Extension of Effective Green | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* |
| Arrival Type | | *3* | *3* | | *3* | *3* | *3* | *3* | *3* | *3* | *3* | *3* |
| Unit Extension | | *3.0* | *3.0* | | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | *12.0* | | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | *0* | | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | Excl. Left | NB Only | Thru & RT | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *15.0* | G = | G = | G = | G = *5.0* | G = *1.0* | G = *53.0* | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = *4* | Y = *4* | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *97* | *59* | | *9* | *26* | *96* | *1278* | *5* | *9* | *918* | *125* |
| Lane Group Capacity | | *212* | *1495* | | *276* | *482* | *186* | *2159* | *1279* | *93* | *1973* | *1196* |
| v/c Ratio | | *0.46* | *0.04* | | *0.03* | *0.05* | *0.52* | *0.59* | *0.00* | *0.10* | *0.47* | *0.10* |
| Green Ratio | | *0.17* | *1.00* | | *0.17* | *0.32* | *0.11* | *0.64* | *0.86* | *0.06* | *0.59* | *0.80* |
| Uniform Delay $d_1$ | | *33.8* | *0.0* | | *31.4* | *21.0* | *37.7* | *9.2* | *0.9* | *40.4* | *10.5* | *2.0* |
| Delay Factor k | | *0.11* | *0.11* | | *0.11* | *0.11* | *0.12* | *0.18* | *0.11* | *0.11* | *0.11* | *0.11* |
| Incremental Delay $d_2$ | | *1.6* | *0.0* | | *0.0* | *0.0* | *2.5* | *0.4* | *0.0* | *0.5* | *0.2* | *0.0* |
| PF Factor | | *1.000* | *0.950* | | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* |
| Control Delay | | *35.4* | *0.0* | | *31.5* | *21.1* | *40.2* | *9.6* | *0.9* | *40.8* | *10.7* | *2.0* |
| Lane Group LOS | | *D* | *A* | | *C* | *C* | *D* | *A* | *A* | *D* | *B* | *A* |
| Approach Delay | | *22.0* | | | *23.8* | | | *11.7* | | | *9.9* | |
| Approach LOS | | *C* | | | *C* | | | *B* | | | *A* | |
| Intersection Delay | | *11.8* | | | Intersection LOS | | | | | | *B* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Gene Autry Trail @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2020 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *1* | *0* | *1* | *1* | *1* | *2* | *1* | *1* | *2* | *1* |
| Lane Group | | *LT* | *R* | | *LT* | *R* | *L* | *T* | *R* | *L* | *T* | *R* |
| Volume (vph) | *54* | *1* | *76* | *1* | *2* | *11* | *58* | *893* | *10* | *5* | *1074* | *76* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* |
| Extension of Effective Green | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* |
| Arrival Type | | *3* | *3* | | *3* | *3* | *3* | *3* | *3* | *3* | *3* | *3* |
| Unit Extension | | *3.0* | *3.0* | | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | *12.0* | | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | *0* | | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *17.0* | G = | G = | G = | G = *5.0* | G = *56.0* | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = *4* | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *55* | *76* | | *3* | *11* | *58* | *893* | *10* | *5* | *1074* | *76* |
| Lane Group Capacity | | *251* | *1495* | | *319* | *1495* | *93* | *2084* | *1279* | *93* | *2084* | *1279* |
| v/c Ratio | | *0.22* | *0.05* | | *0.01* | *0.01* | *0.62* | *0.43* | *0.01* | *0.05* | *0.52* | *0.06* |
| Green Ratio | | *0.19* | *1.00* | | *0.19* | *1.00* | *0.06* | *0.62* | *0.86* | *0.06* | *0.62* | *0.86* |
| Uniform Delay $d_1$ | | *30.9* | *0.0* | | *29.7* | *0.0* | *41.6* | *8.8* | *0.9* | *40.3* | *9.5* | *1.0* |
| Delay Factor k | | *0.11* | *0.11* | | *0.11* | *0.11* | *0.21* | *0.11* | *0.11* | *0.11* | *0.12* | *0.11* |
| Incremental Delay $d_2$ | | *0.4* | *0.0* | | *0.0* | *0.0* | *13.0* | *0.1* | *0.0* | *0.2* | *0.2* | *0.0* |
| PF Factor | | *1.000* | *0.950* | | *1.000* | *0.950* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* |
| Control Delay | | *31.3* | *0.0* | | *29.7* | *0.0* | *54.6* | *8.9* | *0.9* | *40.5* | *9.7* | *1.0* |
| Lane Group LOS | | *C* | *A* | | *C* | *A* | *D* | *A* | *A* | *D* | *A* | *A* |
| Approach Delay | | *13.2* | | | *6.4* | | | *11.6* | | | *9.2* | |
| Approach LOS | | *B* | | | *A* | | | *B* | | | *A* | |
| Intersection Delay | | *10.4* | | | Intersection LOS | | | | | | *B* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Gene Autry Trail @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2020 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *1* | *0* | *1* | *1* | *1* | *2* | *1* | *1* | *2* | *1* |
| Lane Group | | *LT* | *R* | | *LT* | *R* | *L* | *T* | *R* | *L* | *T* | *R* |
| Volume (vph) | *113* | *2* | *69* | *3* | *7* | *28* | *112* | *1422* | *5* | *10* | *1022* | *149* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* |
| Extension of Effective Green | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* |
| Arrival Type | | *3* | *3* | | *3* | *3* | *3* | *3* | *3* | *3* | *3* | *3* |
| Unit Extension | | *3.0* | *3.0* | | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | *12.0* | | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | *0* | | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | Excl. Left | NB Only | Thru & RT | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *17.0* | G = | G = | G = | G = *5.0* | G = *2.0* | G = *50.0* | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = *4* | Y = *4* | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *115* | *69* | | *10* | *28* | *112* | *1422* | *5* | *10* | *1022* | *149* |
| Lane Group Capacity | | *240* | *1495* | | *315* | *282* | *204* | *2084* | *930* | *93* | *1861* | *831* |
| v/c Ratio | | *0.48* | *0.05* | | *0.03* | *0.10* | *0.55* | *0.68* | *0.01* | *0.11* | *0.55* | *0.18* |
| Green Ratio | | *0.19* | *1.00* | | *0.19* | *0.19* | *0.12* | *0.62* | *0.62* | *0.06* | *0.56* | *0.56* |
| Uniform Delay $d_1$ | | *32.6* | *0.0* | | *29.8* | *30.2* | *37.2* | *11.2* | *6.4* | *40.4* | *12.8* | *9.9* |
| Delay Factor k | | *0.11* | *0.11* | | *0.11* | *0.11* | *0.15* | *0.25* | *0.11* | *0.11* | *0.15* | *0.11* |
| Incremental Delay $d_2$ | | *1.5* | *0.0* | | *0.0* | *0.2* | *3.2* | *0.9* | *0.0* | *0.5* | *0.3* | *0.1* |
| PF Factor | | *1.000* | *0.950* | | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* |
| Control Delay | | *34.1* | *0.0* | | *29.8* | *30.3* | *40.3* | *12.1* | *6.4* | *40.9* | *13.1* | *10.0* |
| Lane Group LOS | | *C* | *A* | | *C* | *C* | *D* | *B* | *A* | *D* | *B* | *A* |
| Approach Delay | | *21.3* | | | *30.2* | | | *14.1* | | | *13.0* | |
| Approach LOS | | *C* | | | *C* | | | *B* | | | *B* | |
| Intersection Delay | | *14.3* | | | Intersection LOS | | | | | | *B* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Gene Autry Trail @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2020 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *1* | *0* | *1* | *1* | *1* | *2* | *1* | *1* | *2* | *1* |
| Lane Group | | *LT* | *R* | | *LT* | *R* | *L* | *T* | *R* | *L* | *T* | *R* |
| Volume (vph) | *85* | *1* | *109* | *1* | *2* | *11* | *65* | *893* | *10* | *5* | *1074* | *86* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* |
| Extension of Effective Green | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* |
| Arrival Type | | *3* | *3* | | *3* | *3* | *3* | *3* | *3* | *3* | *3* | *3* |
| Unit Extension | | *3.0* | *3.0* | | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | *12.0* | | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | *0* | | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *17.0* | G = | G = | G = | G = *5.0* | G = *56.0* | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = *4* | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *86* | *109* | | *3* | *11* | *65* | *893* | *10* | *5* | *1074* | *86* |
| Lane Group Capacity | | *242* | *1495* | | *318* | *1495* | *93* | *2084* | *1279* | *93* | *2084* | *1279* |
| v/c Ratio | | *0.36* | *0.07* | | *0.01* | *0.01* | *0.70* | *0.43* | *0.01* | *0.05* | *0.52* | *0.07* |
| Green Ratio | | *0.19* | *1.00* | | *0.19* | *1.00* | *0.06* | *0.62* | *0.86* | *0.06* | *0.62* | *0.86* |
| Uniform Delay $d_1$ | | *31.7* | *0.0* | | *29.7* | *0.0* | *41.8* | *8.8* | *0.9* | *40.3* | *9.5* | *1.0* |
| Delay Factor k | | *0.11* | *0.11* | | *0.11* | *0.11* | *0.27* | *0.11* | *0.11* | *0.11* | *0.12* | *0.11* |
| Incremental Delay $d_2$ | | *0.9* | *0.0* | | *0.0* | *0.0* | *22.9* | *0.1* | *0.0* | *0.2* | *0.2* | *0.0* |
| PF Factor | | *1.000* | *0.950* | | *1.000* | *0.950* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* |
| Control Delay | | *32.6* | *0.0* | | *29.7* | *0.0* | *64.6* | *8.9* | *0.9* | *40.5* | *9.7* | *1.0* |
| Lane Group LOS | | *C* | *A* | | *C* | *A* | *E* | *A* | *A* | *D* | *A* | *A* |
| Approach Delay | | *14.4* | | | *6.4* | | | *12.6* | | | *9.2* | |
| Approach LOS | | *B* | | | *A* | | | *B* | | | *A* | |
| Intersection Delay | | *11.0* | | | Intersection LOS | | | | | | *B* | |



*HCS+*™ Version 5.3 Generated: 1/19/2014 10:19 AM

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Gene Autry Trail @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2020 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *1* | *0* | *1* | *1* | *1* | *2* | *1* | *1* | *2* | *1* |
| Lane Group | | *LT* | *R* | | *LT* | *R* | *L* | *T* | *R* | *L* | *T* | *R* |
| Volume (vph) | *132* | *2* | *89* | *3* | *7* | *28* | *135* | *1422* | *5* | *10* | *1022* | *182* |
| % Heavy Vehicles | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* | *8* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* |
| Extension of Effective Green | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* |
| Arrival Type | | *3* | *3* | | *3* | *3* | *3* | *3* | *3* | *3* | *3* | *3* |
| Unit Extension | | *3.0* | *3.0* | | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | *12.0* | | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | *0* | | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | Excl. Left | NB Only | Thru & RT | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *17.0* | G = | G = | G = | G = *5.0* | G = *2.0* | G = *50.0* | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = *4* | Y = *4* | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *134* | *89* | | *10* | *28* | *135* | *1422* | *5* | *10* | *1022* | *182* |
| Lane Group Capacity | | *240* | *1495* | | *314* | *282* | *204* | *2084* | *930* | *93* | *1861* | *831* |
| v/c Ratio | | *0.56* | *0.06* | | *0.03* | *0.10* | *0.66* | *0.68* | *0.01* | *0.11* | *0.55* | *0.22* |
| Green Ratio | | *0.19* | *1.00* | | *0.19* | *0.19* | *0.12* | *0.62* | *0.62* | *0.06* | *0.56* | *0.56* |
| Uniform Delay $d_1$ | | *33.1* | *0.0* | | *29.8* | *30.2* | *37.7* | *11.2* | *6.4* | *40.4* | *12.8* | *10.1* |
| Delay Factor k | | *0.16* | *0.11* | | *0.11* | *0.11* | *0.24* | *0.25* | *0.11* | *0.11* | *0.15* | *0.11* |
| Incremental Delay $d_2$ | | *2.9* | *0.0* | | *0.0* | *0.2* | *8.0* | *0.9* | *0.0* | *0.5* | *0.3* | *0.1* |
| PF Factor | | *1.000* | *0.950* | | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* |
| Control Delay | | *36.0* | *0.0* | | *29.8* | *30.3* | *45.8* | *12.1* | *6.4* | *40.9* | *13.1* | *10.3* |
| Lane Group LOS | | *D* | *A* | | *C* | *C* | *D* | *B* | *A* | *D* | *B* | *B* |
| Approach Delay | | *21.7* | | | *30.2* | | | *15.0* | | | *12.9* | |
| Approach LOS | | *C* | | | *C* | | | *B* | | | *B* | |
| Intersection Delay | | *14.8* | | | Intersection LOS | | | | | | *B* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Gene Autry Trail @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2030 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *1* | *0* | *1* | *1* | *1* | *2* | *1* | *1* | *2* | *1* |
| Lane Group | | *LT* | *R* | | *LT* | *R* | *L* | *T* | *R* | *L* | *T* | *R* |
| Volume (vph) | *69* | *1* | *94* | *1* | *3* | *12* | *72* | *1044* | *10* | *6* | *1255* | *99* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* |
| Extension of Effective Green | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* |
| Arrival Type | | *3* | *3* | | *3* | *3* | *3* | *3* | *3* | *3* | *3* | *3* |
| Unit Extension | | *3.0* | *3.0* | | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | *12.0* | | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | *0* | | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *17.0* | G = | G = | G = | G = *5.0* | G = *56.0* | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = *4* | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *70* | *94* | | *4* | *12* | *72* | *1044* | *10* | *6* | *1255* | *99* |
| Lane Group Capacity | | *252* | *1538* | | *331* | *291* | *96* | *2144* | *957* | *96* | *2144* | *957* |
| v/c Ratio | | *0.28* | *0.06* | | *0.01* | *0.04* | *0.75* | *0.49* | *0.01* | *0.06* | *0.59* | *0.10* |
| Green Ratio | | *0.19* | *1.00* | | *0.19* | *0.19* | *0.06* | *0.62* | *0.62* | *0.06* | *0.62* | *0.62* |
| Uniform Delay $d_1$ | | *31.2* | *0.0* | | *29.7* | *29.8* | *41.9* | *9.2* | *6.5* | *40.3* | *10.1* | *6.9* |
| Delay Factor k | | *0.11* | *0.11* | | *0.11* | *0.11* | *0.31* | *0.11* | *0.11* | *0.11* | *0.18* | *0.11* |
| Incremental Delay $d_2$ | | *0.6* | *0.0* | | *0.0* | *0.1* | *32.0* | *0.2* | *0.0* | *0.3* | *0.4* | *0.0* |
| PF Factor | | *1.000* | *0.950* | | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* |
| Control Delay | | *31.8* | *0.0* | | *29.7* | *29.9* | *73.9* | *9.4* | *6.5* | *40.6* | *10.5* | *6.9* |
| Lane Group LOS | | *C* | *A* | | *C* | *C* | *E* | *A* | *A* | *D* | *B* | *A* |
| Approach Delay | | *13.6* | | | *29.8* | | | *13.5* | | | *10.4* | |
| Approach LOS | | *B* | | | *C* | | | *B* | | | *B* | |
| Intersection Delay | | *12.0* | | | Intersection LOS | | | | | | *B* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Gene Autry Trail @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2030 - No Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *1* | *0* | *1* | *1* | *1* | *2* | *1* | *1* | *2* | *1* |
| Lane Group | | *LT* | *R* | | *LT* | *R* | *L* | *T* | *R* | *L* | *T* | *R* |
| Volume (vph) | *145* | *3* | *85* | *3* | *8* | *31* | *138* | *1657* | *6* | *11* | *1190* | *191* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* |
| Extension of Effective Green | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* |
| Arrival Type | | *3* | *3* | | *3* | *3* | *3* | *3* | *3* | *3* | *3* | *3* |
| Unit Extension | | *3.0* | *3.0* | | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | *12.0* | | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | *0* | | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | Excl. Left | NB Only | Thru & RT | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *17.0* | G = | G = | G = | G = *5.0* | G = *2.0* | G = *50.0* | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = *4* | Y = *4* | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *148* | *85* | | *11* | *31* | *138* | *1657* | *6* | *11* | *1190* | *191* |
| Lane Group Capacity | | *247* | *1538* | | *324* | *291* | *210* | *2144* | *957* | *96* | *1914* | *854* |
| v/c Ratio | | *0.60* | *0.06* | | *0.03* | *0.11* | *0.66* | *0.77* | *0.01* | *0.11* | *0.62* | *0.22* |
| Green Ratio | | *0.19* | *1.00* | | *0.19* | *0.19* | *0.12* | *0.62* | *0.62* | *0.06* | *0.56* | *0.56* |
| Uniform Delay $d_1$ | | *33.4* | *0.0* | | *29.8* | *30.2* | *37.7* | *12.4* | *6.4* | *40.4* | *13.6* | *10.2* |
| Delay Factor k | | *0.19* | *0.11* | | *0.11* | *0.11* | *0.23* | *0.32* | *0.11* | *0.11* | *0.20* | *0.11* |
| Incremental Delay $d_2$ | | *4.1* | *0.0* | | *0.0* | *0.2* | *7.5* | *1.8* | *0.0* | *0.5* | *0.6* | *0.1* |
| PF Factor | | *1.000* | *0.950* | | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* |
| Control Delay | | *37.4* | *0.0* | | *29.8* | *30.4* | *45.2* | *14.2* | *6.4* | *40.9* | *14.2* | *10.3* |
| Lane Group LOS | | *D* | *A* | | *C* | *C* | *D* | *B* | *A* | *D* | *B* | *B* |
| Approach Delay | | *23.8* | | | *30.2* | | | *16.6* | | | *13.9* | |
| Approach LOS | | *C* | | | *C* | | | *B* | | | *B* | |
| Intersection Delay | | *16.1* | | | Intersection LOS | | | | | | *B* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Gene Autry Trail @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *Midday Peak Hour* | Analysis Year | *Year 2030 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *1* | *0* | *1* | *1* | *1* | *2* | *1* | *1* | *2* | *1* |
| Lane Group | | *LT* | *R* | | *LT* | *R* | *L* | *T* | *R* | *L* | *T* | *R* |
| Volume (vph) | *100* | *1* | *127* | *1* | *3* | *12* | *79* | *1044* | *10* | *6* | *1255* | *109* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* |
| Extension of Effective Green | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* |
| Arrival Type | | *3* | *3* | | *3* | *3* | *3* | *3* | *3* | *3* | *3* | *3* |
| Unit Extension | | *3.0* | *3.0* | | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | *12.0* | | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | *0* | | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *17.0* | G = | G = | G = | G = *6.0* | G = *55.0* | G = | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = *4* | Y = | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *101* | *127* | | *4* | *12* | *79* | *1044* | *10* | *6* | *1255* | *109* |
| Lane Group Capacity | | *248* | *1538* | | *330* | *291* | *115* | *2105* | *940* | *115* | *2105* | *940* |
| v/c Ratio | | *0.41* | *0.08* | | *0.01* | *0.04* | *0.69* | *0.50* | *0.01* | *0.05* | *0.60* | *0.12* |
| Green Ratio | | *0.19* | *1.00* | | *0.19* | *0.19* | *0.07* | *0.61* | *0.61* | *0.07* | *0.61* | *0.61* |
| Uniform Delay $d_1$ | | *32.1* | *0.0* | | *29.7* | *29.8* | *41.1* | *9.8* | *6.9* | *39.3* | *10.7* | *7.3* |
| Delay Factor k | | *0.11* | *0.11* | | *0.11* | *0.11* | *0.26* | *0.11* | *0.11* | *0.11* | *0.19* | *0.11* |
| Incremental Delay $d_2$ | | *1.1* | *0.0* | | *0.0* | *0.1* | *17.1* | *0.2* | *0.0* | *0.2* | *0.5* | *0.1* |
| PF Factor | | *1.000* | *0.950* | | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* |
| Control Delay | | *33.2* | *0.0* | | *29.7* | *29.9* | *58.1* | *10.0* | *6.9* | *39.5* | *11.2* | *7.4* |
| Lane Group LOS | | *C* | *A* | | *C* | *C* | *E* | *A* | *A* | *D* | *B* | *A* |
| Approach Delay | | *14.7* | | | *29.8* | | | *13.3* | | | *11.0* | |
| Approach LOS | | *B* | | | *C* | | | *B* | | | *B* | |
| Intersection Delay | | *12.4* | | | Intersection LOS | | | | | | *B* | |

# SHORT REPORT

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *Greg* | Intersection | *Gene Autry Trail @ Via Escuela* |
| Agency or Co. | *Endo Engineering* | Area Type | *All other areas* |
| Date Performed | *1/15/2014* | Jurisdiction | *Palm Springs* |
| Time Period | *PM Peak Hour* | Analysis Year | *Year 2030 - W/ Project* |

## Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | *0* | *1* | *1* | *0* | *1* | *1* | *1* | *2* | *1* | *1* | *2* | *1* |
| Lane Group | | *LT* | *R* | | *LT* | *R* | *L* | *T* | *R* | *L* | *T* | *R* |
| Volume (vph) | *164* | *3* | *105* | *3* | *8* | *31* | *161* | *1657* | *6* | *11* | *1190* | *224* |
| % Heavy Vehicles | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* | *5* |
| PHF | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* | *1.00* |
| Pretimed/Actuated (P/A) | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* | *A* |
| Startup Lost Time | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* |
| Extension of Effective Green | | *2.0* | *2.0* | | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* | *2.0* |
| Arrival Type | | *3* | *3* | | *3* | *3* | *3* | *3* | *3* | *3* | *3* | *3* |
| Unit Extension | | *3.0* | *3.0* | | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* | *3.0* |
| Ped/Bike/RTOR Volume | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Lane Width | | *12.0* | *12.0* | | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* | *12.0* |
| Parking/Grade/Parking | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* | *N* | *0* | *N* |
| Parking/Hour | | | | | | | | | | | | |
| Bus Stops/Hour | | *0* | *0* | | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Minimum Pedestrian Time | | *3.2* | | | *3.2* | | | *3.2* | | | *3.2* | |

| Phasing | EW Perm | 02 | 03 | 04 | Excl. Left | NB Only | Thru & RT | 08 |
|---|---|---|---|---|---|---|---|---|
| Timing | G = *17.0* | G = | G = | G = | G = *5.0* | G = *4.0* | G = *48.0* | G = |
| | Y = *4* | Y = | Y = | Y = | Y = *4* | Y = *4* | Y = *4* | Y = |
| Duration of Analysis (hrs) = *1.00* | | | | | | Cycle Length C = *90.0* | | |

## Lane Group Capacity, Control Delay, and LOS Determination

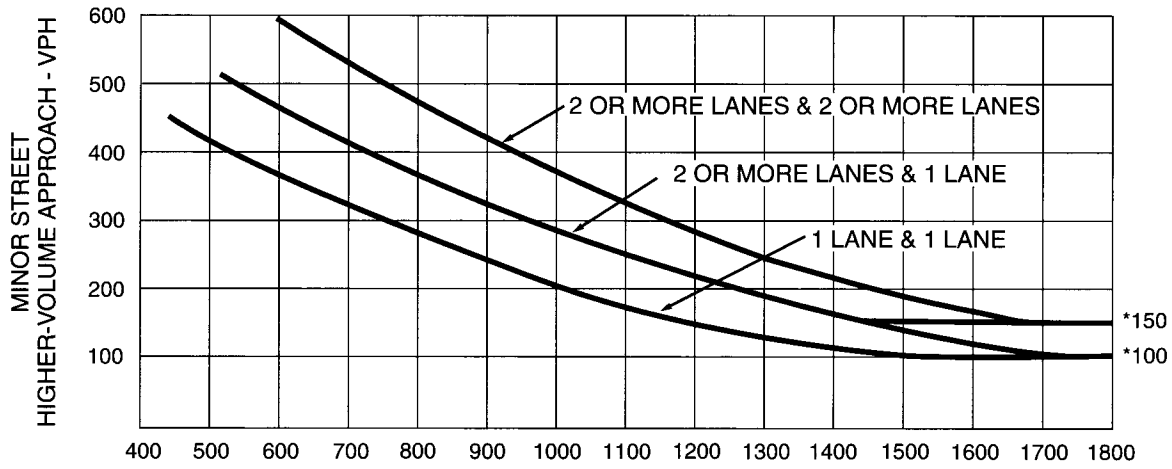
| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjusted Flow Rate | | *167* | *105* | | *11* | *31* | *161* | *1657* | *6* | *11* | *1190* | *224* |
| Lane Group Capacity | | *247* | *1538* | | *323* | *291* | *248* | *2144* | *957* | *96* | *1837* | *820* |
| v/c Ratio | | *0.68* | *0.07* | | *0.03* | *0.11* | *0.65* | *0.77* | *0.01* | *0.11* | *0.65* | *0.27* |
| Green Ratio | | *0.19* | *1.00* | | *0.19* | *0.19* | *0.14* | *0.62* | *0.62* | *0.06* | *0.53* | *0.53* |
| Uniform Delay $d_1$ | | *33.9* | *0.0* | | *29.8* | *30.2* | *36.3* | *12.4* | *6.4* | *40.4* | *15.0* | *11.5* |
| Delay Factor k | | *0.25* | *0.11* | | *0.11* | *0.11* | *0.23* | *0.32* | *0.11* | *0.11* | *0.23* | *0.11* |
| Incremental Delay $d_2$ | | *7.4* | *0.0* | | *0.0* | *0.2* | *6.0* | *1.8* | *0.0* | *0.5* | *0.8* | *0.2* |
| PF Factor | | *1.000* | *0.950* | | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* | *1.000* |
| Control Delay | | *41.4* | *0.0* | | *29.8* | *30.4* | *42.4* | *14.2* | *6.4* | *40.9* | *15.8* | *11.7* |
| Lane Group LOS | | *D* | *A* | | *C* | *C* | *D* | *B* | *A* | *D* | *B* | *B* |
| Approach Delay | | *25.4* | | | *30.2* | | | *16.7* | | | *15.3* | |
| Approach LOS | | *C* | | | *C* | | | *B* | | | *B* | |
| Intersection Delay | | *17.0* | | | Intersection LOS | | | | | | *B* | |

# *Appendix C*

## TRAFFIC SIGNAL WARRANT WORKSHEETS

Peak Hour Warrant Graph
Peak Hour Signal Warrant Worksheets

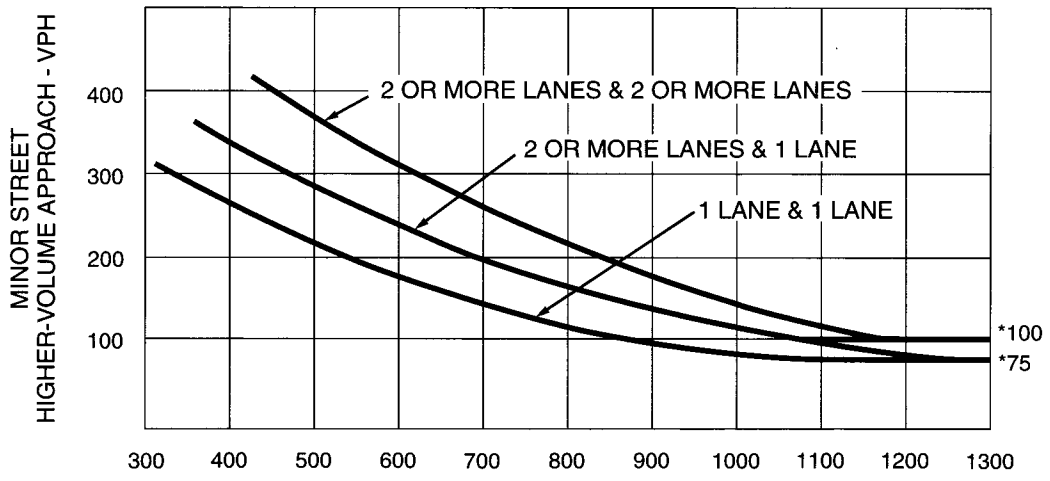
## *Figure 4C-3. Warrant 3, Peak Hour*




*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

## *Figure 4C-4. Warrant 3, Peak Hour (70% Factor)*

**(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)**




*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Peak Hour Volume Warrant

**Intersection: Farrell Drive @ Racquet Club Road**

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

| Approach | MD Pk Hr Existing | 2020 Ambient | 2020 +Project | 2030 Ambient | 2030 +Project | | PM Pk Hr Existing | 2020 Ambient | 2020 +Project | 2030 Ambient | 2030 +Project |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Eastbound | 246 | 256 | 278 | 273 | 295 | | 262 | 270 | 311 | 289 | 330 |
| Westbound | 367 | 380 | 384 | 409 | 413 | | 569 | 578 | 595 | 624 | 641 |
| Southbound | 63 | 43 | 76 | 54 | 87 | | 56 | 50 | 70 | 60 | 80 |
| Meets 1-Hr. Warrant | No | No | No | No | No | | No | No | No | No | No |

**Intersection: Whitewater Club Drive @ Via Escuela**

Major Approach: 1 Lane Minor Approach: 1 Lane Urban Warrants

| Approach | MD Pk Hr Existing | 2020 Ambient | 2020 +Project | 2030 Ambient | 2030 +Project | | PM Pk Hr Existing | 2020 Ambient | 2020 +Project | 2030 Ambient | 2030 +Project |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Eastbound | 86 | 83 | 103 | 109 | 129 | | 136 | 155 | 195 | 195 | 235 |
| Westbound | 135 | 157 | 175 | 195 | 213 | | 244 | 282 | 338 | 348 | 404 |
| Southbound | 35 | 65 | 163 | 70 | 168 | | 37 | 53 | 114 | 58 | 119 |
| Meets 1-Hr. Warrant | No | No | No | No | No | | No | No | No | No | No |

**Intersection: Whitewater Club Drive @ Vista Chino**

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

| Approach | MD Pk Hr Existing | 2020 Ambient | 2020 +Project | 2030 Ambient | 2030 +Project | | PM Pk Hr Existing | 2020 Ambient | 2020 +Project | 2030 Ambient | 2030 +Project |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Eastbound | 1095 | 1381 | 1394 | 1923 | 1936 | | 1508 | 1901 | 1915 | 2644 | 2658 |
| Westbound | 1091 | 1374 | 1382 | 1909 | 1917 | | 1164 | 1466 | 1490 | 2039 | 2063 |
| Southbound | 23 | 28 | 35 | 32 | 39 | | 26 | 30 | 34 | 35 | 39 |
| Meets 1-Hr. Warrant | No | No | No | No | No | | No | No | No | No | No |

# *Appendix G*

## TRAFFIC GLOSSARY

# Appendix D - Traffic Glossary

**AASHTO --** American Association of State Highway and Transportation Officials.

**Access point --** An intersection, driveway, or opening on the right-hand side of a roadway. An entry on the opposite side of a roadway or a median opening also can be considered as an access point if it is expected to influence traffic flow significantly in the direction of interest.

**All-way stop controlled --** An intersection with stop signs at all approaches. The driver's decision to proceed is based on the rules of the road (e.g., the driver on the right has the right-of-way) and also on the traffic conditions of the other approaches.

**Annual Average Daily Traffic (AADT) --** The total volume passing a point or segment of a highway facility in both directions for one year divided by the number of days in the year.

**Average Daily Traffic (ADT) --** The total volume passing a point or segment of a highway facility in both directions on an average day during a specified interval (which can be the peak month or weekdays etc.).

**Average Day --** A day representing traffic volumes normally and repeatedly found at a location, typically a weekday when volumes are influenced by employment or a weekend day when volumes are influenced by entertainment or recreation.

**Approach --** All lanes of traffic moving towards an intersection of a midblock location from one direction including any adjacent parking lanes.

**Arterial --** Signalized streets that serve primarily through traffic and provide access to abutting properties as a secondary function, having signal spacing of 2 miles or less and turn movements at intersections that usually do not exceed 20 percent of total traffic.

**Average approach delay --** Average stopped-time delay at a signalized intersection plus average time lost because of deceleration to and acceleration from a stop, generally estimated as 1.3 times the average stopped time delay.

**Average control delay --** the total time vehicles are stopped in an intersection approach during a specified time interval divided by the volume departing from the approach during the same time period. It does not include queue follow-up time (i.e. the time required for the vehicle to travel from the last-in-queue position to the first-in-queue position).

**Average stopped-time delay --** The total time vehicles are stopped in an intersection approach or lane group during a specified time interval divided by the volume departing from the approach or lane group during the same time period, in seconds per vehicle.

**Average total delay --** The total additional travel time experienced by drivers, passengers, or pedestrians as a result of control measures and interaction with other users of the facility divided by the volume departing from the corresponding cross section of the facility.

**AWSC intersection --** an all-way stop-controlled intersection (which can be a three-way stop if the intersection has only three legs or a four-way stop if the intersection has four legs).

**Bike lane --** A portion of a roadway that has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicycles.

**Bike path --** A bikeway physically separated from motorized traffic by an open space or barrier, either within the highway right-of-way or within an independent right-of-way.

**Bikeway --** Any road, path, or way that in some manner is specifically designated as being open to bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicyclists or are to be shared with other vehicles.

**Capacity --** The maximum rate of flow at which persons or vehicles can be reasonable expected to traverse a point or uniform segment of a lane or roadway during a specified time period under prevailing roadway, traffic, and control conditions, usually expressed as vehicles per hour or persons per hour.

**Clearance lost time --** The minimum possible time interval between the departure of one bus from a bus berth and the entrance of another.

**Clearance time --** The time, in seconds, between signal phases during which an intersection is not used by any traffic.

**Conflicting approach --** The approach at approximately 90 degrees to the subject approach at an all-way stop-controlled (AWSC) intersection.

**Conflicting traffic volume --** The volume of traffic that conflicts with a specific movement at an unsignalized intersection.

**Control delay --** The component of delay that results when a control signal causes a lane group to reduce speed or to stop; it is measured by comparison with the uncontrolled condition.

**CMP** -- Congestion Management Program, designed to ensure that a balanced transportation system is developed which relates population growth, traffic growth and land use decisions to transportation system level of service performance standards to help reduce traffic congestion and improve air quality.

**Constrained operation --** An operating conditions in a weaving area in which, because of geometric constraints, weaving vehicles are unable to occupy as large a portion of available lanes as required to achieve balanced operation.

**Critical gap --** The minimum time interval between vehicles in a major traffic stream that permits side-street vehicles in a stop-controlled approach to enter the intersection under prevailing traffic and roadway conditions, in seconds.

**Critical lane group --** The lane groups that have the highest flow ratio for a given signal phase.

**Critical volume-to-capacity ratio --** The proportion of available intersection capacity used by vehicles in critical lane groups.

**Crosswalk --** That part of a roadway at an intersection included within the connections of the lateral lines of the sidewalks on opposite sides of the highway measured from the curbs (or in the absence of curbs, from the edges of the traversable roadway) and in the absence of a sidewalk on one side of the roadway, the part of a roadway included within the extension of the lateral lines of the sidewalk at right angles to the centerline. Any portion of a roadway at an intersection or elsewhere distinctly indicated as a pedestrian crossing by lines on the surface, which may be supplemented by a contrasting pavement texture, style or color.

**Cycle --** Any complete sequence of signal indications.

**Cycle length --** The total time required for one complete sequence of signal indications.

**Deceleration lane --** A paved auxiliary lane, including tapered areas, allowing vehicles leaving the through-traffic lane of the roadway to decelerate.

**Delay --** Additional travel time experienced by a driver, passenger, or pedestrian beyond what would reasonably be desired for a given trip.

**Demand volume --** The traffic volume expected to desire service past a point or segment of the highway system at some future time, or the traffic currently arriving or desiring service past such a point, usually expressed as vehicles per hour.

**Effective green time --** The time allocated for a given traffic movement (green plus yellow) at a signalized intersection less the start-up and clearance lost times for the movement.

**Exclusive turn lane --** A designated left- or right-turn lane or lanes used only by vehicles making those turns.

**Expressway** -- An arterial which increases vehicular capacity by reducing at-grade access and increased signal spacing.

**Flared approach --** A shared right-turn lane that allows right-turning vehicles to complete their movement while other vehicles are occupying the lane.

**FHWA** -- Federal Highway Administration.

**Free flow speed --** (1) The theoretical speed of traffic when density is zero, that is, when no vehicles are present; (2) the average speed of vehicles over an arterial segment not close to signalized intersections under conditions of low volume.

**Gap acceptance --** The process by which a minor-street vehicle accepts an available gap to maneuver.

**Green time --** The actual length of the green indication for a given movement at a signalized intersection.

**HCM --** Highway Capacity Manual.

**HCS --** Highway Capacity Software implementing the Highway Capacity Manual procedures.

**Ideal conditions--** Characteristics for a given type of facility that are assumed to be the best possible from the point of view of capacity, that is, characteristics that if further improved would not result increased capacity.

**Intersection --** The area embraced within the prolongation or connection of the lateral curb lines, or if none the lateral boundary lines of the roadways of two highways that join one another at, or approximately at right angles, or the area within which vehicles traveling on different highways that join at any other angle might come into conflict. The junction of an alley or driveway with a roadway or highway does not constitute an intersection.

**Intersection delay --** The total additional travel time experienced by drivers, passengers, or pedestrians as a result of control measures and interaction with other users of the facility, divided by the volume departing from the corresponding cross section of the facility.

**Interval** -- The part of a signal cycle during which signal indications do not change..

**ITE** -- Institute of Transportation Engineers.

**Level of service (LOS) --** A qualitative measure describing operational conditions within a traffic stream, generally described in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety.

**Lost time --** Time during which the intersection is not effectively used by any movement; clearance lost time plus start-up lost time.

**Major street --** The street not controlled by stop signs at a two-way stop-controlled intersection. The street normally carrying the higher volume of vehicular traffic.

**Maximum service flow rate --** The highest 15-minute rate of flow that can be accommodated on a highway facility under ideal conditions while maintaining the operating characteristics for a stated level of service, expressed as passenger cars per hour per lane.

**Minor street --** The street controlled by stop signs at a two-way stop-controlled intersection; also referred to as a side street. The street normally carrying the lower volume of vehicular traffic.

**Passenger car equivalent --** The number of passenger cars that are displaced by a single heavy vehicle of a particular type under prevailing roadway, traffic, and control conditions.

**Peak hour --** The hour during which the greatest number of vehicles are traveling on a given facility.

**Peak hour factor --** The hourly volume during the maximum volume hour of the day divided by the peak 15-minute rate of flow within the peak hour; a measure of traffic demand fluctuation within the peak hour.

**Pedestrian Clearance Time --** The time provided for a pedestrian crossing in a crosswalk, after leaving the curb or shoulder, to travel to the far side of the traveled way or to a median.

**Performance measure --** A quantitative or qualitative characteristic describing the quality of service provided by a transportation facility or service.

**Permitted plus protected --** Compound left-turn protection that displays the permitted phase before the protected phase.

**Permitted turns --** Left or right turns at a signalized intersection that are made against an opposing or conflicting vehicular or pedestrian flow.

**Phase --** The part of a signal cycle allocated to any combination of traffic movements receiving the right-of-way simultaneously during one or more intervals.

**Planning analysis --** A use of capacity analysis procedures to estimate the number of lanes required by a facility in order to provide for a specified level of service based on approximate and general planning data in the early stages of project development.

**Platoon --** A group of vehicles or pedestrians traveling together as a group, either voluntarily or involuntarily because of signal control, geometrics, or other factors.

**Platoon --** A group of vehicles or pedestrians traveling together as a group, either voluntarily or involuntarily, because of traffic signal controls, geometrics, or other factors.

**Protected turns --** Left or right turns at a signalized intersection made with no opposing or conflicting vehicular or pedestrian flow.

**Queue --** A line of vehicles or persons waiting to be served by the system in which the rate of low from the front of the queue determines the average speed within the queue. Slowly moving vehicles or people joining the rear of the queue are usually considered a part of the queue. The internal queue dynamics may involve a series of starts and stops. A faster-moving line of vehicles is often referred to as a moving queue or a platoon.

**Red Clearance Interval --** An optional interval that follows a yellow change interval and precedes the next conflicting green interval.

**Right-of-Way Assignment --** The permitting of vehicles and/or pedestrians to proceed in a lawful manner in preference to other vehicles or pedestrians by the display of signal indications.

**Roadway Network --** A geographical arrangement of intersecting roadways.

**RTIP** -- Regional Transportation Improvement Program is a list of transportation projects, their costs and projected funding sources, and their anticipated date of completion.

**RTP** -- Regional Transportation Plan is a plan adopted for the region's transit, highways, bicycle programs, commuter and inter-city rail lines.

**Shared lane capacity --** The capacity of a lane at an unsignalized intersection that is shared by two or three movements, in passenger cars per hour.

**Signal Coordination --** The establishment of timed relationships between adjacent traffic control signals.

**Signal Phase --** the right-of-way, yellow change, and red clearance intervals in a cycle that are assigned to an independent traffic movement or combination of movements.

**Signal System --** two or more traffic control signals operating in signal coordination.

**Signal Timing --** the amount of time allocated for the display of a signal indication.

**Signal Warrant --** a threshold condition that, if found to be satisfied as part of an engineering study, shall result in analysis of other traffic conditions or factors to determine whether a traffic control signal or other improvement is justified.

**TCM** -- Transportation Control Measures.

**TDM** -- Transportation Demand Management is a program designed to decrease the demand for peak hour commute and truck travel and increase the use of alternative transportation modes.

**TIS** -- Traffic Impact Study. A Congestion Management Program (TIS) analysis is required for all large projects.

**Total delay --** The sum of all components of delay for any lane group, including control delay, traffic delay, geometric delay, and incident delay.

**Trip-end --** one end of a trip at either the origin or the destination; i.e. each trip has two trip-ends.

**Traffic --** pedestrians, bicyclists, ridden or herded animals, vehicles, streetcars, and other conveyances either singularly or together while using any highway for purposes of travel.

**Traffic Control Signal --** any highway traffic signal by which traffic is alternately directed to stop and permitted to proceed.

**Travel speed --** The average speed, in miles per hour, of a traffic stream computed as the length of a highway segment divided by the average travel time of the vehicles traversing the segment.

**Travel time --** The average time spent by vehicles traversing a highway segment, including control delay, in seconds per vehicle or minutes per vehicle.

**TSM --** Transportation Systems Management is a program to facilitate low cost traffic flow improvements like coordinating traffic signals, metering freeway ramps and incident management.

**Two-way left-turn lane (TWLTL) --** The center lane on a three-lane or multi-lane highway that is used continuously for vehicles turning left in either direction of flow at mid-block locations.

**Two-way stop-controlled --** The type of traffic control at an intersection where drivers on the minor street or a driver turning left from the major street wait for a gap in the major-street traffic to complete a maneuver.

**Unconstrained operation --** An operating conditions in a weaving area where geometric constraints do not limit the ability of weaving vehicles to achieve balanced operation.

**Unsignalized intersection --** Any intersection not controlled by traffic signals.

**V/C ratio --** The ratio of demand flow rate to capacity for a traffic facility.

**Volume --** The number of persons or vehicles passing a point on a lane, roadway, sidewalk etc. during some time interval, often taken to be one hour, expressed in vehicles.

**VMT** -- Vehicle miles traveled.

**Yellow Change Interval** -- the first interval following the green interval during which the yellow signal indication is displayed.