Downtown Palm Springs Project and Downtown Palm Springs Park Traffic Impact Study Update

Prepared By: Endo Engineering

October 2015

October 8, 2015

Ms. Nicole Criste
Terra Nova Planning and Research, Inc.
42635 Melanie Place
Palm Desert, CA 92211

SUBJECT: Museum Market Plaza Specific Plan Updated Traffic Impact Study Addressing the Downtown Palm Springs Project and Downtown Palm Springs Park

Dear Ms. Criste;

Endo Engineering is happy to submit this updated *Museum Market Plaza Specific Plan Traffic Impact Study* addressing the Downtown Palm Springs Project and Downtown Palm Springs Park. The 15.5-acre project site is located south of Amado Road and north of Tahquitz Canyon Way, between Museum Drive and Indian Canyon Drive in downtown Palm Springs, California.

Endo Engineering prepared the *Museum Market Plaza Specific Plan Traffic Impact Study* (dated September 2, 2008) for the *Museum Market Plaza Specific Plan EIR* certified in December 2009. This updated traffic analysis evaluates subsequent refinements and modifications to the development program and roadway configuration associated with the Downtown Palm Springs Project, including provisions for a 1.3-acre outdoor entertainment venue (the Downtown Palm Springs Park) and future development within Block K of the Museum Market Plaza Specific Plan (the existing Town & Country Center).

This report has been prepared in accordance with City of Palm Springs standards and requirements. The pages that follow update the baseline conditions within the study area to reflect the peak season in the year 2015. Traffic operations at the key intersections were evaluated for following peak travel periods: (1) the midday and evening peak hours on a typical weekday; (2) the highest volume hour on Thursday evenings during Villagefest; and (3) the midday peak hour on Saturdays. Existing plus project conditions are evaluated. Opening year 2017 conditions are assessed, with and without the initial phase of development. Future year 2030 conditions are analyzed with and without the traffic generated upon buildout of the Downtown Palm Springs Project.

Sixteen cumulative developments within the study area were evaluated. The buildout traffic projections developed for the *Palm Springs 2007 General Plan* were used to address the anticipated areawide growth in background traffic as the *Palm Springs 2007 General Plan* is implemented. This study incorporates recommendations for the refinement of several adopted Specific Plan mitigation measures, as appropriate, to address the current project design and context. In addition, mitigation strategies are discussed for potential temporary LOS deficiencies associated with occasional design day special day events at the Downtown Palm Springs Park.

We trust that the information provided herein will be of value to you, the project applicant, and the City of Palm Springs in reviewing the Downtown Palm Springs Project and Downtown Palm Springs Park. Should questions or comments arise regarding the findings and recommendations within this report, please do not hesitate to contact me by telephone, by facsimile, or by electronic mail (endoengr@cox.net).

Cordially,
ENDO ENGINEERING

Vicki Lee Endo

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

DOWNTOWN PALM SPRINGS PROJECT AND DOWNTOWN PALM SPRINGS PARK

(FORMERLY MUSEUM MARKET PLAZA SPECIFIC PLAN)

TRAFFIC IMPACT STUDY UPDATE

SOUTH OF AMADO ROAD AND NORTH OF TAHQUITZ CANYON WAY
BETWEEN MUSEUM DRIVE AND INDIAN CANYON DRIVE

CITY OF PALM SPRINGS

October 8, 2015

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1.0 EXECUTIVE SUMMARY

Endo Engineering prepared the *Museum Market Plaza Specific Plan Traffic Impact Study* (dated September 2008) for use in the *Museum Market Plaza Specific Plan EIR,* which was certified by the Palm Springs City Council on December 2, 2009. Since the approval of the Museum Market Plaza Specific Plan, the development program and roadway configuration within the Specific Plan area have evolved and been refined. This report is an update to the previous traffic impact study, which is incorporated herein by reference.

Purpose and Scope

This updated study evaluates the current development program and roadway configuration (the "Downtown Palm Springs Project") for the 13.2-acre core area, located north of Tahquitz Canyon Way and west of Palm Canyon Drive. The future development within Block K, which is located south of Andreas Road, between Palm Canyon Drive and Indian Canyon Drive, is also evaluated. The Downtown Palm Springs Project makes provision for a 1.3-acre outdoor entertainment venue (the "Downtown Palm Springs Park"). The Downtown Palm Springs Park would host special events that could accommodate up to 4,000 attendees at one time on a design day. These events may occur at any time during the week and may be single main events with specific start times or continuous events, where attendees arrive over an extended period of time.

Updated traffic count data was collected for the streets within the development site and the study area. New cumulative developments were addressed and the status of all previously addressed cumulative developments within the study area was updated. Updated traffic projections were developed for the baseline conditions, four existing-plus-project development scenarios, three opening year 2017 development scenarios, and three horizon year 2030 development scenarios. Conditions were evaluated with and without the traffic generated by special events at the Downtown Palm Springs Park on a design day. The new traffic projections for the key intersections are evaluated to determine the peak hour levels of service to determine whether the circulation system proposed, including the mitigation in the *Museum Market Plaza Specific Plan EIR,* would be adequate to accommodate the anticipated development.

Areas with potential temporary LOS deficiencies that would occur infrequently in conjunction with special events held at the Downtown Palm Springs Park were identified. Mitigation strategies to address these potential LOS deficiencies were discussed. The findings within this study should be of value in the planning and scheduling of future events at the outdoor entertainment venue as well as developing effective traffic management plans for future events at the Downtown Palm Springs Park.

1A. Project Location

The project site is located in the Coachella Valley, nestled against the base of the San Jacinto Mountains. The 18.5-acre site is south of Interstate 10, in the heart of downtown Palm Springs. The project site is more precisely located south of Amado Road and north of Tahquitz Canyon Way, between Museum Drive and Indian Canyon Drive.

Existing Land Uses

The area within the Museum Market Plaza Specific Plan includes the 13.2-acre site of the recently demolished Desert Fashion Plaza as well as the existing Town & Country Center. The western third of the site is developed as surface and underground parking associated with the former Desert Fashion Plaza development. The existing parking area in the northwest corner of the site is accessed from Museum Drive, opposite the future east-west alignment of Andreas Road.

An underground parking garage extends from beneath the northern portion of the property to its southwest corner. The existing at-grade parking area occupying the northeast corner at the intersection of Museum Drive and Tahquitz Canyon Way (and the below grade parking) are accessed from Tahquitz Canyon Way, between Belardo Road and Cahuilla Road, and from Museum Drive, north of Tahquitz Canyon Way.

1B. Project Description

The development within the project site was previously approved as the Museum Market Plaza Specific Plan. The maximum development allowed within the Museum Market Plaza Specific Plan includes: (1) a combination of retail/commercial and professional office space with up to 400,000 square feet (S.F.), (2) 900 multiple-family attached residential dwelling units, and (3) 620 hotel rooms. This includes the area within Block K (the Town & Country Center) and the core area, which is located west of Palm Canyon Drive and north of Tahquitz Canyon Way.

The Downtown Palm Springs Project would provide a combination of retail and professional office space with a total of 391,284 S.F., 650 multiple-family attached residential dwelling units, and 620 hotel rooms. The 1.3 acres located west of Belardo Road and north of the future east-west "Main Street" connection between Palm Canyon Drive and the Palm Springs Art Museum would be developed as the Downtown Palm Springs Park. The Downtown Palm Springs Park would host special events that could accommodate up to 4,000 attendees. These events may occur at any time during the week and may be single main events with specific start times or continuous events, where attendees arrive over an extended period of time.

A single-story building to be constructed in the northeast corner of the Downtown Palm Springs Park would accommodate the 1,250 S.F. downtown Palm Springs Police Center offices and provide approximately 1,000 S.F. for the concessions and box office area as well as space for public restrooms, storage, and a mezzanine level observation loft from which to view the events area.

The Town & Country Center (Block K) was assumed to developed after the initial phase with 90,000 S.F. of retail and professional office uses as well as 180 hotel rooms and 150 multiple-family attached residential dwelling units. The future development in Block K was included in the land use quantities provided above for the Downtown Palm Springs Project.

Roadway Configuration

Two existing streets adjacent to the core area would be extended through the project site. Belardo Road would be extended from Tahquitz Canyon Way through the site to the northern site boundary as a north-south two-lane local street with on-street parallel parking and a 41-foot right-of-way. Andreas Road would be constructed as a two-lane east-west roadway, from Palm Canyon Drive through the site to the future extension of Belardo Road. The existing east-west roadway in the northwest corner of the site connecting Museum Drive to Belardo Road would be retained, with a realigned three-leg intersection at the Belardo Road extension. A new east-west "Main Street" (proposed with a 41-foot right-of-way) would replace the former "Museum Way" and extend from Palm Canyon Drive to Museum Drive. Market Street, a two-lane north-south private street, would extend from Main Street to the existing Hyatt Hotel and accommodate a 30-foot wide pedestrian "paseo" shaded by a canopy that would continue along the northern site boundary to Palm Canyon Drive.

Project Phasing

The Downtown Palm Springs Project would be constructed in multiple phases. The initial phase of development would include all public street and infrastructure improvements as well as the approved, entitled, and under construction development within Blocks A through E (as shown in Table 2-3). Subsequent phases of development, which are not scheduled at this time, could occur in each of the Blocks.

1C. Project Study Area

The study area and key intersections were identified, following coordination with the City of Palm Springs. The thirteen existing and four future key intersections are shown in Figure 2-2.

1D. Existing Traffic Conditions

The new Belardo Road bridge over Tahquitz Creek was constructed and dedicated in September 2012 approximately 0.75 miles south of the project site. This improvement allows Belardo Road to extend south of the site to the intersection of South Palm Canyon Drive and East Palm Canyon Drive. While this improvement does not currently serve significant residential or commercial development, it provides an alternate route (to Indian Canyon Drive and Palm Canyon Drive) for existing and future development to the south. Indian Canyon Drive and Palm Canyon Drive continue to function as the primary north-south site access routes.

New 24-hour traffic counts were made for four consecutive days (Wednesday through Saturday) at the same locations within the study area where similar counts were made for the 2008 TIS. The new counts revealed that the diversion of traffic to Belardo Road and Museum Drive during Villagefest resulting from the closure of Palm Canyon Drive, south of Amado Road, is similar to that previously documented in the 2008 TIS. Only one of the count locations (Belardo Road, south of Amado Road) had the highest 24-hour traffic volume on a day other than Saturday. The traffic diverted by the Palm Canyon Drive closure on Thursday during Villagefest resulted in the highest daily traffic volume on Belardo Road (3,735 vehicles per day) occurring on Thursday.

The *Highway Capacity Manual* (HCM 2000) operational methodologies were utilized to determine the peak hour intersection delay and levels of service. The City of Palm Springs General Plan policy specifies Level of Service D or better operation as acceptable during the peak hours in the peak season. All of the existing key intersections are currently operating at LOS A or LOS B during the peak hours evaluated on weekdays, Saturdays, and during Villagefest.

1E. Traffic Impacts

The number of trips generated by the Downtown Palm Springs Project, as shown in Table 4-1, would be approximately 5 percent less than previously evaluated for the Preferred Project in the 2008 TIS on a daily and peak hour basis, except during special events. Although the findings of this updated traffic study are generally consistent with the findings in the 2008 TIS, small differences resulted from the evolution and refinement of the development program, roadway configuration, and parking location, as well as the updated traffic counts and cumulative project analysis. The primary differences were related to the potential for future events at the outdoor entertainment venue in Block E.

The Downtown Palm Springs Project would retain the Museum Drive connection to Belardo Road. This would allow more traffic to flow around the perimeter of the project site instead of pass through the center of the project site on Belardo Road and Main Street. This circulation configuration creates a more pedestrian-friendly development and allows for on-site road closures, as needed, during special events while maintaining access to and around the project site for activities not associated with the special events. Since the Downtown Palm Springs Project includes parking primarily located in the parking areas adjacent to Museum Drive and Tahquitz Canyon Way, much of the site traffic will access the parking structures from the perimeter of the site via Museum Drive or Tahquitz Canyon Way. As a result, the traffic loading on the internal streets within the core area would be substantially reduced.

With the exception of Palm Canyon Drive at Andreas Road (Intersection 14), the LOS analysis showed that the key intersections would provide acceptable levels of service during the weekday peak hours in the year 2030 upon buildout of the Downtown Palm Springs Project. Palm Canyon Drive at Andreas Road (Intersection 14), would require signalization to maintain acceptable levels of service during weekday peak hours in the peak season prior to any future site development following the initial phase.

The special events associated with the Downtown Palm Springs Park would generate a substantial volume of traffic during the hour before and the hour following these recreational activities. Most of the key intersections would be able to accommodate the increased traffic demands during most of the hours throughout the week. However, if special events are scheduled to occur during Villagefest, the additional traffic from Villagefest and the closure of Palm Canyon Drive would create substantial delays along Belardo Road. If the start time for the special events coincides with the Saturday midday peak hour, the delay at some of the key intersections along Belardo Road may increase substantially.

1F. Recommendations

Recommendations For Weekday LOS Deficiencies Following Phase 1

The intersection of Palm Canyon Drive and Andreas Road (Intersection 14) should be signalized after the initial phase of development is completed in the year 2017, before additional site development is initiated. With this mitigation, all of the key intersections are projected to operate at acceptable levels of service during the weekday peak hours in the peak season of the year 2030 upon buildout of the Downtown Palm Springs Project.

Recommendations For Year 2030 Saturday LOS Deficiencies

The intersection of Belardo Road with Tahquitz Canyon Way should be improved to provide two westbound through lanes with all-way stop control or signalized to accommodate the midday peak hour traffic volumes projected for Saturdays upon project completion. The applicant or developer should be responsible for providing two westbound lanes on Tahquitz Canyon Way east and west of Belardo Road when the intersection is reconstructed to extend Belardo Road to mitigate the LOS deficiency identified during the midday peak hour on Saturdays in the year 2030 upon project buildout. The second westbound lane can be discontinued west of the access to the parking structure. This westbound lane would provide storage for vehicles entering the parking structure without blocking the westbound travel lane on Tahquitz Canyon Way. With this improvement and all-way stop control, a single lane northbound, southbound, and eastbound approach would be adequate. If it is not feasible to provide two westbound lanes on Tahquitz Canyon Way east and west of Belardo Road, this intersection would need traffic control signals to maintain acceptable levels of service with year 2030+project buildout traffic volumes during the midday peak hour on Saturdays.

Recommendations For Special Event LOS Deficiencies

The CA MUTCD states "The peak hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of one hour on an average day, the minor street traffic suffers undue delay when entering or crossing the major street." Based on this guidance, it is not appropriate to identify the need for a traffic control signal based on temporary traffic volumes that are expected to occur during an hour or two when special events are held from time to time.

The intersection of Palm Canyon Drive with Tahquitz Canyon Way should be restriped prior to the first design day event to add an exclusive eastbound right-turn lane to reduce congestion following special events held at the Downtown Palm Springs Park.

A traffic management plan should be developed that identifies key intersections where congestion may occur and the necessary steps to minimize the potential impact of special event. This plan should include measures to reduce the peak traffic flow to the park and should direct the flow of traffic to available parking areas. The traffic management plan should be updated based on prior experiences to insure that the potential LOS deficiencies are minimized.

Traffic operations should be monitored during special events to identify congested intersections in the vicinity to facilitate the creation of a database for use in improving the effectiveness of the traffic management plans over time. A fund should be established to support the monitoring program and maintain the database.

Recommendations Regarding Previously Required Intersection Improvements

As proposed, the Downtown Palm Springs Project would comply with all applicable mitigation measures identified in the Specific Plan EIR. Table III-44 in the Specific Plan EIR identifies intersection improvements for weekday and Saturday impacts in the year 2030 as well as additional mitigation required for impacts during Villagefest.

Previous Mitigation For Year 2030 Weekdays and Saturdays

Palm Canyon Drive with Museum Way

Table III-44 in the Specific Plan EIR requires mitigation for two key intersections that would not exist with the current roadway configuration. Mitigation specified for the intersection of Palm Canyon Drive with Museum Way is no longer applicable since Museum Way was eliminated from the Specific Plan when it was approved. As a one-way (westbound) roadway, Main Street would not require an eastbound through or right-turn lane or a westbound through or right-turn lane at the intersection of Palm Canyon Drive.

The traffic control signal required to assign the right-of-way to non-conflicting turning movements at the intersection of Museum Way and Palm Canyon Drive would not be required if Main Street operates as a one-way (westbound) roadway. However, a pedestrian crossing signal may still be desirable on Palm Canyon Drive at Main Street.

Indian Canyon Drive at Museum Way

The mitigation for Indian Canyon Drive at Museum Way is no longer applicable, since Museum Way was eliminated from the Specific Plan when it was approved. Main Street would not intersect Indian Canyon Drive. No traffic signal would be required and no eastbound left-turn lane would be required since the intersection of Indian Canyon Drive and Museum Way would not exist with the current roadway configuration.

Belardo Road at Museum Way

The mitigation required per Table III-44 in the Specific Plan EIR for this intersection should be modified to change the intersection name to Belardo Road at Main Street. The two-way stop control previously required should be changed to all-way stop control. The construction of a single approach lane on all legs of the intersection would still be applicable. If Main Street is operated as a one-way street between Palm Canyon Drive and Belardo Road, appropriate pavement markings and signage per the CA MUTCD would be required to minimize the potential for wrong-way travel on Main Street by motorists not familiar with the area.

Belardo Road at Tahquitz Canyon Way

The two-way stop control previously required for this intersection should be modified to reflect all-way stop control. The approach lane geometrics identified in Table III-44 in the Specific Plan EIR would provide the flexibility accommodate a wide range of travel demands during different peak hours on various days, including motorists entering the intersection from various directions when entering and leaving special events.

The most critical traffic flow at this intersection would be the westbound through movement prior to design day special events. Consequently, two westbound lanes on Tahquitz Canyon Way that are carried through the intersection at Belardo Road to the parking facility access would be required with all-way stop control to provide acceptable LOS for the year 2030 on Saturdays upon project buildout. As noted previously, it is not feasible to

provide two westbound lanes on Tahquitz Canyon Way east and west of Belardo Road, this intersection would need traffic control signals to maintain acceptable levels of service with year 2030+project buildout traffic volumes during the midday peak hour on Saturdays.

Previous Mitigation For Year 2030 During Villagefest

Table III-44 in the Specific Plan EIR identifies the installation of traffic signals at three key intersections as additional mitigation required for conditions in the year 2030 during Villagefest. Two of those intersections (Belardo Road at Amado Road, Intersection 8 and Belardo Road at Arenas Road, Intersection 10) are located off-site and the third intersection (Belardo Road at Museum Way) is now Belardo Road at Main Street (Intersection 17).

None of these traffic control signals are warranted or recommended with the current roadway configuration and updated traffic projections. The addition of a northbound and a southbound left-turn lane previously required for Intersection 10 and Intersection 17 per Table III-44 in the Specific Plan EIR is no longer recommended or required.

2.0 PROJECT DESCRIPTION

2A. Project Location

The project site is located at the western end of the Coachella Valley, nestled against the base of the San Jacinto Mountains. The 15.1-acre site is located 5.5 miles south of Interstate 10, in the heart of the historic shopping and entertainment district in downtown Palm Springs that has served visitors in the desert region for decades. Restaurants, boutiques, art galleries, clothing stores, hotels and theaters characterize this pedestrian-oriented district. Figure 2-1 depicts the project site in its regional context.

The project site is located in the historic shopping core of Palm Springs, south of Amado Road and north of Tahquitz Canyon Way, between Museum Drive and Indian Canyon Drive, as shown in Figure 2-2, which illustrates the study area and key intersections evaluated. Tahquitz Canyon Way connects downtown Palm Springs with the Palm Springs International Airport, which is located approximately 2.2 miles east of the project site.

Surrounding Land Uses

The area within the Museum Market Plaza Specific Plan is located west of Section 14 and east of the Palm Springs Art Museum and the O'Donnell Golf Club. The area to the east includes retail shops and both public and quasi-public land uses including the Palm Springs Post Office, which is located east of Indian Canyon Drive and south of Amado Road. The Palm Springs Convention Center is located east of the study area, between Amado Road and Andreas Road.

The *Section 14 Master Development Plan/Specific Plan* addresses 212 acres of vacant land located east of Indian Canyon Drive, opposite the Museum Market Plaza Specific Plan site, and bisected by the Tahquitz Canyon Way corridor. Numerous new, expanded, and revitalized uses are planned and being developed within Section 14 to create an integrated destination resort environment that will appeal to all age groups. The *Section 14 Master Development Plan/Specific Plan* provides development standards and regulations for a variety of land uses (including commercial uses, a casino, and hotels) designed to energize downtown Palm Springs.

The Spa Resort Casino is located east of the project site. The Spa Hotel, which was formerly located on the northeast corner at the intersection of Indian Canyon Drive and Tahquitz Canyon Way, was closed on July 8, 2014 and demolished. A portion of the Spa Hotel surface parking was retained to serve the Spa Resort Casino. Housing is a prominent existing land use within Section 14. Most of the residential development is multiple-family condominiums and apartments constructed at a density of 6 to 30 units per acre.

The Hyatt Regency Suites Hotel is located immediately north of the project site. This hotel occupies the area south of Amado Road, between Palm Canyon Drive and Belardo Road. The Palm Mountain Resort and Day Spa is located immediately south of Tahquitz Canyon Way, between Belardo Road and Cahuilla Road.

Existing On-Site Land Uses

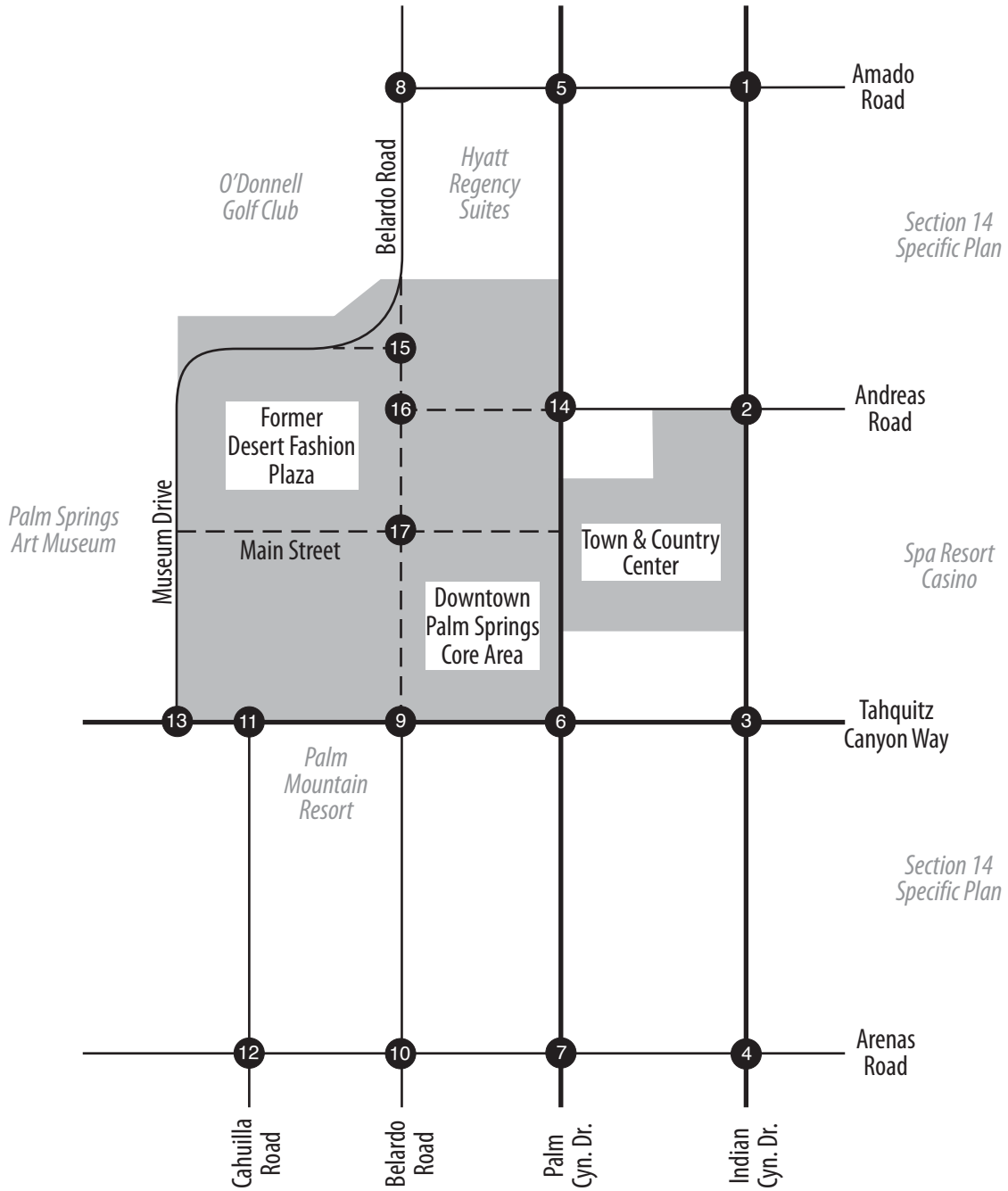
The Town & Country Center is located south of Andreas Road, between Palm Canyon Drive and Indian Canyon Drive. This area is designated as Block "K" within the Museum Market Plaza Specific Plan. The existing land uses/entitlements to be replaced within the Town & Country Center are shown in Table 2-1.

Figure 2-1
Regional Location

Endo Engineering

Scale: 1" = 5,700'

Figure 2-2
Study Area and Key Intersections



Legend

1 Key Intersection

Project Site

Endo Engineering

Scale: 1" = 350'

Table 2-1
Existing Land Uses/Entitlements To Be Replaced

Land Use Type	Land Use Quantity	Development Status
Town & Country Center		
Bank of America Building	15,980 S.F.	Existing
Restaurant Use	15,040 S.F.	Existing
Retail	17,610 S.F.	Existing
Office	2,350 S.F.	Existing
Total Building Floor Area	50,980 S.F.	

The western third of the core area is occupied by surface and underground parking associated with the Desert Fashion Plaza enclosed shopping mall that was demolished. A multi-level parking garage is currently located in the northwest corner of the site that is accessed from Museum Drive. An underground parking garage extends from beneath the northern portion of the property to its southwest corner. This parking area is accessed from Tahquitz Canyon Way, between Belardo Road and Cahuilla Road.

The 13.2-acre under-utilized Desert Fashion Plaza (with 288,400 S.F. of retail and 41,600 S.F. of restaurant uses) was formerly located along the west side of Palm Canyon Way, between the Hyatt Hotel and Tahquitz Canyon Way. Approximately 12 percent of the Desert Fashion Plaza was occupied when the *Museum Market Plaza Specific Plan Traffic Impact Study* (the 2008 TIS*)* was prepared. Following the approval of the *Museum Market Plaza Specific Plan*, the Desert Fashion Plaza was demolished.

2B. Project Description

On November 18, 2009, the City Council adopted Resolution No. 22625, certifying the *Final EIR for the Museum Market Plaza Specific Plan*, including amendments to the 2007 General Plan and Palm Springs Zoning Code. On December 2, 2009, the *Museum Market Plaza Specific Plan* was adopted (by Ordinance No. 1764) and the City Council reaffirmed and re-adopted Resolution No. 22625. The original development consisted of Blocks A-H, K-1 and K-2 as well as new public streets for a total of 18.5 acres within the Central Business District of Palm Springs.

Museum Market Plaza Specific Plan

The approved *Museum Market Plaza Specific Plan Traffic Impact Study* (the 2008 TIS*)* addressed the development of all properties within the original Museum Market Plaza Specific Plan area at the project level and identified specific mitigation measures addressing the site-specific and cumulative traffic effects of the proposed development. Five alternative development concepts were evaluated therein with four different internal circulation configurations. The 2008 TIS evaluated conditions upon project buildout in the year 2030 at the same level of detail for each alternative. The location of each specific land use within the various Planning Blocks was not established at that time and the final roadway configuration had not been identified. The mitigation measures therein were developed to reduce the effects of buildout under the Specific Plan to a less than-significant level. As proposed, the Downtown Palm Springs Project would comply with all applicable mitigation measures identified in the Specific Plan EIR.

Table 2-2 shows the land uses that were approved for the area within the Museum Market Plaza Specific Plan by the Palm Springs City Council. The approved land uses were essentially identical to the land uses associated with the Preferred Project that was evaluated in the 2008 TIS. The roadway configuration approved was not the configuration associated with the Preferred Project. To better accommodate a centrally located

outdoor public open space as a venue for community events, the internal roadway network was modified by the City Council when the Specific Plan was approved.

Table 2-2
Museum Market Plaza Specific Plan Versus
Downtown Palm Springs Project Land Uses

Land Use Type	Museum Market Plaza Specific Plan[a] Land Use Quantity	Downtown Palm Springs Project[b] Land Use Quantity
Hotel	620 Rooms	620 Rooms
Retail	300,000 S.F.	293,463 S.F.
Office	100,000 S.F.	97,821 S.F.
High Density Residential	900 D.U.	650 D.U.

a. The land uses associated with the Museum Market Plaza Specific Plan approved by the City Council on December 2, 2009 including the 55 hotel rooms previously characterized as entitlements for Block L that were transferred to the approved Specific Plan area.

b. Includes the Downtown Palm Springs Park in Block E with 5,000 square feet of building area that could be used for retail or office space (e.g., administrative/event booking office space, traffic management and security office space, law enforcement office space, ticket sales, concessions). An additional 2,500 S.F of floor area for use as public restrooms, stages, back of house, etc. that would not generate additional traffic is not included.

Museum Way was replaced by Main Street, a public street, that is no longer shown crossing Block K. Belardo Road was extended as a public street from Tahquitz Canyon Way across the site to the northern site boundary. Andreas Road was shown as a two-lane public street extending from Palm Canyon Drive to Belardo Road. Museum Drive was realigned to form a new three-leg intersection at Belardo Road.

Following the approval of the Museum Market Plaza Specific Plan, development plans for the area evolved and refinements to the layout of the individual development blocks and land uses within the Specific Plan were proposed as the internal street grid was refined. The current designations of the planning area blocks within the project site are shown in Figure 2-3.

The area east of the Palm Springs Art Museum, between Belardo Road and Museum Drive, which was originally designated as Planning Area "G" in the Specific Plan was renamed development Block "E" in the Downtown Palm Springs Project. The gym/spa, retail uses (including a potential movie theater), and multi-family residential development shown for this area in the Specific Plan were changed to public open space to create a larger outdoor entertainment venue for the staging of community gatherings and special events than the previous Main Plaza location within Block B could accommodate. This change increased the development potential of Block B.[1]

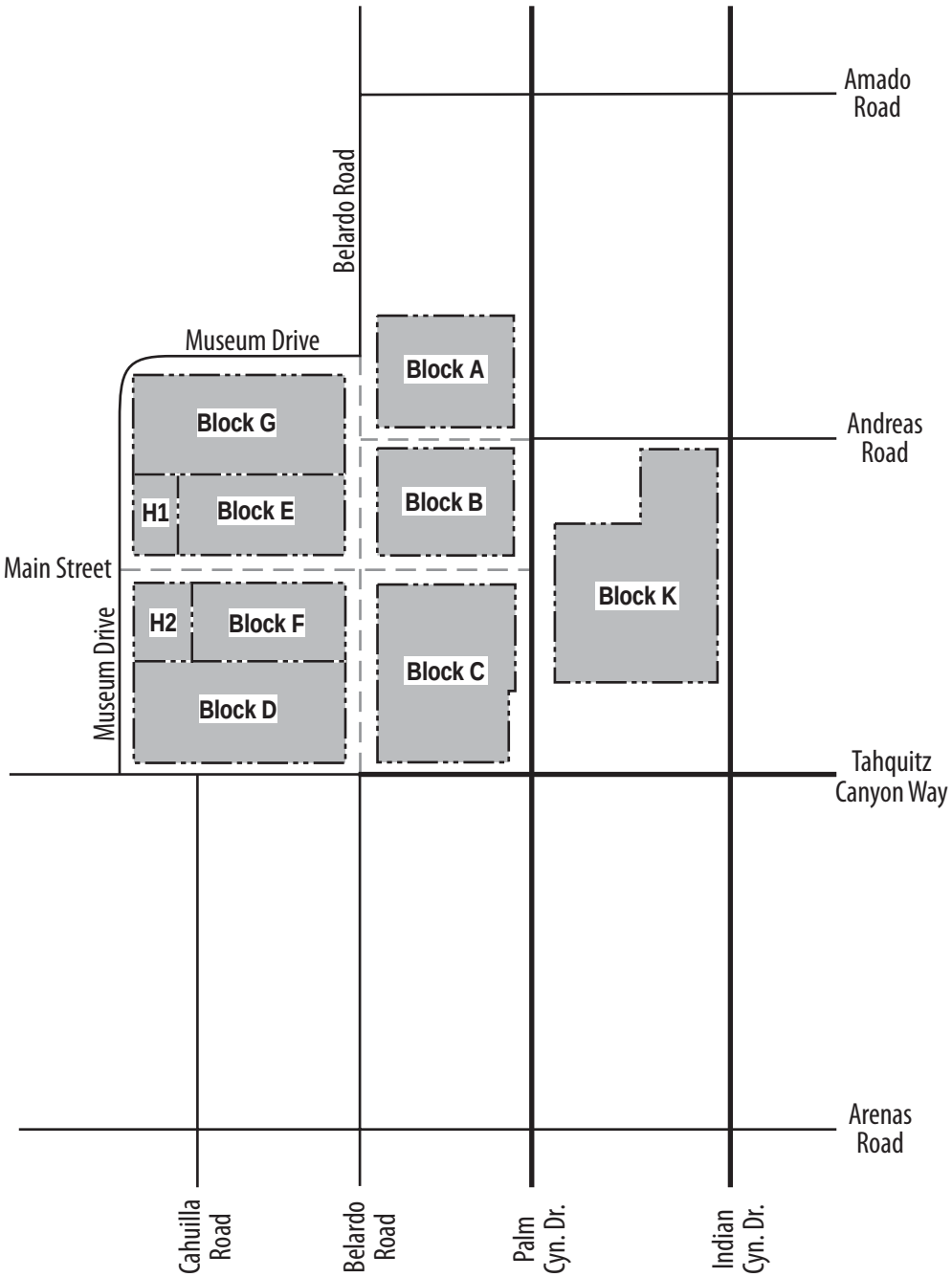
Downtown Palm Springs Project

On October 17, 2012, the Palm Springs City Council adopted Resolution 23238 approving an *Addendum to the Final EIR for the Museum Market Plaza Specific Plan* (Case No. 5.1204). Resolution 23238 also identified the implementation of a revised Downtown Revitalization Plan ("Downtown Palm Springs") as conforming to the Museum Market Plaza Specific Plan. The Downtown Palm Springs project proposes an overall reduction in square footage and the relocation of development among the planning area blocks. The completion of this project will provide for an outdoor public performance venue and special event space in Block E. The 1.3-acre urban open space will serve the needs of residents and visitors as a venue for cultural and social activities.

1. City of Palm Springs. *Addendum to the Final EIR (Museum Market Plaza Specific Plan) Prepared for the Proposed Renovation Plan ("Downtown Palm Springs")*.

Figure 2-3

Planning Area Blocks Within the Project Site



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Scale: 1" = 350'

The Downtown Palm Springs Project (shown in Figure 2-4) calls for commercial mixed-use densities consistent with those identified in the approved Museum Market Plaza Specific Plan. Table 2-3 shows the land use quantities within initial phase of the development as well as the future development expected to occur following the initial phase. The initial phase includes all site development that is approved/entitled and under construction including the Downtown Palm Springs Park. The key elements of the site access and internal roadway configuration designed to serve the Downtown Palm Springs Project, with the Downtown Palm Springs Park located within Block E, are shown in Figure 2-5.

No further environmental review is required for the development of permanent open space for an outdoor community event venue (i.e., the "Downtown Palm Springs Park"). However, the staging of special events with up to 4,000 attendees was not anticipated for this Block when the 2008 TIS was prepared. The potential effects associated with this refinement of the development program are addressed in this updated study.

Downtown Palm Springs Park

On September 17, 2014, the Palm Springs City Council approved the acquisition of the event center identified for Block E as permanent public open space to be operated by the City as an active and vibrant area for staging community and public events (such as concerts, movies, outdoor markets, public gatherings, or other community events). Events may range from Villagefest farmers markets to large entertainment concerts attracting up to 4,000 attendees. Like the Convention Center, the intent is that management of the event center be coordinated through a third party event coordinator.

Various elements of the conceptual design of the Downtown Palm Springs Park are shown in Figure 2-6. They include:

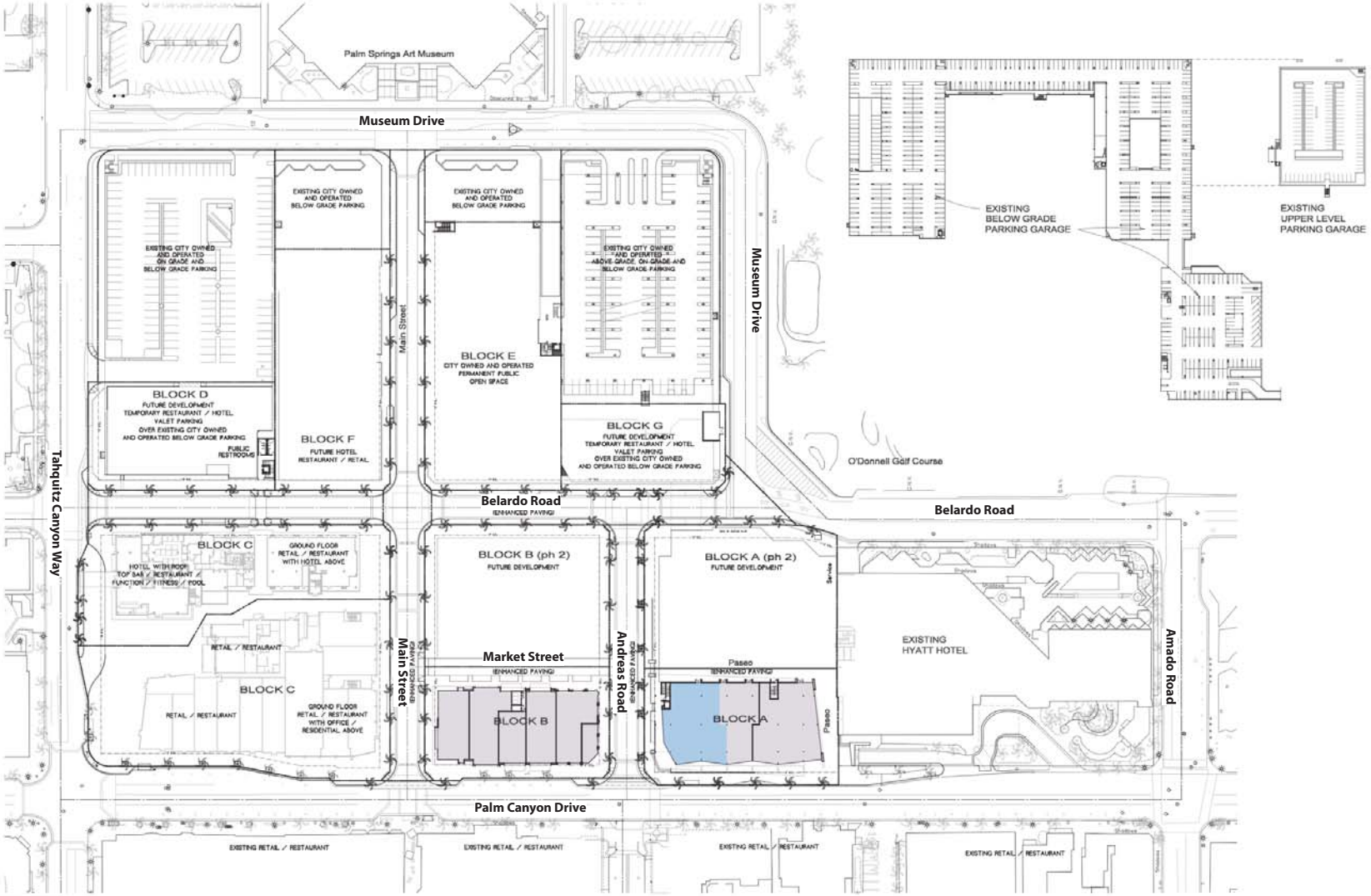
- A main performance event stage at the west end of Block E for concerts;
- A second performance stage at the north end of Block E for small performances and viewing of films;
- A single-story building for use as a downtown police sub-station, with concession space, storage space,public restroom facilities, and a roof-top observation deck for additional seating/standing;
- Permanent locations for the Forever Marilyn statue and the "Aluminaire" House designed by Albert Frey, and
- A flexible design to accommodate multi-function use as a public park.

To expand the size of the public space, on-street parallel parking along the Main Street frontage would be eliminated, thereby increasing the usable public open space area to 1.3 acres. A sculpture garden and palm tree grotto proposed on Museum Drive would buffer the back-of-house facilities necessary to support the main performance stage. Additional viewing platforms may be located on the existing parking garage, along the north side of the event center. Access from the north, east, and south sides of the event center for ticketed performances would be secured with landscaping, berms, and/or fencing.

Proposed Roadway Configuration

The Downtown Palm Springs Project includes a refined street configuration. The entire street grid created by the project and purchased by the City is designed with landscaping, architectural shading and decorative interlocking pavers, but with no curbs to maximize its use for events. It will be possible to close the entire street grid off for special events and public activities at the event center located across Museum Drive from the Palm Springs Art Museum. The exact configurations of Belardo Road and Museum Drive will be subject to further review and refinement, consistent with future detailed plans for the project.

Figure 2-4
Downtown Palm Springs Project



SANBORN
ARCHITECTURE CIVIL ENGINEERING LAND SURVEYING

DOWNTOWN PALM SPRINGS
WESSMAN DEVELOPMENT
Prepared by SANBORN A/E, INC. - ARCHITECTURE-CIVIL ENGINEERING-SURVEYING - 760-423-0600

Scale: 1" = 188'

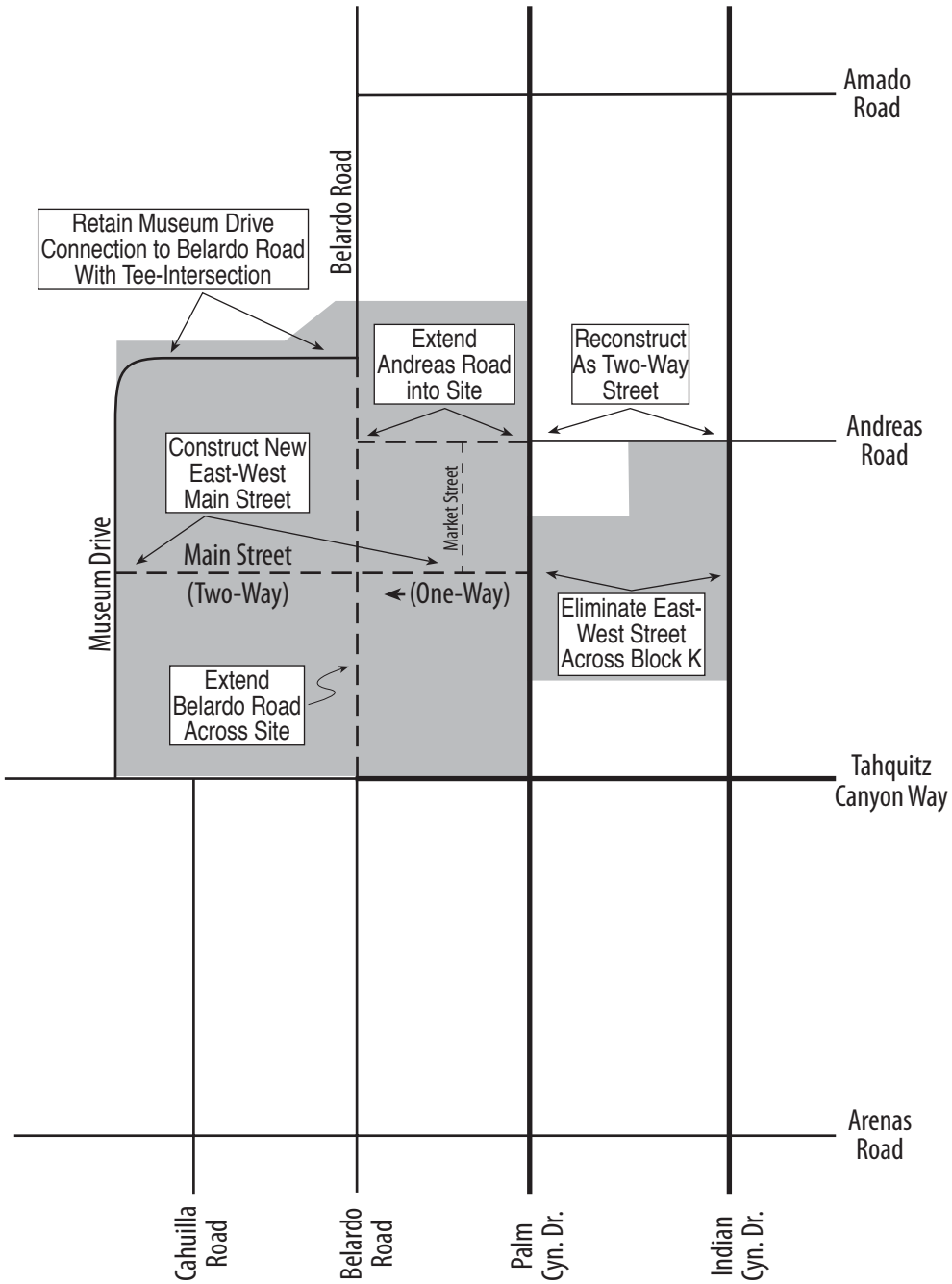
Table 2-3
Downtown Palm Springs Project Development By Phase[a]

Block	Initial Phase (Entitled/Under Construction)				Subsequent Phases of Development[c]		
	Retail/Commercial[b] (T.S.F)	Offices[b] (T.S.F.)	Hotel (Rooms)	Downtown Park (Attendees)	Retail/Offices[c] (T.S.F.)	Hotel (Rooms)	Multi-Family Attached High-Rise Dwelling Units
Block A	38,613	12,871	--	--	--	--	150
Block B	23,850	7,950	--	--	--	150	--
Block C	33,750	11,250	155	--	68,000	--	--
Block D&F	--	--	135	--	--	--	200
Block E	--	--	--	4,000	5,000	--	--
Block G	--	--	--	--	100,000	--	150
Block K	--	--	--	--	90,000	180	150
Total	96,213	32,071	290	4,000	263,000	330	650

a. The approved *Museum Market Plaza Specific Plan EIR* did not specify the location of the retail/office building space, hotel rooms, or dwelling units by block but limits the total development within the Specific Plan to 400,000 S.F. of retail/office land uses, 620 hotel rooms, and 900 residential dwelling units.
b. The total retail/office building floor area entitlement was assumed to include 75 percent retail/commercial uses and 25 percent professional offices, consistent with the 2008 TIS.
c. The development shown for subsequent development phases does not include the development within the initial phase. The total retail/office building floor area was assumed to include 75 percent retail/commercial uses and 25 percent professional offices, consistent with the 2008 TIS.

Figure 2-5

Key Elements of the Downtown Palm Springs Street Configuration

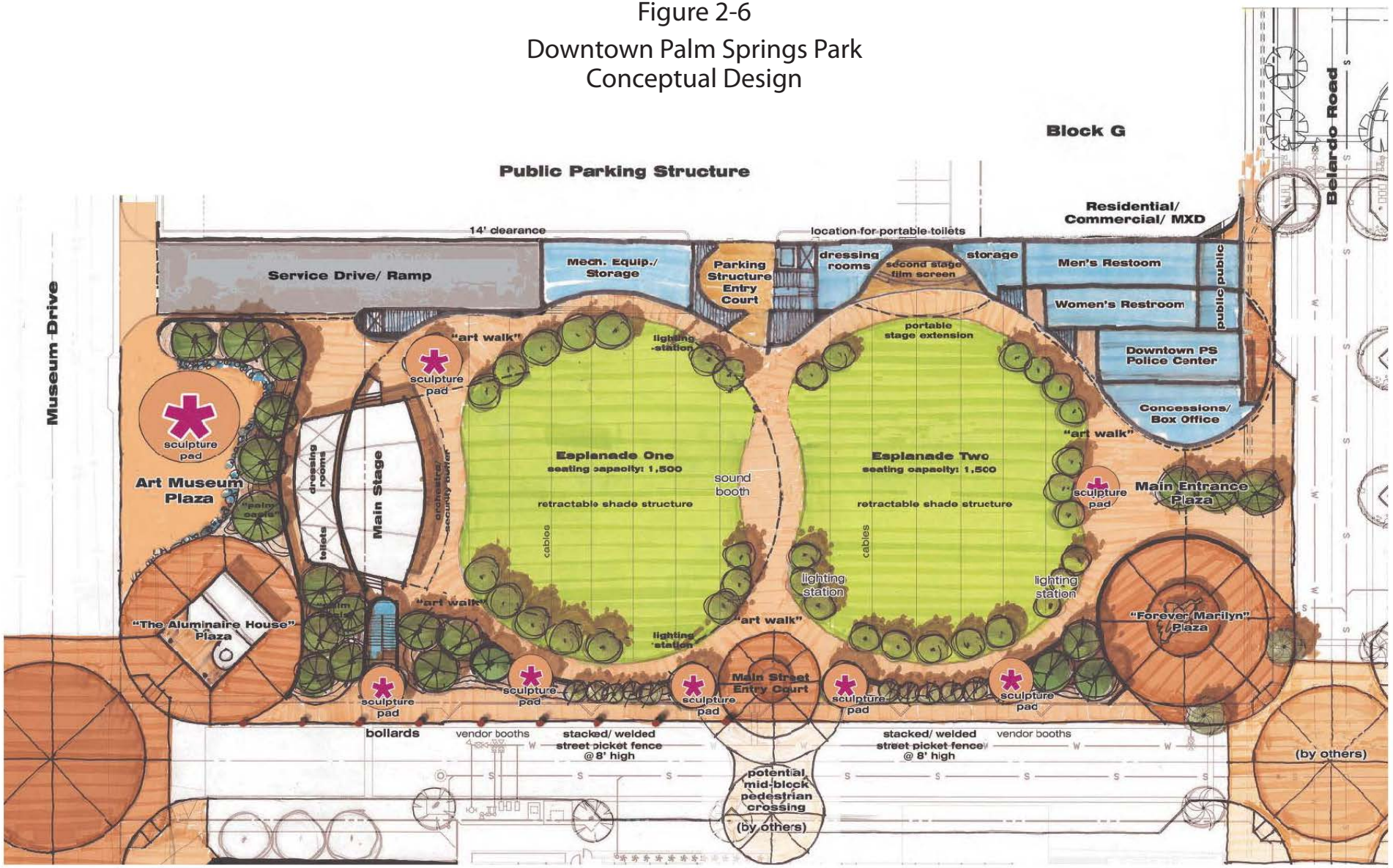


Endo Engineering

Scale: 1" = 350'

Figure 2-6

Downtown Palm Springs Park
Conceptual Design



Source: MSA Consulting, Inc.

Scale: 1" = 50'

Belardo Road is currently envisioned as a north-south roadway aligned along the eastern edge of the Downtown Palm Springs Park. Main Street would provide east-west access between Palm Canyon Drive and the Palm Springs Art Museum entry on the west side of Museum Drive. Extending Andreas Road from Palm Canyon Drive to Belardo Road and converting the existing portion of Andreas Road between Palm Canyon Drive and Indian Canyon Drive to two-way operation would provide east-west connectivity.

All streets would be finished with decorative interlocking pavers and no curbs. All new public areas would be enhanced with landscaping and other amenities designed to promote pedestrian activity and public functions. Main Street and Andreas Road would accommodate east/west travel and have enhanced paving within the site. Retractable (electric) bollards would be provided that could be raised, as needed, to allow interior streets and other areas to be used for special events and functions. The retractable bollards would be installed at the following intersections to permit street closures during community events, when necessary, to better accommodate pedestrian traffic:

- Main Street at Mid-Block Crossing,
- Main Street at Museum Drive,
- Andreas Road at Palm Canyon Drive,
- Museum Drive at Belardo Road, and
- Museum Drive at Tahquitz Canyon Way.

Andreas Road would be constructed as a public east-west two-lane street, from Palm Canyon Drive to Belardo Road, creating two internal key intersections (Intersections 14 and 16).[2] Andreas Road would separate Block A from Block B. To increase east/west connectivity between the project site and development east of Indian Canyon Drive, Andreas Road is currently being converted from a one-way (eastbound) roadway to a two-way street between Palm Canyon Drive and Indian Canyon Drive. Andreas Road would maintain a path for vehicular circulation around the periphery of the site via Museum Drive during events within Block E.

Belardo Road would be extended as a north-south local street through the project site from Tahquitz Canyon Way to Museum Drive near the northern site boundary, where it would connect to the existing alignment of Belardo Road, south of Amado Road. One travel lane in each direction is proposed with on-street parallel parking in designated areas. Additional width for sidewalks is to be dedicated by the developer via easements with the tentative parcel map.

When connected through the site, Belardo Road would accommodate traffic diverted around Villagefest by the closure of Palm Canyon Drive, between Amado Road and Baristo Road. Three new internal key intersections would be located along the new Belardo Road extension. Belardo Road at Museum Drive was evaluated as a future three-leg intersection (Intersection 15). Belardo Road at Andreas Road was evaluated as a future three-leg intersection (Intersection 16). Belardo Road at Main Street was evaluated as the future four-leg intersection (Intersection 17). During community events in Block E, Belardo Road may be closed to vehicular traffic between Andreas Road to Tahquitz Canyon Way, as needed, to accommodate pedestrian movements.

Main Street, a new two-lane east-west public street with a proposed 41-foot right-of-way and additional sidewalk width to be dedicated, would provide a direct connection between Palm Canyon Drive and Museum Drive, in front of the Palm Springs Art Museum. Main Street would accommodate two-way vehicular travel between Museum Drive and Belardo Road. From Palm Canyon Drive to Belardo Road, Main Street could operate as either a two-way street or a one-way street (for westbound travel only). The most likely configuration would be as a one-way street between Palm Canyon Drive and Belardo Road. For the purposes of this analysis, Main Street was evaluated as a one-way (westbound) street to provide a more conservative analysis.

Main Street would be constructed with enhanced paving and could be closed to vehicular travel during special events at the Downtown Palm Springs Park. With a one-way configuration traffic control signal controls would not be needed to assign the right of way for conflicting vehicular turning movements at the intersection of Palm Canyon Drive and Main Street. When compared to two-way operation, the one-way configuration would

2. There were no conflicting vehicular turning movements at the intersection of Palm Canyon Drive and Andreas Road with the roadway configuration evaluated for the Preferred Plan in the 2008 TIS. Consequently, this intersection was not evaluated in the 2008 TIS.

reduce the potential for vehicle-pedestrian conflicts as well the number of conflicting vehicular turning movements at the intersection of Palm Canyon Drive and Main Street, improving traffic operations and safety.

Market Street, a new north-south two-lane private street with enhanced paving and a shade canopy, would extend north of Main Street beyond Andreas Road to the northern site boundary. Market Street would separate the initial phase of development within Block A and Block B from the subsequent development within these blocks and accommodate activities such as an outdoor farmers market. Market Street would integrate the Hyatt Hotel into the Downtown Palm Springs development by providing a direct and inviting pedestrian access south of a new southern entry at the Hyatt Hotel.

Museum Drive, an existing north-south public collector street would extend north from Tahquitz Canyon Way to the northwest parking structure then turn ninety degrees and continue as an east-west street to intersect Belardo Road at a "T" type intersection. This configuration would maintain a route around the perimeter of the core area and the Downtown Palm Springs Park for vehicular use during community events when Belardo Road (south of Andreas Road) and Main Street may be closed to vehicular travel in the vicinity of Block E.

Circulation Refinements Since the 2008 Traffic Impact Study

The approved Museum Market Plaza Specific Plan included a site access and internal circulation configuration that was modified in several respects from the circulation configuration evaluated for the Preferred Project in the 2008 TIS. The Preferred Project evaluated in the 2008 TIS would have abandoned and vacated Museum Drive, west of Belardo Road. Museum Drive would have extended north of Tahquitz Canyon Way along the western boundary of the project site but terminated at the parking structure in the northwest corner of the site.

Museum Way, a new two-lane east-west street with a 48-foot right-of-way, would have provided a direct two-way connection between Indian Canyon Drive and Museum Drive, by crossing Block K. When the Specific Plan was approved, Museum Way was eliminated between Indian Canyon Drive and Palm Canyon Drive (across Block K) and replaced by Main Street between Palm Canyon Drive and Museum Drive.

Andreas Road, between Palm Canyon Drive and Indian Canyon Drive, has recently been converted from a one-way (eastbound) street to a two-way street. This change was not anticipated in the analysis of the Prefered Project. Andreas Road would not have been extended west of Palm Canyon Drive with the Preferred Project.

Belardo Road would have been extended north of Tahquitz Canyon Way across the site to connect to the existing alignment of Belardo Road south of Amado Road with the Preferred Project. Belardo Road would have been improved as a private street within the project site. The Specific Plan called for Belardo Road to be extended as a Collector Street with a 62-foot right-of-way.

Local Street "A/B" a former private east-west street would have been constructed south of Andreas Road, between Palm Canyon Drive and Belardo Road (between Block A and Block B) with the Preferred Project. Local Street "A/B" was replaced by the westerly extension of Andreas Road, between Palm Canyon Drive and Belardo Road. The north/south "Townhome Access" shown for the Preferred Project, west of Belardo Road, between Tahquitz Canyon Way and Museum Way, was eliminated.

Parking

The western third of the project site is currently developed with surface and underground parking that was previously associated with the Desert Fashion Plaza development and identified in the Specific Plan as being retained for future use. The Downtown Palm Springs Project that would include approximately 1,219 parking spaces plus the parking provided in Block K preserves this parking. This total includes: 223 at-grade spaces, 587 below-grade parking spaces, 300 private underground spaces, and 109 above-grade spaces, depending on the final configuration and striping plans that will include accessible spaces and parking aisles that are ADA

compliant, compact spaces, and SUV spaces. The City of Palm Springs has acquired all of the parking on the project site as well as the two "museum pads" (Blocks H-1 and H-2) that would be open green space.

Existing Uses To Be Removed

The proposed project would require the demolition and redevelopment of all of the on-site land uses except the existing parking structures and existing below grade parking. The existing parking facilities would be renovated by the City of Palm Springs. The existing land uses within the site are shown in Table 2-1. The existing Town & Country Center uses were assumed to be demolished and replaced by the land uses shown in Table 2-3 for Block K.

Pedestrian Facilities

After the initial phase of development, a 30-foot wide pedestrian "paseo" would be created along the northern site boundary. The alignment will match an improved exterior entry into the adjacent Hyatt Hotel on the north and Market Street on the south. This will integrate the Hyatt Hotel into the proposed project by improving pedestrian access between the two developments. A pedestrian paseo 30-feet wide would be provided along the alignment of Market Street, between Andreas Road and the northern site boundary. This pedestrian paseo would provide a venue for outdoor farmers markets with vendor stalls and a shade canopy.

Project Phasing

The initial phase of the project includes approved, entitled, and under construction development within the site as detailed in Table 2-3. The initial phase includes development located in each Block except Block G (north of the Downtown Palm Springs Park) and Block K (east of Palm Canyon Drive). The City of Palm Springs is currently engaged in the final design phases of the Downtown Palm Springs Park, which will require one year of construction to complete. The intent was for it to be constructed with a grand opening that coincides with the planned opening of the Kimpton Hotel and the AC Marriot Hotel near the end of the year 2016.[3] However, the current schedule includes the completion of the Downtown Palm Springs Park in October 2017.

Full implementation of the project would include subsequent phases of development within each block that are not proposed at this time. The provisions of the approved Specific Plan, which establishes detailed standards and guidelines for land use, development density, design, infrastructure, and phasing, will define future development. For the purposes of this analysis, the project buildout year was assumed to be the year 2030, which coincides with the horizon year of the future traffic projections in the *City of Palm Springs 2007 General Plan*.

2C. Project Study Area

The study area and key intersections were identified, following coordination with the City of Palm Springs. The key intersections are shown in Figure 2-2 and include:

Existing Key Intersections

1. Indian Canyon Drive @ Amado Road;
2. Indian Canyon Drive @ Andreas Road;
3. Indian Canyon Drive @ Tahquitz Canyon Way;
4. Indian Canyon Drive @ Arenas Road;
5. Palm Canyon Drive @ Amado Road;
6. Palm Canyon Drive @ Tahquitz Canyon Way;
7. Palm Canyon Drive @ Arenas Road;
8. Belardo Road @ Amado Road;

Future Key Intersections

14. Palm Canyon Drive @ Andreas Road;
15. Belardo Road @ Museum Drive;
16. Belardo Road @ Andreas Road; and
17. Belardo Road @ Main Street.

3. The six-story Kimpton Hotel will be constructed in Block C1 with 155 rooms.

9. Belardo Road @ Tahquitz Canyon Way;
10. Belardo Road @ Arenas Road;
11. Cahuilla Road @ Tahquitz Canyon Way;
12. Cahuilla Road @ Arenas Road; and
13. Museum Drive @ Tahquitz Canyon Way.

2D. Cumulative Projects

Through coordination with the City of Palm Springs, sixteen cumulative projects were identified that would generate traffic through the study area, as shown in Table 2-4. The area encompassed by the cumulative projects extended north to Tamarisk Road, east to Farrell Drive, and south to East Palm Canyon Drive. The location of each of the cumulative developments addressed is shown in Figure 2-7.

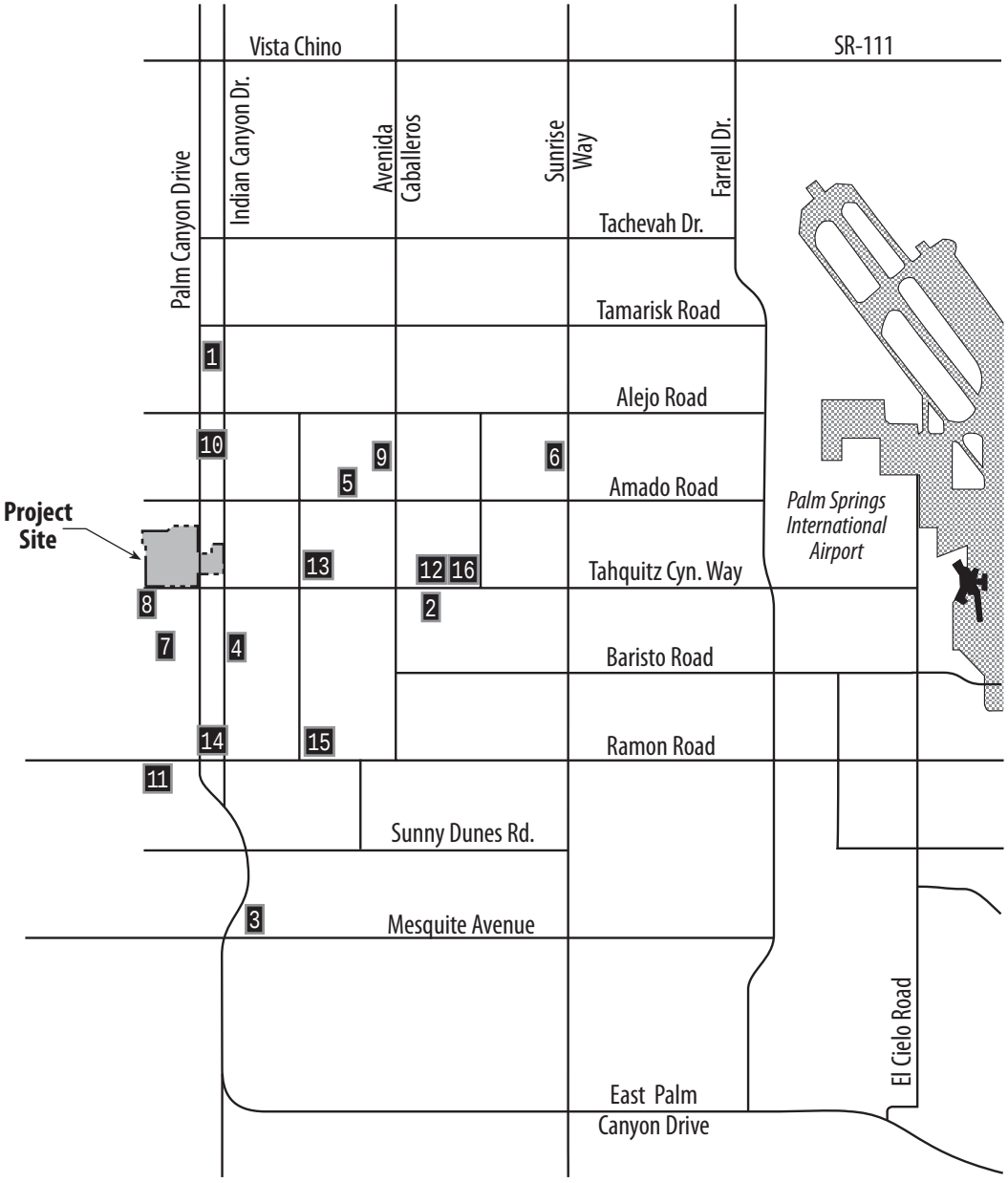
Table 2-4
Cumulative Projects Evaluated

Project	Land Use Category	ITE Code[a]	Quantity[b]
1. **750 Lofts**	Hotel Commercial Restaurant	310 820 931	46 Rooms 2.595 TSF 3.025 TSF
2. **Agua Caliente Museum**	Museum	Rael TIA	90,000 SF
3. **The Cameron (TTM 33575**)	Residential- MFA Commercial	230 826	100 DU 32.58 TSF
4. **Canyon Lofts (TTM 36815)**	Residential- MFA	230	104 DU
5. **Dolce Hotel**	Hotel Residential- SFD	310 210	200 Rooms 50 DU
6. **En Alza (TTM 36878)**	Residential- SFD	210	50 DU
7. **La Serena Villas**	Hotel	310	6 Rooms
8. **Palm Mountain Resort**	Hotel	310	20 Rooms
9. **Palomino**	Residential- SFD	210	6 DU
10. **Rael Development**			
- Existing	Commercial General Office Restaurant	826 SANDAG 932	17,490 SF 2,500 SF 1,620 SF
- Proposed	Commercial Residential- MFA General Office	814 230 SANDAG	28,000 SF 130 DU 4,400 SF
11. **Skye (TTM 36738)**	Residential- SFD	210	40 DU
12. **Sol (TTM 36525)**	Residential- SFD	210	17 DU
13. **Spa Hotel**	Hotel	310	150 Rooms
14. **The Palm Canyon (TTM 33514)**			
- Existing (50% Occupied) - Proposed	Retail Retail Residential - MFA	820 820 230	45,936 SF 39,250 SF 125 DU
15. **Village Traditions**	Residential- SFD	210	31 DU
16. **Vivante (TPM 35989)**	Senior Housing Commercial	254 826	132 DU 26 TSF

a. The ITE Trip Generation Land Use Code is shown except for the museum (where the Rael trip generation forecast was assumed) and the small General Office use for which rates in the SANDAG *Traffic Generators* publication were assumed because the floor area was too small to fall within the cluster of data in the ITE *Trip Generation* manual.

b. SF = Square Feet. DU = Dwelling Units.

Figure 2-7
Sixteen Cumulative Projects



Legend

1 750 Lofts	9 Palomino
2 Agua Caliente Museum	10 Rael Development (TTM 34190)
3 The Cameron (TTM 33575)	11 Skye (TTM 36738)
4 Canyon Lofts (TTM 36815)	12 Sol (TM 36525)
5 Dolce Hotel	13 Spa Hotel
6 En Alza (TTM 36878)	14 The Palm Canyon (TTM 33514)
7 La Serena Villas	15 Village Traditions II
8 Palm Mountain Resort	16 Vivante (TPM 35989)

Endo Engineering

Scale: 1" = 2765'

3.0 CIRCULATION BACKGROUND ANALYSIS

3A. Existing and Approved Land Uses

The project site is located within the heart of downtown Palm Springs, a world-famous premier desert resort destination and community. Within the City of Palm Springs central business district (CBD) the dominant land uses include pedestrian-oriented shopping and entertainment districts, destination resorts, businesses, and commercial/retail uses for residents, tourists, and the regional market. Commercial vehicle loading of goods and people occurs on a regular basis in the downtown and a heavy demand exists for parking with a high degree of parking turnover.

Existing On-Site Land Uses

The Town & Country Center and the Zeldaz Nightclub/Restaurant are located south of Andreas Road, between Palm Canyon Drive and Indian Canyon Drive. The existing land uses/entitlements to be replaced within the Town & Country Center are shown in Table 2-1 and include 15,040 S.F. of restaurant uses, 17,610 S.F. of retail uses, 2,350 S.F. of professional office space, and 15,980 S.F. of the Bank of America Building.

A multi-level parking garage is currently located in the northwest corner of the site that is accessed from Museum Drive. An underground parking garage extends from beneath the northern portion of the property to its southwest corner. This parking area is accessed from Tahquitz Canyon Way, between Belardo Road and Cahuilla Road.

Belardo Road (south of Amado Road), Museum Drive, and Tahquitz Canyon Way (east of Museum Drive) currently provide an important link in several citywide bikeway loops. The Heritage Trail Citywide Loop, the Tahquitz Creek Citywide Loop, the Downtown Loop and the Las Palmas Loop all include bikeways along Belardo Road and Museum Drive

Villagefest Street Fair

Villagefest and other special events, festivals, and parades occur in downtown Palm Springs periodically throughout the year. Every Thursday night, the Villagefest street fair occurs on Palm Canyon Drive, between Amado Road and Baristo Road. This requires the closure of Palm Canyon Drive for a distance of one-half mile. Thursday traffic volumes in the study area during Villagefest includes through traffic, local traffic, and Villagefest visitor traffic.

Started in 1991, Villagefest occurs between 6:00 PM and 10:00 PM from October through May, and between 7:00 PM and 10:00 PM from June through September. Villagefest attracts thousands of visitors each week by offering street entertainment and more than 200 booths with art, hand-crafted items, and unique food.

The closure of Palm Canyon Drive to southbound traffic on Thursday evenings to accommodate Villagefest activities more than doubles the traffic volumes on Belardo Road, south of Amado Road and south of Tahquitz Canyon Way. Traffic volumes also increase dramatically along Museum Drive, which connects Belardo Road to Tahquitz Canyon Way, and along Calle Encilia, a north-south roadway located east of Indian Canyon Drive.

Approved On-Site Land Uses

The approved on-site land uses are shown in Table 2-2 and include a maximum of 400,000 S.F. of commercial/retail and professional office floor space, 620 hotel rooms, and 900 high-rise multi-family attached dwelling units. Block E is currently approved for development as the future Downtown Palm Springs Park, a 1.3-acre outdoor public open space and venue for community events. The Downtown Palm Springs Revitalization

Plan was approved for the site and determined to be consistent with the approved Museum Market Plaza Specific Plan. The Downtown Palm Springs Project would include the land uses shown in Table 2-2. Additional development would be allowed within the project site up to the maximum entitlements associated with the Museum Market Plaza Specific Plan.

3B. Surrounding Street System

Figure 3-1 depicts the street system within the study area including the existing traffic control devices at the key intersections and the number of mid-block through lanes. North/south access is provided primarily by a one-way couplet formed by Palm Canyon Drive and Indian Canyon Drive. One-way streets typically have a somewhat greater capacity than two-way streets due to the reduced friction and because left-turn movements can be made more easily when there is no opposing traffic. Better traffic signal progression is often possible on one-way streets. Where cross streets are also one-way, (e.g., Palm Canyon Drive at Andreas Road and Indian Canyon Drive at Andreas Road) turning movement conflicts are further reduced. The reduction in total possible movements also reduces pedestrian-vehicular conflicts.

East/west access is provided primarily by Tahquitz Canyon Way, which connects downtown Palm Springs to the Resort/Convention Center District within Section 14 and the Palm Springs International Airport (to the east). Tahquitz Canyon Way also provides access to the residential neighborhood located southwest of the project site.

Local access is provided by Belardo Road, Amado Road, Andreas Road, and Arenas Road. Direct site access is provided by Belardo Road, Palm Canyon Drive, Indian Canyon Drive, Museum Drive, Cahuilla Road, Andreas Road, and Arenas Road. Most of the streets in the study area currently permit parallel on-street curb parking. Parking bays have been constructed along both sides of Palm Canyon Drive and Indian Canyon Drive to provide for the short-duration parking needs of abutting uses while minimizing the potential for adverse impacts on capacity and safety that are typically associated with on-street parking along arterial streets.

Palm Canyon Drive is a 3-lane one-way roadway within the study area serving southbound traffic. A significant portion of the traffic approaching the site from the north on Palm Canyon Drive is regional traffic from the Interstate 10 Freeway. The posted speed limit along Palm Canyon Drive is 25 miles per hour (MPH). On-street parallel parking is currently permitted on both sides of Palm Canyon Drive throughout the study area. The existing pavement width is approximately 50 feet curb-to-curb.

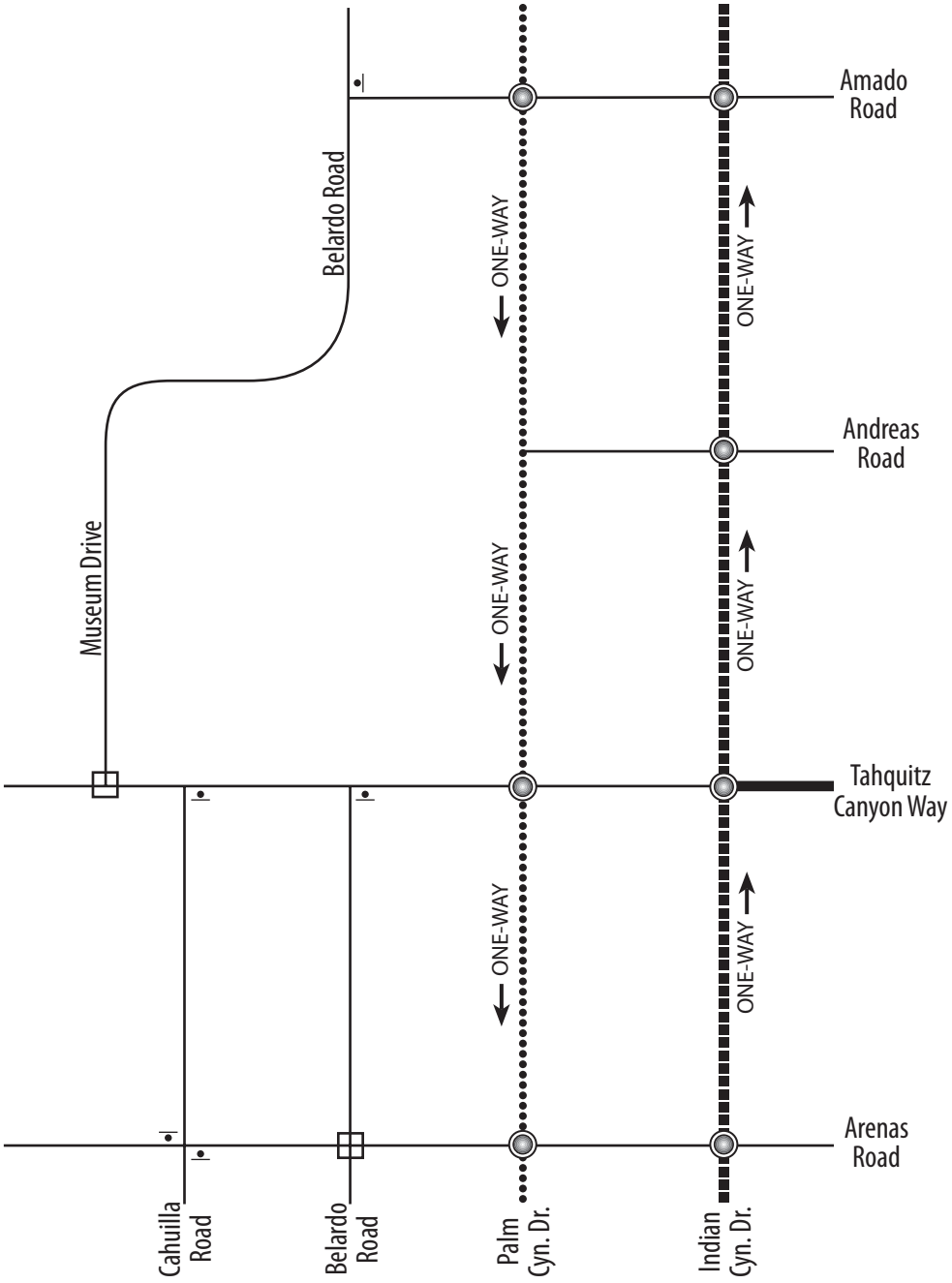
Indian Canyon Drive is a 4-lane one-way roadway within the study area serving northbound traffic. The posted speed limit along Indian Canyon Drive is 30 mph. Indian Canyon Drive provides direct access to the Interstate 10 Freeway, via an interchange located north of the study area. In conjunction with Palm Canyon Drive, Indian Canyon Drive provides the primary north/south arterial access to Downtown Palm Springs as the northbound side of a one-way couplet. Parallel on-street parking is currently permitted along both sides of Indian Canyon Drive within the study area. The existing pavement width is approximately 61 feet curb-to-curb.

Tahquitz Canyon Way is the most direct link between the Palm Springs International Airport terminal and the study area. East of Indian Canyon Drive, Tahquitz Canyon Way is a 4-lane divided east/west roadway with a raised landscaped median and a posted speed limit of 30 mph. West of Indian Canyon Drive, Tahquitz Canyon Way is a 52-foot wide two-lane undivided street with on-street parallel parking on both sides of the roadway and sufficient pavement width for a dedicated left-turn lane at intersections. West of Museum Drive, Tahquitz Canyon Way provides access to a condominium complex. The intersections of Tahquitz Canyon Way with Palm Canyon Drive and with Indian Canyon Drive are both signalized.

Belardo Road is a north/south two-lane undivided roadway located approximately 325 feet west of Palm Canyon Drive (at Amado Road). South of Amado Road, Belardo Road diverts to the west to connect to Museum Drive. From Tahquitz Canyon Way south, Belardo Road appears to be located approximately 335 feet west of Palm Canyon Drive. Belardo Road is controlled by a STOP sign at Tahquitz Canyon Way. An all-way STOP

Figure 3-1

Surrounding Street System



Legend

- Signalized Intersection
- Stop Sign
- All-Way Stop
- Four Lanes-Divided
- Four Lanes-Undivided
- Three Lanes-Undivided
- Two Lanes-Undivided

Endo Engineering

Scale: 1" = 350'

controls the intersection of Belardo Road and Arenas Road. The prima facie speed on Belardo Road appears to be 25 mph.

Amado Road is a two-lane undivided roadway that is signalized at the intersections of Palm Canyon Drive and Indian Canyon Drive. Amado Road provides access from the project site to the Spa Resort Casino and Palm Springs Convention Center. East of Indian Canyon Drive, Amado Road has sufficient pavement width to accommodate four travel lanes. The prima facie speed on Amado Road in the study area appears to be 25 mph.

Andreas Road is a two-lane undivided roadway with sufficient pavement width to accommodate four travel lanes east of Indian Canyon Drive. Until recently, Andreas Road, between Palm Canyon Drive and Indian Canyon Drive, was a single lane one-way (eastbound) street with angled parking on the south side and parallel on-street parking on the north side of the roadway. The intersection of Andreas Road and Indian Canyon Drive is signalized, and the eastbound approach was channelized to prevent eastbound through movements across Indian Canyon Drive. With the angled parking on the south side of Andreas Road, the eastbound approach was sufficiently off-set to the north of the receiving lane on Andreas Road, east of Indian Canyon Drive, to make it impractical to allow the eastbound vehicles to make a through movement. Traffic on Andreas Road currently moves at low speeds (15 mph) throughout the day.

When the traffic counts were made at the key intersections, Andreas Road was closed at the intersection of Palm Canyon Drive. Construction activities were underway to convert the one-way segment to two-way operation. Existing traffic volumes were estimated for the intersections of Andreas Road with Palm Canyon Drive and Indian Canyon Drive based on the count data provided in the 2008 TIS

Arenas Road is an east/west two-lane undivided roadway that extends across the southern portion of the study area. The intersection of Arenas Road and Cahuilla Road is two-way stop controlled with STOP signs on Cahuilla Road. The intersection of Arenas Road and Belardo Road is all-way stop controlled. The two intersections of Palm Canyon Drive and Indian Canyon Drive with Arenas Road are controlled by traffic signals. West of Indian Canyon Drive, the posted speed limit is 25 mph. East of Indian Canyon Drive, Arenas Road has angled parking on the north and south side of the street and operates with a prima facie speed of 15 mph.

Museum Drive is a north/south two-lane undivided roadway that extends from Tahquitz Canyon Way north to Belardo Road, along the western edge of the project site. Museum Drive provides access to the Palm Springs Art Museum as well as parking areas serving the former Desert Fashion Plaza development. The posted speed limit on Museum Drive is 25 mph. Bike lanes are located on both sides of Museum Drive/Belardo Road. On-street parallel parking is permitted on Museum Drive.

Cahuilla Road is a north/south two-lane undivided roadway, which extends south of Tahquitz Canyon Way approximately 310 feet west of Belardo Road. The two intersections of Cahuilla Road with Tahquitz Canyon Way and Arenas Road are two-way stop controlled with STOP signs on Cahuilla Road. The speed on Cahuilla Road is approximately 25 mph.

3C. General Plan Circulation System

Proposals for development and redevelopment must be reviewed for consistency with the goals and policies in the *Palm Springs 2007 General Plan*. Where inconsistencies are found, mitigation measures must be identified to address those impacts.

The Circulation Element of the *Palm Springs 2007 General Plan* details the general location, character, and extent of the circulation system required to serve future travel demands associated with build-out per the Land Use Element of the General Plan. It details the roadway classification (i.e. major thoroughfare, secondary thoroughfare or collector street), the required right-of-way width, designated truck routes, master planned bikeways and horse trails. The Circulation Element Map in the *Palm Springs 2007 General Plan* does not include all local streets.

The *City of Palm Springs 2007 General Plan* was updated in October of 2007. The roadway classifications shown therein for the roadways within the study area are illustrated in Figure 3-2. Figure 3-3 illustrates typical street cross-sections by roadway classification within the City of Palm Springs. The revisions made in October 2007 included changes in the Circulation Element classification of the streets within the study area. Tahquitz Canyon Way was designated as a four-lane divided Major Thoroughfare, east of Belardo Road, and a 2-lane undivided Collector Street, between Museum Drive and Belardo Road.

As shown in Figure 3-2, Amado Road, Indian Canyon Drive, Palm Canyon Drive, and Tahquitz Canyon Way (east of Belardo Road) are classified as Major Thoroughfares. Major Thoroughfares are typically high capacity streets with a 10-foot to 14-foot wide median that provide four or more travel lanes within a 100-foot to 110-foot right-of-way. Major Thoroughfares have a limited number of cross streets and provide stacking and turning lanes at intersections.

Arenas Road is classified as a Secondary Thoroughfare within the study area. Secondary Thoroughfares are four-lane undivided roadways with 64 feet of pavement and an 80-foot or 88-foot right-of-way. Secondary Thoroughfares chiefly serve locally destined traffic and secondary traffic generators.

Collector Streets are typically two-lane undivided roadways with 40 feet of pavement within a 60-foot to 66-foot right-of-way. Within the study area, the Collector Streets include: Andreas Road (between Palm Canyon Drive and Indian Canyon Drive), Belardo Road, and Tahquitz Canyon Way (between Belardo Road and Museum Drive).

Cahuilla Road is a two-lane undivided local street in the study area. Andreas Road, east of Indian Canyon Drive, is also a local street. Local streets typically provide two travel lanes and a pavement width of 36 feet (measured curb-to-curb) within a right-of-way that is 50-feet to 60-feet in width.

The City of Palm Springs Circulation Element includes numerous circulation goals, policies, and actions that may be relevant to the project, which have been included as Appendix E. Policy CR2.1 specifies that Level of Service D or better be maintained for the City's circulation network, as measured using "in season" peak hour conditions.

3D. Existing Traffic Volumes

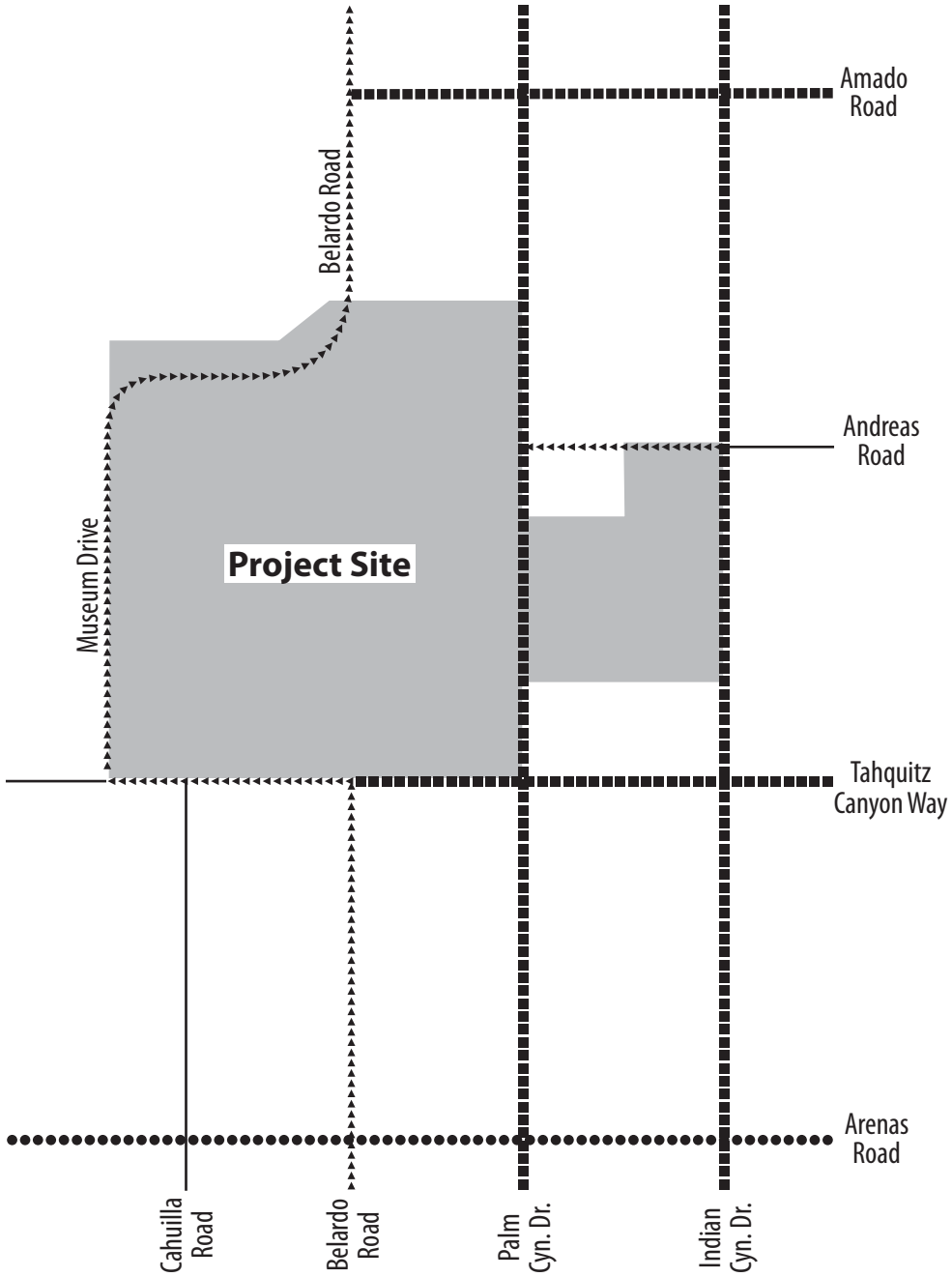
The Coachella Valley is relatively isolated from neighboring urbanized regions and is home to hundreds of resort facilities and retirement communities. A large tourist and retired population, supported by large service sector employment, generates travel patterns that are, in many ways, atypical of Southern California. Seasonal fluctuations in traffic demand reflect trip purposes and the activity in the area served by the roadways.

Approximately 3.5 million people visit the Coachella Valley each year. The tourist season extends from October to May, with the increase in the tourist population beginning to peak in January. Traffic volumes throughout the Coachella Valley are subject to significant seasonal fluctuations, as the population swells in the winter and spring with tourists and part-year residents known as "snow birds," then decreases as they leave to avoid the hot summer months.

New 24-Hour Traffic Counts

New 24-hour traffic counts were collected within the study area, from Wednesday August 19, 2015 through Saturday August 22, 2015 on three north-south roadways and two east-west roadways. The 24-hour directional traffic count locations included: (1) Arenas Road, east of Belardo Road; (2) Belardo Road, south of Amado Road; (3) Indian Canyon Drive, south of Andreas Road; (4) Palm Canyon Drive, south of Andreas Road; and (5) Tahquitz Canyon Way, east of Belardo Road. The traffic count data is included in Appendix A.

Figure 3-2
Palm Springs General Plan Circulation System



Legend

- Major Thoroughfare
- Secondary Thoroughfare
- Collector Street
- Local Street

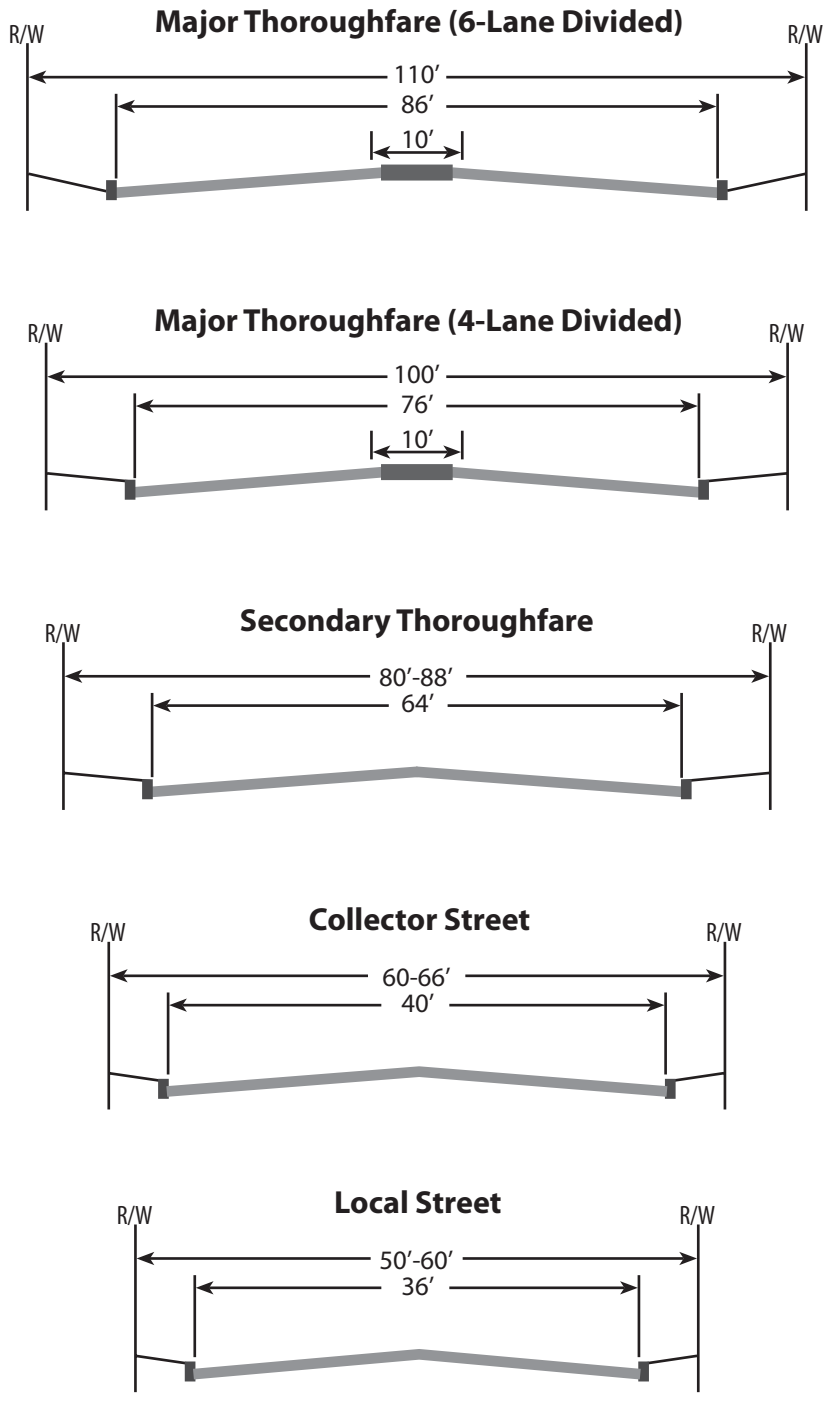
Endo Engineering

Source: "City of Palm Springs 2007 General Plan"

Scale: 1" = 350'

Figure 3-3

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*

The traffic count data was collected to document the baseline traffic volumes in the study area but also for use in identifying an appropriate seasonal expansion factor. This factor was needed to increase the new intersection turning movement traffic counts made during the off-peak season to more closely reflect the peak season travel demands.

The 24-hour traffic counts made on Wednesday at all five of the count locations showed that the traffic volumes during the midday peak hour (between 11:00 AM to 1:00 PM) currently exceed the volumes during the traditional morning commuter peak hour (between 7:00 AM and 9:00 AM). When the two-way traffic volumes at the five traffic count locations were combined, a total of 2,048 vehicles per hour (VPH) were counted during the midday peak hour, which exceeded the 1,593 VPH counted during the morning peak hour by 29 percent. Therefore, peak hour traffic levels in the project vicinity on weekdays were evaluated for the highest volume hour during the midday (between 11:00 AM to 1:00 PM) and during the evening (between 4:00 PM to 6:00 PM).

New Peak Hour Traffic Counts

To determine the peak hour traffic volumes at the existing key intersections, two-hour midday peak (11:00 AM to 1:00 PM) and two-hour evening peak (4:00 PM to 6:00 PM) manual turning movement traffic counts were made on Wednesday, August 19, 2015 at thirteen existing key intersections by Counts Unlimited. Although the school year had started when the traffic counts were made, the traffic volumes in the study area peak in the winter and spring, rather than during August. Consequently, the new traffic count data collected at the key intersections were increased to reflect the peak season conditions within the study area.

No new traffic count was made at the intersection of Palm Canyon Drive with Andreas Road (Intersection 14), which was closed for construction. A southbound right-turn lane on Palm Canyon Drive at Tahquitz Canyon Way was closed for construction and the sidewalk and on-street parking were also eliminated on the west side of the roadway by the construction activity. It is possible that local residents, being aware of the construction activity along Palm Canyon Drive within the study area, were avoiding this area when the traffic counts were collected.

The sum of all of the entering traffic volumes made at the thirteen key intersections on Wednesday (August 19, 2015) was 7,796 vehicles per hour (VPH) during the midday peak hour. This was 16 percent greater than the sum of the entering vehicles during the evening peak hour (6,711 VPH). Consequently, the midday peak hour on weekdays represents the highest volume hour for design purposes.

Peak Season Expansion Factor

Available 24-hour traffic count data for the peak season of the year 2015 was used to identify an appropriate seasonal expansion factor for the peak hour traffic count data collected on Wednesday, Thursday and Saturday at the key intersections within the study area. The traffic count data published By CVAG in the *2015 Traffic Census Report* included one daily peak season southbound traffic count for Palm Canyon Drive, south of Tahquitz Canyon Way. However, no corresponding northbound count was available for Indian Canyon Drive, south of Tahquitz Canyon Way. Palm Canyon Drive and Indian Canyon Way function as a one-way couplet in the study area. If local residents are avoiding the construction along Palm Canyon Drive, the 24-hour traffic count data for this roadway will be lower than normal. Therefore, an appropriate seasonal expansion factor was determined by comparing the new 24-hour traffic count data to peak season traffic counts published by CVAG in the *2015 Traffic Census Report* for both Palm Canyon Drive and Indian Canyon Drive.

The new southbound traffic count for Palm Canyon Drive and northbound traffic count for Indian Canyon Drive, south of Andreas Road, were added together then compared to the combined peak season CVAG traffic count data for these major thoroughfares. The new traffic counts for Palm Canyon Drive and Indian Canyon Drive, south of Andreas Road, included a total of 8,854 vehicles per day (VPD) in the southbound direction and 10,988 VPD in the northbound direction on Wednesday, August 19, 2015. The combined total volume counted in both directions was 19,842 VPD.

The CVAG *2015 Traffic Census Report* included peak season traffic counts for both Palm Canyon Drive and Indian Canyon Drive that were made south of Alejo Road and north of Ramon Road. Since these count locations are near the northern and southern boundaries of the study area, and the new traffic count data was collected in the middle of the study area, the two CVAG peak season traffic counts for each roadway were averaged. The resulting average daily northbound volume for Indian Canyon Drive was added to the average daily southbound volume for Palm Canyon Drive to identify the two-way volume during the peak season of 24,314 VPD.

The weekday 2-way peak season CVAG volume of 24,314 VPD was divided by the new Wednesday 2-way traffic count of 19,842 VPD made on August 19, 2015 to identify an appropriate seasonal expansion factor of 22.5 percent. To ensure that conditions in the peak season were addressed, this 22.5 percent seasonal correction factor was applied to all of the peak hour traffic count data collected at the key intersections, including the Wednesday, Saturday, and Thursday traffic counts (which were made during Villagefest).

Annual Traffic Growth Rate

Based upon historical traffic counts compiled by CVAG for Palm Canyon Drive, south of Tahquitz Canyon Way, the average weekday traffic volumes in the study area during the peak season have decreased steadily every year since the year 2008, when the traffic volume peaked at 13,591 VPD. The CVAG year 2015 weekday traffic volume of 9,482 VPD is 70 percent of the traffic volume in the year 2008. Based on this historical traffic count data, no single annual traffic growth rate was applied to the new seasonally corrected traffic counts. Future increases in traffic volumes on the streets within the study area will occur in increments as each new cumulative development and phase of development within the project site is completed.

The existing year 2015 peak season typical weekday midday and evening peak hour traffic volumes by turning movement at the key intersections are shown in Figure 3-4. The 24-hour traffic counts made for the 2008 TIS (when traffic volumes within the study area were at their peak) determined that when the site was developed and traffic volumes in the area were higher than they are currently, 8.0 percent of the daily traffic volumes in the study area occurred during the evening peak hour. This 8.0 percent factor, was assumed to be applicable to the current year 2015 peak season traffic volumes within the study area as well as future traffic volumes with the Downtown Palm Springs Project developed. The weekday traffic volumes adjacent to the key intersections were estimated from the seasonally corrected current peak hour traffic volumes shown in Figure 3-4, by applying this factor. The peak season typical weekday traffic volume estimates are shown in Figure 3-5 and provided in more detail in Table 3-1.

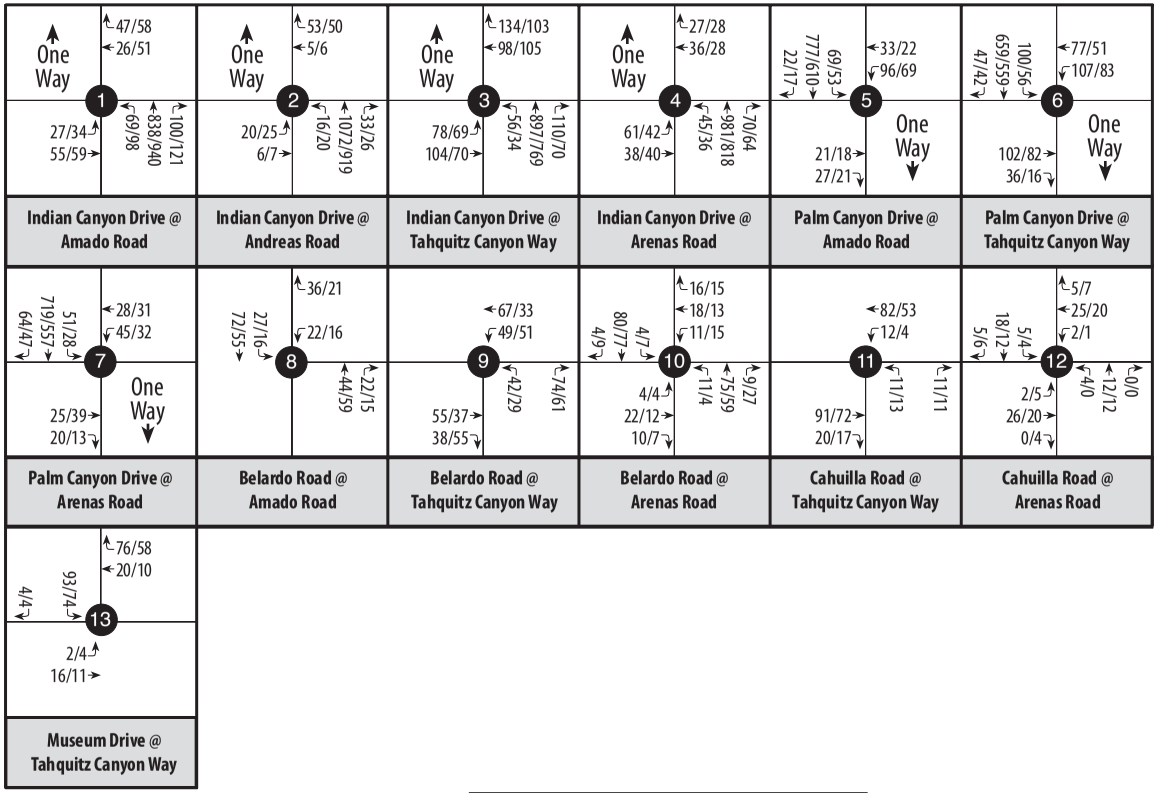
Existing Traffic Diverted To Belardo Road During Villagefest

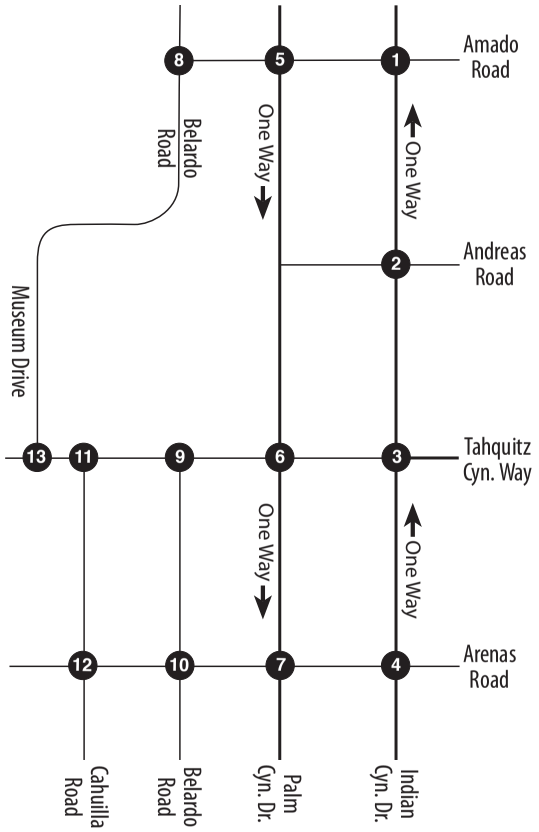
Villagefest is located on Palm Canyon Drive, between Amado Road and Baristo Road. From June through September, Villagefest is open between 7:00 PM and 10:00 PM on Thursday nights. From October to May, the Villagefest hours extend from 6:00 PM and 10:00 PM. Although Villagefest occurs after the typical 4:00 PM to 6:00 PM peak commuter travel period, traffic volumes along some routes within the study area increase dramatically during Villagefest activities. Motorists diverting around the closed section of Palm Canyon Drive increase traffic volumes substantially along Museum Drive and along Belardo Road, south of Amado Road and south of Tahquitz Canyon Way.

Although some local residents may avoid the area during Villagefest activities because of the closure of Palm Canyon Drive, the sum of the five 24-hour traffic counts made in the study area on Thursday, August 20, 2015, exceeded the Wednesday traffic counts by 4.2 percent. The north/south travel demand in the study area on Belardo Road and Museum Drive more than doubled on Thursday during Villagefest, when Palm Canyon Drive was closed to southbound traffic.[1] The increase in diverted traffic volumes was also evident on Tahquitz Canyon Way, between Museum Drive and Belardo Road, and south of Tahquitz Canyon Way (on Belardo Road and, to a lesser extent, on Cahuilla Road).

1. The 24-hour traffic counts made on Belardo Road, south of Amado Road, revealed that the daily traffic volume increased by approximately 2,122 vehicles per day (VPD) from 1,613 VPD on Wednesday (August 19, 2015) to 3,835 VPD on Thursday (August 20, 2015).

Figure 3-4
Existing Weekday Peak Hour Traffic Volumes
(Year 2015 - Peak Season)





Legend

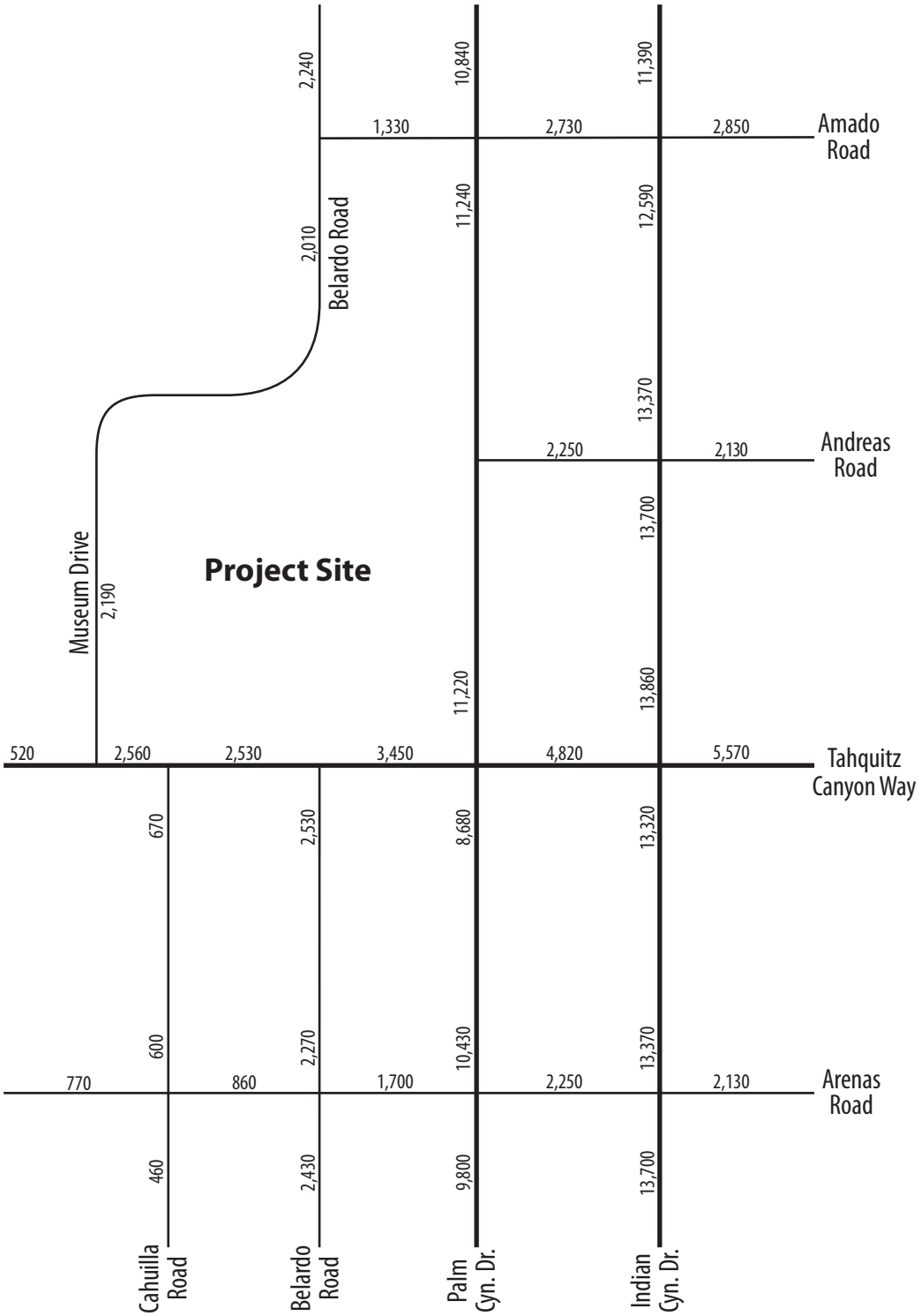
5/8 Midday/Evening Peak Hour Turning Volume

Endo Engineering

Schematic

Figure 3-5

Existing Weekday Traffic Volumes
(Year 2015 Peak Season)



Endo Engineering

Source: Weekday volumes estimated as 12.5 times PM peak hour volumes shown in Figure 3-4.

Scale: 1" = 350'

Table 3-1
Existing Peak Season Typical Weekday Traffic Volumes[a]

Roadway Segment	Year 2015 Peak Season Weekday Traffic Volume Estimate (Two-Way)
Amado Road	
- East of Belardo Road	1,330
- West of Palm Canyon Drive	1,290
- East of Palm Canyon Drive	2,730
- West of Indian Canyon Drive	2,210
- East of Indian Canyon Drive	2,850
Andreas Road	
- West of Indian Canyon Dr.	2,250
- East of Indian Canyon Dr.	2,130
Tahquitz Canyon Way	
- West of Mission Drive	520
- East of Mission Drive	2,560
- West of Cahuilla Road	2,540
- East of Cahuilla Road	2,450
- West of Belardo Road	2,530
- East of Belardo Road	3,060
- West of Palm Canyon Drive	3,450
- East of Palm Canyon Drive	4,820
- West of Indian Canyon Drive	4,180
- East of Indian Canyon Drive	5,570
Arenas Road	
- West of Cahuilla Road	770
- East of Cahuilla Road	780
- West of Belardo Road	860
- East of Belardo Road	1,000
- West of Palm Canyon Drive	1,700
- East of Palm Canyon Drive	1,870
- West of Indian Canyon Drive	2,250
- East of Indian Canyon Drive	2,130
Indian Canyon Drive	
- North of Amado Road	11,390
- South of Amado Road	12,590
- North of Andreas Road	13,370
- South of Andreas Road	13,700
- North of Tahquitz Canyon Way	13,860
- South of Tahquitz Canyon Way	13,320
- North of Arenas Road	13,370
- South of Arenas Road	13,700

a. To estimate the daily volume from the peak hour traffic volumes, it was assumed that 8 percent of the weekday traffic volume occurs during the evening peak hour.

Table 3-1 (Continued)
Existing Peak Season Typical Weekday Traffic Volumes[a]

Roadway Segment	Year 2015 Peak Season Weekday Traffic Volume Estimate (Two-Way)
Palm Canyon Drive	
- North of Amado Road	10,840
- South of Amado Road	11,240
- North of Tahquitz Canyon Way	11,220
- South of Tahquitz Canyon Way	8,680
- North of Arenas Road	10,430
- South of Arenas Road	9,800
Belardo Road	
- North of Amado Road	2,240
- South of Amado Road	2,010
- South of Tahquitz Canyon Way	2,530
- North of Arenas Road	2,270
- South of Arenas Road	2,430
Cahuilla Road	
- South of Tahquitz Canyon Way	670
- North of Arenas Road	600
- South of Arenas Road	460
Museum Drive	
- North of Tahquitz Canyon Way	2,190

a. To estimate the daily volume from the peak hour traffic volumes, it was assumed that 8 percent of the weekday traffic volume occurs during the evening peak hour.

With the closure of Palm Canyon Drive during Villagefest, traffic volumes on Belardo Road are greater throughout the study area. However, traffic volumes on other streets within the study area may be reduced during Villagefest activities, as a result of the closure of cross streets that intersect Palm Canyon Drive. For example, Arenas Road, east of Belardo Road, had the lowest daily traffic volume (1,570 VPD) on Thursday. By comparison, the 24-hour traffic counts on Wednesday and Saturday at the same location were 2,034 VPD and 3,646 VPD, respectively.

Conditions during Villagefest were documented with new manual turning movement traffic counts made at the three existing key intersections along Belardo Road from 6:30 PM through 8:30 PM on August 20, 2015 (Thursday). The intersection traffic count data during Villagefest, is included in Appendix A. Villagefest activities occur after the typical evening commuter "rush hour". The highest hourly traffic volumes at the affected intersections occurred between 7:30 PM and 8:30 PM on Thursday and those volumes exceed the traffic volumes at these intersections during a typical weekday evening peak hour (between 4:00 PM and 6:00 PM).

The new turning movement traffic counts made at the three existing key intersections along Belardo Road on Wednesday (August 19, 2015) between 4:00 PM and 6:00 PM revealed that the combined total of all entering vehicles during a typical weekday evening peak hour was 570 vehicles. However, on the following day during Villagefest, the combined total of all vehicles entering these same three intersections was 1,310 vehicles between 7:30 PM to 8:30 PM. Prior to the seasonal correction, the highest hourly volume during Villagefest was 2.3 times the volume during the evening peak hour on a weekday. Therefore, peak season conditions were evaluated at the three existing key intersections along Belardo Road based upon the highest hourly volumes on Thursday

night during Villagefest. Even though the daily capacity of Belardo Road may not be exceeded on Thursdays with Villagefest traffic, peak travel demands during Villagefest were evaluated to ensure that excessive delay and long queues will not develop in the future when Belardo Road is reconnected across the project site.

Traffic Volumes Associated With Villagefest

Consecutive 24-hour directional traffic counts were made on Belardo Road, south of Amado Road, from August 19, 2015 through August 22, 2015 (Wednesday through Saturday). Prior to the seasonal correction, the traffic count data for Belardo Road included: 1,613 vehicles per day (VPD) on Wednesday, 3,735 VPD on Thursday, 1,969 VPD on Friday, and 1,791 VPD on Saturday. While this unadjusted traffic count data does not reflect conditions during the peak season, it does indicate the magnitude of the increase in the traffic on Belardo Road during Villagefest in the off-peak season (approximately 2,100 vehicles per day). The northbound volume increased by 556 VPD and the southbound volume increased by 1,566 VPD. This traffic includes a combination of local traffic, Villagefest traffic, and tourists visiting the area who are diverting to Belardo Road when Palm Canyon Drive is closed.

Figure 3-6 illustrates the existing peak season traffic volumes (including the 22.5 percent seasonal expansion factor) during the highest hour on a Thursday when Villagefest activities are occurring. The turning volumes in Figure 3-6 reflect conditions in the evening when Palm Canyon Drive is closed to through traffic, between Amado Road and Baristo Road to accommodate Villagefest. Through traffic diverts to alternate parallel routes (primarily Belardo Road to the west and Calle Encilia to the east) during the hours when Palm Canyon Drive is closed.

At the three key intersections evaluated along Belardo Road (Intersections 8, 9 and 10) during Villagefest, the combined total number of entering vehicles during the peak season of 1,604 VPH during the highest hour (from 7:30 PM to 8:30 PM) on Thursday (August 20, 2015) was essentially unchanged from the volume cited in the 2008 TIS. The current entering volume represents 98 percent of the 1,644 VPH entering these intersections in the 2008 TIS. At the intersection of Belardo Road with Tahquitz Canyon Way, the eastbound right-turn volume during the evening peak hour on Wednesday (55 VPH) was 18 percent of the volume making this movement the following day (298 VPH) during Villagefest. The northbound left-turn volume on Thursday during Villagefest (111 VPH) was 3.8 times the volume making this movement during the evening peak hour on Wednesday (29 VPH) at this intersection.

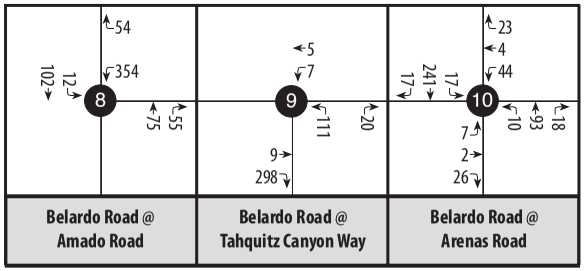
A 24-hour directional machine traffic count was made on Belardo Road (south of Amado Road) on Wednesday (July 9, 2008) and on Thursday (July 10, 2008) to identify the change in northbound and southbound traffic volumes on Belardo Road associated with Villagefest activities (including the closure of Palm Canyon Drive between Amado Road and Baristo Road). That 24-hour directional count data was expanded by 33 percent to reflect peak season conditions. The hourly Wednesday traffic volumes were then subtracted from the hourly Thursday volumes to show the change when Villagefest was occurring. Figure 3-7 illustrates the increase in northbound and southbound traffic volumes on Belardo Road by hour during Villagefest.

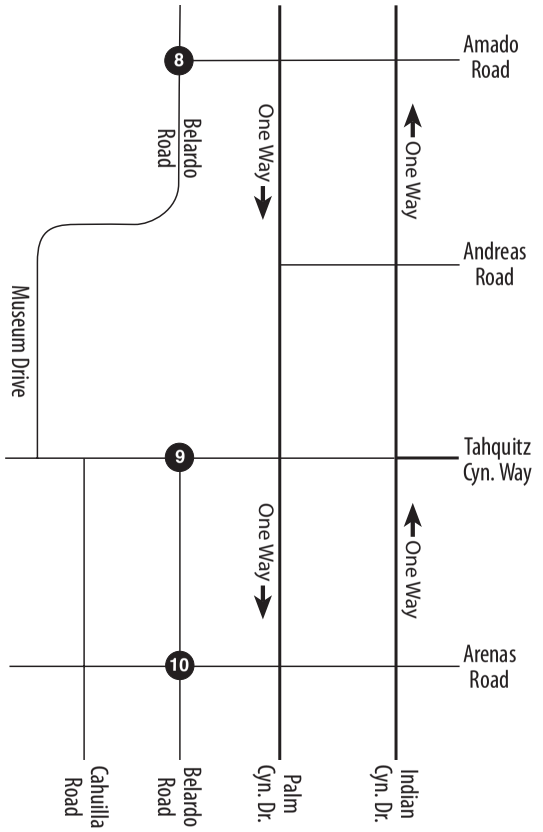
From Figure 3-4 it can be seen that Belardo Road (south of Amado Road) currently carries 145 vehicles per hour (74 northbound and 71 southbound) in the evening peak hour on a typical weekday in the peak season. However, during Villagefest, Belardo Road (south of Amado Road) carries 586 vehicles per hour (130 northbound and 456 southbound), as shown in Figure 3-6. The 441 vehicles per hour added to Belardo Road (south of Amado Road) during Villagefest is more than three times the volume on a typical weekday during the evening rush hour.

Saturday Traffic Volumes

Activity levels increase within the study area on weekends when tourists and visitors frequent the area. The Saturday traffic counts exceeded the Wednesday, Thursday, and Friday traffic counts at four of the five 24-hour traffic count locations. Only Belardo Road, south of Amado Road, had lower daily traffic volumes on Saturday than on Thursday and Friday. When combined, the five daily traffic counts made on Saturday (August 22, 1015)

Figure 3-6
Existing Traffic Volumes During Villagefest
(Year 2015 - Peak Season)





Legend
5 Highest Hour Turning Volume

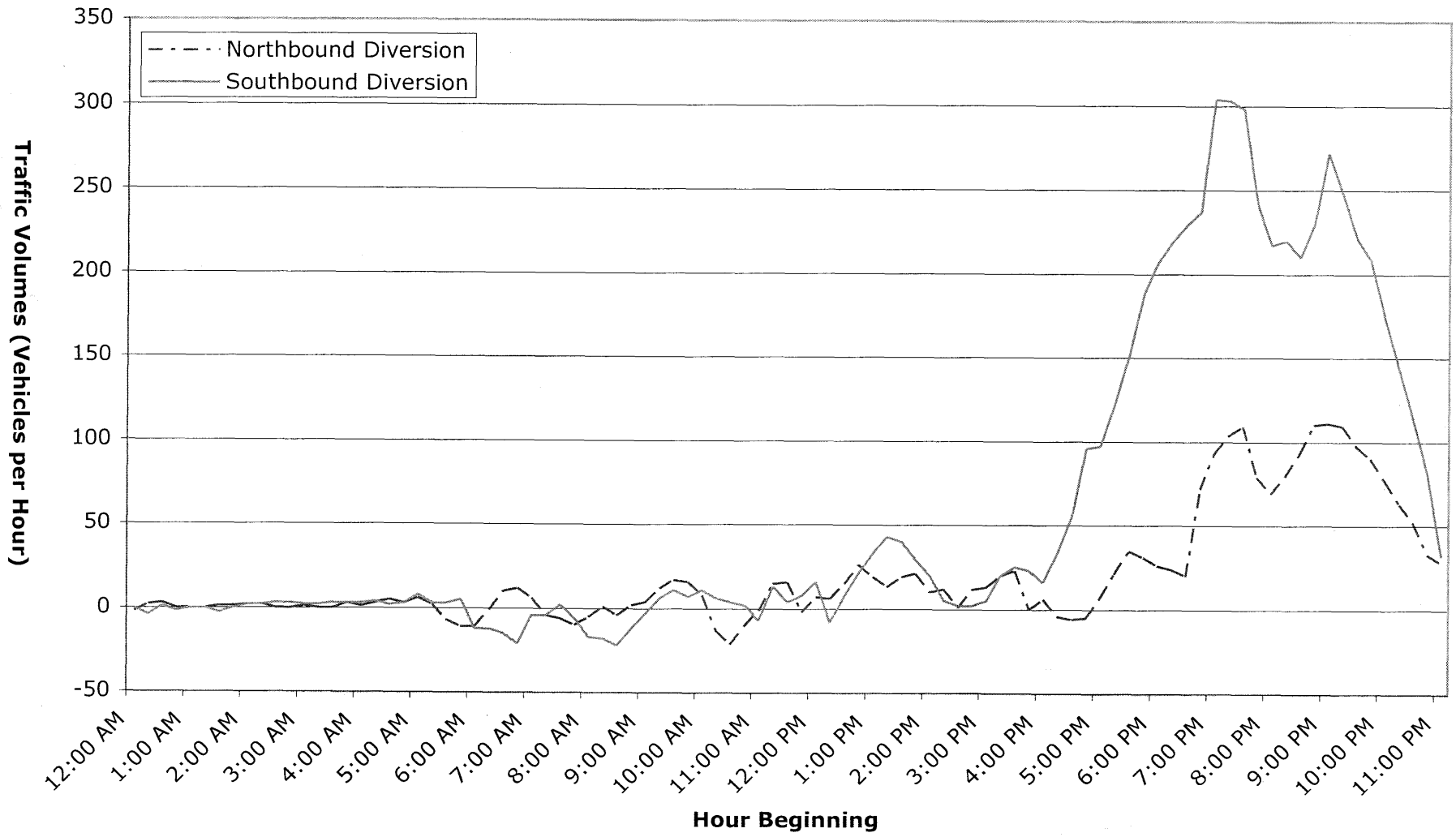
Endo Engineering

Schematic

Figure 3-7

Current Traffic Diversion to Belardo Road During Days With Villagefest

(Based on 24-Hour Count South of Amado Road on July 10, 2008 Minus July 9, 2008)



exceeded the Wednesday traffic counts by 32 percent (8,200 vehicles). The Saturday traffic counts exceeded the Thursday traffic counts by 26 percent (7,100 vehicles). On Arenas Road, the Saturday traffic volume of 3,646 VPD was more than twice the Thursday volume of 1,570 VPD. On Saturdays, the highest travel demand typically occurs within the study area in the middle of the day (between 11:00 AM and 1:00 PM) and exceeds the weekday peak hour travel demand at some intersections.

Saturday conditions were documented with midday traffic counts made at ten key intersections from 11:00 AM through 1:00 PM. This count period was identified as the highest volume hour on Saturday, based upon the available Saturday traffic count data for the study area. The traffic counts are provided in Appendix A and were seasonally corrected (by applying a 22.5 percent expansion factor). Figure 3-8 illustrates the existing peak season traffic volumes in the midday peak hour on Saturday. Since the area has substantially more retail/commercial land use than professional office uses, at many of the key intersections the Saturday traffic volumes are higher than the weekday volumes in the study area.

3E. 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.

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.).

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 2000) provides techniques for determining capacity, delay, and LOS for transportation facilities.[2] The City of Palm Springs requires the use of the *Highway Capacity Manual* (HCM) methodology to determine the 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 peak hour conditions during the peak season.

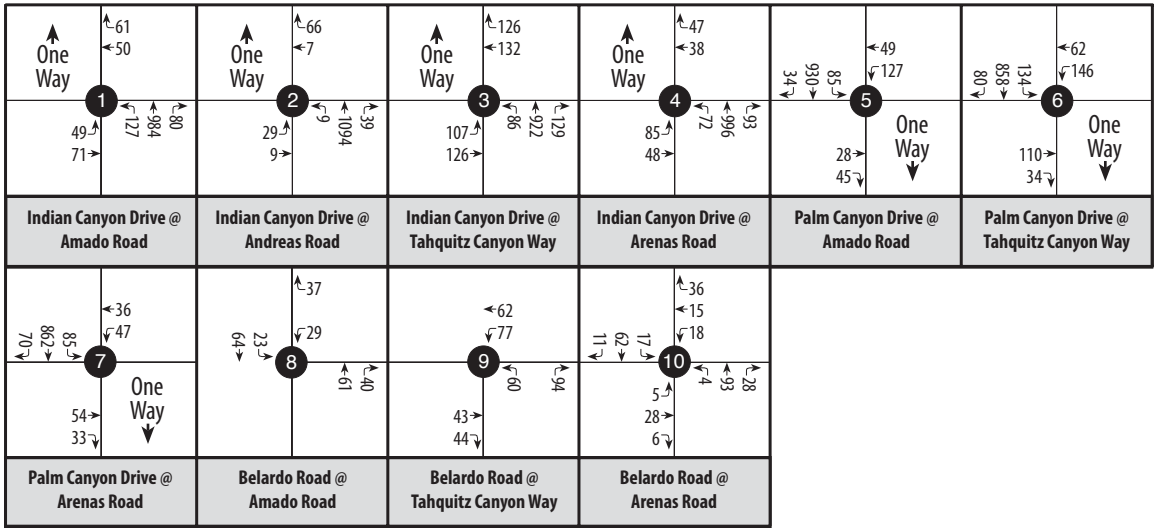
The Highway Capacity Software (HCS+) package is a direct computerized implementation of the HCM 2000 procedures, prepared under FHWA sponsorship and maintained by the McTrans Center at the University of Florida Transportation Research Center. HCS+ Version 5.3 was utilized to assess the key intersections in the project vicinity. The relationship between peak hour intersection capacity and levels of service is summarized in Appendix B (see Table B-1 for unsignalized intersections and Table B-2 for signalized intersections).

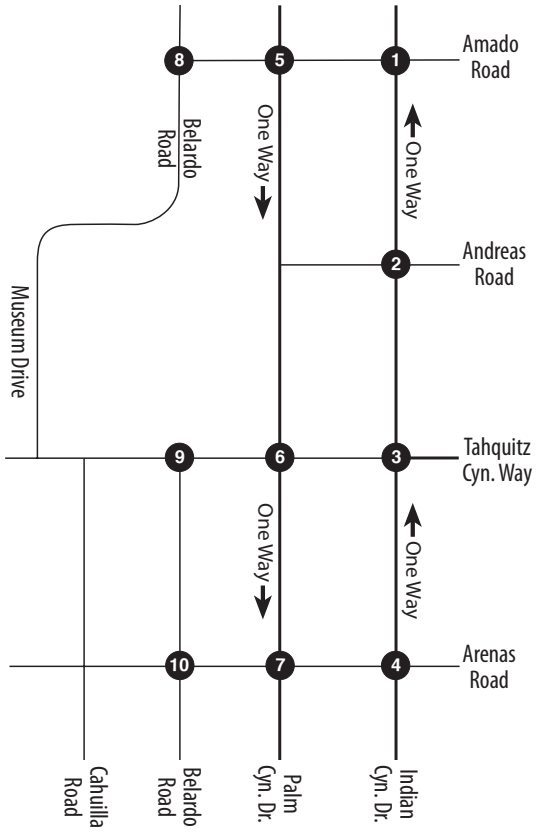
Unsignalized Peak Hour Intersection Analysis

Unsignalized intersections are typically categorized as either two-way stop-controlled (TWSC) intersections, if the minor street is controlled by stop signs, or all-way stop-controlled (AWSC) intersections, if both streets are controlled by stop signs. Figure 3-9 shows the approach lane geometrics and the existing traffic control at the key

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

Figure 3-8
Existing Saturday Traffic Volumes
(Year 2015 Peak Season)



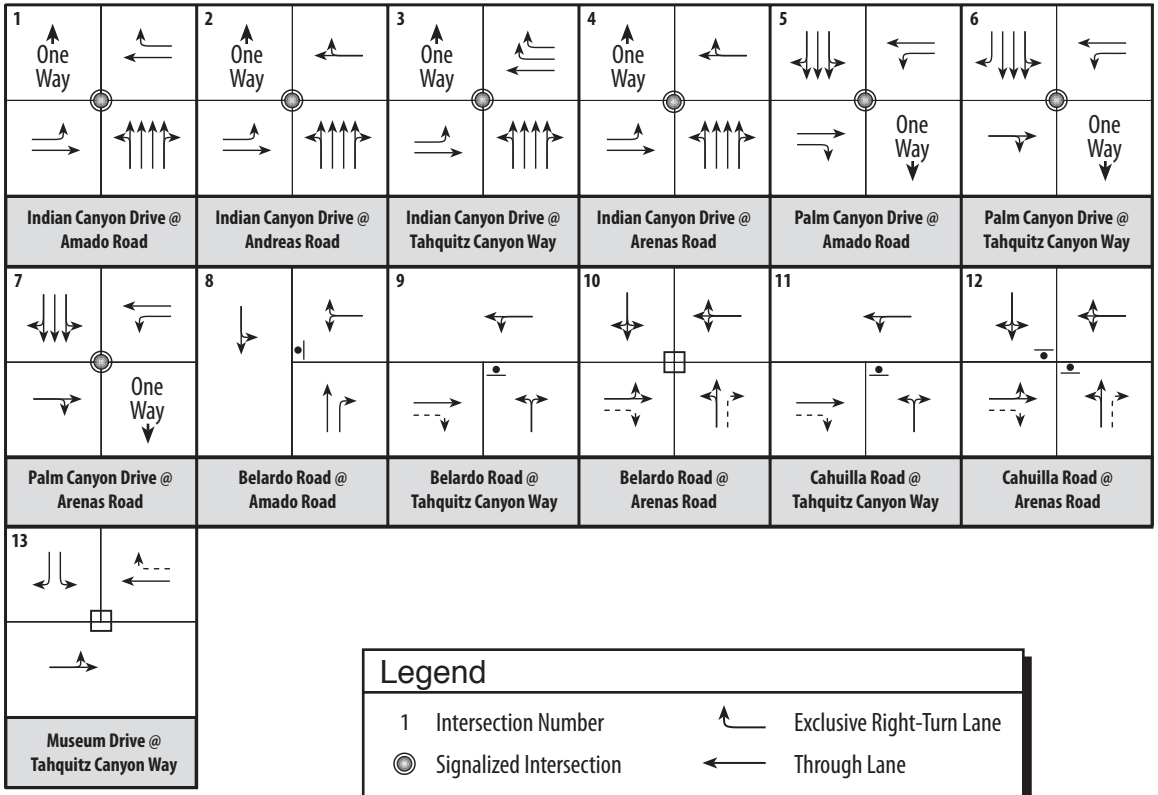


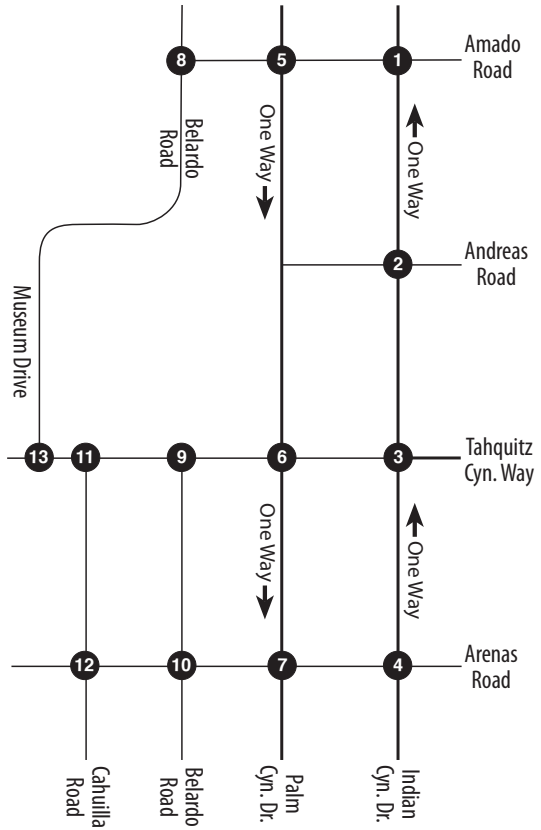
Legend
5 Midday Peak Hour Turning Volume

Endo Engineering

Schematic

Figure 3-9
Existing Lane Geometrics at Key Intersections





Legend

1	Intersection Number		Exclusive Right-Turn Lane
	Signalized Intersection		Through Lane
	Stop Sign Control		Exclusive Left-Turn Lane
	All Way Stop Conrol		Right/Left Lane
	Right/Through/Left Lane		Through/Right Lane
	Unmarked Right-Turn Lane		Through/Left Lane

Endo Engineering

Schematic

intersections. Since Intersection 14 (Palm Canyon Drive at Andreas Road) was closed for construction, no traffic counts could be made at this intersection and the existing peak hour delay and LOS could not be evaluated.

At TWSC intersections, the approaches controlled by the stop signs 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 at TWSC intersections are called the "major street" approaches. The left-turn movement from the minor street is normally the most difficult to execute at a TWSC intersection, because it faces the most complex set of conflicting moves.

Performance measures for unsignalized intersections include: 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 movement and intersection approach. The average control delay for any particular movement is a function of the capacity of the approach and the degree of saturation. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

The HCM 2000 does not define a single overall level of service for unsignalized TWSC intersections as a whole, but rather identifies the LOS for the minor-street approaches and the conflicting left-turn movements from the major street. Since the through movements on the major street have no control delay, an evaluation of the approach with the longest average control delay allows the range of delay occurring at the intersection to be identified. Each intersection with TWSC is evaluated on an individual basis by the City Engineer, with consideration given to these and other performance measures (such as the delay to the major street through vehicles, the queue length on the minor-street approach, and the volume-to-capacity ratio) in determining if the intersection meets the City's minimum performance standard or requires mitigation.

Since it is inappropriate to make a definitive determination regarding a single intersection LOS for TWSC intersections, the Palm Springs intersection performance standard (LOS D) does not apply directly to the performance measures quantified by the HCM 2000 methodology for unsignalized intersection operation. However, in those instances where the levels of service for the minor-street approaches and the conflicting left-turn moves from the major street are operating at LOS D or better levels of service, it may be concluded that a TWSC intersection will meet the City of Palm Springs intersection performance standard.

The HCM 2000 procedures for all-way stop-controlled (AWSC) intersections provide the overall intersection average control delay and level of service as well as the average control delay and level of service for each intersection approach and lane group. The approach delay is the weighted average of the lane delays. The overall intersection control delay and LOS as well as the delay and LOS for the approach with the most delay are provided for intersections with AWSC.

Peak Season Conditions on Typical Weekdays

The average control delay values and the corresponding levels of service during the peak hours on typical weekdays are provided in Table 3-2 for the key intersections. The delay and LOS assume the existing approach lanes at the intersections (which are shown in Figure 3-9) and an eight percent heavy vehicle mix. All of the unsignalized key intersections evaluated are currently operating at excellent levels of service (LOS A) with very little control delay during the midday and evening peak hours on typical weekdays.

Peak Season Conditions During Villagefest

Table 3-3 shows the control delay and LOS at the three unsignalized key intersections along Belardo Road during the highest volume hour on a Thursday during Villagefest. Intersections 8, 9, and 10 are currently operating at LOS B or better during Villagefest. As shown in Table 3-3, the intersection Belardo Road with Arenas Road (Intersection 10) is operating at LOS A during the highest volume hour with all-way stop control. The minor-street

approaches with the most delay at both of the intersections with two-way stop control are operating at LOS B or LOS A during the highest volume hour on Thursday evenings with Villagefest.

Table 3-2
Existing Weekday Peak Hour LOS at the Key Intersections
(Year 2015-Peak Season)[a]

Signalized Key Intersection	Traffic Control	Midday Peak Hour			Evening Peak Hour		
		LOS	Delay (Sec.)	V/C Ratio	LOS	Delay (Sec.)	V/C Ratio
1. Indian Canyon Drive @ Amado Road	Signal	A	5.1	0.22	A	5.4	0.25
2. Indian Canyon Drive @ Andreas Road	Signal	A	4.6	0.24	A	4.7	0.20
3. Indian Cyn. Drive @ Tahquitz Cyn. Way	Signal	B	12.6	0.34	B	12.4	0.29
4. Indian Canyon Drive @ Arenas Road	Signal	A	6.2	0.26	A	6.0	0.20
5. Palm Canyon Drive @ Amado Road	Signal	A	6.0	0.30	A	5.4	0.23
6. Palm Cyn. Drive @ Tahquitz Cyn. Way	Signal	B	13.5	0.32	B	12.7	0.25
7. Palm Canyon Drive @ Arenas Road	Signal	A	5.6	0.24	A	6.2	0.19
Unsignalized Key Intersection		LOS	Delay (Sec.)	Approach	LOS	Delay (Sec.)	Approach
8. Belardo Road @ Amado Road	TWSC	A	9.2	WLR	A	9.1	WLR
9. Belardo Road @ Tahquitz Canyon Way	TWSC	A	9.7	NLR	A	9.3	NLR
10. Belardo Road @ Arenas Road	AWSC	A	7.74	--	A	7.63	--
11. Cahuilla Road @ Tahquitz Canyon Way	TWSC	A	9.3	NLR	A	9.1	NLR
12. Cahuilla Road @ Arenas Road	TWSC	A	9.4	NLT	A	9.5	NLR
13. Museum Drive @ Tahquitz Canyon Way	TWSC	A	9.1	SL	A	9.0	SL

a. The HCS worksheets are provided in Appendix B. TWSC=Two-Way Stop Control. AWSC=All-Way Stop Control. Unsignalized intersection LOS was determined from the delay (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) per HCM 2000 page 17-2 and 17-32. Signalized intersection LOS was 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).

Peak Season Conditions on Saturdays

During the midday peak hour on Saturdays, the three unsignalized key intersections (Intersections 8, 9, and 10) evaluated along Belardo Road (at Amado Road, Tahquitz Canyon Way, and Arenas Road) are currently operating at acceptable levels of service (LOS B or better) as shown in Table 3-4. The intersection with AWSC (Belardo Road at Arenas Road) is operating at LOS A during the midday peak hour on Saturdays.

Table 3-3
Existing LOS at the Key Intersections
During the Highest Volume Hour on a Villagefest Thursday [a]

Key Intersection	Control	Major St. Left or Intersection		Approach With Most Delay	
		Delay (Sec.)	LOS	Delay (Sec.)	LOS
8. Belardo Road @ Amado Road	TWSC	7.6	A	14.4	B
9. Belardo Road @ Tahquitz Canyon Way	TWSC	8.0	A	9.2	A
10. Belardo Road @ Arenas Road	AWSC	9.06	A	9.67	A

a. The HCS worksheets are provided in Appendix B. TWSC=Two-Way Stop Control. AWSC=All-Way Stop Control.

Table 3-4
Existing Saturday Peak Hour LOS at the Key Intersections[a]

Key Intersection	Traffic Control	Midday Peak Hour		
		LOS	Delay (Sec.)	V/C Ratio
1. Indian Canyon Drive @ Amado Road	Signal	A	5.5	0.22
2. Indian Canyon Drive @ Andreas Road	Signal	A	5.1	0.27
3. Indian Canyon Drive @ Tahquitz Canyon Way	Signal	B	13.1	0.32
4. Indian Canyon Drive @ Arenas Road	Signal	A	7.4	0.33
5. Palm Canyon Drive @ Amado Road	Signal	A	6.5	0.30
6. Palm Canyon Drive @ Tahquitz Canyon Way	Signal	B	12.9	0.32
7. Palm Canyon Drive @ Arenas Road	Signal	A	6.5	0.33
Unsignalized Key Intersection		**LOS**	**Delay (Sec.)**	**Approach**
8. Belardo Road @ Amado Road	TWSC	B	10.4	NLR
9. Belardo Road @ Tahquitz Canyon Way	TWSC	B	10.4	NLR
10. Belardo Road @ Arenas Road	AWSC	A	8.0	--

a. The HCS worksheets are provided in Appendix B. TWSC=Two-Way Stop Control. AWSC=All-Way Stop Control. Unsignalized intersection LOS was determined from the delay (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) per HCM 2000 page 17-2 and 17-32. Signalized intersection LOS was 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).

Signalized Intersection Analysis

The HCM 2000 procedures were utilized to evaluate the peak hour intersection control delay and levels of service at the signalized key intersections. The parameters assumed for the HCM 2000 evaluation included a saturation flow rate of 1,900 vehicles per hour; a lost time which includes a 3 second clearance interval plus any "all red" time); and a peak hour factor of 1.0. The signal timing assumed for each intersection included ample pedestrian crossing time.

The HCM 2000 methodology addresses the capacity, V/C ratio, and level of service of individual 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. 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.

Peak Season Conditions on Typical Weekdays

Table 3-2 summarizes the existing intersection control delay and corresponding levels of service at the signalized key intersections evaluated. An eight percent truck mix was assumed to determine the intersection control delay and levels of service**.** The intersection approach lanes that were assumed are shown in Figure 3-9. All of the signalized key intersections evaluated are currently operating at LOS B or better during the peak hours on weekdays

Peak Season Conditions on Villagefest Thursdays

None of the key intersections along Belardo Road are currently signalized.

Peak Season Conditions on Typical Saturdays

All of the signalized key intersections currently operate at acceptable levels of service (LOS A or LOS B) during the midday peak hour on Saturdays, as shown in Table 3-3. During the midday peak hour on Saturdays, two of the signalized key intersections (Indian Canyon Drive at Tahquitz Canyon Way and Palm Canyon Drive at Tahquitz Canyon Way) currently operate at LOS B. The average control delay at these intersections is currently 13.1 seconds per vehicle or less during the midday peak hour.

3F. Transit Service

The SunLine Transit Agency provides public transportation services to the Coachella Valley. There were 4.71 million boardings in the fiscal year 2012/2013 within a service area of 1,120 square miles. Based on the 2010 U.S. census data, the population of the Coachella Valley within 0.75 miles of the SunLine transit route network grew by 30 percent from 216,374 in 2000 to 281,189 in 2010. During that same period, the overall population of the Coachella Valley grew by 39 percent. The California Department of Finance January 2012 estimate of the population of the nine cities within the Coachella Valley was 361,124, one percent higher than the 355,986 population one year earlier. SCAG projections suggest that the population of the Coachella Valley will more than double between the year 2010 and the year 2035.[3]

3. SunLine Transit Agency. *SunLine Transit Agency Short Range Transit Plan FY 2014/15-FY 2016/17.*

The SunLine Transit Agency provides fixed-schedule public transit service between local communities with 69 SunBus fixed-route vehicles and fourteen local routes. The fleet of low-emission buses operates between 4:38 AM and 11:23 PM on weekdays and from 5:00 AM to 10:48 PM on weekends (excluding Thanksgiving and Christmas) along fixed-schedule SunBus transit routes to provide public transportation service to the nine cities and communities within the Coachella Valley. Based on a 2008 SunLine Transit Agency survey, fixed route riders include primarily workers, students, seniors, and visitors. School and work are the major trip generators, followed by shopping, medical care, and recreation.

SunLine Transit Agency buses are wheelchair accessible. They have bicycle racks that are convenient for cyclists to use and can accommodate either two or three bicycles per bus. Bike racks are proposed by SunLine Transit at select bus stop locations.

The SunLine Transit Agency also provides paratransit service (SunDial) for individuals within 0.75 miles on either side of the existing SunBus route network who have disabilities that prevent them from using accessible fixed-route public transportation services. A paratransit fleet of 31 SunDial vans provides curb-to-curb dial-a-ride next-day complementary demand-response service that is ADA compliant and wheelchair accessible. A total of 136,208 trips were made on SunDial in the fiscal year 1012/13, an increase of 9.3 percent over the previous year ridership. SunDial is designed to serve seniors and those with disabilities on an appointment basis, based on fixed route service hours associated with the passenger's origin and destination. The service is available seven days per week (excluding Thanksgiving and Christmas). In addition to SunDial, a subscription-based transit service is available through agencies serving people with disabilities who need regular repetitive trips. The Desert Health Car Service transports seniors to City senior centers.

The project site has excellent access to public transportation services. Two fixed SunBus transit routes currently operate adjacent to the project site with Palm Canyon Drive, Indian Canyon Drive and Tahquitz Canyon Way as service corridors.

Line 111 is the major trunk line, which is interconnected with eleven smaller community feeder routes that provide access to every community in the Valley. Buses on line 111 travel north along Indian Canyon Drive to Vista Chino and then south along Palm Canyon Drive through the study area. Line 111 has transfer points to Local Line 24 as well as Line 14 and Line 30. Local Line 24 serves the areas within Palm Springs located both north and east of the study area. Line 30 connects downtown Palm Springs to the Cities of Cathedral City and Rancho Mirage.

SunBus Line 14 enters the study area from the east along Tahquitz Canyon Way then turns south on Palm Canyon Drive to Ramon Road. It extends easterly on Ramon Road to Indian Canyon Drive, where it turns north to Tahquitz Canyon Way then turns east. Line 14 connects downtown Palm Springs with the City of Desert Hot Springs (to the north).

3G. Other Modes of Transportation

Pedestrian Facilities

Mobility for all travel modes is an integral element of the transportation system. Providing an interconnected network of bikeways improves safety for all users and improves access for those who ride bicycles. Bicycling, walking and equestrian transportation modes represent non-motorized alternatives to the automobile. 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.

Pedestrian facilities include sidewalks, crosswalks, traffic control features, special walkways, curb cuts and ramps for older pedestrians and people with mobility impairments. They may also be associated with transit stops or other loading areas, stairs, elevators, escalators, and grade separations. The pedestrian facilities should

provide a continuous route that is accessible for all users without the inclusion of features, such as vertical elements, that are difficult to navigate. Vertical curbs cannot be components of the primary pedestrian access routes. Sidewalks are the key element of a pedestrian access route at locations adjacent to arterial streets.

Pedestrian facilities are a critical component of the non-motorized transportation network within the City of Palm Springs. They include walkways, bridges, trails, crosswalks, signals, benches, and shade canopies. A non-motorized transportation facility may be part of a roadway (e.g., a shoulder) or separated from roadway traffic (such as a bike path) for exclusive non-motorized use. The arterial streets abutting the site accommodate pedestrian access adjacent to and crossing the streets. The sidewalks have accessible curb ramps at the arterial intersections aligned with the crosswalks to accommodate the pedestrian traffic. Pop outs have been constructed at some locations to minimize the pedestrian crossing distances and maximize pedestrian safety.

AASHTO recommends in *A Policy on the Geometric Design of Highways and Streets* (2011) that the number of pedestrian crossings on heavily traveled arterials be kept to a minimum. However, within and near business districts, pedestrians are critical to the viability of entertainment and commercial/retail developments within urban core areas. It is usually necessary, to provide crosswalks at every intersecting street in urban core areas.

Within the study area, there are crosswalks today at nearly every key intersection (except Cahuilla Road at Arenas Road). Pedestrian crosswalks exist on Palm Canyon Drive north of Andreas Road and at the future Main Street alignment (with a traffic control signal).

Although proper and reasonable design for pedestrians is important, it can be difficult to make adequate provisions for pedestrians, given the demands of vehicular traffic in intensely developed urban core areas. However, the most successful shopping areas are often those that provide the most comfort and pleasure for pedestrians. That is likely the case because the typical pedestrian is a shopper nearly 50 percent of the time that they are a pedestrian and a commuter only eleven percent of the time.

Pedestrians tend to take the shortest route between two points. They often cross mid-block and fail to stay in crosswalks along streets. Pedestrians resist changes in grade or elevation and tend to avoid underpass (potential crime areas) and overpass facilities (as climbing stairs requires much more effort). Pedestrian volumes tend to peak in the midday, rather than during the morning or evening peak commuter hours. Since vehicular traffic in Palm Springs also peaks in the midday, it will be particularly important to provide facilities for the safe and orderly movement of pedestrians.

Landscape buffers and planting strips between the sidewalk and the adjacent street are a component of the pedestrian infrastructure that can enhance safety by providing a physical separation between pedestrians and moving vehicles thereby enhancing the walking experience. Planting strips can provide space for traffic signs and street furniture. At locations without on-street parking or bicycle lanes, the ITE suggests that a buffer width of 5 feet (minimum) with 6 feet (desirable) be provided. Where right-of-way constraints make it not feasible to provide a landscape buffer, the use of a curb-attached sidewalk requires additional width.

At bus stop locations, accessible connections suitable for loading and waiting should be provided in the buffer region. Curb ramps should have a running slope of 5 percent (minimum) up to 8.3 percent (maximum). The length of the ramp should not exceed 15 feet. A landing (4 feet by 4 feet) should be provided at the top of the curb ramp.

Sidewalks for an arterial street should be constructed with a maximum cross slope of 2 percent to enable all users to easily navigate the facility. At driveway locations, the slope of the driveway should match the 2 percent cross slope of the sidewalk. Motorists entering and exiting the site should have unobstructed sight distance for the sidewalk, the street and the driveway. Pedestrians should be provided similar unobstructed sight distance.

At locations where the crosswalk includes a pedestrian refuge island or median, appropriate curb ramps are required so that the pedestrian has a continuous surface. The pedestrian refuge space should be at least 6 feet long in the direction of pedestrian travel and accommodate passing.

The absolute minimum width of a sidewalk is four feet, where unobstructed and continuously maintained. A passing space (5 feet by 5 feet) should be incorporated every 200 feet on these minimum width sidewalks.

Where possible, a typical sidewalk width of 6 feet is desirable to allow pedestrians to walk comfortably side by side. At busy arterial locations with curb-attached sidewalks, the desirable minimum sidewalk width is 8 feet. This enables 4 feet of unobstructed access and room for light poles and street furniture. In locations with substantial pedestrian activity, the sidewalk width should be significantly wider.

The distances walked increase in urbanized areas as a function of the population and parking duration. A typical parker walks 525 feet to his or her destination in urban areas with a population between 100,000 and 1 million. With a current population of fewer than 50,000, the median walking distances in Palm Springs are likely to be 500 to 600 feet in the study area. Approximately 80 percent of the distances traveled by pedestrians will be less than one-quarter mile. Pedestrians will most likely not be willing to walk more than 1.0 mile to work or more than 0.5 mile to catch a bus. Age is an important consideration in design, as the elderly may be affected by limitations in sensory, perceptual, cognitive, and/or motor skills brought on by the aging process.

2010 ADA Accessibility Standards

To ensure that buildings and facilities are accessible to and usable by people with disabilities, the 1990 *Americans With Disabilities Act* (ADA) established accessibility requirements for state and local government facilities and places of public accommodation. The U.S. Architectural and Transportation Barriers Compliance Board (U.S. Access Board) developed design guidelines for accessible buildings and facilities in the *ADA Accessibility Guidelines* (ADAAG) published in 1991 and updated in 2010. The ADAAG address among other topics, accessible routes, signage, protruding objects, and handrails at ramps and stairs. The ADAAG standards published as Appendix A to 28 CFR Part 36 have been adopted by the Department of Justice as its Standards for Accessible Design.

Titles II and III of the ADA require that newly constructed buildings be readily accessible to and usable by individuals with disabilities. Any time a building is altered or constructed, it building must meet the minimum standards in the *ADA Accessibility Guidelines* issued by the United States Access Board or the Uniform Federal Accessibility Standards (UFAS), 28 CFR Section 35.151. Title II of the ADA requires that state and local governments ensure that persons with disabilities have access to the pedestrian routes in the public right of way. Crosswalks constitute distinct elements of the right of way intended to facilitate pedestrian traffic. Without curb ramps, people who use wheelchairs, scooters, or other mobility devices may be forced to travel in roadways to reach their destinations because sidewalk travel is difficult and can be hazardous.

Under Title II of the ADA, newly constructed or altered streets, roadways, and highways must contain curb ramps or other sloped areas at any intersection having curbs or other barriers to entry from a street-level pedestrian walkway. Newly constructed or altered street-level pedestrian walkways must contain curb ramps or other sloped areas at intersections of streets, roadways, and highways.[4] Alterations of streets, roadways, and highways include activities such as reconstruction, rehabilitation, resurfacing, widening, and projects of similar scale and effect.

Curb ramps allow people with mobility disabilities to gain access to sidewalks and pass through raised medians. They are needed wherever a sidewalk or other pedestrian walkway crosses a curb. They must be located to ensure that a person with a mobility disability can travel from a sidewalk on one side of the street to the sidewalk on the other side of the street. However, the ADA does not require the installation of ramps or curb ramps in the absence of a pedestrian walkway with a prepared surface for pedestrian use or in the absence of a curb, elevation, or other barrier between the street and the walkway.

4. Source: 28CFR 35.151(i)(1) and 35.151(i)(2).

Bicycle Facilities

Bikeways and pathways are used by a wide variety of people including children on their way to school, commuters cycling 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.

Palm Springs Bikeway Standards

The City of Palm Springs requires bikeways to be designed and constructed in accordance with City standards, unless otherwise approved by the City Engineer. The *Palm Springs 2007 General Plan* suggests that consideration also be given to the design requirements in Chapter 1000, Bicycle Transportation Design, of the Caltrans *Highway Design Manual* (Revised May 7, 2012) and the CVAG *Non-Motorized Transportation Plan* (September 2010).

Class I bike paths or bike trails provide a right-of-way separate from any street or highway exclusively for use by bicyclists and pedestrians, with vehicular crossings minimized. 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. The *City of Palm Springs 2007 General Plan* identifies the Class I bike path area as including a minimum width of 8 feet for two-way bicycling and 4 feet for one-way cycling.

Class II bike lanes are unprotected bikeways with a minimum four-foot width for one-way bicycle traffic delineated by a stripe on the roadway. While bike lanes are within an exclusive right-of-way designated for use by bicyclists, cross traffic is permitted by motor vehicles entering and exiting driveways.

Class III bike routes are unprotected on-street bikeways sharing the roadway with vehicular traffic. These facilities include any type of bikeway (including streets signed as bikeways) that offer no other specific lane or other accommodation for bicycles. Bicycles and motor vehicle traffic share the same roadway surface area.

Caltrans Class I Bikeway Design Standards

The current design standards in the Caltrans *Highway Design Manual* (May 4, 2012) state that the design of projects should, when possible, expand the options for biking, walking, and transit use. As described therein, Class I bike paths should generally be used to serve corridors not served by streets and highways. Class I bike paths should be constructed away from the influence of parallel streets, at locations where cross flow by motor vehicles and pedestrian conflicts can be minimized. Common applications identified for Class I bike paths include: (1) as part of planned developments; (2) within school campuses; (3) within and between parks; (4) within utility rights of way; and (5) to close gaps to bicycle travel caused by barriers such as freeways, rivers, and mountains.

Section 21966 of the *California Vehicle Code* states that no pedestrian shall proceed along a bicycle path or lane where there is an adjacent adequate pedestrian facility. Unless adjacent to an adequate pedestrian facility, Class I bikeways are for the exclusive use of bicycles and pedestrians. Therefore, any facility serving pedestrians must meet applicable accessibility requirements per Caltrans *Design Information Bulletin 82-05, which reflects the 2010 Americans with Disabilities Act (ADA) Standards and the California Building Code 2013 (Title 24) published in July 2013.*[5] If regular pedestrian use is anticipated, separate facilities for pedestrians may be beneficial to minimize conflicts.

Guidance provided in Chapter 1000, Bicycle Transportation Design, of the Caltrans *Highway Design Manual* for the selection of an appropriate bikeway facility indicates that *"…sidewalks are not Class I bikeways because they are primarily intended to serve pedestrians, generally cannot meet the design standards of Class I bikeways,*

5. California Department of Transportation. *Design Information Bulletin 82-05: Pedestrian Accessibility Guidelines for Highway Projects.* October 1, 2013.

and do not minimize vehicle cross flows." Issues associated with sidewalk bikeways are discussed in Index 1003.3 which states:

> *"Sidewalks are not to be designated for bicycle travel. Wide sidewalks that do not meet design standards for bicycle paths or bicycle routes also may not meet the safety and mobility needs of bicyclists. Wide sidewalks can encourage higher speed bicycle use and can increase the potential for conflicts with turning traffic at intersections as well as with pedestrians and fixed objects."*

Mandatory Class I bikeway width standards in the Caltrans *Highway Design Manual* (May 7, 2012) identify the minimum paved width of travel way for a two-way bike path as 8 feet, with 10-feet preferred. The minimum paved width for a one-way bike path is 5 feet. Guidance therein indicates that it should be assumed that Class I bicycle paths will be used for two-way travel as one-way Class I bike paths are rare, except where two one-way paths that are parallel and adjacent to each other are provided within a wide right-of way. Enforcement of one-way travel is difficult, and there is rarely a situation where there is a need for bicycle travel in only one direction.

Shared pedestrian facilities that are part of non-motorized transportation facilities should be designed in accordance with the Caltrans *Highway Design Manual* requirements for the appropriate bikeway classification. Although a Class I bikeway may legally be used by pedestrians and bicycles, at certain segments of the path it may not be practical to design for both users. In such cases, a deviation from either the bicycle standard (in Chapter 1000 of the *Highway Design Manual*) or the pedestrian accessibility standard in *Design Information Bulletin (DIB) 82-05* would be necessary. Federal regulations allow the use of other accessibility standards if they provide substantially equivalent or greater access to the facility than the minimum Federal accessibility standards. The *California Building Code* allows the enforcing agency to make judgments as to equivalent designs. Local Agency standards that provide equivalent or greater accessibility may be used in lieu of the minimum standards in DIB 82-05.

Bike lanes on existing roadways should conform to Caltrans standards or be upgraded to meet Caltrans standards. Separate standards apply to each of the three bicycle facility classifications and each class of bikeway has its appropriate application, as discussed in the Caltrans *Highway Design Manual.*

Existing Bicycle Facilities

The Coachella Valley Association of Governments *Non-Motorized Transportation Plan* (September 2010) identifies existing and proposed non-motorized facilities within the project vicinity. The Coachella Valley Regional Bikeway Plan identifies regionally significant routes that link important destinations across jurisdictional boundaries. These routes are competitive candidates for joint funding applications among cities and/or the County of Riverside.

Class I bikeways offer a paved right-of-way completely separated from any street or highway for bicycle travel. There are no existing Class I bike routes within the study area.

Class II bikeways are often called bike lanes because they provide an unprotected striped or stenciled lane for one-way travel on a street or highway for shared use with motor vehicle traffic and signing. A Class II bikeway extends across the study area along Palm Canyon Drive, Amado Road (between Belardo Road and Palm Canyon Drive), Belardo Road (south of Amado Road), Museum Drive (south of Belardo Road), Tahquitz Canyon Way (east of Museum Drive), and Belardo Road (south of Tahquitz Canyon Way).

Class III bikeways are also referred to as bike routes. They provide for shared use with pedestrian or motor vehicle traffic and are identified only by signing. Class III bikeways include any type of bikeway, including streets signed as bikeways but offering no other accommodations for bicycles. There are existing Class III bike routes in the study area along Palm Canyon Drive, south of Amado Road, along Indian Canyon Drive, along

Belardo Road, north of Amado Road, and along Arenas Road. There are several bicycle parking facilities and activity centers scattered throughout the study area.

There are several existing bicycle loops that pass through the study area. These include the Las Palmas Loop that is located along Belardo Road, Museum Drive, and Tahquitz Canyon Way. The Citywide Loop is located along Belardo Road, Museum Drive, Tahquitz Canyon Way, and Cahuilla Road. The Downtown Loop is located along Belardo Road, Museum Drive, Tahquitz Canyon Way, and Belardo Road.

Proposed Bicycle Facilities

The City of Palm Springs has identified 7 Class I projects, 19 Class II projects, and 21 Class III projects in the CVAG *Non-Motorized Transportation Plan* (September 2010). Class I projects are estimated to cost $500,000 per mile. Costs for Class II projects are estimated at $50,000 per mile. Class III projects are estimated to cost $10,000 per mile.

Caltrans standards are used to design bikeways by most jurisdictions throughout California. These standards apply to three different classifications of bicycle facilities: Class I, Class II, and Class III bikeways.

4.0 CIRCULATION IMPACT ANALYSIS

The impact analysis addressed the 13.2-acre Downtown Palm Springs Project (DPSP), plus the future development within Block K, with and without a design day community event with 4,000 attendees attracted to the 1.3-acre outdoor entertainment venue in Block "E" known as the Downtown Palm Springs Park. The future traffic volumes associated with the approved development program for the project site as well as sixteen cumulative developments were estimated, based on an updated list of cumulative developments developed through coordination with the City of Palm Springs. The traffic projections developed for the *Palm Springs 2007 General Plan* were also utilized to incorporate Citywide and regional traffic growth through the year 2030, when the approved Downtown Palm Springs Project would be completed. The traffic volumes associated with the initial phase of site development (including the Downtown Palm Springs Park) as well as buildout of the project site were projected assuming the refined circulation network approved in conjunction with the Downtown Palm Springs Project.

Future Site Development Scenarios Addressed

The traffic analysis summarized below evaluated conditions at the key intersections with eleven different development scenarios for the area within the project site. Future conditions were evaluated at the same level of detail for the initial phase and buildout of the Downtown Palm Springs Project (DPSP) with and without a design day event within the Downtown Palm Springs Park attracting 4,000 attendees. This allowed future traffic projections to be developed for each scenario and established whether or not mitigation would be required to achieve the City of Palm Springs minimum peak hour intersection performance standard of LOS D.

As shown below, five different development scenarios were evaluated for the peak season of the existing year (2015). Three scenarios were evaluated for the initial phase opening year (2017). Three scenarios were analyzed for the future horizon year 2030.

Year 2015 Scenarios	Year 2017 Scenarios	Year 2030 Scenarios
[1] Existing Peak Season	[6] Year 2017 Ambient	[9] Year 2030 Ambient
[2] Existing+DPSP Phase1	[7] Year 2017+DPSP Phase 1	[10] Year 2030+DPSP Buildout
[3] Existing+DPSP Phase1+Park Event	[8] Year 2017+DPSP Phase 1+Event	[11] Year 2030+DPSP Buildout+Event
[4] Existing+DPSP Buildout		
[5] Existing+DPSP Buildout+Park Event		

For each site development scenario, four different peak hour periods were evaluated. The four peak analysis periods evaluated include the following.

- Weekdays: The midday and evening peak hour conditions on typical weekdays during the peak season were evaluated at each of the thirteen existing and four future key intersections.

- Saturdays: The highest midday volume hour (between 11:00 AM and 1:00 PM) condition on Saturdays in the peak season was evaluated at fourteen of the existing and proposed key intersections along Belardo Road, Palm Canyon Drive, and Indian Canyon Drive.

- Villagefest Thursdays: The highest evening volume hour between 6:30 PM and 8:30 PM on Villagefest Thursdays during the peak season was evaluated at the six future key intersections along Belardo Road (Intersections 8-10 and Intersections 15-17).

Future On-Site Roadway Configuration Addressed

The Downtown Palm Springs Project would extend Belardo Road directly across the site as a public street, from the northern site boundary to Tahquitz Canyon Way, and provide a new local east/west public street (Main Street) from Museum Drive east across the site to Palm Canyon Drive. Main Street would be located approximately 400 feet north of Tahquitz Canyon Way and 250 feet south of Andreas Road. Main Street would not extend from Palm Canyon Drive to Indian Canyon Drive (across Block K). Andreas Road would be extended west from Palm Canyon Drive to the new extension of Belardo Road as a local two-way east/west street.

All future development scenarios evaluated assumed that the proposed on-site roadway modifications would be completed, as well as the modifications to Andreas Road, between the project site and Indian Canyon Drive. All scenarios with Main Street constructed assumed that Main Street would be operated between Palm Canyon Drive and Belardo Road as a one-way (westbound) street. Between Belardo Road and Museum Drive, Main Street was assumed to function as a two-way street.

The project site is well designed to allow the closure of various internal roadways to facilitate pedestrian movements and host community gatherings and special recreational events. The perimeter streets that border the site and the proposed intersection of Museum Drive with Belardo Road would allow Museum Drive to function as an alternate north-south route to Belardo Road in the event that the closure of Belardo Road between Andreas Drive and Tahquitz Canyon Way is necessary. The east-west connectivity provided by the connection of Andreas Road to Belardo Road and Belardo Road to Museum Drive allows traffic to flow through the northern part of the project site if Main Street is closed to vehicular traffic between Museum Drive and Palm Canyon Drive.

Methodology Used To Develop Future Traffic Projections

Traffic Loading of Future Belardo Road Connection

Site traffic volumes using the existing roadway network would access the site via a modified circulation network in the future with the Downtown Palm Springs Project. The extension of Belardo Road across the site would allow a portion of the existing "through" traffic using Museum Drive to utilize the new and more direct Belardo Road alignment. The existing traffic that would divert was estimated by evaluating the movements at four intersections along the existing route through the intersections of: (1) Belardo Road at Amado Road; (2) Museum Drive at Tahquitz Canyon Way; (3) Cahuilla Road at Tahquitz Canyon Way; and (4) Belardo Road at Tahquitz Canyon Way. Fifty percent of the smallest peak hour volumes along this route were assumed to divert to the new Belardo Road alignment.

Block K Traffic

The new traffic count data included the site traffic associated with the currently occupied portion of the existing development within the project site. Since the existing development is located in Block K, the existing development was assumed to remain until after the initial phase of development (including the approved/entitled and under construction development) is completed. For those future development scenarios that included project buildout, the trip generation associated with the existing land uses within Block K was subtracted from the trip generation associated with the anticipated future development within Block K. Table 2-3 shows the future land uses assumed for Block K.

Area-Wide and Regional Traffic Growth

Other than the localized traffic increases associated with the sixteen cumulative projects addressed individually (refer to Table 2-4 and Figure 2-7 for details) traffic increases associated with area-wide and regional growth were addressed by utilizing the future traffic projections developed for the *Palm Springs 2007 General Plan*. The area-wide and regional traffic growth through the initial phase opening year 2017 were developed by assuming a constant growth rate between the existing traffic volumes and the year 2030 traffic projections associated with the

Palm Springs 2007 General Plan. A ten percent growth in the existing traffic volumes was assumed as a minimum in those instances where General Plan buildout year 2030 traffic projections were either not available or less than the current traffic volumes on a roadway segment within the study area.

In most cases, the General Plan buildout traffic projection was exceeded by the sum of the existing traffic volume (increased by 10 percent), the project-related ("site") traffic volume, and the cumulative traffic volume. At a few locations (e.g. Palm Canyon Drive and Indian Canyon Drive near Arenas Road), the General Plan buildout traffic volume exceeded the sum of the traffic volumes associated with known development. At these locations, the future year 2030 ambient traffic volume (without site traffic) was estimated by subtracting the traffic volume associated with project buildout from the General Plan buildout traffic projection.

From October to May, Villagefest occurs every Thursday, between 6:00 PM and 10:00 PM. Even before 6:00PM, the cross streets providing access to Palm Canyon Drive begin to close in preparation for Villagefest. To address the traffic impacts associated with the development of the project site on Villagefest days, the trip generation during a weekday evening peak hour was assumed for the project site. Cumulative traffic passing through the study area on Palm Canyon Drive on typical weekdays was assumed to divert to Belardo Road, between Amado Road and Arenas Road on Villagefest Thursdays or travel around the study area on other parallel routes such as Calle Encilia. Cumulative traffic on Palm Canyon Drive destined for Tahquitz Canyon Way was assumed to divert to the east along Amado Road on Villagefest Thursdays.

The Saturday traffic projections for the future year 2030 were developed from Saturday trip generation estimates for the proposed project and the sixteen cumulative projects. General Plan buildout projections for Saturdays were estimated for each intersection by multiplying the General Plan buildout weekday volumes by 115 percent. This ratio was determined by dividing the Saturday counts by the weekday counts on Indian Canyon Drive, south of Andreas Road.

Modal Split

The CVAG *2004 Origin Destination Survey* found that 92 percent of all trips made by residents of the Coachella Valley were made in passenger vehicles. Less than one percent of the trips in the region were completed on public transportation. The ITE *Trip Generation Manual* database reflects single-use developments where virtually all access is by private automobile and all parking is accommodated on site. There are no statistically valid data for adjusting standard trip-generation rates to reflect the effects of Transportation Demand Management (TDM) programs, transit availability, or small-area development patterns on trip generation rates.[1]

The CVAG *2004 Origin Destination Survey* also found that residents of the Coachella Valley are making many short trips. Approximately 59 percent of the trips that begin in Palm Springs remain in Palm Springs. Nearly 22 percent of all trips made by households in the Coachella Valley were completed in five minutes or less. Nearly 23 percent of all household trips were completed in 6 to 10 minutes. Another 21 percent of the trips made by households were completed in 11 to 15 minutes. Fewer than 9 percent of all trips completed by households took longer than 30 minutes. This indicates that a greater share of the mobility needs of this area can be met by providing safe, convenient, and inviting transit, pedestrian, and bicycle facilities and amenities as well as mixed use developments, where many needs can be met within a relatively compact area.

4A. Site Traffic

The Institute of Transportation Engineers (ITE) *Trip Generation Manual* is the principal source of trip-generation rates used in site traffic analyses. Detailed data are provided therein for vehicular trips with "average" vehicle occupancy. The ITE database is updated periodically. The latest revision (9th Edition; 2012) utilized herein to estimate the trip generation associated with the proposed development.

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1 ITE. *Trip Generation Manual Volume 1: User's Guide and Handbook* (9th Edition) 2012 and *Trip Generation Handbook*, (2nd Edition) June 2004. Appendix B . pg. 121.

The recommended procedures and guiding principles outlined in the ITE *Trip Generation Manual User's Guide and Handbook* (9th Edition, 2012) were followed in selecting the independent variables and time periods for analysis as well as the use of the regression equations versus the weighted average trip generation rates. In addition, the procedures recommended by the ITE for estimating the trip generation at multi-use sites were employed with conservative estimates of internal trip making, as discussed below.

While site-specific conditions such as the availability of transit and walk-in traffic can result in different vehicular trip-generation rates, the practice of making adjustments to the ITE rates for small differences in auto occupancy or transit usage is questionable, given the precision of the measurement of the ITE trip-generation rates and their day-to-day variation. Therefore, no transit usage or auto occupancy adjustments were made to the ITE trip-generation rates.

While this results in a "worst case" analysis, as required by CEQA, it is not meant to imply that alternative modes of transportation would not play an important role in future trip-making within the project site. The *2004 CVAG Origin Destination Survey* found that less than one percent of the trips in the region were completed using public transportation but residents in multi-family housing were twice as likely to use public transportation than residents of single-family housing. Approximately 4 percent of all trips made by the households surveyed were made by walking and one percent was made by bicycle. Residents of non-retired households were four times more likely to walk to their destination than residents of retired households.

Unadjusted Trip Generation Associated With The Project Site

Table 4-1 provides the unadjusted peak hour and daily trip generation forecast associated the existing land uses, the initial phase and buildout of the Downtown Palm Springs Project, and the design day event at the Downtown Palm Springs Park. Unadjusted trip generation estimates have not been modified to reflect the internal trip interactions that occur without using streets external to the project site and are counted twice when the trip generation of the individual uses is summed. When several different land use types are included in a single mixed-use development, the traffic added to the adjacent streets may be less than the sum of the individual trip generation estimates associated with each individual land use code. The reduction is attributable to trips being made by vehicle on internal roadways that remain internal to the proposed development (e.g., between the residential and retail or entertainment uses).

Since the Desert Fashion Plaza was demolished, the only remaining trip generators within the project site are located within Block K. The initial phase of development would occur within the core area of the project, rather than in Block K. Therefore, the existing development within Block K was assumed to remain until after the initial phase of the development is completed. The existing development in Block K was assumed to be removed and replaced with new development prior to project buildout, which was assumed to occur in the year 2030.

The traffic generated by the existing land uses, the initial phase of development, and project buildout will occur day in and day out on weekdays and on weekends whereas community gatherings and recreational events at the Downtown Palm Springs Park are expected to occur only a few times per month. The construction of the facilities required at the Downtown Palm Springs Park to accommodate community gatherings and recreational events could be completed within one year after it is initiated. Therefore, the Downtown Palm Springs Park was assumed to be developed in conjunction with the initial phase of the Downtown Palm Springs Project.

The unadjusted weekday trip generation associated with the currently occupied land uses within the Town & Country Center is shown in Table 4-1 and includes approximately 4,380 trip-ends. Of that total, 317 trips occur during the midday peak hour (183 inbound and 134 outbound) and 381 occur during the evening peak hour (183 inbound and 198 outbound).

Table 4-1
Unadjusted Site Trip-Generation Forecast
By Development Phase[a]

Development Scenario [ITE Land Use Code]	Land Use Quantity	Midday Peak Hour In	Midday Peak Hour Out	Midday Peak Hour Total	Evening Peak Hour In	Evening Peak Hour Out	Evening Peak Hour Total	Daily 2-Way
EXISTING LAND USES								
Town & Country Center								
Weekday								
- Commercial [820]	50.98 TSF	183	134	317	183	198	381	4,380
Saturday								
- Commercial [820]	50.98 TSF	290	268	558	--	--	--	6,040
INITIAL PHASE OF DEVELOPMENT								
Downtown Palm Springs Project								
Weekday								
- General Office [710]	32.1 TSF	68	9	77	19	95	114	550
- Commercial [820]	96.2 TSF	280	205	485	280	304	584	6,620
- Hotel [310]	290 Room	75	64	139	89	85	174	2,220
Total		423	278	701	388	484	872	9,390
Saturday								
- General Office [710]	32.1 TSF	7	6	13				80
- Commercial [820]	96.2 TSF	439	405	844	*(Midday Peak Hour*			9,020
- Hotel [310]	290 Room	117	92	209	*Only Evaluated)*			2,380
Total		563	503	1,066				11,480
Downtown Palm Springs Park								
- Community Event	4000 Attendees	1,600	32	1,632	32	1,600	1,632	3,520
PROJECT BUILDOUT								
Downtown Palm Springs Project								
Weekday								
- General Office [710]	97.8 TSF	165	23	188	32	156	188	1,290
- Commercial [820]	293.5 TSF	592	432	1,024	592	641	1,233	13,670
- Hotel [310]	620 Room	144	123	267	190	182	372	5,180
- MFA Residential Uses [232]	650 DU	37	183	220	147	90	237	2,670
Total		938	761	1,699	961	1,069	2,030	22,810
Saturday								
- General Office [710]	97.8 TSF	23	19	42				240
- Commercial [820]	293.5 TSF	915	845	1,760				18,210
- Hotel [310]	620 Room	250	196	446	*(Midday Peak Hour*			5,080
- MFA Residential Uses [232]	650 DU	96	128	224	*Only Evaluated)*			2,760
Total		1,284	1,188	2,472				26,290
Downtown Palm Springs Park								
- Community Event	4000 Attendees	1,600	32	1,632	32	1,600	1,632	3,520

a. The ITE trip-generation regression equations from *Trip Generation Manual* (ITE 9th Edition, 2012) were used except for Saturday when the average rates for office space were assumed (0.43 trips/TSF (54%in:46%out) during the midday peak hour with 2.46 daily trips/TSF) and the average rates for hotels were assumed (0.72 trips/room (56%in:44%out) with 8.19 daily trips/room). TSF=Thousand square feet of building floor area. Rooms=Hotel Rooms. DU=Dwelling Units. MFA=High-Rise Multi-Family Attached Residential.

Trip Generation of Initial Phase

The initial phase of development would include all approved, entitled, and under construction development within the Downtown Palm Springs Project. The unadjusted weekday trip generation associated with the initial phase of development is projected to total 9,390 trip-ends. Of that total, 701 trips would occur during the midday peak hour (423 inbound and 278 outbound) and 872 would occur during the evening peak hour (388 inbound and 484 outbound). This trip generation estimate reflects those days when the 1.3-acre Downtown Palm Springs Park is not functioning as an outdoor entertainment venue attracting 4,000 attendees.

The trip generation associated with the Downtown Palm Springs Park on a design day with a community event attracting 4,000 attendees was developed by assuming an average vehicular occupancy (AVO) rate of 2.5 persons per vehicle. Since the park is located within an area that includes hotels, restaurants, retail shops, and professional offices, the trip generation forecast assumed that 30 percent of the attendees would be already parked in the area and walk to the Downtown Palm Springs Park from other surrounding land uses. The in:out directional split assumed for a design day event was 98:2 (i.e., 98 percent inbound and 2 percent outbound) during the hour preceding the event start time and the reverse split 2:98 during the hour following the event. The trips generated by the support personnel associated with an event (such as the back-of-house technical set-up and strike crew, concessions and box office staff, vendor trips, clean up crew, security, traffic management personnel etc.) were assumed to add 220 trips per day (ten percent) to the Downtown Palm Springs Park design day trip generation. For a worse-case design day, the peak park trip generation was assumed to coincide with the peak travel hours on the adjacent streets.

Trip Generation Upon Project Buildout

Project buildout would include all approved, entitled, and under construction development in the initial phase as well as the subsequent phases of the Downtown Palm Springs Project. Upon project buildout, the existing land uses within Block K would be removed and replaced with the development shown in Table 2-3. Main Street would extend from Palm Canyon Drive to Museum Drive, but not be extended through Block K.

The unadjusted weekday trip generation associated with the completion of the Downtown Palm Springs Project is projected to total approximately 22,810 trip-ends without a design day event at the Downtown Palm Springs Park. Of that total, 1,699 are expected to occur during the midday peak hour (938 inbound and 761 outbound) and 2,030 are projected to occur during the evening peak hour (961 inbound and 1,069 outbound).

There are no trip-generation rates available for land uses within the Downtown Palm Springs Project that reflect the hour between 7:30 PM and 8:30 PM on a weekday. To assure a worst-case assessment, the occupied land uses within the project site were assumed to generate the same number of trips on Thursday evenings during Villagefest that they would during the evening peak hour on a typical weekday.

On weekdays, commercial centers typically generate the most traffic between during the midday. Between noon and 1 PM, 8.85 percent of the weekday trips typically occur. The evening peak hour trip generation typically includes 8.80 percent of the weekday trips and occurs between 5 PM and 6 PM. The ITE has determined that between 6 PM and 7 PM, 7.75 percent of the weekday trips occur and between 7 PM and 8 PM, 7.55 percent of the weekday trips occur at commercial/retail centers.[2] Consequently, the trip generation of the commercial uses within the project site during Villagefest would be approximately 86 to 88 percent of the trips generated by those same commercial land uses between 5 PM and 6 PM, assuming that Villagefest does not attract additional commercial/retail patrons to the site or encourage employees within the site to stay later on Thursdays to take advantage of the culinary, recreational, and cultural attractions afforded by Villagefest.

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2 ITE; *Trip Generation Manual Volume 3*: *Data* (9th Edition) 2012. "Hourly Variation in Shopping Center Traffic" (pg 1558).

The weather in the study area, which includes relatively mild temperatures during the winter months and warm evenings during the summer months, is conducive to outdoor recreational activities like Villagefest. The new 24-hour traffic counts indicate that Villagefest activities increase the number of people attracted to the study area. The Thursday traffic volumes at the five count locations in the study area were 4.2 percent greater than the Wednesday traffic counts even though the project site is predominantly undeveloped. Once the project site is developed with additional commercial, restaurant, hotel, office and residential land uses, the trips generated during the evening on Thursdays are likely to extend over a longer period than the typical 5 PM to 6 PM peak hour.

Commercial centers typically generate between 13 and 28 percent more traffic on Saturdays than on typical weekdays, depending on their gross leasable area. The ITE database shows that for commercial centers with 100,000 to 300,000 S.F., the traffic generated on Saturdays is 13.4 percent greater than on a typical weekday. As shown in Table 4-1, the unadjusted trip generation associated with the currently occupied land uses on-site totals approximately 6,040 Saturday trip-ends, of which 588 trip-ends occur during the midday peak hour (with 290 inbound and 268 outbound). The Saturday trip generation for both the initial phase and project buildout are also projected to be higher than the weekday trip generation.

Internal Capture of Project-Related Trips

All of the trip-generation rates provided by the ITE were developed from data collected at isolated single-use free-standing sites. The development of mixed-use projects with office, retail and residential uses reduces the trip generation associated with the development below that which is projected directly from the ITE trip generation rates because of the internal trip interactions among the uses that are "captured" within the multi-use site. This is particularly true where a trip can be made by walking. As a result, the total number of vehicle trips entering and exiting the site may be reduced below the sum of the individual discrete trips generated by each separate land use. The reduction is attributable to trips being made that remain internal to the proposed development such as those made between the residential or hotel uses and one or more of the retail uses. These internal trip interactions are counted twice when the trips generated by each individual use are summed to establish the "unadjusted" trip generation.

The proposed project is a multi-use development with various land uses in close proximity between which trips can be made without using the off-site road system. These trips can be made either by walking or by vehicles using internal roadways without using external streets. The future capture of trips internal to the site will have a net effect of reducing the number of motor vehicle trips between the project site and the external street system compared to that of comparable stand-alone sites. Trips will typically be made between the various interacting land use pairs by walking, since the parking is primarily consolidated for the project in the two parking structures on Museum Drive.

Mixed-use developments like the Downtown Palm Springs Project incorporate several different land uses in a single project. As a result, they may include retail areas that compose less than 50 percent of the total project area, rather than the 80 percent retail area that is typical of shopping centers. Variables that can affect the internal capture rate include:

- The size of the development;
- The mix of on-site land uses (the combination of land uses which tend to interact i.e., residential, office, retail, restaurant, entertainment, and hotel);
- The proximity of the on-site land uses (within reasonable walking distance);
- The availability of pedestrian connections between on-site land uses;
- The site location within the urban/suburban area; and
- The proximity of competing or complementary land uses.

Observed internal capture rates vary by time of day and the day of the week. Weekday morning peak hours may have lower internal capture rates, if retail uses or a cinema are not open for business. Office uses may generate more internal trips on weekdays than on weekend days, when many are closed. Conversely, a recreational event or a hotel use may generate more internal trips on Saturday and Sunday than on weekdays,

since hotel occupancy rates tend to be higher on weekends and people attending an outdoor film screening, concert, or theatrical performance at the Downtown Palm Springs Park would likely visit other retail uses on-site before or after the event.

The number of internal trips between a pair of land uses on-site would be a function of both the size of the receiving land use (and the number of trips it attracts) and the size of the originating land use (and the number of outbound trips that it generates). The number of internal trips that would be captured on-site would be constrained by the smaller of these two values. Therefore, an iterative balancing procedure must be utilized to constrain internal trip making estimates to realistic values, based upon the size and mix of the various land uses on-site as well as their proximity and the availability of competing land uses in the surrounding area.

A traditional downtown or central business district (CBD) typically has a mixture of diverse employment, retail, residential, commercial, recreation, and hotel uses with extensive pedestrian interactions that occur because of the scale of the area, ease of access, and the proximity of the various uses. Automobile occupancy is usually higher in the CBD than in outlying areas, particularly during peak commuting hours. However, the ITE also advises caution in the direct application of the unconstrained internal capture rates identified in Table 7.1 and 7.2 of *Trip Generation Handbook* for projects within central business districts, since the ITE rates were identified from data collected for paired land uses at multi-use sites in Florida that were located outside of traditional downtown central business districts.

After careful consideration, professional judgment was exercised in estimating the internal trip-capture rates for the future multi-use development proposed on-site to ensure a conservative analysis. The land uses within the Town and Country Center portion of the site were considered separately from the core area commercial uses with respect to internal trip interactions. This reflected the spatial separation between these two areas and the fact that their gross leasable areas were considered separately (not combined) to estimate the trip generation associated with each of these commercial areas.

Adjusted Trip Generation Associated With The Project Site

The unadjusted trip-generation forecast shown in Table 4-1 was adjusted to reflect the anticipated internal trip interactions illustrated in Figure 4-1 and eliminate the double counting of internal trips, as shown in Table 4-2. The adjustments were based on Tables 7.1 and 7.2 of the ITE's *Trip Generation Handbook,* which provide internal capture rates within a multi-use development. As shown therein, retail uses capture approximately 20 percent of the traffic from adjacent office, residential, and other retail uses. Although the proposed project would include a substantial leasable core area with a variety of commercial uses, the project site is located within an urban area with a substantial number of existing and future commercial developments nearby. Therefore, a maximum internal capture rate of 10 percent of the trip-ends generated by the Town & Country Center, the future hotels, residential uses, and office uses on-site was assumed to be local commercial trips destined for retail uses within the core area on-site.

The internal capture rate assumed was one-half of the ITE value of 20 percent for trip origins within offices to retail uses and one-third of the 34 percent for residential trip origins to retail uses. No internal trip adjustments were made between the residential or hotel uses and the office land uses on-site or between the offices and the Town & Country Center. The adjusted trip generation shown in Table 4-2 assumed that a maximum of 10 percent of the shopping trips would be generated by the office uses, residential uses, and hotel uses. This adjustment reduced the external trip generation estimate by 10.6 percent for the initial phase and by 14.2 percent for project buildout.

Site Trip Distribution and Traffic 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 that 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.

Figure 4-1

Internal Trip Capture Rates Assumed
for Future Multi-Use Site Development

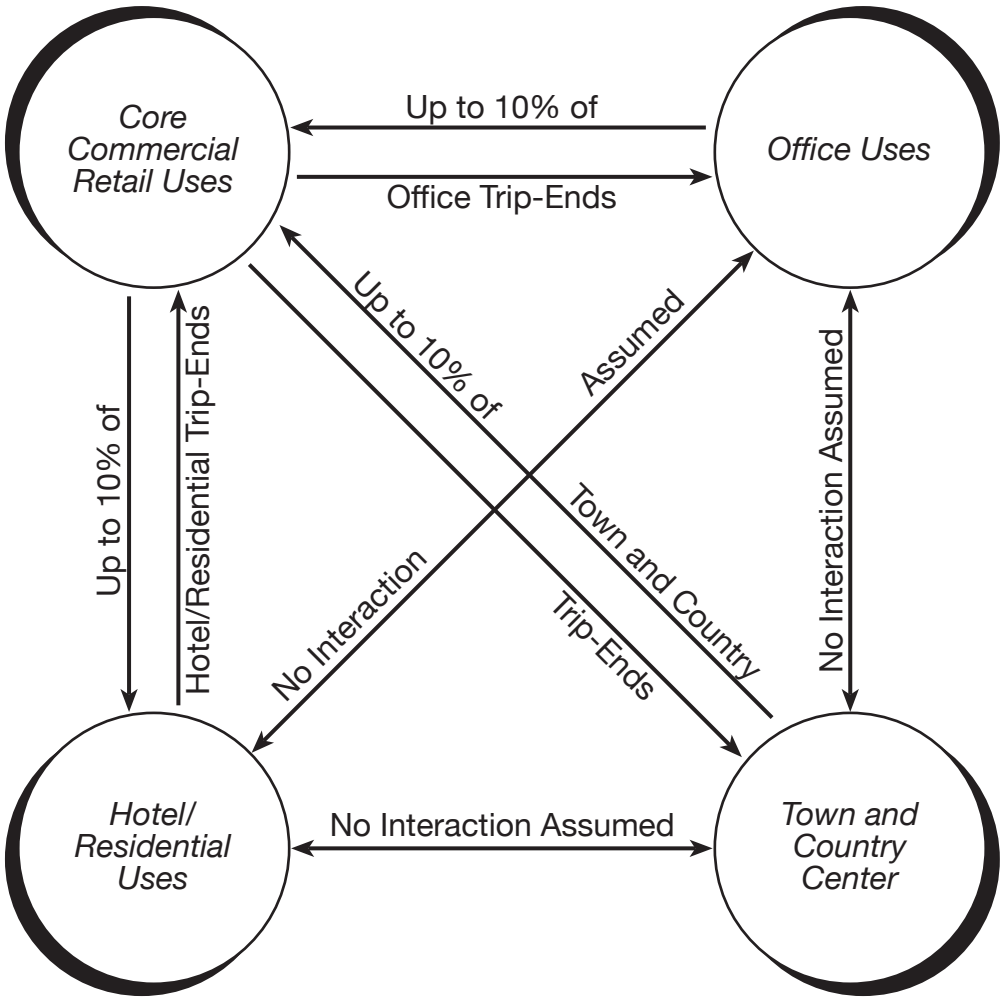


Table 4-2
Adjusted Site Trip-Generation Forecast
(Downtown Palm Springs Project)

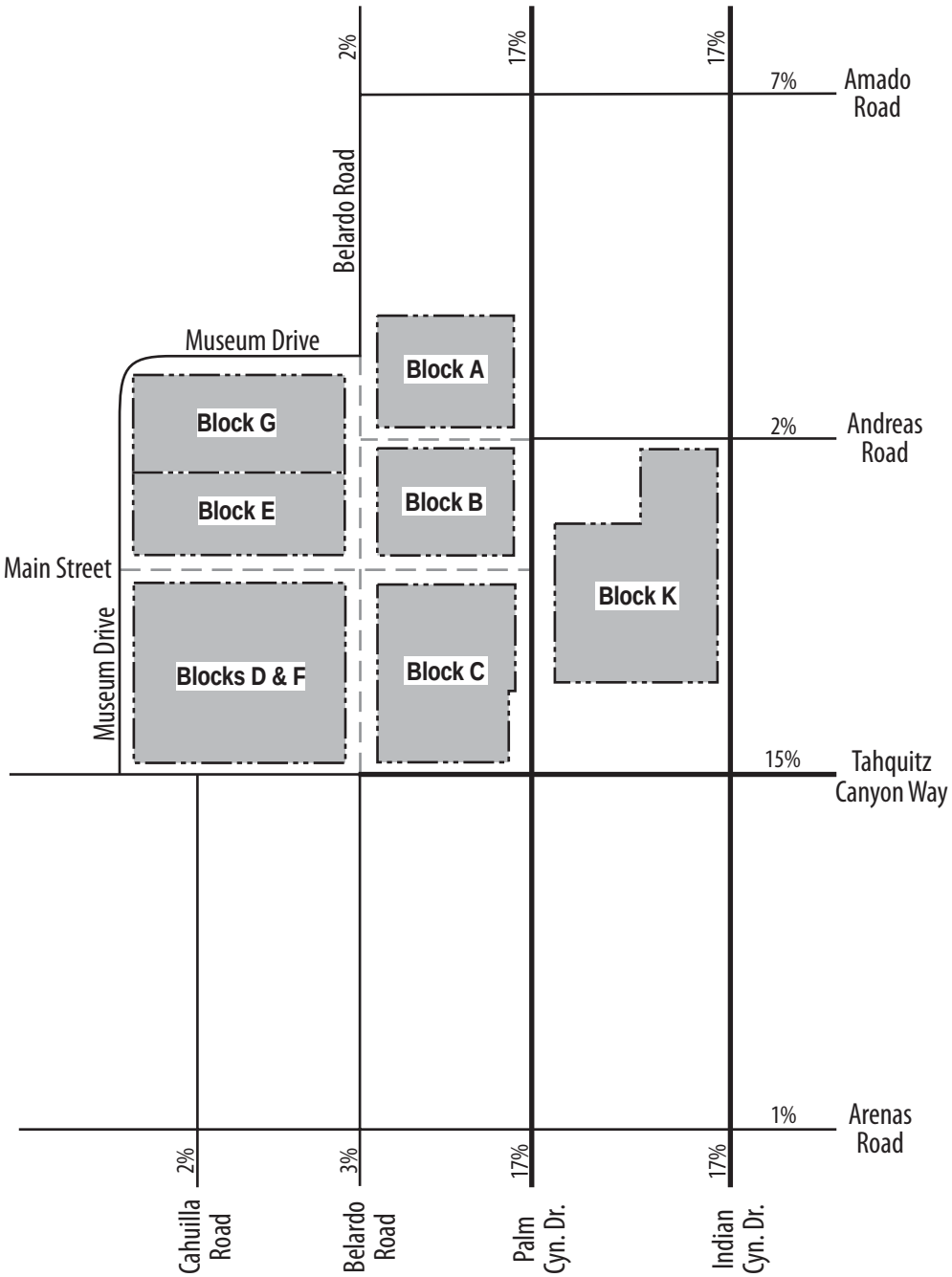
Development Phase/Scenario (Interval and Direction)	Unadjusted Trips[a]	Internal Trips[b]	External Trips	Adjusted Trips
Phase 1 - Weekday & Villagefest				
- Daily (Two-Way)	9,390	1,000	8,390	8,890
- Midday Inbound	423	38	385	404
- Midday Outbound	278	38	240	259
- Evening Inbound	388	52	336	362
- Evening Outbound	484	52	432	458
Phase 1 - Saturday Midday				
- Daily (Two-Way)	11,480	840	10,640	11,060
- Midday Inbound	563	38	525	544
- Midday Outbound	503	38	465	484
Project Completion – Weekday & Villagefest				
- Daily (Two-Way)	22,810	3,240	19,570	21,190
- Midday Inbound	938	122	816	877
- Midday Outbound	761	122	639	700
- Evening Inbound	961	148	813	887
- Evening Outbound	1,069	148	921	995
Project Completion - Saturday				
- Daily (Two-Way)	26,290	3,240	23,050	24,670
- Midday Inbound	1,284	150	1,134	1,209
- Midday Outbound	1,188	150	1,038	1,113
Downtown Palm Springs Park Event[c]				
- Daily (Two-Way)	3,520		2,460	
- Midday Inbound	1,600		1,120	
- Midday Outbound	32		22	
- Evening Inbound	1,600		1,120	
- Evening Outbound	32		22	

a. Unadjusted trips per Table 4-1, which have not been adjusted to remove trips captured internally that were counted twice.
b. Each value shown was counted twice. Values shown must be reduced by 50 percent, and then added to the external trips to identify the adjusted trips with the internal trips included once.
c. The external trips shown for a design day park event reflect a 30 percent reduction for attendees who are already parked within or near the site and walk to a design day event from other nearby land uses (hotel, restaurants, shops).

Other considerations may include the aesthetic quality of alternate routes, the number of turning maneuvers, and avoidance of congestion. Site access locations, signalized access points, and turn restrictions on driveways can directly affect the project traffic assignment.

The overall trip distribution associated with Downtown Palm Springs Project is shown in Figure 4-2. It was based primarily on the trip distribution and traffic assignment included in the approved 2008 *Traffic Impact Study for the Museum Market Plaza Specific Plan.* Traffic is typically assigned to the parking areas associated with the proposed land uses. For this project, the parking is primarily consolidated into the two parking structures on Museum Drive. Site traffic was evenly distributed to the proposed on-site parking spaces including the private underground parking spaces in Block B and Block F. Fifty percent of the residential guest parking may be located in a different block than the residential dwelling units and the parking for the hotel employees may be

Figure 4-2
Site Traffic Distribution



Legend	
100%	Percent of Site Traffic (Inbound + Outbound)

Endo Engineering

Scale: 1" = 350'

located in a different block than the hotel. The parking for the commercial uses may be located anywhere within the Specific Plan.

Site Traffic Volumes

Initial Phase of the Downtown Palm Springs Project

Figure 4-3 shows the weekday site traffic volumes at the key intersections during the midday and evening peak hours associated with the initial phase of the Downtown Palm Springs Project. Figure 4-4 shows the Phase 1 site traffic volumes at the key intersections along Belardo Road during the highest volume hour (7:30 PM - 8:30 PM) on Thursdays associated with Villagefest activities and the closure of Palm Canyon Drive. Figure 4-5 shows the Saturday site traffic volumes at fourteen key intersections during the midday peak hour associated with the initial phase of the Downtown Palm Springs Project. The site traffic projections shown in Figures 4-3 through 4-5 reflect conditions without a design day event at the Downtown Palm Springs Park.

Buildout of the Downtown Palm Springs Project

Figure 4-6 shows the weekday site traffic volumes at the key intersections during the midday and evening peak hours associated with buildout of the Downtown Palm Springs Project. Figure 4-7 shows the site traffic volumes associated with buildout of the Downtown Palm Springs Project at the key intersections along Belardo Road during the highest volume hour (7:30 PM - 8:30 PM) on Thursdays associated with Villagefest activities and the closure of Palm Canyon Drive. Figure 4-8 shows the Saturday site traffic volumes at fourteen key intersections during the midday peak hour associated with buildout of the Downtown Palm Springs Project. The site traffic projections shown in Figures 4-6 through 4-8 reflect conditions without a design day event at the Downtown Palm Springs Park.

Design Day Event at the Downtown Palm Springs Park

Figure 4-9 provides the design hour inbound and outbound site traffic volumes at the key intersections associated with an event at the Downtown Palm Springs Park with the potential to attract 4,000 attendees. Since the events at the park may occur at any time during the week, the trip generation associated with the park activities was generally assumed to occur during the peak travel periods on the adjacent streets.

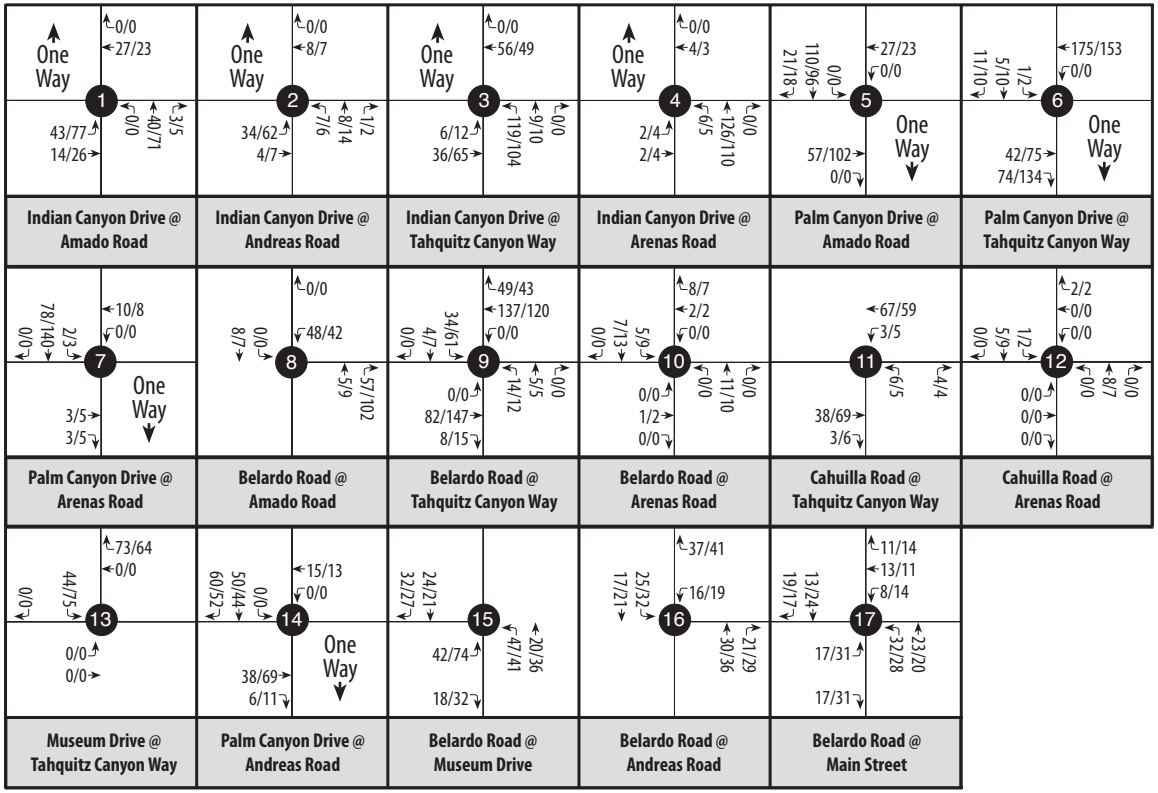
4B. Existing+Site Traffic

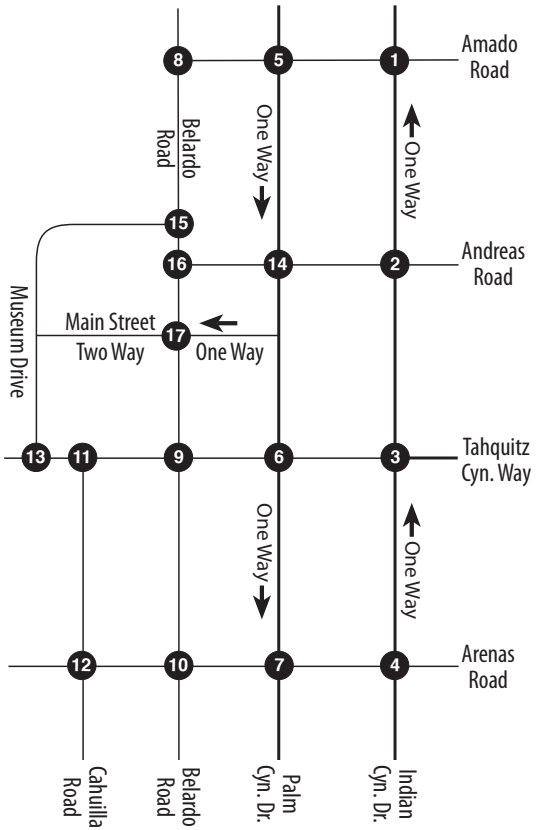
The existing weekday peak hour turning volumes were shown in Figure 3-4. The existing Villagefest highest hour turning volumes were shown in Figure 3-6. The existing Saturday midday peak hour turning volumes were shown in Figure 3-8. Existing+project traffic volumes were determined by adding the future site traffic volumes to the existing traffic volumes throughout the study area. All of the figures showing the weekday existing+site traffic volumes include 17 key intersections, including the 13 existing key intersections and four future intersections that would be constructed in conjunction with the project when Belardo Street, Main Street, and Andreas Road are extended through the project site.

Existing+Initial Phase Traffic

The existing weekday peak hour turning volumes at the key intersections were added to the weekday site traffic volumes associated with the initial phase of development (shown in Figure 4-3) to determine the existing+initial phase weekday peak hour traffic volumes at the key intersections shown in Figure 4-10. The existing+initial phase+park event weekday peak hour traffic volumes at the key intersections are shown in Figure 4-11. These traffic projections reflect the addition of the design day event traffic shown in Figure 4-9 to the existing+initial phase traffic volumes shown in Figure 4-10.

Figure 4-3
Weekday Site Traffic Volumes Associated With Phase 1 of the Downtown Palm Springs Project





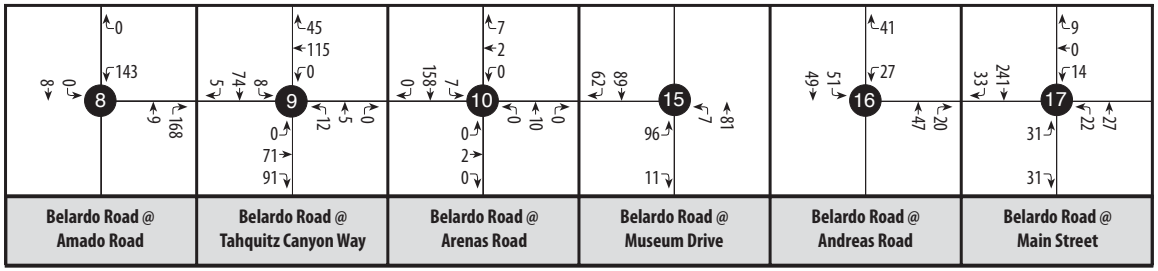
Legend

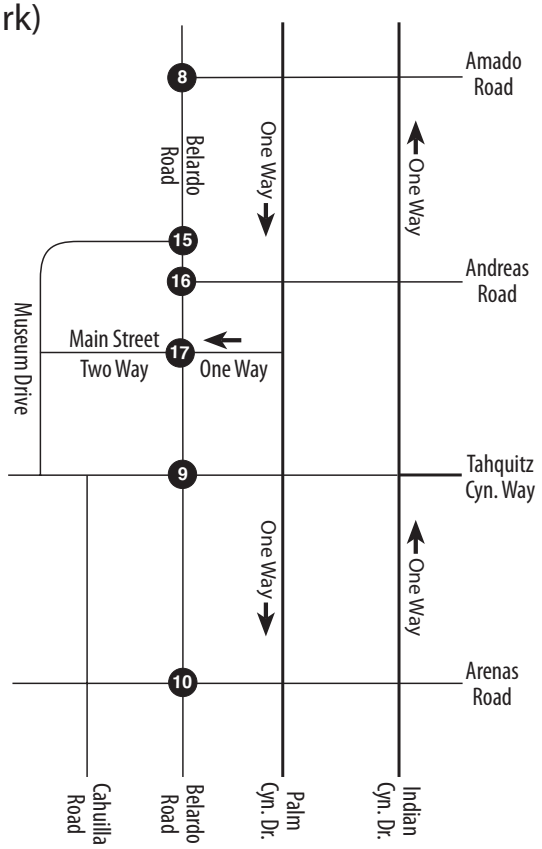
5/8 Midday/Evening Peak Hour Turning Volume

Endo Engineering

Schematic

Figure 4-4
Site Traffic Volumes During Villagefest
Associated With Phase 1 of the Downtown Palm Springs Project
(Without the Downtown Palm Springs Park)





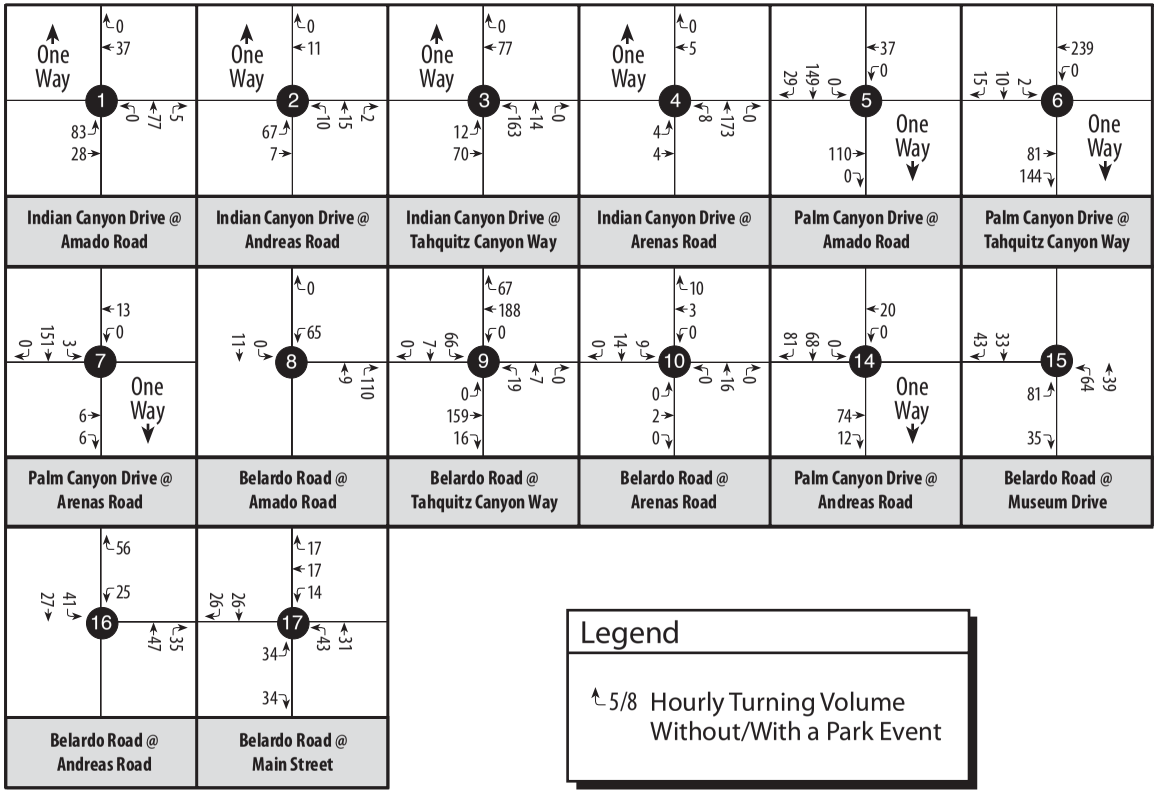
Legend

5 Highest Hour Turning Volume

Endo Engineering

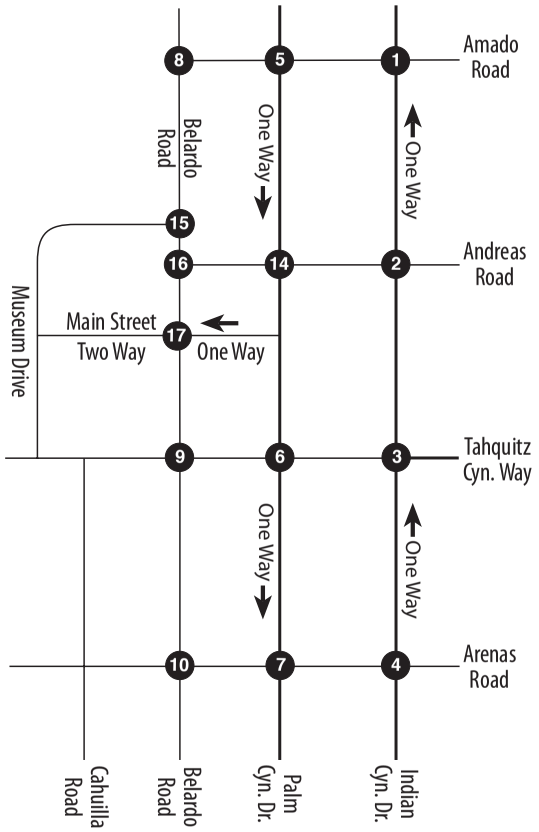
Schematic

Figure 4-5
Saturday Site Traffic Volumes Associated With Phase 1 of the Downtown Palm Springs Project



Legend

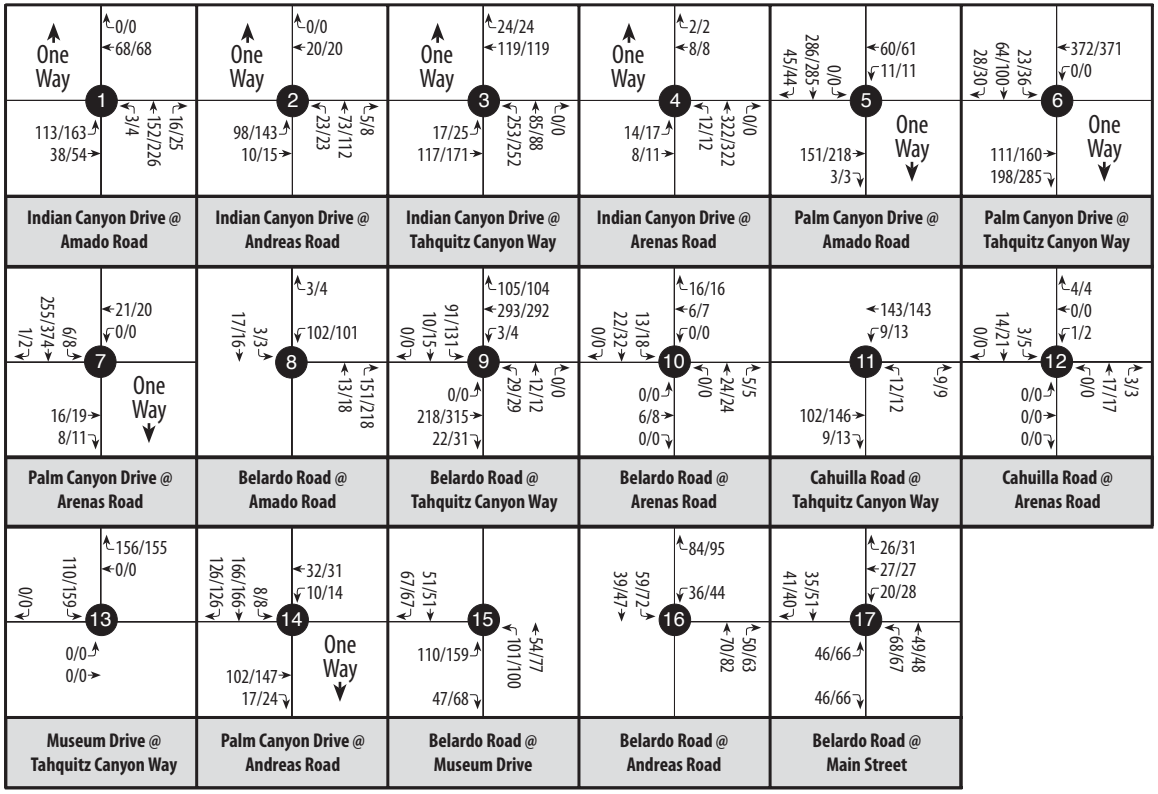
5/8 Hourly Turning Volume Without/With a Park Event

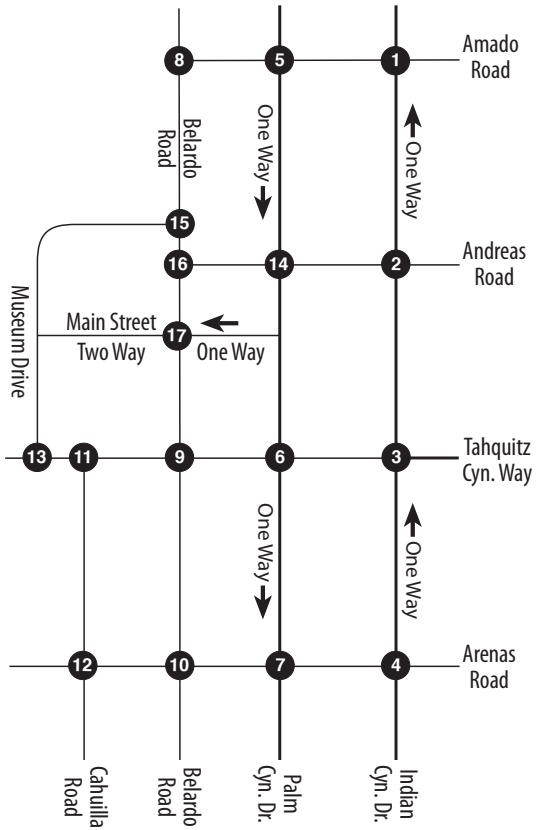


Endo Engineering

Schematic

Figure 4-6
Weekday Site Traffic Volumes Associated With Buildout of the Downtown Palm Springs Project



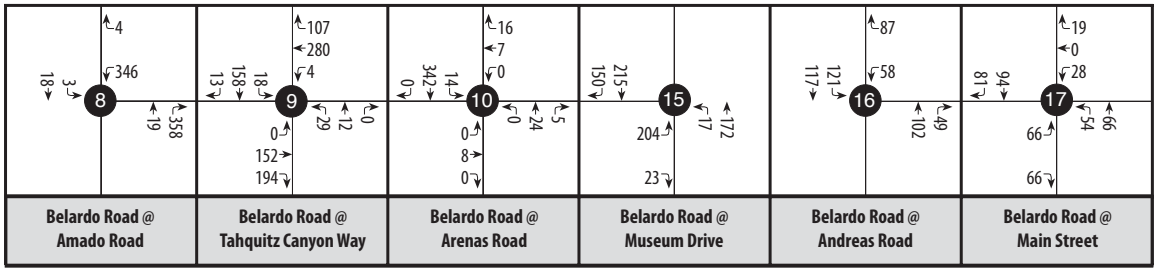


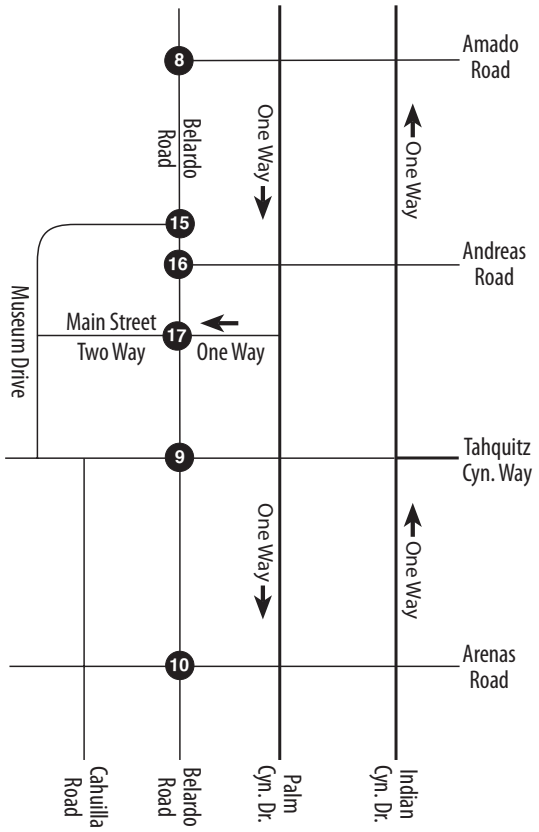
Legend
5/8 Midday/Evening Peak Hour Turning Volume

Endo Engineering

Schematic

Figure 4-7
Site Traffic Volumes During Villagefest
Associated With Buildout of the Downtown Palm Springs Project
(Without the Downtown Palm Springs Park)



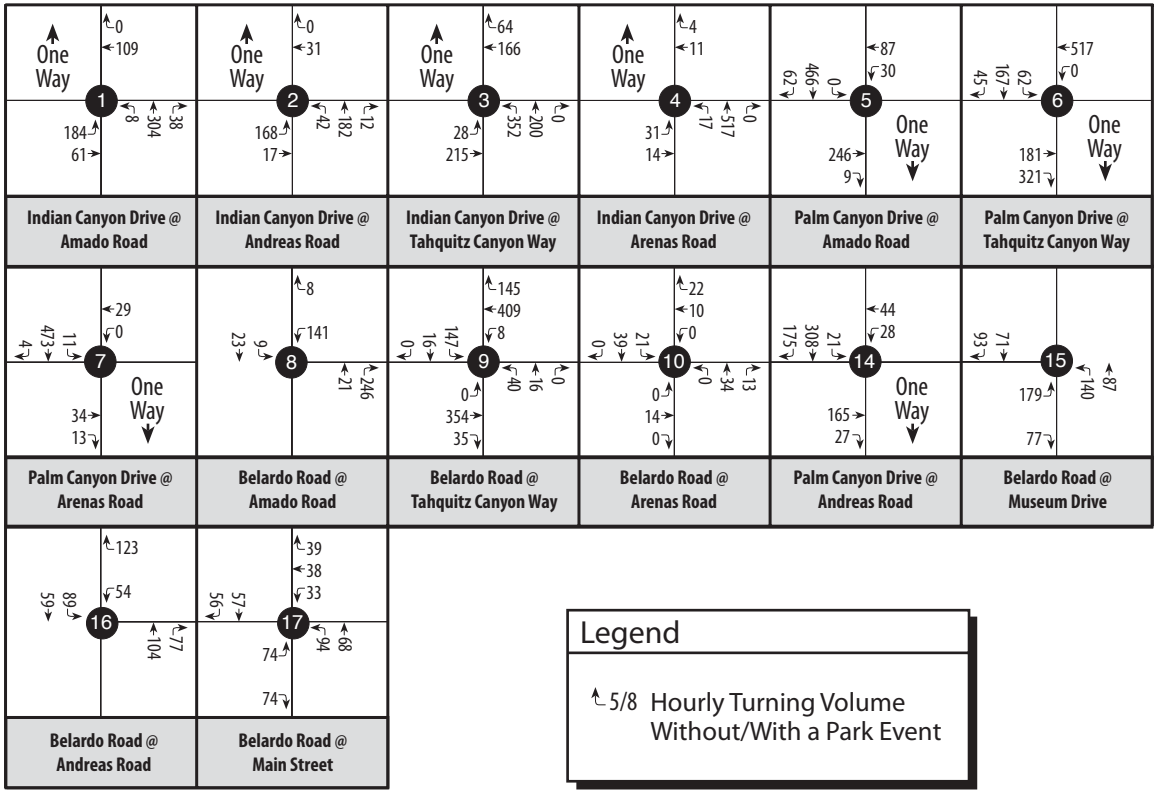


Legend
5 Highest Hour Turning Volume

Endo Engineering

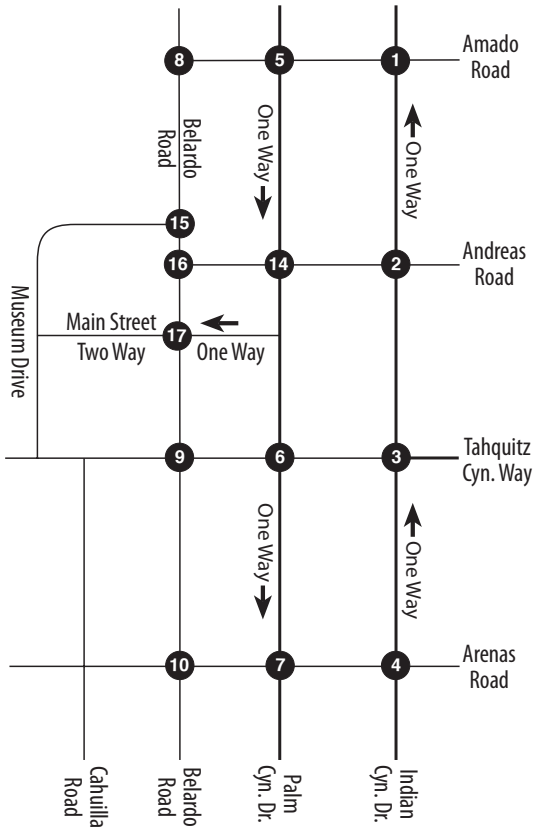
Schematic

Figure 4-8
Saturday Site Traffic Volumes Associated With Buildout of the Downtown Palm Springs Project



Legend

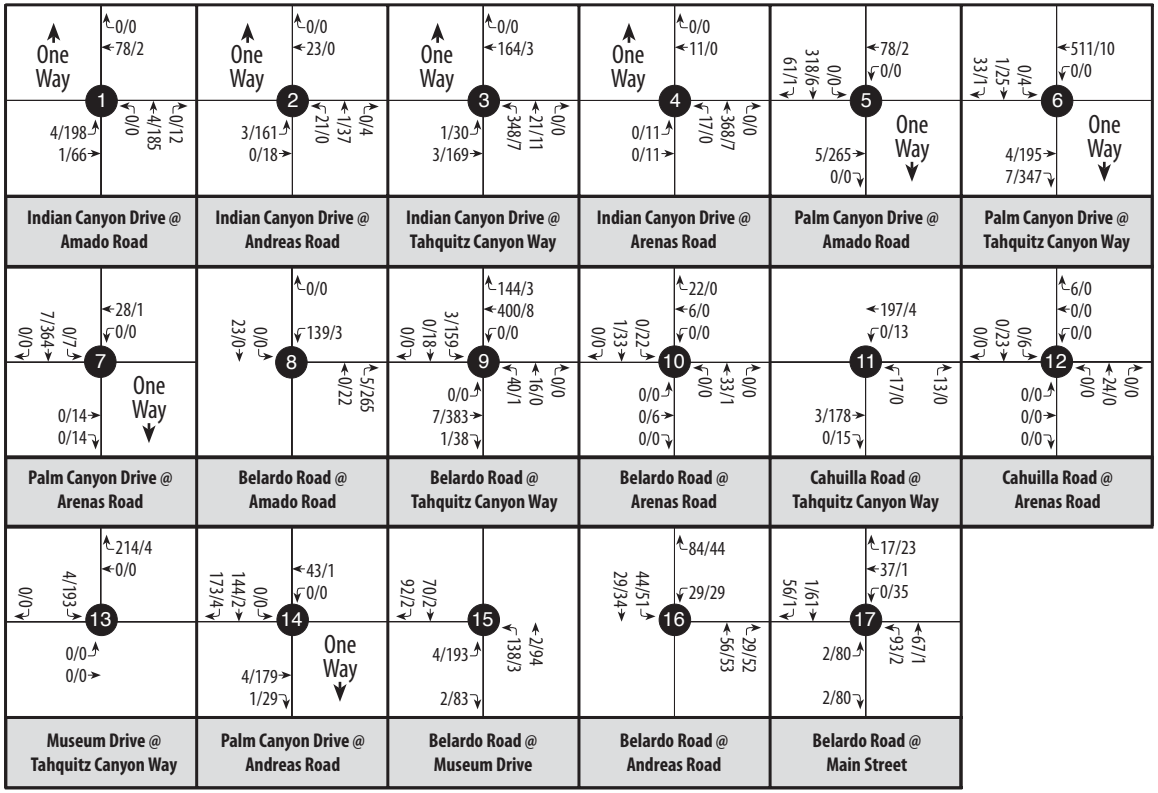
5/8 Hourly Turning Volume Without/With a Park Event

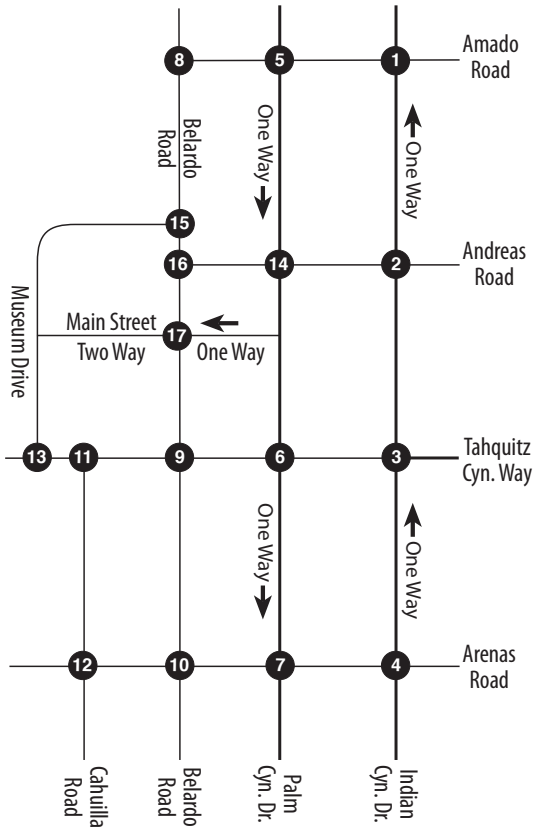


Endo Engineering

Schematic

Figure 4-9
Design Hour Inbound and Outbound Site Traffic Volumes Associated With the Downtown Palm Springs Park





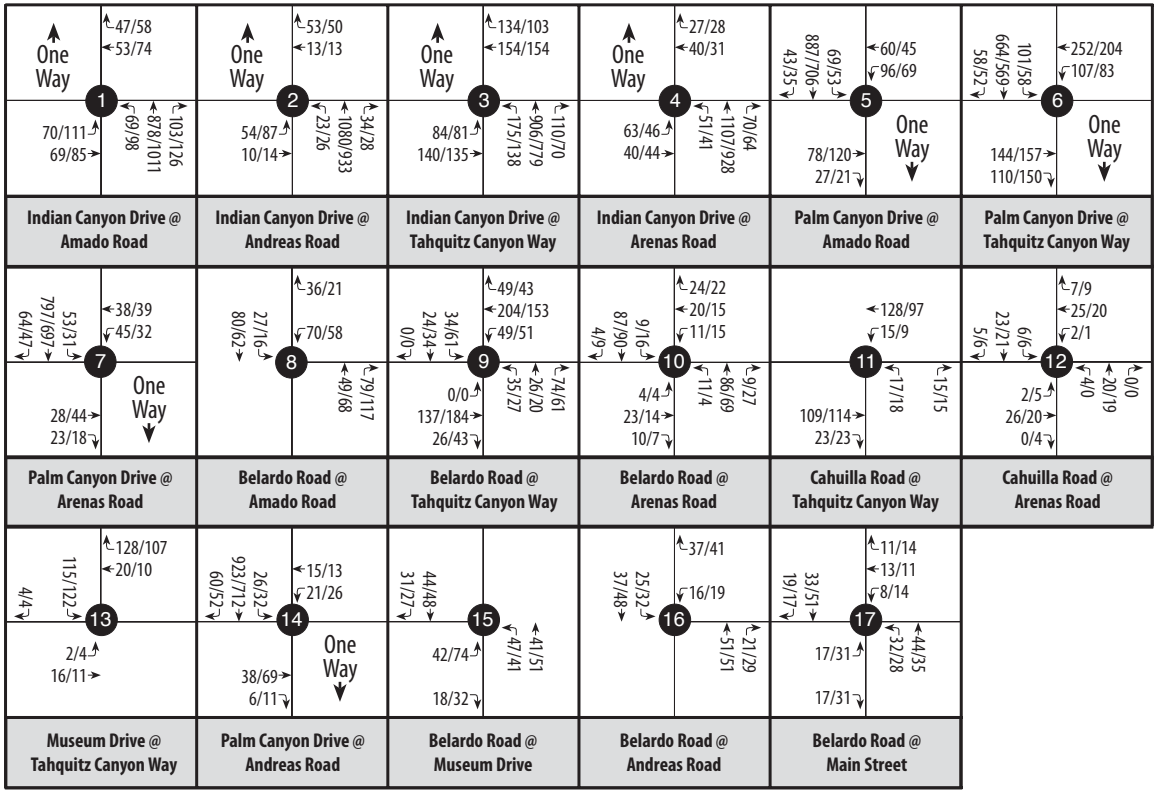
Legend

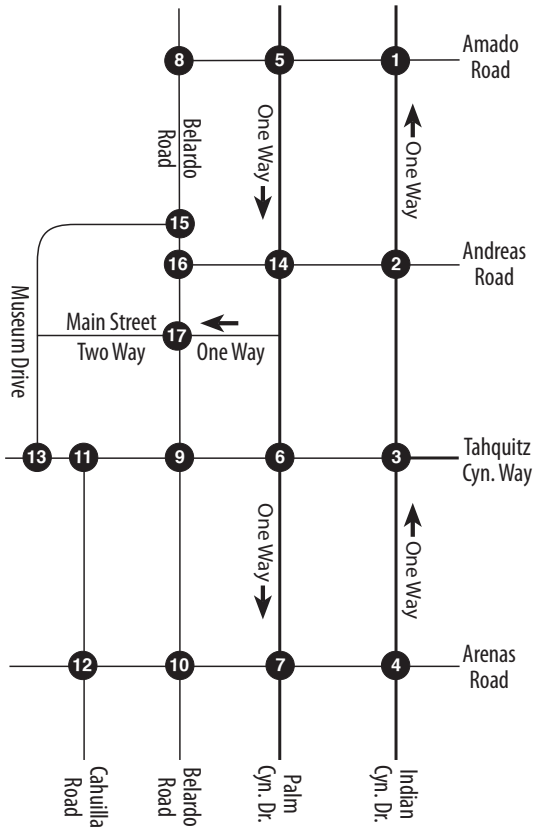
5/8 Turning Volume During Hour Preceeding/Following Event

Endo Engineering

Schematic

Figure 4-10
Existing + Phase 1 Weekday Traffic Volumes
Without the Downtown Palm Springs Park





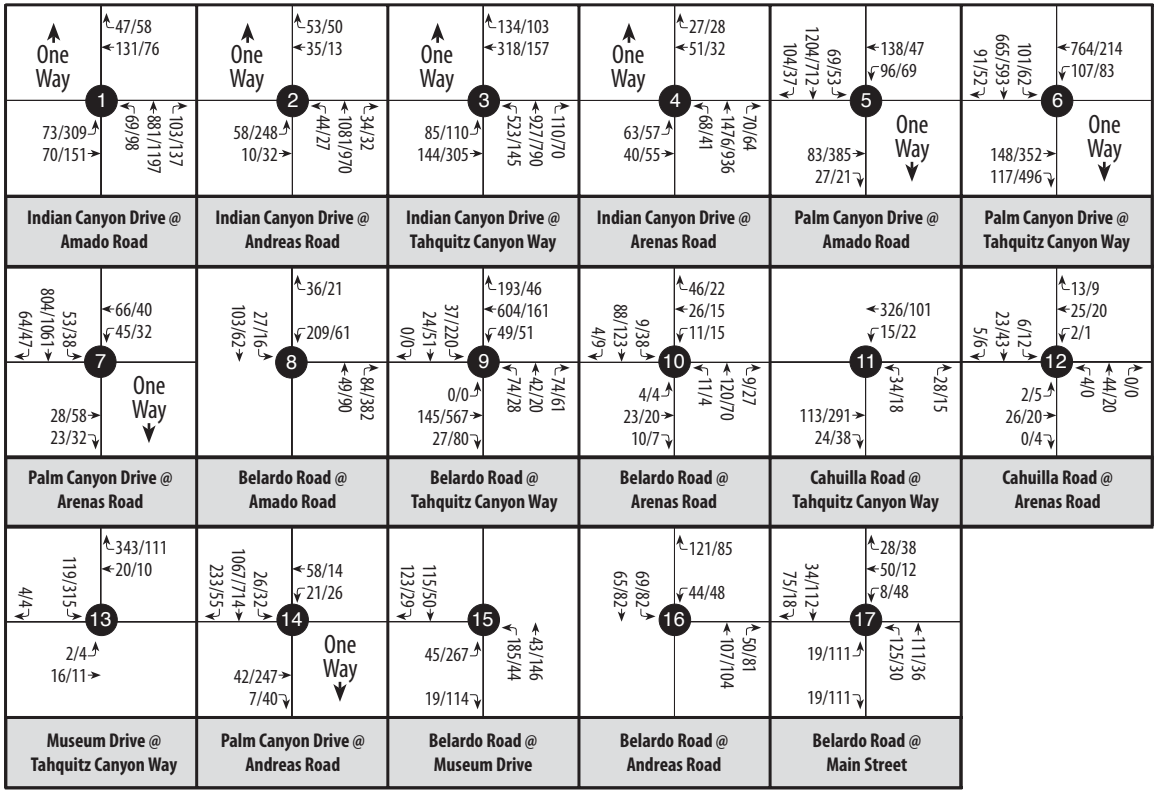
Legend

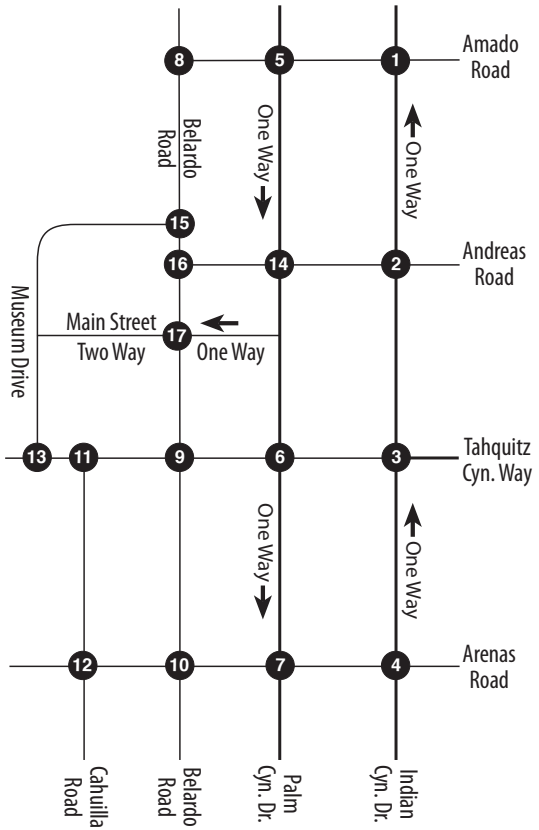
5/8 Midday/Evening Peak Hour Turning Volume

Endo Engineering

Schematic

Figure 4-11
Existing + Phase 1 Weekday Traffic Volumes
With the Downtown Palm Springs Park





Legend

5/8 Midday/Evening Peak Hour Turning Volume

Endo Engineering

Schematic

Figure 4-12 shows the existing+Phase 1 traffic projections for the hour between 7:30 PM and 8:30 PM on Thursdays with Villagefest. Projections are included in Figure 4-12 for conditions with and without a design day event at the Downtown Palm Springs Park. Figure 4-13 provides the existing+Phase 1 traffic projections for the midday peak hour on Saturdays. Projections are included therein for conditions with and without a design day event at the Downtown Palm Springs Park.

Existing+Project Buildout Traffic

The existing weekday peak hour turning volumes (shown in Figure 3-4) were added to the weekday site traffic volumes upon project buildout (shown in Figure 4-6) to determine the existing+project buildout peak hour traffic volumes at the key intersections shown in Figure 4-14. The addition of the hourly traffic volumes shown in Figure 4-9 produced the traffic projections shown in Figure 4-15, which reflect the existing+project buildout+park event weekday peak hour traffic volumes at the key intersections.

Figure 4-16 shows the existing+project buildout traffic volumes during the highest volume hour on Thursday evenings with Villagefest both with and without an event. These traffic projections were developed by adding the existing traffic volumes in Figure 3-6 to the site traffic upon buildout from Figure 4-7 and then adding the Downtown Palm Springs Park design day event traffic shown in Figure 4-9.

Figure 4-17 provides the existing+project buildout traffic volumes during the midday peak hour on Saturdays with and without a design day event at the Downtown Palm Springs Park that attracts 4,000 attendees. The traffic volumes shown in Figure 3-8 were added to those in Figure 4-8 and Figure 4-9 to develop these projections.

4C. Future Through Traffic Projections

Trip Generation Associated With Cumulative Developments

The cumulative traffic analysis included the assignment of traffic from sixteen cumulative projects (shown in Figure 2-7) that were identified through coordination with the City of Palm Springs. The location of the cumulative projects extended north to Tamarisk Road, east to Sunrise Way, and south to Mesquite Avenue. Cumulative traffic from developments located outside of this area were assumed to be part of the minimum 10 percent growth in existing traffic volumes.

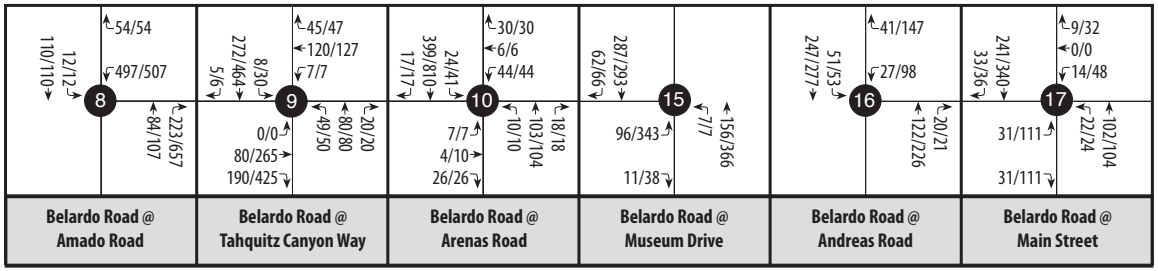
Traffic volumes were projected for the midday and evening peak hours on typical weekdays in the peak season as well as the midday peak hour of the generators on Saturdays. Since Villagefest starts at 6:00 PM during the winter season, and road closures begin up to an hour earlier, the cumulative development trip-generation forecast for Thursday evenings during Villagefest was assumed to be same as that of the weekday evening peak hour.

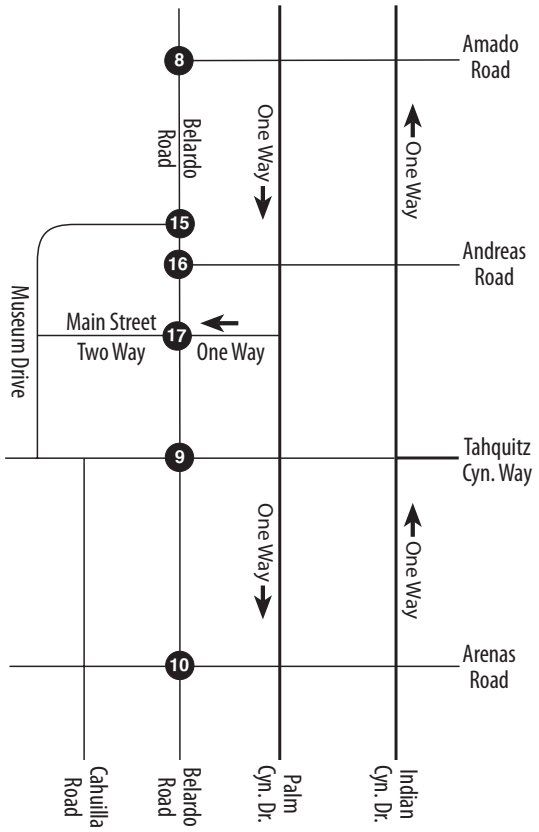
The cumulative trip-generation estimates for a typical weekday midday and evening peak hour are shown in Table 4-3. These estimates were developed from the ITE *Trip Generation Manual* (9 Edition) by applying the recommended procedures for estimating trip generation outlined by the ITE in *Trip Generation Handbook* (March, 2001). The weekday trip generation associated with the Agua Caliente Museum was increased by 67 percent to estimate the Saturday trip generation, based upon historical visitor attendance data provided by the Palm Springs Art Museum.

The cumulative projects are projected to generate a total of approximately 15,350 weekday trip-ends, as shown in Table 4-3. During the midday peak hour on weekdays, 1,371 trip-ends would be generated (626 inbound and 745 outbound). During the evening peak hour, 1,439 trip-ends would be generated (771 inbound and 668 outbound) by the sixteen cumulative projects evaluated.

Table 4-4 summarizes the trip generation for the cumulative projects during the midday peak hour on a typical Saturday. The Saturday trip generation associated with the sixteen cumulative developments evaluated (1,504 trip-ends, with 757 inbound and 747 outbound trips in the midday peak hour) is expected to be greater than the

Figure 4-12
Existing + Phase 1 Traffic Volumes During Villagefest
With and Without the Downtown Palm Springs Park





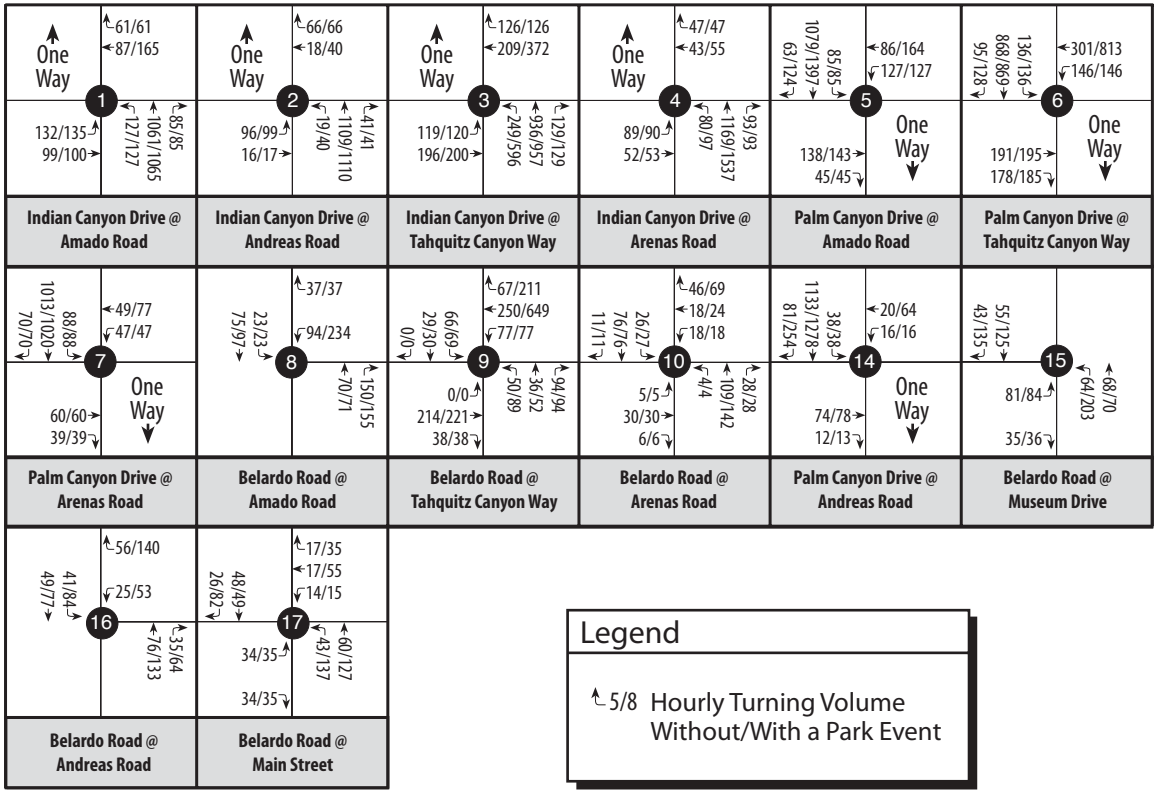
Legend

5/8 Hourly Turning Volume Without/With a Park Event

Endo Engineering

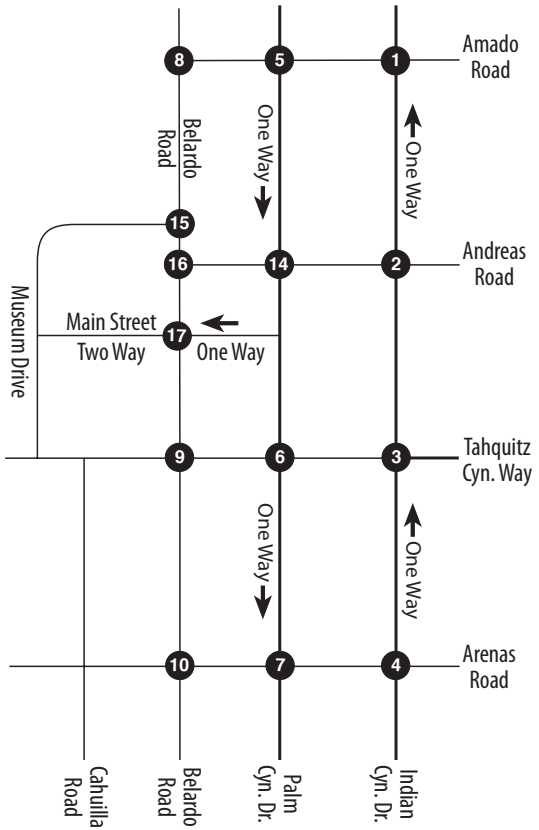
Schematic

Figure 4-13
Existing + Phase 1 Saturday Traffic Volumes
Without and Without the Downtown Palm Springs Park



Legend

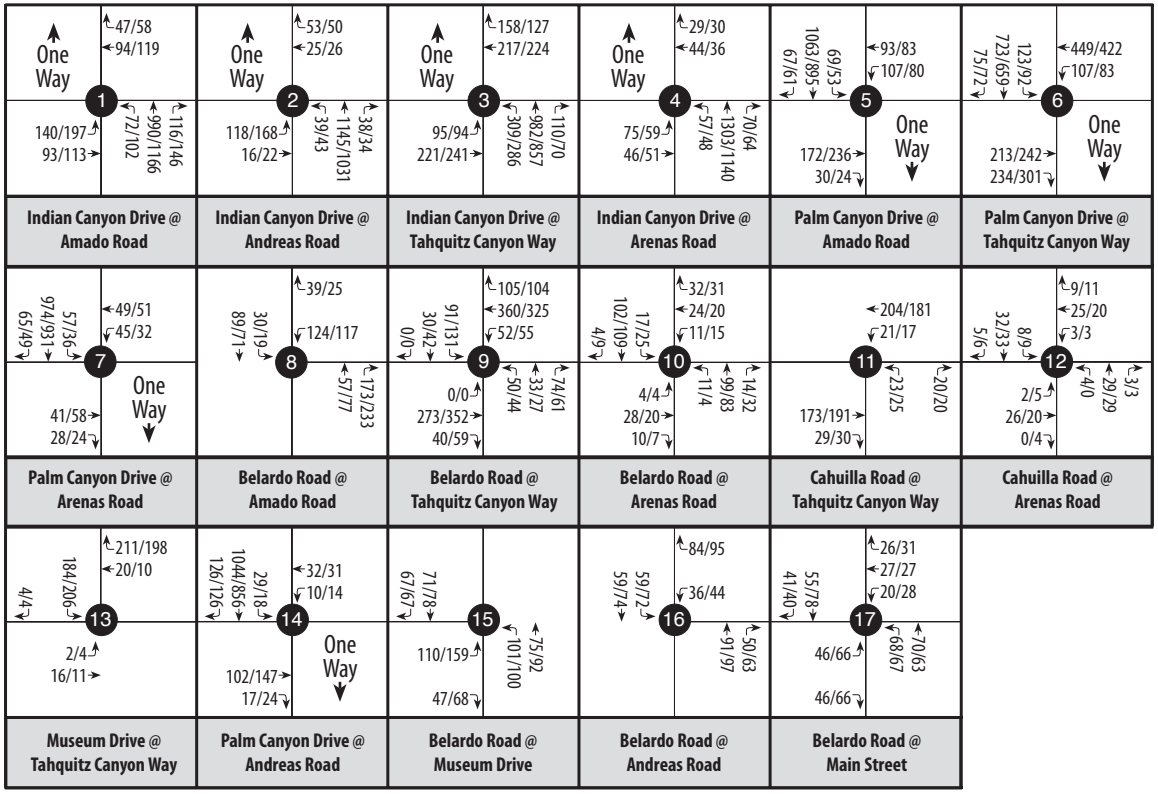
5/8 Hourly Turning Volume Without/With a Park Event

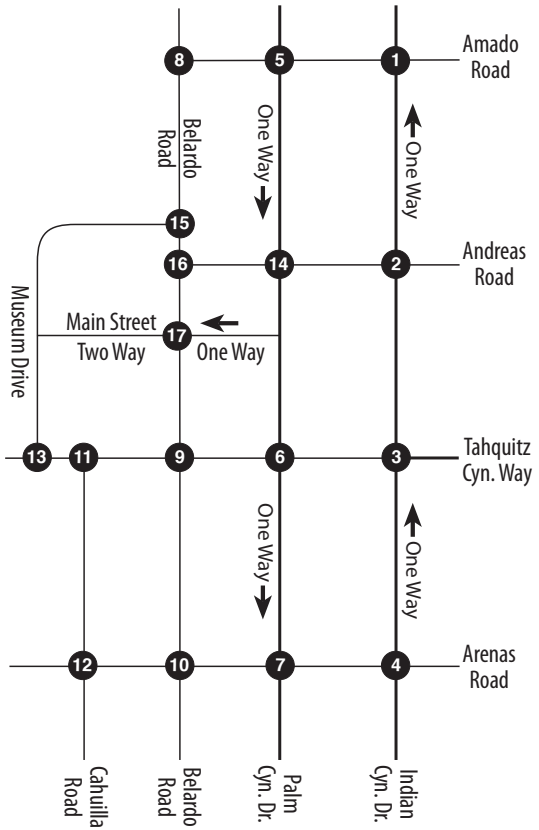


Endo Engineering

Schematic

Figure 4-14
Existing + Project Buildout Weekday Traffic Volumes
Without the Downtown Palm Springs Park



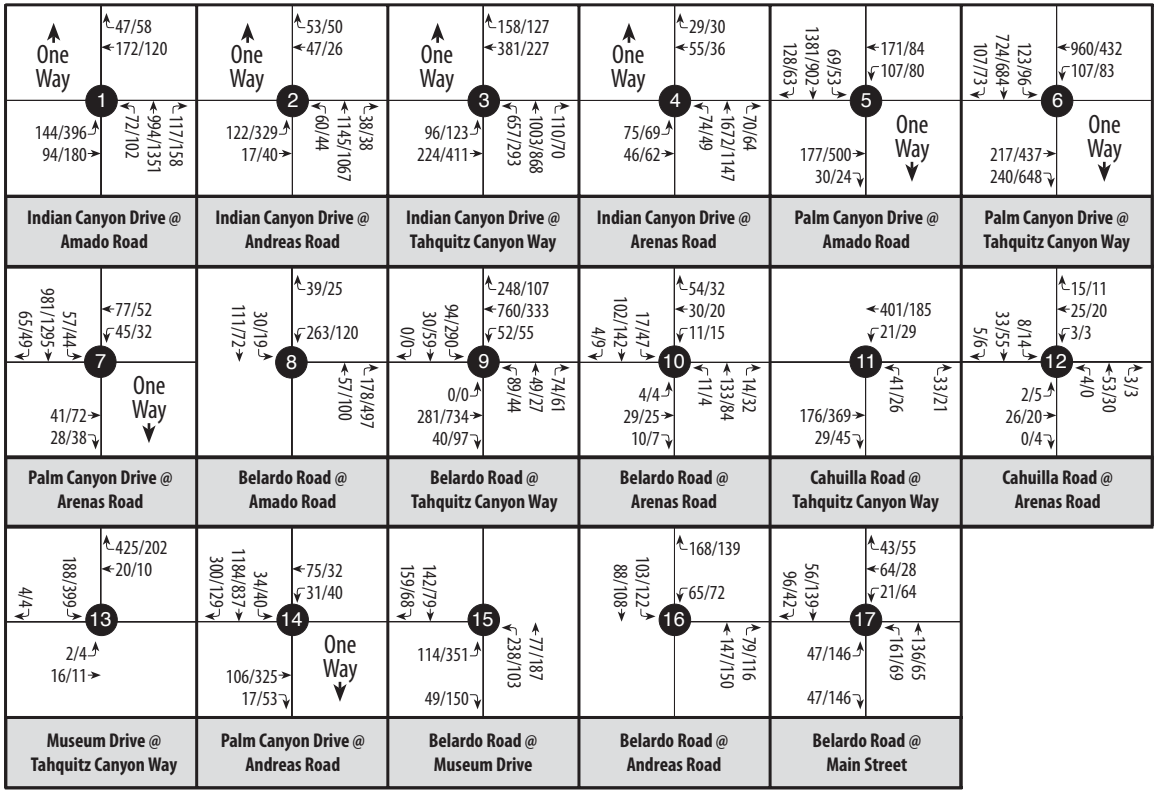


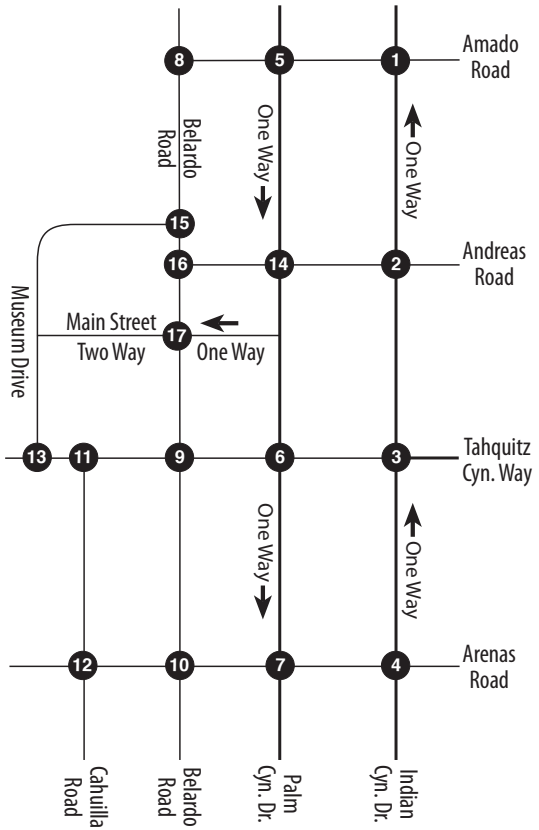
Legend
5/8 Midday/Evening Peak Hour Turning Volume

Endo Engineering

Schematic

Figure 4-15
Existing + Project Buildout Weekday Traffic Volumes
With the Downtown Palm Springs Park



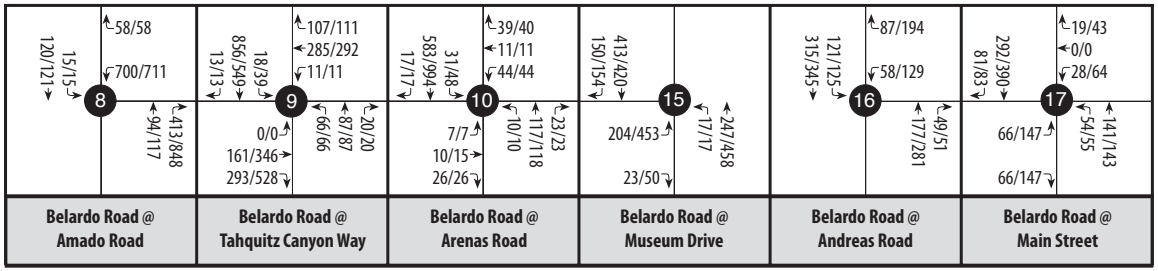


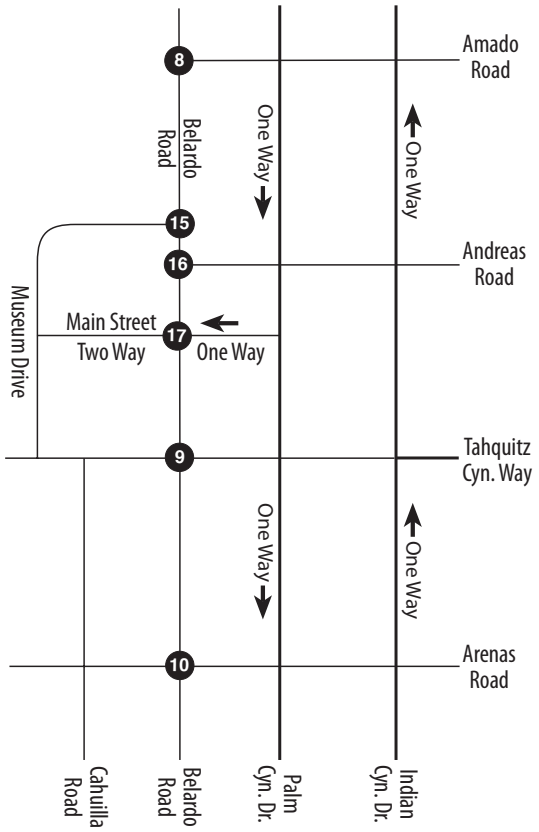
Legend
5/8 Midday/Evening Peak Hour Turning Volume

Endo Engineering

Schematic

Figure 4-16
Existing + Project Buildout Traffic Volumes During Villagefest
With and Without the Downtown Palm Springs Park





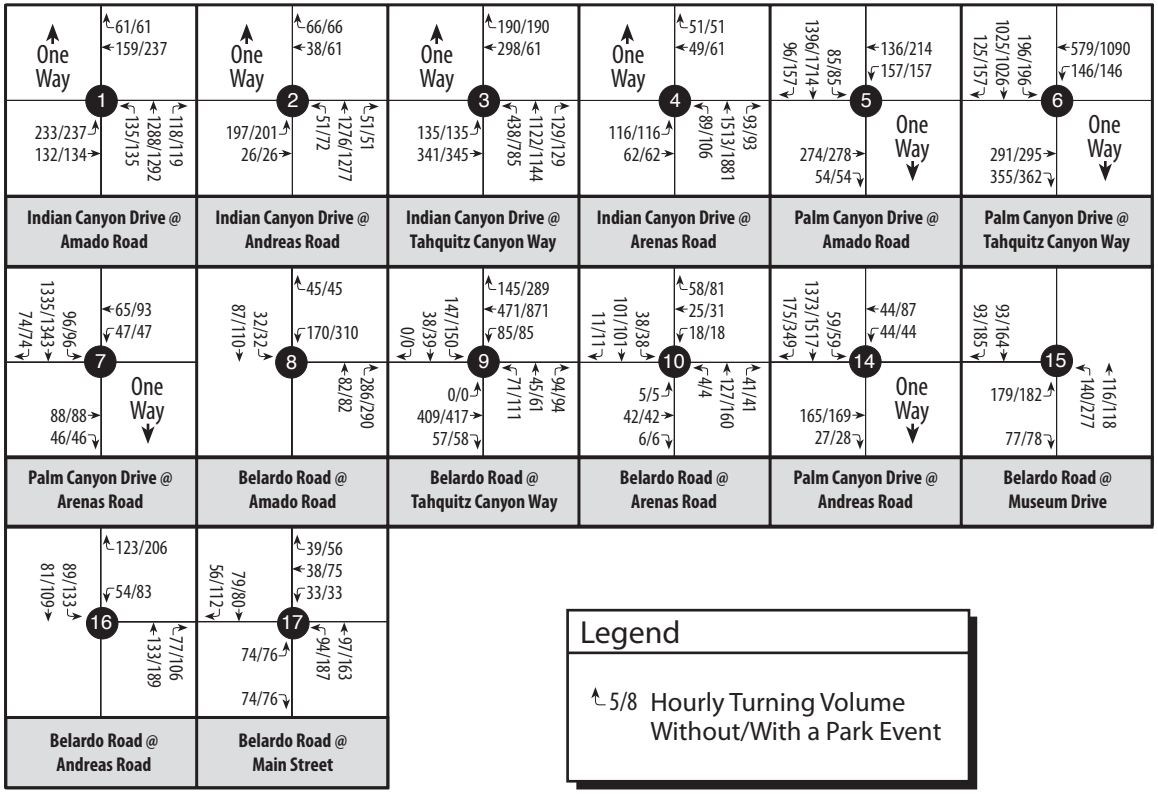
Legend

5/8 Hourly Turning Volume Without/With a Park Event

Endo Engineering

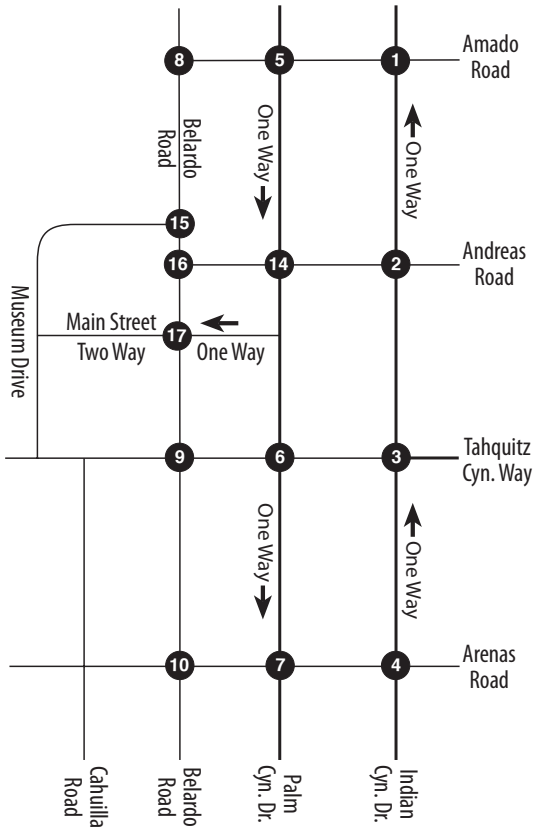
Schematic

Figure 4-17
Existing + Project Buildout Saturday Traffic Volumes
With and Without the Downtown Palm Springs Park



Legend

5/8 Hourly Turning Volume Without/With a Park Event



Endo Engineering

Schematic

weekday trip generation. Although the multi-family attached residential weekday trip generation forecast in Table 4-3 was developed from the ITE regression equations, the weighted average trip generation rates were utilized for the Saturday trip generation in Table 4-4, based on the limited number of trip generation studies for Saturdays and the small number of dwelling units being evaluated.

Table 4-3
Cumulative Project Weekday Trip-Generation Forecast[a]

Development Scenario [ITE Land Use Code]	Land Use[b] Quantity	Midday Peak Hour In	Out	Total	Evening Peak Hour In	Out	Total	Daily 2-Way
750 Lofts	From TIA	17	12	29	34	26	60	760
Agua Caliente Museum	90 TSF	89	57	146	43	104	147	2,060
The Cameron (TTM 33575) [230]	100 DU	10	41	51	40	20	60	640
Specialty Retail [826]	32.58 TSF	132	143	275	92	72	164	1,430
		142	184	326	132	92	224	2,070
Canyon Lofts (TTM 36815) [230]	34 DU	4	17	21	17	8	25	250
Dolce Hotel [310]	200 Rooms	55	47	102	61	59	120	1,420
Residential [210]	50 DU	12	35	47	35	21	56	560
Total		67	82	149	96	80	176	1,980
En Alza (TTM 36878) [210]	50 DU	12	35	47	35	21	56	560
La Serena Villas [310]	6 Rooms	2	1	3	2	2	4	50
Palm Mountain Resort [310]	20 Rooms	6	4	10	6	6	12	160
Palomino [210]	6 DU	4	12	16	5	3	8	80
Rael Development (TTM 34190)								
Existing Development (To Be Removed)								
Specialty Retail [826]	17.49 TSF	97	105	202	49	39	88	790
General Office [San Diego Rates]	2.5 TSF	6	1	7	1	5	6	50
Restaurant [932]	1.62 TSF	11	10	21	10	6	16	210
Subtotal of Trips Removed		114	116	230	60	50	110	1,050
Proposed Future Development								
Specialty Retail [826]	33 TSF	133	144	277	93	73	166	1,450
Hotel [310]	200 Rooms	55	47	102	61	59	120	1,420
Subtotal of Trips Added		188	191	379	154	132	286	2,870
Total Net Increase		74	75	149	94	82	176	1,820
Skye (TTM 36738) [210]	40 DU	10	30	40	29	17	46	450
Sol (TTM 36525) [210]	17 DU	3	10	13	11	6	17	160
Spa Hotel [310]	150 Rooms	43	37	80	46	44	90	970

a. Unadjusted trip generation forecast based upon a direct application of the peak hour of the generator trip-generation rates and regression equations published by the ITE in Trip Generation Manual (9th Edition, 2012). The use of specialty retail (Land Use Code 826) was based upon similar assumptions in the Rael Development Traffic Study. No pass-by trip adjustments were assumed for specialty retail development.

b. From TIA means taken from the traffic impact analysis for the development. TSF=Thousand square feet of building floor area. DU=Dwelling units.

Table 4-3 (Continued)
Cumulative Project Weekday Trip-Generation Forecast[a]

Development Scenario [ITE Land Use Code]	Land Use[b] Quantity	Midday Peak Hour In	Out	Total	Evening Peak Hour In	Out	Total	Daily 2-Way
The Palm Canyon (TTM 33514)								
Existing Retail [820]	45.936 TSF	133	149	282	180	195	375	4,100
Portion Occupied	50%[c]	67	75	142	90	98	188	2,050
Proposed Retail [820]	39.25 TSF	120	135	255	163	176	339	3,700
Net Retail Increase		53	60	113	73	78	151	1650
Primary with Pass-by	34%[d]	35	35	70	48	48	96	1090
MFA Residential [230]	125 DU	10	51	61	48	24	72	780
Total Net Increase		45	86	131	96	72	168	1,870
Village Traditions II [210]	31 DU	6	17	23	20	11	31	300
Vivante (TPM 35989)	From TIA	102	86	188	105	94	199	1,810
Total Cumulative Trip Generation		626	745	1,371	771	668	1,439	15,350

a. Unadjusted trip generation forecast based upon a direct application of the peak hour of the generator trip generation rates and regression equations published by the ITE Trip Generation (Ninth Edition).
b. From TIA means taken from the traffic impact analysis for the development. TSF=Thousand square feet of building floor area. DU=Dwelling units.
c. The assumption that "The Palm Canyon" site is 50 percent occupied is based upon a drive-by review of the site.
d. Pass-by trips are those involving motorists passing the site who opt to make an intermediate stop to visit the retail development on-site on their way to another destination. Since the inbound and the outbound volume of pass-by trips must equal (i.e. any pass-by trip that enters the site must depart) the smaller of the two volumes constrains the pass-by trip percentage.

The typical weekday traffic of each of the sixteen cumulative developments was assigned to the streets and intersections in the study area and then added together to identify the year 2017 and year 2030 cumulative peak hour turning movement and daily traffic projections shown in Figure 4-18 and Figure 4-19. Where possible, the cumulative traffic volumes of each project were assigned through the study area based upon the cumulative traffic distribution and assignment information in the available traffic studies for the developments. In those instances where no traffic study was available, the location of future trip destinations and origins was considered in conjunction with the turning percentages of entering traffic at the key intersections in the vicinity of each cumulative development, to determine the future cumulative trip distribution and traffic assignment.

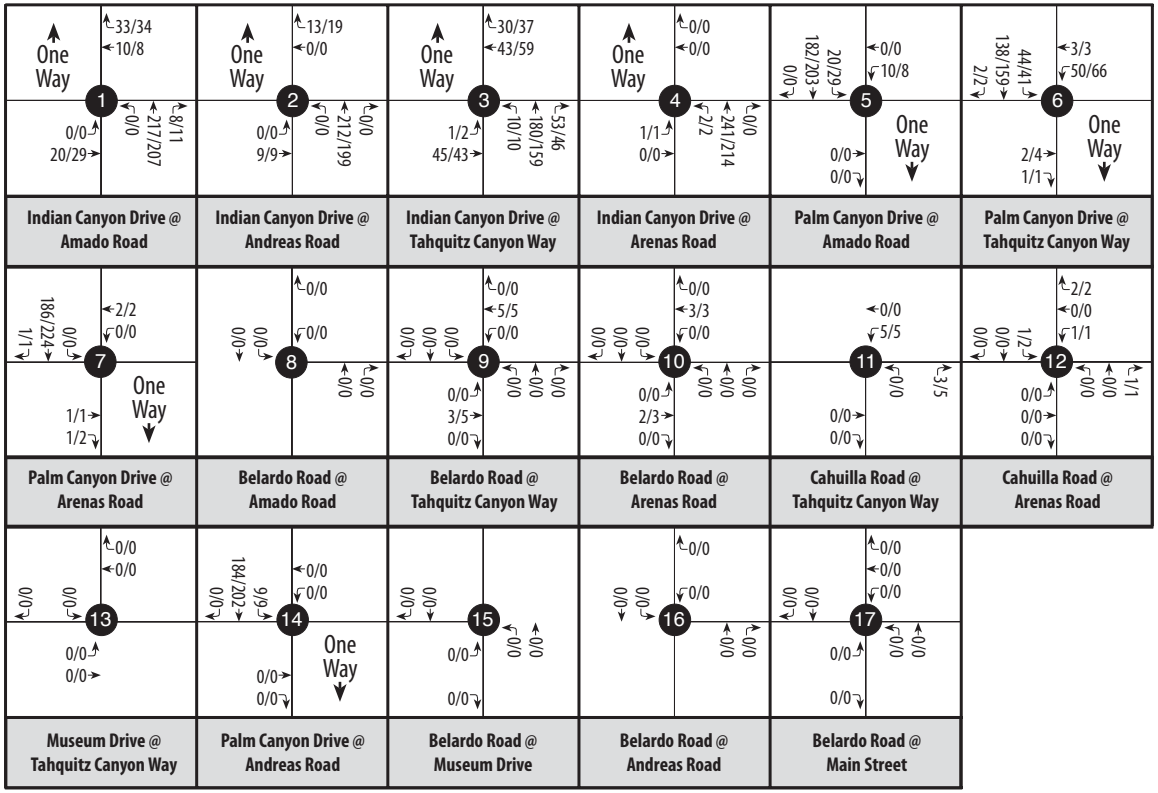
The closure of Palm Canyon Drive on Thursdays for Villagefest would cause a portion of the cumulative traffic to divert to Belardo Road. These diverted cumulative traffic volumes were included in the opening year 2017 and year 2030 traffic projections for the key intersections along Belardo Road during Villagefest without site traffic (refer to Figure 4-24 and Figure 4-31 after page 4-16).

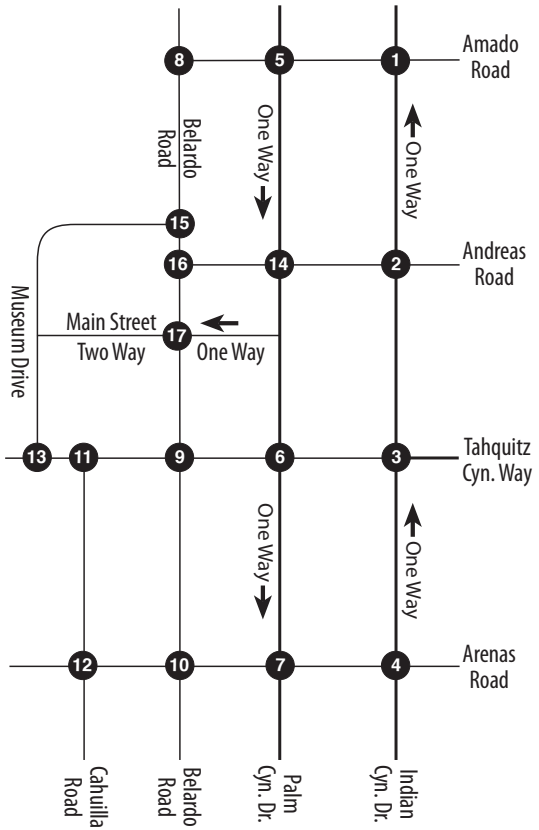
Figure 4-20 depicts the future cumulative midday peak hour turning volumes at the key intersections evaluated on Saturdays. Figure 4-21 shows the future daily cumulative traffic projections throughout the study area on Saturdays.

4D. Future Total Traffic Projections

Figure 4-22 shows the typical weekday traffic projections for the roadways within the study area upon buildout of the *Palm Springs General Plan*. These projections were developed in conjunction with the 2007 update of the *Palm Springs General Plan* and include the site traffic that would utilize the roadways within the study area.

Figure 4-18
Cumulative Weekday Peak Hour Traffic Volumes





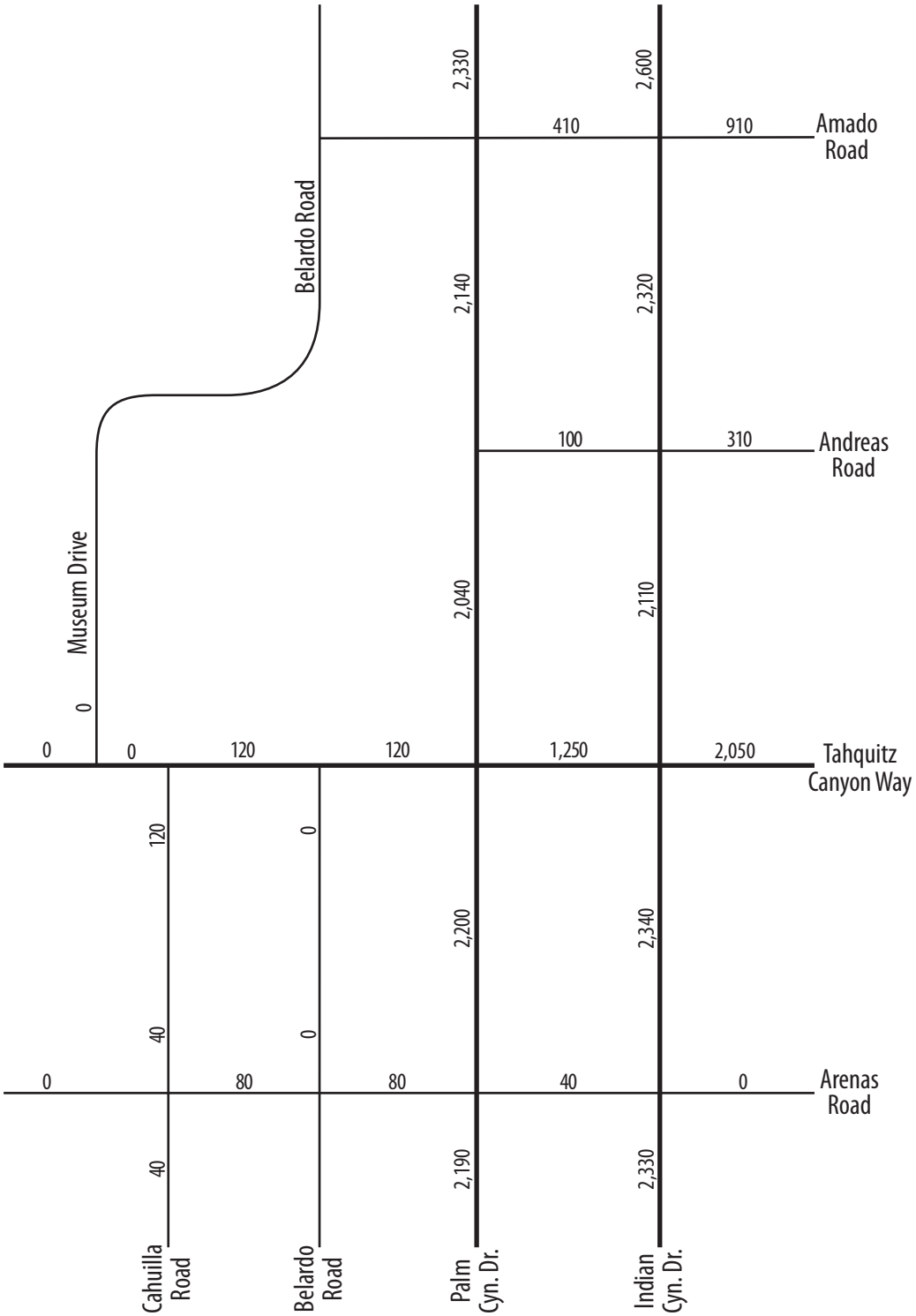
Legend
5/8 Midday/Evening Peak Hour Turning Volume

Endo Engineering

Schematic

Figure 4-19

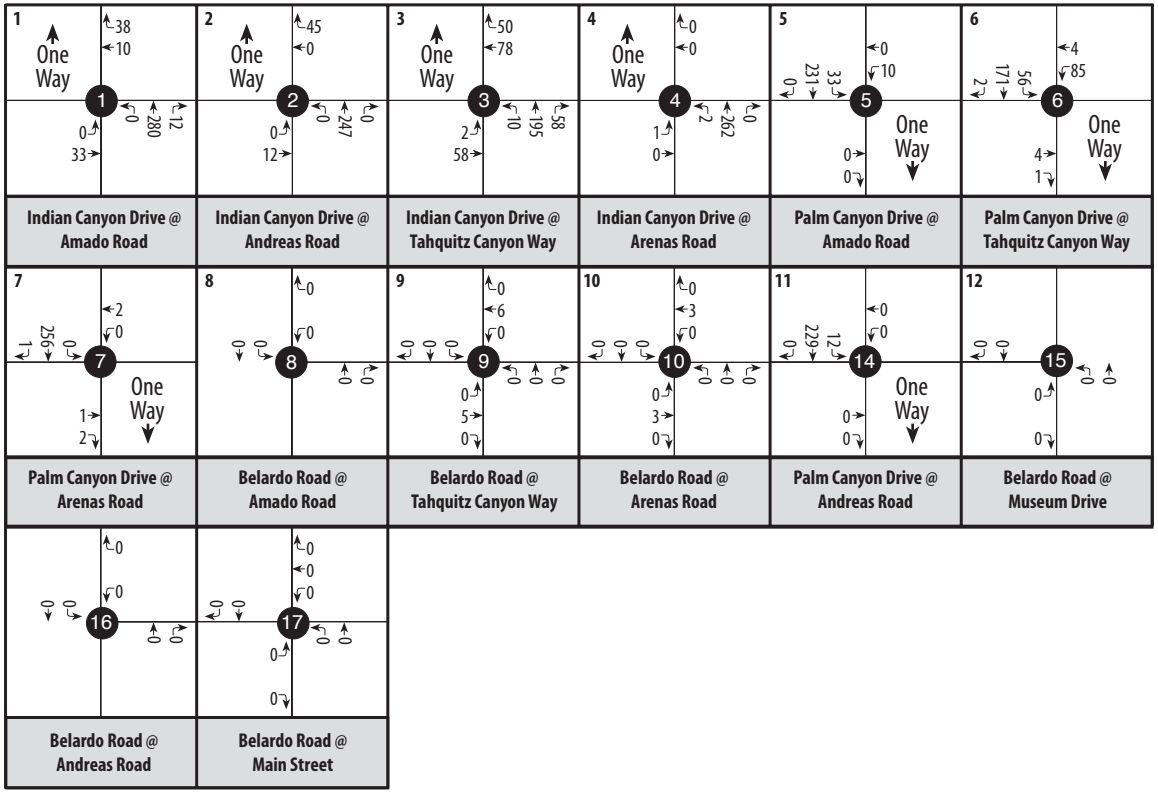
Year 2030 Cumulative Weekday Traffic Projections

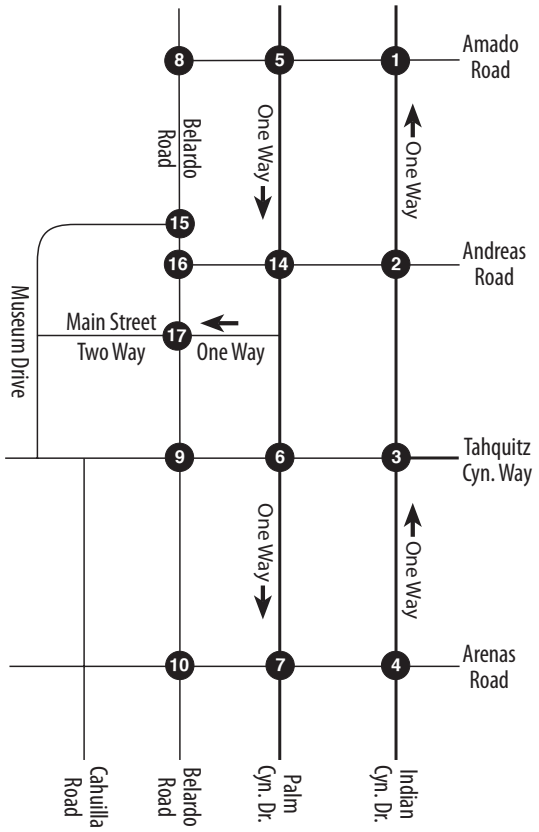


Endo Engineering

Scale: 1" = 350'

Figure 4-20
Cumulative Development Traffic Volumes on Saturdays





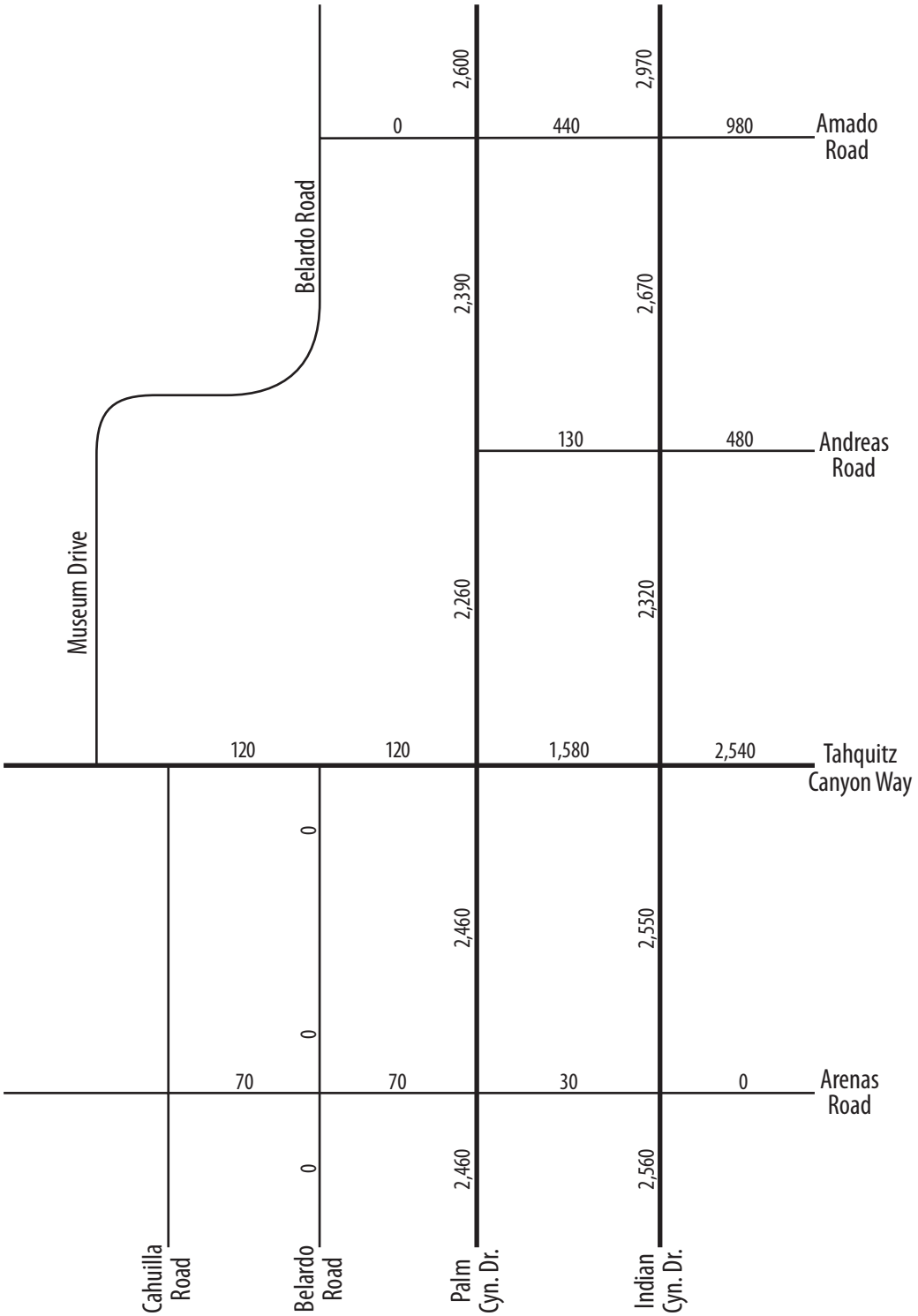
Legend
5 Peak Hour Turning Volume

Endo Engineering

Schematic

Figure 4-21

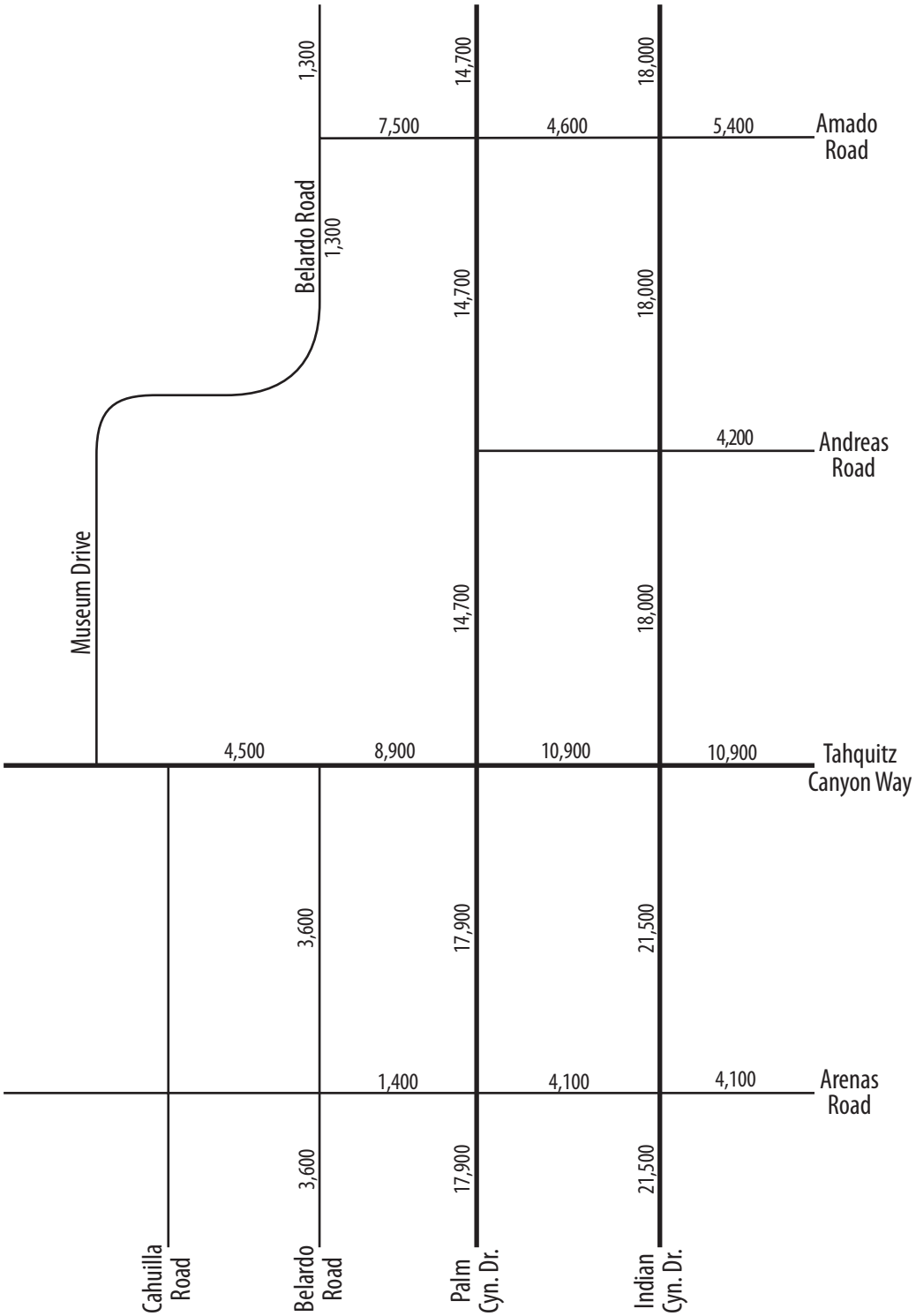
Year 2030 Cumulative Saturday Traffic Projections



Endo Engineering

Scale: 1" = 350'

Figure 4-22
General Plan Build-Out Typical Weekday Traffic Projections



Endo Engineering

Source: "City of Palm Springs General Plan," Oct. 24, 2007.

Scale: 1" = 350'

Table 4-4
Cumulative Project Saturday Trip-Generation Forecast[a]

Development Scenario [ITE Land Use Code]	Land Use[b] Quantity	Midday Peak Hour In	Out	Total	Daily 2-Way
750 Lofts	From TIA	17	12	29	760
Agua Caliente Museum	90 TSF	89	57	146	2,060
The Cameron (TTM 33575) [230]	100 DU	10	41	51	640
Specialty Retail [826]	32.58 TSF	132	143	275	1,430
		142	184	326	2,070
Canyon Lofts (TTM 36815) [230]	34 DU	4	17	21	250
Dolce Hotel [310]	200 Room	55	47	102	1,420
Residential [210]	50 DU	12	35	47	560
		67	82	149	1,980
En Alza (TTM 36878) [210]	50 DU	12	35	47	560
La Serena Villas [310]	6 Room	2	1	3	50
Palm Mountain Resort [310]	20 Room	6	4	10	160
Palomino [210]	6 DU	4	12	16	80
Rael Development (TTM 34190)					
Existing Development (To Be Removed)					
Specialty Retail [826]	17.49 TSF	97	105	202	790
General Office [San Diego Rates]	2.5 TSF	6	1	7	50
Restaurant [932]	1.62 TSF	11	10	21	210
Subtotal of Trips Removed		114	116	230	1,050
Proposed Future Development					
Specialty Retail [826]	33 TSF	133	144	277	1,450
Hotel [310]	200 Room	55	47	102	1,420
Subtotal of Trips Added		188	191	379	2,870
Total Net Increase		74	75	149	1,820
Skye (TTM 36738) [210]	40 DU	10	30	40	450
Sol (TTM 36525) [210]	17 DU	3	10	13	160
Spa Hotel [310]	150 Room	43	37	80	970

a. Unadjusted trip generation forecast based upon a direct application of the peak hour of the generator trip generation rates and regression equations published by the ITE Trip Generation (Ninth Edition). The use of specialty retail (Land Use Code 826) was based upon similar assumptions in the Rael Development Traffic Study. No pass-by trip adjustments were assumed for specialty retail development.
b. TSF=Thousand square feet of building floor area. DU=Dwelling units.

Table 4-4 Continued
Cumulative Project Saturday Trip-Generation Forecast[a]

Development Scenario [ITE Land Use Code]	Land Use[b] Quantity	Midday Peak Hour In	Out	Total	Evening Peak Hour In	Out	Total	Daily 2-Way
The Palm Canyon -TTM 33514								
Existing Retail [820]	45.936 TSF	133	149	282	180	195	375	4,100
Portion Occupied	50%[c]	67	75	142	90	98	188	2,050
Proposed Retail [820]	39.25 TSF	120	135	255	163	176	339	3,700
Net Retail Increase		53	60	113	73	78	151	1650
Primary with Pass-By	34%[d]	35	35	70	48	48	96	1090
MFA Residential [230]	125 DU	10	51	61	48	24	72	780
Total Net Increase		45	86	131	96	72	168	1,870
Village Traditions II [210]	31 DU	6	17	23	20	11	31	300
Vivante (TPM 35989)	From TIA	102	86	188	105	94	199	1,810
Total Cumulative Trip Generation		626	745	1,371	771	668	1,439	15,350

a. Unadjusted trip generation forecast based upon a direct application of the peak hour of the generator trip generation rates and regression equations published by the ITE Trip Generation (Ninth Edition).
b. TSF=Thousand square feet of building floor area. DU=Dwelling units.
c. The assumption that "The Palm Canyon" site is 50 percent occupied is based upon a drive-by review of the site.
d. Pass-by trips are those involving motorists passing the site who opt to make an intermediate stop to visit the retail development on-site on their way to another destination. Since the inbound and the outbound volume of pass-by trips must equal (i.e. any pass-by trip that enters the site must depart) the smaller of the two volumes constrains the pass-by trip percentage.

Year 2030 peak hour turning movement projections were developed by assuming that the increase in the peak hour volumes between the year 2015 and the year 2030 would mirror the change in the daily volumes. The increase in the peak hour turning volumes was normalized to the growth in the daily traffic volumes to ensure that the future peak hour volumes would more accurately reflect the overall increase in daily traffic volumes.

The existing turning movement volumes at the key intersections were first modified to reflect the future roadway network within the study area then proportionally increased to represent the future year 2030 turning movements. 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. All of the cumulative projects shown in Table 2-4 were assumed to be completed by the time the initial phase of the Downtown Palm Springs Project is completed. Consequently, the projected cumulative traffic volumes were added to the year 2017 and the year 2030 peak hour traffic volumes. The future buildout year 2030 traffic projections were identified as the larger of: (1) *Palm Springs 2007 General Plan* buildout traffic projection, or (2) the existing traffic volumes (including a ten percent increase for future growth)+cumulative traffic volumes+site traffic volumes.

The methodology utilized to develop the future Saturday traffic volumes was similar to that used to develop the future weekday traffic projections. The future year 2030 weekday buildout traffic projections in the *Palm Springs 2007 General Plan* for the study area were expanded by 15 percent to reflect Saturday traffic conditions. This expansion factor was identified by comparing the Saturday and weekday volumes from the new 24-hour counts made on Indian Canyon Drive, south of Andreas Road. The Palm Canyon Drive counts were not considered because the construction activity along Palm Canyon Drive may have influenced the traffic volumes during the weekday and Saturday 24-hour traffic counts.

Year 2017 Ambient Peak Hour Traffic Projections

Figure 4-23 shows the midday and evening peak hour turning volume projections at the key intersections on weekdays in the future year 2017 without site traffic. These projections include the existing volumes in the peak season plus the cumulative traffic volumes associated with sixteen local projects plus the projected regional and area-wide traffic growth anticipated as the *Palm Springs 2007 General Plan* is implemented.

Figure 4-24 provides the future year 2017 turning volume projections without site traffic during the highest volume hour associated with Villagefest. Figure 4-25 shows the midday peak hour traffic projections at the key intersections on Saturdays in the year 2017, prior to the addition of site-generated traffic.

Year 2017 Total Peak Hour Traffic Projections

Figure 4-26 provides the opening year 2017 weekday traffic projections at the key intersections, following the addition of the site traffic generated by the initial phase of the Downtown Palm Springs Project. These projections do not include the traffic associated with a design day event at the Downtown Palm Springs Park. Figure 4-27 shows the year 2017 weekday traffic projections at the key intersections following the addition of the traffic generated by a design day event at the Downtown Palm Springs Park.

Figure 4-28 shows the traffic projections for the opening year 2017 during Villagefest with and without a design day event at the Downtown Palm Springs Park. These volumes reflect future conditions during the hour between 7:30 and 8:30 PM on Thursdays. The volumes shown include the traffic generated by the initial phase of the Downtown Palm Springs Project, cumulative traffic, and area-wide traffic growth.

Figure 4-29 provides the midday peak hour traffic projections for Saturdays in the opening year 2017 with and without a design day event at the Downtown Palm Springs Park. These volumes reflect future conditions during the hour between 7:30 and 8:30 PM on Thursdays. The volumes shown include the traffic generated by the initial phase of the Downtown Palm Springs Project, cumulative traffic, and area-wide traffic growth.

Year 2030 Ambient Peak Hour Traffic Projections

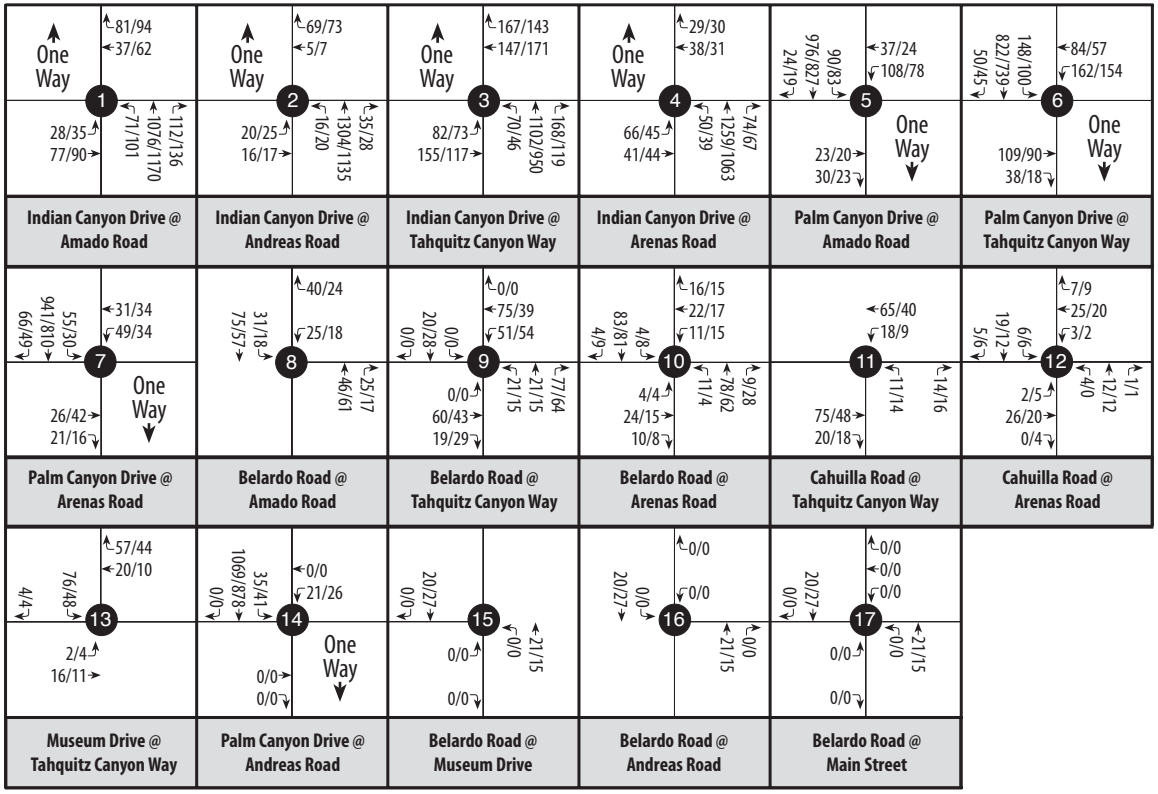
Figure 4-30 shows the weekday traffic projections for the midday and evening peak hour in the future year 2030, prior to the addition of site-generated traffic. Figure 4-31 provides the year 2030 traffic projections without site traffic for the key intersections along Belardo Road during the hour between 7:30 PM and 8:30 PM with Villagefest. Figure 4-32 shows the year 2030 midday peak hour traffic projections at the key intersections on Saturdays, prior to the addition of site traffic volumes.

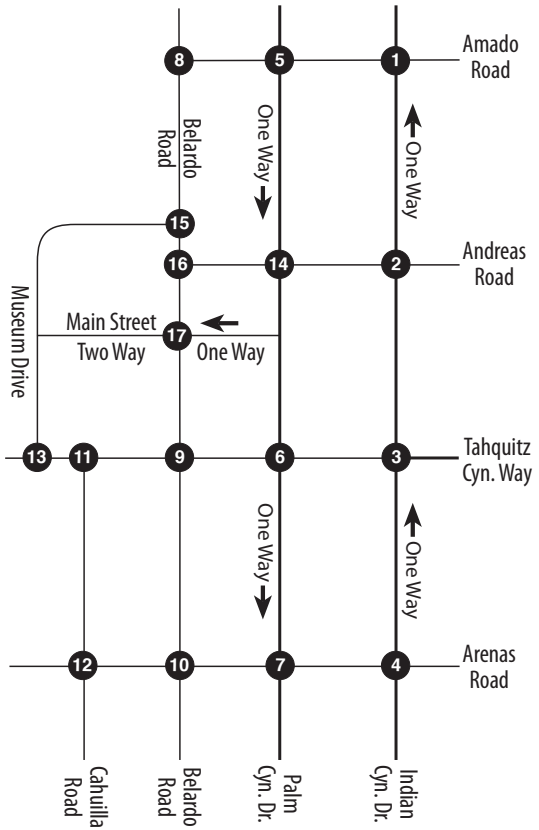
Year 2030 Total Peak Hour Traffic Projections

Figure 4-33 shows the future year 2030 weekday peak hour turning volume projections at the key intersections including the traffic generated by the completion of the Downtown Palm Springs Project. These traffic projections do not include the traffic associated with a design day event at the Downtown Palm Springs Park. The year 2030 weekday (two-way) traffic projections for the roadways throughout the study area with the traffic generated by the completion of the Downtown Palm Springs Project are shown in Figure 4-34. The traffic projections shown in Figure 4-34 do not reflect conditions with a design day event at the Downtown Palm Springs Park.

Figure 4-35 shows the future year 2030 weekday peak hour turning volume projections at the key intersections including the traffic generated by the completion of the Downtown Palm Springs Project and the traffic associated with a design day event at the Downtown Palm Springs Park. Figure 4-36 shows the future year 2030 hourly turning volume projections for the key intersections along Belardo Road Villagefest upon buildout of the Downtown Palm Springs Project with and without the traffic associated with a design day event at the Downtown Palm Springs Park. These traffic projections reflect the period between 7:30 PM and 8:30 PM.

Figure 4-23
Future Year 2017 Weekday Traffic Volumes
Without Site Traffic





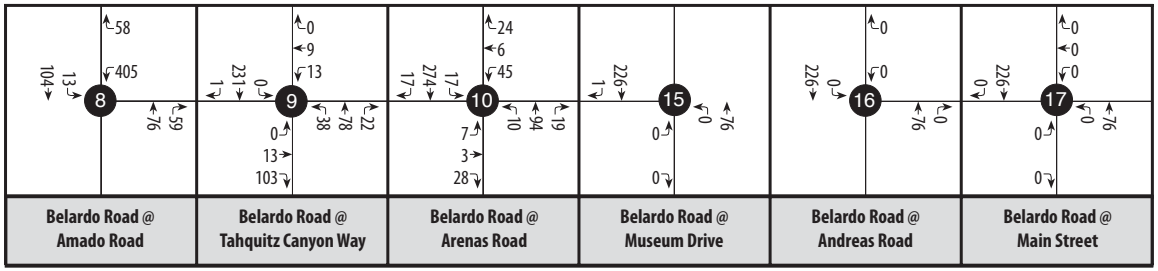
Legend

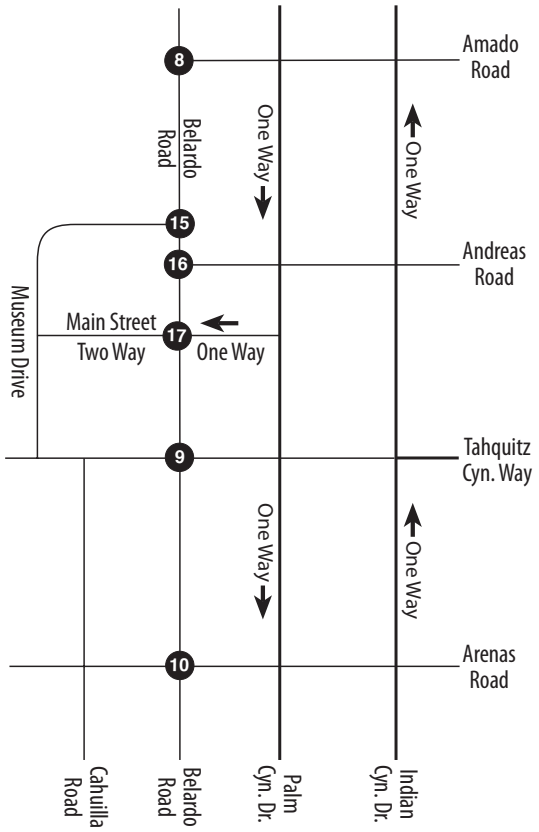
5/8 Midday/Evening Peak Hour Turning Volume

Endo Engineering

Schematic

Figure 4-24
Opening Year 2017 Traffic Volumes During Villagefest
Without Site Traffic



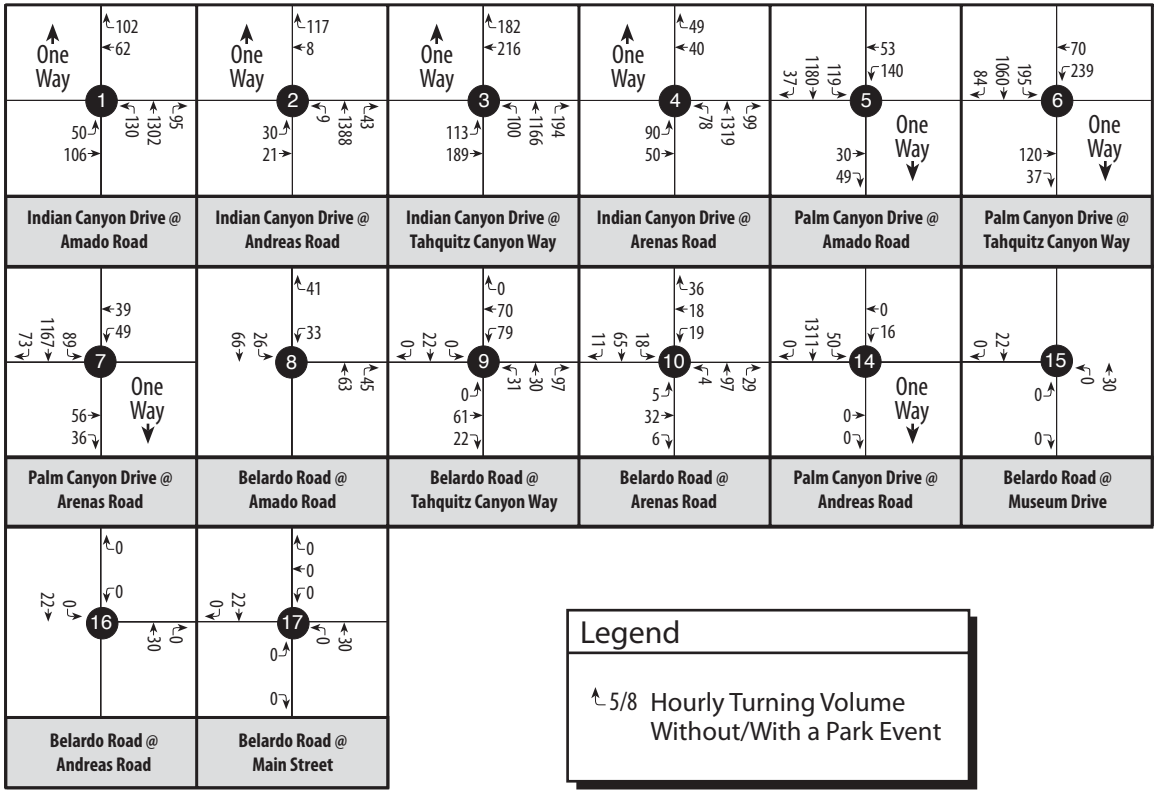


Legend
5 Highest Hour Turning Volume

Endo Engineering

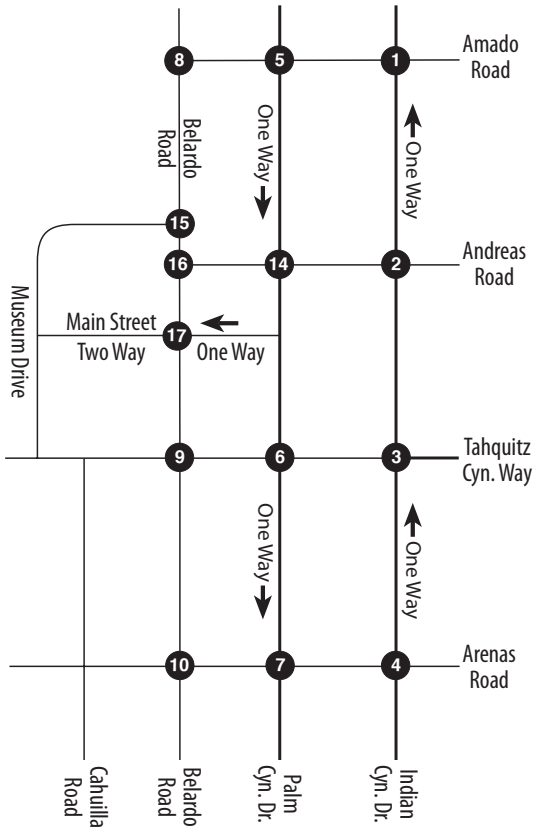
Schematic

Figure 4-25
Opening Year 2017 Saturday Traffic Volumes
Without Site Traffic



Legend

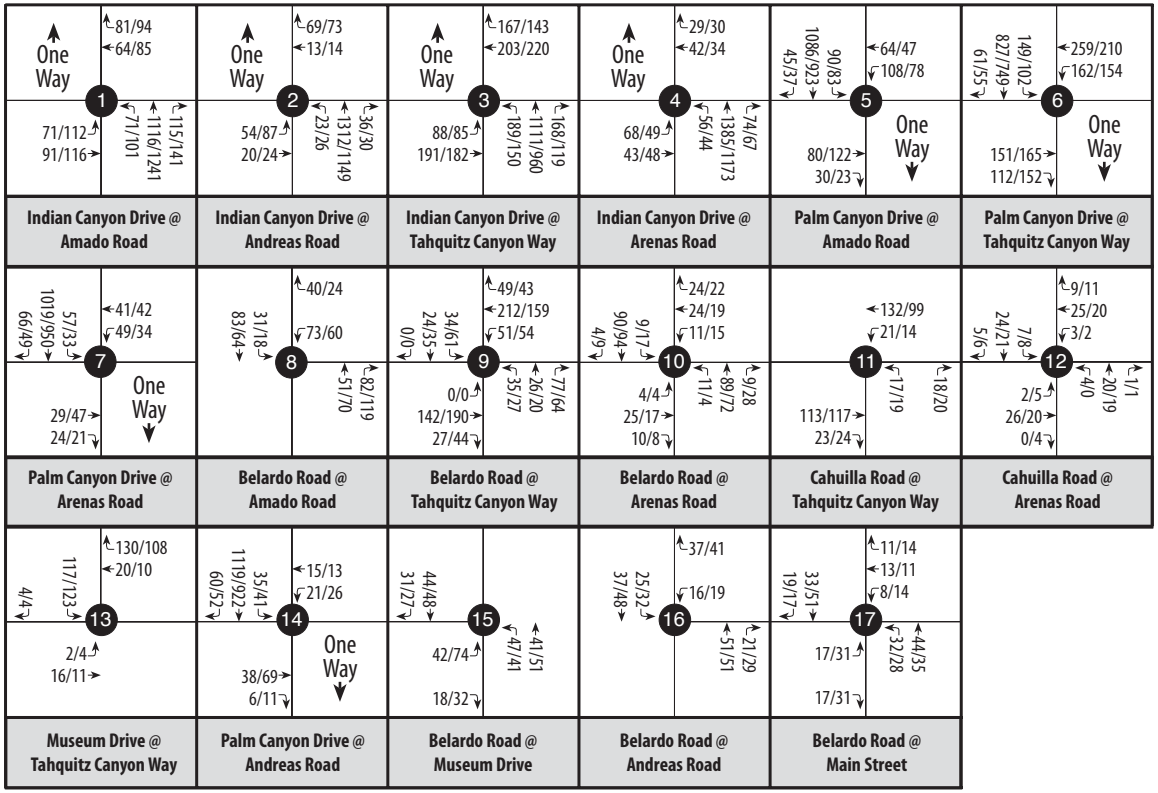
5/8 Hourly Turning Volume Without/With a Park Event

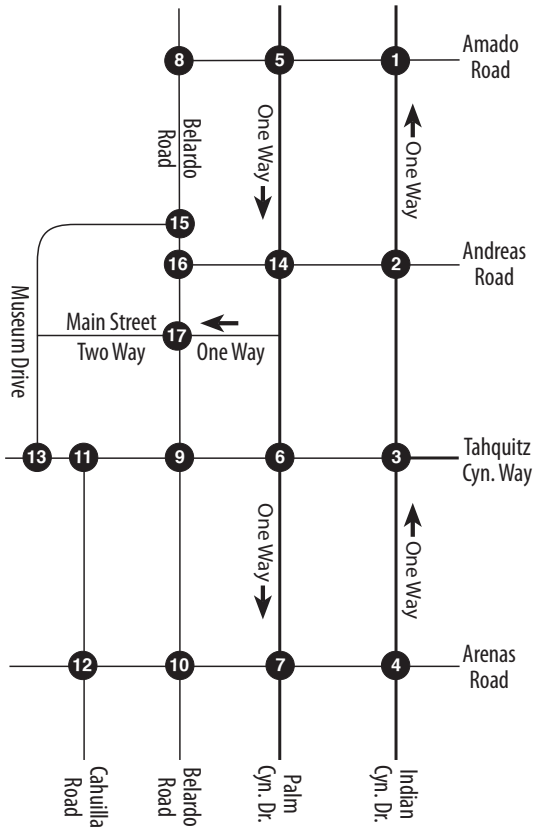


Endo Engineering

Schematic

Figure 4-26
Opening Year 2017 + Phase 1 Weekday Traffic Volumes
Without the Downtown Palm Springs Park



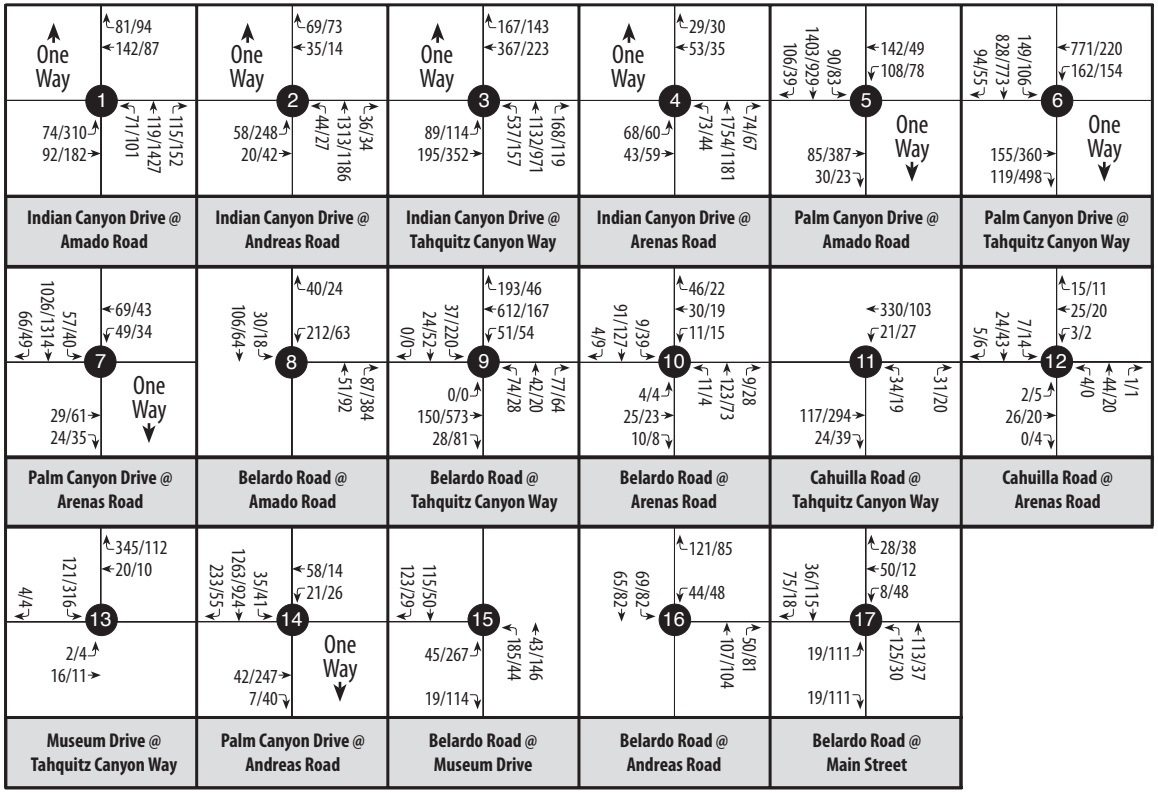


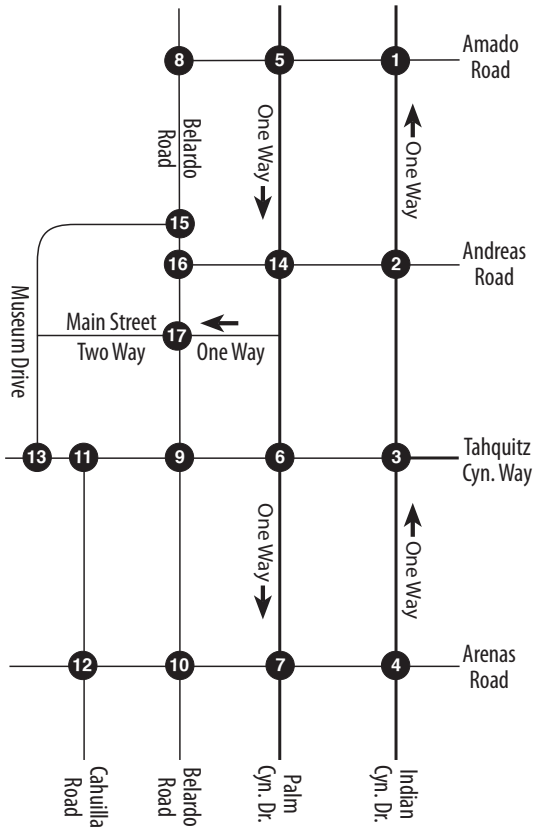
Legend
5/8 Midday/Evening Peak Hour Turning Volume

Endo Engineering

Schematic

Figure 4-27
Opening Year 2017 + Phase 1 Weekday Traffic Volumes
With the Downtown Palm Springs Park



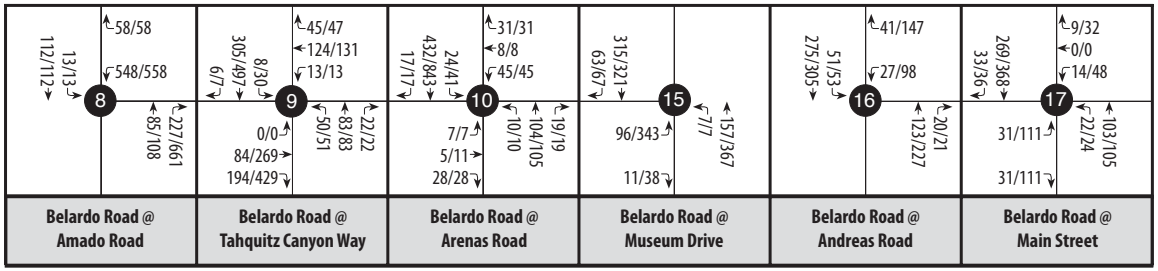


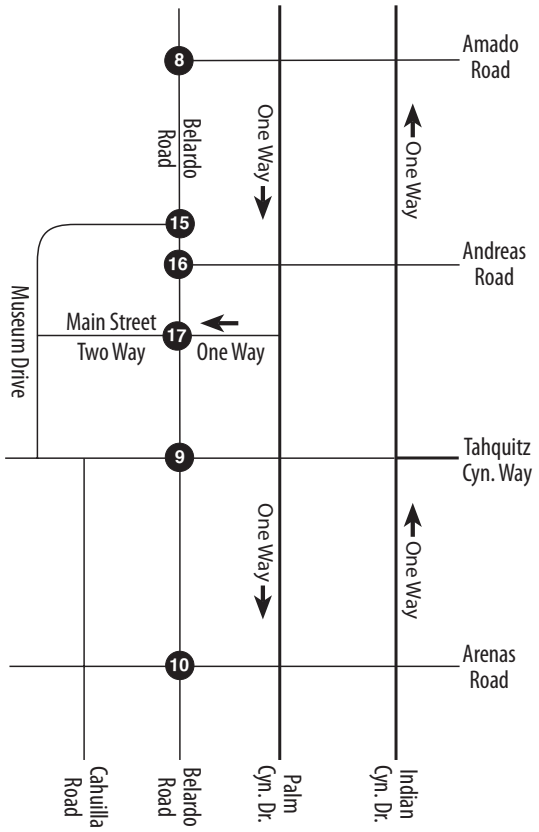
Legend
5/8 Midday/Evening Peak Hour Turning Volume

Endo Engineering

Schematic

Figure 4-28
Opening Year 2017 Traffic Volumes During Villagefest
With and Without the Downtown Palm Springs Park





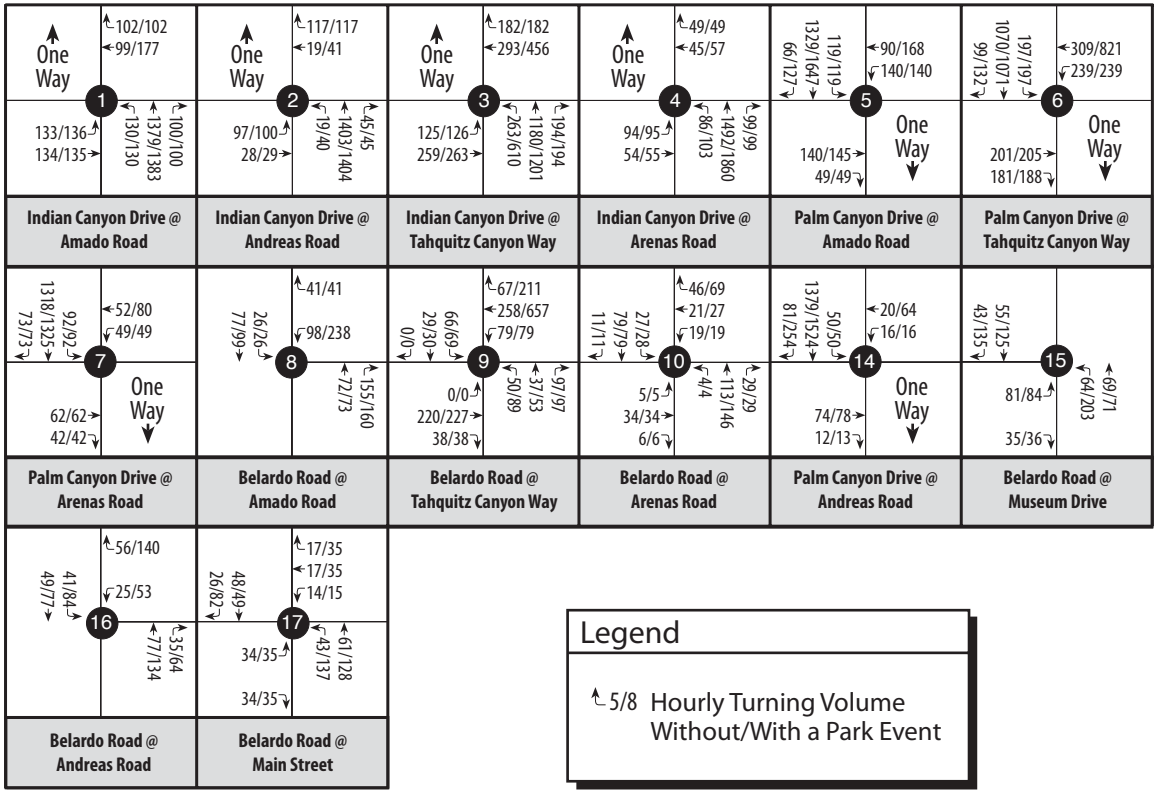
Legend

5/8 Hourly Turning Volume Without/With a Park Event

Endo Engineering

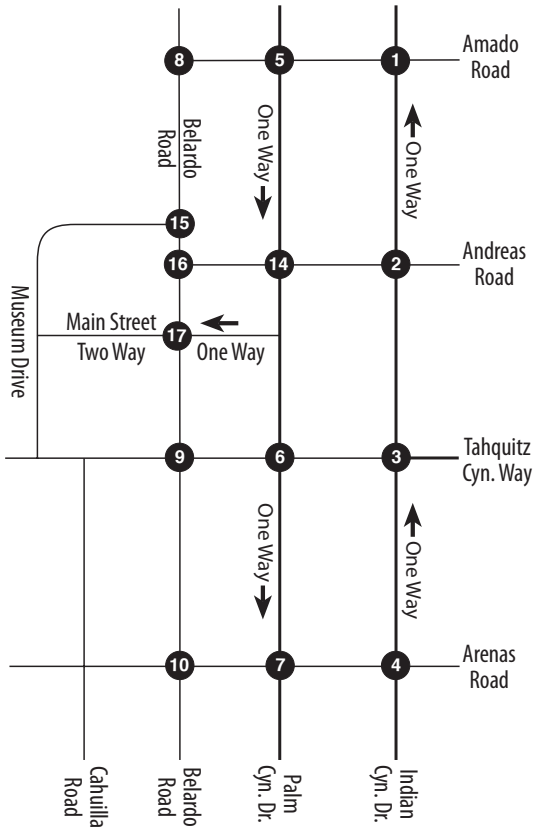
Schematic

Figure 4-29
Opening Year 2017 + Phase 1 Saturday Traffic Volumes
With and Without the Downtown Palm Springs Park



Legend

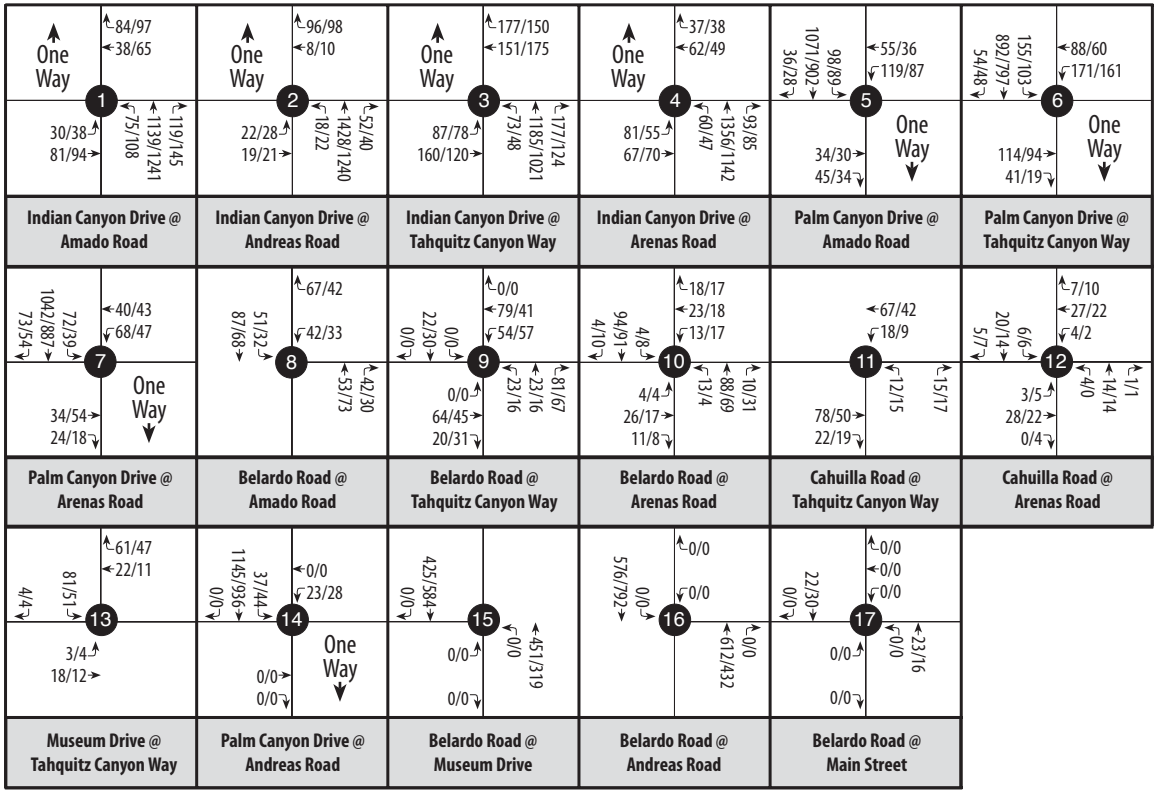
5/8 Hourly Turning Volume Without/With a Park Event

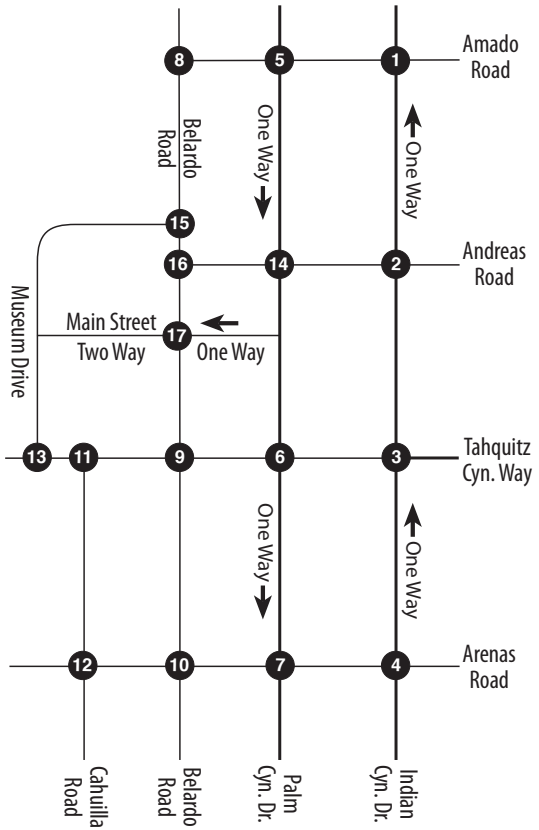


Endo Engineering

Schematic

Figure 4-30
Year 2030 Weekday Traffic Volumes
Without Site Traffic





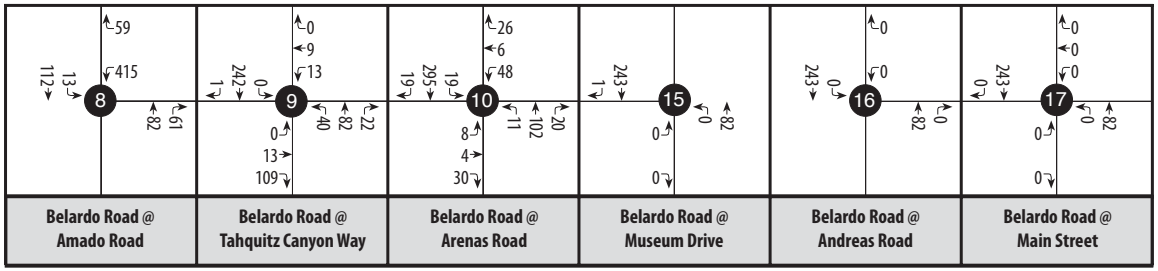
Legend

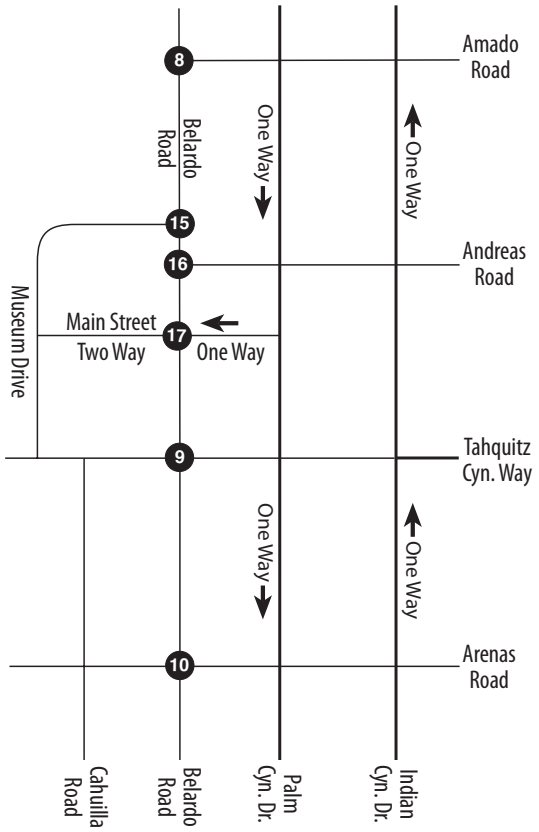
5/8 Midday/Evening Peak Hour Turning Volume

Endo Engineering

Schematic

Figure 4-31
Year 2030 Traffic Volumes During Villagefest
Without Site Traffic



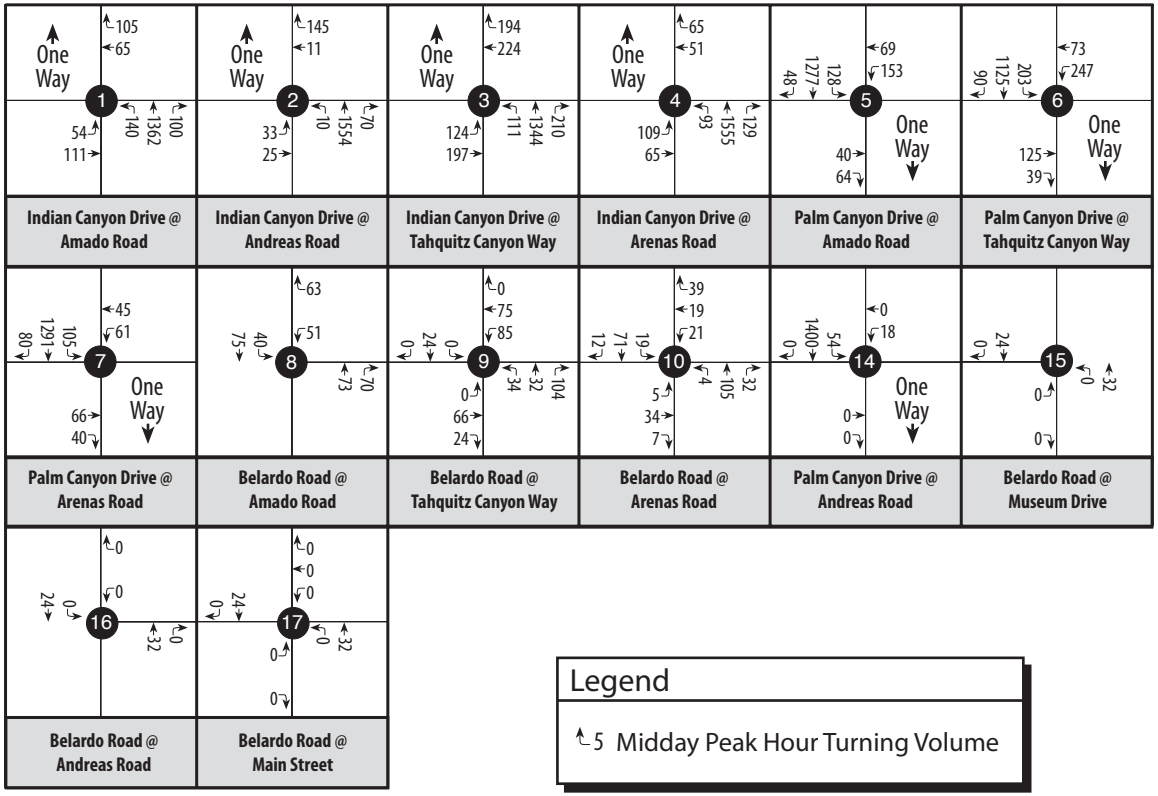


Legend
5 Highest Hour Turning Volume

Endo Engineering

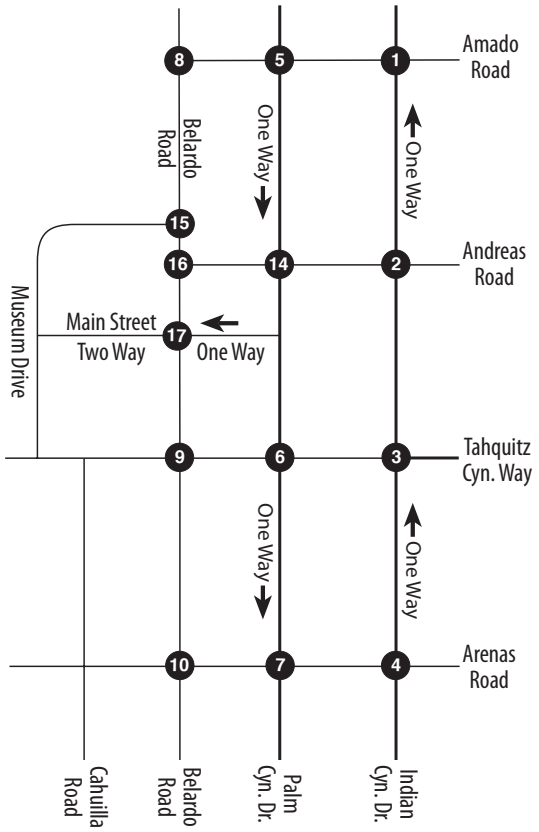
Schematic

Figure 4-32
Year 2030 Saturday Traffic Volumes
Without Site Traffic



Legend

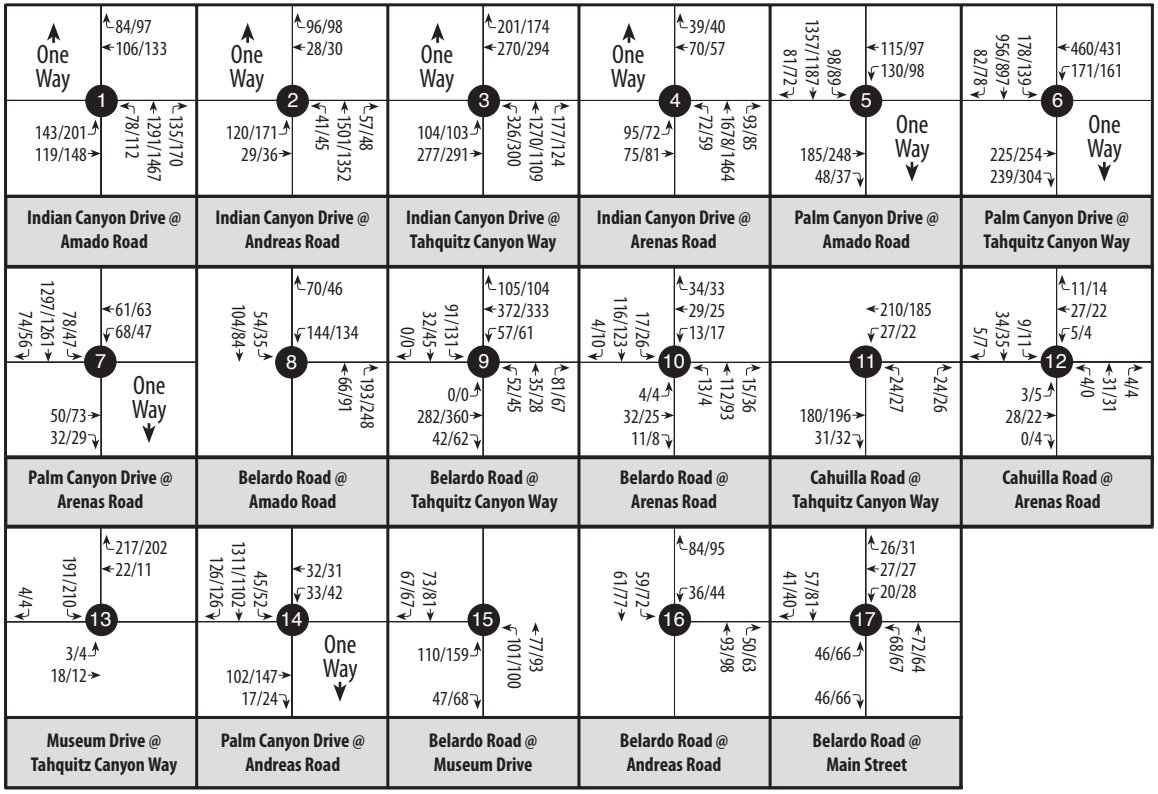
5 Midday Peak Hour Turning Volume

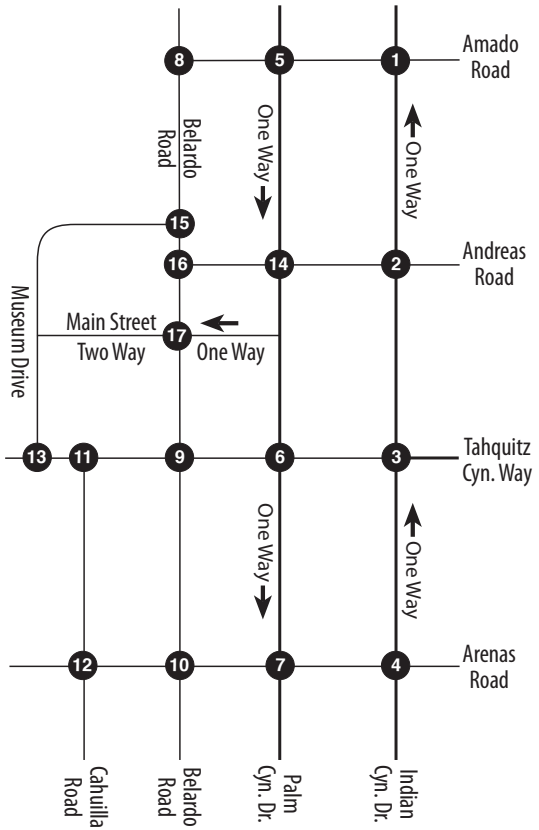


Endo Engineering

Schematic

Figure 4-33
Year 2030 + Project Buildout Weekday Peak Hour Traffic Volumes
Without a Downtown Palm Springs Park Event





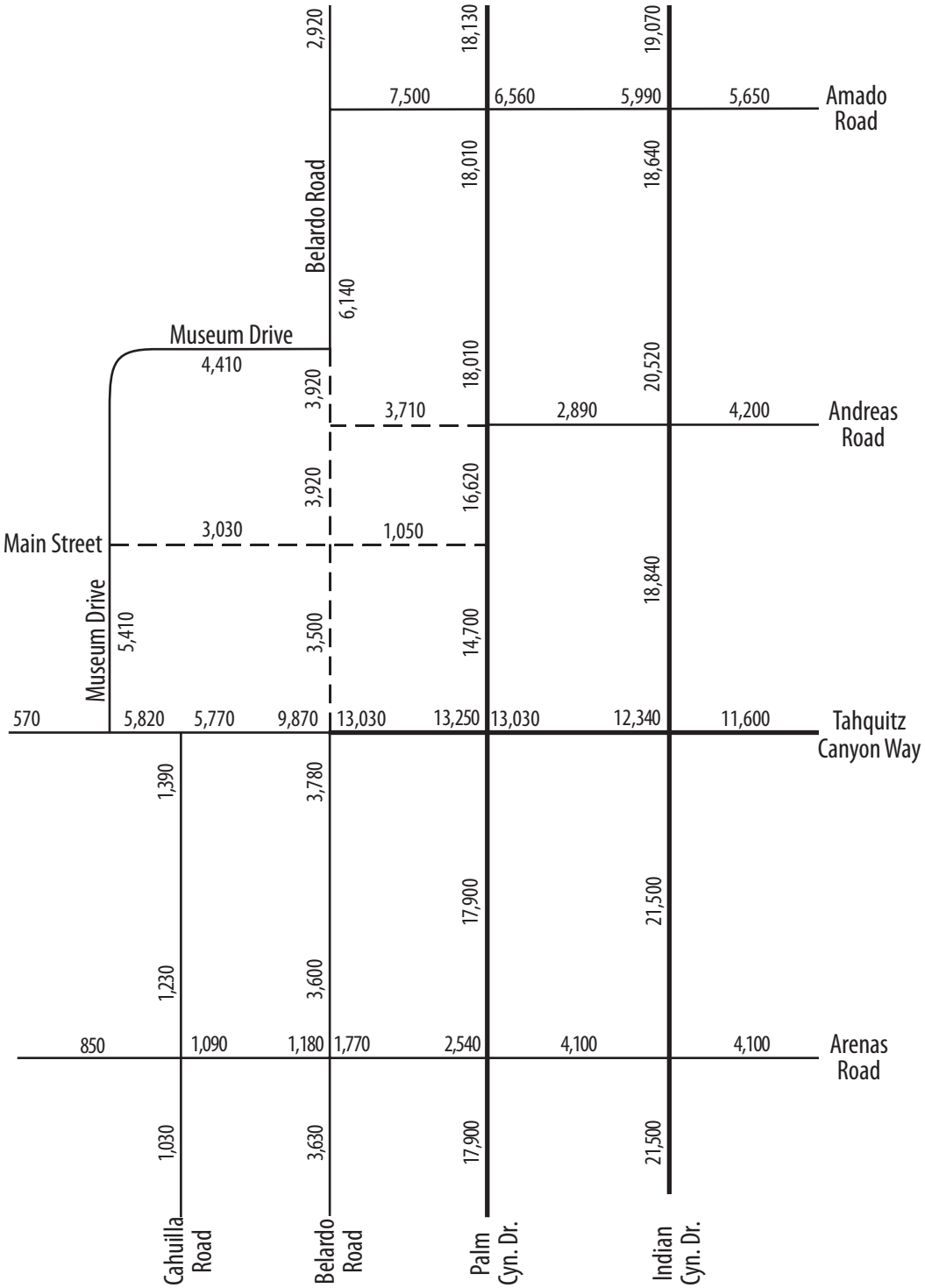
Legend
5/8 Midday/Evening Peak Hour Turning Volume

Endo Engineering

Schematic

Figure 4-34

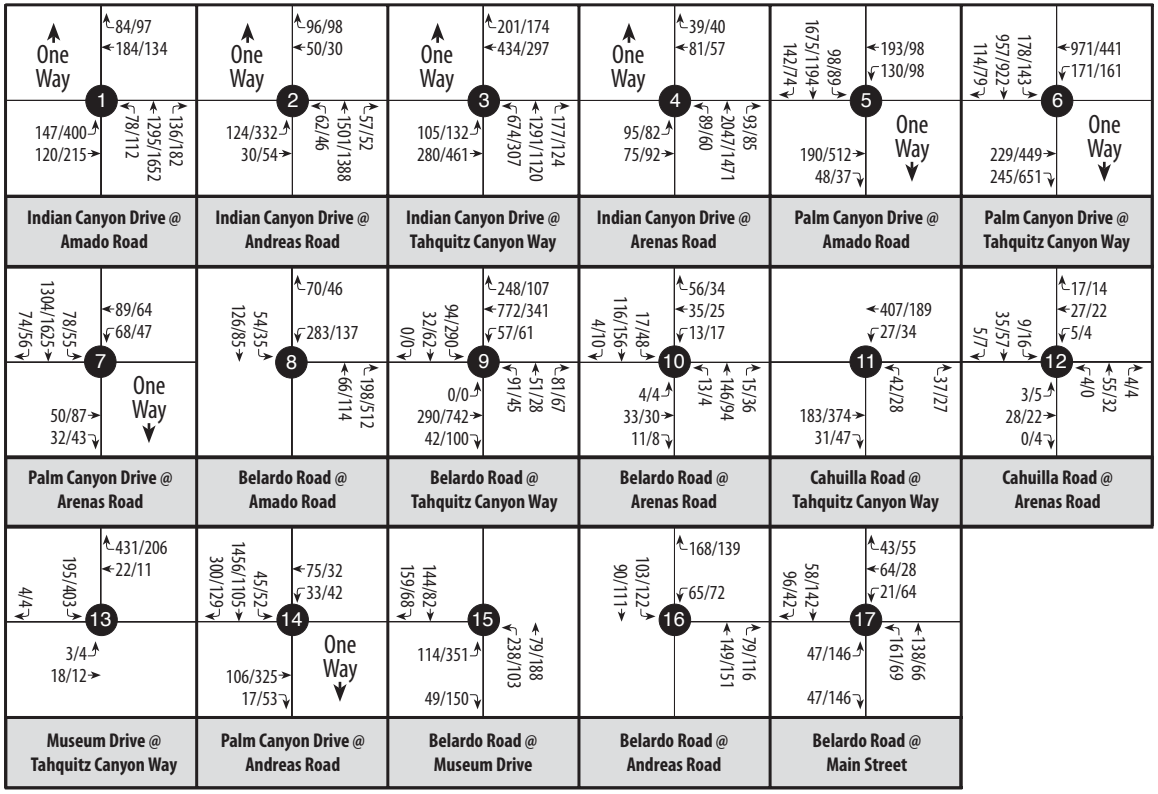
Year 2030 Weekday Traffic Projections Upon Project Completion
Without an Event at the Downtown Palm Springs Park

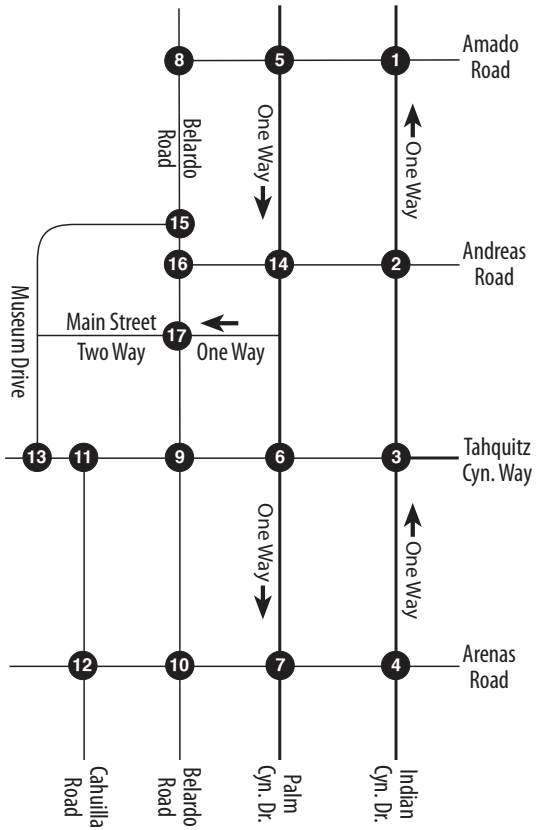


Endo Engineering

Scale: 1" = 350'

Figure 4-35
Year 2030 + Project Buildout Weekday Peak Hour Traffic Volumes
With a Downtown Palm Springs Park Event



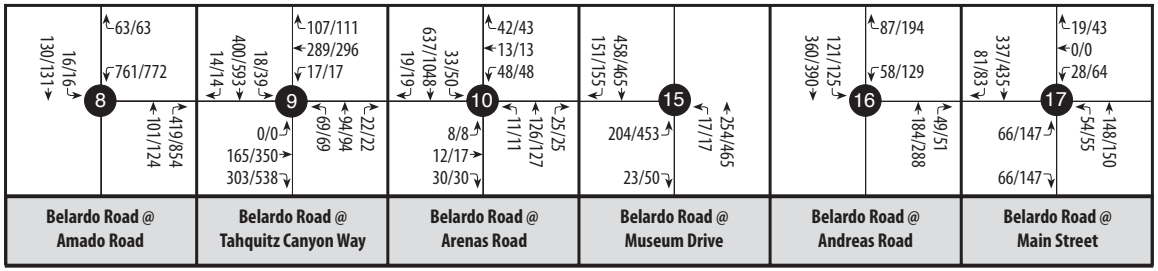


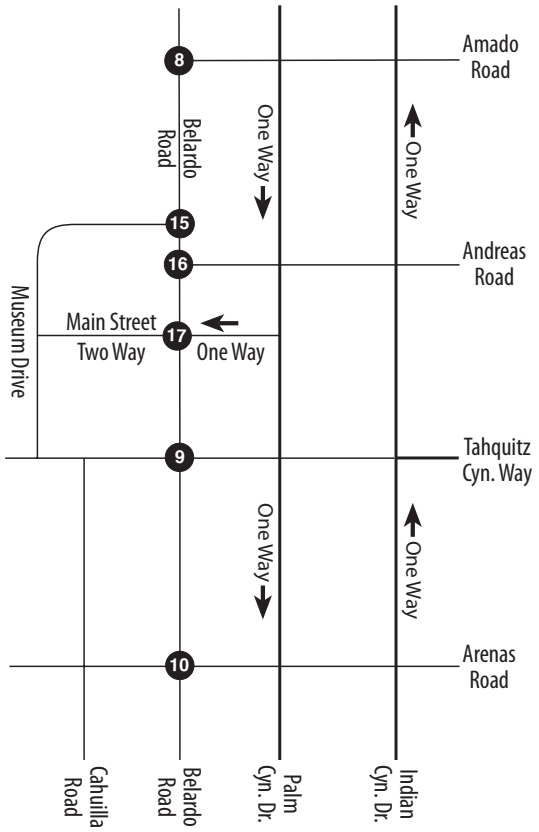
Legend
5/8 Midday/Evening Peak Hour Turning Volume

Endo Engineering

Schematic

Figure 4-36
Year 2030 + Project Buildout Traffic Volumes During Villagefest
With and Without the Downtown Palm Springs Park)





Legend

5/8 Hourly Turning Volume Without/With a Park Event

Endo Engineering

Schematic

Figure 4-37 shows the year 2030 midday peak hour traffic projections at the key intersections on Saturdays upon buildout of the Downtown Palm Springs Project. Projections are included for conditions with and without the traffic associated with a design day event at the Downtown Palm Springs Park.

4E. Projected Level of Service Analysis

The peak hour delay and level of service were evaluated for the key intersections with numerous development scenarios to identify potential deficiencies. With that information, the mitigation measures included in the *Museum Market Plaza Specific Plan Final EIR* can be reviewed to determine if they will be sufficient to maintain adequate levels of service per the City of Palm Springs General Plan policy. If not, additional measures in the form of on-site and/or off-site improvements can be identified to accommodate the site access and circulation needs.

In view of the number of site development scenarios and various peak hours evaluated, the level of service analysis was divided into two main categories as either an existing+project or future scenario. Each of these categories was divided into three sub-categories (weekdays, Villagefest, and Saturdays) and then addressed in chronological order. Since different key intersections were evaluated for weekdays, Villagefest, and Saturdays, this organization facilitates comparisons between sequential development phases that add traffic to the intersections.

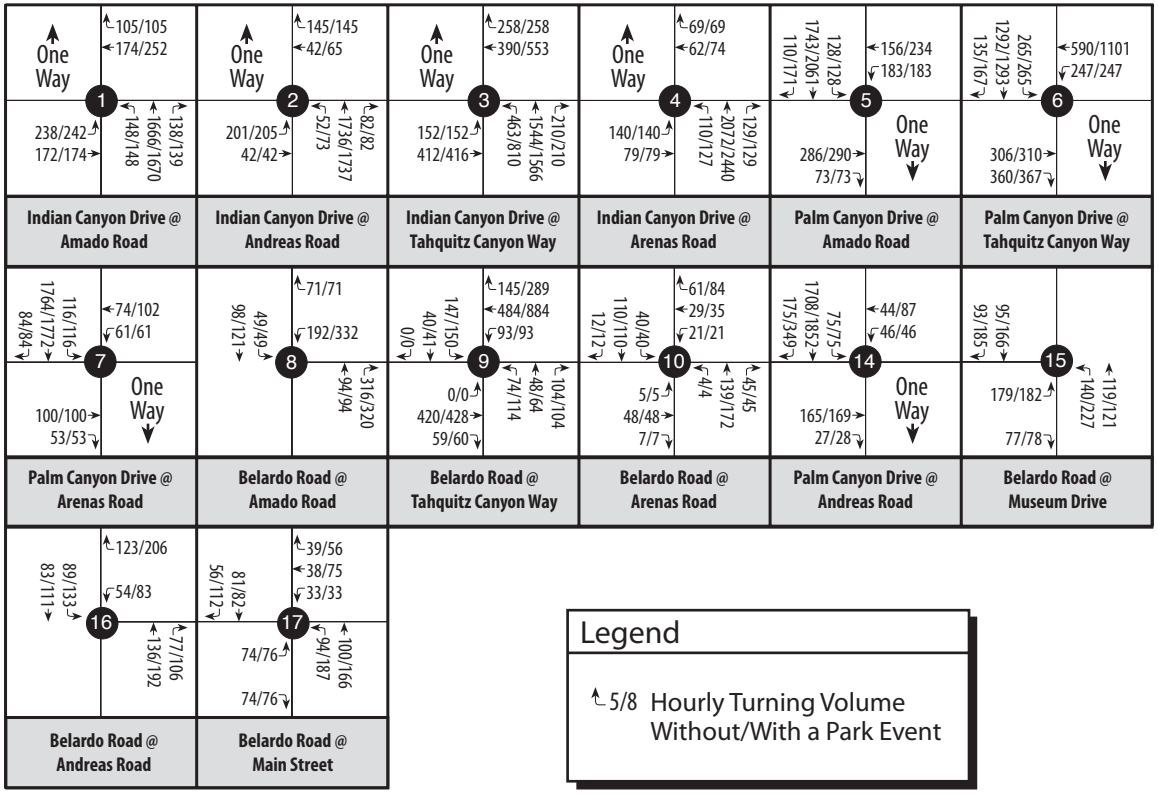
Some types of mitigation, such as the installation of new traffic control signals, are only appropriate for deficiencies anticipated on "average" days. These types of mitigation can be identified based on the weekday LOS analysis. As an example, the installation of traffic control signals would affect traffic operations and traffic safety 365 days per year would not be an appropriate form of mitigation for a special event that is expected to generate peak travel demands during only a few hours per year. Traffic management plans can be developed based on site-specific conditions and implemented on a temporary basis to mitigate peak travel demands associated with special events on an individualized basis.

Existing+Project Weekday LOS

The existing weekday midday and evening peak hour delay and levels of service at the key intersections are shown in Table 3-2. Table 4-5 summarizes the existing+phase 1 weekday peak hour LOS at the key intersections without the traffic associated with a design day event at the Downtown Palm Springs Park. Table 4-6 shows the existing+phase 1 weekday peak hour LOS at the key intersections including the traffic associated with a design day event at the Downtown Palm Springs Park.

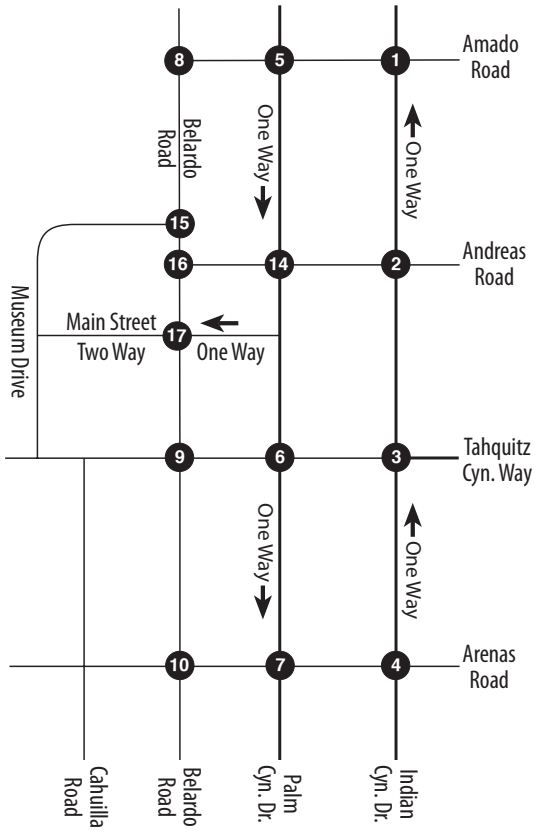
Table 4-7 provides the existing+project buildout weekday peak hour LOS at the key intersections without the traffic associated with a design day event at the Downtown Palm Springs Park. Table 4-8 shows the existing+project buildout weekday peak hour delay and LOS at the key intersections following the addition of the traffic associated with a design day event at the Downtown Palm Springs Park.

Figure 4-37
Year 2030 + Project Buildout Saturday Traffic Volumes
With and Without the Downtown Palm Springs Park



Legend

5/8 Hourly Turning Volume Without/With a Park Event



Endo Engineering

Schematic

Table 4-5
Existing+Phase 1 Weekday Peak Hour LOS at the Key Intersections
Without a Design Day Event at the Downtown Palm Springs Park[a]

Key Intersection	Traffic Control	Midday Peak Hour			Evening Peak Hour		
		LOS	Delay (Sec.)	V/C Ratio	LOS	Delay (Sec.)	V/C Ratio
1. Indian Canyon Drive @ Amado Road	Signal	A	6.1	0.26	A	9.3	0.17
2. Indian Canyon Drive @ Andreas Road	Signal	A	5.6	0.26	A	7.0	0.26
3. Indian Canyon Drive @ Tahquitz Canyon Way	Signal	B	13.9	0.46	B	14.2	0.41
4. Indian Canyon Drive @ Arenas Road	Signal	A	6.1	0.28	A	6.0	0.23
5. Palm Canyon Drive @ Amado Road	Signal	A	7.1	0.33	A	8.1	0.27
6. Palm Canyon Drive @ Tahquitz Canyon Way	Signal	B	16.1	0.41	B	16.8	0.40
7. Palm Canyon Drive @ Arenas Road	Signal	A	5.7	0.26	A	6.2	0.23
8. Belardo Road @ Amado Road	TWSC	A	9.9	WLR	A	9.7	WLR
9. Belardo Road @ Tahquitz Canyon Way[a]	AWSC	B	10.07	–	A	9.88	–
10. Belardo Road @ Arenas Road	AWSC	A	7.86	–	A	7.80	–
11. Cahuilla Road @ Tahquitz Canyon Way	TWSC	A	9.7	NLR	A	9.6	NLR
12. Cahuilla Road @ Arenas Road	TWSC	A	9.5	NLT	A	9.5	NLT
13. Museum Drive @ Tahquitz Canyon Way	TWSC	A	9.3	SL	A	9.2	SL
14. Palm Canyon Drive @ Andreas Road	TWSC	C	22.3	ETR	C	19.4	ETR
15. Belardo Road @ Museum Drive[a]	AWSC	A	7.76	–	A	7.98	–
16. Belardo Road @ Andreas Road	TWSC	A	9.1	WLR	A	9.3	WLR
17. Belardo Road @ Main Street	AWSC	A	7.49	–	A	7.58	–

a. All-way STOP control traffic control was assumed for this intersection when Belardo Road is extended.

Table 4-6
Existing+Phase 1 Weekday Peak Hour LOS at the Key Intersections
With a Design Day Event at the Downtown Palm Springs Park[a]

Key Intersection	Traffic Control	Midday Peak Hour			Evening Peak Hour		
		LOS	Delay (Sec.)	V/C Ratio	LOS	Delay (Sec.)	V/C Ratio
1. Indian Canyon Drive @ Amado Road	Signal	A	7.2	0.28	B	14.0	0.68
2. Indian Canyon Drive @ Andreas Road	Signal	A	6.0	0.27	B	11.3	0.41
3. Indian Canyon Drive @ Tahquitz Canyon Way	Signal	B	19.2	0.69	B	18.3	0.54
4. Indian Canyon Drive @ Arenas Road	Signal	A	5.9	0.36	A	6.4	0.24
5. Palm Canyon Drive @ Amado Road	Signal	A	7.6	0.43	B	11.6	0.45
6. Palm Canyon Drive @ Tahquitz Canyon Way	Signal	B	15.9	0.63	E	56.9	0.82
7. Palm Canyon Drive @ Arenas Road	Signal	A	6.4	0.26	A	5.9	0.33
8. Belardo Road @ Amado Road	TWSC	B	11.7	WLR	A	9.9	WLR
9. Belardo Road @ Tahquitz Canyon Way[a]	AWSC	F	286.54	–	F	78.29	–
10. Belardo Road @ Arenas Road	AWSC	A	8.09	–	A	8.14	–
11. Cahuilla Road @ Tahquitz Canyon Way	TWSC	B	11.0	NLR	B	11.1	NLR
12. Cahuilla Road @ Arenas Road	TWSC	A	9.7	NLT	A	9.6	SLTR
13. Museum Drive @ Tahquitz Canyon Way	TWSC	A	9.3	SL	B	10.5	SL
14. Palm Canyon Drive @ Andreas Road	TWSC	E	45.1	WLT	F	77.7	ETR
15. Belardo Road @ Museum Drive[a]	AWSC	A	8.88	–	C	18.76	–
16. Belardo Road @ Andreas Road	TWSC	B	10.6	WLR	B	10.6	WLR
17. Belardo Road @ Main Street	AWSC	A	8.78	–	A	8.84	–

a. All-way STOP control traffic control was assumed for this intersection when Belardo Road is extended.

Table 4-7
Existing+Project Buildout Weekday Peak Hour LOS at the Key Intersections
Without a Design Day Event at the Downtown Palm Springs Park[a]

Key Intersection	Traffic Control	Midday Peak Hour			Evening Peak Hour		
		LOS	Delay (Sec.)	V/C Ratio	LOS	Delay (Sec.)	V/C Ratio
1. Indian Canyon Drive @ Amado Road	Signal	A	7.9	0.35	A	9.2	0.45
2. Indian Canyon Drive @ Andreas Road	Signal	A	7.3	0.33	A	9.0	0.35
3. Indian Canyon Drive @ Tahquitz Canyon Way	Signal	B	17.0	0.57	B	18.0	0.55
4. Indian Canyon Drive @ Arenas Road	Signal	A	6.2	0.33	A	6.1	0.28
5. Palm Canyon Drive @ Amado Road	Signal	A	8.6	0.41	A	9.6	0.40
6. Palm Canyon Drive @ Tahquitz Canyon Way	Signal	B	17.6	0.57	B	18.0	0.61
7. Palm Canyon Drive @ Arenas Road	Signal	A	6.0	0.31	A	6.2	0.30
8. Belardo Road @ Amado Road	TWSC	B	10.7	WLR	B	10.4	WLR
9. Belardo Road @ Tahquitz Canyon Way[a]	AWSC	C	20.76	–	C	22.33	–
10. Belardo Road @ Arenas Road	AWSC	A	8.08	–	A	8.06	–
11. Cahuilla Road @ Tahquitz Canyon Way	TWSC	B	10.7	NLR	B	10.7	NLR
12. Cahuilla Road @ Arenas Road	TWSC	A	9.5	NLT	A	9.5	NLT
13. Museum Drive @ Tahquitz Canyon Way	TWSC	A	9.6	SL	A	9.7	SL
14. Palm Canyon Drive @ Andreas Road	TWSC	E	47.5	ETR	E	44.4	ETR
15. Belardo Road @ Museum Drive[a]	AWSC	A	8.84	–	A	9.53	–
16. Belardo Road @ Andreas Road	TWSC	B	10.1	WLR	B	10.6	WLR
17. Belardo Road @ Main Street	AWSC	A	8.21	–	A	8.48	–

a. All-way STOP control traffic control was assumed for this intersection when Belardo Road is extended.

Table 4-8
Existing+Project Buildout Weekday Peak Hour LOS at the Key Intersections
With a Design Day Event at the Downtown Palm Springs Park[a]

Key Intersection	Traffic Control	Midday Peak Hour			Evening Peak Hour		
		LOS	Delay (Sec.)	V/C Ratio	LOS	Delay (Sec.)	V/C Ratio
1. Indian Canyon Drive @ Amado Road	Signal	A	8.9	0.37	B	14.0	0.68
2. Indian Canyon Drive @ Andreas Road	Signal	A	8.1	0.36	B	13.3	0.50
3. Indian Canyon Drive @ Tahquitz Canyon Way	Signal	C	29.1	0.89	C	22.0	0.68
4. Indian Canyon Drive @ Arenas Road	Signal	A	6.1	0.41	A	6.4	0.29
5. Palm Canyon Drive @ Amado Road	Signal	A	9.0	0.51	B	13.1	0.58
6. Palm Canyon Drive @ Tahquitz Canyon Way	Signal	B	17.7	0.77	F	265.6	1.02
7. Palm Canyon Drive @ Arenas Road	Signal	A	6.5	0.31	A	6.2	0.40
8. Belardo Road @ Amado Road	TWSC	B	12.9	WLR	B	10.7	WLR
9. Belardo Road @ Tahquitz Canyon Way[a]	AWSC	F	863.29	–	F	555.76	–
10. Belardo Road @ Arenas Road	AWSC	A	8.33	–	A	8.44	–
11. Cahuilla Road @ Tahquitz Canyon Way	TWSC	B	12.5	NLR	B	12.7	NLR
12. Cahuilla Road @ Arenas Road	TWSC	A	9.8	SLTR	A	9.7	SLTR
13. Museum Drive @ Tahquitz Canyon Way	TWSC	A	8.8	SL	B	11.3	SL
14. Palm Canyon Drive @ Andreas Road	TWSC	F	264.9	WLT	F	898.0	ETR
15. Belardo Road @ Museum Drive[a]	AWSC	B	10.64	–	C	18.00	–
16. Belardo Road @ Andreas Road	TWSC	B	12.7	WLR	B	13.6	WLR
17. Belardo Road @ Main Street	AWSC	B	10.04	–	A	8.48	–

a. All-way STOP control traffic control was assumed for this intersection when Belardo Road is extended.

Existing+Project LOS During Villagefest

The existing delay and levels of service at the key intersections during the highest volume hour on a Thursday during Villagefest are shown in Table 3-3. Table 4-9 shows the existing+phase 1 highest hour delay and LOS at the six key intersections along Belardo Road with and without the traffic associated with a design day event at the Downtown Palm Springs Park. Table 4-10 provides the existing+project buildout highest hour delay and LOS at the six key intersections along Belardo Road with and without the traffic associated with a design day event at the Downtown Palm Springs Park.

Table 4-9
Existing+Phase 1 Evening Peak Hour LOS at the
Key Intersections on Belardo Road During Villagefest
With and Without a Design Day Event at the Downtown Palm Springs Park

Key Intersection	Traffic Control	Major Street Left or Intersection Delay (Sec.)	LOS	Approach With Most Delay Delay (Sec.)	LOS
Without Downtown Park Event					
8. Belardo Road @ Amado Road	TWSC	8.0	A	21.5	C
9. Belardo Road @ Tahquitz Canyon Way[a]	AWSC	11.20	B	12.72	B
10. Belardo Road @ Arenas Road	AWSC	11.50	B	13.01	B
15. Belardo Road @ Museum Drive[a]	AWSC	10.01	B	10.59	B
16. Belardo Road @ Andreas Road	TWSC	7.7	A	10.8	B
17. Belardo Road @ Main Street	AWSC	8.96	A	9.43	A
With Downtown Park Event					
8. Belardo Road @ Amado Road	TWSC	9.4	A	24.7	C
9. Belardo Road @ Tahquitz Canyon Way[a]	AWSC	45.27	E	86.38	F
10. Belardo Road @ Arenas Road	AWSC	195.16	F	249.63	F
15. Belardo Road @ Museum Drive[a]	AWSC	18.76	C	21.12	C
16. Belardo Road @ Andreas Road	TWSC	7.9	A	15.5	C
17. Belardo Road @ Main Street	AWSC	11.85	B	13.60	B

a. All-way STOP control traffic control was assumed for this intersection when Belardo Road is extended.

Table 4-10
Existing+Project Buildout Peak Hour LOS at the
Key Intersections on Belardo Road During Villagefest
With and Without a Design Day Event at the Downtown Palm Springs Park[a]

Key Intersection	Traffic Control	Major Street Left or Intersection Delay (Sec.)	LOS	Approach With Most Delay Delay (Sec.)	LOS
Without Downtown Park Event					
8. Belardo Road @ Amado Road	TWSC	8.6	A	141.0	F
9. Belardo Road @ Tahquitz Canyon Way[b]	AWSC	30.37	D	41.59	E
10. Belardo Road @ Arenas Road	AWSC	21.65	C	27.11	D
15. Belardo Road @ Museum Drive[b]	AWSC	14.80	B	16.58	C
16. Belardo Road @ Andreas Road	TWSC	8.0	A	14.7	B
17. Belardo Road @ Main Street	AWSC	10.88	B	12.05	B
With Downtown Park Event					
8. Belardo Road @ Amado Road	TWSC	10.3	B	216.3	F
9. Belardo Road @ Tahquitz Canyon Way[b]	AWSC	366.99	F	782.17	F
10. Belardo Road @ Arenas Road	AWSC	568.68	F	723.76	F
15. Belardo Road @ Museum Drive[b]	AWSC	96.29	F	138.15	F
16. Belardo Road @ Andreas Road	TWSC	8.4	A	37.1	E
17. Belardo Road @ Main Street	AWSC	18.25	C	24.20	C

a. Delay=average approach control delay (seconds/vehicle) for the minor street approach that exhibits the most delay at TWSC intersections. Since AWSC intersections do not have minor approaches, the delay and LOS for the approach with the most delay were included and the approach was identified. Overall intersection delay (seconds/vehicle) and overall intersection LOS are shown for the all-way stop controlled intersections.
b. The traffic control assumed for this intersection was assumed to be constructed as all-way STOP control when Belardo Road is extended.

Existing+Project Saturday LOS

The existing midday peak hour delay and levels of service at ten of the existing key intersections on Saturdays are shown in Table 3-4. Table 4-11 shows the existing+phase 1 midday peak hour delay and LOS at fourteen future key intersections with and without the traffic associated with a design day event at the Downtown Palm Springs Park. Table 4-12 provides the existing+project buildout midday peak hour delay and LOS at fourteen future key intersections with and without the traffic associated with a design day event at the Downtown Palm Springs Park.

Table 4-11
Existing+Phase 1 Saturday Midday Peak Hour LOS at the Key Intersections
With and Without a Design Day Event at the Downtown Palm Springs Park[a]

Key Intersection	Traffic Control	Without Downtown Park			With Downtown Park		
		LOS	Delay (Sec.)	V/C Ratio	LOS	Delay (Sec.)	V/C Ratio
1. Indian Canyon Drive @ Amado Road	Signal	A	7.5	0.36	A	8.37	0.37
2. Indian Canyon Drive @ Andreas Road	Signal	A	7.0	0.31	A	7.8	0.32
3. Indian Canyon Drive @ Tahquitz Canyon Way	Signal	B	13.1	0.32	C	21.4	0.72
4. Indian Canyon Drive @ Arenas Road	Signal	A	7.1	0.34	A	7.0	0.42
5. Palm Canyon Drive @ Amado Road	Signal	A	8.3	0.42	A	9.3	0.52
6. Palm Canyon Drive @ Tahquitz Canyon Way	Signal	B	18.1	0.57	B	17.8	0.70
7. Palm Canyon Drive @ Arenas Road	Signal	A	6.6	0.35	A	7.1	0.35
8. Belardo Road @ Amado Road	TWSC	B	10.2	WLR	B	12.2	WLR
9. Belardo Road @ Tahquitz Canyon Way[a]	AWSC	D	25.3	SB	F	574.22	–
10. Belardo Road @ Arenas Road	AWSC	A	8.11	--	A	8.39	–
14. Palm Canyon Drive @ Andreas Road	TWSC	E	42.6	ETR	F	126.2	WLT
15. Belardo Road @ Museum Drive	AWSC	A	8.26	–	A	9.66	–
16. Belardo Road @ Andreas Road	TWSC	A	9.6	WLR	B	11.5	WLR
17. Belardo Road @ Main Street	AWSC	A	7.81	–	A	9.32	–

a. All-way STOP control traffic control was assumed for this intersection when Belardo Road is extended.

Table 4-12
Existing+Project Buildout
Saturday Midday Peak Hour LOS at the Key Intersections
With and Without a Design Day Event at the Downtown Palm Springs Park[a]

Key Intersection	Control	Without Downtown Park			With Downtown Park		
		LOS	Delay (Sec.)	V/C Ratio	LOS	Delay (Sec.)	V/C Ratio
1. Indian Canyon Drive @ Amado Road	Signal	B	10.4	0.52	B	11.5	0.56
2. Indian Canyon Drive @ Andreas Road	Signal	B	10.4	0.45	B	10.8	0.47
3. Indian Canyon Drive @ Tahquitz Canyon Way	Signal	C	23.2	0.77	D	43.7	0.95
4. Indian Canyon Drive @ Arenas Road	Signal	A	7.8	0.44	A	7.9	0.52
5. Palm Canyon Drive @ Amado Road	Signal	B	11.3	0.61	B	12.4	0.70
6. Palm Canyon Drive @ Tahquitz Canyon Way	Signal	C	25.0	0.82	C	29.3	0.92
7. Palm Canyon Drive @ Arenas Road	Signal	A	7.2	0.45	A	7.5	0.45
8. Belardo Road @ Amado Road	TWSC	B	11.6	WLR	B	14.7	WLR
9. Belardo Road @ Tahquitz Canyon Way[a]	AWSC	F	306.35	–	F	1631	–
10. Belardo Road @ Arenas Road	AWSC	A	8.54	--	A	8.87	–
14. Palm Canyon Drive @ Andreas Road	TWSC	F	1342	ETR	F	2646	ETR
15. Belardo Road @ Museum Drive	AWSC	B	10.54	–	B	13.86	–
16. Belardo Road @ Andreas Road	TWSC	B	11.6	WLR	C	16.2	WLR
17. Belardo Road @ Main Street	AWSC	A	9.14	–	B	11.92	–

a. All-way STOP control traffic control was assumed for this intersection when Belardo Road is extended.

Future Weekday LOS Analysis

Table 4-13 shows the future year 2017 weekday midday and evening peak hour delay and levels of service at the key intersections without site traffic. The opening year 2017+phase 1 weekday peak hour delay and LOS at the key intersections without the traffic associated with a design day event at the Downtown Palm Springs Park are shown in Table 4-14. Table 4-15 shows the future year 2017+phase 1 weekday peak hour LOS following the addition of the traffic generated by a design day event at the Downtown Palm Springs Park.

Table 4-16 includes the future year 2030 weekday midday and evening peak hour delay and levels of service at the seventeen key intersections without site traffic. Table 4-17 shows the year 2030+project buildout weekday peak hour LOS at the key intersections without the traffic associated with a design day event at the Downtown Palm Springs Park. Table 4-18 shows the year 2030+project buildout weekday peak hour delay and LOS at the key intersections following the addition of the traffic associated with a design day event at the Downtown Palm Springs Park.

Table 4-13
Future Year 2017 Weekday Peak Hour LOS at the Key Intersections
Without Site-Generated Traffic[a]

Key Intersection	Traffic Control	Midday Peak Hour			Evening Peak Hour		
		LOS	Delay (Sec.)	V/C Ratio	LOS	Delay (Sec.)	V/C Ratio
1. Indian Canyon Drive @ Amado Road	Signal	A	5.2	0.28	A	5.6	0.32
2. Indian Canyon Drive @ Andreas Road	Signal	A	5.0	0.29	A	5.4	0.27
3. Indian Canyon Drive @ Tahquitz Canyon Way	Signal	B	13.6	0.47	B	13.8	0.41
4. Indian Canyon Drive @ Arenas Road	Signal	A	6.0	0.31	A	5.8	0.25
5. Palm Canyon Drive @ Amado Road	Signal	A	6.0	0.36	A	5.1	0.29
6. Palm Canyon Drive @ Tahquitz Canyon Way	Signal	B	14.3	0.41	B	13.8	0.35
7. Palm Canyon Drive @ Arenas Road	Signal	A	5.3	0.30	A	5.6	0.25
8. Belardo Road @ Amado Road	TWSC	A	9.3	WLR	A	9.2	WLR
9. Belardo Road @ Tahquitz Canyon Way[a]	AWSC	A	8.13	–	A	7.82	–
10. Belardo Road @ Arenas Road	AWSC	A	7.79	–	A	7.69	–
11. Cahuilla Road @ Tahquitz Canyon Way	TWSC	A	9.2	NLR	A	9.0	NLR
12. Cahuilla Road @ Arenas Road	TWSC	A	9.4	NLT	A	9.4	NLT
13. Museum Drive @ Tahquitz Canyon Way	TWSC	A	9.1	SL	A	8.9	SL
14. Palm Canyon Drive @ Andreas Road	TWSC	B	14.6	WLT	B	13.5	WLT
15. Belardo Road @ Museum Drive[a]	AWSC	A	7.36	–	A	7.36	–
16. Belardo Road @ Andreas Road	TWSC	A	7.3	SLT	A	7.3	SLT
17. Belardo Road @ Main Street	AWSC	A	7.15	–	A	7.16	–

a. All-way STOP control traffic control was assumed for this intersection when Belardo Road is extended.

Table 4-14
Opening Year 2017+Phase I
Weekday Peak Hour LOS at the Key Intersections
Without a Design Day Event at the Downtown Palm Springs Park[a]

Key Intersection	Traffic Control	Midday Peak Hour			Evening Peak Hour		
		LOS	Delay (Sec.)	V/C Ratio	LOS	Delay (Sec.)	V/C Ratio
1. Indian Canyon Drive @ Amado Road	Signal	A	6.1	0.30	A	6.9	0.38
2. Indian Canyon Drive @ Andreas Road	Signal	A	5.7	0.30	A	6.8	0.31
3. Indian Canyon Drive @ Tahquitz Canyon Way	Signal	B	15.7	0.55	B	16.2	0.51
4. Indian Canyon Drive @ Arenas Road	Signal	A	5.9	0.34	A	5.8	0.28
5. Palm Canyon Drive @ Amado Road	Signal	A	6.9	0.40	A	7.1	0.33
6. Palm Canyon Drive @ Tahquitz Canyon Way	Signal	B	16.9	0.49	B	17.7	0.51
7. Palm Canyon Drive @ Arenas Road	Signal	A	5.5	0.32	A	5.7	0.29
8. Belardo Road @ Amado Road	TWSC	B	10.0	WLR	A	9.8	WLR
9. Belardo Road @ Tahquitz Canyon Way[a]	AWSC	B	10.25	–	B	10.04	–
10. Belardo Road @ Arenas Road	AWSC	A	7.91	–	A	7.86	–
11. Cahuilla Road @ Tahquitz Canyon Way	TWSC	A	9.8	NLR	A	9.7	NLR
12. Cahuilla Road @ Arenas Road	TWSC	A	9.5	NLT	A	9.5	NLT
13. Museum Drive @ Tahquitz Canyon Way	TWSC	A	9.3	SL	A	9.2	SL
14. Palm Canyon Drive @ Andreas Road	TWSC	D	29.8	ETR	D	27.2	ETR
15. Belardo Road @ Museum Drive[a]	AWSC	A	7.76	–	A	7.98	–
16. Belardo Road @ Andreas Road	TWSC	A	9.1	WLR	A	9.3	WLR
17. Belardo Road @ Main Street	AWSC	A	7.49	–	A	7.58	–

a. All-way STOP control traffic control was assumed for this intersection when Belardo Road is extended.

Table 4-15
Opening Year 2017+Phase I
Weekday Peak Hour LOS at the Key Intersections
With a Design Day Event at the Downtown Palm Springs Park[a]

Key Intersection	Traffic Control	Midday Peak Hour			Evening Peak Hour		
		LOS	Delay (Sec.)	V/C Ratio	LOS	Delay (Sec.)	V/C Ratio
1. Indian Canyon Drive @ Amado Road	Signal	A	7.0	0.33	B	11.8	0.60
2. Indian Canyon Drive @ Andreas Road	Signal	A	6.2	0.32	B	11.5	0.46
3. Indian Canyon Drive @ Tahquitz Canyon Way	Signal	C	21.2	0.74	C	20.6	0.63
4. Indian Canyon Drive @ Arenas Road	Signal	A	5.9	0.41	A	6.2	0.29
5. Palm Canyon Drive @ Amado Road	Signal	A	7.5	0.49	B	11.7	0.51
6. Palm Canyon Drive @ Tahquitz Canyon Way	Signal	B	18.0	0.67	E	60.5	0.92
7. Palm Canyon Drive @ Arenas Road	Signal	A	6.0	0.32	A	5.7	0.40
8. Belardo Road @ Amado Road	TWSC	B	11.9	WLR	A	10.0	WLR
9. Belardo Road @ Tahquitz Canyon Way[a]	AWSC	F	309.15	–	F	88.80	–
10. Belardo Road @ Arenas Road	AWSC	A	8.14	–	A	8.21	–
11. Cahuilla Road @ Tahquitz Canyon Way	TWSC	B	11.1	NLR	B	11.1	NLR
12. Cahuilla Road @ Arenas Road	TWSC	A	9.7	NLT	A	9.6	SLTR
13. Museum Drive @ Tahquitz Canyon Way	TWSC	A	9.3	SL	B	10.5	SL
14. Palm Canyon Drive @ Andreas Road	TWSC	F	81.5	WLT	F	431.7	ETR
15. Belardo Road @ Museum Drive[a]	AWSC	A	8.88	–	B	11.37	–
16. Belardo Road @ Andreas Road	TWSC	B	10.6	WLR	B	11.0	WLR
17. Belardo Road @ Main Street	AWSC	A	8.78	–	A	8.84	–

a. All-way STOP control traffic control was assumed for this intersection when Belardo Road is extended.

Table 4-16
Year 2030 Weekday Peak Hour LOS at the Key Intersections
Without Site-Generated Traffic[a]

Key Intersection	Traffic Control	Midday Peak Hour			Evening Peak Hour		
		LOS	Delay (Sec.)	V/C Ratio	LOS	Delay (Sec.)	V/C Ratio
1. Indian Canyon Drive @ Amado Road	Signal	A	5.3	0.29	A	5.7	0.33
2. Indian Canyon Drive @ Andreas Road	Signal	A	5.5	0.33	A	5.8	0.30
3. Indian Canyon Drive @ Tahquitz Canyon Way	Signal	B	14.3	0.55	B	14.1	0.48
4. Indian Canyon Drive @ Arenas Road	Signal	A	6.9	0.36	A	6.6	0.28
5. Palm Canyon Drive @ Amado Road	Signal	A	6.5	0.39	A	6.0	0.32
6. Palm Canyon Drive @ Tahquitz Canyon Way	Signal	B	14.4	0.42	B	13.8	0.36
7. Palm Canyon Drive @ Arenas Road	Signal	A	6.0	0.34	A	6.2	0.28
8. Belardo Road @ Amado Road	TWSC	A	9.7	WLR	A	9.5	WLR
9. Belardo Road @ Tahquitz Canyon Way[a]	AWSC	A	8.15	–	A	7.80	–
10. Belardo Road @ Arenas Road	AWSC	A	7.84	–	A	7.72	–
11. Cahuilla Road @ Tahquitz Canyon Way	TWSC	A	9.2	NLR	A	9.0	NLR
12. Cahuilla Road @ Arenas Road	TWSC	A	9.4	NLT	A	9.4	NLT
13. Museum Drive @ Tahquitz Canyon Way	TWSC	A	9.1	SL	A	8.9	SL
14. Palm Canyon Drive @ Andreas Road	TWSC	C	15.3	WLT	B	14.0	WLT
15. Belardo Road @ Museum Drive[a]	AWSC	A	7.32	–	A	7.38	–
16. Belardo Road @ Andreas Road	TWSC	A	7.3	SLT	A	7.3	SLT
17. Belardo Road @ Main Street	AWSC	A	7.11	–	A	7.12	–

a. All-way STOP control traffic control was assumed for this intersection when Belardo Road is extended.

Table 4-17
Year 2030+Project Buildout Weekday Peak Hour LOS at the Key Intersections
Without a Design Day Event at the Downtown Palm Springs Park[a]

Key Intersection	Traffic Control	Midday Peak Hour			Evening Peak Hour		
		LOS	Delay (Sec.)	V/C Ratio	LOS	Delay (Sec.)	V/C Ratio
1. Indian Canyon Drive @ Amado Road	Signal	A	7.6	0.40	A	9.1	0.50
2. Indian Canyon Drive @ Andreas Road	Signal	A	8.2	0.43	A	9.9	0.44
3. Indian Canyon Drive @ Tahquitz Canyon Way	Signal	C	20.1	0.73	C	20.7	0.70
4. Indian Canyon Drive @ Arenas Road	Signal	A	7.3	0.44	A	6.7	0.36
5. Palm Canyon Drive @ Amado Road	Signal	A	8.9	0.51	A	9.5	0.48
6. Palm Canyon Drive @ Tahquitz Canyon Way	Signal	B	19.3	0.66	C	20.4	0.71
7. Palm Canyon Drive @ Arenas Road	Signal	A	6.5	0.41	A	6.4	0.38
8. Belardo Road @ Amado Road	TWSC	B	11.7	WLR	B	11.2	WLR
9. Belardo Road @ Tahquitz Canyon Way[a]	AWSC	C	23.03	–	C	24.28	–
10. Belardo Road @ Arenas Road	AWSC	A	8.19	–	A	8.17	–
11. Cahuilla Road @ Tahquitz Canyon Way	TWSC	B	10.8	NLR	B	10.8	NLR
12. Cahuilla Road @ Arenas Road	TWSC	A	9.6	NLT	A	9.6	SLTR
13. Museum Drive @ Tahquitz Canyon Way	TWSC	A	9.7	SL	A	9.7	SL
14. Palm Canyon Drive @ Andreas Road	TWSC	F	152.1	ETR	F	214.5	WLT
15. Belardo Road @ Museum Drive[a]	AWSC	A	8.77	–	A	9.44	–
16. Belardo Road @ Andreas Road	TWSC	B	10.1	WLR	B	10.6	WLR
17. Belardo Road @ Main Street	AWSC	A	8.15	–	A	8.42	–

a. All-way STOP control traffic control was assumed for this intersection when Belardo Road is extended.

Table 4-18
Year 2030+Project Buildout Weekday Peak Hour LOS
at the Key Intersections with a Design Day Event
at the Downtown Palm Springs Park[a]

Key Intersection	Traffic Control	Midday Peak Hour			Evening Peak Hour		
		LOS	Delay (Sec.)	V/C Ratio	LOS	Delay (Sec.)	V/C Ratio
1. Indian Canyon Drive @ Amado Road	Signal	A	8.6	0.43	B	14.4	0.73
2. Indian Canyon Drive @ Andreas Road	Signal	A	8.7	0.44	B	14.2	0.59
3. Indian Canyon Drive @ Tahquitz Canyon Way	Signal	D	40.0	0.95	C	26.4	0.81
4. Indian Canyon Drive @ Arenas Road	Signal	A	7.4	0.51	A	7.1	0.38
5. Palm Canyon Drive @ Amado Road	Signal	A	9.6	0.61	B	13.6	0.65
6. Palm Canyon Drive @ Tahquitz Canyon Way	Signal	C	20.3	0.80	F	259.6	1.11
7. Palm Canyon Drive @ Arenas Road	Signal	A	6.9	0.41	A	6.7	0.49
8. Belardo Road @ Amado Road	TWSC	B	14.8	WLR	B	11.4	WLR
9. Belardo Road @ Tahquitz Canyon Way[a]	AWSC	F	882.11	–	F	576.24	–
10. Belardo Road @ Arenas Road	AWSC	A	8.46	–	A	8.56	–
11. Cahuilla Road @ Tahquitz Canyon Way	TWSC	B	12.6	NLR	B	12.8	NLR
12. Cahuilla Road @ Arenas Road	TWSC	A	9.8	NLT	A	9.8	SLTR
13. Museum Drive @ Tahquitz Canyon Way	TWSC	A	9.7	SL	B	11.3	SL
14. Palm Canyon Drive @ Andreas Road	TWSC	F	639.7	ETR	F	2107	ETR
15. Belardo Road @ Museum Drive[a]	AWSC	B	10.53	–	C	17.53	–
16. Belardo Road @ Andreas Road	TWSC	B	12.6	WLR	B	13.5	WLR
17. Belardo Road @ Main Street	AWSC	A	9.94	–	B	10.36	–

a. All-way STOP control traffic control was assumed for this intersection when Belardo Road is extended.

Future Villagefest Conditions

Table 4-19 shows the future year 2017 control delay and levels of service at the three key intersections along Belardo Road during the highest volume hour on a Thursday during Villagefest without site traffic. Table 4-20 shows the opening year 2017+phase 1 highest hour delay and LOS at the six key intersections along Belardo Road with and without the traffic associated with a design day event at the Downtown Palm Springs Park.

Table 4-21 shows the future year 2030 control delay and LOS at the three key intersections along Belardo Road during the highest volume hour on a Thursday during Villagefest without site traffic. Table 4-22 provides the year 2030+project buildout highest hour delay and LOS at the six key intersections along Belardo Road with and without the traffic associated with a design day event at the Downtown Palm Springs Park.

Table 4-19
Opening Year 2017 Evening Peak Hour LOS
at the Key Intersections on Belardo Road During Villagefest
Without Site-Generated Traffic

Key Intersection	Control	Major Street Left or Intersection		Approach With Most Delay	
		Delay (Sec.)	LOS	Delay (Sec.)	LOS
8. Belardo Road @ Amado Road	TWSC	7.6	A	16.2	C
9. Belardo Road @ Tahquitz Canyon Way[b]	AWSC	8.91	A	9.43	A
10. Belardo Road @ Arenas Road	AWSC	9.42	A	10.18	B

a. Delay=average approach control delay (seconds/vehicle) for the minor street approach that exhibits the most delay at TWSC intersections. Since AWSC intersections do not have minor approaches, the delay and LOS for the approach with the most delay were included and the approach was identified. Overall intersection delay (seconds/vehicle) and overall intersection LOS are shown for the all-way stop controlled intersections.
b. The traffic control assumed for this intersection was assumed to be constructed as all-way STOP control when Belardo Road is extended.

Table 4-20
Opening Year 2017+Phase 1 Peak Hour LOS
at the Key Intersections on Belardo Road During Villagefest
With and Without a Design Day Event at the Downtown Palm Springs Park[a]

Key Intersection	Traffic Control	Major Street Left or Intersection Delay (Sec.)	LOS	Approach With Most Delay Delay (Sec.)	LOS
Without Downtown Park					
8. Belardo Road @ Amado Road	TWSC	8.0	A	27.5	D
9. Belardo Road @ Tahquitz Canyon Way[b]	AWSC	12.01	B	14.11	B
10. Belardo Road @ Arenas Road	AWSC	12.36	B	14.21	B
15. Belardo Road @ Museum Drive[b]	AWSC	10.40	B	11.15	B
16. Belardo Road @ Andreas Road	TWSC	7.7	A	10.9	B
17. Belardo Road @ Main Street	AWSC	9.22	A	9.80	A
With Downtown Park					
8. Belardo Road @ Amado Road	TWSC	9.7	A	34.4	D
9. Belardo Road @ Tahquitz Canyon Way[b]	AWSC	117.27	F	274.20	F
10. Belardo Road @ Arenas Road	AWSC	368.20	F	466.92	F
15. Belardo Road @ Museum Drive[b]	AWSC	24.58	C	29.05	D
16. Belardo Road @ Andreas Road	TWSC	8.0	A	17.4	C
17. Belardo Road @ Main Street	AWSC	13.35	B	15.96	C

a. Delay=average approach control delay (seconds/vehicle) for the minor street approach that exhibits the most delay at TWSC intersections. Since AWSC intersections do not have minor approaches, the delay and LOS for the approach with the most delay were included and the approach was identified. Overall intersection delay (seconds/vehicle) and overall intersection LOS are shown for the all-way stop controlled intersections.

b. The traffic control assumed for this intersection was assumed to be constructed as all-way STOP control when Belardo Road is extended.

Table 4-21
Year 2030 Peak Hour LOS at the Key Intersections
Along Belardo Road During Villagefest
Without Site-Generated Traffic

Key Intersection	Traffic Control	Major Street Left or Intersection		Approach With Most Delay	
		Delay (Sec.)	LOS	Delay (Sec.)	LOS
8. Belardo Road @ Amado Road	TWSC	7.6	A	16.8	C
9. Belardo Road @ Tahquitz Canyon Way[b]	AWSC	8.95	A	9.49	A
10. Belardo Road @ Arenas Road	AWSC	9.65	A	10.52	B

a. Delay=average approach control delay (seconds/vehicle) for the minor street approach that exhibits the most delay at TWSC intersections. Since AWSC intersections do not have minor approaches, the delay and LOS for the approach with the most delay were included and the approach was identified. Overall intersection delay (seconds/vehicle) and overall intersection LOS are shown for the all-way stop controlled intersections.
b. The traffic control assumed for this intersection was assumed to be constructed as all-way STOP control when Belardo Road is extended.

Table 4-22
Year 2030+Project Buildout
Peak Hour LOS at the Key Intersections on Belardo Road During Villagefest
With and Without a Design Day Event at the Downtown Palm Springs Park[a]

Key Intersection	Traffic Control	Major Street Left or Intersection Delay (Sec.)	LOS	Approach With Most Delay Delay (Sec.)	LOS
Without Downtown Park					
8. Belardo Road @ Amado Road	TWSC	8.5	A	297.0	F
9. Belardo Road @ Tahquitz Canyon Way[b]	AWSC	50.23	F	80.16	F
10. Belardo Road @ Arenas Road	AWSC	32.03	D	42.14	E
15. Belardo Road @ Museum Drive[b]	AWSC	16.59	C	19.58	C
16. Belardo Road @ Andreas Road	TWSC	8.0	A	15.2	C
17. Belardo Road @ Main Street	AWSC	11.54	B	13.10	B
With Downtown Park					
8. Belardo Road @ Amado Road	TWSC	10.6	B	415.9	F
9. Belardo Road @ Tahquitz Canyon Way[b]	AWSC	537.53	F	1125	F
10. Belardo Road @ Arenas Road	AWSC	799.87	F	1016	F
15. Belardo Road @ Museum Drive[b]	AWSC	177.46	F	253.81	F
16. Belardo Road @ Andreas Road	TWSC	8.4	A	59.1	F
17. Belardo Road @ Main Street	AWSC	26.83	D	40.83	E

a. Delay=average approach control delay (seconds/vehicle) for the minor street approach that exhibits the most delay at TWSC intersections. Since AWSC intersections do not have minor approaches, the delay and LOS for the approach with the most delay were included and the approach was identified. Overall intersection delay (seconds/vehicle) and overall intersection LOS are shown for the all-way stop controlled intersections.

b. The traffic control assumed for this intersection was assumed to be constructed as all-way STOP control when Belardo Road is extended.

Future Saturday Conditions

Table 4-23 shows the Saturday midday peak hour delay and levels of service in the future year 2017 without site traffic at the ten of the key intersections. Table 4-24 shows the opening year 2017+phase 1 midday peak hour delay and LOS at fourteen future key intersections with and without the traffic associated with a design day event at the Downtown Palm Springs Park.

Table 4-25 includes the Saturday midday peak hour delay and levels of service in the future year 2030 without site traffic at the ten existing key intersections. Table 4-26 provides the year 2030+project buildout midday peak hour delay and LOS at fourteen future key intersections with and without the traffic associated with a design day event at the Downtown Palm Springs Park.

Table 4-23
Opening Year 2017 Saturday Midday Peak Hour
LOS at the Key Intersections Without Site-Generated Traffic[a]

Key Intersection	Traffic Control	Midday Peak Hour LOS	Delay (Sec.)	V/C Ratio
1. Indian Canyon Drive @ Amado Road	Signal	A	5.9	0.35
2. Indian Canyon Drive @ Andreas Road	Signal	A	6.1	0.35
3. Indian Canyon Drive @ Tahquitz Canyon Way	Signal	B	16.2	0.56
4. Indian Canyon Drive @ Arenas Road	Signal	A	6.8	0.37
5. Palm Canyon Drive @ Amado Road	Signal	A	6.9	0.45
6. Palm Canyon Drive @ Tahquitz Canyon Way	Signal	B	16.2	0.52
7. Palm Canyon Drive @ Arenas Road	Signal	A	6.1	0.38
8. Belardo Road @ Amado Road	TWSC	A	9.5	WLR
9. Belardo Road @ Tahquitz Canyon Way[a]	AWSC	A	8.48	–
10. Belardo Road @ Arenas Road	AWSC	A	7.96	–

a. All-way STOP control traffic control was assumed for this intersection when Belardo Road is extended.

Table 4-24
Opening Year 2017+Phase 1
Saturday Midday Peak Hour LOS at the Key Intersections
With and Without a Design Day Event at the Downtown Palm Springs Park[a]

Key Intersection	Traffic Control	Without Downtown Park			With Downtown Park		
		LOS	Delay (Sec.)	V/C Ratio	LOS	Delay (Sec.)	V/C Ratio
1. Indian Canyon Drive @ Amado Road	Signal	A	7.4	0.42	A	8.4	0.45
2. Indian Canyon Drive @ Andreas Road	Signal	A	8.0	0.39	A	8.5	0.41
3. Indian Canyon Drive @ Tahquitz Canyon Way	Signal	C	20.5	0.70	C	30.0	0.88
4. Indian Canyon Drive @ Arenas Road	Signal	A	6.9	0.41	A	7.0	0.49
5. Palm Canyon Drive @ Amado Road	Signal	A	8.3	0.51	A	9.0	0.60
6. Palm Canyon Drive @ Tahquitz Canyon Way	Signal	C	20.8	0.69	C	20.7	0.75
7. Palm Canyon Drive @ Arenas Road	Signal	A	6.3	0.42	A	6.7	0.43
8. Belardo Road @ Amado Road	TWSC	B	10.3	WLR	B	12.4	WLR
9. Belardo Road @ Tahquitz Canyon Way[a]	AWSC	B	13.56	–	F	601.07	–
10. Belardo Road @ Arenas Road	AWSC	A	8.18	–	A	8.48	–
14. Palm Canyon Drive @ Andreas Road	TWSC	F	93.4	ETR	F	1323	WLT
15. Belardo Road @ Museum Drive[a]	AWSC	A	8.26	–	A	9.67	–
16. Belardo Road @ Andreas Road	TWSC	A	9.6	WLR	B	11.5	WLR
17. Belardo Road @ Main Street	AWSC	A	7.81	–	A	9.33	–

a. All-way STOP control traffic control was assumed for this intersection when Belardo Road is extended.

Table 4-25
Year 2030 Saturday Midday Peak Hour LOS at the Key Intersections
Without Site-Generated Traffic[a]

Key Intersection	Traffic Control	Midday Peak Hour LOS	Delay (Sec.)	V/C Ratio
1. Indian Canyon Drive @ Amado Road	Signal	A	5.9	0.36
2. Indian Canyon Drive @ Andreas Road	Signal	A	6.7	0.39
3. Indian Canyon Drive @ Tahquitz Canyon Way	Signal	B	17.1	0.67
4. Indian Canyon Drive @ Arenas Road	Signal	A	7.8	0.44
5. Palm Canyon Drive @ Amado Road	Signal	A	7.3	0.48
6. Palm Canyon Drive @ Tahquitz Canyon Way	Signal	B	16.1	0.53
7. Palm Canyon Drive @ Arenas Road	Signal	A	6.6	0.43
8. Belardo Road @ Amado Road	TWSC	A	9.9	WLR
9. Belardo Road @ Tahquitz Canyon Way[a]	AWSC	A	8.55	–
10. Belardo Road @ Arenas Road	AWSC	A	7.99	–

a. All-way STOP control traffic control was assumed for this intersection when Belardo Road is extended.

Table 4-26
Year 2030+Project Buildout
Saturday Midday Peak Hour LOS at the Key Intersections
With and Without a Design Day Event at the Downtown Palm Springs Park[a]

Key Intersection	Traffic Control	Without Downtown Park			With Downtown Park		
		LOS	Delay (Sec.)	V/C Ratio	LOS	Delay (Sec.)	V/C Ratio
1. Indian Canyon Drive @ Amado Road	Signal	B	10.5	0.59	B	11.8	0.64
2. Indian Canyon Drive @ Andreas Road	Signal	B	12.0	0.58	B	12.5	0.59
3. Indian Canyon Drive @ Tahquitz Canyon Way	Signal	D	48.5	0.97	F	208.3	1.21
4. Indian Canyon Drive @ Arenas Road	Signal	A	9.1	0.57	A	9.7	0.65
5. Palm Canyon Drive @ Amado Road	Signal	B	12.7	0.72	B	15.1	0.83
6. Palm Canyon Drive @ Tahquitz Canyon Way	Signal	D	37.2	0.94	D	44.8	0.96
7. Palm Canyon Drive @ Arenas Road	Signal	A	7.7	0.55	A	8.0	0.56
8. Belardo Road @ Amado Road	TWSC	B	12.8	WLR	C	17.7	WLR
9. Belardo Road @ Tahquitz Canyon Way[a]	AWSC	F	355.62	–	F	>1000	–
10. Belardo Road @ Arenas Road	AWSC	A	8.68	–	A	9.03	–
14. Palm Canyon Drive @ Andreas Road	TWSC	F	3345	ETR	F	5611	ETR
15. Belardo Road @ Museum Drive[a]	AWSC	B	11.54	–	B	13.69	–
16. Belardo Road @ Andreas Road	TWSC	B	11.5	WLR	C	16.0	WLR
17. Belardo Road @ Main Street	AWSC	A	9.07	–	B	11.80	–

a. All-way STOP control traffic control was assumed for this intersection when Belardo Road is extended.

4F. Traffic Signal Analysis

The justification for the installation of a traffic signal at an intersection is based on the warrants adopted by Caltrans and the Federal Highway Administration. There are several types of traffic signal warrants including: an eight-hour vehicle volume warrant (including minimum vehicle volume and interruption of continuous traffic warrants), a four-hour vehicle volume warrant, a peak hour vehicle volume warrant, a pedestrian volume warrant, a school crossing warrant, a coordinated signal system warrant, a crash warrant, and a roadway network warrant.

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

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

The evaluation of peak hour levels of service at the unsignalized key intersections provides a preliminary indication of when and where traffic signals might be needed in the study area to improve levels of service. Peak hour traffic volumes at the existing and future unsignalized key intersections were compared to urban peak hour or daily traffic signal warrants, as appropriate, for all of the scenarios evaluated to determine whether or not the installation of new traffic signals would be warranted.

For new intersections where traffic counts cannot be made, the traffic signal analysis was based on the CA MUTCD daily traffic signal warrants. For existing intersections where traffic counts can be made, the traffic signal analysis utilized the peak hour traffic signal warrant. Warrant 3, the peak hour traffic signal warrant, is intended for use where traffic conditions are such that for at least one hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street. Peak hour signal warrants (see Appendix 4) 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.

Traffic signal volume warrants specify that the traffic volumes represent an average day. Therefore, traffic from special events would not normally be mitigated with a traffic signal. Similarly, traffic signal volume warrants that are only met during the peak hour on Saturday do not reflect conditions on an average day, and would not normally be considered as a basis for requiring traffic control signals as mitigation.

Of the existing and future unsignalized intersections in the study area, only two intersections had unacceptable levels of service and volumes approaching signal volume warrants on an average day. Both of these intersections are existing tee-intersections that will be constructed as four-way intersections upon implementation of the proposed project. Daily signal warrants would be appropriate for use in evaluating these intersections since representative traffic counts cannot be made.

Belardo Road at Tahquitz Canyon Way (9)

Based on the urban daily signal warrants, the intersection of Belardo Road and Tahquitz Canyon Way would not quite meet signal warrants with future year 2030+project buildout weekday traffic volumes. This intersection is projected to provide acceptable levels of service (LOS C) during the midday and evening peak hours on weekdays. However, the year 2030+project buildout daily volumes comprise 95 percent of Daily Warrant 2 (Interruption of Continuous Traffic) and 79 percent of the 80 percent threshold for Daily Warrant 3 (Combination of Warrants). Furthermore, the projected year 2030+project buildout Saturday traffic volumes are projected to meet both Daily Warrant 1 and Daily Warrant 2, and the intersection LOS on Saturday would be unacceptable.

While not strictly required, mitigation is recommended for this intersection to reduce the potential for substantial delays and congestion on Saturdays upon buildout of the project. If the future land uses generate more traffic than projected, the installation of traffic control signals may ultimately be required to maintain an acceptable LOS during weekday peak hours. A better alternative would be to provide two westbound through lanes, to allow the outer lane to store the queue entering the parking structure while motorists traveling westbound use the inner lane to pass vehicles queued at the entry to the parking structure. With two westbound through lanes at this intersection and all-way STOP control, the intersection is projected to provide acceptable levels of service with year 2030+project buildout traffic volumes on Saturdays. Although a proposed drop-off lane for the Kimpton Hotel may narrow the Tahquitz Canyon Way approach to Belardo Road, there appears to be sufficient pavement width on Tahquitz Canyon Way if the drop-off lane is modified or the centerline of Tahquitz Canyon Way is offset to the south.

Palm Canyon Drive at Andreas Road (14)

The Preferred Project in the 2008 *Museum Market Plaza Specific Plan Traffic Impact Study* included the extension of a site access roadway (Museum Way) to Indian Canyon Drive along the Main Street alignment. The Downtown Palm Springs Project shows the connection between Palm Canyon Drive and Indian Canyon Drive occurring at Andreas Road rather than at Main Street. This alignment was addressed in the *Museum Market Plaza Specific Plan Traffic Impact Study* in conjunction with the Less Intense Alternative A. For Less Intense Alternative A, a traffic signal was recommended as mitigation at the intersection Palm Canyon Drive and Andreas Road.

Based on the urban daily signal warrants, the intersection of Palm Canyon Drive and Andreas Road (Intersection 14) does not meet signal warrants with the opening year 2017+initial phase weekday traffic volumes. However, signal warrants would be met with the year 2030+project buildout weekday traffic volumes. The level of service analysis shows that without signalization, this intersection is projected to operate at LOS D with opening year 2017+initial phase weekday traffic volumes, and LOS F with year 2030+project buildout weekday traffic volumes. Therefore, this intersection is recommended for signalization following the completion of Phase 1.

4G. Site Access And Internal Circulation Analysis

Site Access

The surrounding street system was designed to accommodate the Desert Fashion Plaza and has adequate capacity to provide access for the proposed project. The Downtown Palm Springs Project would improved the mobility within the area by extending Belardo Road through the site, adding the Main Street connection between Museum Drive and Palm Canyon Drive, and extending Andreas Road to Belardo Road. The site could be closed to motor vehicle traffic (with retractable bollards on Main Street at Museum Drive and at Palm Canyon Drive and on Belardo Road, at Andreas Road and at Tahquitz Canyon Way), and still maintain more mobility than afforded by the Desert Fashion Plaza. With the on-site parking consolidated in two primary parking structures and access on the perimeter of the project site, the parking to be used even when the site is closed to vehicular traffic.

Additional combinations of road closures could also be accommodated. Belardo Road or Main Street could be closed individually, or segments of each street could be closed. For example, Main Street could be closed from Museum Drive to Belardo Road, or Belardo Road could be closed from Andreas Road to Main Street. The road closures should remove entire roadway segments and not include closures at intersections that result in dead-end streets. Emergency access and the potential effect of road closures on emergency response times should also be considered.

Main Street as a One-Way or Two-Way Facility

Main Street is not proposed between Palm Canyon Drive and Indian Canyon Drive. Consequently, the intersection of Main Street with Palm Canyon Drive would not have eastbound traffic crossing Palm Canyon Drive. Since Palm Canyon Drive is a one-way street, there would be no left-turn movements between Palm Canyon Drive and Main Street, regardless of whether Main Street is operating as a one-way or a two-way street. The likelihood of pedestrians and motorists seeing each other is much higher at intersections of one-way streets. Pedestrians need look in only one direction, and the driving task is simplified for motorists when all vehicles are moving in the same direction. A study of 1,297 intersections in 15 U.S. cities found that the number of vehicle-pedestrian accidents was lower at intersections of one-way streets than at intersections of two-way streets.[3]

3. Zegeer, C.V., J. Stewart, H. Huang and P. Langerwey. "Safety Effects of Marked and Unmarked Crosswalks at Uncontrolled Intersections." *Transportation Research Record*, No. 1773 (2001): 56-68.

Assuming Main Street operates as a one-way street, the future traffic volumes between Belardo Road and Palm Canyon Drive, are projected to remain below 1,500 vehicles per day with all of the scenarios evaluated. The one-way flow of traffic would reduce the potential for conflicts by: (1) providing fewer conflict points at intersections (i.e., fewer turning movements), (2) providing more available gaps for crossing pedestrians, and (3) allowing drivers to monitor pedestrian movements more readily, since all vehicles would be moving in the same direction.

The intersection of Main Street with Palm Canyon Drive would not require a traffic signal, whether Main Street were improved as a one-way or a two-way street. Although there is a pedestrian traffic signal currently located near this intersection, it is non-operational because of the current construction activity on the west side of Palm Canyon Drive.

Main Street could operate as either a one-way or a two-way roadway. As a two-way roadway, Main Street could attract enough traffic to reduce the eastbound right-turn demand on Tahquitz Canyon Way at Palm Canyon Drive following special events. Even if this were to occur, Main Street is expected to remain a low-volume roadway because it would terminate at Palm Canyon Drive.

The year 2030+project buildout daily traffic volumes for Main Street, between Museum Drive and Belardo Road (see Figure 4-34) are projected to remain relatively low (i.e. 3,030 VPD or less). If Main Street were to function as a one-way street from Palm Canyon Drive to Museum Drive, alternative routes are available with the capacity necessary to accommodate the eastbound traffic that was assigned to Main Street in conjunction with this analysis.

4H. Other Considerations

Traffic Management Plan

A traffic management plan should be developed with site-specific strategies that can be implemented to reduce potential LOS deficiencies during planned events at the Downtown Palm Springs Park. The traffic management plan should include measures to increase vehicle occupancy, reduce the travel demand, and spread the arrival times over a longer period to reduce the peak travel flows. The traffic management plan should address those intersections identified in the traffic analysis that may require officer-assisted traffic control. Many potential LOS deficiencies may be avoided by scheduling special events to avoid the peak traffic hours on the adjacent streets.

The closure of Main Street could provide an opportunity to provide access for a shuttle service. If an event is planned for peak traffic periods or during Villagefest, Main Street could be closed to passenger cars, but provide an access for a shuttle service. There are large parking areas within one-half mile of the site that could be used as remote overflow parking sites with shuttles to reduce the traffic entering the project site. Reduced attendance fees or parking fees could be used as an incentive to encourage patrons to use the shuttle service.

5.0 FINDINGS AND CONCLUSIONS

5A. Traffic Impacts

The level of service analysis summarized in Section 4 included an evaluation of peak season conditions during three different days of the week to assess traffic operations during those hours when the demand for mobility within and through the study area results in the highest demands on the transportation infrastructure. The midday and evening peak hour conditions on weekdays were evaluated. The highest volume hour on Thursdays during Villagefest was analyzed. The midday peak hour conditions on Saturdays were addressed. For each different day and peak hour evaluated, the following development scenarios were addressed: (1) ambient conditions without site traffic; (2) conditions with the initial phase of development; (3) conditions upon project completion; (4) conditions with the initial phase of development and a design day event at the Downtown Palm Springs Park, and (5) conditions upon project completion with a design day event at the Downtown Palm Springs Park.

Table 5-1 identifies those key intersections with potential LOS deficiencies by development scenario and day of the week, assuming unmitigated intersection geometrics. Only key intersections projected to operate at LOS E or LOS F based on the average delay per vehicle for the intersection as a whole were included. Intersections with TWSC and a minor approach projected to operate at LOS E or F were also included in Table 5-1. A discussion of potential mitigation strategies for each of the key intersections identified in Table 5-1 as having a potential level of service deficiency is provided in Table 5-2. Some of the LOS deficiencies identified would be of short duration and occur infrequently (i.e., design day special events in the park or Villagefest).

Table 5-1
Key Intersections With Potential LOS Deficiencies by Development Scenario

Scenario and Intersection	Control[a] Type	Year 2017 + Initial Phase	Year 2030+ Project Buildout	Year 2017+ Phase 1+ Event	Year 2030+ Project Buildout+Event
Weekday Midday and Evening Peak Hours					
6. Palm Canyon Drive @ Tahquitz Canyon Way	Signal	Acceptable	Acceptable	LOS E	LOS F
9. Belardo Road @ Tahquitz Canyon Way	AWSC	Acceptable	Acceptable	LOS F	LOS F
14. Palm Canyon Drive @ Andreas Road	TWSC	Acceptable	LOS F	LOS F	LOS F
Villagefest Highest Evening Hour					
8. Belardo Road @ Amado Road	TWSC	Acceptable	LOS F	Acceptable	LOS F
9. Belardo Road @ Tahquitz Canyon Way	AWSC	Acceptable	LOS F	LOS F	LOS F
10. Belardo Road @ Arenas Road	AWSC	Acceptable	Acceptable	LOS F	LOS F
15. Belardo Road @ Museum Drive	AWSC	Acceptable	Acceptable	Acceptable	LOS F
16. Belardo Road @ Andreas Road	TWSC	Acceptable	Acceptable	Acceptable	LOS F
Saturday Midday Peak Hour					
3. Indian Canyon Drive @ Tahquitz Canyon Way	Signal	Acceptable	Acceptable	Acceptable	LOS F
9. Belardo Road @ Tahquitz Canyon Way	AWSC	Acceptable	LOS F	LOS F	LOS F
14. Palm Canyon Drive @ Andreas Road	TWSC	LOS F	LOS F	LOS F	LOS F

a. AWSC=All-Way STOP Controlled. TWSC=Two-Way STOP Controlled. The existing+project scenarios would require the same mitigation as the year 2017+project scenarios.

Table 5-2
Mitigation Strategies for Intersections With Potential LOS Deficiencies

Intersection/Potential Deficiency	Potential Mitigation Strategies
3. **Indian Canyon Drive @ Tahquitz Canyon Way** Deficiency: Provides acceptable LOS for all scenarios except the year 2030+project buildout+park event scenario during the midday peak hour on Saturdays.	Any mitigation to improve the capacity of this intersection by adding additional lanes would require substantial modifications and affect on-street parking. Since the impacts are temporary and infrequent, they may be addressed by a Traffic Management Plan for planned special events. The most cost-effective strategy would be to avoid scheduling major events with start times that coincide with the Saturday midday peak hour.
6. **Palm Canyon Drive @ Tahquitz Canyon Way** Deficiency: Provides acceptable LOS for all scenarios except during park events.	To improve service for all scenarios and mitigate the LOS deficiencies, an exclusive eastbound right-turn lane could be added at this intersection.
8. **Belardo Road @ Amado Road** Deficiency: Provides acceptable LOS for all conditions except the scenarios with park events during Villagefest.	Future traffic conditions should be monitored when park events occur during Villagefest. When park events occur during Villagefest, a traffic control officer may be necessary to manually direct traffic at this intersection.
9. **Belardo Road @ Tahquitz Canyon Way** Deficiency: Provides unacceptable LOS with park event scenarios, as well as with the year 2030+project buildout scenarios during the midday peak hour on Saturday and Villagefest.	Provides acceptable LOS with year 2030+project buildout weekday scenario. All-way STOP control is recommended when Belardo Road is extended through the site. To improve the LOS for all scenarios and mitigate the year 2030+project buildout Saturday and Villagefest (without park event) LOS deficiencies, two westbound through lanes should be provided at this intersection and the two receiving lanes should extend west to the existing parking structure access connection. During park events, a traffic control officer may be necessary to manually direct traffic at this intersection.
10. **Belardo Road @ Arenas Road** Deficiency: Provides unacceptable LOS during Villagefest with park event scenarios.	Since the LOS deficiencies are temporary and infrequent, they may be addressed by a Traffic Management Plan developed for planned special events. The most cost-effective strategy would be to avoid scheduling major events during Villagefest. When park events occur during Villagefest, a traffic control officer may be necessary to manually direct traffic at this intersection.
14. **Palm Canyon Drive @ Andreas Road** Deficiency: Provides unacceptable LOS with all Saturday scenarios, all park event scenarios, and the year 2030+project buildout scenario on weekdays.	Recommended for signalization after Phase 1. Once signalized, this intersection will provide acceptable levels of service with all future scenarios.

Table 5-2 (Continued)
Mitigation Strategies for Intersections With Potential LOS Deficiencies

Intersection/Potential Deficiency	Potential Mitigation Strategies
15. **Belardo Road @ Museum Drive** Deficiency: Provides acceptable LOS for all scenarios except the year 2030+project buildout+park event scenario during Villagefest.	Since the LOS deficiency would be temporary and infrequent, it may be addressed by a Traffic Management Plan developed for planned special events. The most cost-effective strategy would be to avoid scheduling major events during Villagefest. When park events occur during Villagefest, a traffic control officer may be necessary to manually direct traffic at this intersection.
16. **Belardo Road @ Andreas Road** Deficiency: Provides acceptable LOS for all scenarios except the year 2030+project buildout+park event scenario during Villagefest.	Since the LOS deficiency would be temporary and infrequent, it may be addressed by a Traffic Management Plan developed for planned special events. The most cost-effective strategy would be to avoid scheduling major events during Villagefest. When park events occur during Villagefest, a traffic control officer may be necessary to manually direct traffic at this intersection.

The recommended minimum lane geometrics and traffic controls for the key intersections are shown in Figure 5-1. Figure 5-2 illustrates various mitigation strategies for intersections with potential LOS deficiencies associated with the Downtown Palm Springs Project including short-term deficiencies associated with design day events at the outdoor entertainment venue in Block E. It may not be appropriate to mitigate short-term deficiencies that are infrequent (such as those associated with Villagefest or a design day community event held at the Downtown Palm Springs Park) by installing new traffic control signals or constructing other costly transportation infrastructure improvements that oversize roadways and result in traffic signals that are not warranted. It may be feasible to mitigate some or all of the potential deficiencies in a cost-effective manner by incorporating minor modifications to the site access and internal circulation plan before the construction of the Downtown Palm Springs Project is completed and through comprehensive event operations planning to successfully manage attendee travel before, during, and after planned special events.

Even if some or all of the mitigation strategies identified in Table 5-2 are determined to be infeasible, the transportation system LOS deficiencies identified in Table 5-1 should be of value in gauging the potential effects of a proposed event on traffic operations in the vicinity of the Downtown Palm Springs Park venue. Information regarding where and when problems may occur and the magnitude of those potential problems can be useful in managing travel during planned special events by better defining the scope of a site-specific Traffic Management Plan to successfully manage travel for future planned special events held at the Downtown Palm Springs Park.

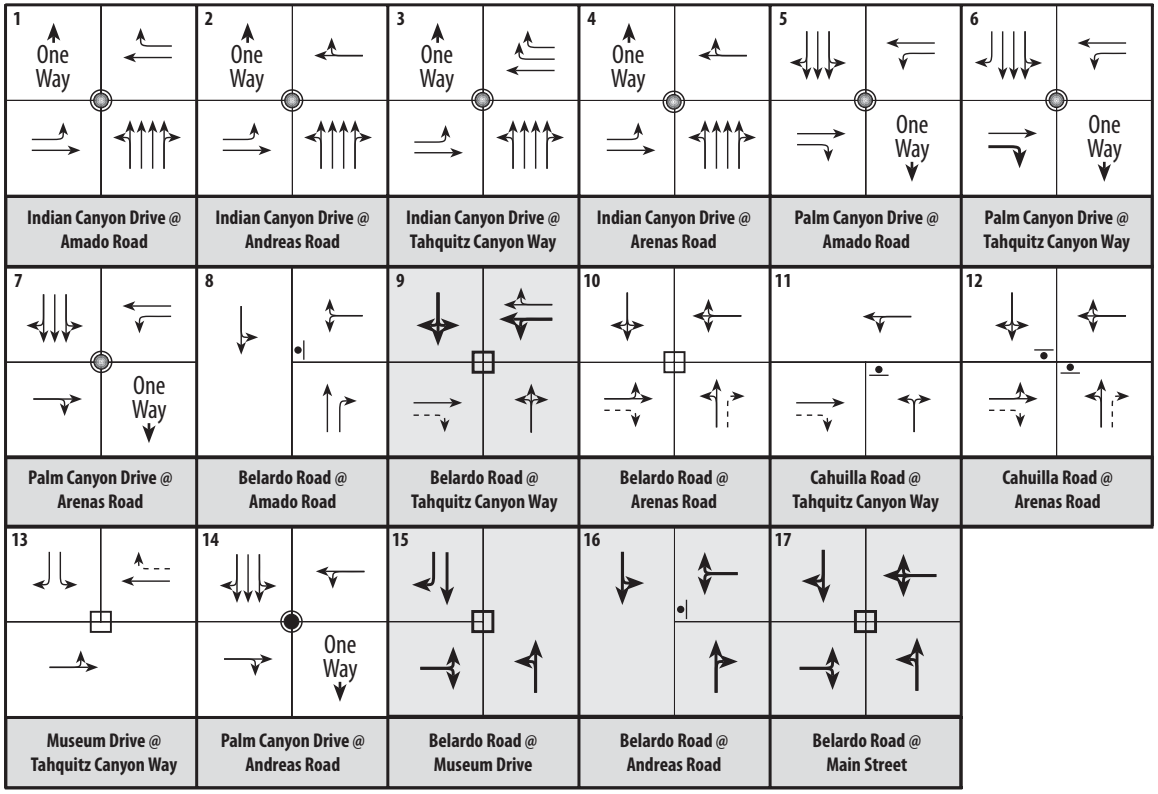
Special Events

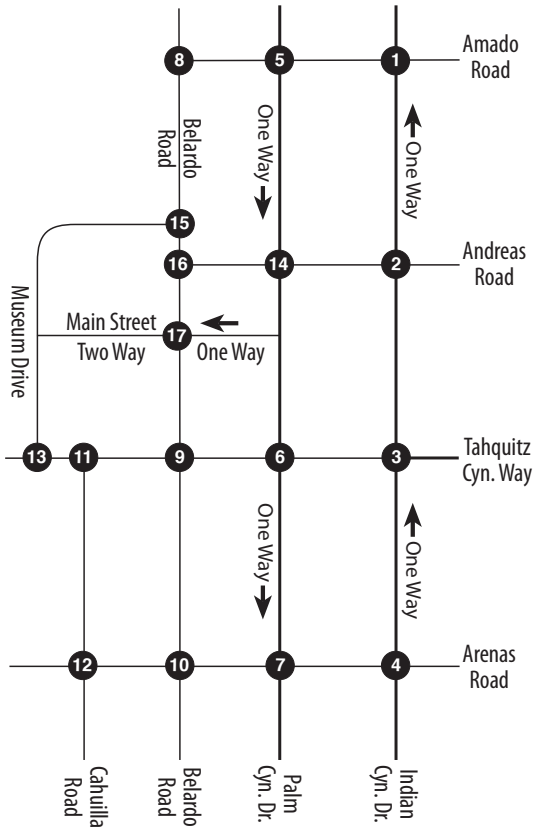
Factors Affecting the Impact of Special Events

The most critical factors in determining the impact of special events include: the travel demand, the road/site capacity, and the event operation. The travel demand is directly related to the event patron traffic, which is constrained by the venue attendance capacity. The travel demand is influenced by the event patron demographics, the average vehicle occupancy, acceptable walking times, percent walking trips, availability of

Figure 5-1

Recommended Minimum Lane Geometrics and Traffic Control at the Key Intersections





Legend

- 1 Intersection Number
- Signalized Intersection
- Stop Sign Control
- All Way Stop Conrol
- Right/Through/Left Lane
- Unmarked Right-Turn Lane
- Future Traffic Signal
- Exclusive Right-Turn Lane
- Through Lane
- Exclusive Left-Turn Lane
- Right/Left Lane
- Through/Right Lane
- Through/Left Lane

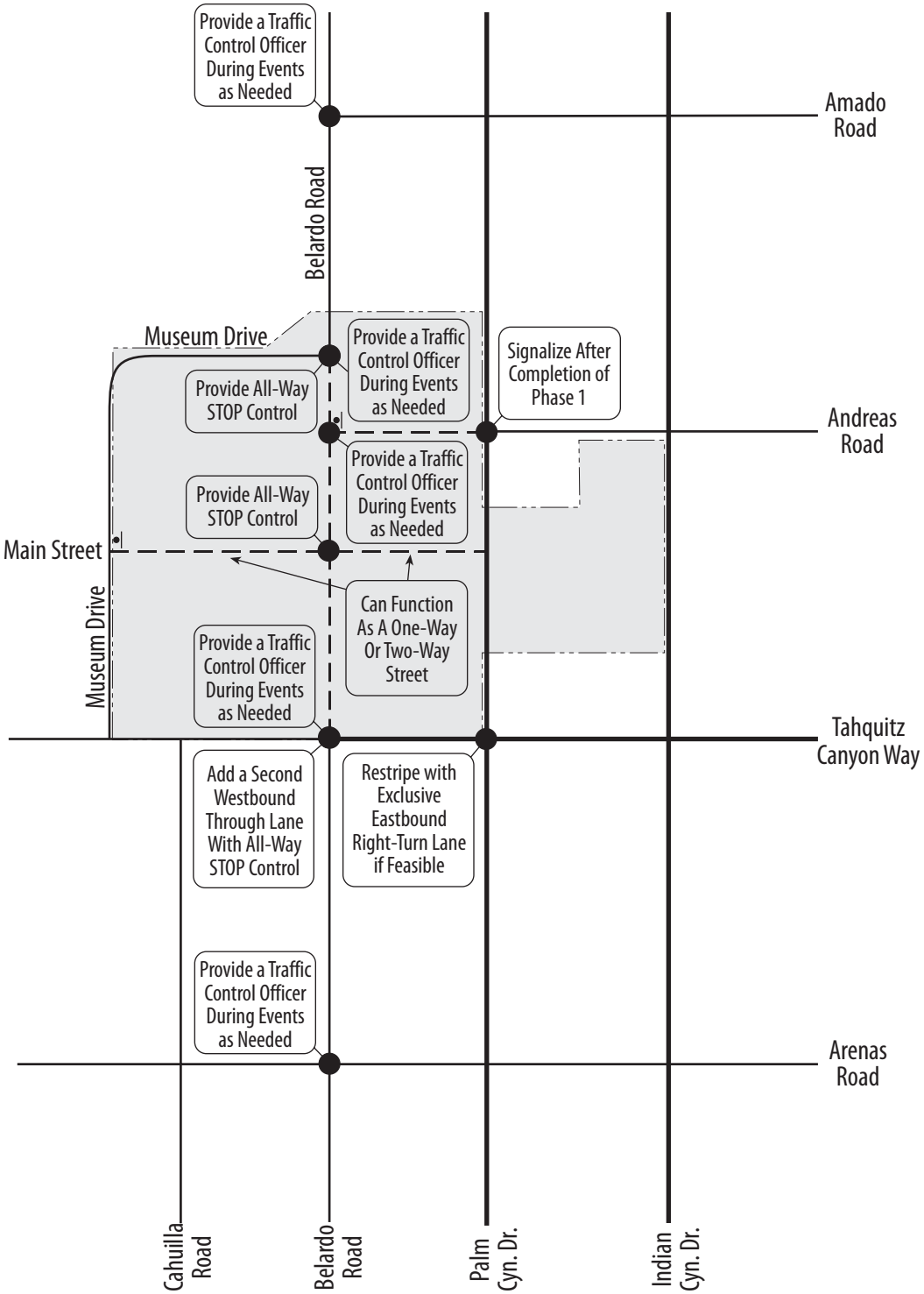
Note: Bolded arrows in shaded approaches represent new traffic lanes.

Endo Engineering

Schematic

Figure 5-2

Traffic Mitigation Strategies for the
Downtown Palm Springs Project



Endo Engineering

Source:

Scale: 1" = 350'

parking areas, the cost of parking and admission, the presence of employment centers and hotels in the venue vicinity, and transit availability.

Roadway facilities that affect the travel demand associated with special events include: local streets connecting the major travel corridors to the venue site; the location and capacity of the site access points; accommodations for pedestrians and bicycles; geometrics and lane assignments; traffic control devices; and the location and capacity of off-street venue parking areas, on-street parking areas, and overflow parking areas. The number and location of transit stops serving the venue and the scope of the transit services at those stops are important factors as are incentives and promotions that encourage transit ridership.

Event logistics including: the hours of operation, the site opening and closing times, the road closures required to stage an event, and the number of parking spaces lost to stage an event (parking for event participants, hospitality tents, etc.) influence how well the transportation facilities will function before and after a planned special event. Event organizers will be responsible for identifying the extent of the road closures and the parking area needed to stage each event. It may be advisable to maintain a data archive related to operations for similar planned special events in the future.

Special Events at the Downtown Palm Springs Park

The Downtown Palm Springs Park would provide an opportunity to create a centrally located venue in the downtown area that would attract employees who work in close proximity, thereby reducing the number of vehicular trips generated. The availability of hotels in close proximity may result in a significant number of patrons staying at area hotels and walking to and from the venue. The study area has available roadway and parking capacity. Traffic operations at the Interstate 10 interchanges providing regional access were recently improved at Indian Canyon Drive, Palm Drive/Gene Autry Trail, and at Date Palm Drive.

The trip generation associated with a special event at the park with the potential to attract 4,000 attendees could nearly double the peak hour trip generation associated the entire project site during the hour before the event is scheduled to begin and the hour immediately following the event. The intersections surrounding the project site would be expected to experience additional delay and traffic congestion on a short-term basis associated with these peak events, particularly if they occur during Villagefest or other peak travel periods. For a worst-case assessment, the peak arrival and departure traffic associated with a design day event in Block E was combined with the peak hour traffic volumes of the surrounding streets to identify locations with the potential for LOS deficiencies and traffic congestion that could be mitigated by providing an additional lane or manual traffic control (the temporary assignment right of way by a traffic control officer to facilitate the more efficient movement of the heaviest traffic flows).

The project includes several alternative site access routes for vehicles approaching the site from the north on Palm Canyon Drive (including Amado Road, Andreas Road, Main Street, and Tahquitz Canyon Way). Access from the south via Indian Canyon Drive is more limited, with Tahquitz Canyon Way providing the primary access and Andreas Road functioning as a secondary access route. If the levels of delay experienced by northbound traffic on Indian Canyon Drive turning left onto Tahquitz Canyon Way becomes excessive, there are alternative routes available to avoid or bypass this movement. Motorists anticipating congestion have the option of turning left from Indian Canyon Drive onto Arenas Road and approaching the site on Belardo Road and Cahuilla Drive. Motorists can also turn left from Indian Canyon Drive onto Andreas Road or Amado Road and approach the site from the east or the north.

Mitigation Strategies to Address Potential LOS Deficiencies

For design day special events occurring at any time other than during Villagefest, all of the key intersections except four (Intersections 3, 6, 9, and 14) are projected to provide acceptable levels of service without mitigation. Mitigation strategies that reflect the projected future conditions at each of these four intersections are discussed below. It should be noted that the levels of special event traffic evaluated herein are preliminary. No information

was available identifying specific events, the days and times when those events would occur, the distribution of potential attendees by census tract, the potential for overflow parking at a remote location with attendees using shuttles to access the site, potential transit promotions/incentives etc.

Palm Canyon Drive at Andreas Road (Intersection 14)

Traffic signal control is recommended for the intersection of Palm Canyon Drive with Andreas Road prior to any development following the completion of the initial phase of the Downtown Palm Springs Project. This intersection is projected to operate at LOS F during the midday peak hour on Saturdays in the year 2017 with phase 1, but is not expected to meet signal warrants on an average weekday. When signalized, this intersection would have sufficient capacity to accommodate the year 2030+project buildout+design day event traffic associated with the Downtown Palm Springs Park at acceptable levels of service during the midday peak hour on Saturdays.

Palm Canyon Drive at Tahquitz Canyon Way (Intersection 6)

The level of service analysis for the intersection of Palm Canyon Drive and Tahquitz Canyon Way indicates the potential for congestion during the hour immediately following a design day special event in Block E. A substantial number of the event attendees are expected to use the intersection of Palm Canyon Drive and Tahquitz Canyon Way when exiting the project site. The eastbound approach to Palm Canyon Drive on Tahquitz Canyon Way provides a single shared through/right-turn lane.

The provision of an exclusive eastbound right-turn lane on Tahquitz Canyon Way would allow vehicles turning right onto Palm Canyon Drive to avoid the queue of eastbound vehicles in the through lane, reducing the levels of congestion at this intersection. With this lane, the intersection of Palm Canyon Drive and Tahquitz Canyon Way would provide acceptable levels of service for year 2030+project buildout+design day event traffic volumes during all times except during Villagefest. Without this lane, more motorists will use Belardo Road and Cahuilla Road, south of Tahquitz Canyon Way to bypass the intersection of Palm Canyon Drive and Tahquitz Canyon Way.

There appears to be sufficient pavement width on Tahquitz Canyon Way to accommodate an exclusive eastbound right-turn lane at Palm Canyon Drive. The centerline striping on Tahquitz Canyon Way may have to be relocated northerly to provide the additional width needed to accommodate an eastbound through lane and an exclusive eastbound right-turn lane.

Indian Canyon Drive and Tahquitz Canyon Way (Intersection 3)

The intersection of Indian Canyon Drive and Tahquitz Canyon Way is projected to operate at acceptable levels of service with year 2030+project buildout+design day event traffic volumes on weekdays. However, the service level at this intersection is projected to decrease to LOS F with year 2030+project buildout+design day event traffic volumes during the midday peak hour on Saturdays.

This potential LOS deficiency could be mitigated by providing a second westbound and eastbound through lane on Tahquitz Canyon Way. However, the width of Tahquitz Canyon Way is constrained at this location by on-street parking serving the existing commercial development fronting on Tahquitz Canyon Way, between Indian Canyon Drive and Palm Canyon Drive. It is unlikely that the permanent widening of Tahquitz Canyon Way including the elimination of on-street parking would be justified to mitigate a potential LOS deficiency that would be both infrequent and of short duration.

The potential LOS deficiency at this intersection (identified for the midday peak hour on Saturdays in the peak season) could be avoided by not scheduling major events with start times or end times during the midday peak hour (noon to 1:00 PM) on Saturdays. Motorists familiar with the area may avoid congestion at this intersection by using alternate routes to enter the site. These alternates include using Arenas Road to access Belardo Road or Cahuilla Road or turning left from Indian Canyon Drive onto either Andreas Road, or Amado Road.

Belardo Road at Tahquitz Canyon Way (Intersection 9)

The intersection of Belardo Road and Tahquitz Canyon Way is projected to operate at acceptable levels of service with year 2030+project buildout traffic volumes on weekdays with all-way stop control and a single approach lane in all four directions. However, this unsignalized intersection is projected to fail with year 2030+project buildout traffic volumes during the midday peak hour on Saturdays. This intersection is also projected to operate at LOS F in the highest volume hour during Villagefest (7:30 PM - 8:30 PM on Thursdays) and during the hour immediately before and after a design day special event is held in Block E.

The provision of a second westbound through lane on Tahquitz Canyon Way, both east and west of Belardo Road, could mitigate the potential LOS deficiency at this intersection projected for the midday peak hour on Saturdays. This lane would need to extend west of Belardo Road to the on-site event parking access to accommodate vehicles turning right into the on-site parking area.

Even with the additional westbound lane on Tahquitz Canyon Way, east and west of Belardo Road, a potential LOS deficiency would still occur at this unsignalized intersection during the hour immediately before and after a design day special event is held in Block E without additional mitigation such as officer-assisted traffic control. The delay and congestion at this intersection during Villagefest and on Saturdays without mitigation may not be considered significant because it would be temporary and occur infrequently.

Any special events planned for the Downtown Palm Springs Park venue that are scheduled for time periods when the key intersections may experience excessive delay and substantial congestion should provide Traffic Management Plans that emphasize strategies to reduce traffic volumes approaching the site and spread the inbound traffic demand over an extended period. Providing promotions or incentives that encourage attendees to come early, increase vehicle occupancy, arrive on public transit vehicles, park at offsite locations and walk, ride bicycles, or shuttles to the event, etc. have been shown to be effective techniques.

Mitigation Strategies During Villagefest

During Villagefest, traffic volumes increase on site from both the additional visitors to Villagefest and the closure of Palm Canyon Drive between Amado Road and Baristo Road. As shown in Figure 3-7, approximately 300 southbound trips per hour are diverted from Palm Canyon Drive onto Belardo Road during Villagefest. The new traffic count on Belardo Road, south of Amado Road (prior to the seasonal adjustment) identified 2,143 more vehicles on Belardo Road between 11:00 AM and midnight on Thursday than on Wednesday. Between 5:00 PM and 10:00 PM during Villagefest the southbound traffic volume on Belardo Road increased by 200 to 356 vehicles per hour.

The key intersections along Belardo Road are projected to operate at acceptable levels of service with the increased volumes associated with Villagefest upon completion of the initial phase of the Downtown Palm Springs Project. The intersection of Belardo Road and Tahquitz Canyon Way is projected to operate at LOS F with the year 2030+project buildout traffic volumes during Villagefest (without special event traffic), assuming a single-lane approach in each direction with all-way stop control. With the addition of a second westbound through lane on Tahquitz Canyon Way (east and west of Belardo Road) this LOS deficiency can be mitigated and acceptable levels of service can be maintained.

Once the initial phase of development is completed, a potential LOS deficiency is projected to occur at two of the key intersections along Belardo Road when a design day special event is scheduled during Villagefest. The deficiency is projected to occur between 7:30 PM and 8:30 PM at the intersection of Belardo Road and Tahquitz Canyon Way (Intersection 9) and at the intersection of Belardo Road and Arenas Road (Intersection 10) without mitigation.

If a design day event is scheduled in Block E during Villagefest in the year 2030 upon buildout of the Downtown Palm Springs Project, a potential LOS deficiency is projected to occur at five of the six key intersections along Belardo Road without mitigation. These intersections include: Belardo Road at Amado Road (Intersection 8), Belardo Road at Tahquitz Canyon Way (Intersection 9), Belardo Road at Arenas Road (Intersection 10), Belardo Road at Museum Drive (Intersection 15), and Belardo Road at Andreas Road (Intersection 16). If a design day event is scheduled in Block E during Villagefest, the intersections along Belardo Road that are projected to operate at LOS F could be mitigated by providing traffic control officers to manually direct traffic. A Traffic Management Plan for the event should be required that includes techniques to manage traffic demands at Intersection 8, 9, 10, 15, and 16. The Traffic Management Plan should consider additional TDM strategies such as limiting the size of events held during Villagefest and not scheduling major event start or end times that coincide with the highest volume hour on Belardo Road during Villagefest (7:30-8:30 PM).

5B. Required Improvements

The special events addressed for the design day are not typical everyday occurrences. Bt their very nature, they are "special" and can be most effectively addressed individually by a site-specific traffic management plan tailored to address potential congestion by providing additional capacity at locations where LOS deficiencies and traffic congestion are most likely to occur. Certain proposed mitigation measures associated with addressing traffic conditions during Villagefest or special events that adequately address these short-term impacts may be substituted with other measures or appropriate conditions of approval attached to any required special event or other use permits (such as those required to close public roadways for community festivals).

Belardo Road at Tahquitz Canyon Way (Intersection 9)

The improvements recommended for this 4-way intersection to improve the capacity for special event traffic include the following:

- Install all-way STOP control.
- Provide two westbound approach lanes on Tahquitz Canyon Way that are carried through the intersection at Belardo Road to accommodate motorists entering the event parking area west of Belardo Road.
- A single-lane approach would be adequate for the northbound, southbound, and eastbound approaches.

If the provision of two westbound through lanes is not feasible at this intersection, an alternate form of mitigation would include the installation of traffic control signals. However, the projected traffic volumes may not meet the traffic signal warrants on an average weekday in the peak season upon project buildout. Standard engineering practice is to provide two lanes on each approach when traffic signals are installed.

Palm Canyon Drive at Andreas Road (Intersection 14)

Traffic signal control is recommended for the intersection of Palm Canyon Drive with Andreas Road prior to any development following the completion of the initial phase of the Downtown Palm Springs Project. This intersection is projected to meet traffic signal warrants and provide unacceptable levels of service in the year 2017 immediately following the completion of the initial phase of development. With traffic control signals, this intersection would have sufficient capacity to accommodate the future peak hour traffic demands at acceptable levels of service in the peak season.

Belardo Road at Museum Drive (Intersection 15)

- Install all-way STOP control.
- A single-lane approach would be adequate for all approaches.
- An exclusive southbound right-turn lane is optional, but proposed.

Belardo Road at Andreas Road (Intersection 16)

- Install two-way STOP control on westbound approach.
- A single-lane approach would be adequate for all approaches.

Belardo Road at Main Street (Intersection 17)

- Install all-way STOP control.
- A single-lane approach would be adequate for all approaches.

5C. Compliance With City Standards and Policies

LOS D or better operation shall be provided and maintained at the key intersections under typical weekday peak hour conditions during the peak season. The project proponent shall dedicate appropriate right-of-way to accommodate the ultimate improvement of all General Plan roadways on and abutting the site. In addition, circulation improvements will be made in conjunction with the proposed development on-site as outlined in the Museum Market Plaza Specific Plan. The project proponent will comply City of Palm Springs requirements regarding the provision of bikeway improvements on or adjacent to the site to replace the segments vacated and abandoned on Belardo Road/Museum Drive. The project proponent will coordinate with SunLine Transit Agency regarding public transit facilities on-site.

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. The proposed project will participate in the TUMF program and comply with the City of Palm Springs TDM Ordinance requirements.

5D. Transportation Uniform Mitigation Fee (TUMF) Program

The project proponent shall contribute traffic impact mitigation fees, by participating in the Transportation Uniform Mitigation Fee (TUMF) program. The project proponent shall incrementally pay Transportation Uniform Mitigation Fees (TUMF) and other transportation improvement fees required by the City of Palm Springs.

5E. Compliance With the Palm Springs General Plan

The Downtown Palm Springs Project is consistent with the approved Museum Market Plaza Specific Plan. All of the key intersections are projected to operate at acceptable levels of service during the weekday peak hours in the peak season of the year 2030 upon buildout of the Downtown Palm Springs Project provided the intersection of Palm Canyon Drive and Andreas Road is signalized after the initial phase, before additional site development occurs. The Downtown Palm Springs Project appears to be consistent with the Palm Springs General Plan.

The project would comply with the following circulation goals set forth in the Circulation Element of the *Palm Springs 2007 General Plan*.

- Establish and maintain an efficient, interconnected circulation system that accommodates vehicular travel, walking, bicycling, public transit, and other forms of transportation.
- Establish improved levels of service for efficient traffic flow and provide a safe circulation system.
- Provide efficient circulation in the Downtown to support its role as the City's primary retail center.
- Reduce the City's dependence on the use of single-passenger vehicles by enhancing mass transit opportunities.

- Provide improved mobility for City residents to access local services.
- Establish the City of Palm Springs as the premiere provider of recreational trails and bikeways in the Coachella Valley.
- Create a pedestrian experience that is attractive to both residents and visitors.
- Develop a system of parking facilities and operations that serve current and future commercial and residential uses and preserve the quality of life in residential neighborhoods.

The project would maintain LOS D or better operation for the City's circulation network, as measured using "in season" peak hour conditions. The project would provide travel choices to reduce traffic congestion. Accommodate pedestrian access, including handicapped accessibility in accordance with current ADA regulations. Traffic signal timing would adequately provide for safe pedestrian crossing. It would provide shade on sidewalks in the downtown to make walking more appealing during the summer months. It would provide and maintain trash receptacles, benches, shade structures, drinking fountains, and other amenities in pedestrian corridors. It would provide barrier-free accessibility for all handicapped residents, employees and visitors, including special designs to accommodate ADA-required path of travel separation from vehicular lanes.

The project would establish roadway designs that complement the community character and contribute to the livability of neighborhoods and commercial districts (i.e., width, sidewalks, parking, landscaping, etc.). It would incorporate trails and pedestrian and bicycle linkages to reduce dependence on vehicular use. It would provide bike racks and other bicycle amenities throughout the City to encourage bicycle use as an alternative to vehicular use.

6.0 RECOMMENDATIONS

The *Museum Market Plaza Specific Plan Final EIR* includes mitigation measures that would reduce the potentially significant impacts identified in the 2008 TIS to less than significant. Since 2008, the east-west boulevard shown in the Museum Market Plaza Specific Plan as Museum Way has been replaced by Main Street, which no longer connects Indian Canyon Drive to Palm Canyon Drive across Block K. This modification to the roadway configuration would reduce the number of conflicting turning movements along Palm Canyon Drive and along Indian Canyon Drive associated with access to and from the project site. This is an important improvement that would also reduce the potential for vehicular-pedestrian conflicts. It also respects the historical status of the Town & Country Center.

The loss of east-west connectivity across Block K would be alleviated, to some extent, by: (1) the westerly extension of Andreas Road to Belardo Road, (2) the conversion of Andreas Road to accommodate two-way travel between Indian Canyon Drive and Palm Canyon Drive, and (3) retaining the connection between Museum Drive and Belardo Road. This would improve access to better accommodate the travel demands associated with buildout of the Palm Springs Downtown Project.

Special Events

One objective of this study was to evaluate the adequacy of the site access to accommodate design day events held in Block E as well as simultaneous peak season activities throughout the remainder of the project site. The travel demands associated with planned special events in Block E would be highly directional, with heavy inbound flows during the hour prior to an event and heavy outbound flows during the hour immediately following the event. Depending on the event attendance and its scheduled start and end times, the demand for site access on a design day during the highest volume hours could be nearly twice the demand anticipated on a peak season weekday day without an event.

The on-site special event parking would be accessed from Tahquitz Canyon Way, west of Belardo Road, and from Museum Drive. Since the site-generated traffic would be required to access this parking, the design day event traffic would increase the westbound traffic volumes on Tahquitz Canyon Way, between Indian Canyon Drive and the parking access, during the hour prior to a special event. During the hour following a special event, the eastbound traffic volumes would increase on Tahquitz Canyon Way, between the parking access and Palm Canyon Drive, where motorists would be making eastbound right turns to travel southbound. To accommodate this movement and maintain acceptable levels of service with design day events, the mitigation strategies identified in the 2008 TIS have been refined, as discussed in Section 5.

Effect of Main Street On Site Access During Special Events

The Preferred Project evaluated in the 2008 TIS included Museum Way extending from Indian Canyon Drive across Block K to Palm Canyon Drive. Museum Way was eliminated from the Specific Plan and replaced by Main Street, which would not connect Indian Canyon Drive to Palm Canyon Drive across Block K. However, if Main Street were to be extended across Block K and function as a two-way street, the heavy eastbound right-turn volume projected for Tahquitz Canyon Way at Palm Canyon Drive following special events could be partially accommodated by the right-turn movement from Main Street onto Palm Canyon Drive. The extension of Main Street across Block K as a two-way street could also accommodate a portion of the demand for northbound left turns from Indian Canyon Drive onto Tahquitz Canyon Way prior to special events.

If Main Street were to be extended from Indian Canyon Drive to Palm Canyon Drive across Block K and function as a one-way (westbound) street, it could accommodate a portion of the inbound traffic approaching the site on Indian Canyon Way prior to special events. This would reduce the heavy demand for northbound left

turns from Indian Canyon Way at Tahquitz Canyon Way as well as the heavy westbound through volume on Tahquitz Canyon Way crossing Belardo Road to enter the event parking area.

6A. Roadway Improvements

Recommendations For Weekday LOS Deficiencies Following Phase 1

The intersection of Palm Canyon Drive and Andreas Road (Intersection 14) should be signalized after the initial phase of development is completed in the year 2017, before additional site development is initiated. With this mitigation, all of the key intersections are projected to operate at acceptable levels of service during the weekday peak hours in the peak season of the year 2030 upon buildout of the Downtown Palm Springs Project.

Recommendations For Year 2030 Saturday LOS Deficiencies

The intersection of Belardo Road with Tahquitz Canyon Way should be improved to provide two westbound through lanes with all-way stop control or signalized to accommodate the midday peak hour traffic volumes projected for Saturdays upon project completion. The applicant or developer should be responsible for providing two westbound lanes on Tahquitz Canyon Way east and west of Belardo Road when the intersection is reconstructed to extend Belardo Road to mitigate the LOS deficiency identified during the midday peak hour on Saturdays in the year 2030 upon project buildout. The second westbound lane can be discontinued west of the access to the parking structure. This westbound lane would provide storage for vehicles entering the parking structure without blocking the westbound travel lane on Tahquitz Canyon Way. With this improvement and all-way stop control, a single lane northbound, southbound, and eastbound approach would be adequate. If it is not feasible to provide two westbound lanes on Tahquitz Canyon Way east and west of Belardo Road, this intersection would need traffic control signals to maintain acceptable levels of service with year 2030+project buildout traffic volumes during the midday peak hour on Saturdays.

Recommendations For Special Event LOS Deficiencies

The CA MUTCD states "The peak hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of one hour on an average day, the minor street traffic suffers undue delay when entering or crossing the major street." Based on this guidance, it is not appropriate to identify the need for a traffic control signal based on temporary traffic volumes that are expected to occur during an hour or two when special events are held from time to time.

The intersection of Palm Canyon Drive with Tahquitz Canyon Way should be restriped prior to the first design day event to add an exclusive eastbound right-turn lane to reduce congestion following special events held at the Downtown Palm Springs Park.

A traffic management plan should be developed that identifies key intersections where congestion may occur and the necessary steps to minimize the potential impact of special event. This plan should include measures to reduce the peak traffic flow to the park and should direct the flow of traffic to available parking areas. The traffic management plan should be updated based on prior experiences to insure that the potential LOS deficiencies are minimized.

Traffic operations should be monitored during special events to identify congested intersections in the vicinity to facilitate the creation of a database for use in improving the effectiveness of the traffic management plans over time. A fund should be established to support the monitoring program and maintain the database.

Recommendations Regarding Previously Required Intersection Improvements

As proposed, the Downtown Palm Springs Project would comply with all applicable mitigation measures identified in the Specific Plan EIR. Table III-44 in the Specific Plan EIR identifies intersection improvements for weekday and Saturday impacts in the year 2030 as well as additional mitigation required for impacts during Villagefest.

Previous Mitigation For Year 2030 Weekdays and Saturdays

Palm Canyon Drive with Museum Way

Table III-44 in the Specific Plan EIR requires mitigation for two key intersections that would not exist with the current roadway configuration. Mitigation specified for the intersection of Palm Canyon Drive with Museum Way is no longer applicable since Museum Way was eliminated from the Specific Plan when it was approved. As a one-way (westbound) roadway, Main Street would not require an eastbound through or right-turn lane or a westbound through or right-turn lane at the intersection of Palm Canyon Drive.

The traffic control signal required to assign the right-of-way to non-conflicting turning movements at the intersection of Museum Way and Palm Canyon Drive would not be required if Main Street operates as a one-way (westbound) roadway. However, a pedestrian crossing signal may still be desirable on Palm Canyon Drive at Main Street.

Indian Canyon Drive at Museum Way

The mitigation for Indian Canyon Drive at Museum Way is no longer applicable, since Museum Way was eliminated from the Specific Plan when it was approved. Main Street would not intersect Indian Canyon Drive. No traffic signal would be required and no eastbound left-turn lane would be required since the intersection of Indian Canyon Drive and Museum Way would not exist with the current roadway configuration.

Belardo Road at Museum Way

The mitigation required per Table III-44 in the Specific Plan EIR for this intersection should be modified to change the intersection name to Belardo Road at Main Street. The two-way stop control previously required should be changed to all-way stop control. The construction of a single approach lane on all legs of the intersection would still be applicable. If Main Street is operated as a one-way street between Palm Canyon Drive and Belardo Road, appropriate pavement markings and signage per the CA MUTCD would be required to minimize the potential for wrong-way travel on Main Street by motorists not familiar with the area.

Belardo Road at Tahquitz Canyon Way

The two-way stop control previously required for this intersection should be modified to reflect all-way stop control. The approach lane geometrics identified in Table III-44 in the Specific Plan EIR would provide the flexibility accommodate a wide range of travel demands during different peak hours on various days, including motorists entering the intersection from various directions when entering and leaving special events.

The most critical traffic flow at this intersection would be the westbound through movement prior to design day special events. Consequently, two westbound lanes on Tahquitz Canyon Way that are carried through the intersection at Belardo Road to the parking facility access would be required with all-way stop control to provide acceptable LOS for the year 2030 on Saturdays upon project buildout. As noted previously, it is not feasible to provide two westbound lanes on Tahquitz Canyon Way east and west of Belardo Road, this intersection would need traffic control signals to maintain acceptable levels of service with year 2030+project buildout traffic volumes during the midday peak hour on Saturdays.

Previous Mitigation For Year 2030 During Villagefest

Table III-44 in the Specific Plan EIR identifies the installation of traffic signals at three key intersections as additional mitigation required for conditions in the year 2030 during Villagefest. Two of those intersections (Intersection 8) and (Intersection 10) are located off site and the third intersection (Belardo at Museum Way) is now Belardo Road at Main Street (Intersection 17).

None of these traffic control signals are warranted or recommended with the current roadway configuration and updated traffic projections. The addition of a northbound and a southbound left-turn lane previously required for Intersection 10 and Intersection 17 per Table III-44 in the Specific Plan EIR is no longer recommended or required.

6B. Transportation System Management Actions

The project will comply with all applicable provisions of the City of Palm Springs adopted Transportation Demand Management (TDM) Ordinance. Bicycle racks or bicycle parking facilities may be required in any development submitted for architectural approval. If required, the location and design of these facilities shall be shown on the Site Plan and subject to the review and approval of the City Engineer.