

## 7. PARKING SUPPLY

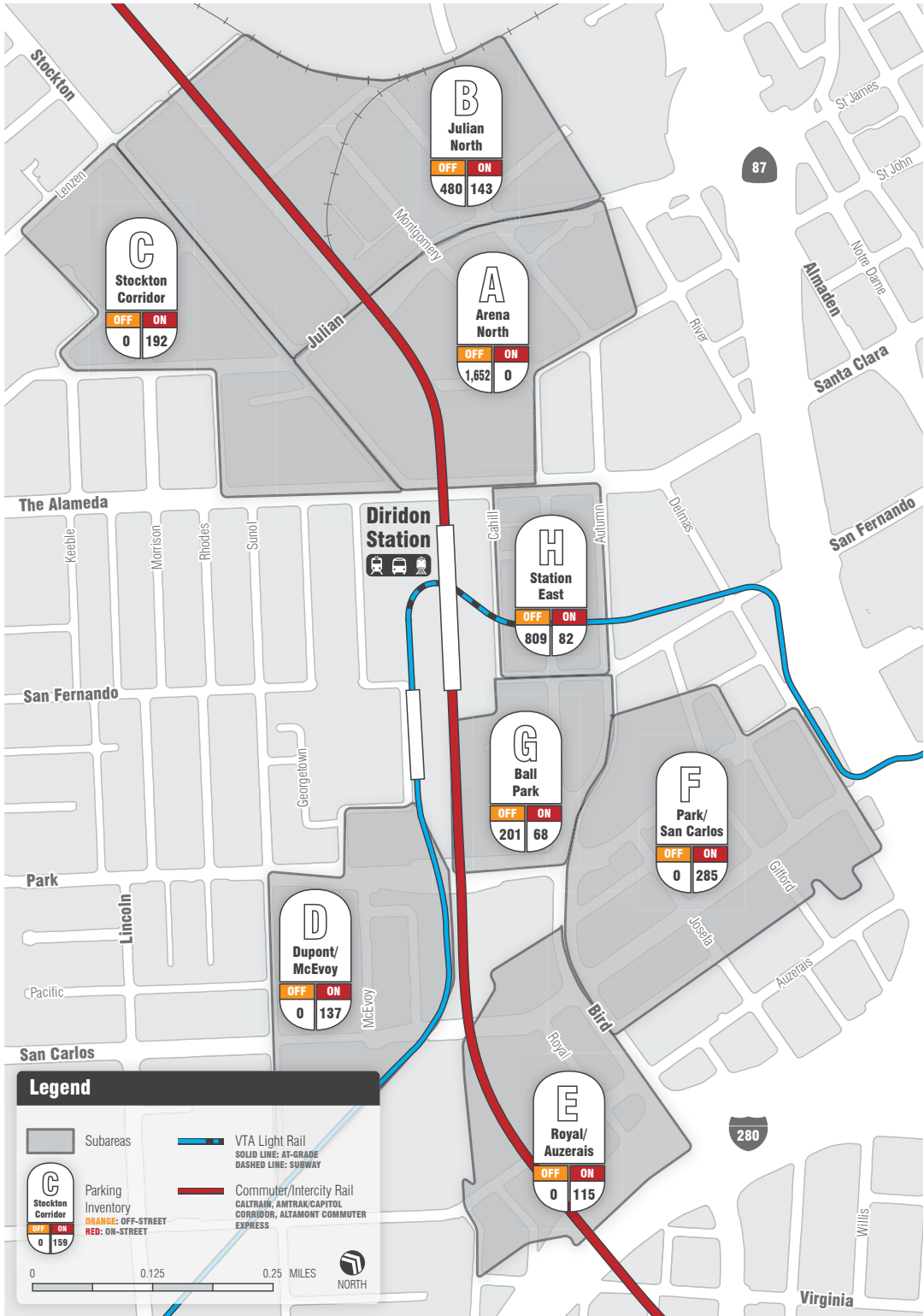
This chapter summarizes the current parking supply and demand within the Diridon Station Area located in downtown San Jose, CA. The parking supply includes the total number of on-street and off-street parking spaces within the boundaries of the study area. Under the authority of the City, eight specific subareas within the Diridon Station Area were identified for study. These subareas are primarily located to the north, south, and east of the current transit station and provide a variety of parking facilities.

Current parking supply data was provided by the City of San Jose. Based on this information, the study area includes a total of 4,164 parking spaces. Of the total parking supply, 1,022 parking spaces are on-street and 3,142 parking spaces are located within off-street facilities.<sup>1</sup> Within the study area, the majority of off-street parking is located near the existing transit station and the majority of on-street parking is located on the periphery of the study area boundaries. The following discussion includes a description of each subarea and an assessment of current on- and off-street parking facilities within each subarea. The location of the individual Subareas are indicated in Figure 7-1.

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(1) Based on the current parking data, the total parking supply within the study area does not include the following: 1) on-street parking spaces governed by existing Residential Parking Permit (RPP) zones; 2) off-street parking in surface lots or garages owned by private businesses that provide spaces only for employee/customer use; 3) off-street parking that is provided by individual vendors during events at the HP Pavilion Arena that are not sanctioned, sponsored, nor operated by HP Pavilion Arena. As such, the total parking supply represents the total amount of on- and off-street parking that is publicly accessible and available.

FIGURE 7-1: DIRIDON STATION PARKING SUPPLY BY SUBAREA (Source: WSA)



## 7.1 Parking Supply by Subarea

### SUBAREA A: ARENA NORTH

The subarea is located directly north of the existing Diridon Station, and is bounded by Julian Street to the north, Santa Clara Street to the south, River Street to the east, and Stockton Avenue to the west. The HP Pavilion Arena is the major use in the subarea, and there are residential and commercial uses east of the arena. Currently, there are no on-street parking spaces available to the public within the subarea. The limited parking supply is mostly due to the Residential Parking Permit (RPP) Area along the residential streets east of the arena, primarily along Montgomery and Autumn Streets. The RPP restricts visitors and non-residents from parking on-street, and only residents are permitted to park their vehicles along the roadways. The arena provides a substantial amount of parking. Currently, the arena provides 1,652 off-street parking spaces. These spaces are available to the public (transit patrons) from 8:00 AM to 5:30 PM during non-event, weekday and weekend hours of operation. The parking cost is \$2.00 for all-day parking during non-event periods; however parking rates increase to \$10.00 and \$14.00 during arena events.

### SUBAREA B: JULIAN NORTH

The subarea is located on the northern periphery of the study area, and is bounded by the existing Union Pacific Railroad (UPRR) tracks and Lenzen Avenue to the north, Julian Street to the south, the river bank the east, and Stockton Avenue to the west. The majority of land uses within the subarea are industrial, commercial, and manufacturing uses. The current parking supply of the subarea includes 143 on-street parking spaces and 480 off-street parking spaces, provided by the Akatiff surface lot located at Autumn Street and Howard Street. During events at the nearby HP Pavilion Arena, the cost of parking varies between \$10.00 and \$20.00 per vehicle.

### **SUBAREA C: STOCKTON CORRIDOR**

The subarea is located in the northwest quadrant of the study area and is bounded by Lenzen Avenue to the north, Santa Clara Street to the south, Stockton Avenue to the east, and Keeble Avenue to the west. Residential buildings and few commercial and industrial facilities make up the majority of uses within the subarea. There are no off-street parking facilities located within the subarea and there are 192 on-street parking spaces available. Due to the near proximity of the arena, a RPP zone has been enacted within the subarea, primarily along Clinton Place and Rhodes Court.

### **SUBAREA D: DUPONT/MCEVOY**

The subarea is located in the southwest quadrant of the study area and is bounded by Laurel Grove Lane to the north, the Valley Transit Authority (VTA) light rail tracks to the south, the UPRR tracks to the east, and Sunol Street to the west. Industrial and commercial buildings are the primary land uses within the subarea. There are no off-street parking facilities located within the subarea and there are currently 137 on-street parking spaces available. The limited supply of parking is likely due to the private, employee/customer parking lots supplied by the industrial and commercial uses in the area. This supply is not publicly available and as such, has not been inventoried.

**SUBAREA E: ROYAL/AUZERAIS**

The subarea is located on the southern periphery of the study area and is bounded by San Carlos Street to the north, I-280 freeway to the south, Bird Avenue to the east, and Hannah Street and river bank to the west. The majority of uses within the subarea are commercial and single-family residences, with few industrial buildings near the freeway. There are no off-street parking facilities located within the subarea and there are currently 115 on-street parking spaces available.

**SUBAREA F: PARK/SAN CARLOS**

The subarea is located in the southeast quadrant of the study area and is bounded by Lake House Avenue to the north, Columbia Avenue to the south, Delmas Avenue to the east and Autumn Street to the west. Commercial and single-family residential buildings make up the majority of land uses within the subarea. There are no off-street parking facilities located within the subarea and there are currently 285 on-street parking spaces available.

**SUBAREA G: BALL PARK**

The subarea is located directly east of the current transit station and is bounded by San Fernando Street to the north, Park Avenue to the south, Autumn Street to the east, and the existing UPRR tracks to the west. The subarea is mostly comprised of industrial, utility, and manufacturing/processing land uses. The 150 S. Montgomery and the Stephen's Meat lots are the only off-street parking facilities located within the subarea; with a total of 201 parking spaces. The 150 S. Montgomery lot primarily serves transit patrons; a monthly parking fee for patrons is available for \$35.00 and no daily parking fee is available. The Stephen's Meat lot's daily parking fee is \$3.00 per vehicle. In addition, there are currently 68 on-street parking spaces available.

### **SUBAREA H: STATION EAST**

The subarea is located directly east of the current transit station and south of the HP Pavilion Arena. The subarea is bounded by Santa Clara Street to the north, San Fernando Street to the south, Autumn Street to the east, and Cahill Street to the west. The majority of uses within the subarea include industrial, commercial, and public open space. There are four off-street parking facilities located within the subarea, which include three Caltrain facilities and Lot D, totaling 809 parking spaces. Parking rates at the Caltrain facilities require a \$3.00 daily fee or a monthly parking permit. Currently, there are 82 on-street parking spaces available within the subarea.

## 7.2 Nearby Parking Supply

It must be noted that the majority of off-street parking facilities are located outside the study area boundaries, specifically east of the study area; bounded by Julian Street to the north, I-280 freeway to the south, Fourth Street to the east, and State Route 87 to the west. In addition, the two Water Company parking lots are located directly east of Subarea H, which are outside the study area. However, it can be assumed that many current transit patrons, employees, and visitors utilize the 805 additional off-street parking spaces. As such, the total off-street parking supply within the area would increase from 3,142 spaces to 4,378 spaces, nearly a 40 percent increase in off-street supply if these lots were to be included into the Diridon Station Area analysis.

Figure 7-1 illustrates the current parking supply throughout the entire study area, and Table 7-1 presents the current on- and off-street parking supply per subarea.

Table 7-1: CURRENT PARKING SUPPLY WITHIN DIRIDON STATION AREA

Subarea	On-Street Parking	Off-Street Parking
A - Arena North	0	1652
B - Julian North	143	480
C - Stockton Corridor	192	0
D - Dupont / McEvoy	137	0
E - Royal / Auzerai	115	0
F - Park / San Carlos	285	0
G - Ball Park	68	201
H - Station East	82	809
Total Spaces	1,022 spaces	3,142 spaces



## 7.3 Existing Parking Demand

Existing parking conditions were assessed in the study area to understand current parking behaviors and to identify the extent of use of on- and off-street parking. These existing conditions were developed through field observations of occupancy during a typical weekday day.

As stated, parking demand refers to the accumulation of parking or the percentage of parking spaces utilized during a specific period of time. Occupancy was recorded by counting the number of parked vehicles during the specific time period compared to the total inventory of spaces available in each of the subareas. For study purposes, occupancy rates were separated between on- and off-street parking facilities per subarea.

A parking occupancy rate of 85 percent is typically defined as “practical capacity” meaning that it has reached a balance point between supply and demand where there are sufficient empty spaces to assure parking availability. Practical capacity is higher for off-street facilities but is generally accepted as 85 percent for on-street facilities since this equates to about 1 open space per average blockface (about 8 spaces). As occupancy rates climb towards 100 percent, drivers will resort to “cruising” for parking or may be tempted to park illegally- activities that can create significant traffic impacts. Identifying those areas with parking impacts order to better determine areas that experience potential parking deficiencies, it is important to identify parking facilities with occupancy rates greater than 85 percent.

The following sections include the methodology used for data collection and a detailed description of the parking demand within each subarea is included. On-street and off-street parking demand is presented for each subarea, and observed parking occupancies during event and non-event periods are also discussed.

## DATA COLLECTION

Existing parking occupancy data was collected and provided by the City of San Jose.<sup>2</sup> The parking data was collected during multiple time periods throughout a series of specific dates. The data collection schedule is presented in Table 2. Detailed tables of parking utilization are located in the Appendix

Table 7-2: DATA COLLECTION SCHEDULE

Date	Event/ Non-Event	Time Period		
		Morning	Midday	Evening
Tuesday 10/6/09	Non-Event		2:00 PM -3:35 PM	
Thursday 10/8/09	Event	7:30 AM - 8:50 AM	12:00 PM - 12:45 PM	6:00 PM – 9:00 PM
Wednesday 10/14/09	Non-Event			4:15 PM – 5:25 PM 7:00 PM – 7:25 PM
Thursday 10/15/09	Non-Event		7:00 AM – 2:35 PM	

## METHODOLOGY

For study purposes, a Geographic Information Systems (GIS) database of on-street blockfaces was developed using City of San Jose parcel data with each blockface (or comparable geometry) assigned a unique identification (ID) number. The parking supply of publicly available spaces collected by the City of San Jose was applied to each on-street blockface accordingly. On-street parking restrictions or areas that are highly restricted (such as loading and drop off zones) and areas where parking is not allowed were recorded; however they were not included in the supply count. Figures 2A, 2B, 2C, 2D, 3A, 3B, 3C, and 3D on the following pages present percentage occupancy (the number of parked vehicles relative to available supply) by blockface for each subarea, during the morning and evening period of observation (7:00-9:00AM and 5:00-9:00PM) on one non-event and one event day.<sup>3</sup> Blockfaces that appear “blank” have no publicly available on-street parking; primarily due to existing parking restrictions or the blockfaces are located in a Residential Permit Parking (RPP) zone.

(2) Parking occupancy data was not collected consistently for each subarea during each time period during both event and non-event days of observation. In particular, while most subareas were observed in the morning and evening periods during event days – subarea F did not have any morning event day observations, but only midday and evening. Since no other data was available for Subarea F for event mornings, the mid-day data was considered to be sufficiently representative of morning event day parking behavior and was included with the morning hours of observation (7:00 AM to 9:00 AM).

(3) In order to conduct a comparative analysis between event and non-event time periods, the study analyzed the on- and off-street parking conditions during the typical morning peak period (7:00 AM and 9:00 AM) and typical evening peak period (5:00 PM to 9:00 PM). The evening peak period is an expanded time period (comprised of a four-hour time span), which includes the typical hours of most impact during events at the HP Pavilion.

Figure 2A  
Parking Utilization - Non-Event 7:00-9:00 AM (Subareas A, B, C, G, H)



Figure 2B  
Parking Utilization - Event 7:00-9:00 AM (Subareas A, B, C, G, H)



Figure 2C  
Parking Utilization - Non-Event 7:00-9:00 AM (Subareas D, E, F, G)



Figure 2D  
Parking Utilization - Event 7:00-9:00 AM (Subareas D, E, F, G)



Figure 3A  
Parking Utilization - Non-Event 5:00-9:00 PM (Subareas A, B, C, G, H)



Figure 3B  
Parking Utilization - Event 5:00-9:00 PM (Subareas A, B, C, G, H)



Figure 3C  
Parking Utilization - Non-Event 5:00-9:00 PM (Subareas D, E, F, G)

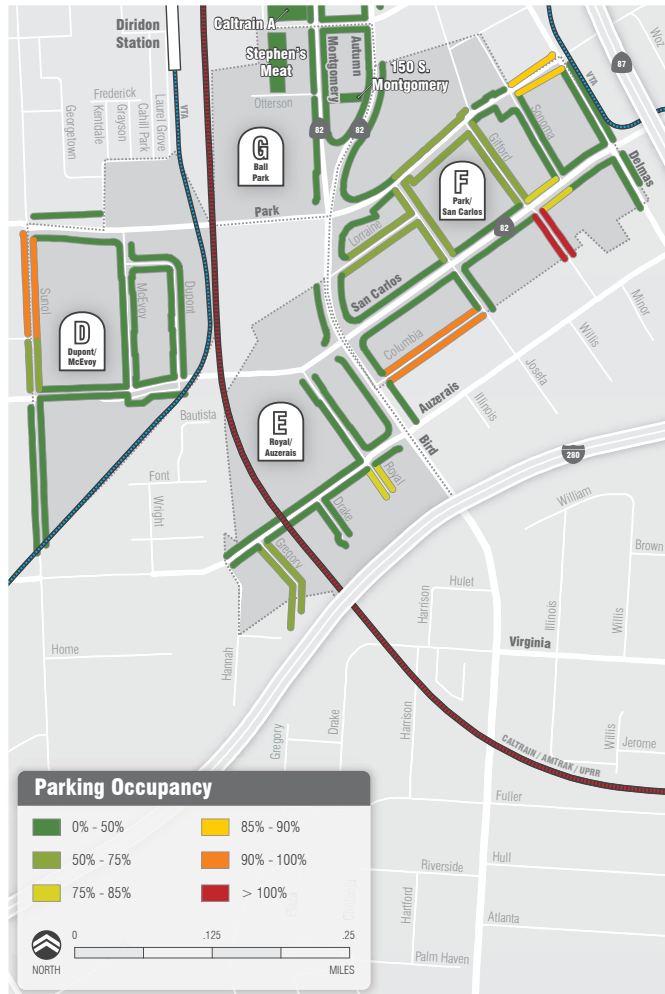


Figure 3D  
Parking Utilization - Event 5:00-9:00 PM (Subareas D, E, F, G)



## ON-STREET PARKING DEMAND

The following sections include an in depth examination into the on-street parking demand for each subarea. The on-street parking analysis is divided into two sections: 1) Non-Event On-Street Parking Demand (Figures 2A, 2C, 3A, and 3C); and 2) Event On-Street Parking Demand (Figures 2B, 2D, 3B, and 3D). The parking demand during specific time periods is also discussed. Occupancy figures were developed for the most impacted time period – evening events (Figures 3A and 3C and a corresponding non-event day are the same time period (Figures 3B and 3D).

### *Non-Event On-Street Parking Demand*

On-street parking utilization varied throughout each time period of observation. During the morning “rush hour” period (7:00 AM to 9:00 AM), Subarea B and Subarea G experienced high parking occupancy rates of 86 percent and 90 percent, respectively. The remaining subareas experienced moderate occupancy rates ranging from 40 percent to 76 percent. During the late morning period (9:00 AM to 11:00 AM), parking conditions did not fluctuate, with Subarea B and Subarea G continuing to experience parking occupancies at or above 85 percent, while the remaining subareas experienced moderate parking occupancies ranging from 42 percent to 73 percent. Field observations during the midday period (11:00 AM to 2:00 PM) indicated Subarea G as 85 percent occupied; whereas Subarea B was observed at 84 percent occupied and the remaining subareas were observed at 39 percent to 74 percent occupied. Parking occupancies decreased during the afternoon hours (between 2:00 PM and 5:00 PM), with an overall average occupancy rate of 58 percent; while Subarea B experienced a parking demand of 90 percent, respectively. During the evening hours (5:00 PM to 9:00 PM), parking occupancies significantly decreased throughout the entire study area, with no recorded parking occupancies above 85 percent, which resulted in an overall average parking utilization rate of 43 percent. Furthermore,



the parking utilization rate during these hours ranged from 28 to 55 percent between subareas throughout the entire study area. The on-street parking demand rates during a non-event period are presented in Table 3 and illustrated in Figures 2A, 2C, 3A, and 3C.

Table 7-3: NON-EVENT ON-STREET PARKING DEMAND

(Source: City of San Jose, Wilbur Smith Associates (October 2009))

Subarea <sup>1</sup>	Time Period				
	7 – 9 AM	9 – 11 AM	11 – 2 PM	2 – 5 PM	5 – 9 PM
B	86%*	85%*	84%	90%*	55%
C	46%	46%	42%	49%	35%
D	40%	42%	39%	33%	28%
E	63%	56%	58%	38%	36%
F	58%	62%	63%	59%	51%
G	90%*	87%*	85%*	78%	41%
H	76%	73%	74%	67%	48%
Average	61%	62%	61%	58%	43%

Notes:

\* indicates parking demand at or above practical capacity (85 percent).

<sup>1</sup> On-street parking spaces in Subarea A are located in a dedicated RPP zone; therefore there were no recorded publicly available on-street parking spaces for Subarea A.

As Table 3 indicates, on-street parking occupancies tend to fluctuate during non-event time periods. Parking occupancies are relatively higher during the morning hours, primarily from 7:00 AM through the midday period (between 11:00 AM and 2:00 PM). Towards the afternoon hours and into the evening period, parking occupancies decrease significantly. This pattern may indicate that the majority of vehicles utilizing on-street spaces are for job-related purposes, given the influx of parked vehicles during the morning hours and the subsequent decrease in demand as the day progresses. Based on these findings, the peak hour parking period throughout the study area is observed to be during the morning hours of 7:00 AM and 9:00 AM.



### ***Event On-Street Parking Demand***

As stated, the HP Pavilion Arena is often host to a variety of events, including sporting events, concerts, and conventions. Typical hours of operations for the Arena during event times occur in the evening hours, in which the Arena will typically open their doors for visitors 60 minutes to 75 minutes prior to the scheduled start of the event.<sup>4</sup> For purposes of the study, on-street parking occupancies for “event” days were collected during a midweek time period, primarily during two specific time periods: the morning peak period (7:00 AM to 9:00 AM) and evening peak period (5:00 PM to 9:00 PM).

During the morning peak period, Subarea G and Subarea H experienced high parking occupancy rates at 93 percent and 82 percent, respectively. The remaining subareas experienced moderate occupancy rates ranging from 36 percent to 71 percent. During the evening peak period, the on-street parking utilization rates significantly increased. Five of the seven subareas experienced parking occupancies greater than 95 percent. In addition, Subarea G and H experienced parking occupancies greater than 100 percent, indicating driveway blocking and the use of valet-parking operations, thus increasing parking capacity to accommodate the demand associated with the event. The remaining two subareas (Subarea D and E) experience relatively low parking occupancies in comparison to other subareas. Overall, the average parking utilization rate during the evening period was 85 percent during an event day. The on-street parking demand rates during an event period are presented in Table 4 and illustrated in Figures 2B, 2D, 3B, and 3D.

As indicated by the findings presented in Table 4, events at the Arena have a significant influence on the on-street parking conditions throughout the study area. Due to the location of Subarea G and H (located directly south of the HP Pavilion Arena),

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(4) HP Pavilion website: <http://www.hpsj.com/index2.html>

Table 7-4: EVENT ON-STREET PARKING DEMAND

(Source: City of San Jose, Wilbur Smith Associates (October 2009))

Subarea <sup>1</sup>	Time Period	
	Morning Period <sup>2</sup>	Evening Period <sup>3</sup>
B	71%	97%*
C	40%	96%*
D	36%	32%
E	49%	62%
F	63%	95%*
G	93%*	110%*
H	82%	100%*
Average	58%	85%*

Notes:

\* indicates parking demand at or above practical capacity (85 percent).

(1) On-street parking spaces in Subarea A are located in a dedicated RPP zone; therefore there were no recorded publicly available on-street parking spaces for Subarea A.

(2) Morning Period includes parking occupancies between 7:00 AM and 9:00 AM.

(3) Evening Period includes parking occupancies between 5:00 PM and 9:00 PM.

the parking occupancies were relatively high during the morning hours; most likely because Arena patrons arrived early in the day and parked within close proximity to the Arena to avoid the need to search for parking during the evening hours and avoid parking a farther distance from the Arena. However, during the evening period, there is a significant influx of parked vehicles throughout the majority of the study area, with each subarea experiencing an on-street parking occupancy rate of 95 percent or higher. As Table 4 indicates, Subareas D and E experience a moderate-to-low parking demand primarily due to location, since these subareas are located the farthest from the Arena. As such, the findings support that Arena visitors parked closer to the Arena, creating a higher on-street parking demand in the nearby subareas.

## OFF-STREET PARKING DEMAND

The following sections include an assessment of the off-street parking demand for each subarea. The off-street parking analysis is divided into two sections: 1) Non-Event Off-Street Parking Demand; and 2) Event Off-Street Parking Demand. The parking demand during specific time periods is also discussed.

### *Non-Event Off-Street Parking Demand*

Based on the findings presented in Table 5, the majority of off-street parking facilities during a non-event day are underutilized, with the exception of the existing Caltrain parking facilities located in Subarea H. During the morning “rush hour” period (7:00 AM to 9:00 AM), the Caltrain facilities experience a parking demand of 80 percent, whereas the remaining off-street facilities experience a parking demand rate between three and 14 percent, respectively. From 9:00 AM to 11:00 AM, there is a similar trend, with 85 percent of the Caltrain facilities occupied and the remaining facilities experiencing a parking demand rate between four and 14 percent. During the midday and afternoon time periods (11:00 AM to 2:00 PM and 2:00 PM to 5:00 PM), the parking demand rate decreases slightly from 88 percent to 86 percent at the Caltrain parking facilities. The occupancies at the remaining facilities continue to be low, ranging from four to 17 percent throughout the midday time periods. There is a significant reduction in parking demand in the evening hours, with the Caltrain facilities experiencing a demand rate of 26 percent between 5:00 PM and 9:00 PM. The parking demand continues to decrease during the evening at other off-street facilities as well, as indicated in Table 5. Non-event off-street parking demand is illustrated in Figures 2A, 2C, 3A, and 3C.

Table 7-5: NON-EVENT OFF-STREET PARKING DEMAND

(Source: City of San Jose, Wilbur Smith Associates (October 2009))

Subarea (Facility)	Time Period				
	7 – 9 AM	9 – 11 AM	11 – 2 PM	2 – 5 PM	5 – 9 PM
A (HP Pavilion Arena)	3%	4%	4%	4%	1%
B (Akatiiff Lot)	14%	14%	17%	17%	4%
G <sup>3</sup>	7%	8%	8%	11%	2%
H (Caltrain Lots) <sup>1,2</sup>	80%	85%*	88%*	86%*	26%
Average	25%	26%	28%	27%	8%

## Notes:

(1) Subarea H includes Caltrain Lots A, B, C, D, and a surface lot (bounded by Santa Clara, railroad tracks, bus terminal, and Cahill Street).

(2) In table 5, Subarea H represents the average occupancy rate of all Caltrain lots and the nearby surface lot during each observed time period.

(3) Subarea G includes the Stephen's Meat and 150 S. Montgomery off-street parking facilities

As stated previously, the majority of off-street facilities during non-event days are underutilized. On average, the parking demand rate for all off-street facilities in the study area peaks at 28 percent during the midday and afternoon hours, and remains low during the morning hours and evening hours. The Caltrain facilities continue to experience a relatively high parking demand, ranging from 80 percent to 88 percent from 7:00 AM to 5:00 PM, which is reflective of the typical commute pattern for Caltrain patrons.

### *Event Off-Street Parking Demand*

During event days, the off-street parking demand is relatively underutilized during the morning peak period (from 7:00 AM to 9:00 AM).<sup>5</sup> Caltrain facilities experience an average occupancy rate of 65 percent during the morning peak period, while other off-street parking facilities experience a parking demand rate ranging from one percent to three percent. During the evening peak period (from 5:00 PM to 9:00 PM); parking occupancies significantly increase at each off-street facility. Caltrain facilities experience a parking demand rate of 89 percent, a 24 percent increase in demand, relative to the morning peak period. The HP Pavilion Arena parking facility reaches near maximum capacity, at 98 percent occupancy during the evening hours. Other nearby off-street facilities in Subarea B and G experience occupancies ranging from 53 percent to 63 percent, respectively. These findings are presented in Table 6 and illustrated in Figures 2B, 2D, 3B, and 3D.

Based on these findings, the off-street parking demand is relatively low during the morning peak period, with an observed 18 percent average parking demand rate during these hours. However, the parking demand rates increase significantly during the evening hours. As shown in Table 6, the average parking demand rate for all off-street facilities is 87 percent, with the HP Pavilion Arena facility experiencing a demand rate of 98 percent and Caltrain facilities (including adjacent T lot) experiencing a demand rate of 89 percent. This indicates that many Arena patrons utilize the Caltrain facilities and HP Pavilion facility during event days, primarily due to the close proximity of these off-street facilities to the Arena.

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(5) This demand reduction from non-event mornings are attributed to occupancy drops in only in Caltrain lots B/C and D, the lots closest to the HP Pavilion. Further investigation would be required to determine if these occupancy drops are due to parking management restrictions or pricing differentials on the part of Caltrain in these lots for event days.

Table 7-6: EVENT OFF-STREET PARKING DEMAND  
 (Source: City of San Jose, Wilbur Smith Associates (October 2009))

Subarea (Facility)	Time Period	
	Morning Period <sup>1</sup>	Evening Period <sup>2</sup>
A (HP Pavilion Arena)	1%	98%
B (Akatiiff Lot)	3%	63%
G <sup>3</sup>	3%	53%
H (Caltrain Lots)	65%	89%
Average	18%	87%

Notes:

\* indicates parking demand at or above practical capacity (85 percent).

(1) Morning Period includes parking occupancies between 7:00 AM and 9:00 AM.

(2) Evening Period includes parking occupancies between 5:00 PM and 9:00 PM.

(3) Subarea G includes the Stephen's Meat and 150 S. Montgomery off-street parking facilities

## COMPARATIVE ANALYSIS

The following discussion includes a comparative analysis between the on-street and off-street parking conditions during event and non-event days. In comparing the occupancies between event and non-event time periods, the analysis can better determine how events at HP Pavilion Arena influence the parking behavior throughout the study area. The comparative analysis is divided into two sections: 1) On-street parking conditions and; 2) Off-Street parking conditions.

### *Comparative Analysis: On-Street Parking Demand*

During the morning peak period (from 7:00 AM and 9:00 AM); the on-street data indicates that the difference in parking demand between event and non-event days is relatively minimal. Overall, the average parking occupancy rate for every subarea during non-event days is 61 percent, in opposed to the 58 percent average occupancy rate during event days. Furthermore, subareas on the periphery of the study area (Subareas B, C, D, and E) experience greater demand during non-event days than event days. Conversely, subareas within closer proximity to the existing transit center and HP Pavilion Arena (Subareas F, G, and H) experience greater demand during event days than non-event days. Overall, during the morning peak period, there is a three percent parking occupancy rate differential between non-event and event days, with non-event days experiencing a higher parking demand. As a result, these findings indicate that during the morning peak period, event days have a minimal affect on the on-street parking conditions throughout the study area. Table 7 summarizes these findings.

Table 7-7: COMPARATIVE ANALYSIS – NON-EVENT V. EVENT DAY  
ON-STREET PARKING DEMAND

(Source: City of San Jose, Wilbur Smith Associates (October 2009))

Subarea	Morning Period <sup>1</sup>			Evening Period <sup>2</sup>		
	Non-Event	Event	±% Difference <sup>3</sup>	Non-Event	Event	±% Difference
B	86%	71%	±15%	55%	97%	±42%
C	46%	40%	±6%	35%	96%	±61%
D	40%	36%	±4%	28%	32%	±4%
E	63%	49%	±14%	36%	62%	±26%
F	58%	63%	±5%	51%	95%	±44%
G	90%	93%	±3%	41%	110%	±69%
H	76%	82%	±6%	48%	100%	±52%
Average	61%	58%	±3%	43%	85%	±42%

Notes:

(1) Morning Period includes average parking occupancies per subarea between 7:00 AM and 9:00 AM

(2) Evening Period includes average parking occupancies per subarea between 5:00 PM and 9:00 PM.

(3) The average occupancy percentage difference between Non-Event Days and Event Days.

Unlike the on-street parking conditions during the morning peak period, the on-street parking conditions vary during the evening peak period (from 5:00 PM to 9:00 PM) between event and non-event days. On average, the on-street parking demand rate is 42 percent higher during event days than non-event days. In fact, the parking demand observed during event days ranges from 4 percent to 69 percent higher than non-event days in each subarea. Subareas in close proximity to the HP Pavilion Arena experience an on-street occupancy rate between 95 and 110 percent during event days, with these rates being well above practical capacity. As a result, these findings indicate that during the evening peak period, event days have a significant effect on the on-street parking conditions throughout the study area, with the majority of subareas experiencing a parking demand rate above practical capacity. Table 7 summarizes these findings.



### *Comparative Analysis: Off-Street Parking Demand*

During the morning peak period (7:00 AM to 9:00 AM), the difference in parking occupancy for off-street parking facilities is relatively minimal between event and non-event time periods. In general, data findings indicate that off-street facilities experience a higher parking demand during non-event days than event days in the morning. Caltrain parking facilities experience an 80 occupancy rate during non-event days and a 65 percent occupancy rate during event days, a difference of 15 percent, respectively. However, given the occupancy rates, it is difficult to determine whether or not an HP Pavilion event may directly influence parking behavior at Caltrain facilities during the morning peak period, since many Caltrain patrons park their vehicles at these facilities in order to use transit as a means of transportation to-and-from work. Other off-street parking facilities experience low parking demand during both event and non-event time periods; overall, these facilities experience a higher demand rate of two and 11 percent during non-event days than event days in the morning peak period.

This suggests that a small segment of regular drivers could potentially be avoiding the area or using other modes of transportation during events. Table 8 summarizes these findings.

During the evening peak period (5:00 PM to 9:00 PM), there is a significant difference in parking occupancies between event and non-event days. For non-event days, the average parking demand rate for all off-street facilities is eight percent, in opposed to the average parking demand rate of 87 percent during event days. This is an indication that during event days, there is a significant influx of parked vehicles at each off-street parking facility in the evening, with many parking facilities experiencing a parking demand

Table 7-8: COMPARATIVE ANALYSIS – NON-EVENT V. EVENT DAY  
OFF-STREET PARKING DEMAND

(Source: City of San Jose, Wilbur Smith Associates (October 2009))

Subarea	Morning Period <sup>1</sup>			Evening Period <sup>2</sup>		
	Non-Event	Event	±% Difference <sup>3</sup>	Non-Event	Event	±% Difference
A (HP Pavilion Arena)	3%	1%	±2%	1%	98%	±97%
B (Akatiff Lot)	14%	3%	±11%	4%	63%	±59%
G	7%	3%	±4%	2%	53%	±51%
H (Caltrain Lots)	80%	65%	±15%	26%	89%	±63%
Average	25%	18%	±7%	8%	87%	±79%

Notes:

(1) Morning Period includes average parking occupancies per subarea between 7:00 AM and 9:00 AM

(2) Evening Period includes average parking occupancies per subarea between 5:00 PM and 9:00 PM.

(3) The average occupancy percentage difference between Non-Event Days and Event Days.

rate of 89 percent or higher (HP Pavilion and Caltrain facilities). In addition, the parking demand rate differential between non-event and event days ranges from 51 percent to 97 percent, with an average occupancy rate increase of 79 percent during event days. Based on these findings, the data indicates that during the evening peak period, the parking conditions throughout the study area are significantly influenced by events at HP Pavilion Arena.

## RESULTS & FINDINGS

- Based on the existing parking conditions of the study area, the following key findings summarize the current parking trends present in the study area.
- The majority of on-street parking that is publicly available is located in Subarea B, C, and F, containing nearly 60 percent of the total on-street parking supply throughout the study area.
- The majority of off-street parking is located in Subarea A and H, primarily due to the HP Pavilion parking facility and the Caltrain parking facilities. These facilities contain 78 percent of the total off-street parking supply throughout the study area.
- Typical non-event days experience a significant amount of on-street parking demand during the morning and midday hours (7:00 AM to 2:00 PM), with Subarea B and G experiencing occupancy rates at or above 85 percent. Other subareas experience a demand rate between 39 percent and 63 percent during the morning and midday hours. There is a significant decrease in on-street demand after 2:00 PM for non-event days.
- On-street parking conditions throughout the study area are not affected by events at HP Pavilion during the morning hours (between 7:00 AM and 9:00 AM). The average on-street parking demand throughout the study area is 58 percent; and the Caltrain facilities experience a demand rate of 93 percent, which may be reflective of the typical morning commute pattern.
- For event days, during the evening peak period (between 5:00 PM and 9:00 PM), on-street parking occupancies have achieved practical capacity, with an overall average occupancy rate of 85 percent throughout the entire study area. Five of the seven study subareas experience a parking occupancy rate of 95 percent or greater; these subareas are typically located within a close proximity to the Arena.
- For non-event time periods, off-street parking facilities throughout the study area are underutilized, with the exception of the Caltrain parking facilities, which experience an average parking demand rate of 85 percent between 7:00 AM and 5:00 PM.
- For event time periods, off-street parking facilities experience high parking occupancies during the evening peak period

(from 5:00 PM to 9:00 PM), with the HP Pavilion Arena and Caltrain parking facilities experiencing occupancy rates of 98 percent and 89 percent, respectively. The average parking occupancy rate for all off-street facilities for event time periods is 87 percent during the evening peak period.

- In comparing on-street parking demand during event and non-event time periods, parking demand rates are comparable during the morning peak period. Conversely, during the evening peak period, the average parking occupancy rate is 42 percent higher for event days than non-event days. This pattern indicates that an event may have a significant and identifiable influence on the on-street parking conditions throughout the study area.
- In comparing off-street parking demand during event and non-event time periods, parking demand rates in most facilities are comparable during the morning peak period. However, during the evening peak period, the average parking occupancy rate is 79 percent higher for event days than non-event days. This pattern indicates that an event may have a significant and identifiable influence on the off-street parking conditions throughout the study area.
- Caltrain off-street facilities B/C and D exhibit distinctly lower parking demand on event days during the morning period (-15%). This may be attributed to regular commuters avoiding the Diridon Station on event days and/or parking management restrictions/pricing instituted by Caltrain to make more parking spaces available for events. This requires further investigation to confirm. It is also possible that the data collected this day is just a fluctuation in the normal commute pattern. Additional occupancy data during this time period could help confirm this behavior.
- Given the parking occupancy rates for on- and off-street facilities during the event time periods, specific subareas near the Arena experience a higher parking demand than subareas located along the periphery of the study area. However, since on- and off-street facilities slightly farther away from the Arena experience moderate-to-low demand during event times, there is an ample amount of parking supply available that would accommodate to the current parking demand. As such, these facilities could absorb the high demand currently in subareas near the Arena; therefore reducing and/or mitigating potential parking deficiencies throughout the study area.