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MEMORANDUM

To: Brenda Wisneski, City of Newport Beach

From: Nelson\Nygaard Project Team

Date: August 30, 2013

Subject: Summary of Balboa Village Parking Data and Windshield Survey (Summer 2013)

PURPOSE OF THIS MEMORANDUM

This memorandum presents a summary of the summer 2013 data collection effort in the study area encompassing Balboa Village and the residential sub-area area west of it. It includes an overview of the data collection and survey methodology, data results, and a summary of key findings. This data serves as an assessment of parking occupancy and turnover during the peak visitor season.

EXECUTIVE SUMMARY

Parking Supply, Utilization, and Turnover

The summer parking analysis yielded various key findings related to parking supply, regulations, utilization, and turnover in the study area. In sum, finding on-street parking along many "front door" block faces and beach-front lots can be difficult, especially during summer weekend days when many on- and off-street facilities meet or exceed target occupancy rates. The specific findings of the parking analysis are summarized below:

1. **The study area has a large supply of parking which is split roughly evenly between the area's on- and off-street facilities**. A total of 2,065 spaces exist in the study area, 929 of which are located on-street (45%), and 1,136 spaces of which exist in various off-street lots and garages in the study area (55%).
2. **While the parking supply is underutilized during summer weekdays, various "hot-spots" of demand exist**. On Thursday counts, at no point did overall on- or off-street utilization reach target levels, though some of the mostly unregulated blocks along Bay Avenue, Balboa Boulevard, and Adams Street reached or exceeded target levels.
3. **On summer weekends, district-wide parking supplies generally met overall demand at most times, though during peak periods most facilities met or exceeded target utilization rates**. On Saturday, utilization peaked at 96% during the 2-4 PM count period. During this peak period, the majority of the study area's on- and off-street facilities met or exceeded target utilization rates. While some over-utilized on- and off-street

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facilities are located in relatively close proximity to facilities with significant capacity, it is clear that during weekends the parking supply in the study area is utilized above target rates.

4. **Vehicle turnover varies by day, though the largest portion of vehicles parking within the study area do so for shorter periods of time**. The largest portion of vehicles parked in the study area during all count times did so for less than two hours. On Thursday, 35% of vehicles parked between 0-2 hours and on Saturday 29% did so. In general, more vehicles stayed parked for longer periods of time on Saturday than on Thursday, likely due to residents not commuting to work and staying parked for longer periods of time, as well as more long-term visitor trips, such as those made by beach-goers, that typically occur on the weekend. These trends roughly follow observed trends in the spring data; however, it should be noted that overall turnover was higher in the spring (cars parked for shorter periods of time) as compared to the summer.
5. **The sub-areas exhibit different parking utilization and turnover trends**. Occupancy was typically lower in the Balboa Village sub-area than in the residential sub-area, though the peaking of demand was much more heavily pronounced in Balboa Village. On Saturday, utilization in Balboa Village surpassed that of the residential sub-area during only two count times, peaking at 98% (2-4 PM). The turnover data shows that between the two sub-areas, vehicles parked for much shorter periods of time in the Balboa Village than in the residential sub-area on both days, as expected given the differences in land use. The Balboa Village's shops, restaurants, and other venues attract short-term parkers, while the on-street blocks of the residential sub-area are most likely used by long-term parkers such as employees, Catalina Flyer patrons and residents.
6. **Comparing spring occupancy levels to summer rates, overall utilization is higher in the summer, but follows the same general trends as observed in the spring.** During all collection efforts, off-street facilities exhibited a gradual peaking in the early afternoon and on-street spaces were utilized most heavily in the late evening.

Windshield Survey

The windshield survey effort yielded the following key findings:

1. **Residents represent a significant portion of the parking demand in the study area, though the number of visitors increases in the summer months**. The largest portion of survey responses came from residents who live west of Balboa Village (39%), followed those who reside within Balboa Village itself (25%). Approximately 7% of survey respondents are employees in the area, while the remaining 26% of respondents identified as one of four types of visitor (much higher than the spring survey, when only 12% of respondents identified as a visitor). While it may very well be that residents were more inclined to fill out and return the surveys than visitors and/or employees, it is clear that many residents are parking on-street.
2. **A significant portion of the on-street parking supply in the study area is used for longer term parking**. Most survey respondents were parked on-street overnight or for multiple nights (58%), while 12% reported that they had parked for eight hours. This held true across all respondent types: employees, residents, and visitors (except for visitors coming for shopping/dinning and to frequent the beach). These figures are roughly equivalent to spring results, when 59% of respondents parked overnight and 15% parked for eight hours.

3. **Motorists are mostly aware of the public off-street facilities in the study area, but still choose to park on-street**. Over 84% of survey respondents were aware of all public off-street facilities in the area. This is slightly lower than spring results (90%), indicating that increased visitation means more parkers are unaware of off-street options and would therefore benefit from an improved parking wayfinding system.
4. **The general availability of free on-street parking seems to encourage high levels of on-street demand**. Approximately 28% of survey respondents said they did not want to pay for parking, electing instead to search for a free on-street space. Approximately 28% of respondents mentioned that the on-street space was the most convenient one to their destination, while 15% said the on-street parking was the easiest type of parking to find.
5. **A significant portion of resident survey respondents state that they do not have sufficient off-street parking to store their vehicle(s)**. Approximately 41% of residents in the study area either do not have access to private off-street parking or do not possess an adequate number of spaces. It is unclear whether that lack of parking is due to physical limitations or whether residents are using their garages or driveways for other purposes.

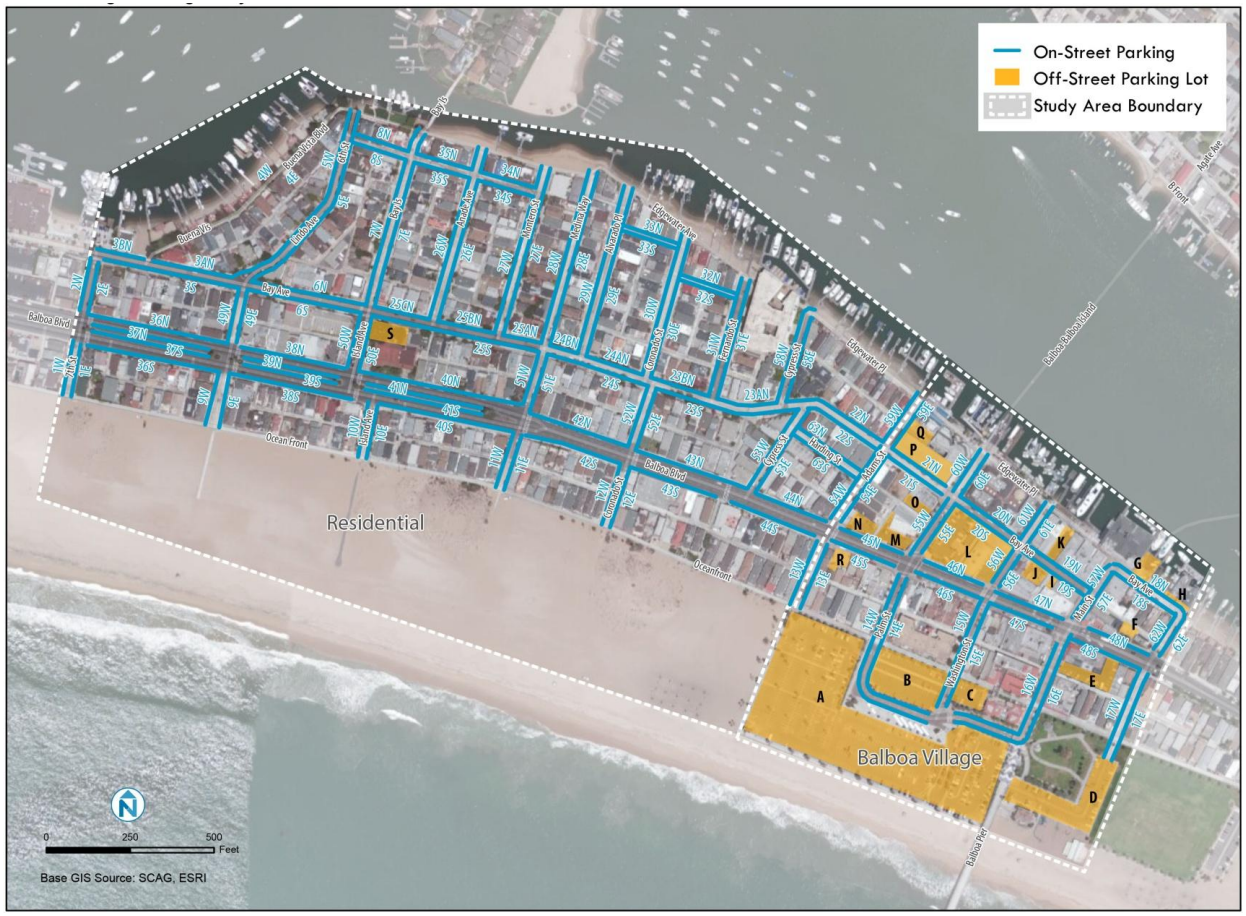
Comment [b1]: Confifm what we mean by this

6. **Summer employees of Balboa Village seem less open to the idea of an Employee Permit Program**. A total of 50% of employee survey respondents said they would be willing or might be willing to pay a small annual parking fee if it guaranteed them a convenient off-street parking space, while 50% said they would not be willing. This differs from the spring, when 77% said they would or might be willing to pay a fee.
7. **Catalina Flyer Visitors represent the visitor type with the longest length of stay**. Most stayed parked either for 8+ hours (19%), or overnight/multiple nights (75%).

SURVEY METHODOLOGY

As shown in Figure 1, the study area is bound by 7th Street to the west and A Street to the east. Two smaller sub-areas were created for the purposes of this analysis. The "Balboa Village" sub-area (areas east of Adams Street) contains most of Balboa Village's shops and businesses, as well as its largest off-street parking lot (Balboa Pier Lot). The "residential" sub-area (area west of Adams Street) is the predominately residential portion of the study area.

Figure 1 Study Area Boundaries and Block IDs



Inventory and Regulations

Parking inventory (number of spaces per facility) and regulations were determined through field observations. Along some blocks of the study area, the on-street inventory was not clearly delineated by striping. In these cases, surveyors made educated assumptions of inventory based on a common size for an on-street parking space, typically 20 feet, or observed utilization. Furthermore, only off-street facilities that were accessible (i.e. not gated or closed for construction) were counted.

Occupancy and Turnover

Staff conducted a comprehensive occupancy and turnover study for both on- and off-street spaces using trained data collection workers. The count days and times were:

- Thursday, June 20th, 2013 from 8 AM – 8 PM, every two hours (plus 9 – 11 PM)
- Saturday, June 22nd, 2013 from 8 AM – 8 PM, every two hours
- Thursday, July 18th, 2013 from 8 AM – 8 PM, every two hours (plus 9 – 11 PM)
- Saturday, July 20th, 2013 from 8 AM – 8 PM, every two hours
- Thursday, August 8th, 2013 from 8 AM – 8 PM, every two hours (plus 9 – 11 PM)
- Saturday, August 10th, 2013 from 8 AM – 8 PM, every two hours

Counts were conducted on these days in order to provide as wide a range of parking conditions as possible, as parking demand tends to fluctuate a great deal by day of week and time of day. The count periods specifically captured parking activity during a typical weekday and weekend at different stages of the peak summer visitation period. Each block face and off-street lot was counted every two hours at approximately the same time of each counting period. The weather was mostly sunny on all six count days, ranging from a high of 79 on July 18th to a low of 76 on August 10th.

In addition to analyzing parking occupancy, parking duration data (for on-street spaces) was also collected to gauge how often each space experiences "turnover" (or, in other words, how long cars stay parked in spaces on a block-by-block basis). This data was collected during the same periods as the occupancy data and involved surveyors noting the last four digits of each license plate, which can be used to identify vehicles without collecting any personal information.

Windshield Survey

Surveys were left on all vehicles parked in on-street spaces during count times and were distributed throughout the day to any car without a survey on the windshield, so that vehicles coming later in the day were also surveyed. The survey was in the form of a postcard pre-addressed to City Hall with the additional option to submit responses online. To incentivize responses, all respondents were entered in a drawing for a free parasailing session for two with Balboa Boat Rentals (June) or free four all day passes to Fun Zone Entertainment's three Boardwalk rides (July and August).

PARKING INVENTORY AND REGULATIONS

Parking Type, Amount, and Regulations

As shown in Figure 2, a total of 2,061 spaces were documented in the on-street blocks and off-street lots of the study area. Overall, there are a total of 925 on-street spaces in the study area, representing 45% of the publicly-available parking supply. A total of 1,136 spaces exist in various off-street lots and garages in the study area[1].

Of the on-street spaces, the vast majority (83%) are unmarked, while 15% are metered. Comparatively, the Balboa Village area has mostly metered on-street parking (78%), while the residential sub-area has a significantly lower proportion of metered parking (9%). Virtually all of the surveyed off-street parking is located in Balboa Village; the residential sub-area only has one off-street lot (an 8-space lot at the Public Library on Balboa Boulevard and Island Avenue). Overall, 58% of the study area's parking supply is in Balboa Village, while 42% of it exists in the residential sub-area. Figure 3 shows on-street parking regulations in the study area.

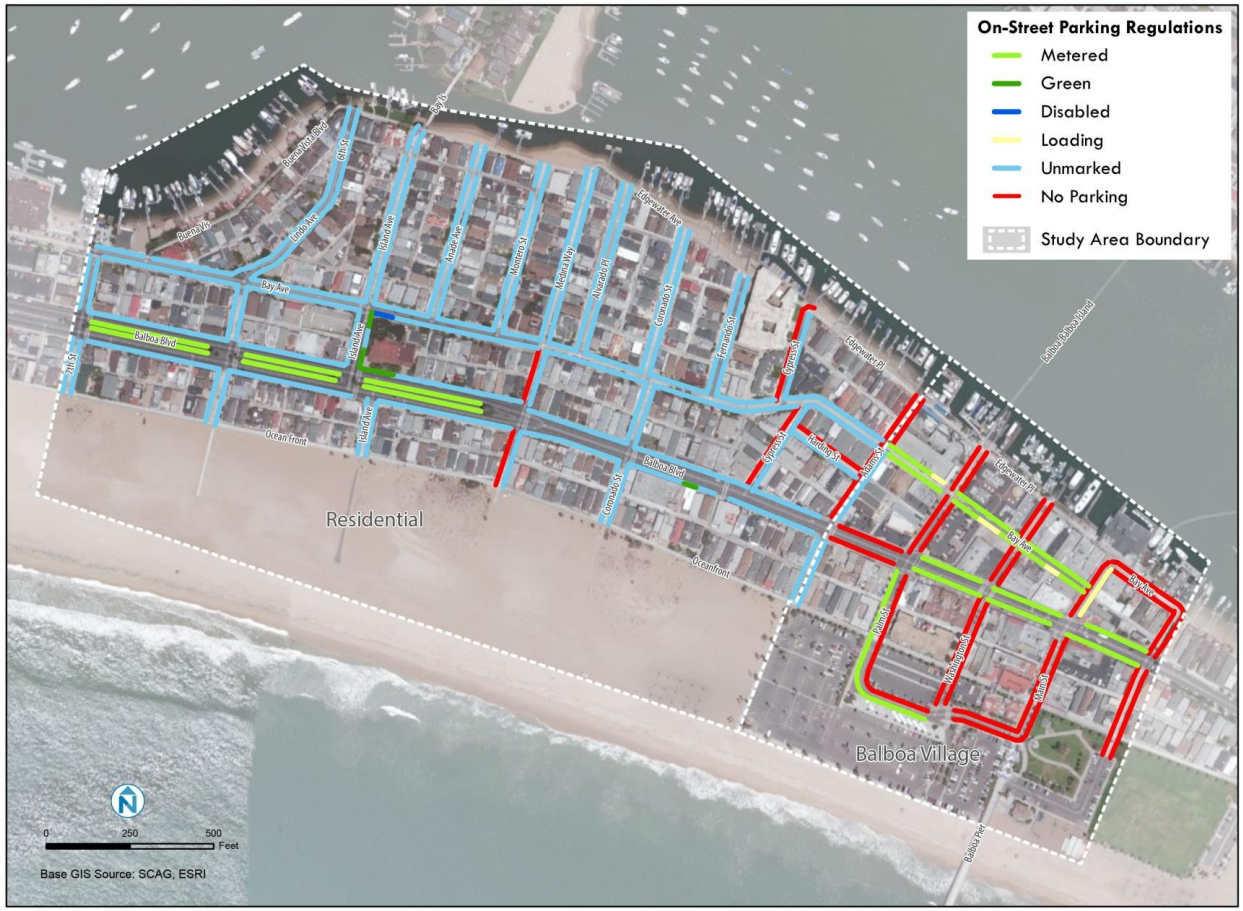
Figure 2 Parking Inventory and Type by Study Sub-Area

Area	On-Street[2]							Off-Street		Total	% of parking
	Unmarked	Metered	Green	Loading	Disabled	Total	% share	Total	% share		
Balboa Village	10	59	0	7	0	76	8%	1,128	99%	1,204	58%
	13%	78%	0%	9%	0%	100%					
Res.	761	77	10	0	1	849	92%	8	1%	857	42%
	90%	9%	1.2%	0%	0.1%	100%					
Total	771	136	10	7	1	925	100%	1,136	100%	2,061	100%
	83%	15%	1.1%	0.8%	0.1%	100%					

[1] Only includes those off-street facilities that were surveyed.

[2] Unmarked spaces are defined as those with no posted restrictions; Metered spaces are defined as those with public parking meters; Green spaces are defined as those with posted short-term time limits (green curb); Loading spaces are defined as those reserved for loading purposes only (yellow or white curb); Disabled spaces are defined as those reserved for handicapped individuals with appropriate placards (blue curb).

Figure 3 On-Street Parking Regulations



Pricing

The study area contains both priced on-street and off-street facilities. Metered on-street spaces are located along Balboa Boulevard, Bay Avenue, and Palm Street and have time limits ranging from 30 minutes, one hour, and two hours. Meters in Balboa Village are priced at $1.50 per hour.

Various public, "pay" lots are located at Balboa Boulevard and Palm Street, at East Bay Avenue and Washington Street, and at Peninsula Park at the end of A Street. The pricing structures of Balboa Village's paid lots are as follows:

- Balboa Pier Main Lot (Lot A)
  - Autos: $1.50 per hour, $15 max for 24-hour period
  - RV's (No Camping): $1.50 per hour, $15 max for 24-hour period (Per Space Occupied)
  - Buses: $50 for 24 passengers or less; $100 for 25 passengers or more
  - Motorcycles: $0.75 per hour, $7.50 max for each 24-hour period
  - Peak Holidays (Memorial Day, July 4th, and Labor Day): $25 flat rate
- Newport Landing (Lot P)
  - Catalina Flyer
    - Monday - Thursday, $10 per day
    - Friday - Saturday, $12 per day
    - Sunday, $15 per day
  - Whale Watching boats - $6 with validation
  - Fishing boats - $8 with validation
- Public Lots (Lots B, C, D, and L)
  - $1.50 per hour (meter)

OCCUPANCY AND TURNOVER

This section provides an overview of the results from the parking occupancy and turnover data collection efforts. It includes a summary of the methodology and the key findings for both the complete study area, as well as the Balboa Village and residential sub-areas. Unless otherwise specified, the data presented below is an average of all three summer collection efforts (June, July, and August). However, specific month by month data is presented where appropriate. This section also offers comparisons to the spring data collection effort conducted in March.

Parking Occupancy[3]

Target occupancy rates of 85% and 90% are effective industry standards for on- and off-street spaces, respectively. In other words, maintaining 15% and 10% vacancy rates for corresponding on- and off-street stalls will help ensure an "effective parking supply." It is at these occupancy levels that roughly one space per block is available, making searching or "cruising" for parking unnecessary and allowing off-street lots to maintain adequate maneuverability. Occupancy rates below these targets indicate a diminished economic return on investments in parking facilities.

Overall Study Area

As shown in Figure 4, overall study area occupancy was significantly higher on Saturday across all count periods. On Saturday, occupancy peaked at 96% (2-4 PM), and was above 60% across all count times. On Thursday, occupancy peaked at only 70% (2-4 PM). These trends were similar to the spring, though average summer occupancy was higher than spring occupancy during all but one time period (4-6 PM Saturday).

[3] All occupancy calculations omit the 24 spaces in Lot E (on Balboa Boulevard between Main Street and A Street) from the total inventory because that facility was closed for construction during the count periods.

Figure 4 Combined Parking Occupancy by Day (Summer and Spring)

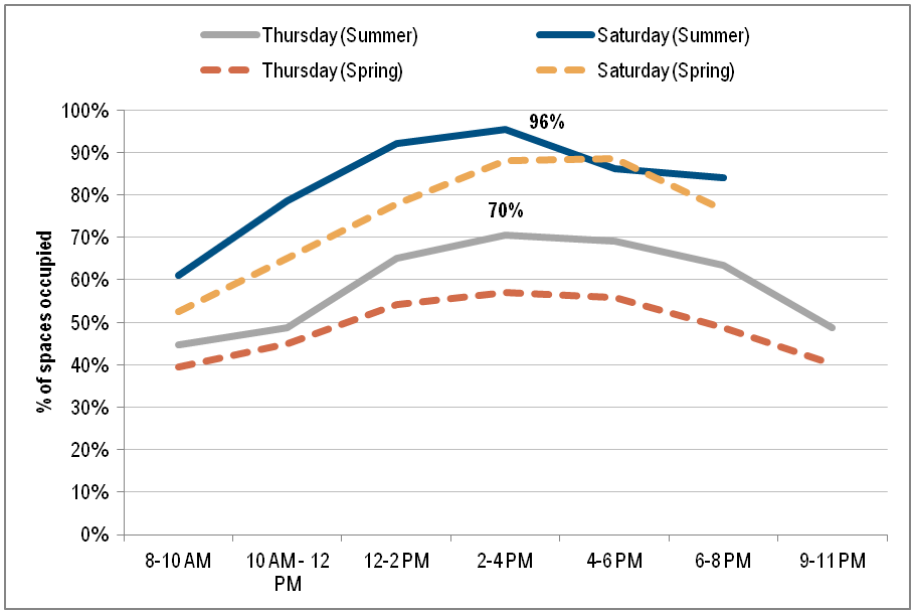


Figure 5 and Figure 6 show parking occupancy by space type for Thursday and Saturday, respectively. On Thursday, on-street utilization rates remained relatively constant, exhibiting a low of 59% (8-10 AM), and a peak of 76% (9-11 PM). The additional 9 PM count conducted on Thursday indicates that occupancy for on-street spaces increases in the evening on weekdays as more residents return home and park their vehicles for the night. Figures 15 and 16 further illustrate this trend.

Off-street occupancy was lower than on-street occupancy during all Thursday count times, and exhibited a more condensed peaking trend. Off-street occupancy was lowest at 8-10 AM (33%) and highest at 2-4 PM (86%). At no point did on- or off-street occupancy reach target levels (85% and 95% for on- and off-street facilities, respectively).

On Saturday, on-street utilization remained relatively constant, exhibiting a low of 82% (8-10 AM) and a peak of 94% (4-6 PM). Conversely, off-street occupancy varied quite drastically, with a low of 44% (8-10 AM) and a high of 98% (2-4 PM).

Comparing spring occupancy levels to summer rates, utilization is higher in the summer, but follows the same general trends as observed in the spring (off-street facilities exhibit a gradual peaking in the early afternoon and on-street spaces are utilized most heavily in the late evening).

Figure 5 Parking Occupancy by Space Type, Thursday (Summer and Spring)

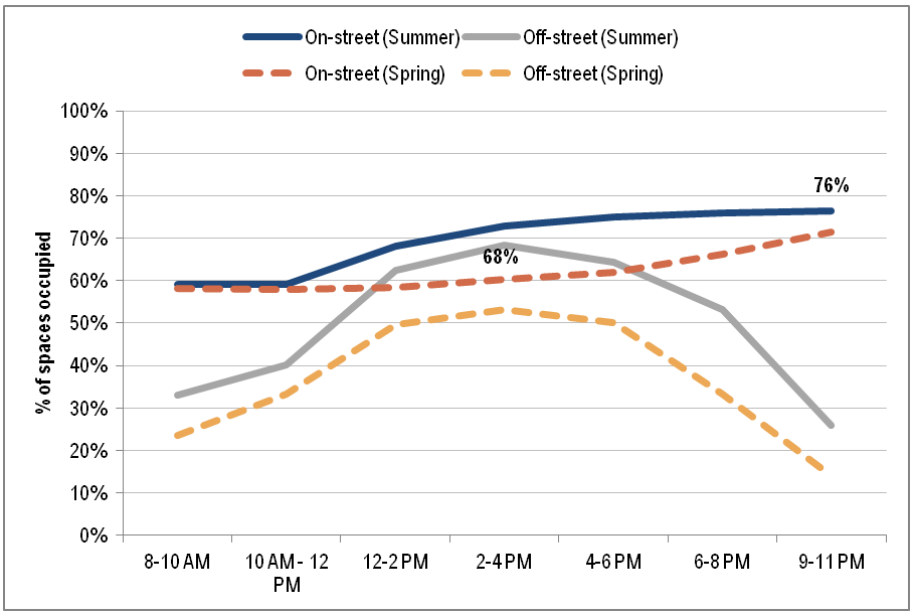
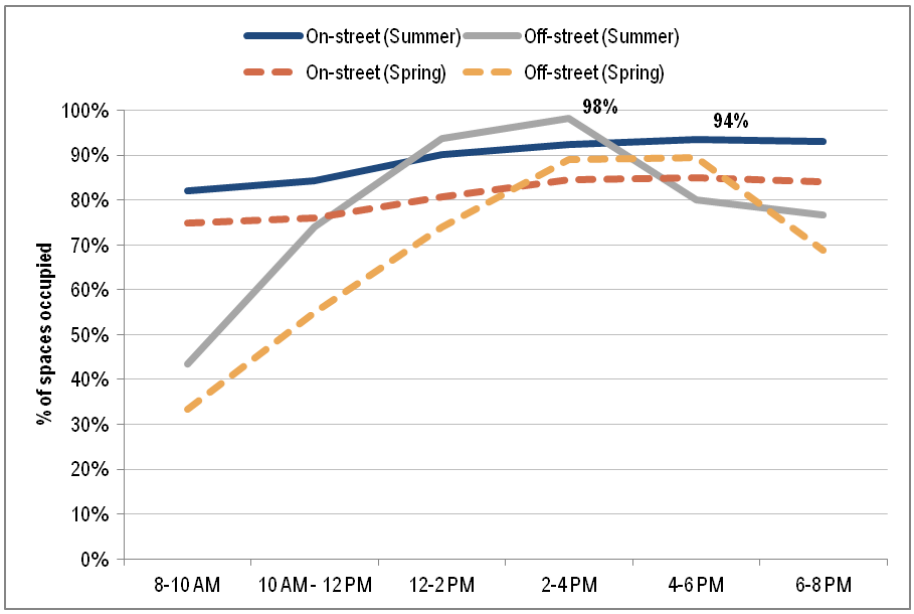


Figure 6 Parking Occupancy by Space Type, Saturday



In looking at off-street facilities by lot type (publicly-owned versus privately-owned), on Thursday, public facilities were utilized at higher rates than private ones during all count times except 8-10 AM, as shown in Figure 7. Neither lot type approached target occupancy rates, however; public facility utilization peaked at 70% (2-4 PM), while private facility utilization peaked at 52% (2-4 PM).

On Saturday, public facilities were utilized at higher rates than private ones during all count times but two (4-6 PM and 6-8 PM), as shown in Figure 8. The utilization of public off-street facilities exceeded target rates during two count times, 12-2 PM and 2-4 PM (96% and 99%, respectively). Private off-street facility utilization peaked at 88% (4-6 PM).

Figure 7 Off-Street Occupancy by Lot Type, Thursday

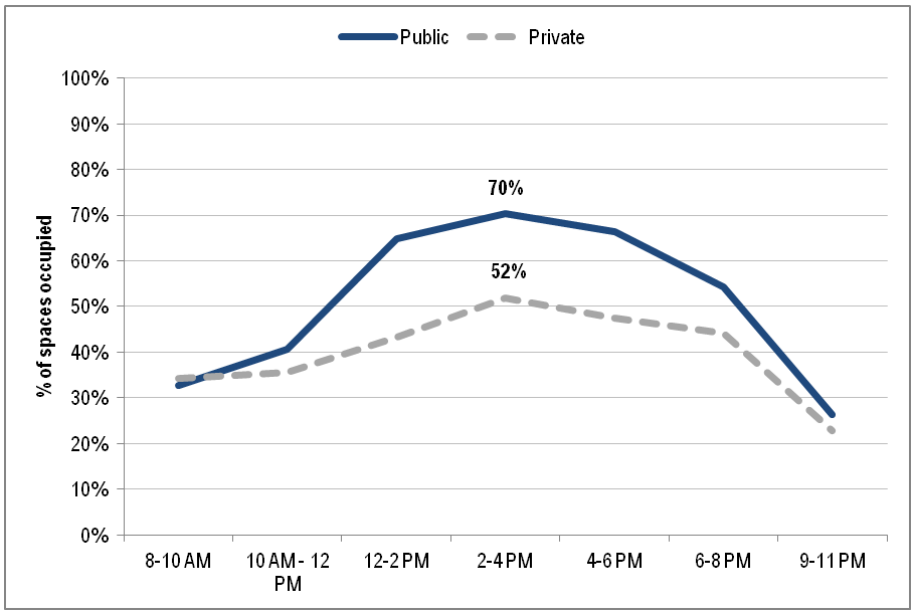
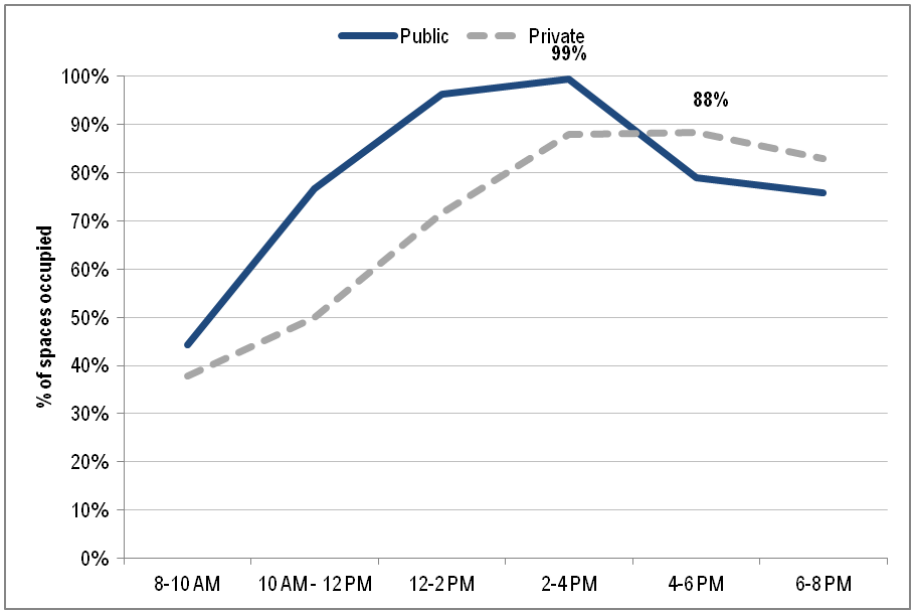


Figure 8 Off-Street Occupancy by Lot Type, Saturday



Figures 9 through 14 map peak-hour overall utilization in the study area for the June, July, and August collection efforts, by day, as follows:

- June
  - Thursday Peak: 9-11 PM (51%)
  - Saturday Peak: 2-4 PM (97%)
- July
  - Thursday Peak: 2-4 PM (83%)
  - Saturday Peak: 4-6 PM (94%)
- August
  - Thursday Peak: 2-4 PM (83%)
  - Saturday Peak: 4-6 PM (96%)

These maps show the utilization level for each individual block face and each individual lot during the peak hour parking demand. The maps reveal various "pockets" of high demand on blocks and in some lots in the study area during Thursday's counts, as shown in Figures 9, 11, and 13. For example, some blocks along Bay Avenue, Balboa Boulevard, Adams Street, and others in the north and eastern portions of the study area reached or exceeded target levels. Compared to July and August, during June's Thursday peak, high rates of utilization were more heavily concentrated in on-street facilities.

On Saturday, occupancy peaked in the mid-90%'s range during the June, July, and August peak periods. During this peak time, the majority of the study area's on- and off-street facilities met or exceeded target utilization rates. While some over-utilized on- and off-street facilities are located in relatively close proximity to facilities with significant capacity, parking supply on summer weekends the in the study area is quite heavily utilized, with many facilities (on- and off-street) 100% occupied. It should also be noted that a few blocks of the metered spaces along Balboa Boulevard are consistently underutilized, however, even during peak periods.

It should be noted that the 180-space Newport Landing garage remained well below target occupancy rates during all count periods, even when the overall parking system was heavily utilized. Indeed, the lot peaked at only 69% occupied during the 2-4 PM Saturday count. This may point to a need of increased wayfinding to this specific facility, or an opportunity to work with the garage's owners to institute a new fare structure that makes spaces more appealing to a wider base of parkers. Currently, rates in the garage are $10 per day Monday – Thursday, $12 per day Friday through Saturday, and $15 per day on Sundays, and are geared mostly towards Catalina Flyer travelers. See Appendix A for occupancy maps[4] during all survey days and count times.

[4] Lot E (on Balboa Boulevard between Main Street and A Street) is shown as "green" on all maps, but was closed for construction during the count periods.

Figure 9 June Study Area Peak Occupancy, Thursday 9-11 PM

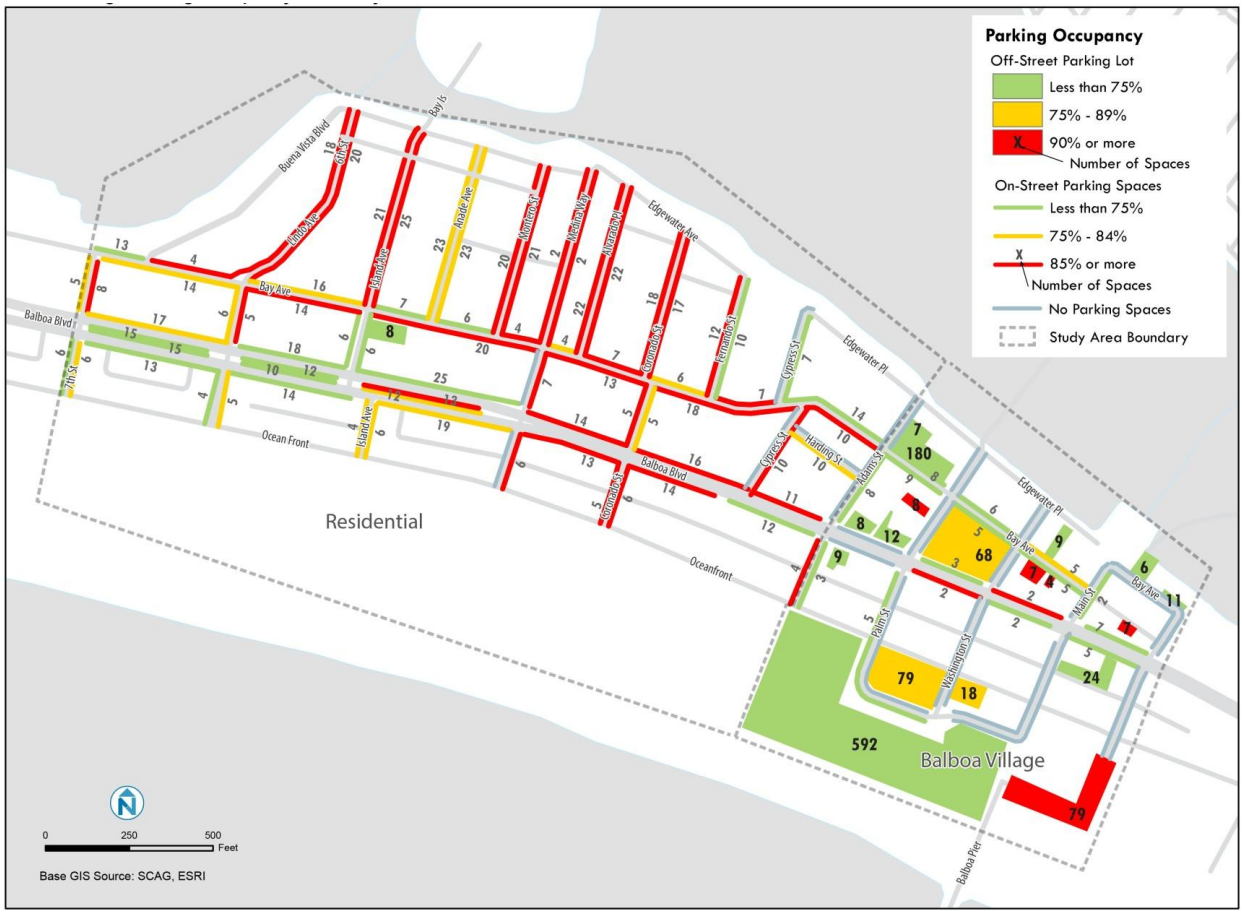


Figure 10 June Study Area Peak Occupancy, Saturday 2-4 PM

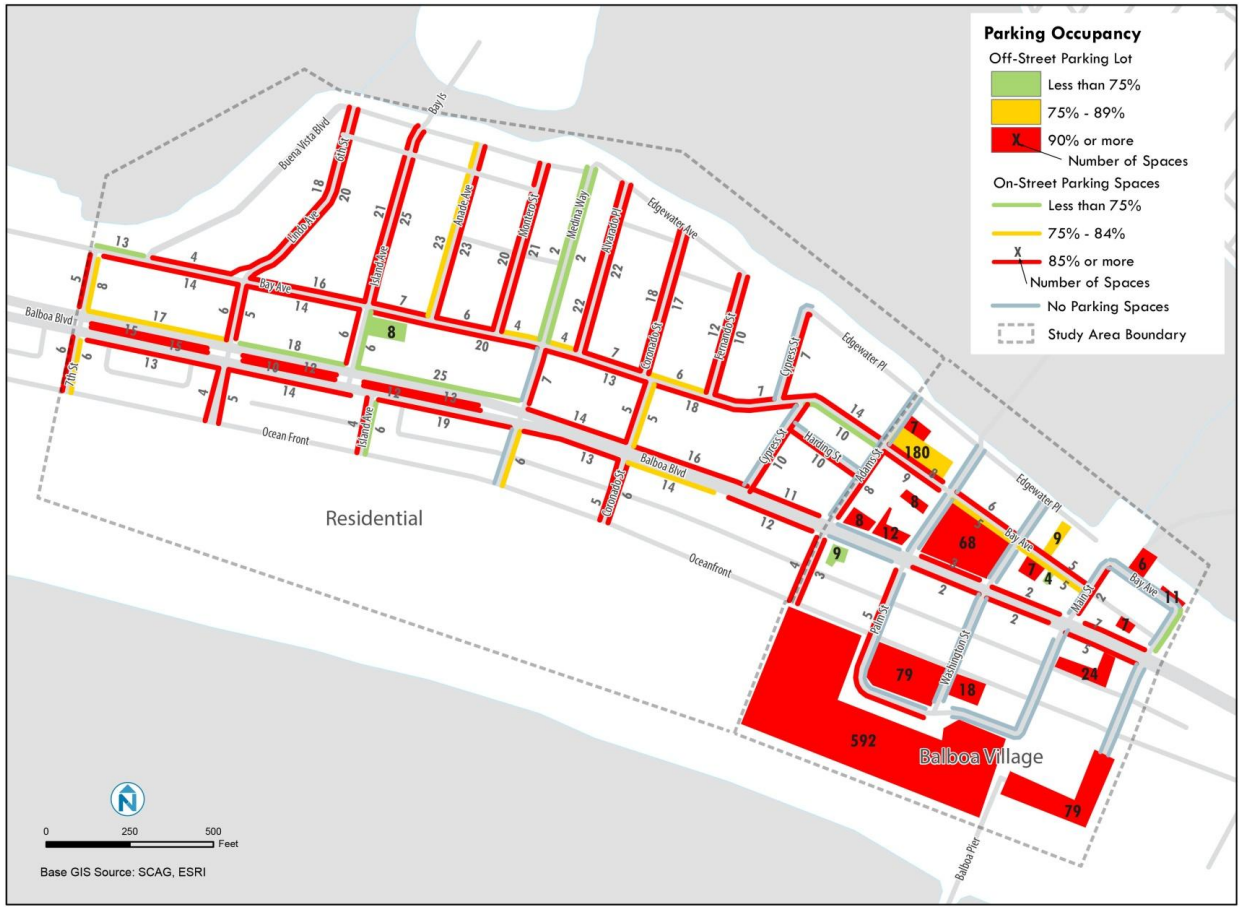


Figure 11 July Study Area Peak Occupancy, Thursday 2-4 PM

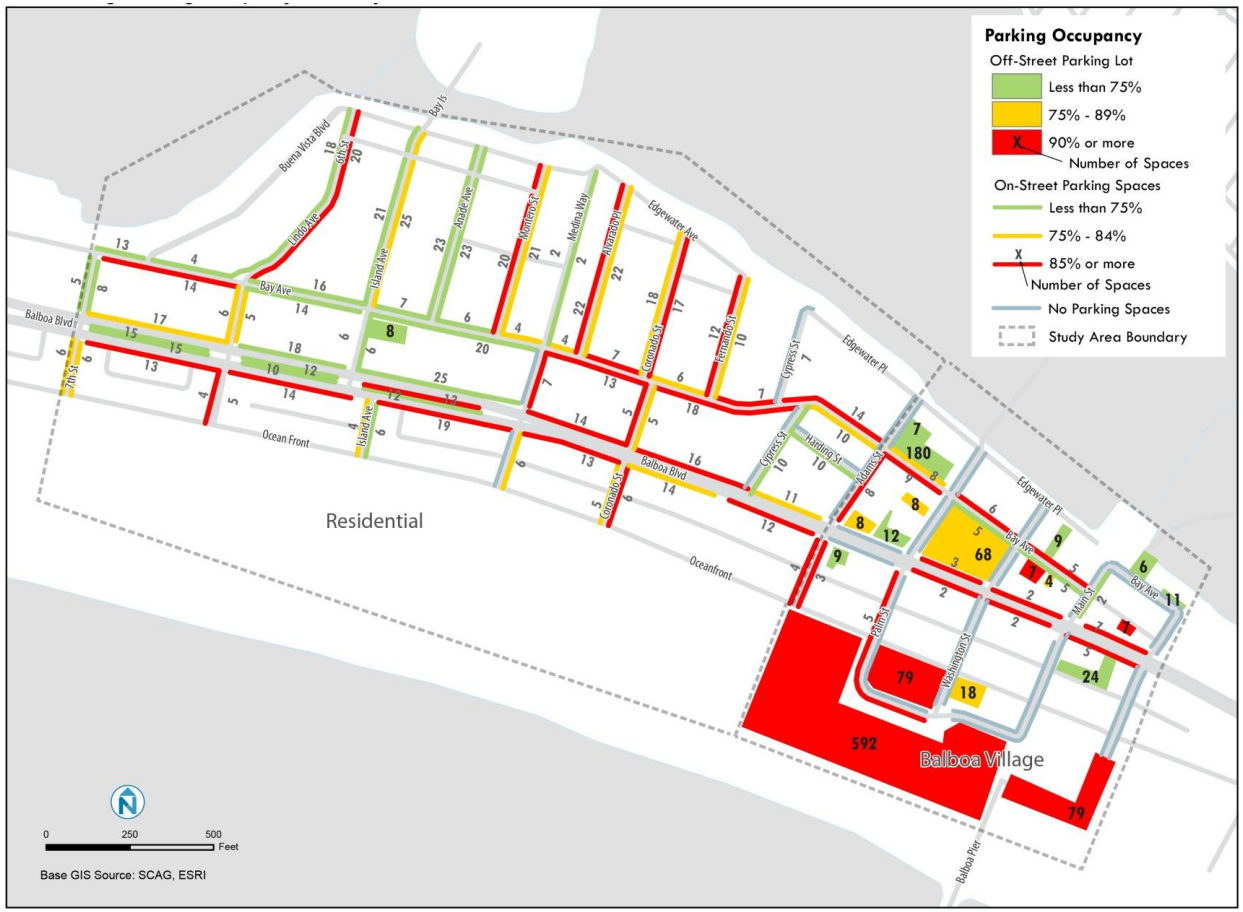


Figure 12 July Study Area Peak Occupancy, Saturday 4-6 PM

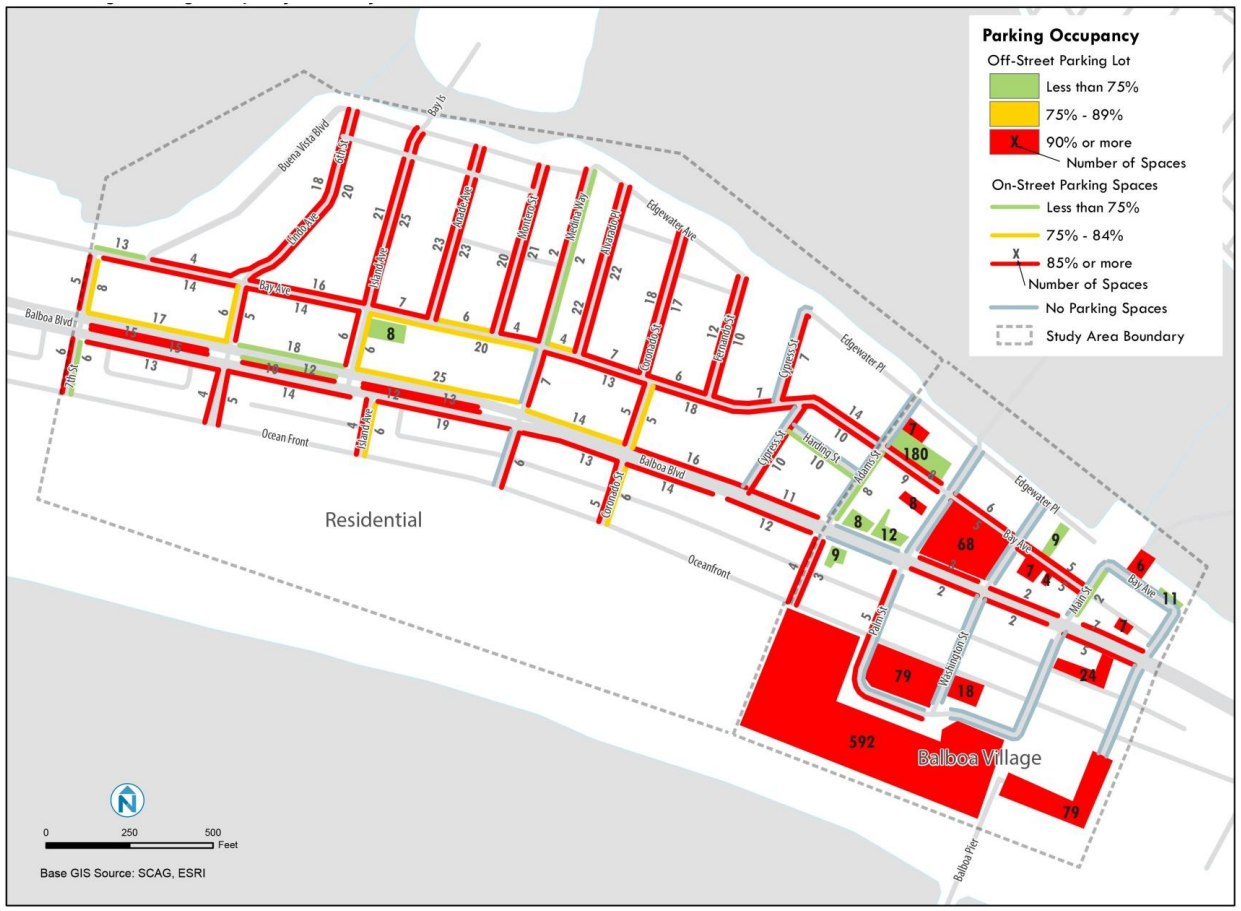


Figure 13 August Study Area Peak Occupancy, Thursday 2-4 PM

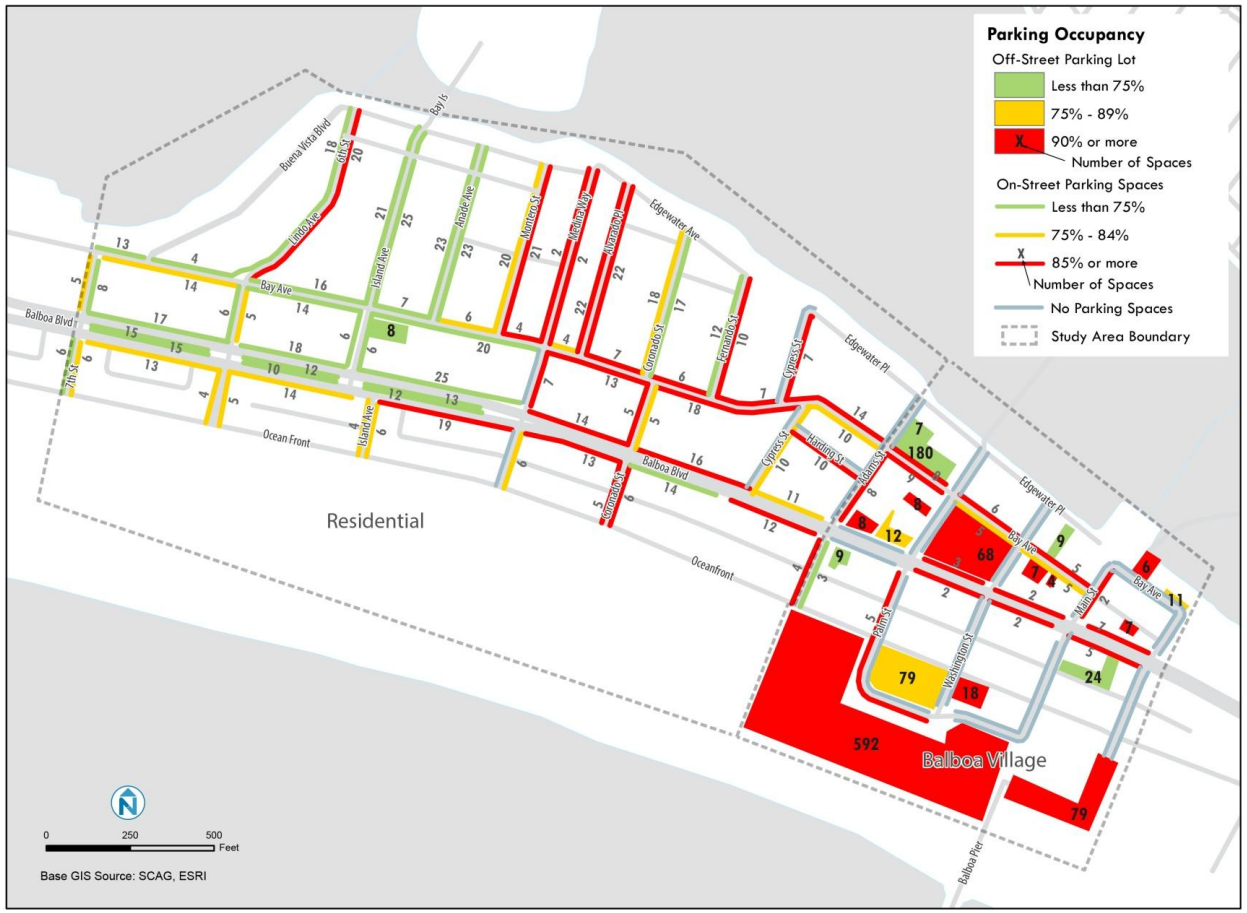
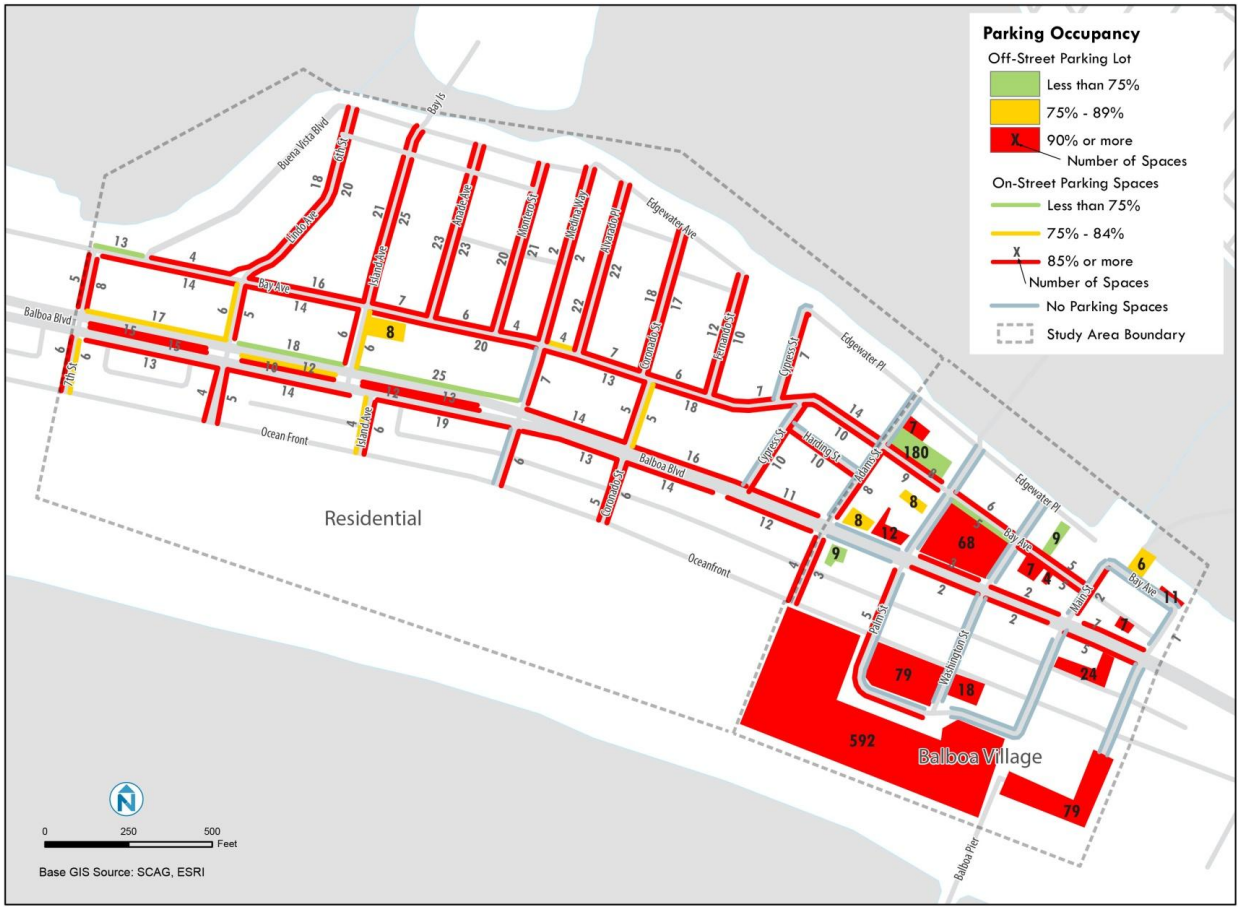


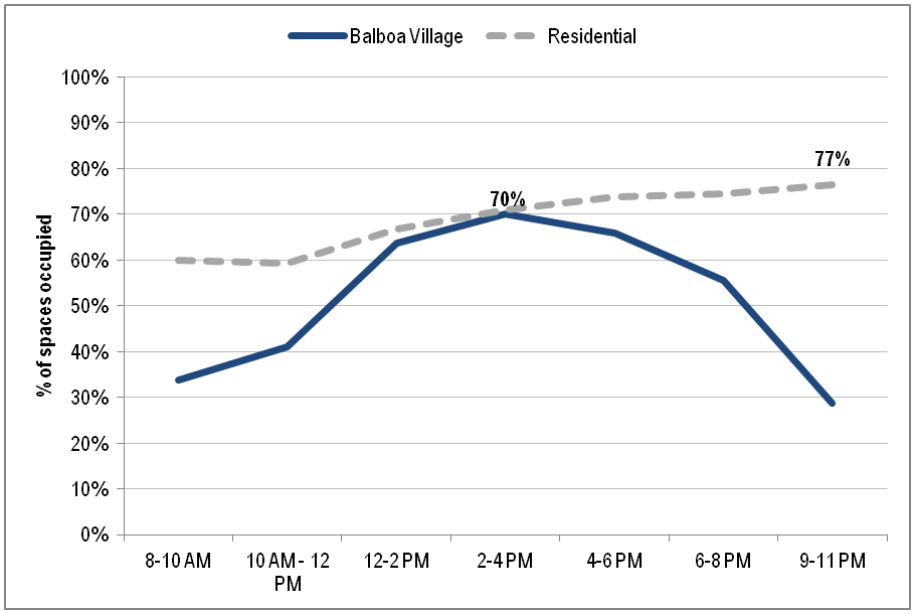
Figure 14 August Study Area Peak Occupancy, Saturday 4-6 PM



Study Sub-Areas

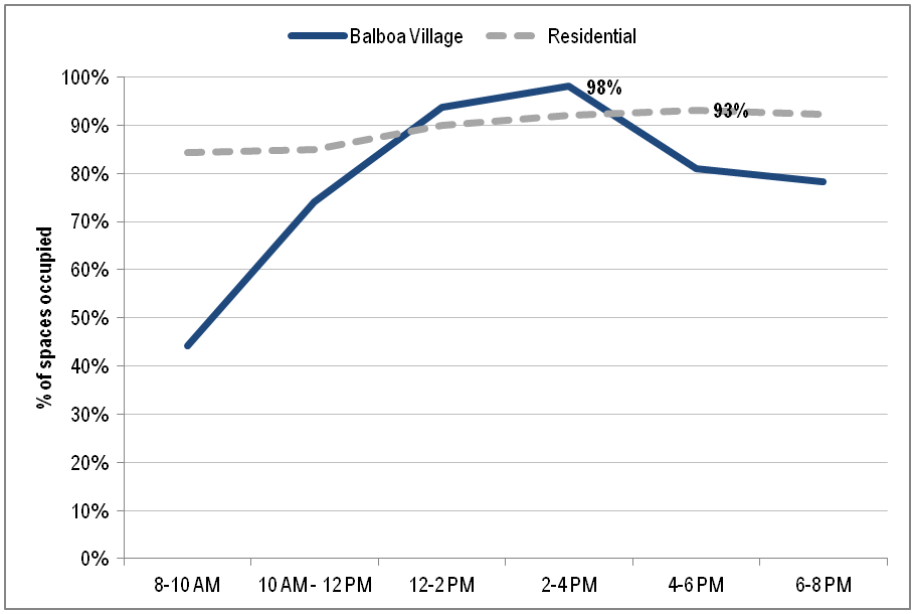
Looking at the two study sub-areas, overall utilization was greater in the residential (7th Street to Adams Street) sub-area across all Thursday count times. Occupancy peaked at 77% during the 9-11 PM count period, and was at its lowest during the 10AM-12PM count period (59%), as shown in Figure 15. In the Balboa Village sub-area, occupancy varied more drastically, rising from a low of 29% (9-11 PM), to a high of 70% (2-4 PM).

Figure 15 Parking Occupancy by Location, Thursday



On Saturday, utilization remained steady in the residential sub-area, but at significantly higher utilization rates than on Thursday. As shown in Figure 16, utilization peaked at 93% (4-6 PM) from a low of 84% (8-10 AM). Utilization in Balboa Village surpassed that of the residential sub-area during two count times, peaking at 98% (2-4 PM).

Figure 16 Parking Occupancy by Location, Saturday



On Thursday, on-street occupancy reached or surpassed target rates in Balboa Village during two count periods, but never in the residential sub-area, as shown in Figure 17. In Balboa Village, on-street utilization peaked at 90% (2-4 PM), while in the residential sub-area utilization peaked at 77% (9-11 PM).

On Saturday, however, on-street occupancy surpassed the 85% target rate in both sub-areas during four count periods (12 PM through 8 PM), peaking at 97% (6-8 PM) in Balboa Village and 94% (4-6 PM) in the residential sub-area, as shown in Figure 18.

Figure 17 On-Street Parking Occupancy by Location, Thursday

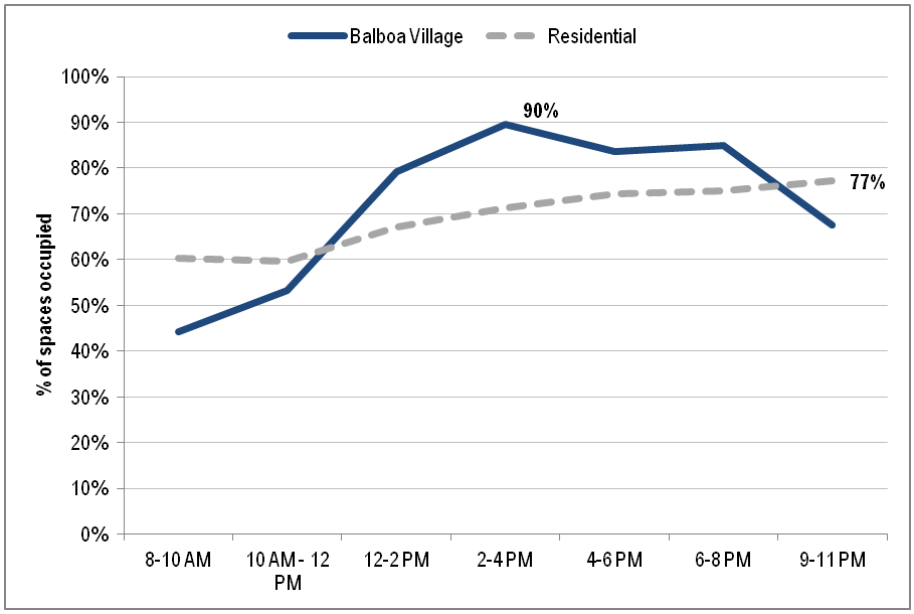
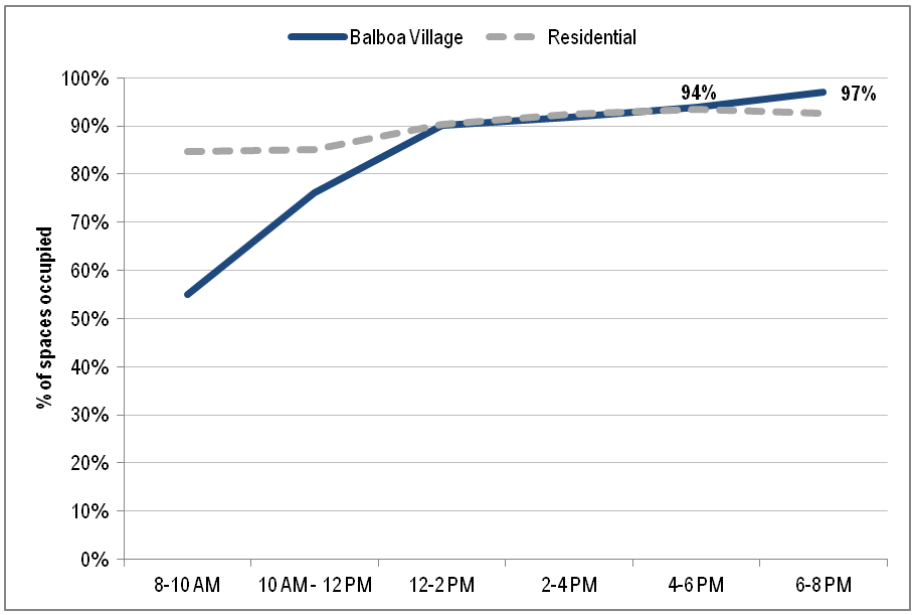
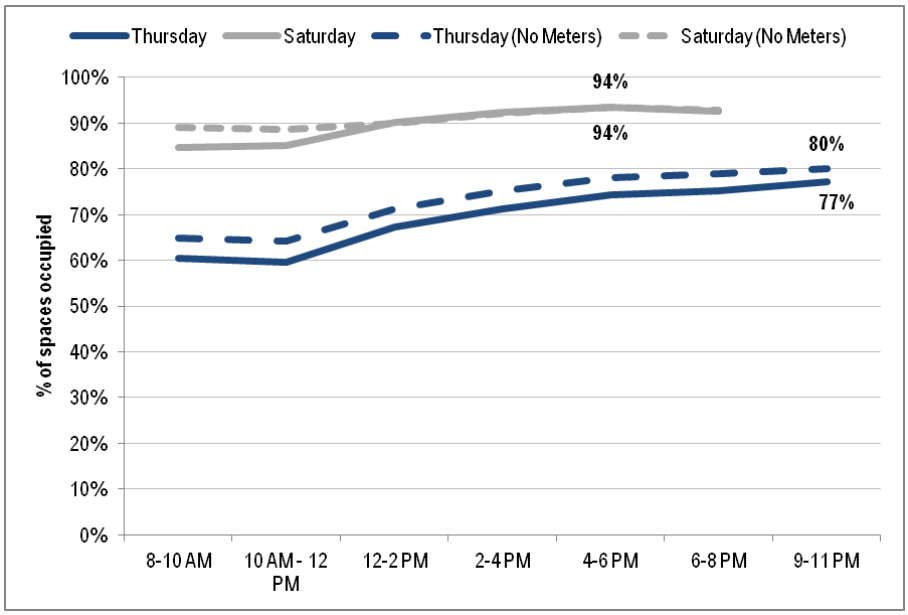


Figure 18 On-Street Parking Occupancy by Location, Saturday



It should also be noted, however, that the underutilized metered parking spaces along Balboa Boulevard slightly distort the picture of on-street demand in the residential sub-area. As shown in Figure 19, removing the metered spaces results in higher levels of occupancy for on-street spaces in the residential sub-area. On Thursday, on-street occupancy peaked at 77%. However, when removing the metered spaces, occupancy peaked at 80%. On Saturday, however, occupancy rates were roughly equal with or without metered spaces.

Figure 19 On-Street Parking Occupancy in Residential Sub-Area by Day, Including and Excluding Metered Spaces



As noted in previous sections, off-street parking is heavily concentrated in the Balboa Village sub-area, as 18 of the 19 off-street facilities are located east of Adams Street. Therefore, as shown in Figure 20 and Figure 21, off-street occupancy in Balboa Village area mirrors overall off-street occupancy in the entire study area on both days. In the residential sub-area, there is only one off-street garage.

On Thursday, off-street occupancy was higher in the Balboa Village sub-area across all count times, peaking at69% (2-4PM), as shown in Figure 20. On Saturday, off-street occupancy was again higher in the Balboa Village sub-area during all but one count period, peaking at 98 % (2-4PM), as shown in Figure 20.

Figure 20 Off-Street Parking Occupancy by Location, Thursday

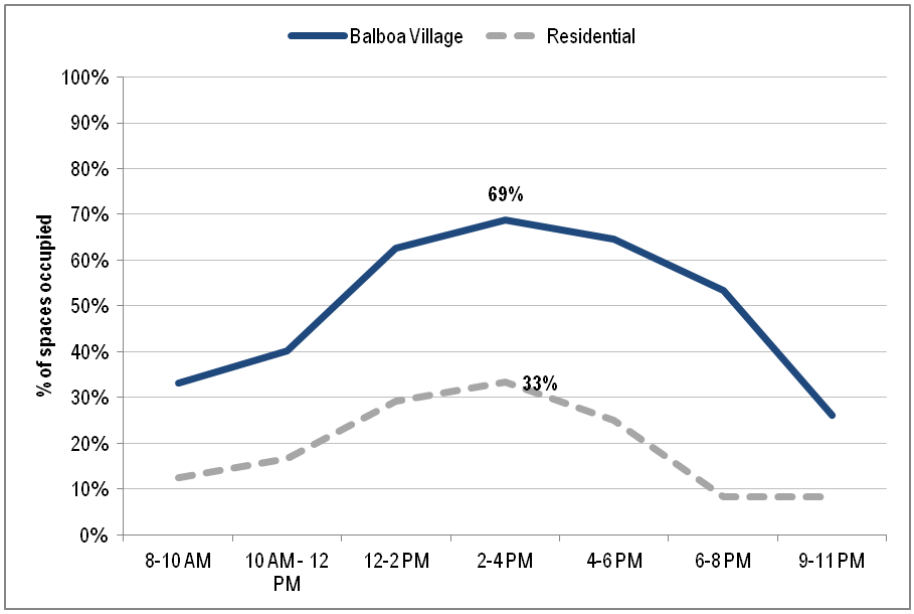
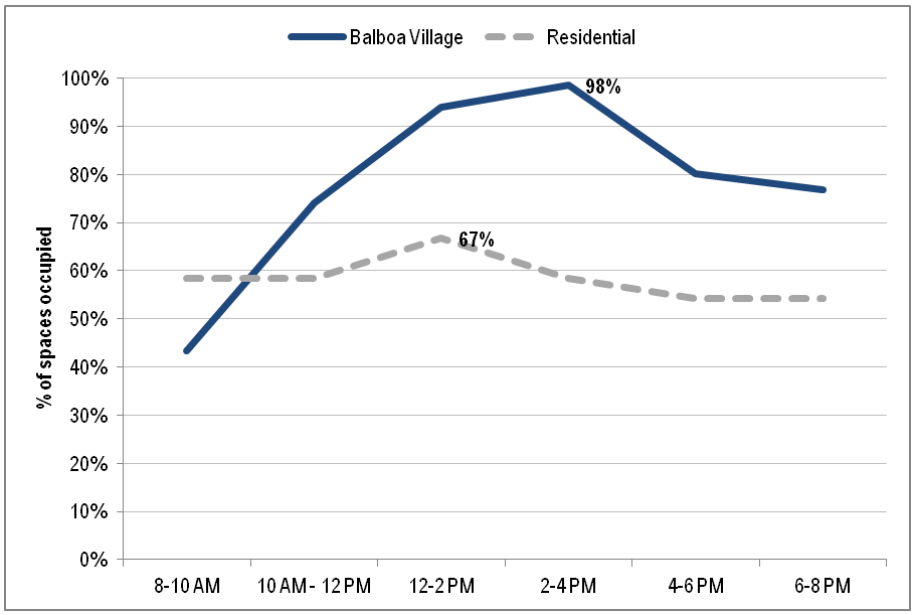


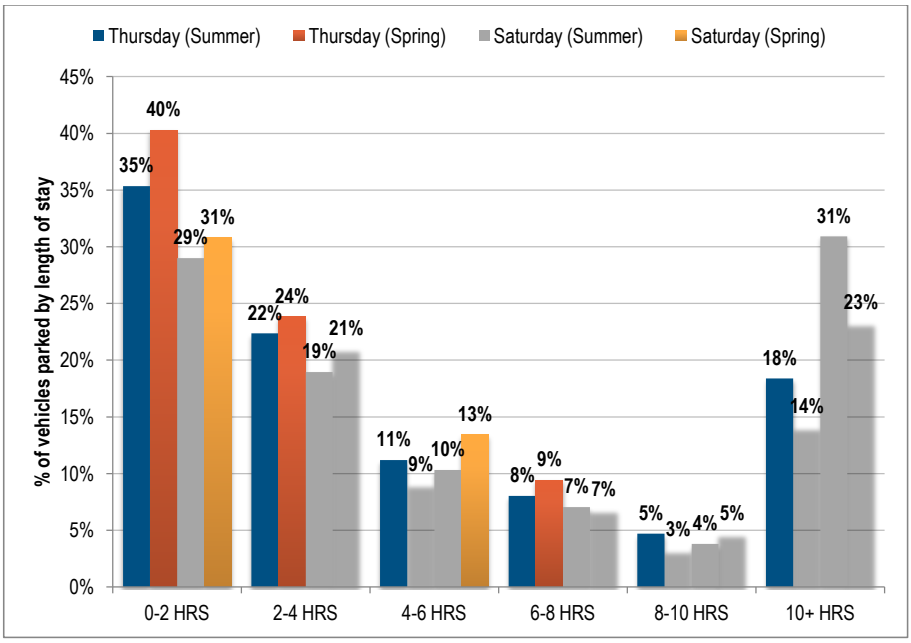
Figure 21 Off-Street Parking Occupancy by Location, Saturday



Parking Turnover

In addition to parking occupancy data, parking turnover data was collected for all on-street block faces.[5] As shown in Figure 22, the largest portion of vehicles parked in the study area during all count times did so for less than two hours. On Thursday, 35% of vehicles parked between 0-2 hours and 57% parked for less than four hours. On Saturday 29% parked for less than two hours and 48% parked for less than four hours. In general, more vehicles were parked for longer periods of time on Saturday than on Thursday, likely due to residents not commuting to work and staying parked for longer periods of time, as well as more long-term visitor trips that typically occur on the weekend. These trends roughly follow observed trends in the spring data; however, it should be noted that overall turnover was higher in the spring (cars parked for shorter periods of time) as compared to the summer.

Figure 22 Vehicle Turnover by Day, Entire Study Area (Summer and Spring)

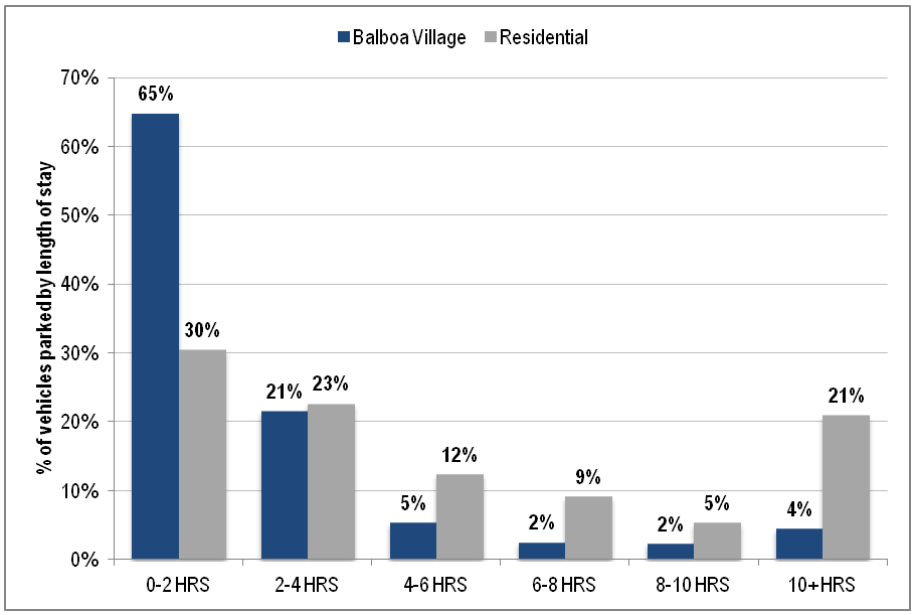


Comparing the two sub-areas, it is clear that vehicles on Thursday parked for shorter periods of time in Balboa Village than in the residential sub-area, as expected given the differences in land use. Balboa Village's shops, restaurants, and other venues attract short-term parkers, while the on-street blocks of the residential sub-area are most likely used for the storage of resident vehicles or long-term employee or visitor parking. As shown in Figure 23, the majority (65%) of vehicles

[5] Turnover is defined as the number of vehicles parked on a block-face divided by the inventory. In other words, the higher the turnover figure, the less time the average vehicle was parked on a block-face (i.e. the greater the amount of vehicular turnover).

parking in Balboa Village did so for 0-2 hours, while only 30% of vehicles in the residential sub-area parked for less than two hours.

Figure 23 Vehicle Turnover by Location, Thursday



These trends held true on Saturday. As shown in Figure 24, the majority (58%) of vehicles parking in Balboa Village did so for 0-2 hours, while only 25% of vehicles in the residential sub-area parked less than two hours. Roughly one in three vehicles parked in the residential sub-area were parked throughout the entire survey period (10+ hours).

Figure 24 Vehicle Turnover by Location, Saturday

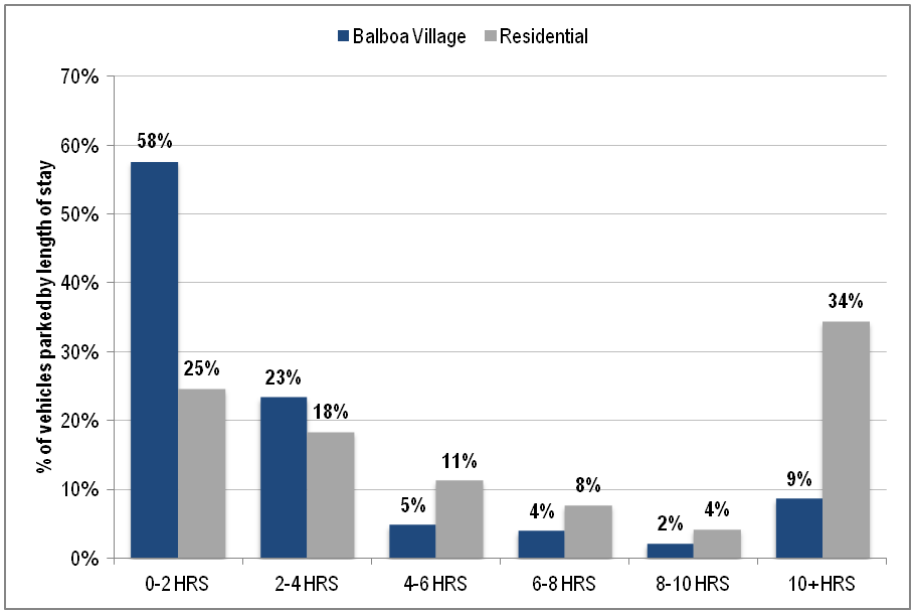


Figure 25 through Figure 30 map vehicle turnover by block-face for Thursday and Saturday surveys, by month. For the purposes of this map, turnover is defined as the number of vehicles parked on a block-face divided by the inventory. In other words, a higher number indicates that more vehicles were parked on the block during the day and that the average vehicle was parked for a shorter amount of time.

On the Thursday count days, the turnover rate was most typically highest along stretches of Bay Avenue, Island Avenue, Coronado Street, Fernando Street, and Main Street, blocks that are proximate to the Balboa Village sub-area (as shown in Figures 25, 27, and 29). On the Saturday count days, turnover was lower overall, though pockets of higher turnover were concentrated along Bay Avenue, Lindo Avenue, Medina Way, Island Avenue, Palm Street, and portions of Balboa Boulevard (Figures 26, 28, and 30). During all count days, turnover was typically highest in or near the heart of the Balboa Village, or along metered block faces.

Figure 25 Map of Turnover by Block-Face, Thursday (June)

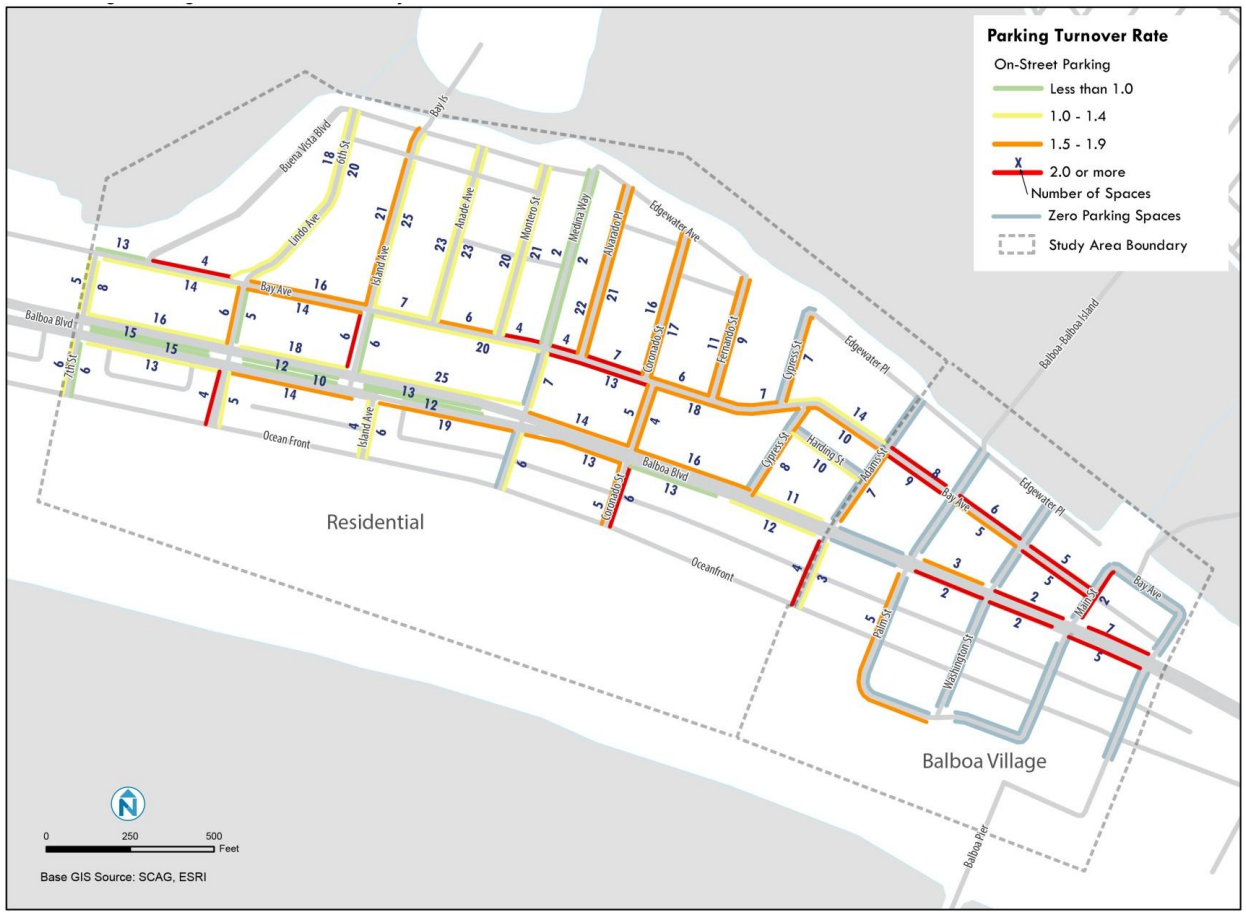


Figure 26 Map of Turnover by Block-Face, Saturday (June)

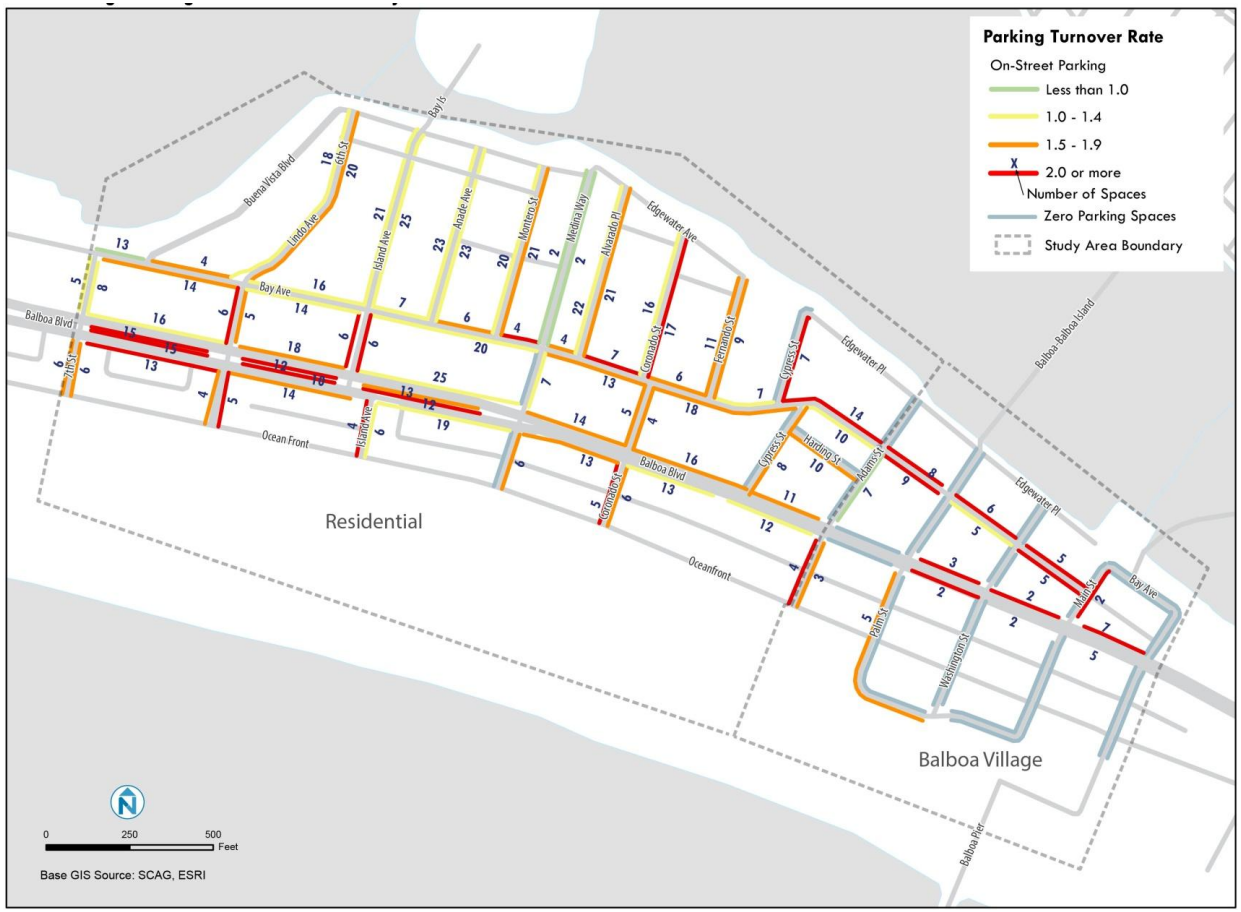


Figure 27 Map of Turnover by Block-Face, Thursday (July)

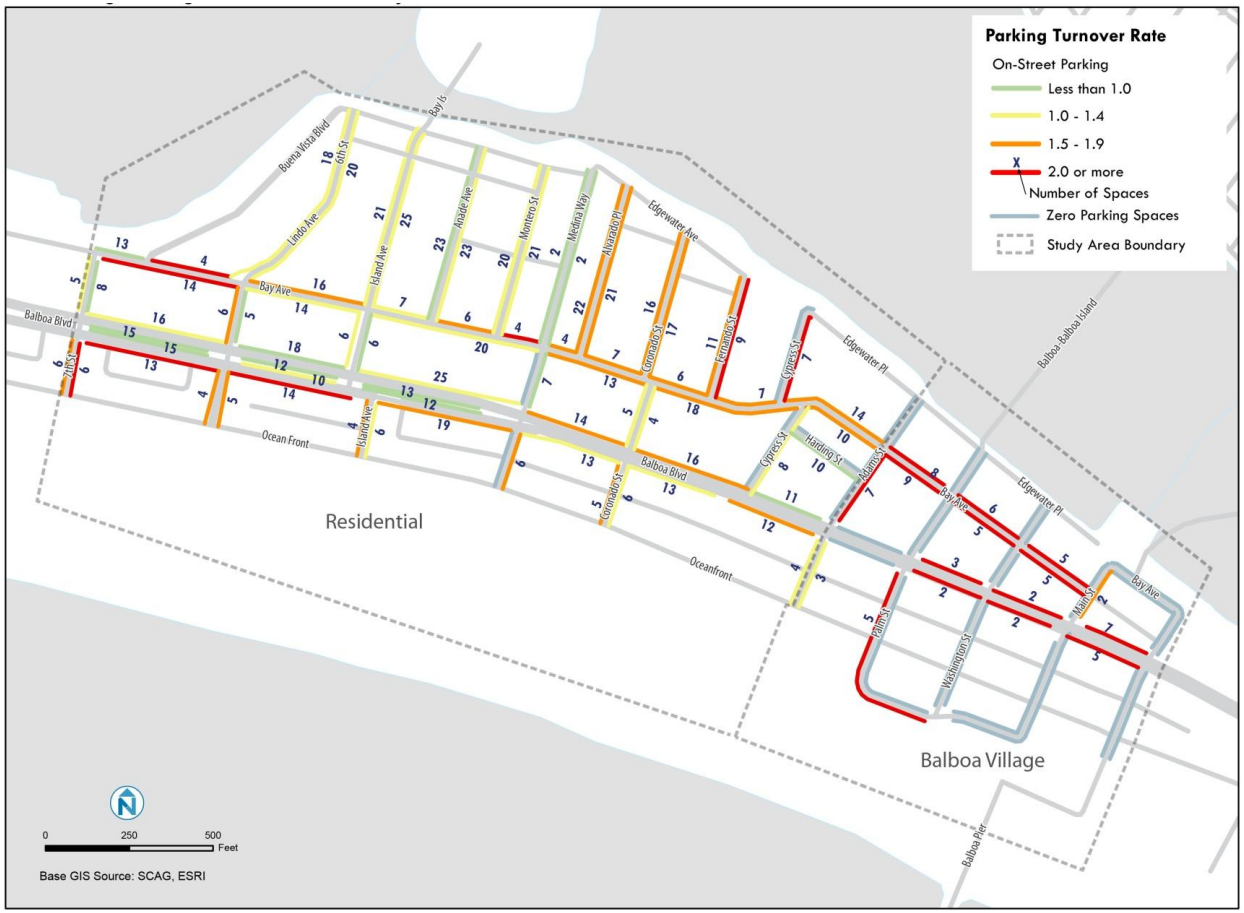


Figure 28 Map of Turnover by Block-Face, Saturday (July)

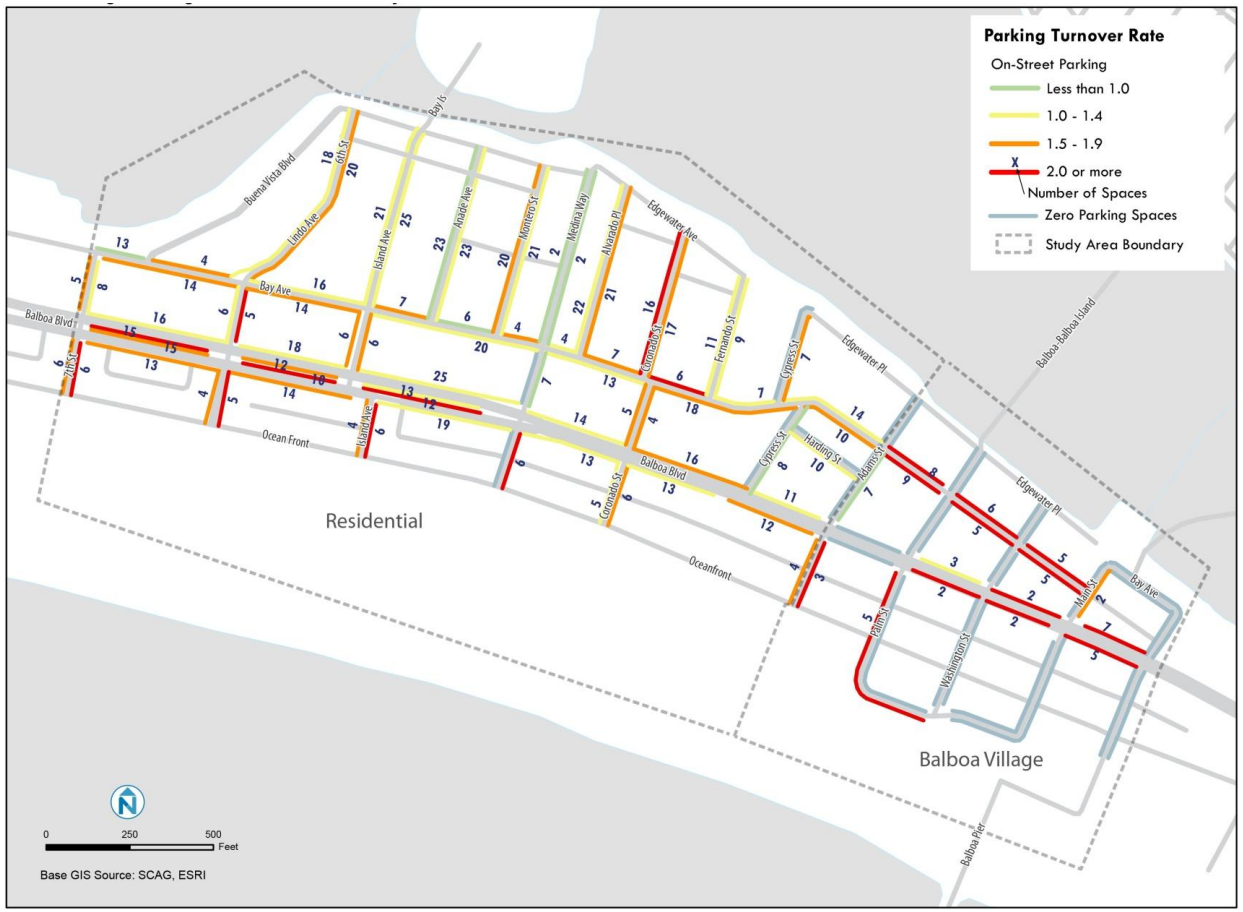


Figure 29 Map of Turnover by Block-Face, Thursday (August)

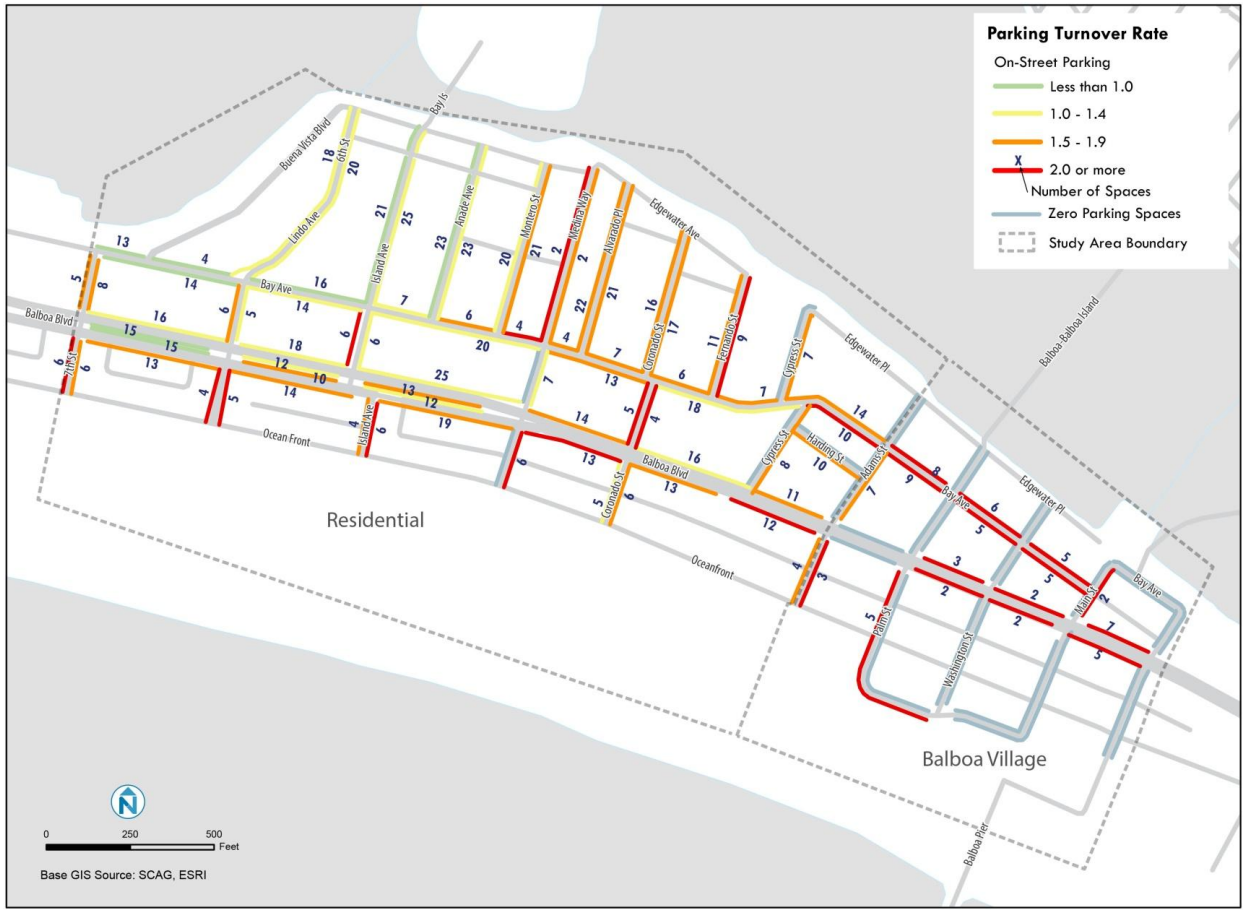
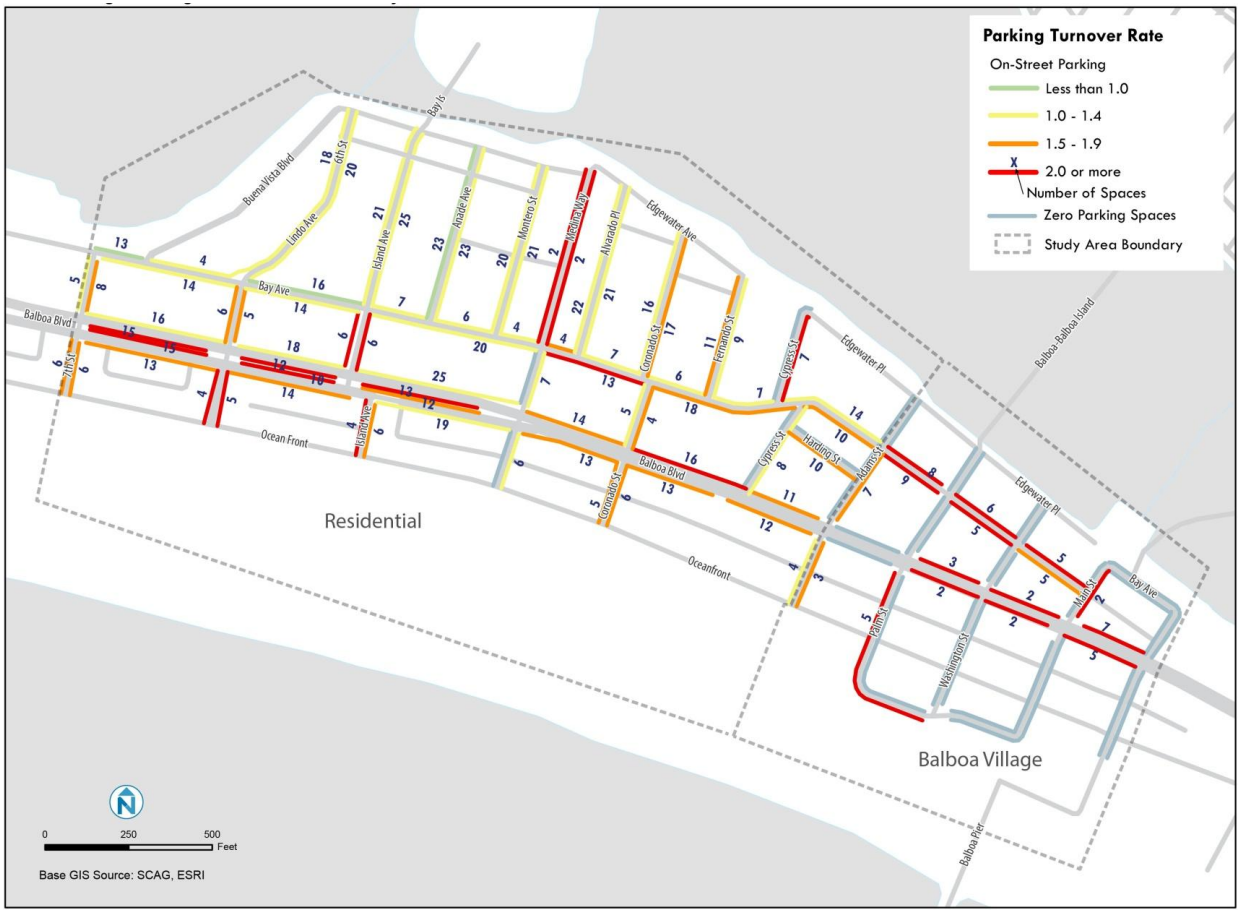


Figure 30 Map of Turnover by Block-Face, Saturday (August)



Key Findings

As described above, the parking analysis yielded various key findings related to parking supply, regulations, utilization, and turnover in the study area. In sum, finding on-street parking along many "front door" block faces and beach-front lots can be difficult, especially during summer weekend days when many on- and off-street facilities meet or exceed target occupancy rates. The specific findings of the parking analysis are summarized below:

1. **The study area has a large supply of parking which is split roughly evenly between the area's on- and off-street facilities**. A total of 2,065 spaces exist in the study area, 929 of which are located on-street (45%), and 1,136 spaces of which exist in various off-street lots and garages in the study area (55%).
2. **While the parking supply is underutilized during summer weekdays, various "hot-spots" of demand exist**. On Thursday counts, at no point did overall on- or off-street utilization reach target levels, though some of the mostly unregulated blocks along spaces along Bay Avenue, Balboa Boulevard, and Adams Street reached or exceeded target levels.
3. **On summer weekends, district-wide parking supplies generally met overall demand at most times, though during peak periods most facilities met or exceeded target utilization rates**. On Saturday, utilization peaked at 96% during the 2-4 PM count period. During this peak period, the majority of the study area's on- and off-street facilities met or exceeded target utilization rates. While some over-utilized on- and off-street facilities are located in relatively close proximity to facilities with significant capacity, it is clear that during weekends the parking supply in the study area is utilized above target rates.
4. **Vehicle turnover varies by day, though the largest portion of vehicles parking within the study area do so for shorter periods of time**. The largest portion of vehicles parked in the study area during all count times did so for less than two hours. On Thursday, 35% of vehicles parked between 0-2 hours and on Saturday 29% did so. In general, more vehicles stayed parked for longer periods of time on Saturday than on Thursday, likely due to residents not commuting to work and staying parked for longer periods of time, as well as more long-term visitor trips that typically occur on the weekend. These trends roughly follow observed trends in the spring data; however, it should be noted that overall turnover was higher in the spring (cars parked for shorter periods of time) as compared to the summer.
5. **The sub-areas exhibit different parking utilization and turnover trends**. Occupancy was typically lower in the Balboa Village sub-area than in the residential sub-area, though the peaking of demand was much more heavily pronounced in Balboa Village. On Saturday, utilization in Balboa Village surpassed that of the residential sub-area during only two count times, peaking at 98% (2-4 PM). When parsing the turnover data between the two sub-areas, it is clear that vehicles parked for much shorter periods of time in the Balboa Village than in the residential sub-area on both days, as expected given the differences in land use. The Balboa Village's shops, restaurants, and other venues attract short-term parkers, while the on-street blocks of the residential sub-area are most likely by long-term parkers such as employees, Catalina Flyer patrons and residents.
6. **Comparing spring occupancy levels to summer rates, utilization is higher in the summer, but follows the same general trends as observed in the spring.** During all collection efforts, off-street facilities exhibited a gradual peaking in the early afternoon and on-street spaces were utilized most heavily in the late evening.

WINDSHIELD SURVEY

In tandem with parking occupancy and turnover collection, a windshield survey was conducted to gather information about the types of people (resident, employee, and visitor) parking on-street in the study area and their reasons for doing so. Approximately 12,000 vehicle surveys were distributed (about 4,000 for each month) and a total of 1,101 vehicle surveys were returned with responses, yielding a response rate of 9%. While this is not a scientific survey, and respondents self-selected to participate, the results do offer a representative picture of parking behavior.

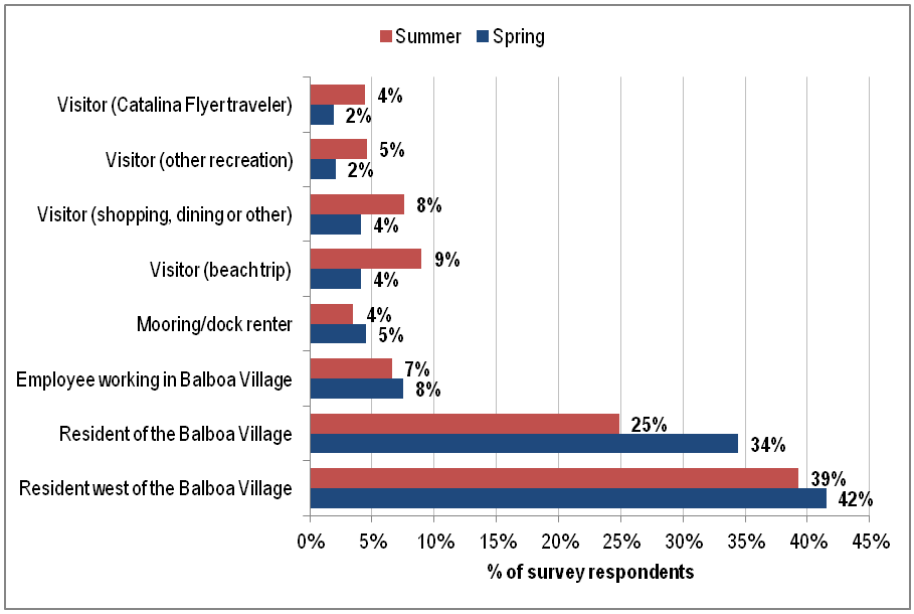
The following section chronicles the results of the windshield survey, beginning with a high level analysis of all of the summer responses combined, as compared to responses collected in the spring. This section also includes a more fine-grained analysis of the summer survey results cross-tabulated by the following respondent types:

- Employees
- Residents (Balboa Village, west of Balboa Village, and mooring/dock renter)
- Visitors (beach trip, Catalina Flyer traveler, shopping/dinning trip, and other)

Combined Results

As shown in Figure 31, the largest portion of summer survey responses came from residents who live west of Balboa Village (39%), followed those who reside within Balboa Village itself (25%). Approximately 7% of survey respondents are employees in the area, while the remaining 26% of respondents identified as one of four types of visitor. In all, a greater mix of visitors responded to the summer survey as compared to the spring survey.

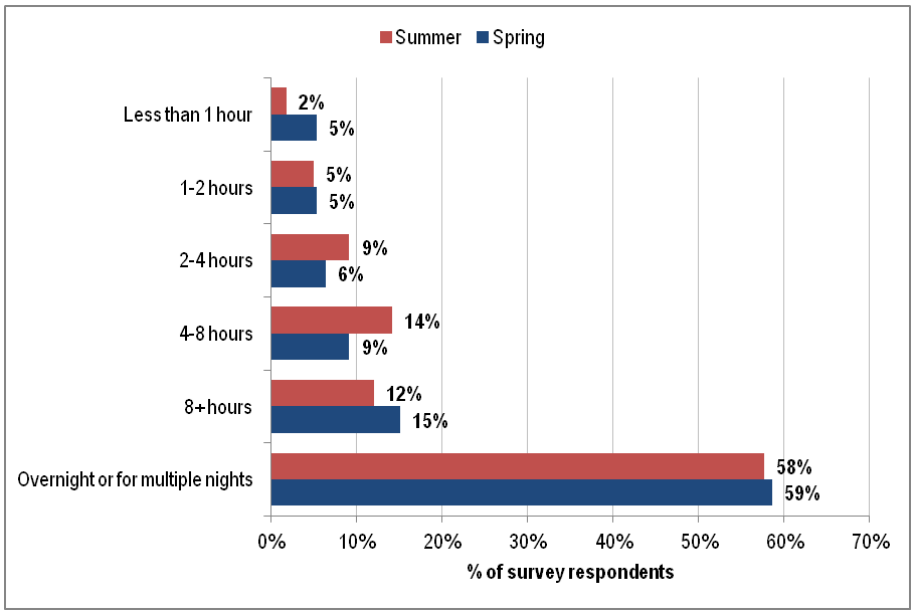
Figure 31 Survey Respondent Type



Number of Respondents (N) = 468 (Spring); 1,083 (Summer)

Most survey respondents were parked on-street overnight or for multiple nights (58%), while 12% reported that they had parked for eight hours. As shown in Figure 32, only 2% of survey respondents parked for less than one hour, 5% between 1 – 2 hours, 9% between 2 – 4 hours, and 9% between 4 – 8 hours. These results roughly mirror the results of the spring collection effort.

Figure 32 Survey Respondent Length of Stay (All Respondents)



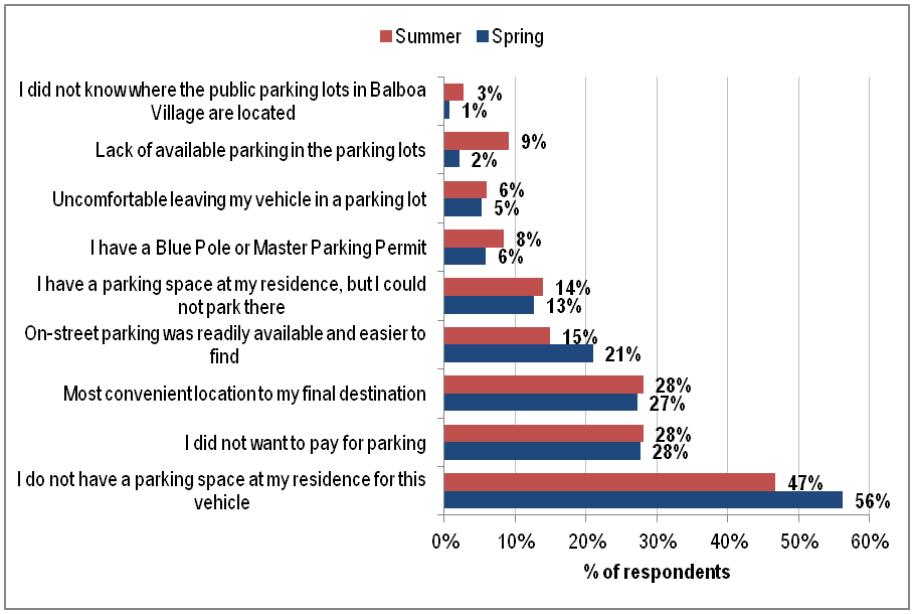
N = 425 (Spring); 1,010 (Summer)

Survey respondents were also asked their reasons for parking on-street in Balboa Village. As shown in Figure 33, the majority of summer respondents (47%) listed not having a parking space at their residence as a reason for doing so, while an additional 28% said they did not want to pay for parking, electing instead to search for a free on-street space. An additional 28% of respondents mentioned that the on-street space was the most convenient one to their destination, while 15% said the on-street parking was the easiest type of parking to find.

A lack of knowledge of lots does not appear to be major concern; only 3% of respondents listed not knowing of off-streets lots as a reason for parking on-street. A total of 14% of survey respondents said that while they have private parking at their residence, they are unable to do so for various reasons. These reasons could potentially include the use of garages for storage space, or households that own more vehicles than private off-street parking spaces.

In all, summer survey responses roughly mirrored those collected in the spring; however, a larger percent of summer respondents listed the lack of available off-street parking as a reason for parking on-street (9% summer, 2% spring), indicating increased utilization of off-street lots during summer months.

Figure 33 Reasons for Parking On-Street, All Respondents



N = 455 (Spring); 1,080 (Summer)

Finally, survey respondents were asked if they were aware of the four main off-street facilities in the study area. As shown in Figure 34, the vast majority of respondents are aware of all of the off-street facilities, but still chose to park on-street. Figures from the summer collection effort were lower for all lots and it is likely that this is due to the larger number of visitors coming to the study area who are less aware of off-street parking options.

Of the facilities, the Balboa Pier lot is the most well-known, while the Palm Street Parking Lot, known by 84% of survey respondents, was the lot that may benefit the most from a wayfinding and/or publicity strategy.

Figure 34 Survey Respondent Awareness of Off-Street Lots (All Respondents)

Lot	Aware of Lot (Spring)	Aware of Lot (Summer)
Balboa Pier Lot	97%	95%
Peninsula Park Parking Lot	91%	86%
Palm Street Parking Lot	90%	84%
Newport Landing Parking Garage	93%	89%

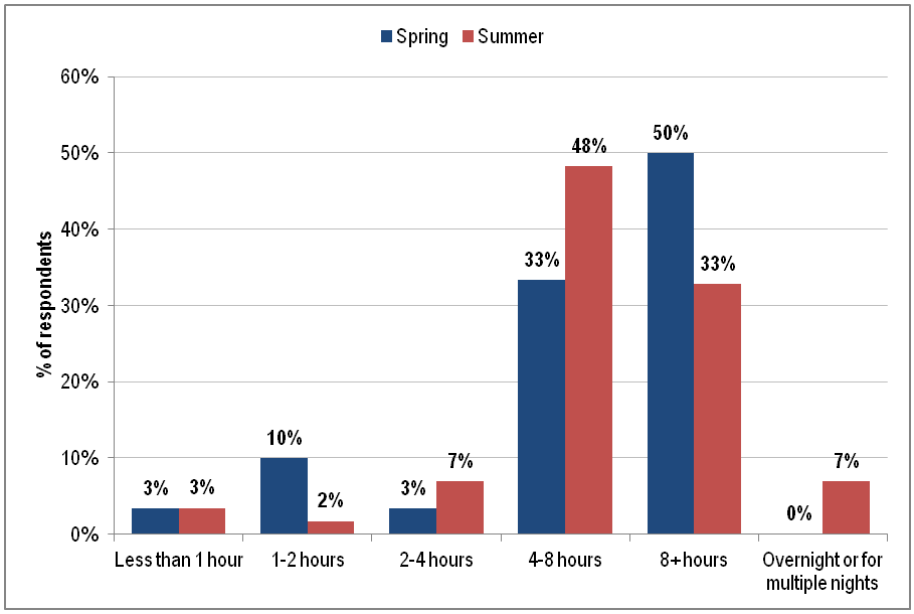
N = 435 (Spring); 1,080 (Summer)

Employees

Survey results were also analyzed by respondent type. As mentioned above, 7% of survey respondents (a total of 71) identified as employees who work in the Balboa Village area. Of these survey respondents, 50% said they would be willing or may be willing to pay a small annual parking fee if it guaranteed them a convenient off-street parking space.

Employees were also asked how long they parked in the on-street space during the survey day. As shown in Figure 35 and as expected for employees, most employees parked for longer periods of time, with 33% of respondents parked for eight hours or more and 48% parked between four to eight hours. As compared to the spring data, it appears employees generally parked for shorter periods of time in the summer, perhaps due to the influx of temporary jobs associated with warm weather activities.

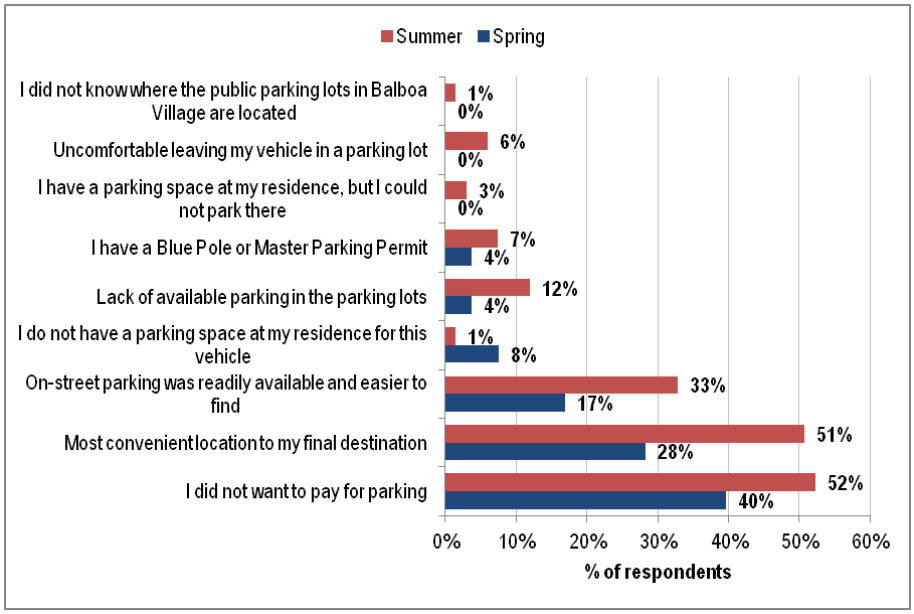
Figure 35 Employee Survey Respondents' Length of Stay



N = 30 (Spring); 58 (Summer)

When asked their reasons for parking on-street, the highest percentage (52%) of employee survey respondents elected "I did not want to pay for parking" as an answer, as shown in Figure 36. Other commonly selected answers included their on-street space being convenient to a final destination, and on-street parking being readily available and easy to find, selected by 51% and 33% of employee respondents, respectively. Comparing the spring and summer data sets, a higher percentage of employees stated that a lack of available parking in off-street lots was one reason they parked on-street, mirroring the occupancy data presented in the previous section of this memorandum.

Figure 36 Employee Survey Respondents' Reason for Parking On-Street



N = 34 (Spring); 67 (Summer)

Residents

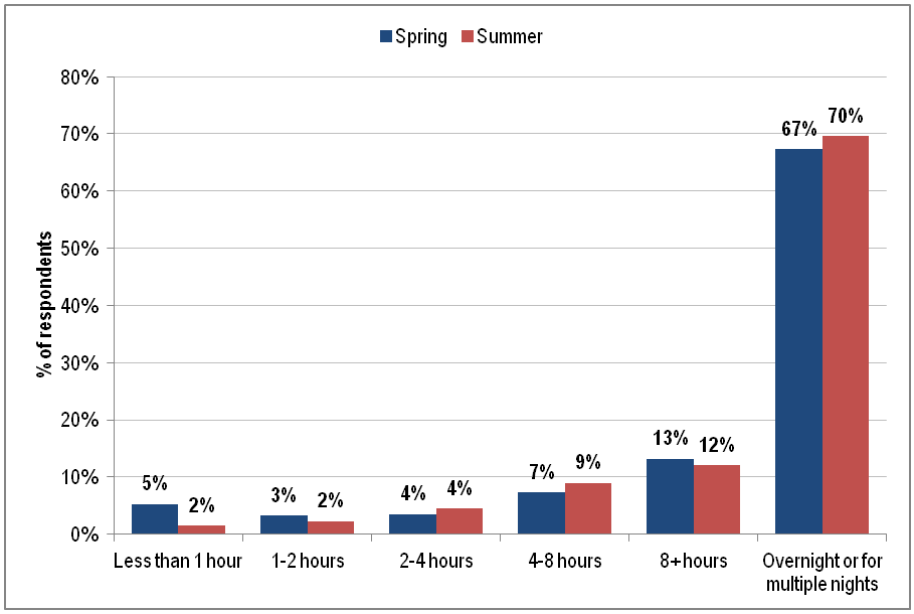
Survey respondents that identified themselves as residents of the area could pick one of three resident categories to further describe their place of residence. These included:

- Resident of Balboa Village
- Resident west of Balboa Village
- Mooring/dock renter[6]

As shown in Figure 37, most resident survey respondents, stayed parked overnight or for multiple nights during the survey period. Approximately 70% of residents parked overnight or for multiple nights. Summer survey respondent length of stay was very similar to spring survey respondent length of stay.

[6] It should be noted that mooring/dock renters are grouped with residents for the purposes of this survey, even though not all of these individuals live on board their boats.

Figure 37 Resident Survey Respondents' Length of Stay



N = 340 (Spring); 666 (Summer))

When asked about their reasons for parking on-street, resident responses did vary somewhat by resident type, as shown in Figure 38. Of respondents who identified as residents of Balboa Village and residents west of Balboa Village, the highest portions (41 and 46%, respectively) chose not having a parking space at their residence as a reason for parking on-street. Conversely, mooring/dock renter survey respondents park on-street for mostly for its convenience (32%).

Figure 38 Resident Survey Respondents' Reason for Parking On-Street

Answer	Resident of Balboa Village	Resident west of Balboa Village	Mooring/dock renter
I do not have a parking space at my residence for this vehicle	41%	46%	17%
I have a parking space at my residence, but I could not park there	13%	6%	19%
Most convenient location to my final destination	13%	14%	32%
Lack of available parking in the parking lots	12%	13%	0%
Uncomfortable leaving my vehicle in a parking lot	8%	5%	16%
I did not want to pay for parking	4%	1%	4%
I did not know where the public parking lots in Balboa Village are located	4%	10%	1%
On-street parking was readily available and easier to find	3%	5%	11%
I have a Blue Pole or Master Parking Permit	2%	0%	0%

N = 442 (resident of Balboa); 648 (resident west of Balboa); 75 (mooring/doc renter)

Visitors

Survey respondents that identified themselves as visitors to the area could pick one of four visitor categories to further describe their reason for coming and parking in the area. These included:

- Beach trip
- Catalina Flyer traveler
- Shopping, dining or other
- Other recreation

As shown in Figure 39, visitor length of stay varied by visitor type. Catalina Flyer travelers, as should be expected, all stayed parked for four hours or more (most—75%-- parked overnight). Those visiting Balboa Village as part of a beach trip exhibited a more varied length of stay distribution, with 25% parking between 2 and 4 hours, 27% between 4 and 8, and 26% staying overnight or for multiple nights. Those coming to Balboa Village for a shipping or dining trip typically stayed for much shorter periods of time, with 52% of shopping/dining visitors responding that they stayed parked for less than four hours.

Figure 39 Visitor Survey Respondents' Length of Stay

Time Parked	Visitor (beach)	Visitor (Catalina Flyer)	Visitor (shopping, dining, etc.)	Visitor (other)
Less than 1 hour	4%	0%	4%	0%
1-2 hours	14%	0%	16%	8%
2-4 hours	25%	0%	32%	10%
4-8 hours	27%	6%	20%	10%
8+ hours	4%	19%	8%	4%
Overnight or for multiple nights	26%	75%	20%	67%

N = 96 (beach trip); 48 (Catalina Flyer traveler); 79 (shopping/dinning trip); 49 (other recreation)

As shown in Figure 40, beach trip visitors most often cited not wanting to pay for parking (31%), on-street parking being the most convenient to their final destination (22%), and on-street parking being readily available (19%) as their reasons for parking on-street. Conversely, Catalina Flyer travelers seem to be mostly influenced by on-street parking being free of charge, as 58% of Catalina Flyer traveler respondents cite not wanting to pay for parking as their reason for parking on-street. Visitors who came to Balboa Village for shopping and/or dinning parked on-street because of its convenience (28%), it being free of charge (23%), and off-street lots being full (18%).

Figure 40 Visitor Survey Respondents' Reason for Parking On-Street

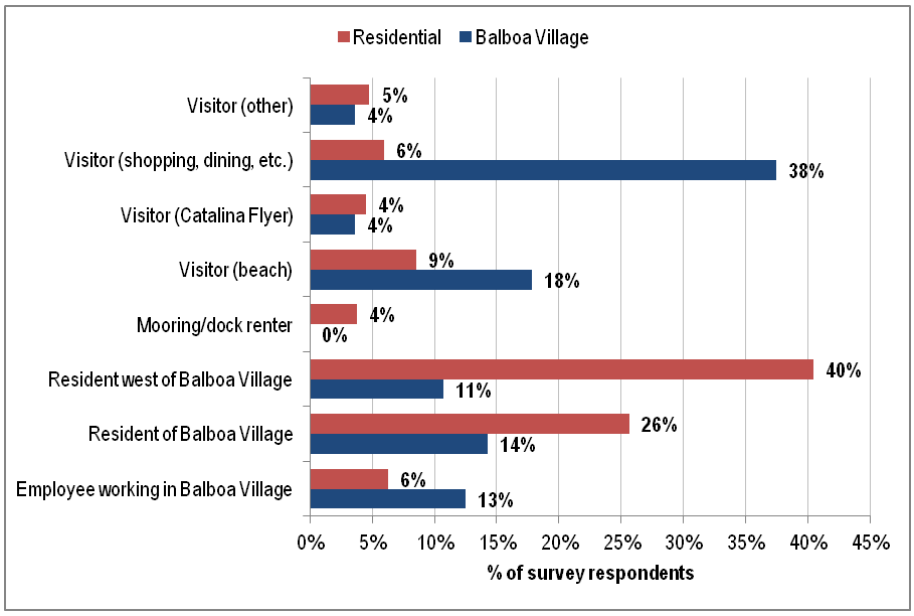
Answer	Visitor (beach)	Visitor (Catalina Flyer)	Visitor (shopping, dining, etc.)	Visitor (other)
I do not have a parking space at my residence for this vehicle	3%	1%	3%	1%
I have a parking space at my residence, but I could not park there	3%	0%	3%	3%
Most convenient location to my final destination	22%	9%	28%	23%
Lack of available parking in the parking lots	17%	12%	18%	10%
Uncomfortable leaving my vehicle in a parking lot	1%	3%	2%	1%
I did not want to pay for parking	31%	58%	23%	48%
I did not know where the public parking lots in Balboa Village are located	5%	6%	5%	3%
On-street parking was readily available and easier to find	19%	7%	14%	10%
I have a Blue Pole or Master Parking Permit	0%	3%	3%	0%

N = 146 (beach trip); 67 (Catalina Flyer traveler); 116 (shopping/dinning trip); 77 (other recreation)

Survey Responses by Sub-Area

Comparing the two study sub-areas, survey responses collected in the Balboa Village sub-area mostly identified as non-residents (77%), whereas those collected in the residential sub-area mostly identified as residents (70%). Figure 41 shows the distribution of respondent type by sub-area.

Figure 41 Survey Respondent Type by Sub-Area



N = 56 (Balboa Village); 1,017 (Residential)

Length of stay also varied by sub-area; as shown in Figure 42, more than half of all responses collected in the Balboa Village sub-area (68%) represented vehicles that were parked for four hours or less. Conversely, in the residential sub-area, a majority of respondents stayed parked for 8 hours or more (72%).

Figure 42 Survey Respondent Length of Stay by Sub-Area

Time Parked	Balboa Village	Residential
Less than 1 hour	13%	1%
1-2 hours	30%	3%
2-4 hours	25%	8%
4-8 hours	9%	15%
8+ hours	8%	12%
Overnight or for multiple nights	15%	60%

N = 53 (Balboa Village); 947 (Residential)

Finally, reasons reported for parking on-street also varied somewhat by sub-area. In Balboa Village, convenience (26%), availability (20%), and permits (15%) were the most popular responses. In the residential sub-area, a lack of parking at residence (31%), free on-street parking (19%), and convenience (17%) were the most popular responses. Figure 43 shows all reported reasons for parking on-street by sub-area.

Figure 43 Survey Respondent Reasons for Parking On-Street by Sub-Area

Answer	Balboa Village	Residential
I do not have a parking space at my residence for this vehicle	5%	31%
I have a parking space at my residence, but I could not park there	6%	9%
Most convenient location to my final destination	26%	17%
Lack of available parking in the parking lots	14%	5%
Uncomfortable leaving my vehicle in a parking lot	2%	4%
I did not want to pay for parking	6%	19%
I did not know where the public parking lots in Balboa Village are located	6%	2%
On-street parking was readily available and easier to find	20%	9%
I have a Blue Pole or Master Parking Permit	15%	5%

N = 56 (Balboa Village); 1,612 (Residential)

Key Findings

The windshield survey effort yielded the following key findings:

1. **Residents represent a significant portion of the parking demand in Balboa Village, though the number of visitors increases in the summer months**. The largest portion of survey responses came from residents who live west of Balboa Village (39%), followed those who reside within Balboa Village itself (25%). Approximately 7% of survey respondents are employees in the area, while the remaining 26% of respondents identified as one of four types of visitor (much higher than the spring survey, when only 12% of respondents identified as a visitor). While it may very well be that residents were more inclined to fill out and return the surveys than visitors and/or employees, it is clear that many residents are parking on-street.
2. **A significant portion of the on-street parking supply in Balboa Village is used for longer term parking**. Most survey respondents were parked on-street overnight or for multiple nights (58%), while 12% reported that they had parked for eight hours. This held true across all respondent types: employees, residents, and visitors (except for visitors coming for shopping/dinning and to frequent the beach). These figures are roughly equivalent to spring results, when 59% of respondents parked overnight and 15% parked for eight hours.
3. **Most are aware of the public off-street facilities in Balboa Village, but still choose to park on-street**. Over 84% of survey respondents were aware of all public off-street facilities in the area. This is slightly lower than spring results (90%), indicating that increased visitation means more parkers are unaware of off-street options and would therefore benefit from a system of parking wayfinding.
4. **The general availability of free on-street parking seems to encourage high levels of on-street demand**. Approximately 28% of survey respondents said they did not want to pay for parking, electing instead to search for a free on-street space. Approximately 28% of respondents mentioned that the on-street space was the most convenient one to their destination, while 15% said the on-street parking was the easiest type of parking to find.
5. **A significant portion of resident survey respondents state that they do not have sufficient off-street parking to store their vehicle(s)**. Approximately 41% of residents in the study area either do not have access to private off-street parking or do not possess an adequate number of spaces. It is unclear whether that lack of parking is due to physical limitations or whether residents are using their garages or driveways for other purposes.

Comment [b2]: Confifm what we mean by this

6. **Summer employees of Balboa Village seem less open to the idea of an Employee Permit Program**. A total of 50% of employee survey respondents said they would be willing or might be willing to pay a small annual parking fee if it guaranteed them a convenient off-street parking space, while 50% said they would not be willing. This differs from the spring, when 77% said they would or might be willing to pay a fee.
7. **Catalina Flyer Visitors represent the visitor type with the longest length of stay**. Most stayed parked either for 8+ hours (19%), or overnight/multiple nights (75%).

APPENDIX A

Parking Occupancy Maps

Figure 44 Study Area Occupancy, Thursday 8 AM to 10 AM (June)

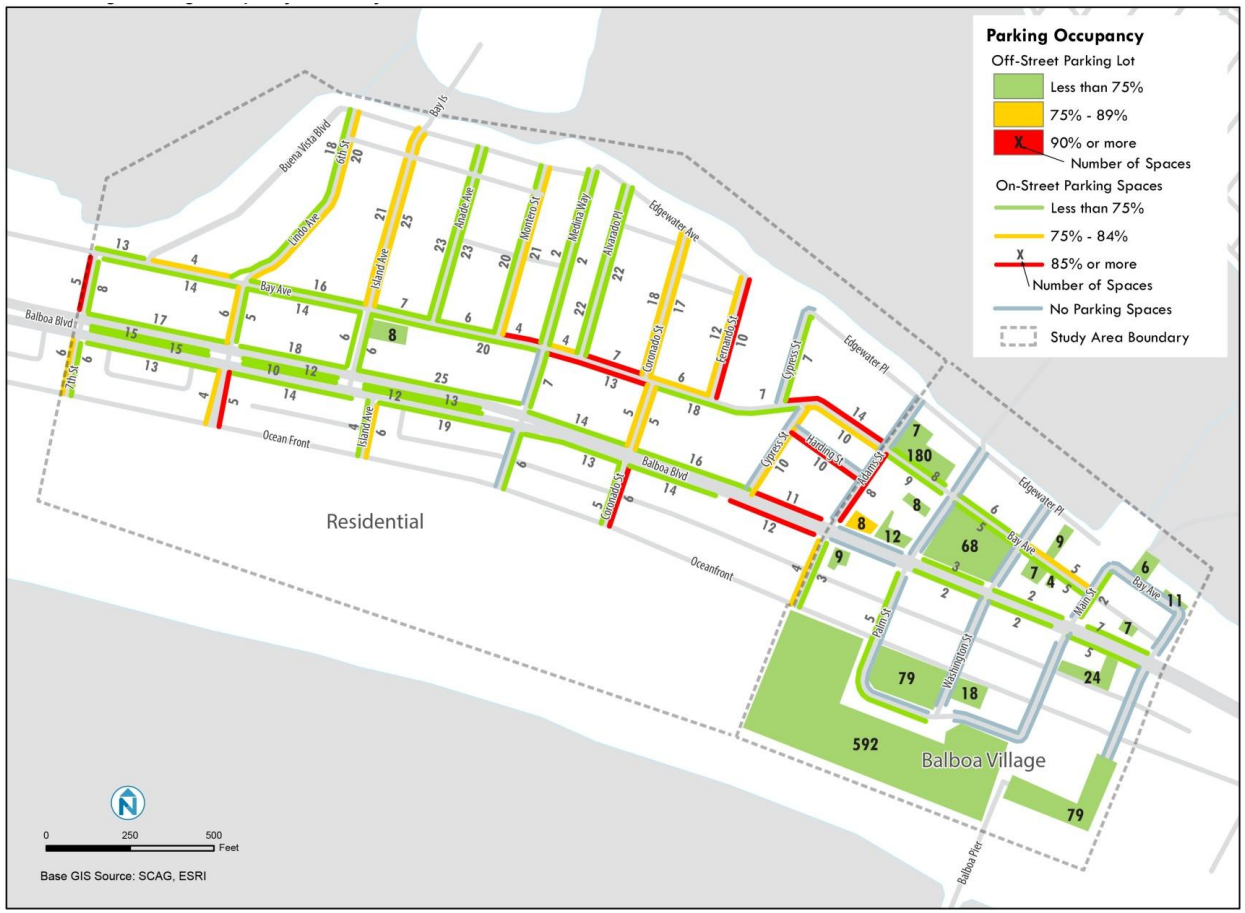


Figure 45 Study Area Occupancy, Thursday 10 AM to 12 PM (June)

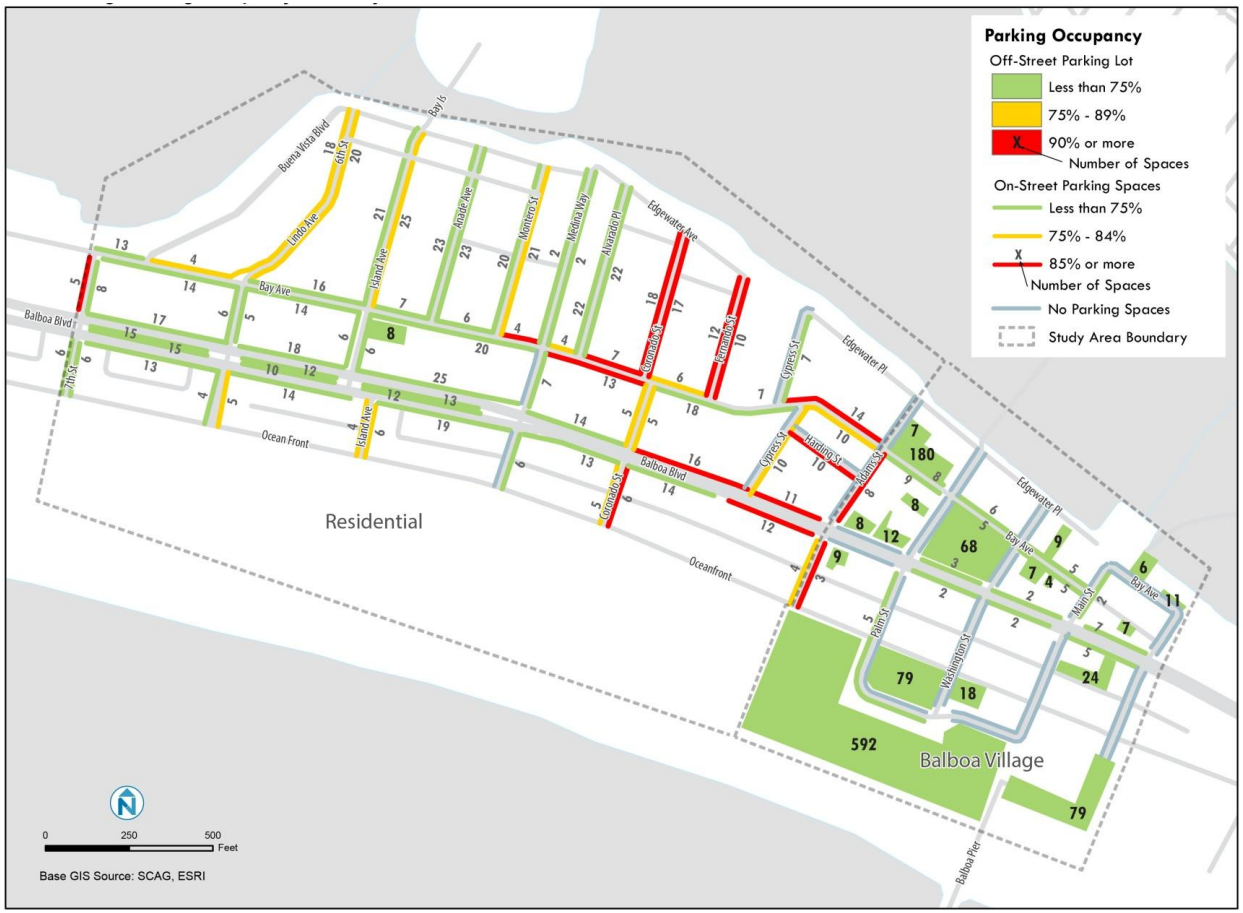


Figure 46 Study Area Occupancy, Thursday 12 PM to 2 PM (June)

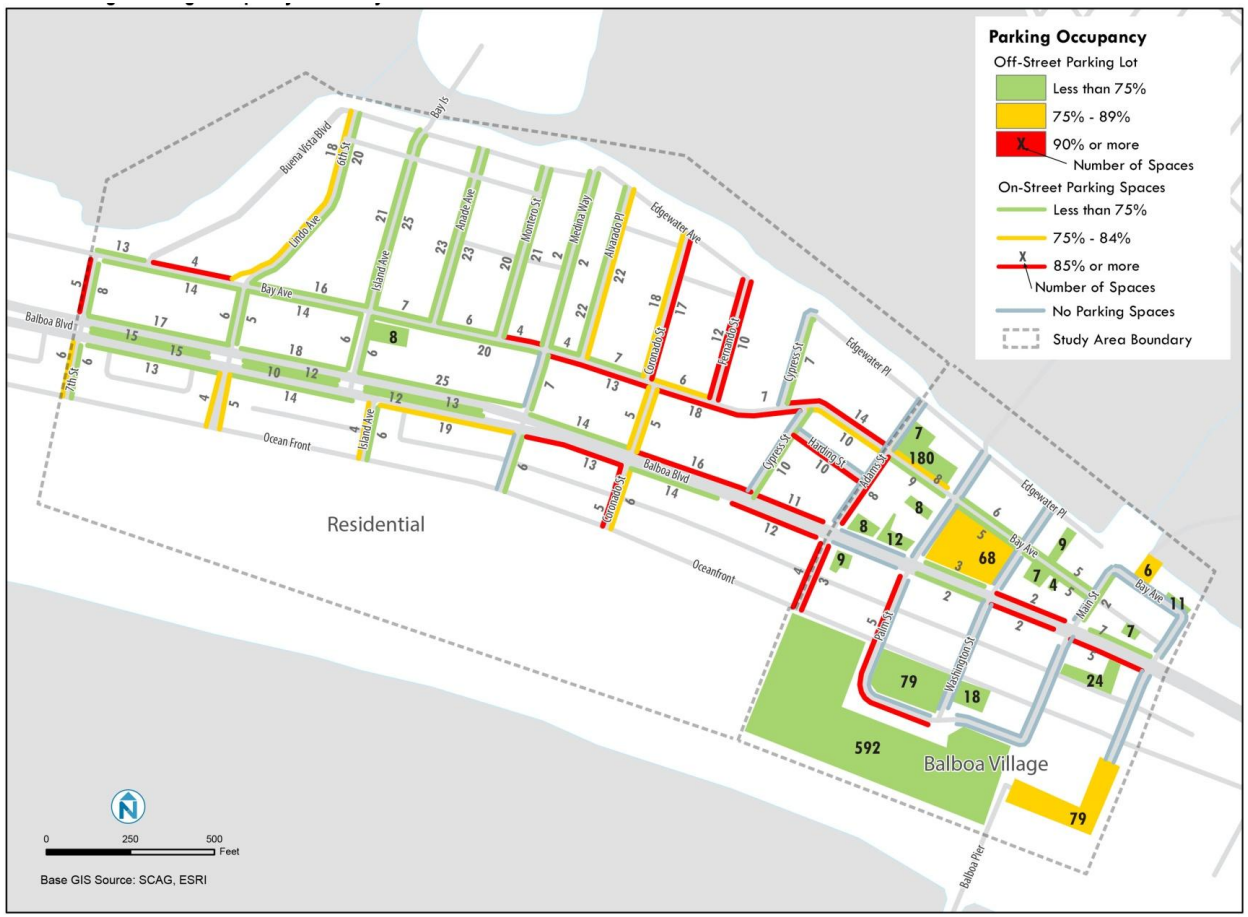


Figure 47 Study Area Occupancy, Thursday 2 PM to 4 PM (June)

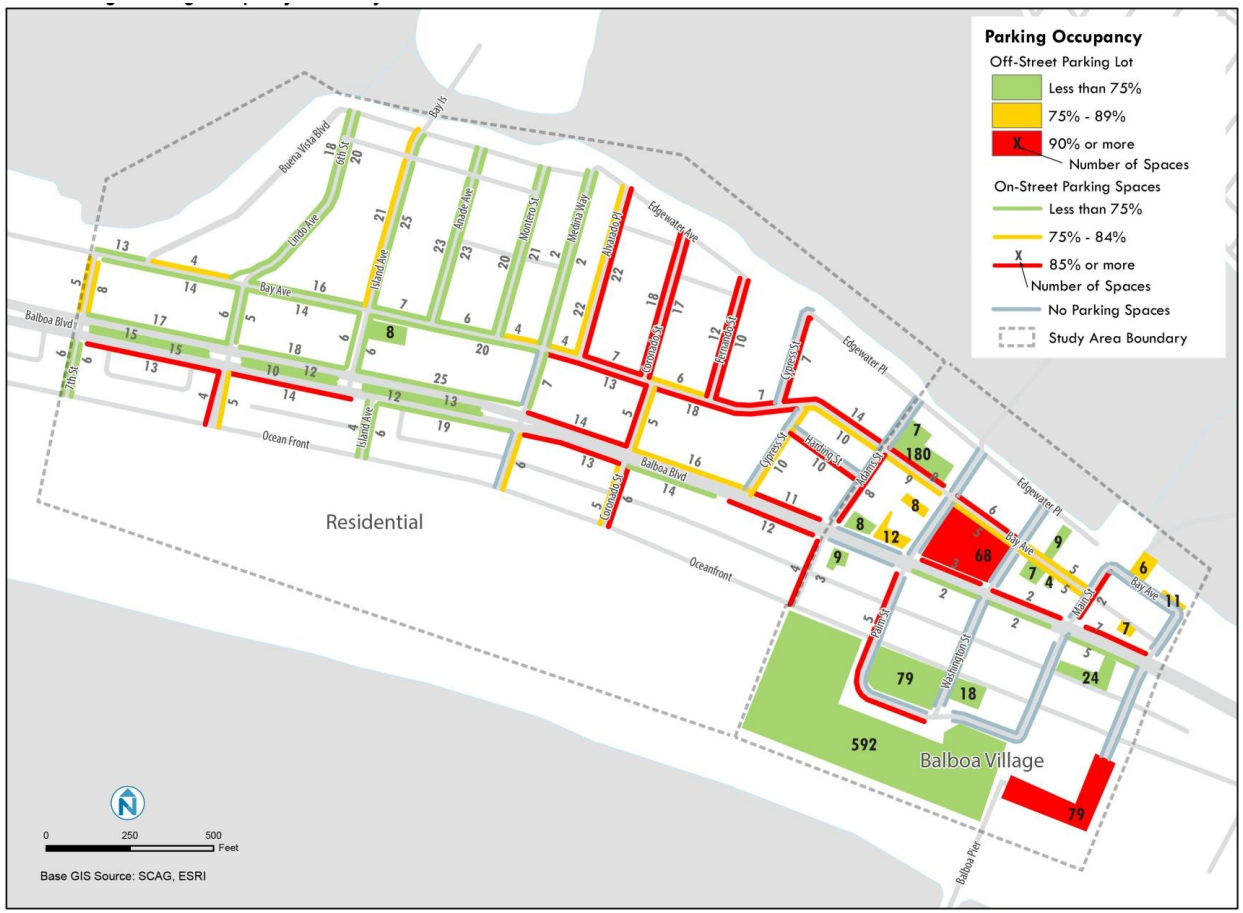


Figure 48 Study Area Occupancy, Thursday 4 PM to 6 PM (June)

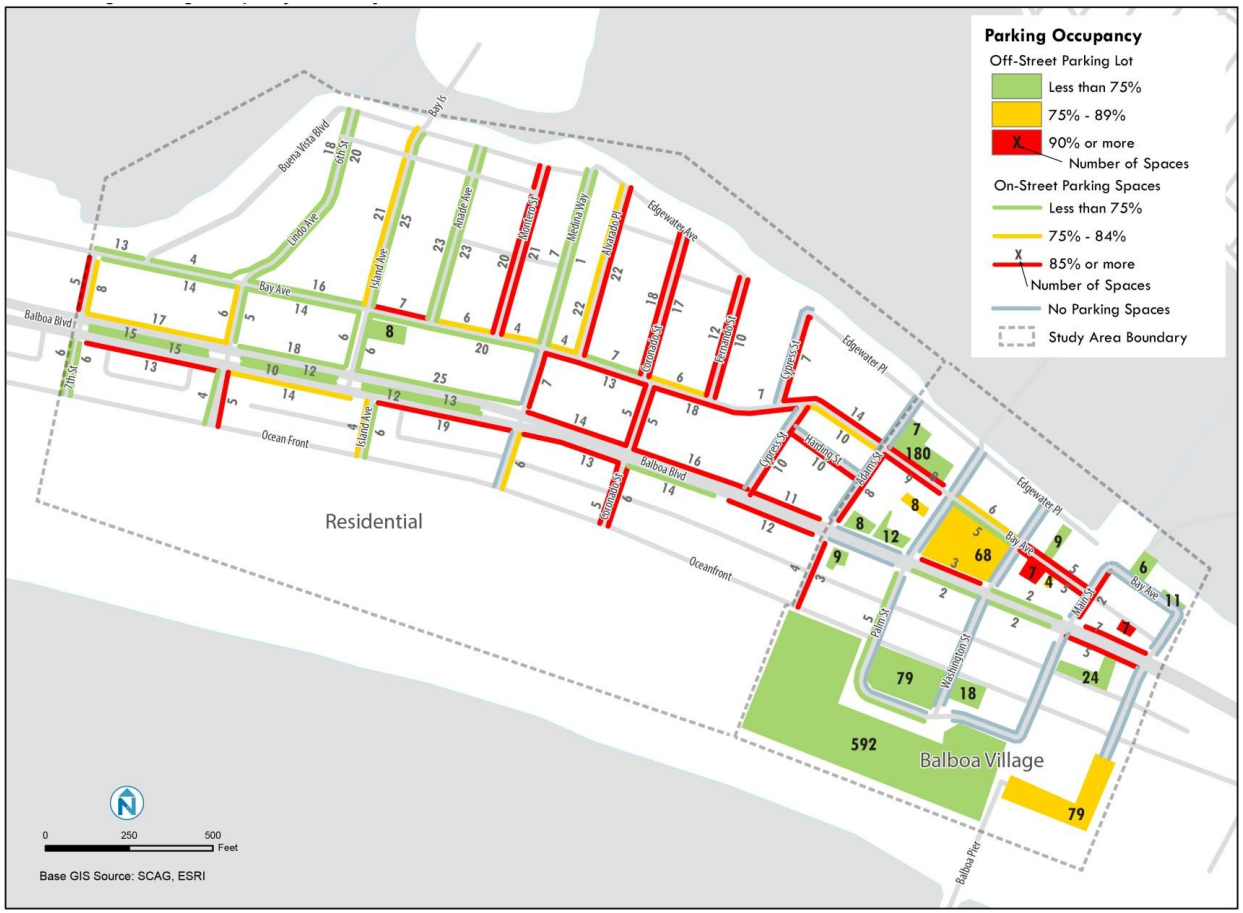


Figure 49 Study Area Occupancy, Thursday 6 PM to 8 PM (June)

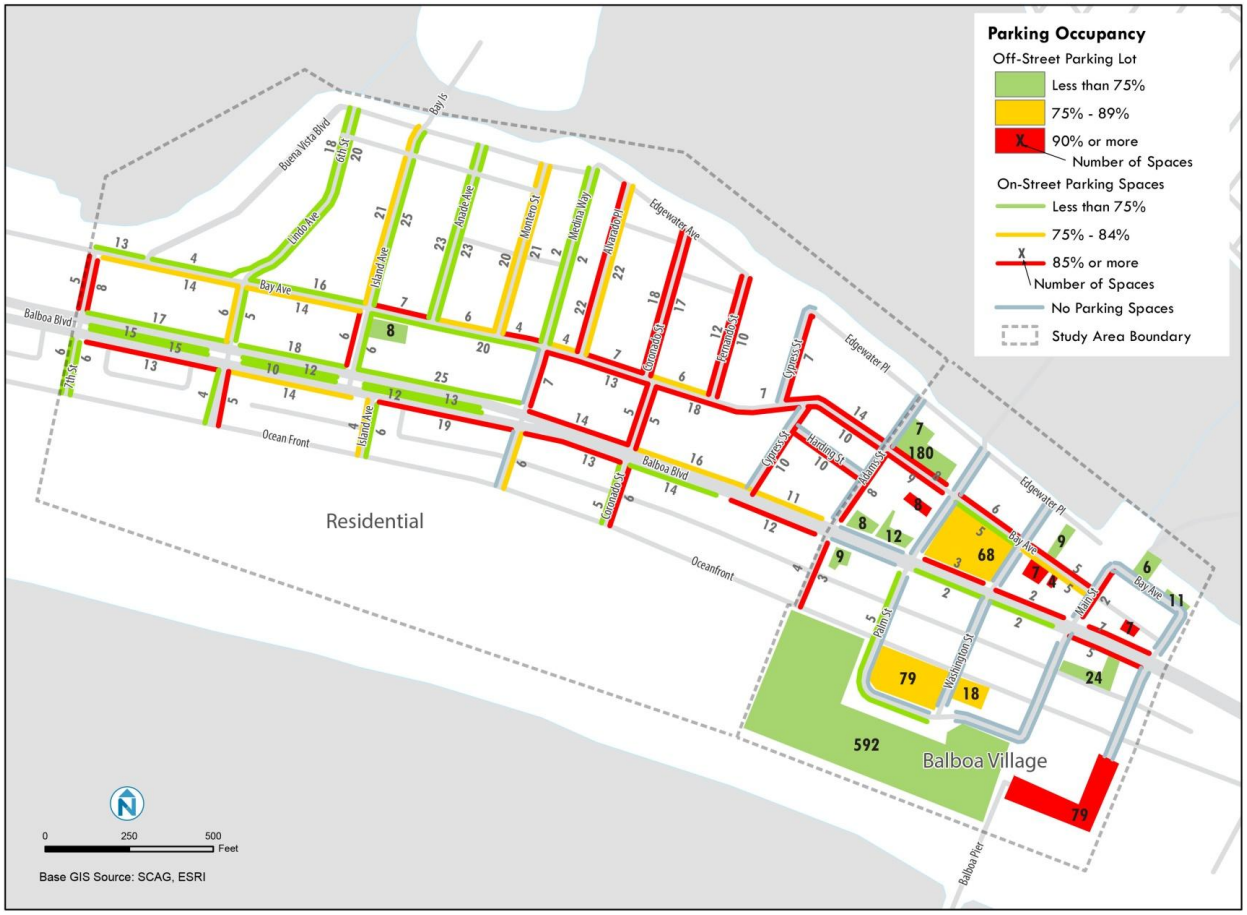


Figure 50 Study Area Occupancy, Thursday 9 PM to 11 PM (June)

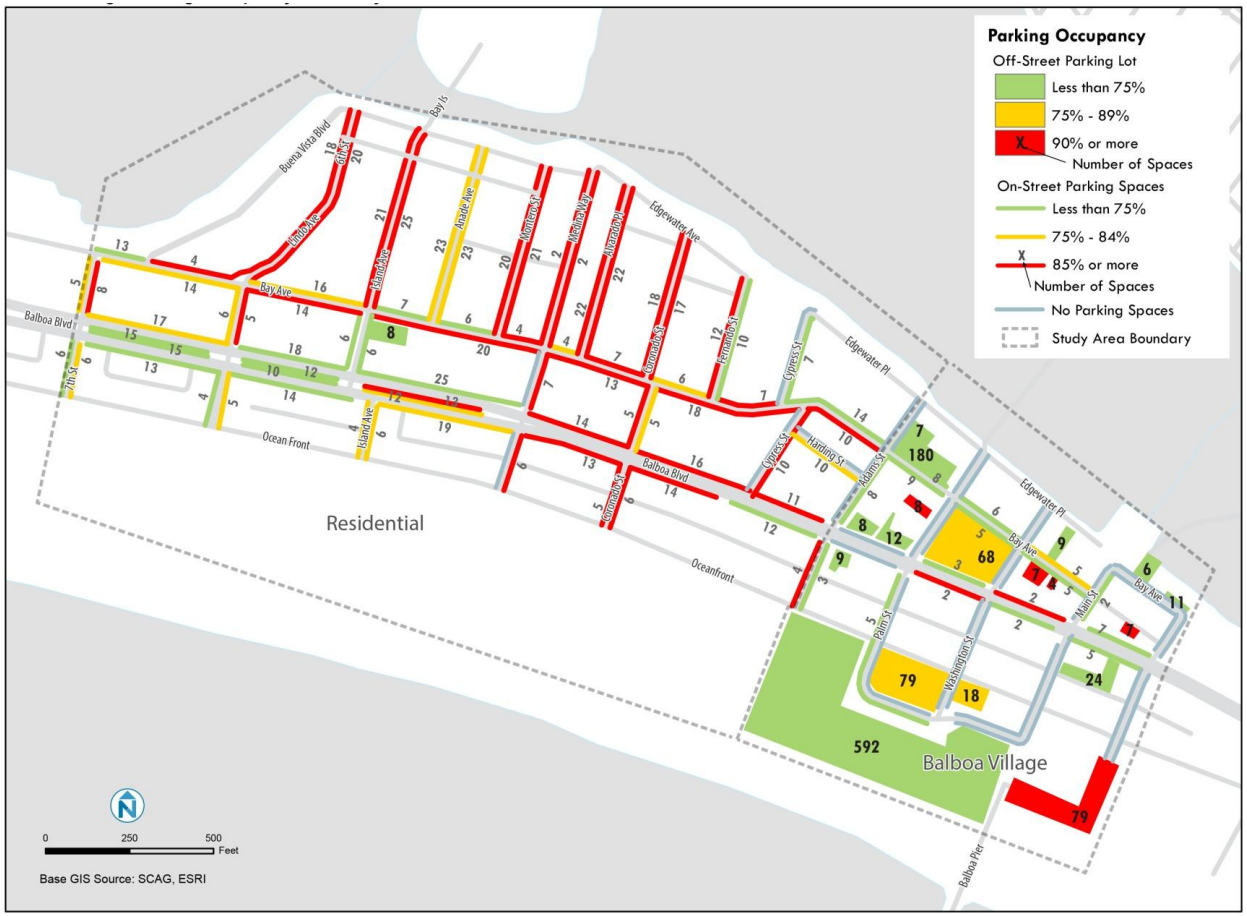


Figure 51 Study Area Occupancy, Saturday 8 AM to 10 AM (June)

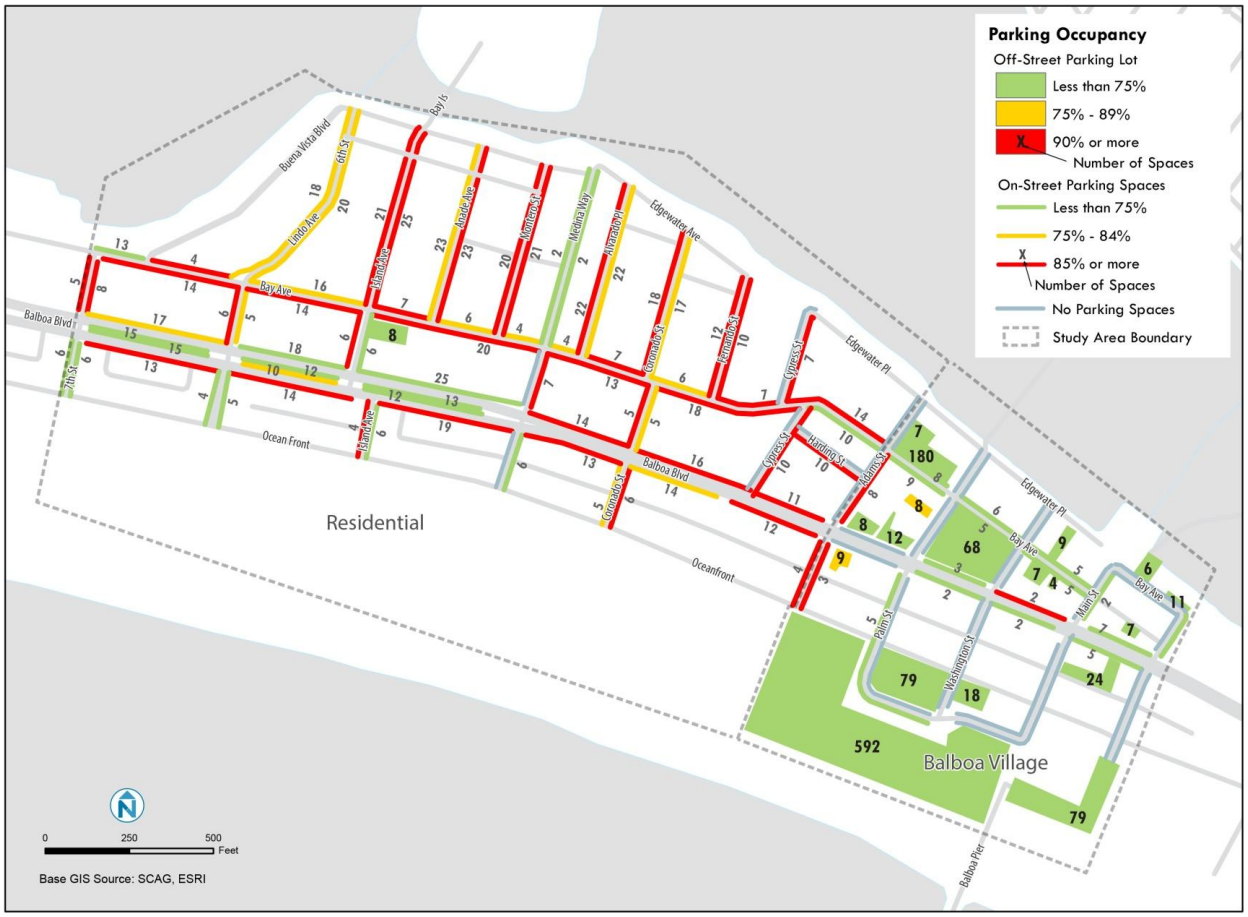


Figure 52 Study Area Occupancy, Saturday 10 AM to 12 PM (June)

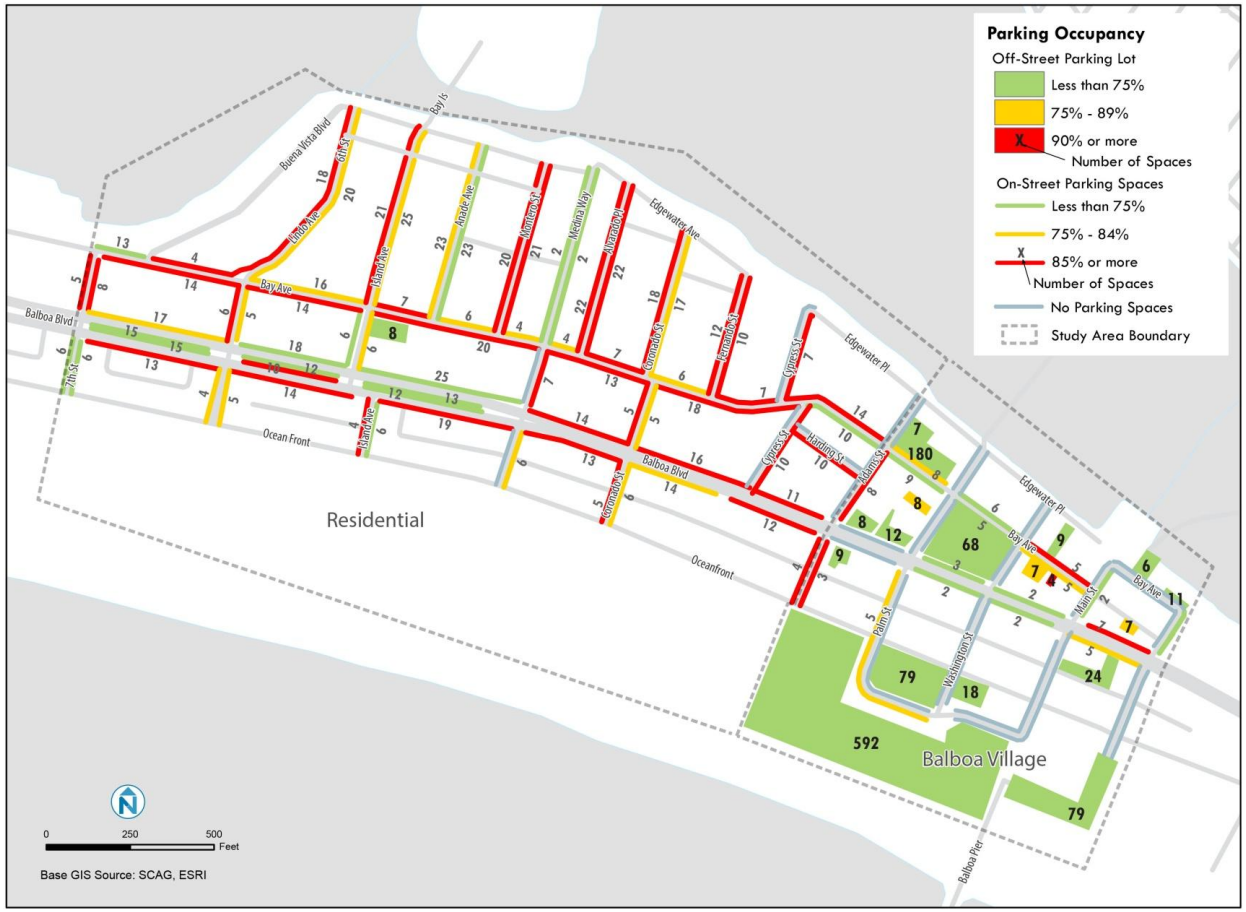


Figure 53 Study Area Occupancy, Saturday 12 PM to 2 PM (June)

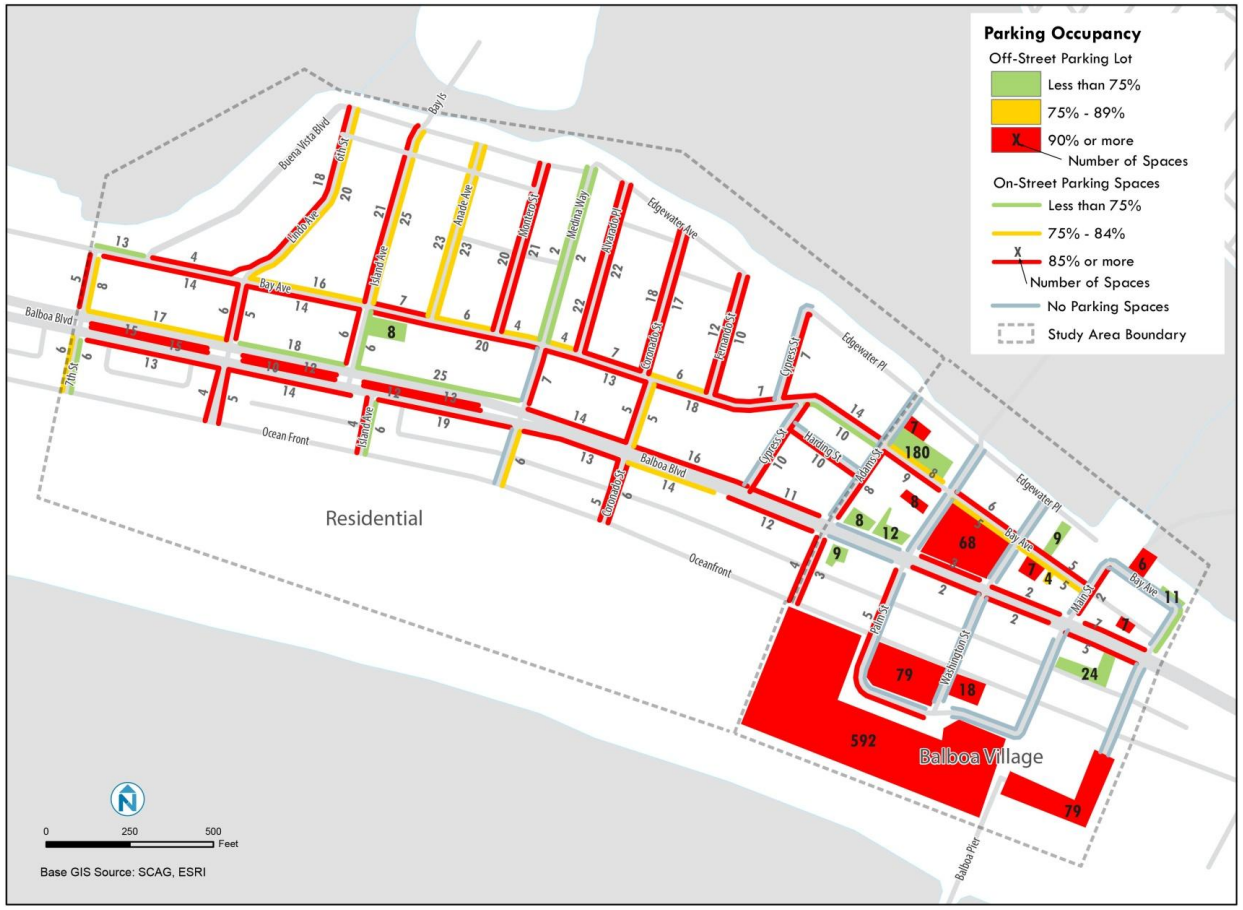


Figure 54 Study Area Occupancy, Saturday 2 PM to 4 PM (June)

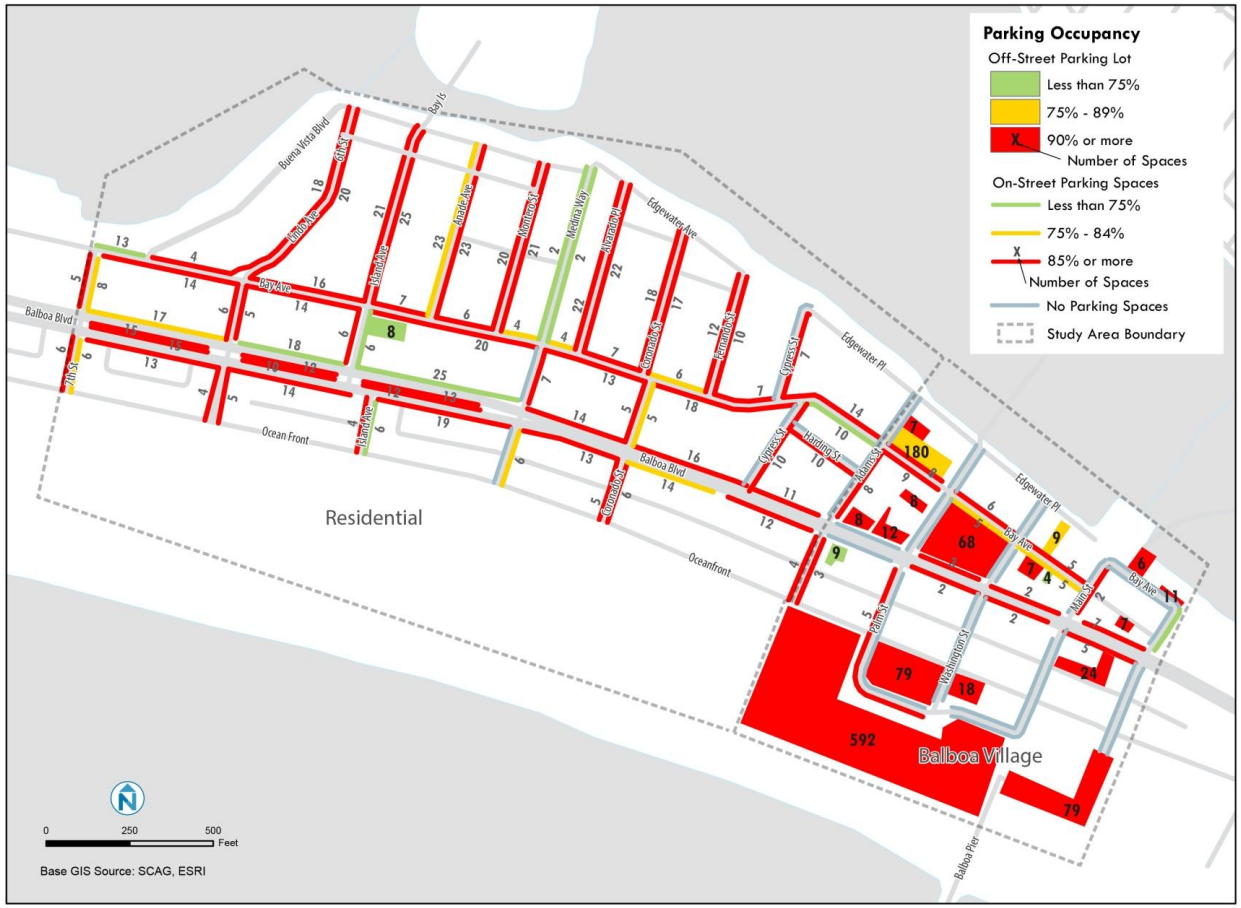


Figure 55 Study Area Occupancy, Saturday 4 PM to 6 PM (June)

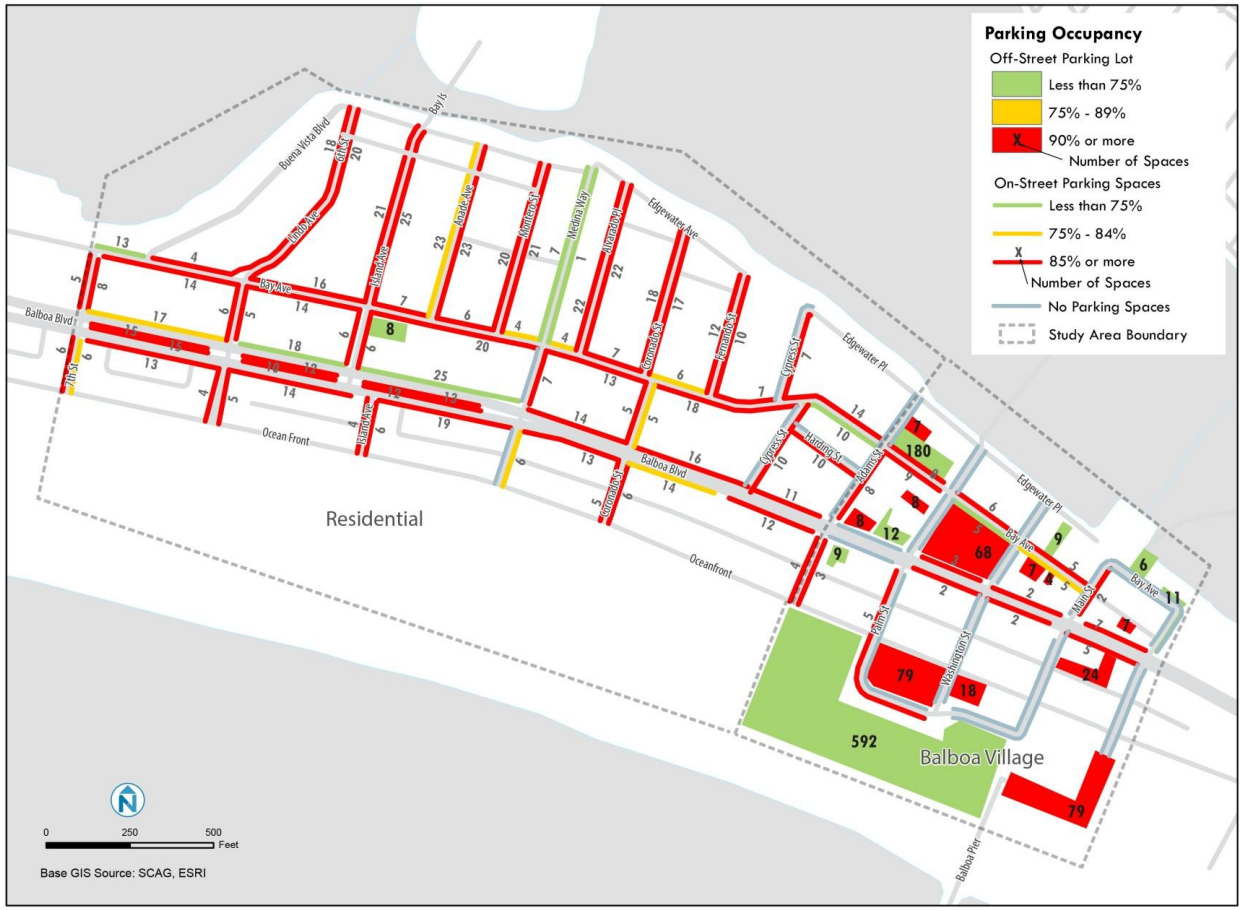


Figure 56 Study Area Occupancy, Saturday 6 PM to 8 PM (June)

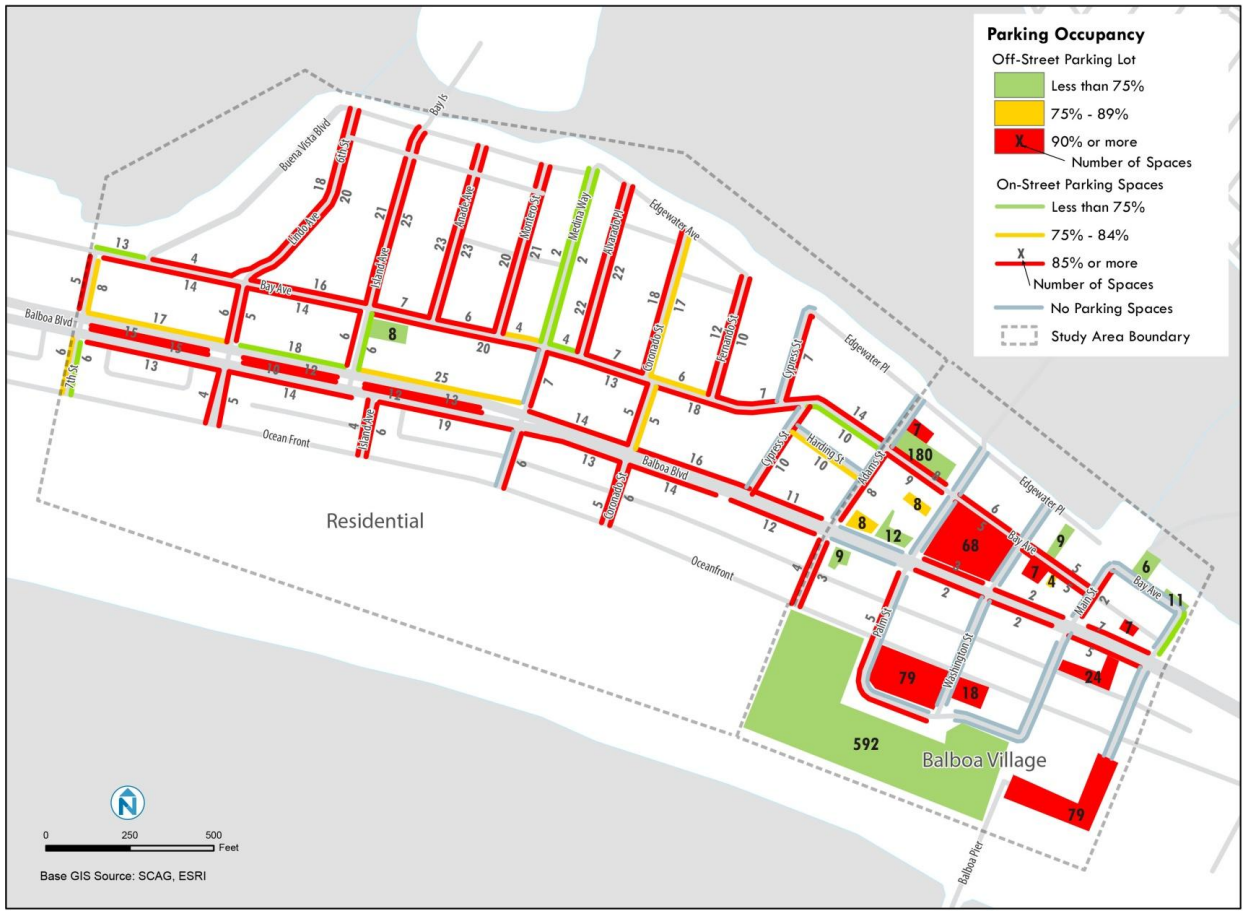


Figure 57 Study Area Occupancy, Thursday 8 AM to 10 AM (July)

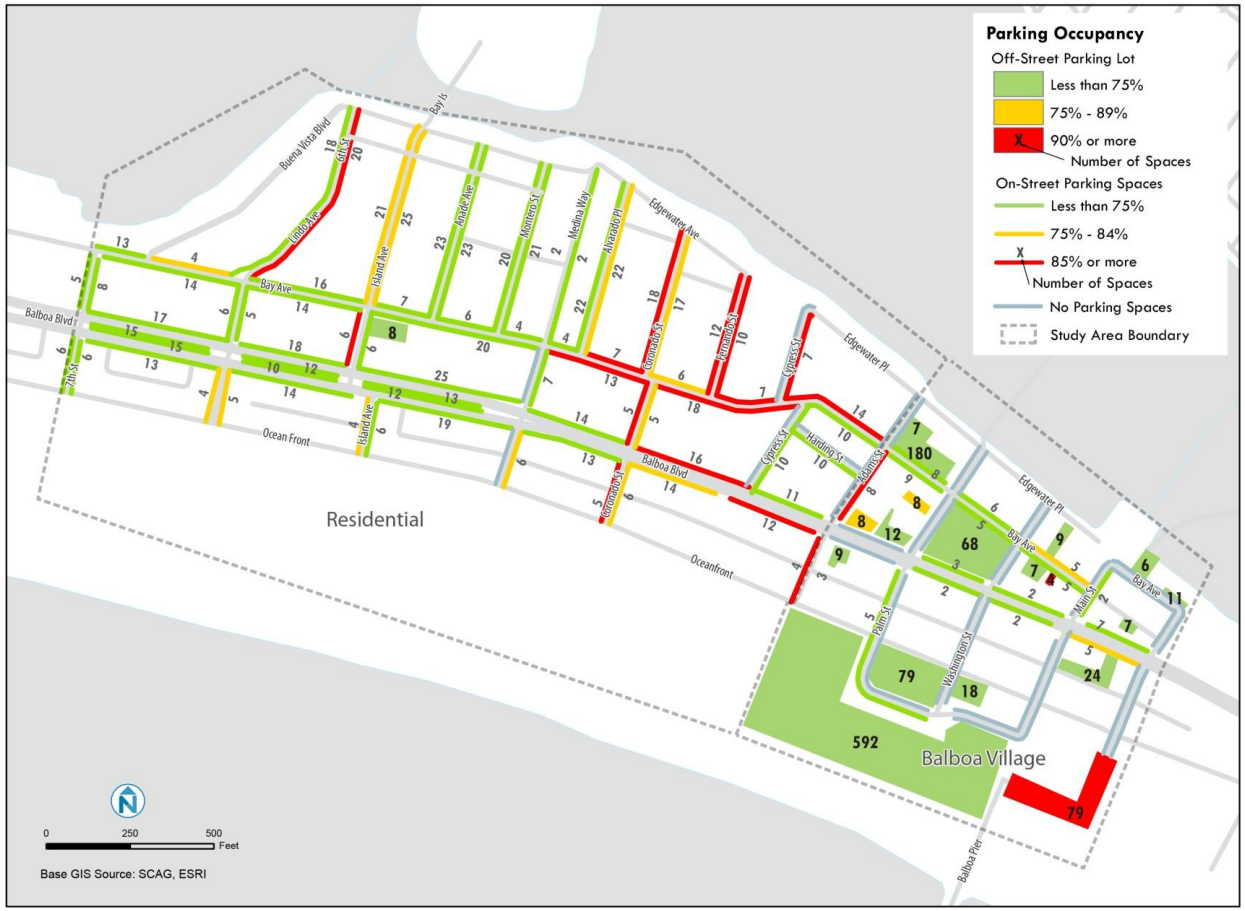


Figure 58 Study Area Occupancy, Thursday 10 AM to 12 PM (July)

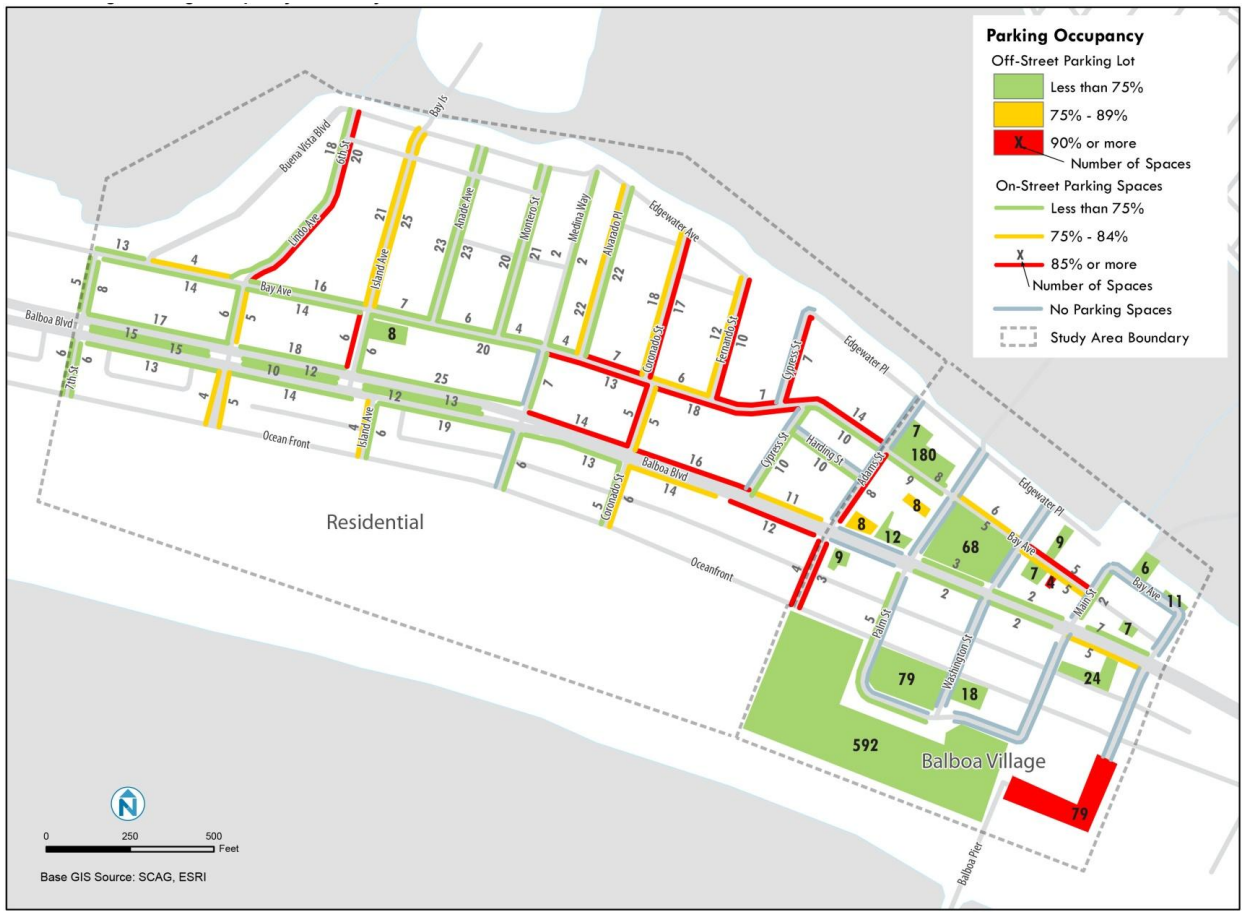


Figure 59 Study Area Occupancy, Thursday 12 PM to 2 PM (July)

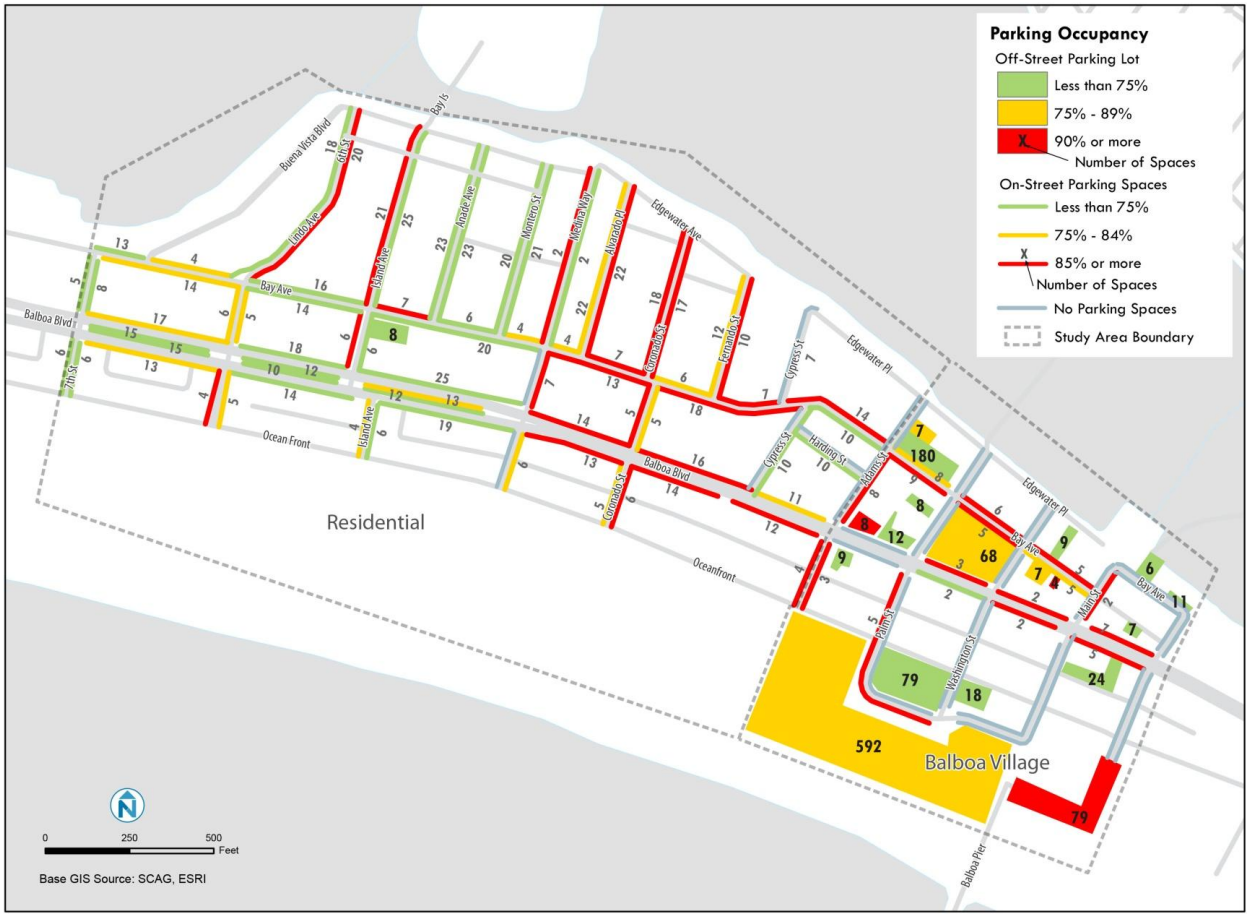


Figure 60 Study Area Occupancy, Thursday 2 PM to 4 PM (July)

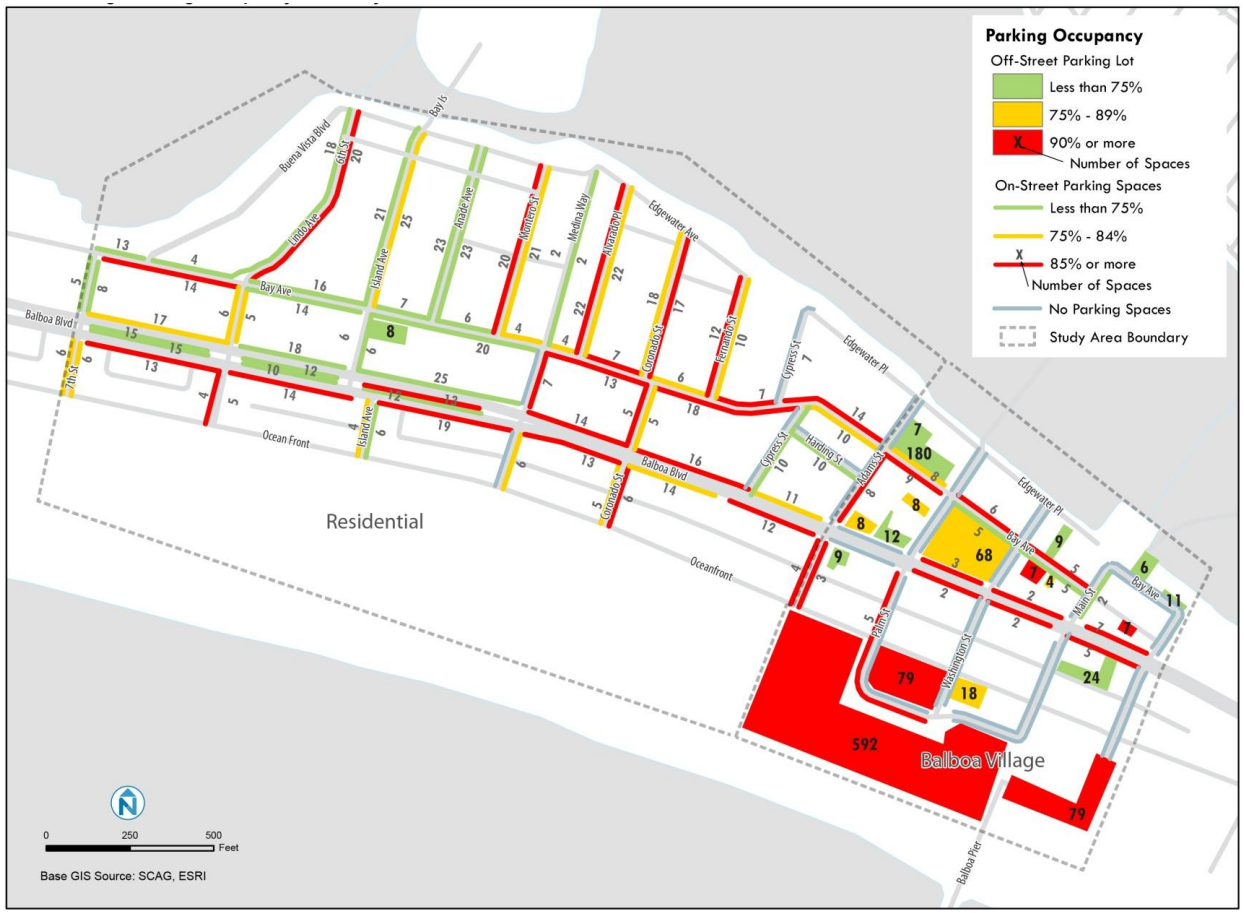


Figure 61 Study Area Occupancy, Thursday 4 PM to 6 PM (July)

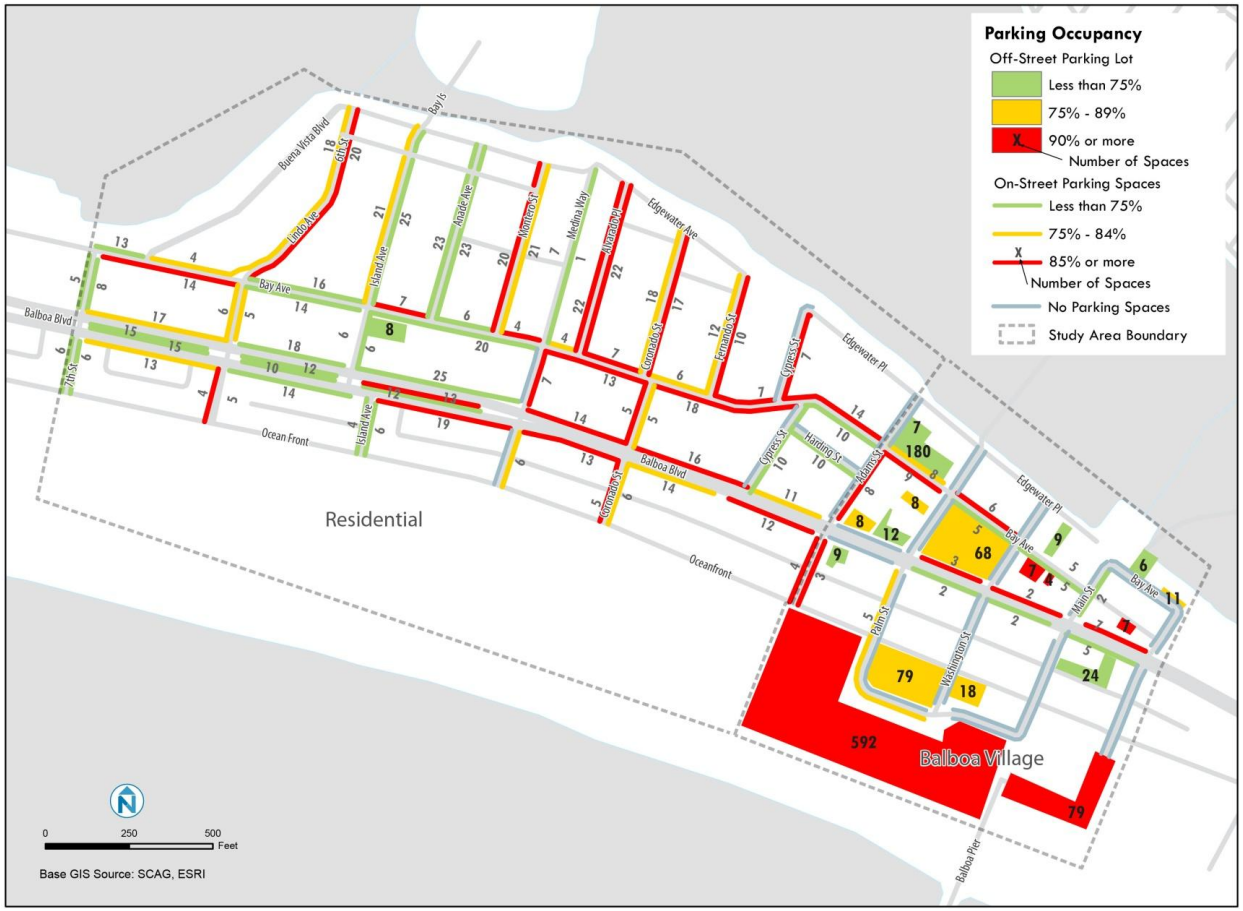


Figure 62 Study Area Occupancy, Thursday 6 PM to 8 PM (July)

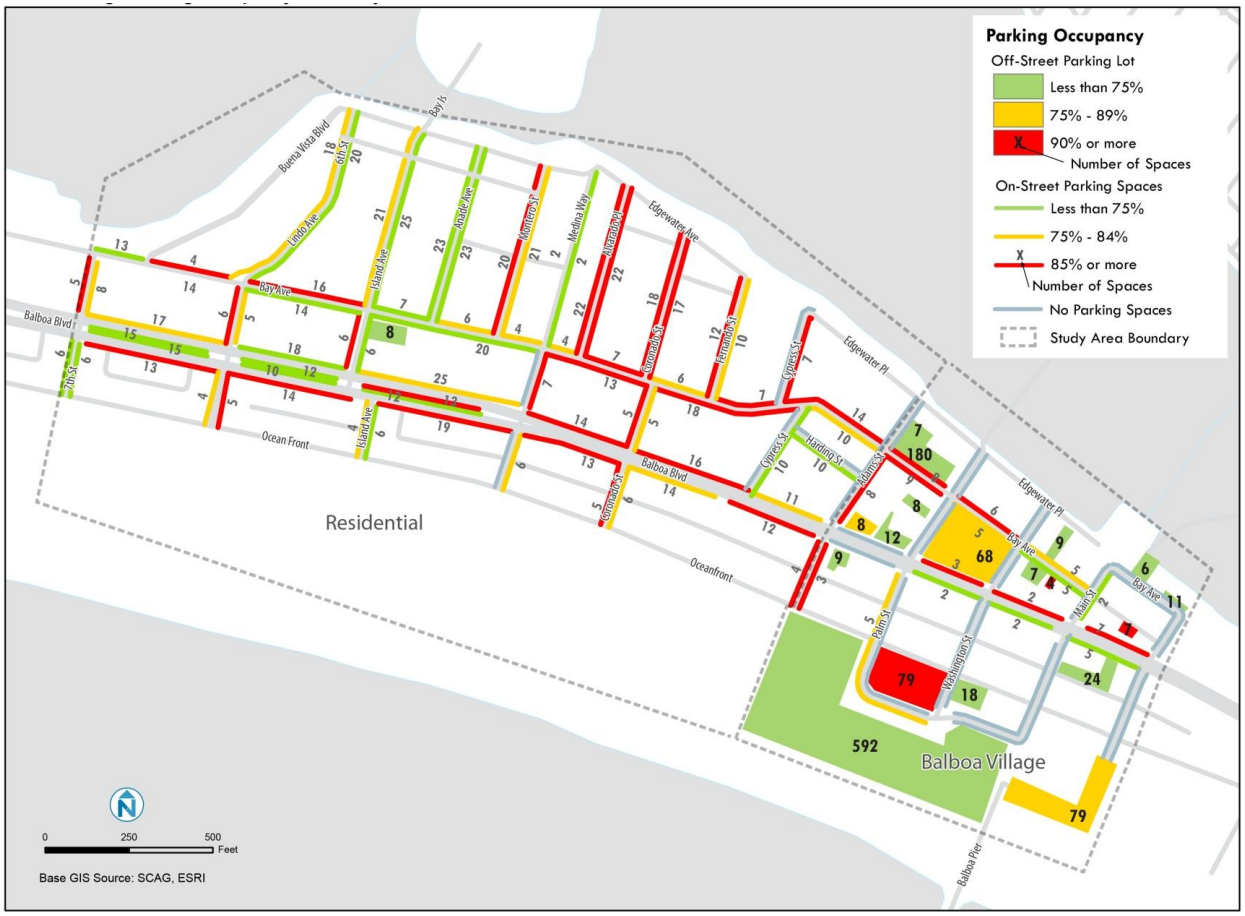


Figure 63 Study Area Occupancy, Thursday 9 PM to 11 PM (July)

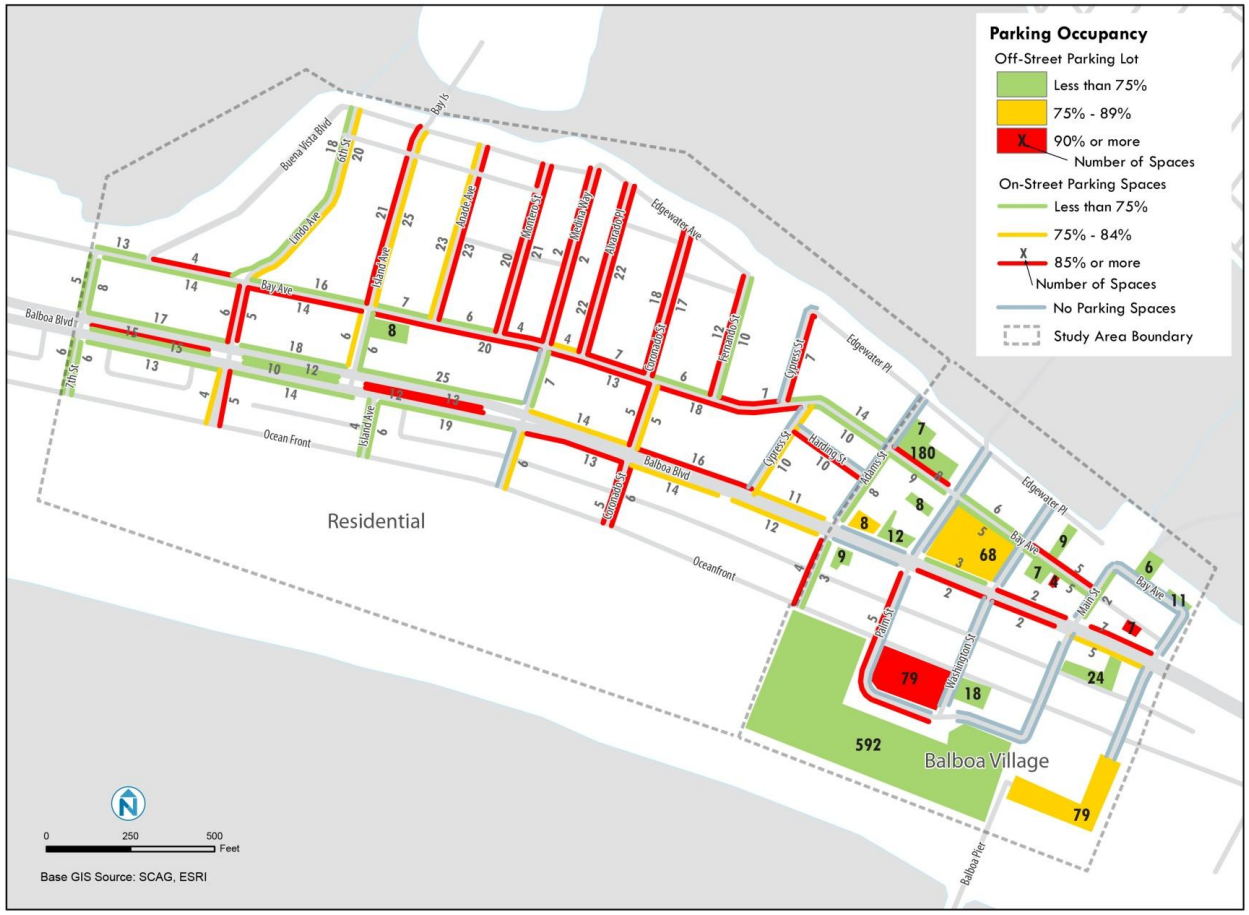


Figure 64 Study Area Occupancy, Saturday 8 AM to 10 AM (July)

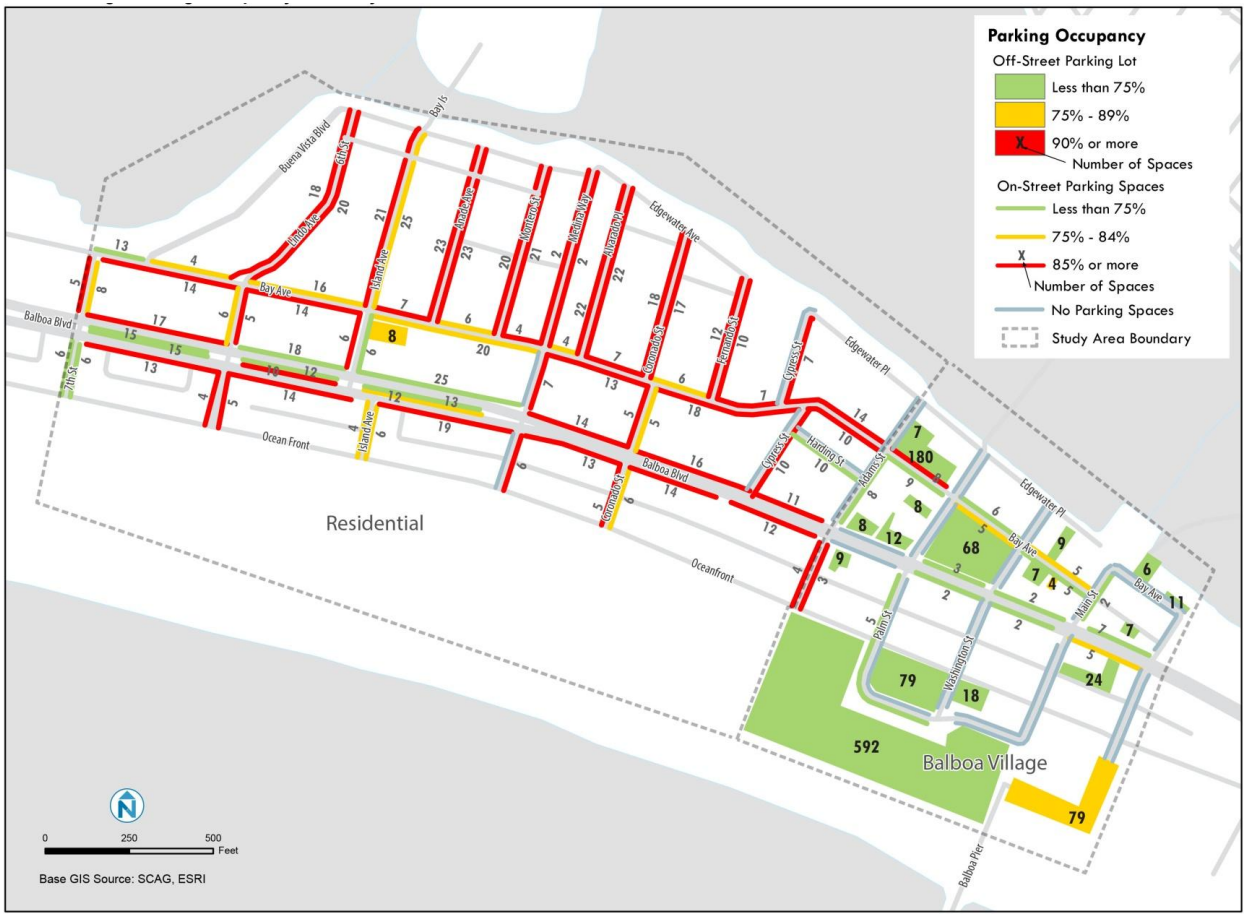


Figure 65 Study Area Occupancy, Saturday 10 AM to 12 PM (July)

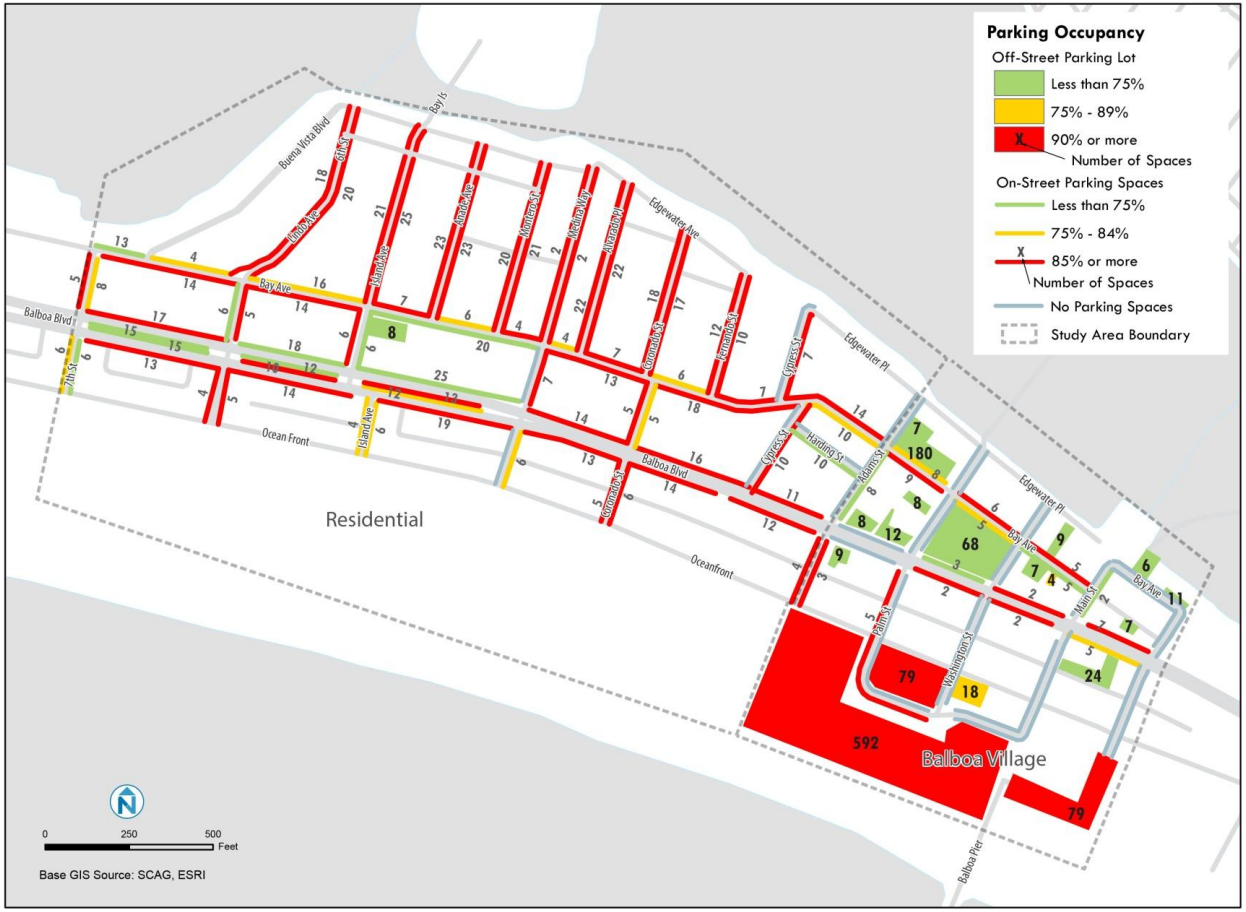


Figure 66 Study Area Occupancy, Saturday 12 PM to 2 PM (July)

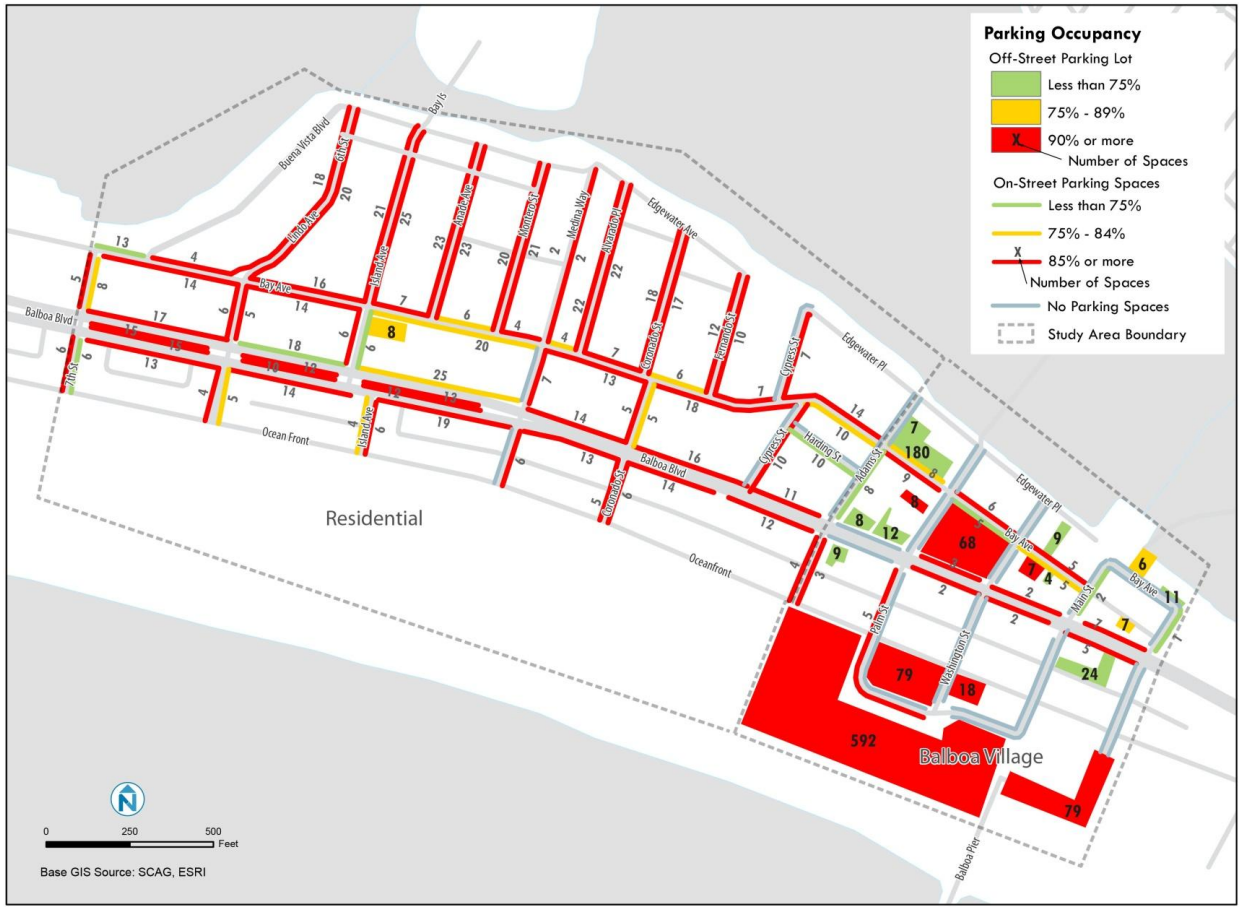


Figure 67 Study Area Occupancy, Saturday 2 PM to 4 PM (July)

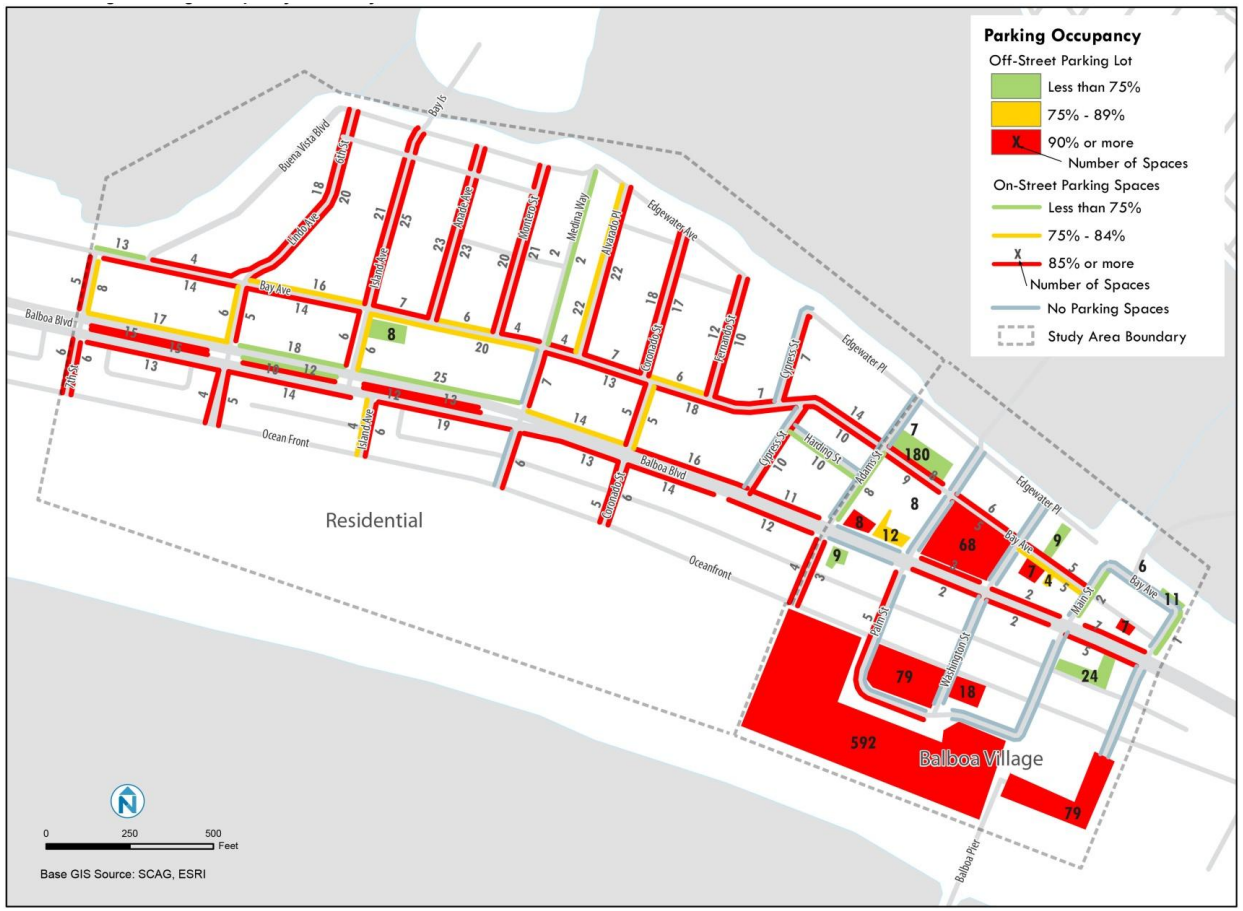


Figure 68 Study Area Occupancy, Saturday 4 PM to 6 PM (July)

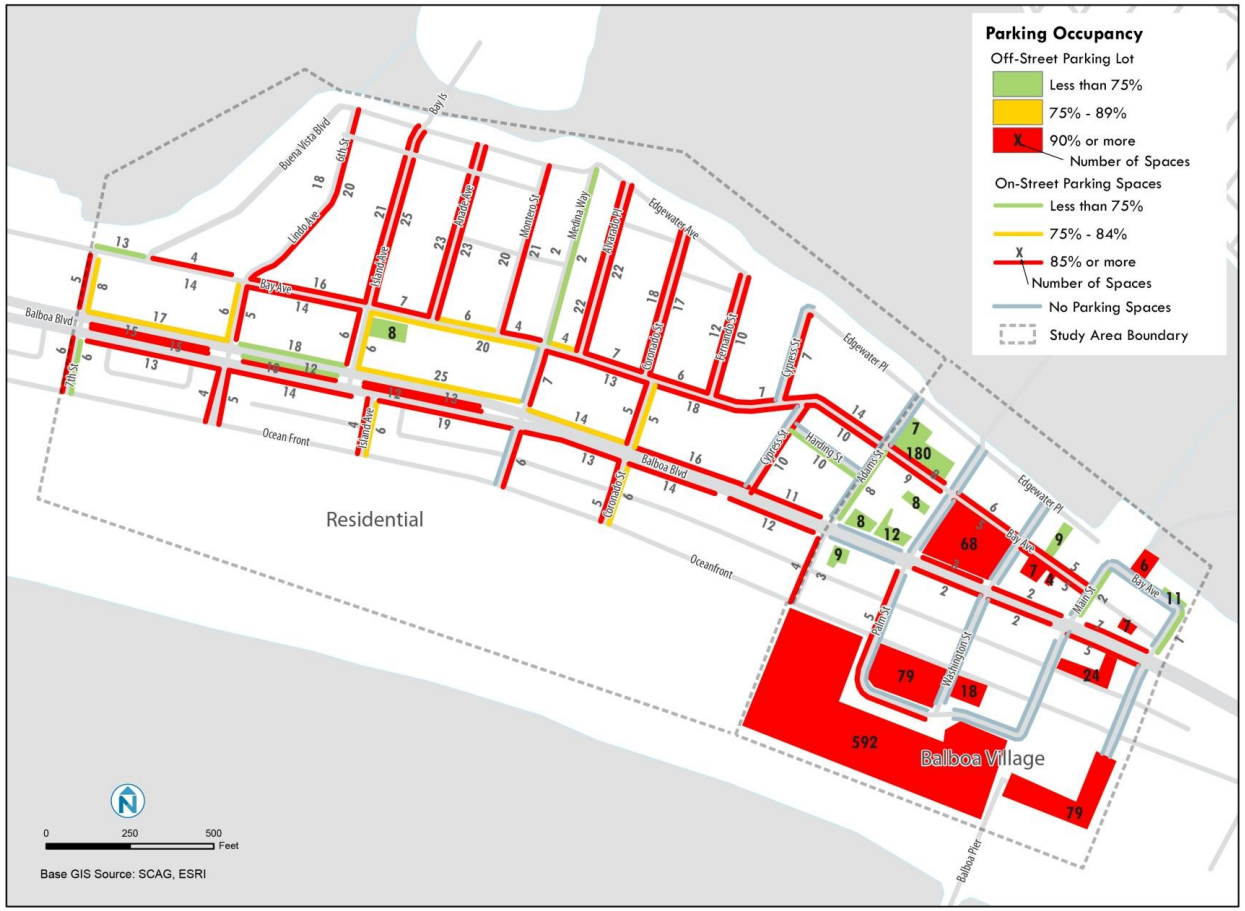


Figure 69 Study Area Occupancy, Saturday 6 PM to 8 PM (July)

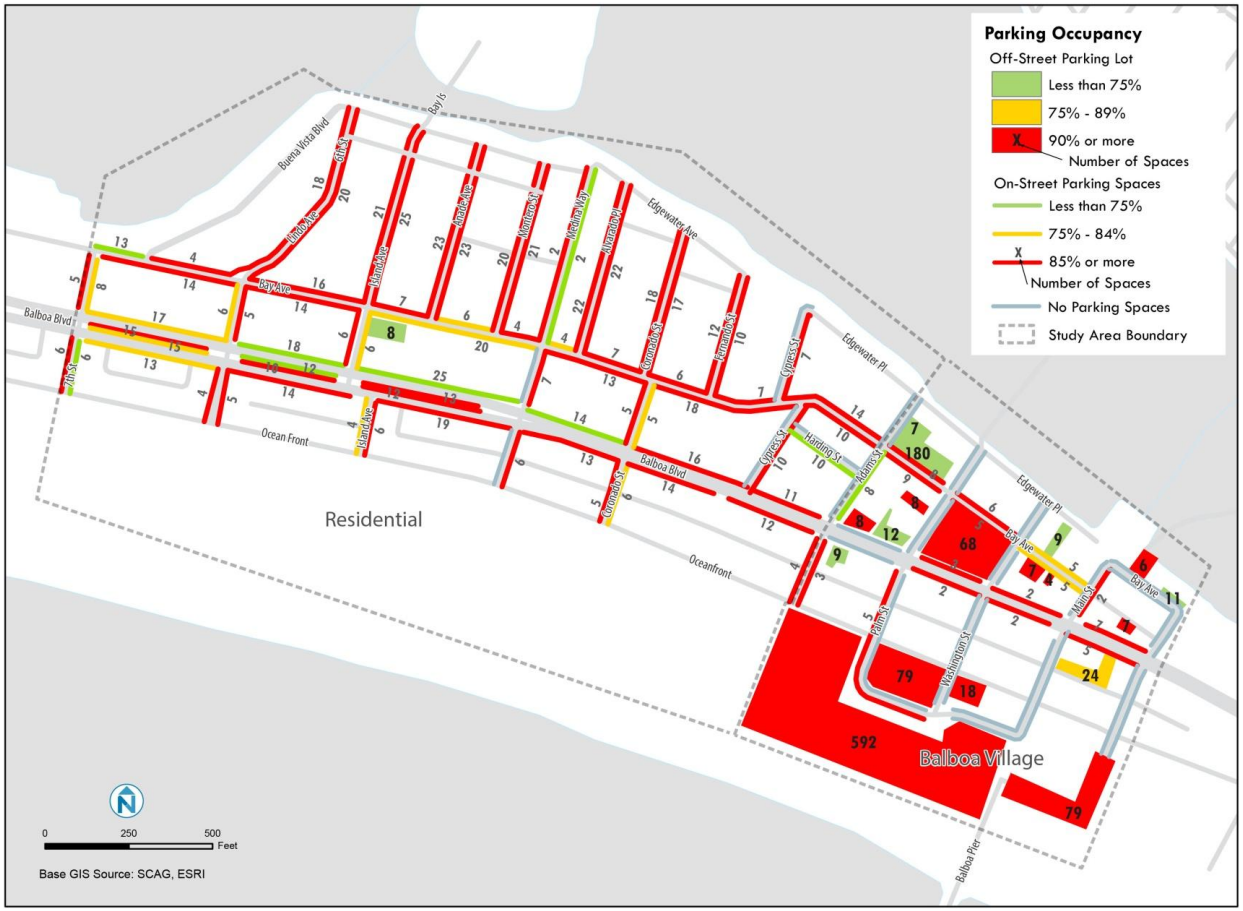


Figure 70 Study Area Occupancy, Thursday 8 AM to 10 AM (August)

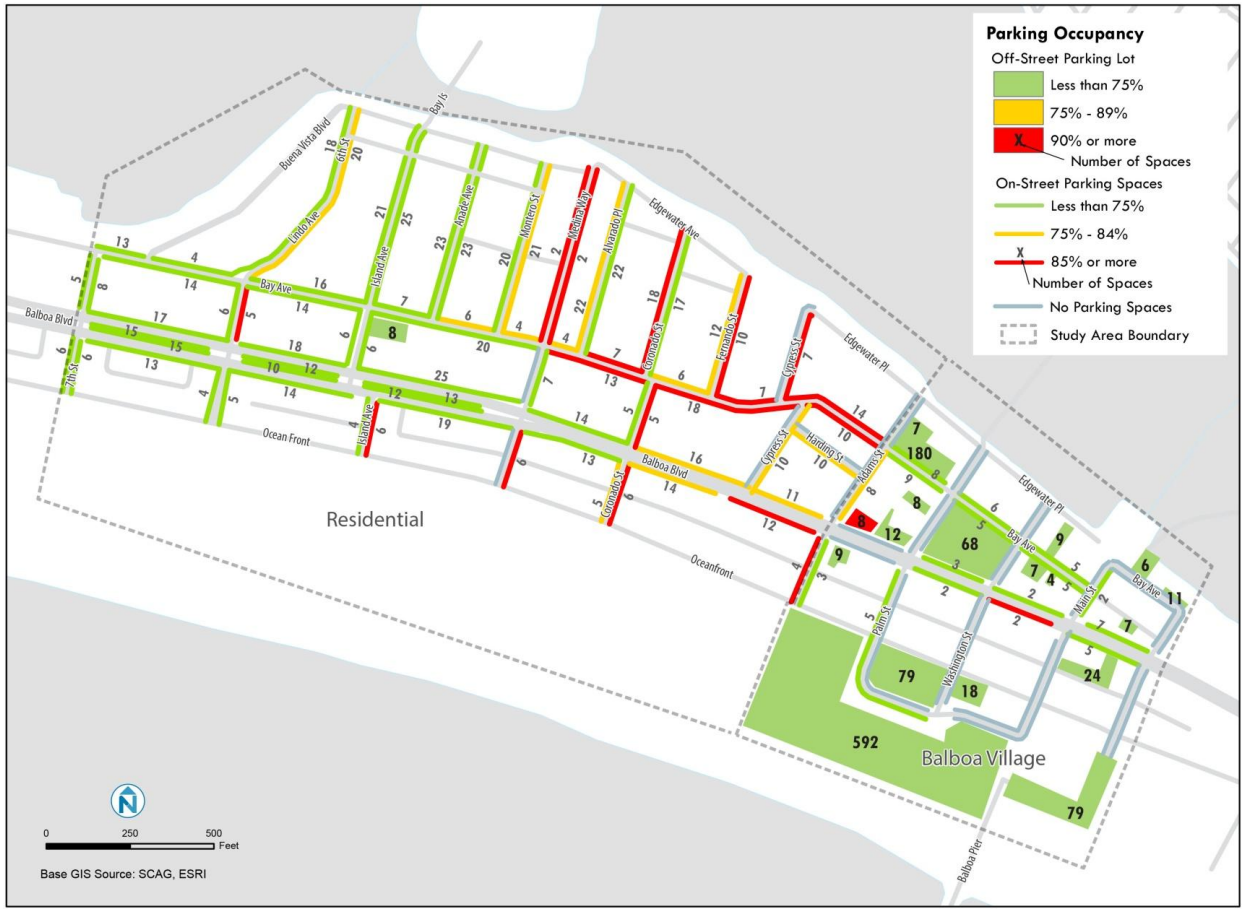


Figure 71 Study Area Occupancy, Thursday 10 AM to 12 PM (August)

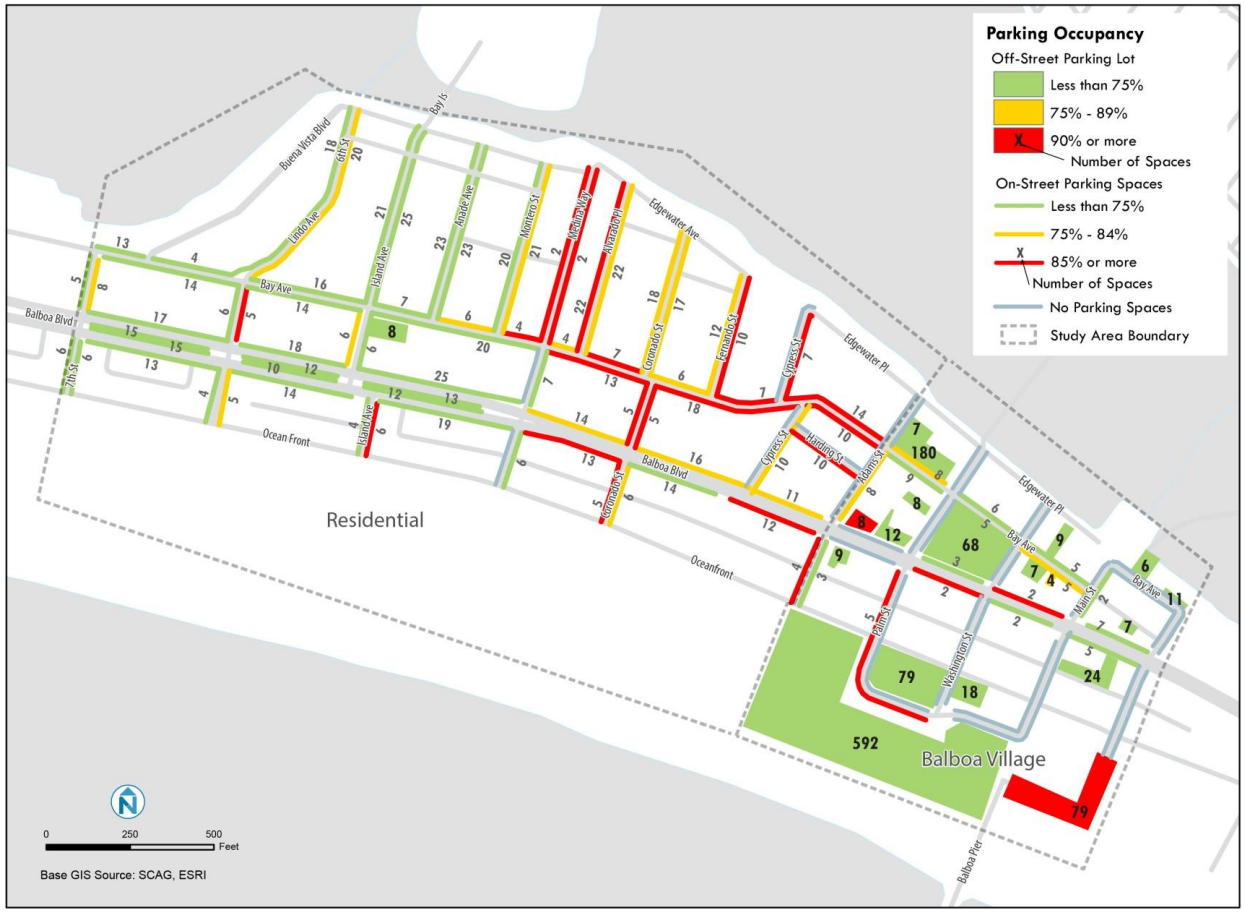


Figure 72 Study Area Occupancy, Thursday 12 PM to 2 PM (August)

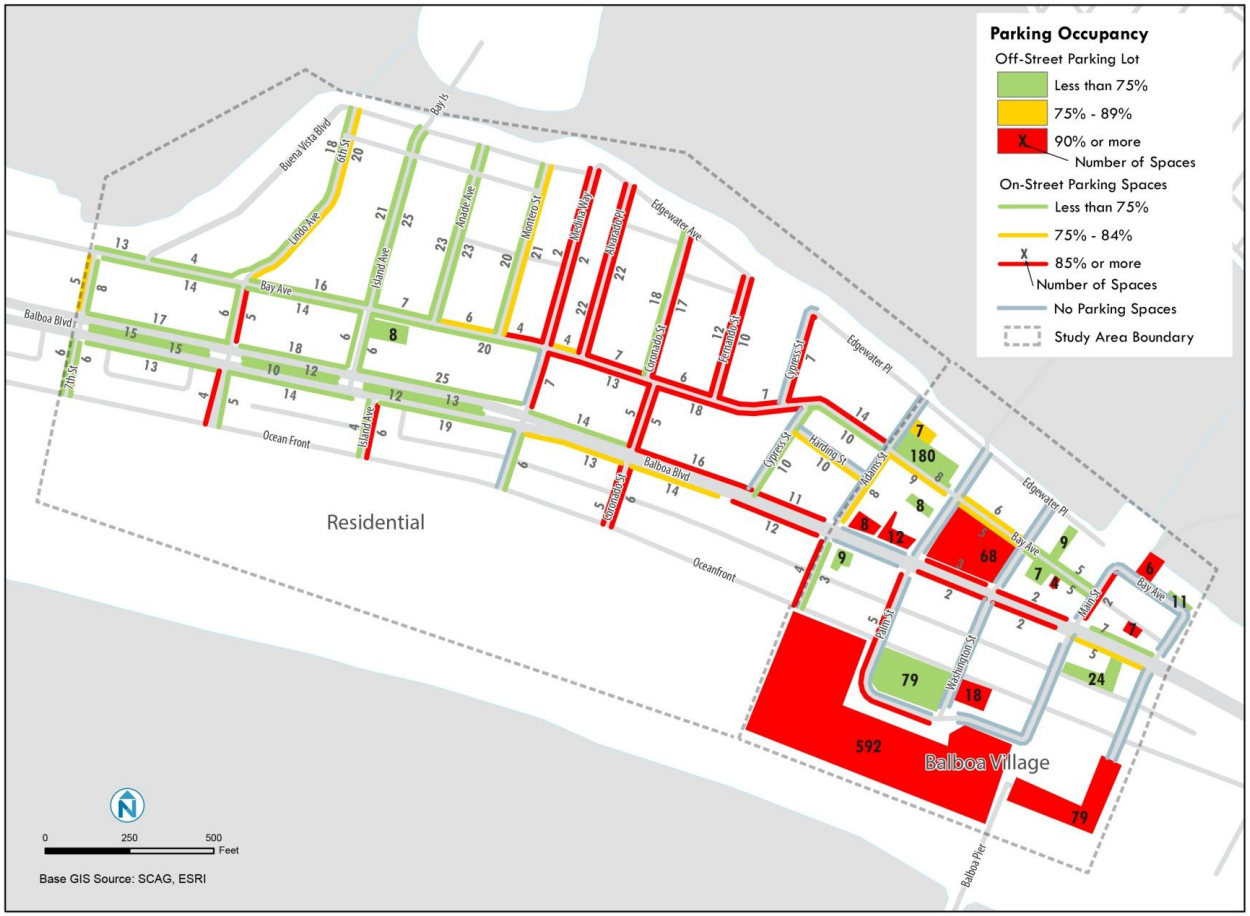


Figure 73 Study Area Occupancy, Thursday 2 PM to 4 PM (August)

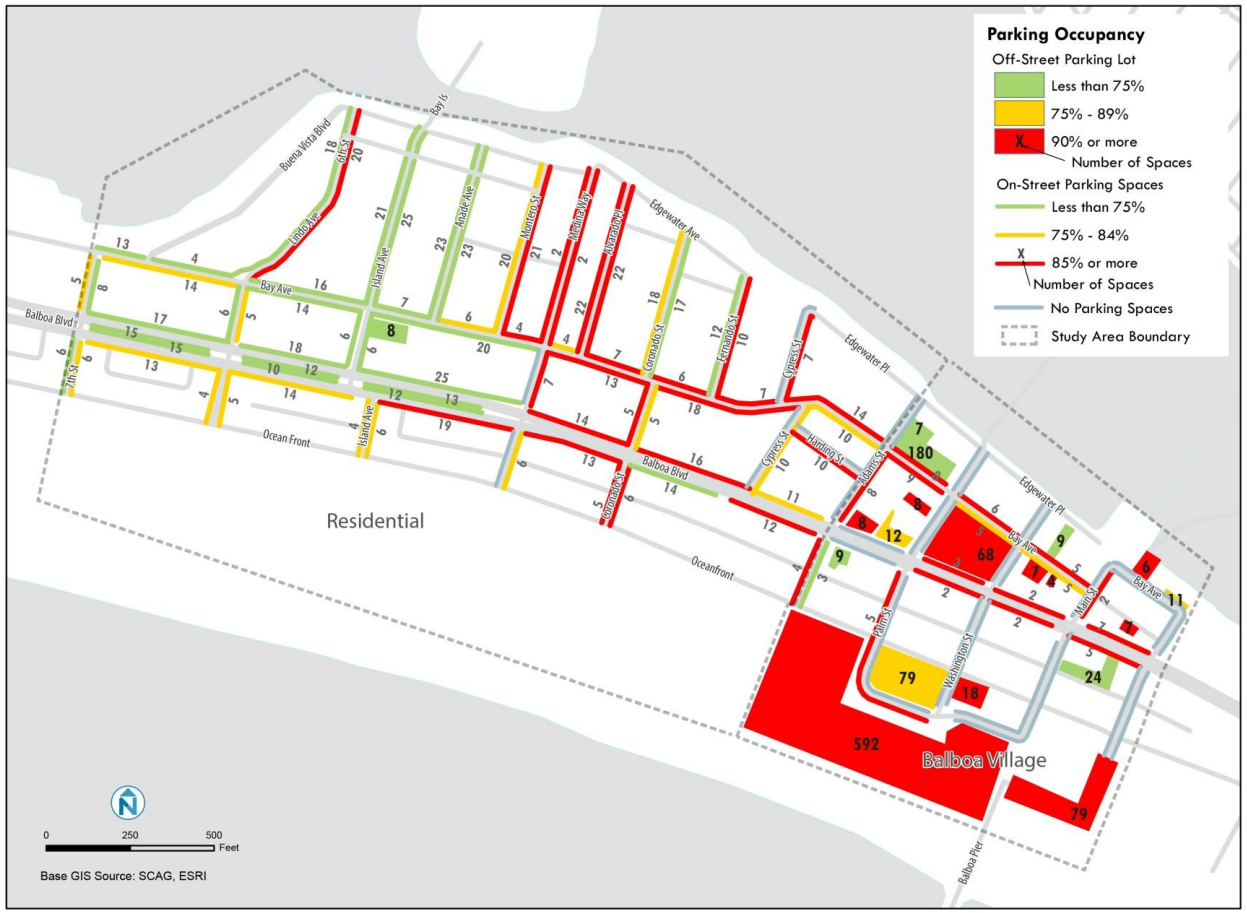


Figure 74 Study Area Occupancy, Thursday 4 PM to 6 PM (August)

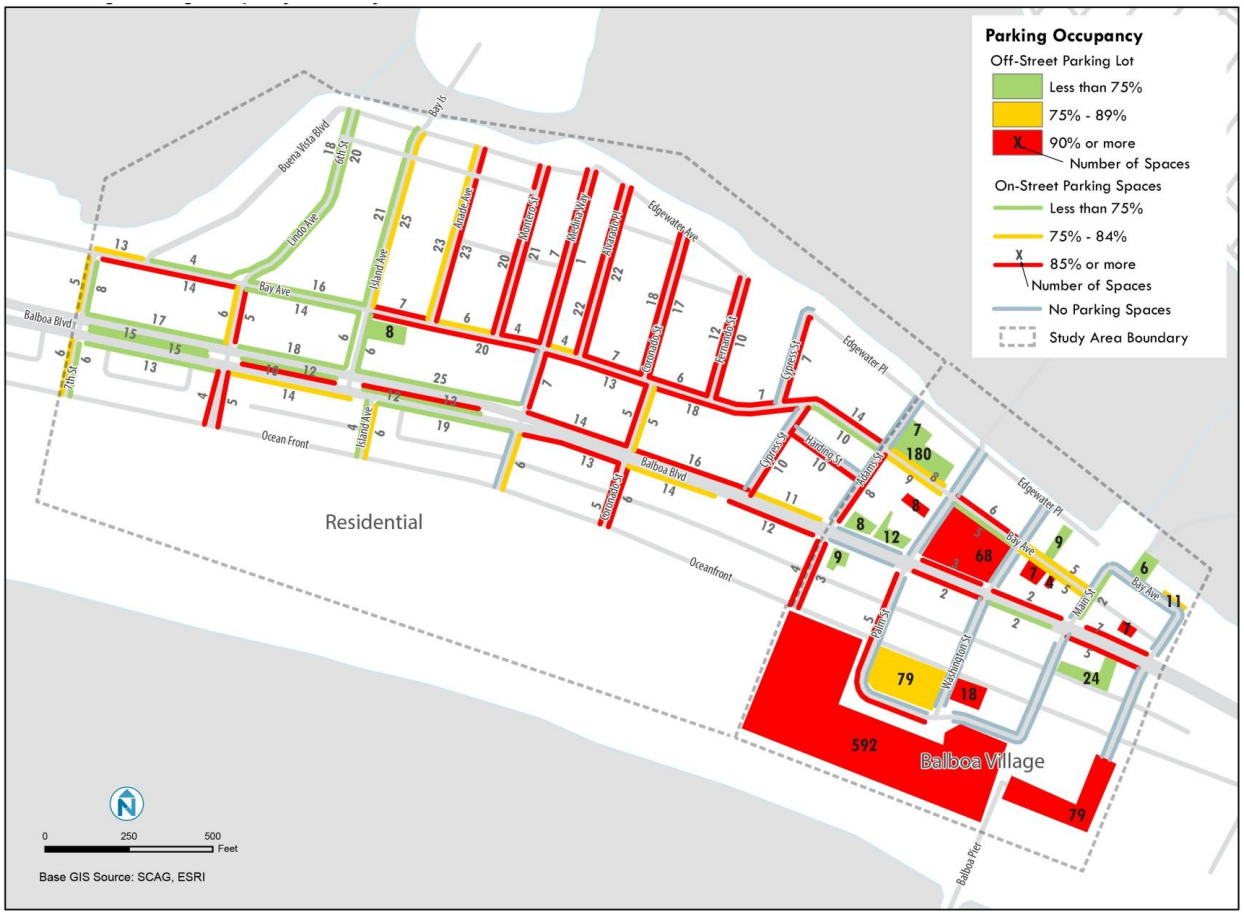


Figure 75 Study Area Occupancy, Thursday 6 PM to 8 PM (August)

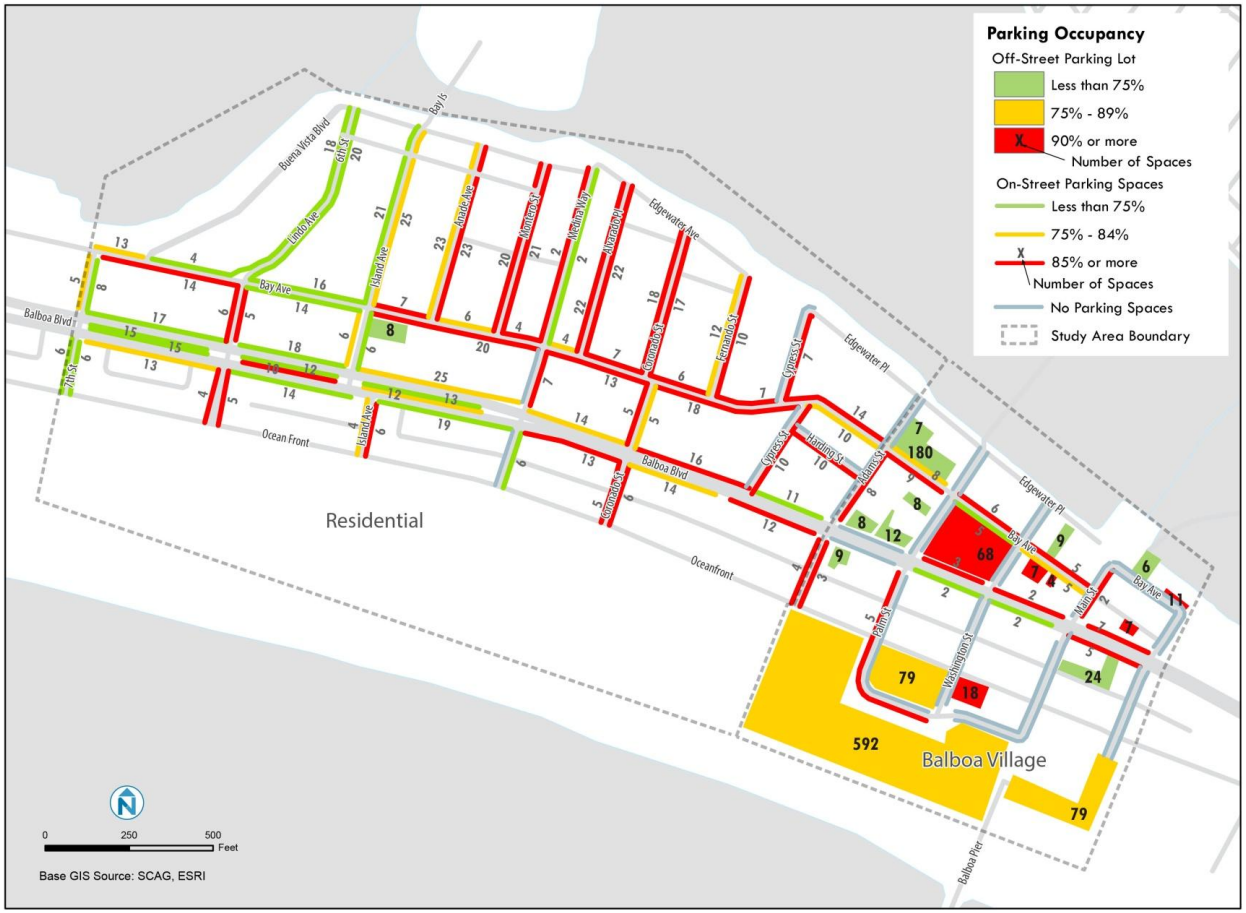


Figure 76 Study Area Occupancy, Thursday 9 PM to 11 PM (August)

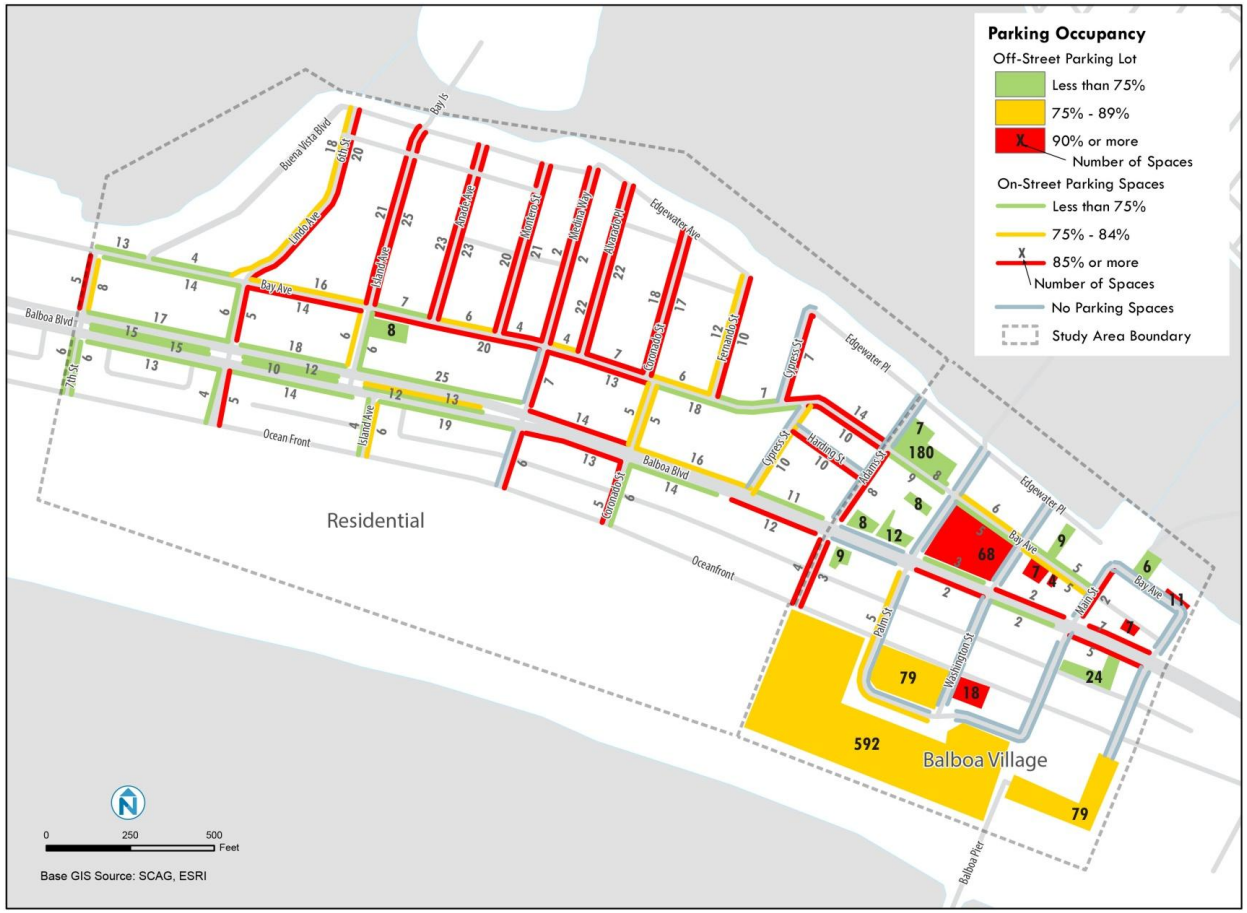


Figure 77 Study Area Occupancy, Saturday 8 AM to 10 AM (August)

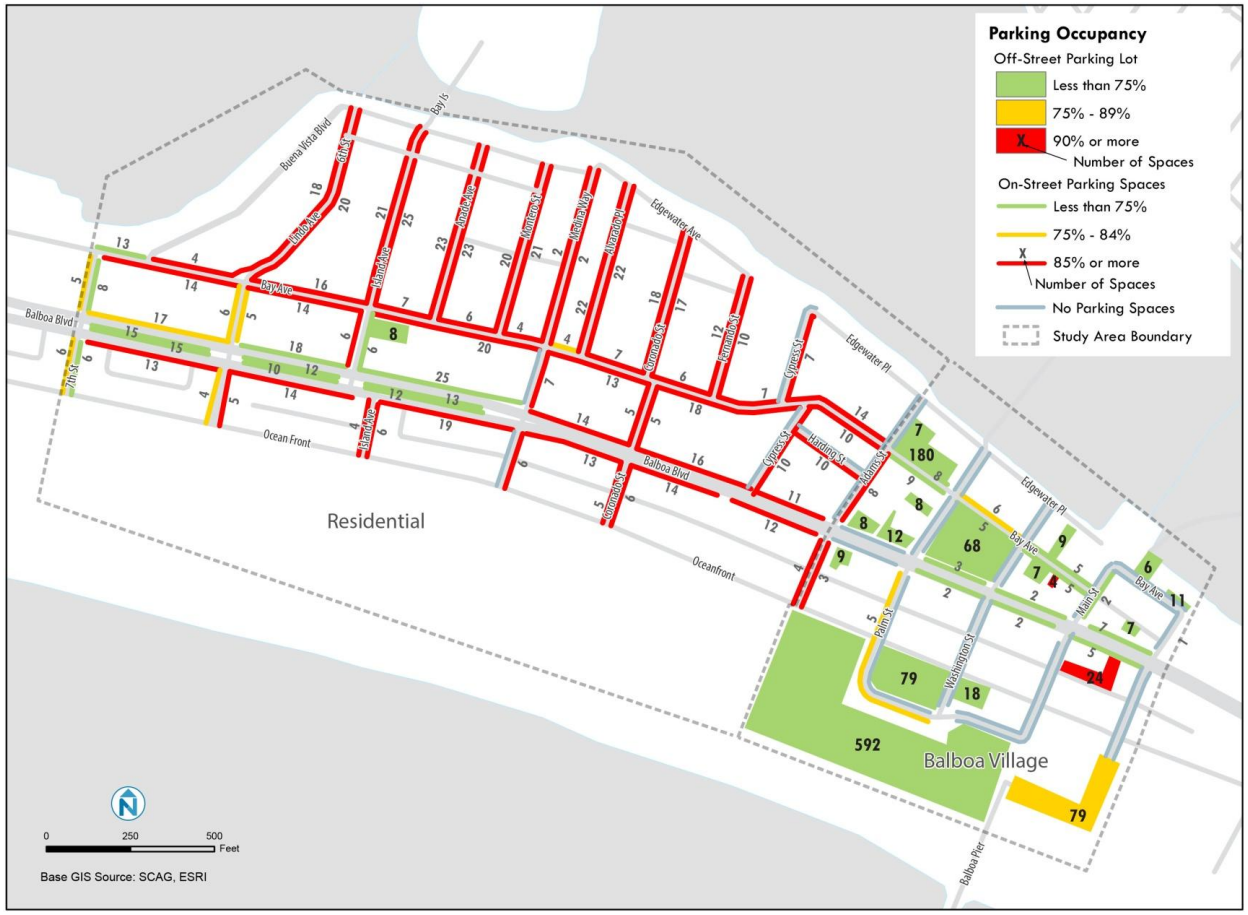


Figure 78 Study Area Occupancy, Saturday 10 AM to 12 PM (August)

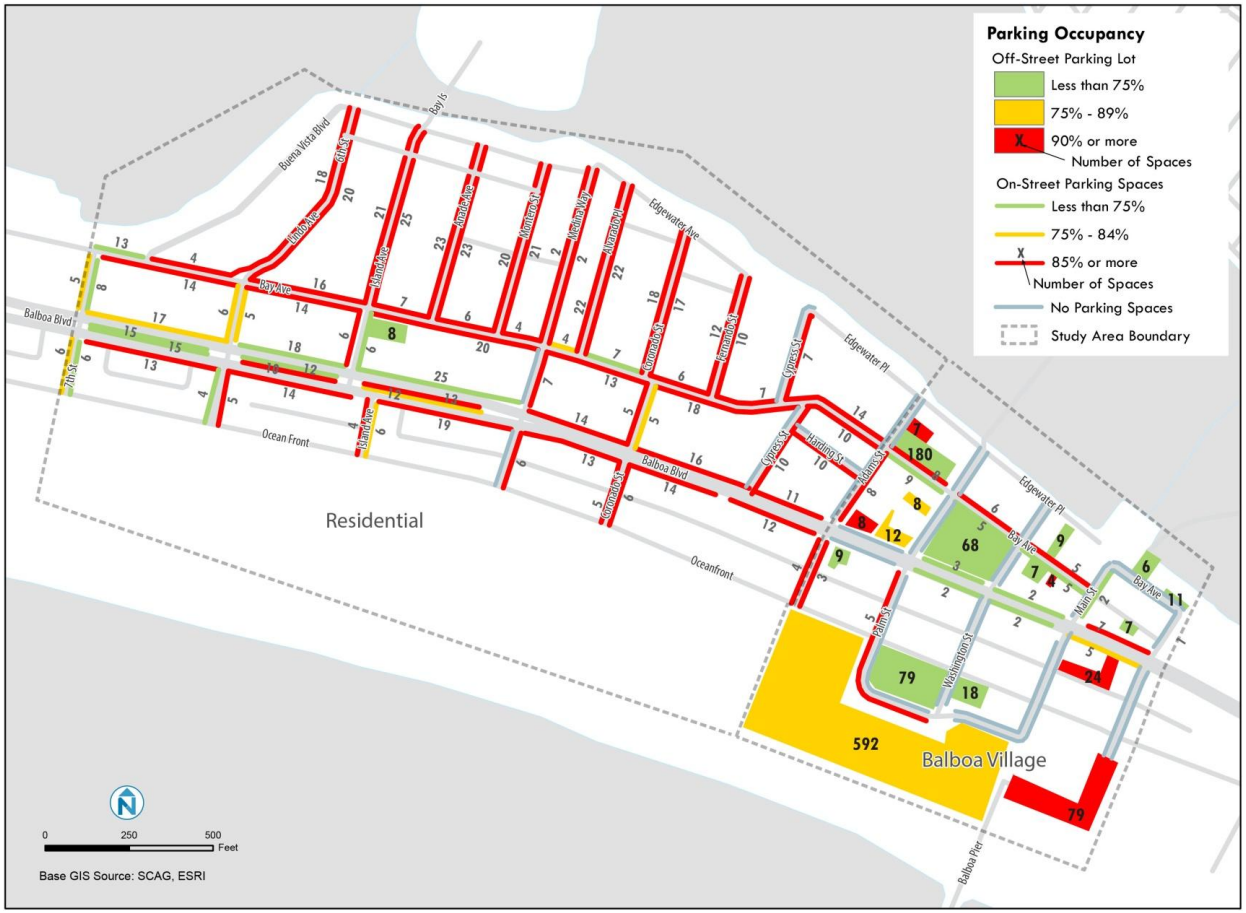


Figure 79 Study Area Occupancy, Saturday 12 PM to 2 PM (August)

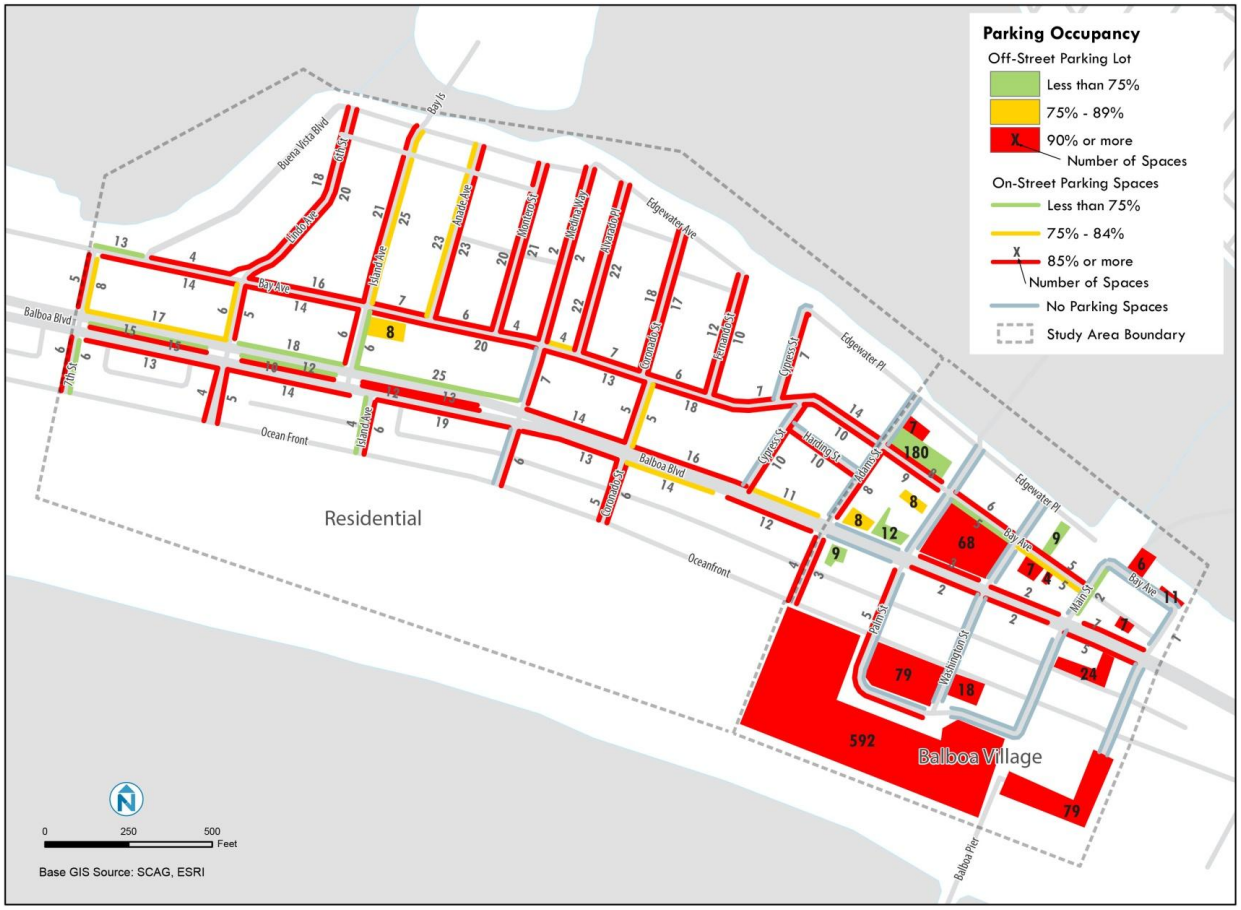


Figure 80 Study Area Occupancy, Saturday 2 PM to 4 PM (August)

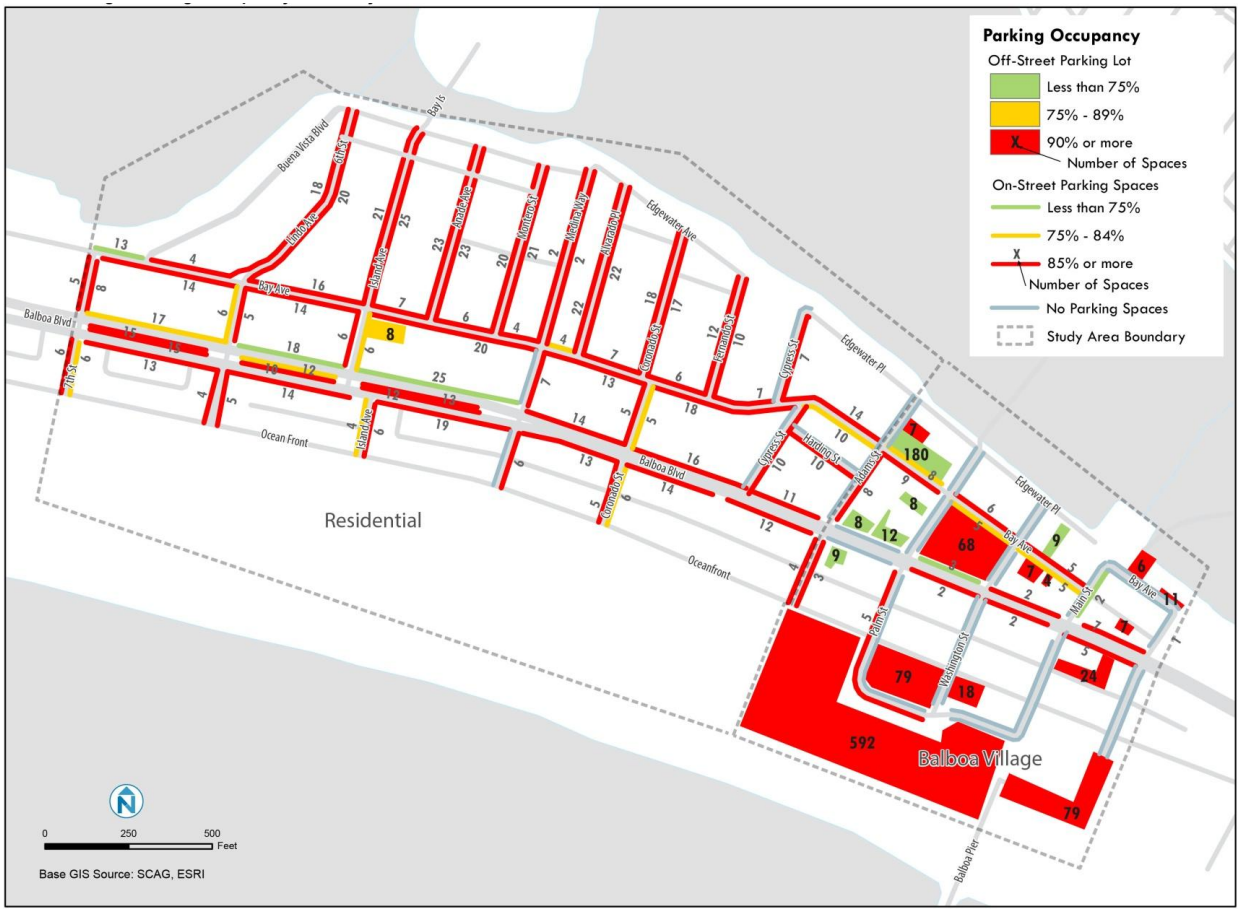


Figure 81 Study Area Occupancy, Saturday 4 PM to 6 PM (August)

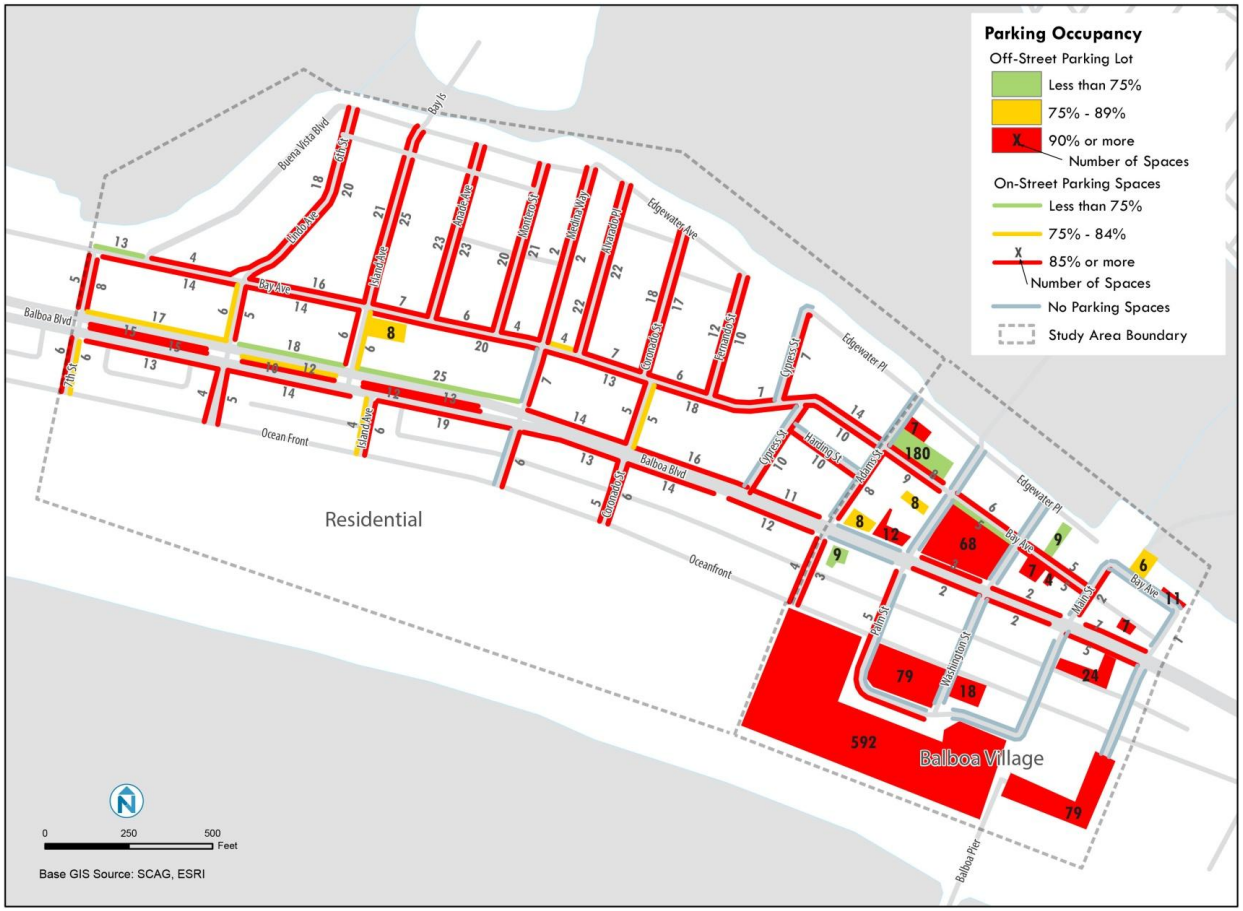
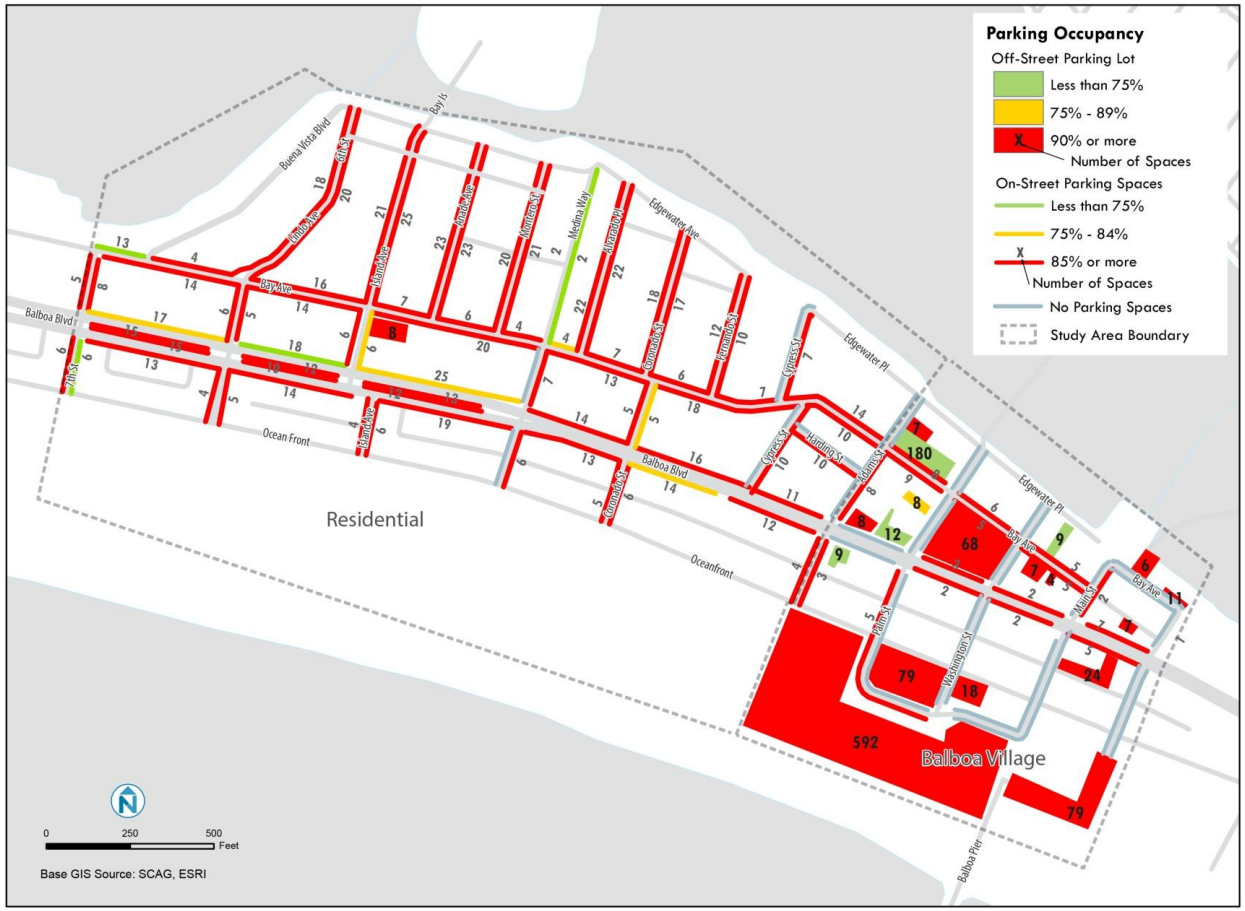



Figure 82 Study Area Occupancy, Saturday 6 PM to 8 PM (August)