



Convoy Corridor Parking Study

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for City of San Diego
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1.0 Introduction

The purpose of this study is to evaluate conditions within the Convoy Street Corridor of Kearny Mesa in relation to the community's plan (Kearny Mesa Community Plan, adopted November 2020) to install a buffered bicycle facility, which will repurpose on-street motor vehicle parking, and develop recommendations to minimize any impacts assessed from the decrease in public parking supply along the corridor. Following this introductory chapter – which describes the study area, the inventory of parking supply, and the methods utilized to produce the existing conditions findings – the report follows with chapters focusing on weekday parking occupancy and turnover (Chapter 2), weekend parking occupancy and turnover (Chapter 3), a summary of responses from stakeholder surveys (Chapter 4), parking conditions with the new bike facility (Chapter 5) and concludes with parking management recommendations (Chapter 6).

1.1 The Kearny Mesa Community Plan

The Kearny Mesa Community Plan (the “Plan”) involved extensive community engagement and collaboration between local residents, businesses, and city officials over several years, prior to its adoption in 2020. The Plan aims to transform the area, historically focused on industrial, restaurant, or retail, into a vibrant, healthy, and connected community with multimodal routes and public spaces that link employment, new housing, transit, parks, and other amenities. One of the Plan's key components is the development of urban villages with mixed land use. Due to the imbalance between the existing land use, and the distance between the existing land uses to residential developments in other communities, people often rely on driving and parking to reach their destination. The inclusion of residential developments offers an opportunity for people to live near their workplace or destination and expand multi-modal improvements, reducing the need for vehicular trips and parking.

At the same time, Mobility Strategies 4.36 through 4.44 aim to reduce the Plan effect on parking by:

- Prioritize the implementation of parking strategies and programs managing parking with strategies like park-once, shared parking, time-limited parking, demand-based pricing; establishing parking districts; and converting parallel parking to angled parking when possible.
- Encourage the adoption of parking management strategies to maximize the use of on-street parking spaces, enhance parking availability and turnover, and minimize overnight parking of oversized vehicles.
- Promote the use of shared parking agreements and technology to optimize the efficiency of existing and future parking supply and to alleviate the burden on future development.

Some of the mixed-use projects envisioned in the Plan are currently going through the permitting process with the City of San Diego, including the Convoy Square project located at the former Dixieline Lumber and Home Centers site on Convoy Street¹, and the Convoy Gateway project to be constructed at the current Zion Market location. In addition several of the planned bicycle facilities within the community are realizing their opportunity for implementation through slurry and resurfacing projects, such as the Convoy Street corridor (which this study was prepared for), among others like Clairemont Mesa Boulevard, Othello Avenue, Kearny Mesa Road and Balboa Avenue. This aligns with the Community Plan Policy 4.13 *Provide and support a continuous network of safe, convenient, and attractive bicycle facilities that connect Kearny Mesa to other communities and to the regional bicycle network, with recommended classifications in Figure 11: Planned Bicycle*

¹ <https://www.sandiegouniontribune.com/business/growth-development/story/2022-07-02/project-will-add-531-apartments-to-san-diegos-convoy-district-where-there-are-no-homes-today>

Network. Implementation of these bicycle facilities should be considered as roadways are resurfaced and/or right-of-way becomes available.

1.2 Study Area

The Convoy Street Corridor is in the western part of the Kearny Mesa Community Planning Area within the City of San Diego. It is a north/south corridor surrounded on three sides by freeways: State Route 52 to the north, Interstate 805 to the west, and State Route 163 to the east. The northern boundary for this study area is Copley Park Place to the north, and Aero Drive to the south. The study area encompasses the properties adjoining Convoy Street and its 14 cross streets. **Figure 1.1** shows the geographic extent of the Project's study area.

Within this study area, the supply of on-street public parking, off-street public parking and select private off-street parking lots were inventoried, and their parking occupancies and turnover were collected and analyzed.

The study area includes three sections, used for summarizing purposes: North, Central, and South. The North section is delineated by Ronson Road to the south and Copley Park Place to the north. The Central section is delineated by Balboa Avenue to the south and Ronson Road (not included) to the north. The Southern section is delineated by Aero Drive to the south and Balboa Avenue (not included) to the north.

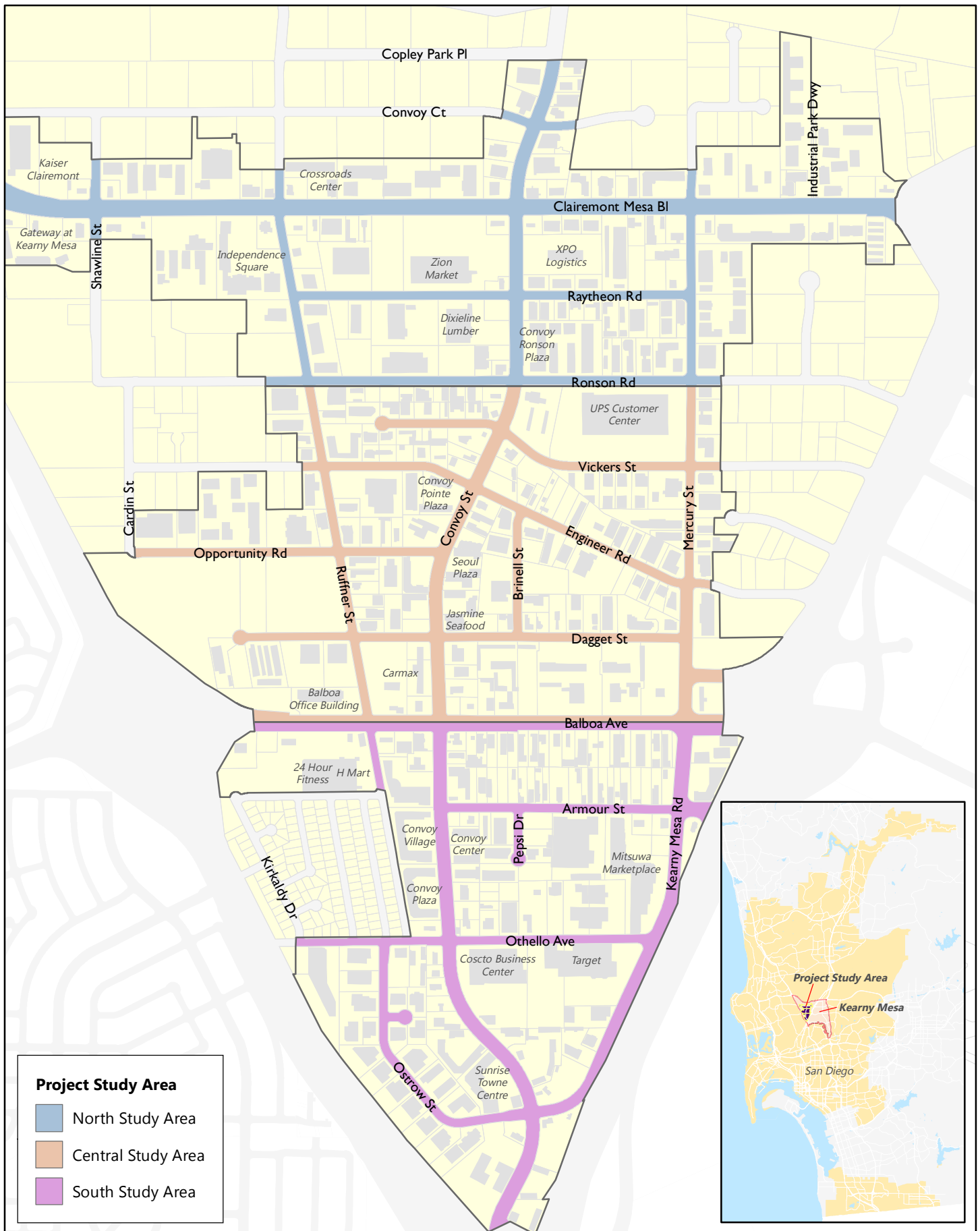
1.3 Parking Inventory and Data Collection Methods

Parking was inventoried by a combination of aerial imagery review and field data collection. Where parking was delineated with markings (in parking lots and some on-street locations), technicians counted parking supply with the aid of 2022 aerial imagery, and confirmed in the field where necessary. In places where on-street parking was not delineated with markings, technicians measured and documented the lengths of curb segments where parking is allowed with aerial imagery, accounting for areas where parking is not permitted such as along curb cuts and other restricted areas. To estimate parking supply along unmarked sections, a length of 20' was assumed for an on-street parallel parking space. The curb segments measured were divided by 20, rounding the remainder to the nearest whole parking space².

All inventoried on-street parking supply was summarized to the city block. Parking supply along Convoy Street, Clairemont Mesa Boulevard, and Mercury Street/Kearny Mesa Road was summarized by block on each side of the street, rather than centerline, for greater specificity (particularly relevant along large roadways that present crossing challenges).

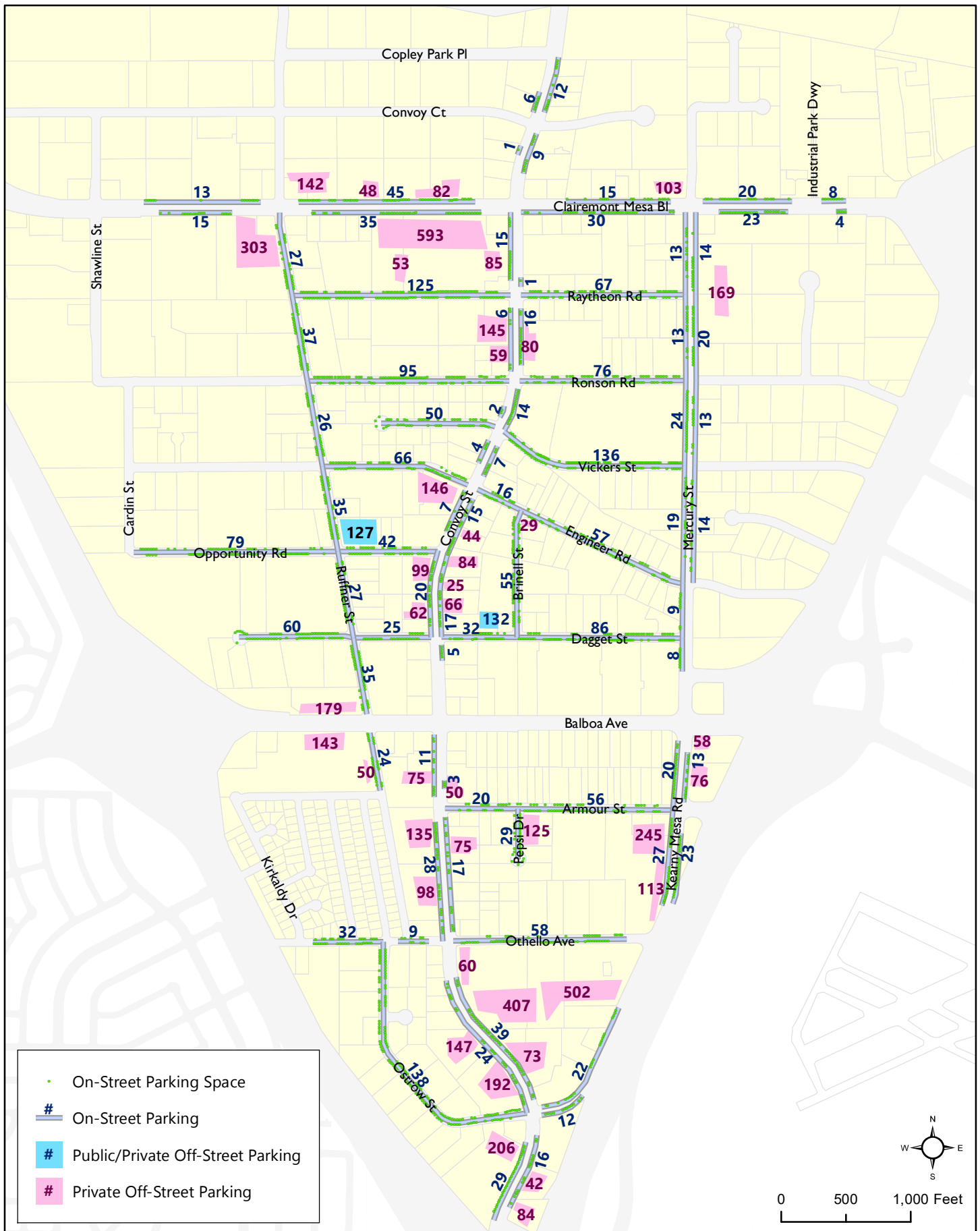
Figure 1.2 shows on-street parking supply by each block segment and off-street parking supply by lot location within the study area.

² Field data indicates that vehicles tend to park closely together and utilize all available parking spaces, including areas with between 10 feet and 19 feet of curb length. Therefore, this report rounded the number of parking spaces to the nearest whole number to reflect the actual on-the-ground conditions.



Kearny Mesa Parking Study

Figure 1.1
Project Study Area



Kearny Mesa Parking Study

Figure 1.2
Existing Parking Supply

Table 1.1 summarizes total public parking supply within the study area by the type of parking. Within the study area, there are an estimated 2,675 public parking spaces, most of which (78%) is along side streets. Most of the parking spaces (47%) are located in the Central part of the study area.

Convoy Street contains 324 parking spaces, representing 12% of the study area's total public parking supply. Most of the parking spaces on Convoy Street (52%) are in the South part of the study area. There are two private off-street parking lots totaling 259 parking spaces shared with paid public parking, both within the Central area: one at the office complex on 7670 Opportunity Road (at the northeast corner of Ruffner Street) and one on Dagget Street behind Jasmine Seafood Restaurant & Express.

Table 1.1 - Total Public Parking Inventory Within the Study Area

Location	North	Central	South	Total Study Area
Convoy Street	66	91	167	324
Side Street Public Parking	695	914	483	2,092
Off-Street Public Parking	n/a	259	n/a	259
Total Public Spaces	761	1,264	650	2,675

Table 1.2 summarizes the total parking inventory, with select private parking lots³ included in the study. Within the study area, there are an estimated total of 8,236 parking spaces, of which over 2/3rds (68%) are private parking. Over half (53%) of the private parking spaces are located within the South part of the study area.

Table 1.2 - Total Parking Inventory Including Select Private Parking

Parking Type	North	Central	South	Total Study Area
Public Parking	761	1,264	650	2,675
Private Parking	1,862	734	2,965	5,561
Total Spaces Inventoried	2,623	1,998	3,615	8,236

1.4 Parking Occupancy Data Collection Methods

Parking occupancy, which is the amount of parking supply being used at a given time, was collected in the study area on one weekday (Friday, October 14, 2022) and one weekend day (Saturday, October 22, 2022) over the course of 13 one-hour long intervals capturing all periods of the day except for late evening and overnight. The time periods where data was collected included:

- Morning: 7am to 8am, 8am to 9am, 9am to 10am, 10am to 11am
- Midday: 11am to 12pm, 12pm to 1pm, 1pm to 2pm
- Afternoon: 2pm to 3pm, 3pm to 4pm, 4pm to 5pm
- Evening: 5pm to 6pm, 6pm to 7pm, 7pm to 8pm

³ The selection of private parking lots for this study was based on their current parking demand and proximity to adjacent land uses such as retail or restaurants. Private parking areas that are exclusively associated with a particular land use, such as an industrial building, were excluded from the analysis. For a visual representation of the private parking lots included in this study, please see Figure 1.2.

Technicians collected parking occupancy in the field by driving the study area with video equipment mounted to a vehicle. The video was reviewed, and occupancy counts were transcribed to each unit of supply. The camera was equipped with Automated License Plate Recognition (ALPR) technology. The conditions of each period are mapped and analyzed in Chapter 2 for weekday and Chapter 3 for weekend. The ALPR helped determine parking turnover, also discussed in those chapters.

The 13 hourly runs were then consolidated into four periods for summary and reporting purposes: Morning (7am – 11am), Midday (11am – 2pm), Afternoon (2pm – 5pm), and Evening (5pm – 8pm). Importantly, occupancy counts are the peak modal count (highest number) recorded within the larger period; for example, if the highest recorded number of occupied parking spaces at a given location occurred from 1pm-2pm, then that number would serve as the count for Midday at that location. This was done to present a conservative approach to illustrate parking observations at the highest demand ; these counts are therefore an overestimation of occupancy for each broader time period because they do not necessarily occur in the same hour.

1.5 Parking Turnover Data Collection Methods

Parking turnover is the amount of time vehicles stay parked at specific locations. Turnover was estimated for the study area with the aid of ALPR technology applied to camera footage used to collect weekday and weekend parking occupancy. As mentioned previously, parking occupancy collection took place throughout the study area over hourly periods from 7am to 8pm.

ALPR technology from the camera footage automatically reads the license plates of parked vehicles and generates a geographically referenced data record for each parked vehicle by its license plate. These records were post-processed for every hour-long time period. Each parked vehicle's duration of stay was estimated by counting the instances of one-hour periods that vehicle was captured in the data collection. The estimated duration a vehicle was parked was assumed to be the mid-point time interval for how many one-hour periods it was observed during the data collection. For example, a parked vehicle observed during only a single one-hour interval (establishing a potential duration window between zero and one hours) was assumed to have a parked duration of 30 minutes; a vehicle observed for two one-hour intervals (establishing a potential duration window between one and two hours) was assumed to be parked for 90 minutes; and so on for each successive period the same parked vehicle was counted. Vehicles which parked during the 6pm time interval were counted separately and not included in the averages, as this was too close to the end of the day's data collection to accurately determine their length of stay.

Each parked vehicle's duration was then summarized to the block locations where it was parked to estimate the average duration for that block. This approach and resulting summarization would have missed any instances where a vehicle arrived and departed in between an interval of data collection without detection. These undetected trips (theoretically between zero and one hour in length), if they were captured, would have decreased the measured average duration of stay. In recognition of this, the parking duration summary should be considered the average duration of stay for vehicles observed. This estimation of parking turnover is more conservative, as it results in a higher parking duration for each segment

2.0 Weekday Parking Conditions

2.1 Weekday Parking Occupancy

Parking occupancy – the percentage of parking supply being used at a given time, was analyzed in two ways: occupancy by supply and destination-based occupancy⁴. Occupancy by supply is the conventional way of conceptualizing parking demand, where the occupancy percentage is attributed to the source of parking (either the block segment or parking lot). While occupancy by supply is adequate for understanding the demand of a particular parking source, it is a limited way of describing parking conditions in urban settings where many places rely on parking that is off-site and where parking is often shared (competed for) among various users. To overcome that limitation, parking conditions were also analyzed by destination-based occupancy. This analysis approach summarizes the parking supply and parking demand from parcel boundaries⁵ (destination) within a 1/8 of a mile distance.

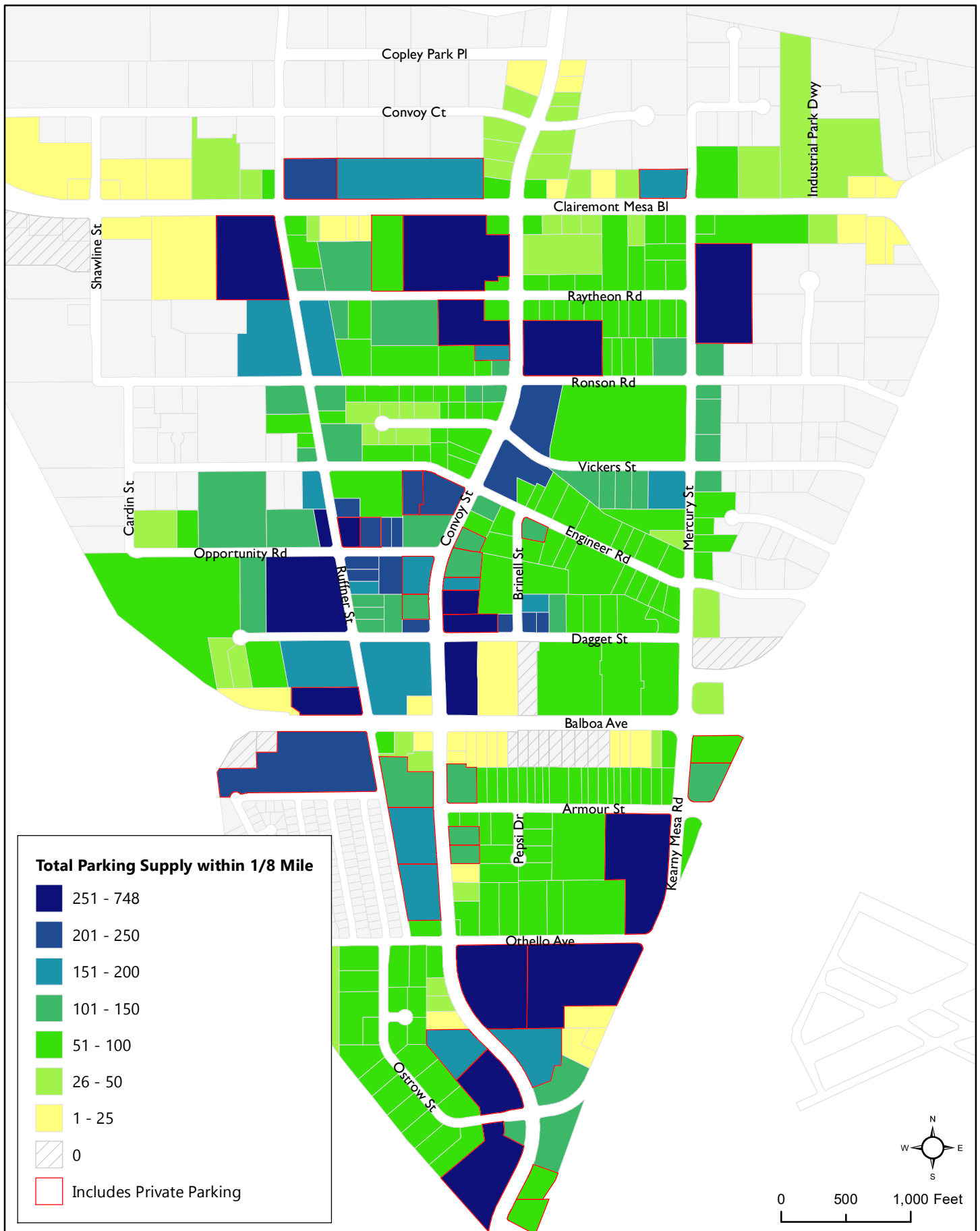
Destination-based occupancy adjusts for the varied size and geographic distribution of parking sources in the study area that are otherwise not well captured in occupancy by supply and recognizes that most visitors are unable to park directly in front of their destination and may have to walk a short distance. An eighth of a mile approximates one long-sided block length or two short-sided block lengths in a typical street grid and roughly equates to approximately 3 minutes of walking. Since parking supply and demand are typically not distributed evenly throughout areas, this analysis more effectively reveals hotspots within certain areas otherwise not captured by the area-wide summarized occupancies. To calculate destination-based occupancy, parking occupancy data collected and initially presented by supply is post-processed and accessibility-based measures (otherwise known as walkshed) are then used to estimate the parking occupancy within 1/8 of a mile network distance of each destination in the study area by weighting the parking occupancy of the catchment area of the destination.

The total parking supply within 1/8 of a mile of each destination is shown in **Figure 2.1**. The destination-based occupancy exhibits presented in this chapter represent an occupancy percentage of this supply. The destination-based occupancy analysis and accompanying exhibits includes parking and private parking occupancies. Note that select private parking data included in this study (indicated in Figure 2.1 with red borders) refers only to the property that the private parking serves. Destinations which have private parking sources that was not included in this study are not reflected.

This chapter and the next will provide an overview of the peak conditions, prior to individually analyzing parking conditions for the four time periods. The peak conditions are better described by destination-based occupancy. For each individual time interval analyzed, the occupancy by supply exhibit will precede its corresponding destination-based occupancy exhibit.

⁴ Destination-Based Parking Occupancy: The Application of Accessibility Measures to Parking Studies (2022) pp. 270-281
https://transportation.planning.org/documents/6290/2022_SoTP_Web.pdf

⁵ Parcels are preferred for this analysis because they are exhaustive and fine-grained (compared to land use data), however data cleaning of parcel boundaries is typically necessary where property line peculiarities occur to provide for the best mapping clarity.



Weekday Peak Conditions

Weekday peak conditions vary by location and time. These conditions are driven by land use (types of businesses) in the study area, and their user patterns (employee usage, customer usage). In those areas where there are workplaces but no customers, we should expect to see greater usage 9am-5pm, whereas in those areas where both employees and customers are visiting the peak patterns will be impacted by customer usage; in that context, we might expect to observe greater usage for time periods which correspond with those activities: for retail services Midday and Afternoon, and for dining Midday and Evening. As many businesses along Convoy Street attract dining customers, we should see greater usage proximate to Convoy Street during Midday and Evening.

Figure 2.2 shows the peak parking period of each destination within the study area based on its parking occupancy within 1/8 mile during the weekday. Locations are also identified where the magnitude of the peak is greater than 85% for one or more periods (blue and red dots, respectively). Eighty-five percent occupancy is considered within parking industry practice to be the threshold for when parking is being utilized most efficiently, with the number striking a balance between maximizing usage and having some spare capacity. Places symbolized in red are above that optimal threshold and may be considered to have critically high or burdensome parking conditions.

Weekday peak conditions of greater than 85% occurring over multiple time periods are indicated with red dots. As shown in Figure 2.2, these are clustered within the North and Central sections of the study area. They are also primarily located on side streets (relative to Convoy Street). These multiple-period high peak points are specifically located on Clairemont Mesa Boulevard (east and west of Convoy Street), Raytheon Road (east of Convoy Street), along Ronson Road (west of Convoy Street), Vickers Street (west of Convoy Street), Engineer Road (both west and east of Convoy Street), Brinell Street (east of and parallel to Convoy Street), and Dagget Street (east of Convoy Street). These locations include commercial land uses offering specialized products and services, and where the available parking supply is relatively low (26-50 spaces, and 51-100 spaces per area within 1/8 mile (see Figure 2.1)). Several destinations fronting the north side of Balboa Avenue (roughly equidistant from Convoy Street and Mercury Street) are also shown to experience high peak conditions for multiple observation periods despite the absence of on-street parking along Balboa Avenue (and the longer than 1/8 mile walking distances from parking at the mid-block). The results for these locations were influenced by the conditions along Dagget Street, where additional access points are located at the rear of these properties.

Locations with peak capacity at or greater than 85% during specific time periods are symbolized by blue dots. The majority of time period-specific peaks occur Midday in the North and Central sections of the study area.

Morning (only) peaks with capacity at or greater than 85% are clustered on Convoy Street proximate to Convoy Court and Copley Park Place.

Midday (only) peaks with capacity at or greater than 85% occur along Convoy Street (from Ronson Road to Dagget Street), Clairemont Mesa Boulevard (west and east of Convoy Street), Ronson Road (east and west of Convoy Street), Vickers Street (east of Convoy Street), Engineer Road (primarily east of Convoy Street), along Mercury Street (near and Engineer Road and Dagget Street), along Balboa Avenue (east of Convoy Street), and along Convoy Street (near Armour Street and Othello Avenue).

Evening (only) peaks with capacity at or greater than 85% were clustered along Convoy Street south of Engineer Road and north of Dagget Street, and south of the Balboa Avenue and north of Othello Avenue. These locations are proximate to restaurants/eateries.

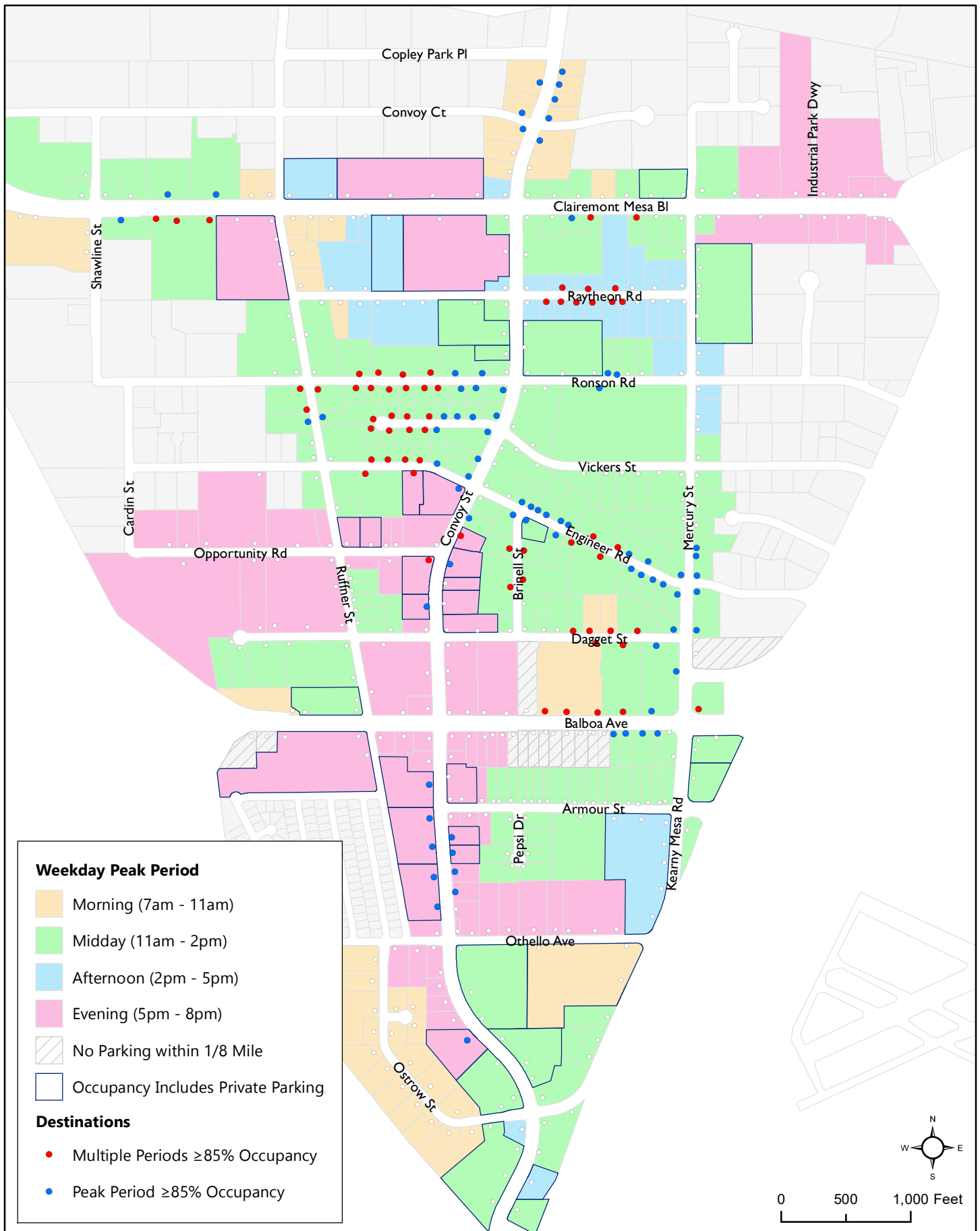


Table 2.1 summarizes weekday public parking occupancy by Section and Location for the four periods analyzed. Mornings revealed no critical strain within the study area. Midday and Evening is when we see occupancy beyond the 85% threshold in some locations, specifically along Convoy Street in the Central section. Overall, occupancy is highest in the Central section of the study area throughout the weekday, with the exception of off-street parking (which remain at lower occupancy levels throughout the weekday). Parking occupancy is lowest in the South section of the study throughout the weekday, which is where more on-street parking exists relative to the other areas.

Table 2.1 – Weekday Public Parking Occupancy by Study Area Section and Location

Section	Location	Morning 7am-11am	Midday 11am-2pm	Afternoon 2pm-5pm	Evening 5pm-8pm
North	Convoy Street	67%	65%	68%	67%
	Side Street	61%	67%	62%	48%
	Total	62%	67%	62%	50%
Central	Convoy Street	71%	91%	82%	92%
	Side Street	74%	79%	75%	69%
	Off-Street	25%	43%	32%	44%
	Total	64%	72%	67%	65%
South	Convoy Street	27%	35%	35%	44%
	Side Street	52%	55%	53%	53%
	Total	45%	50%	48%	51%

*Peak period in bold

Morning (7am to 11am)

Figure 2.3 displays weekday parking occupancy by supply for the morning period between 7am and 11am. Higher occupancy rates were observed in the Central section of the study area; indeed, every road in the Central section had parking occupancy exceeding 50%. Occupancy exceeding 85% were found along Convoy Street, Ruffner Street, Mercury Street, Engineer Road, Opportunity Road, Brinell Street, and Dagget Street. The North section also reports segments at 85% or greater occupancy along Convoy Street, Ruffner Street, Raytheon Road, and Ronson Road. The South section shows two small portions at 85% or greater occupancy, along Kearny Mesa Road and Othello Avenue; all of Armour Street (and Pepsi Drive) parking occupancy is at 70% or greater, with a smaller portion over 85% occupancy.

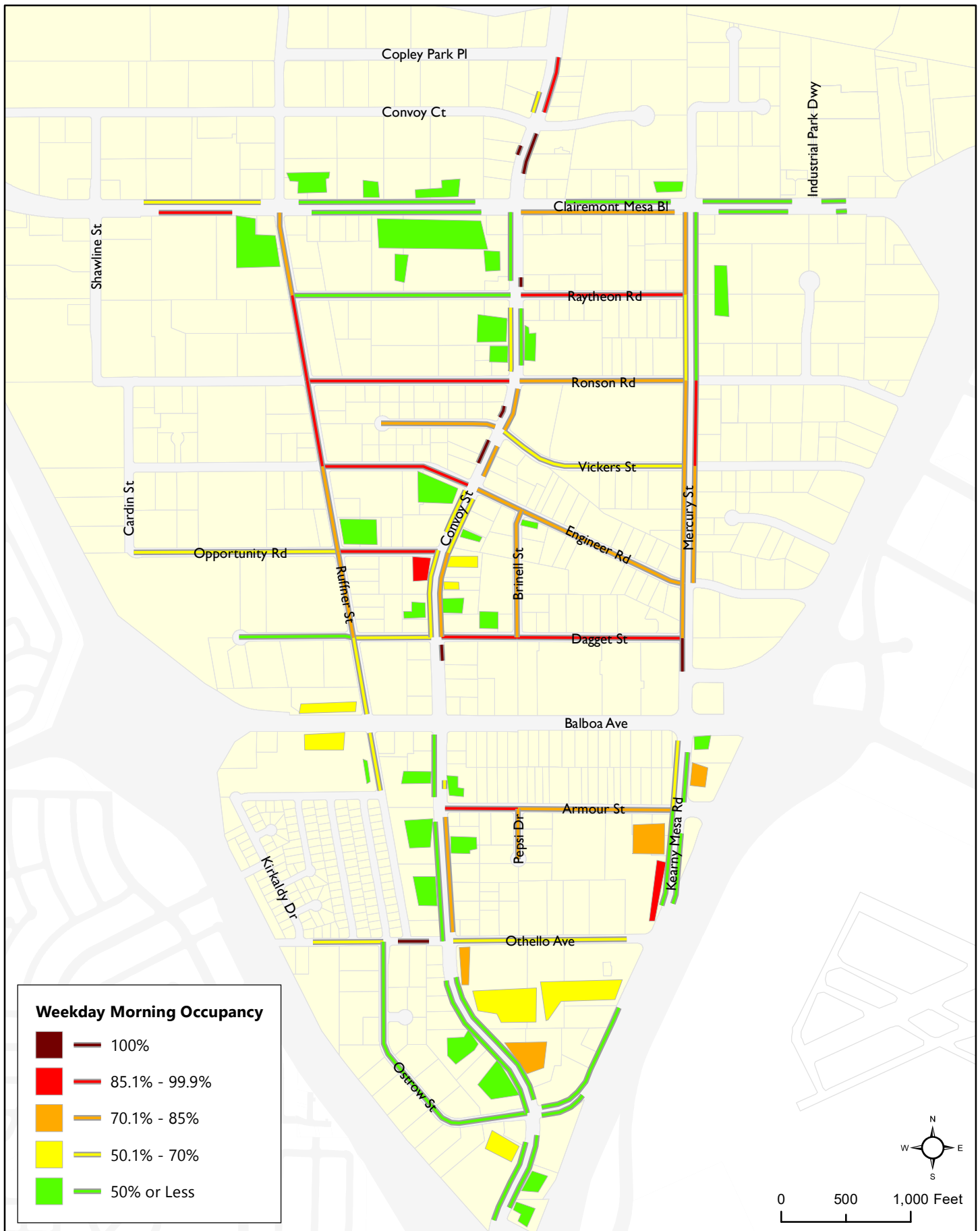
Figure 2.4 shows the public parking occupancy within 1/8th of a mile of each parcel in the study area (destination-based occupancy)⁶. Higher demand is concentrated in the Central section of the study area, especially along Vickers Street, Engineer Road, Brinell Street, Dagget Street, Mercury Street, and Balboa Avenue. The North section of the study area shows highest demand along Ronson Road, Raytheon Road, a smaller portion of Clairemont Mesa Boulevard (west of Ruffner Street), and Convoy Street (from Ronson Road to Copley Park Place on the east side, and from Clairemont Mesa Boulevard to Copley Park Place on the west side). The South section of the study area shows almost completely less than 70% occupancy, with the exception of Armour Street (and Pepsi Drive) and Kearny Mesa Road (from Armour Street to Othello Avenue) which have 70-85% occupancy.

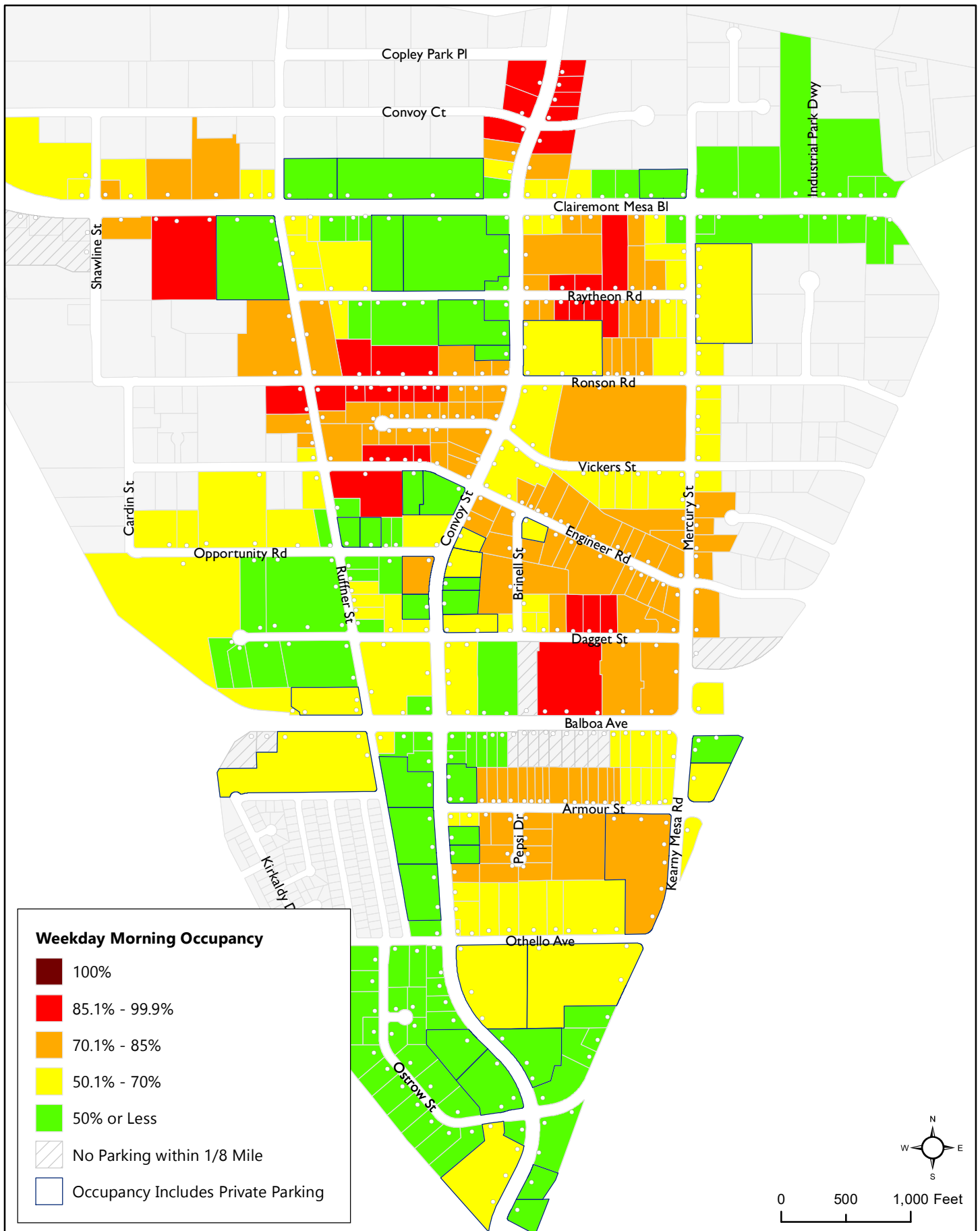
Midday (11am to 2pm)

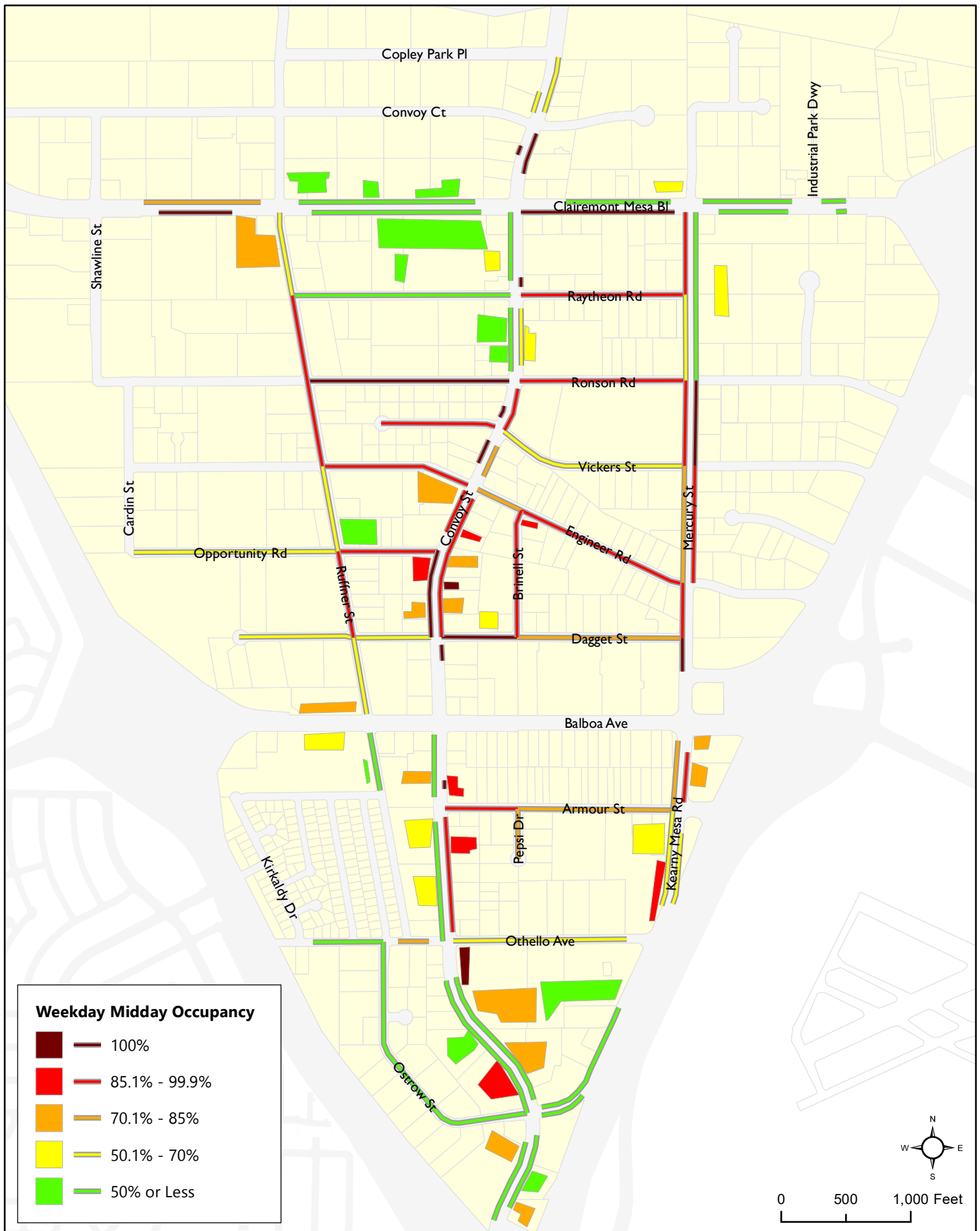
Figure 2.5 displays weekday parking occupancy for the midday period between 11am and 2pm. This period is the weekday peak period for both the Central and North sections of the study area. During this period, occupancies usually increase from the preceding morning period. Higher occupancy rates (50% - 100%) are again concentrated in the Central section of the study area, and on every road within; 85% and higher occupancy was found along Convoy Street, Ruffner Street, Mercury Street, Engineer Road, Opportunity Road, Brinell Street, and Dagget Street. The North section also reports segments at 85% or greater occupancy, including the east side of Convoy Street (north of Raytheon Road), Clairemont Mesa Boulevard (east of Convoy Street), Raytheon Road, Ruffner Street, and all of Ronson Road. The South section shows an increase in demand from the morning period along Convoy Street, and continuing demand along Armour Street (and Pepsi Drive). There is also an increase in demand along Kearny Mesa Road, where the east side between Balboa Avenue and Armour Street is greater than 85% occupancy. Notably, Othello Avenue shows a decrease in demand west of Convoy Street relative to morning.

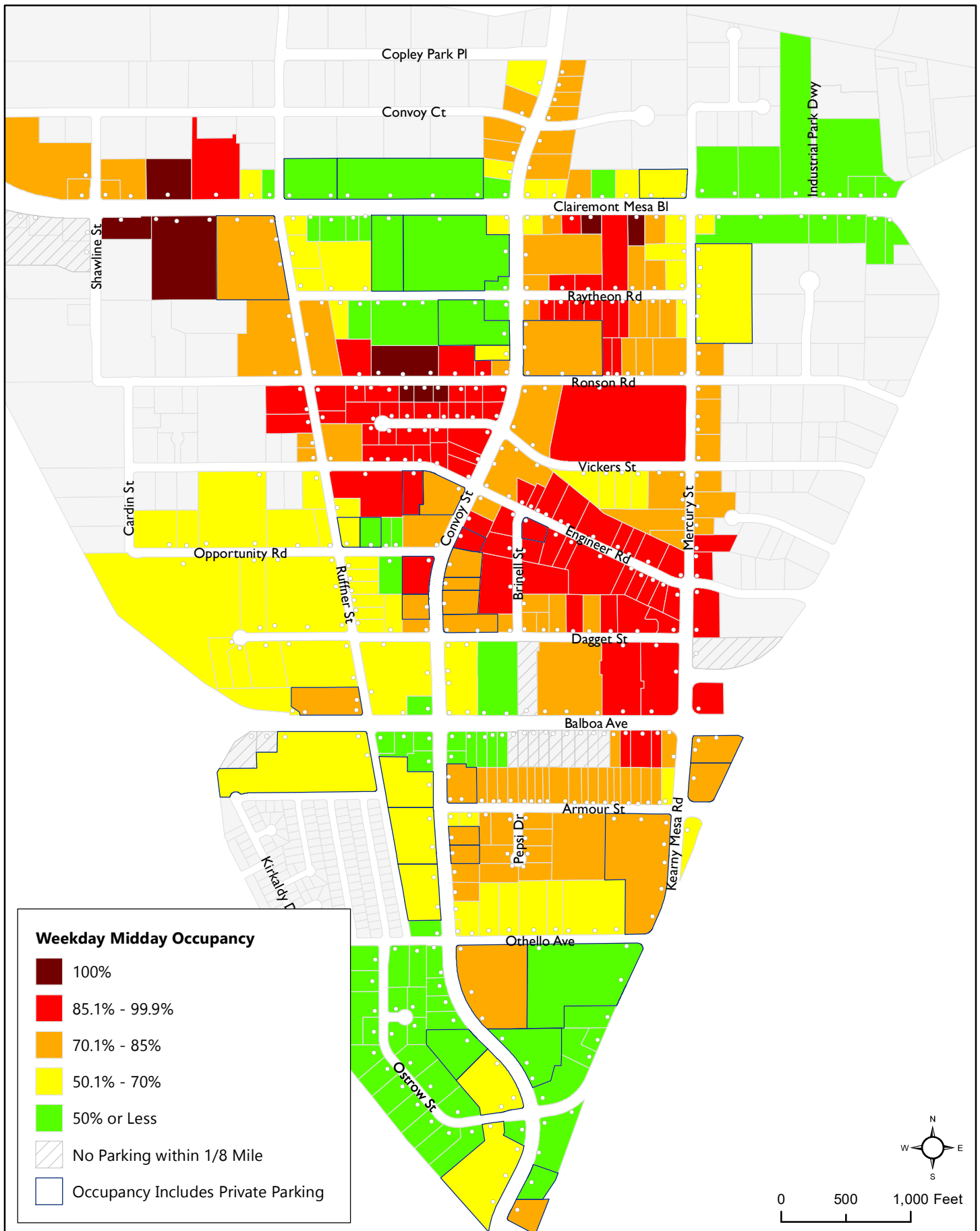
Figure 2.6 shows the destination-based occupancy in the study area. Demand patterns increase from the earlier morning period. The highest demand remains concentrated in the Central section of the study area, especially along Convoy Street, Vickers Street, Engineer Road, Brinell Street, Dagget Street, Mercury Street, and Balboa Avenue. The North section of the study area shows increasing demand along Convoy Street, Ronson Road, Raytheon Road, and Clairemont Mesa Boulevard (west of Ruffner Street). Notably, demand along Convoy Street north of Clairemont Mesa Boulevard decreased from higher morning levels but remained at 50%-85% occupancy. The South section shows increasing demand along Convoy Street, Balboa Avenue, Kearny Mesa Road, Othello Avenue (east of Convoy Street). However, the only occupancy exceeding 85% is located on the south side of Balboa Avenue near Kearny Mesa Road.

⁶ To facilitate comparisons for each time period between occupancy by supply and destination-based parking occupancy, Figure 2.4, and all other subsequent exhibits use the same five occupancy category ranges and color symbols: 100% occupancy (dark red), 85% to 99.9% occupancy (red), 70.1% to 85% (orange), 50.1% to 70% (yellow) and 50% or less (green).









Afternoon (2pm to 5pm)

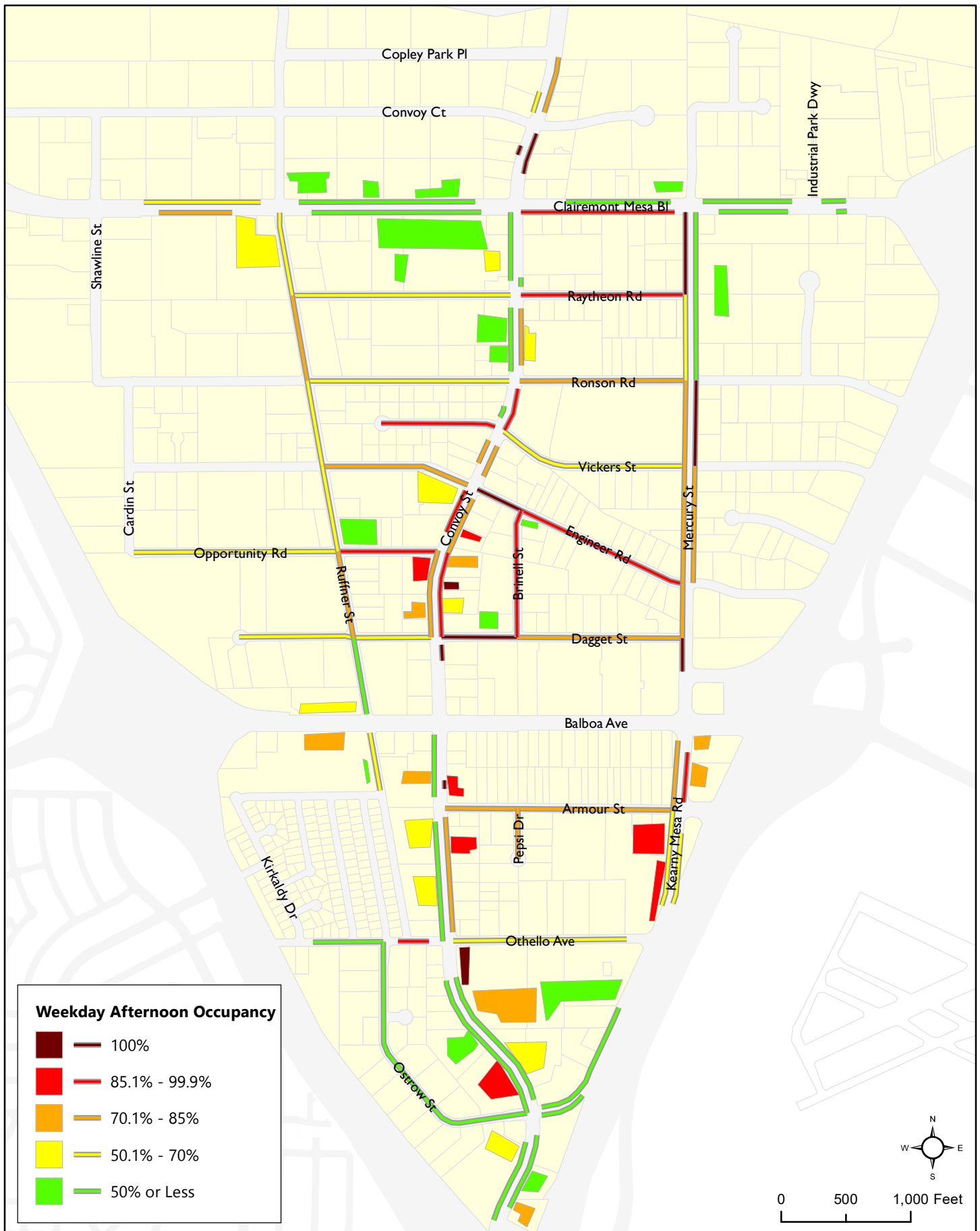
Figure 2.7 shows weekday parking occupancy for the afternoon period between 2pm and 5pm. Occupancy remain concentrated in the Central section of the study area, but the patterns change; there is less demand west of Convoy Street relative to both morning and midday; Mercury Street decreases to morning-level demand (but remains at greater than 70%); and demand remains at levels over 85% east of Convoy Street on Engineer Road and Brinell Street. The North section also shows a new pattern, with a decrease in demand along Ronson Road, an increase in demand along Raytheon (west of Convoy Street) and increasing demand along the east side of Convoy Street from Ronson Road to Copley Park Place. The South section shows varied patterns, with a decrease in demand along Convoy Street, a slight decrease along Armour Street (west of Pepsi Drive), increasing demand on Othello (west of Convoy Street), and an increase in demand along Kearny Mesa Road (all relative to midday occupancy).

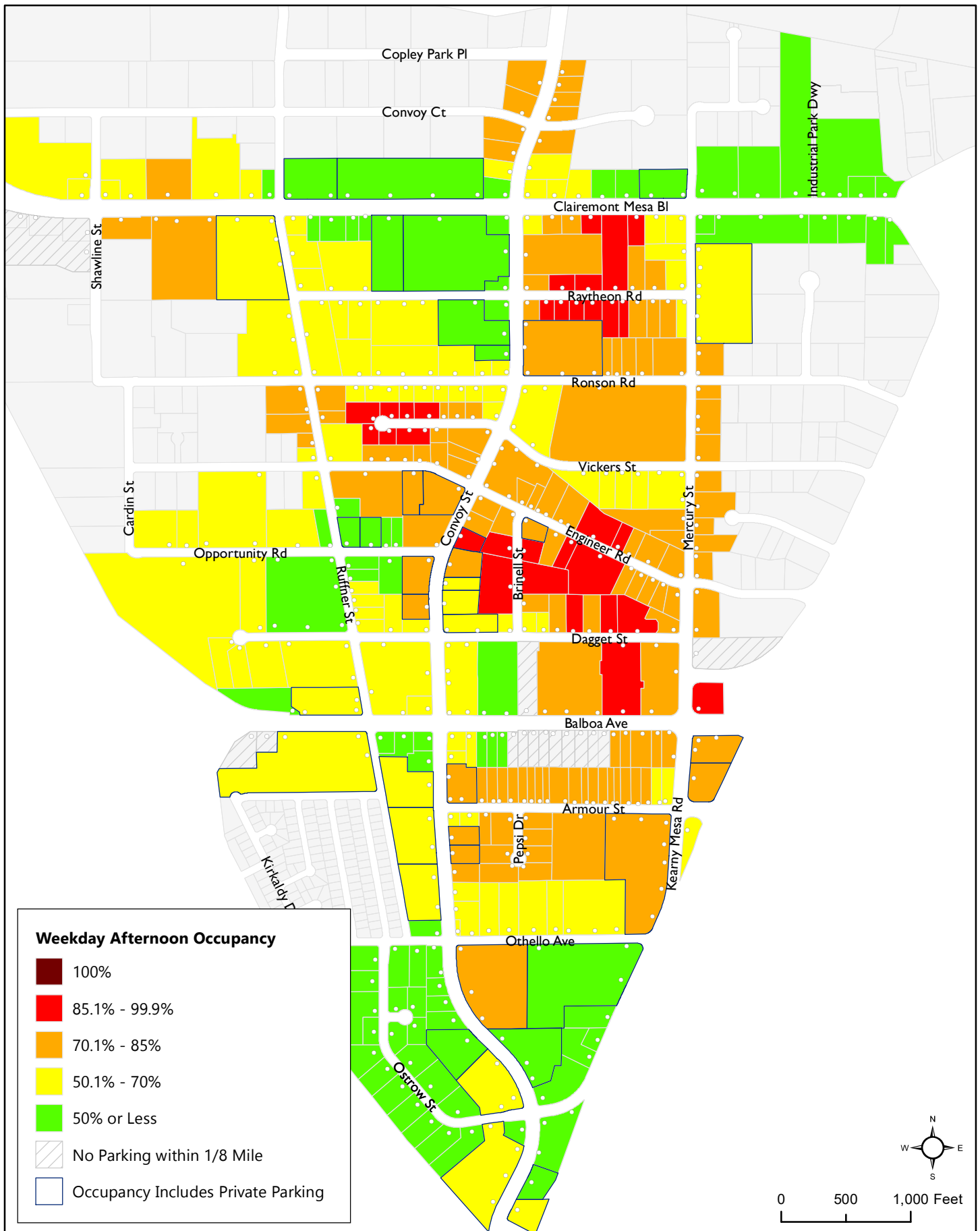
Figure 2.8 shows the destination-based occupancy in the study area. As was the case in the two earlier periods, the highest demand remains concentrated in the Central section of the study area; however, the demand decreases relative to midday. There is still strong demand along Convoy Street, Vickers Street, Engineer Road, Brinell Street, Dagget Street, Mercury Street, and Balboa Avenue, with 85% and higher occupancy on Vickers (west of Convoy Street), and Engineer Road (east of Convoy Street), Brinell Street, Dagget Street and Balboa Avenue. The North section of the study area shows a contrary trend, with decreasing demand throughout. That said, there is still 70%-85% occupancy along Convoy Street from Ronson Road to Copley Park Place, and along Clairemont Mesa Boulevard (east of Convoy Street, and west of Ruffner Street), and greater than 85% occupancy on Raytheon Road and Clairemont Mesa Boulevard east of Convoy Street. The South section shows an overall slight decrease in demand relative to midday, with the exception of a small increase in demand on Convoy Street near Balboa Avenue. Importantly, no part of the South section shows over 85% parking occupancy for weekday afternoons.

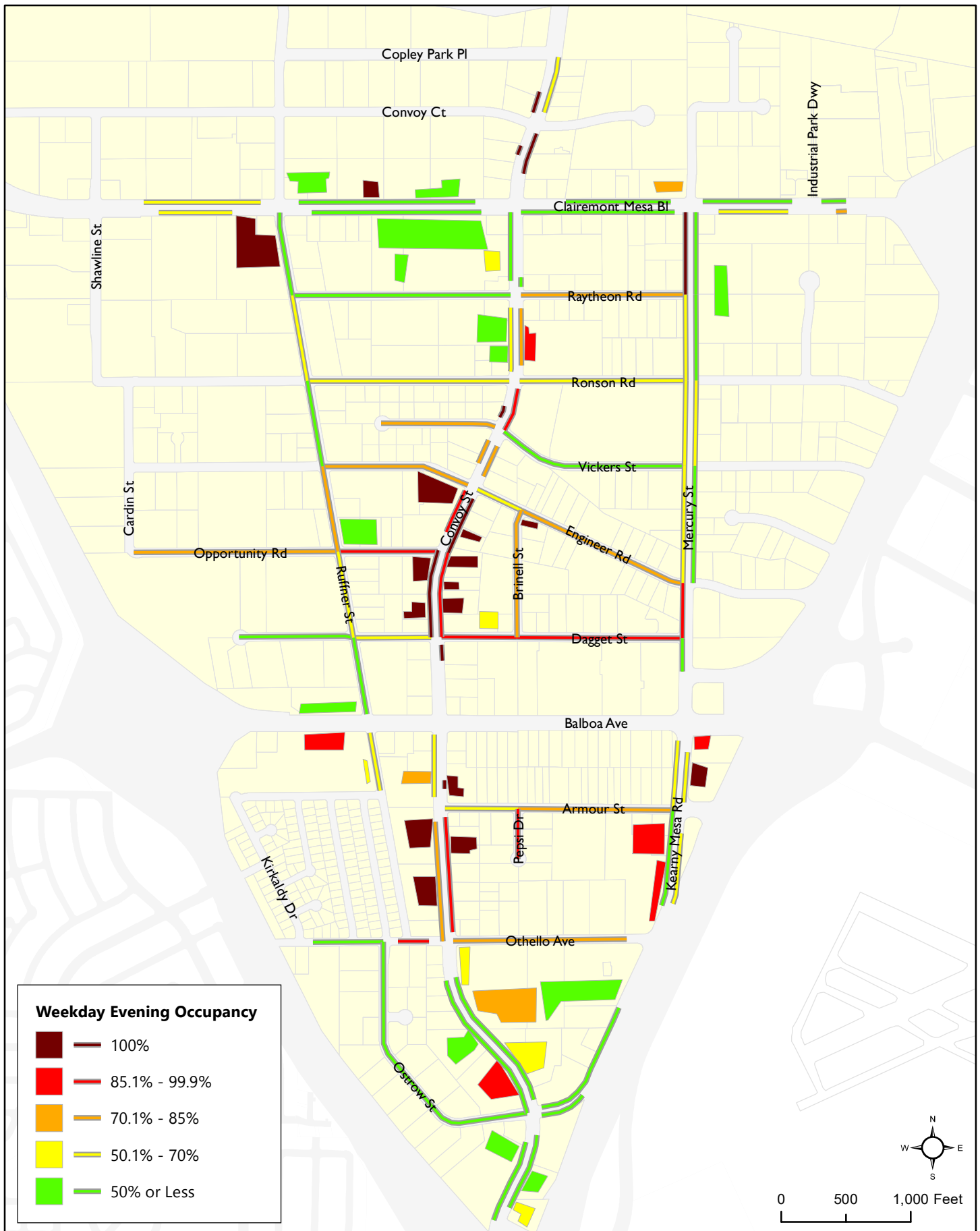
Evening (5pm to 8pm)

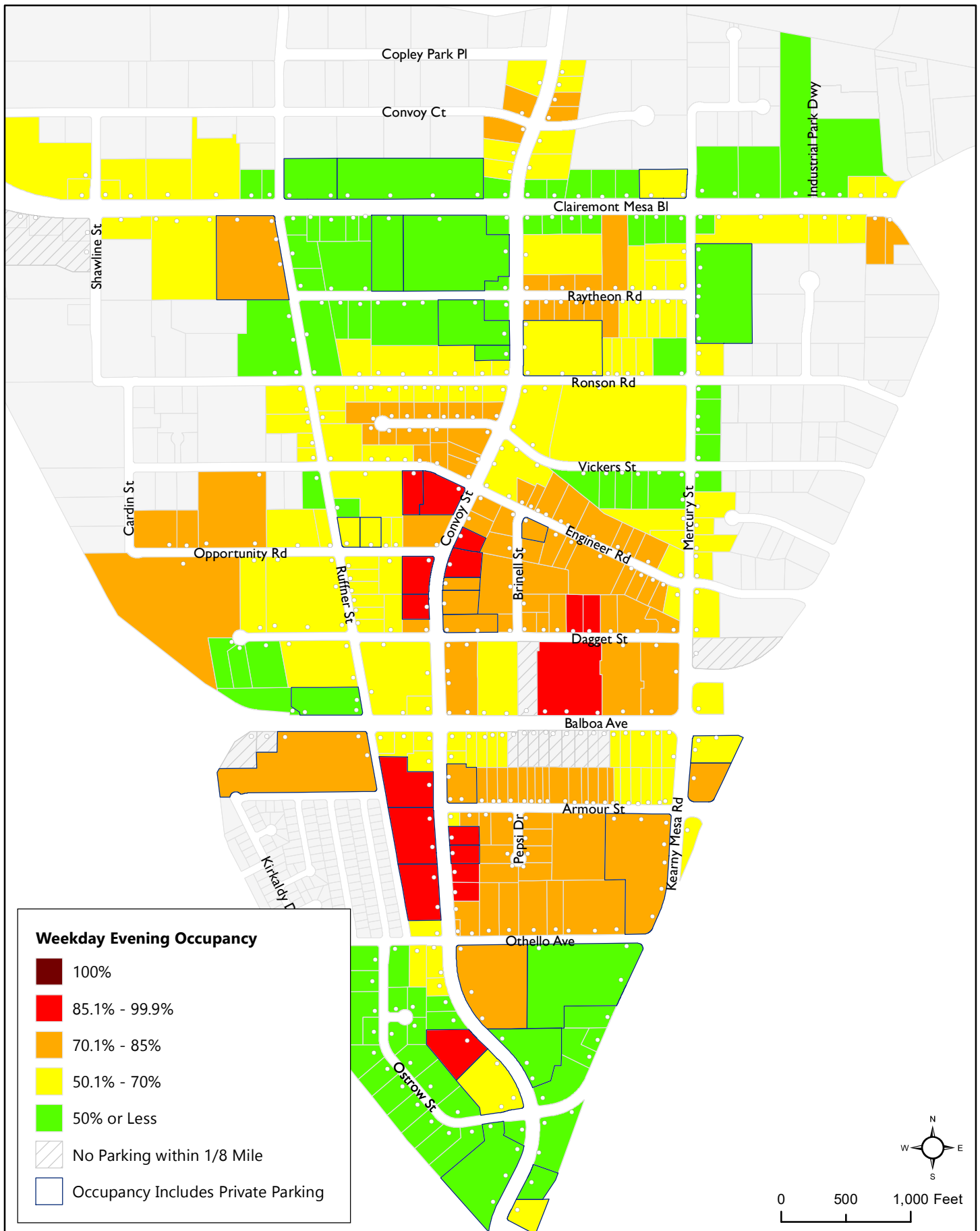
Figure 2.9 shows weekday parking occupancy for the evening period between 5pm and 8pm. Parking occupancy in the Central section of the study area shows a shift in demand southward; demand increases on Convoy Street, especially south of Engineer Road where levels reach 100% occupancy; this includes off-street lots. Mercury Street shows increasing demand south of Engineer Road; and Opportunity Road and Dagget Street also show increasing occupancy, including at levels greater than 85%. The North section shows a general decrease in demand, with the exception of Convoy Street north of Clairemont Mesa Boulevard, and in lots along Convoy Street (south of Raytheon Road) and Clairemont Mesa Boulevard (west of Ruffner Street). 85% and greater demand remains on west side of Kearny Mesa Road, between Clairemont Mesa Boulevard and Raytheon Road. The South section shows increasing parking occupancy north of Othello Avenue, and especially in off-street lots, whereas occupancy decreases south of Othello Avenue, including in off-street lots. Notably there is a shift in demand throughout almost the entire study area from on-street parking to off-street parking.

Figure 2.10 shows the destination-based occupancy in the study area during the evening hours. Relative to afternoon, there is a decrease in parking demand in the Central section, though higher demand remains along Convoy Street south of Vickers Street, and along Engineer Road, Dagget Street, and Balboa Avenue. The North section shows a decline in parking occupancy throughout, except on Clairemont Mesa Boulevard east of Mercury Street and west of Ruffner Street. Notably, there are no destinations with greater than 85% demand during this period. The South section shows an increase in demand relative to afternoon along Convoy Street south of Othello Avenue and north of Ostrow Street, while also showing a decrease in demand south of Ostrow Street.









Weekday Parking Occupancy Summary

Overall, the existing condition data collection show the following pattern for each of the section:

Central

During the morning, the Central section experiences high demand for parking which is generally dispersed among various side streets such as Vickers Street, Engineer Road, Brinell Street, Dagget Street, and Mercury Street. These side streets are usually located adjacent to existing industrial businesses that have early work hours. As the day progresses into midday, there is a further increase in parking demand within the Central section, especially along Convoy Street, likely due to the popularity of restaurants located in this area. However, during the afternoon period, parking demand slightly decreases, reflecting a pattern that is typically associated with lunch time parking demand and possibly due to early closing of some industrial businesses. As evening approaches, parking demand on Convoy Street rises again, reflecting dinner-time parking needs, while the demand for parking on side streets drops to its lowest level on a weekday.

North

The North section, much like the Central Area, sees a high demand for parking on streets that border industrial businesses, such as Ruffner Street, Raytheon Road, and Ronson Road. However, there is relatively low parking demand on Convoy Street and Clairemont Mesa Boulevard. As the day progresses, parking demand in the North section increases but not as rapidly as in the Central section. The demand for parking in the North section rises significantly on Clairemont Mesa Boulevard west of Ruffner Street and between Convoy Street and Mercury Street during midday, as these areas are generally occupied by retail and restaurant businesses that open around this time. Following the midday period, the demand for parking in the North section decreases, and this trend continues into the evening.

South

Throughout the day, parking demand in the South section remains relatively low, generally less than 50%, with a slight shift in the parking demand pattern observed during the evening period. Specifically, in the evening period, the South section experiences an increase in demand along Convoy Street south of Othello Avenue and north of Ostrow Street, while there is a decrease in demand south of Ostrow Street. High parking demand is only observed in the areas fronting restaurant and retail businesses along Convoy Street, whereas other segments of Convoy Street and side streets have excess parking availability.

2.2 Weekday Parking Turnover

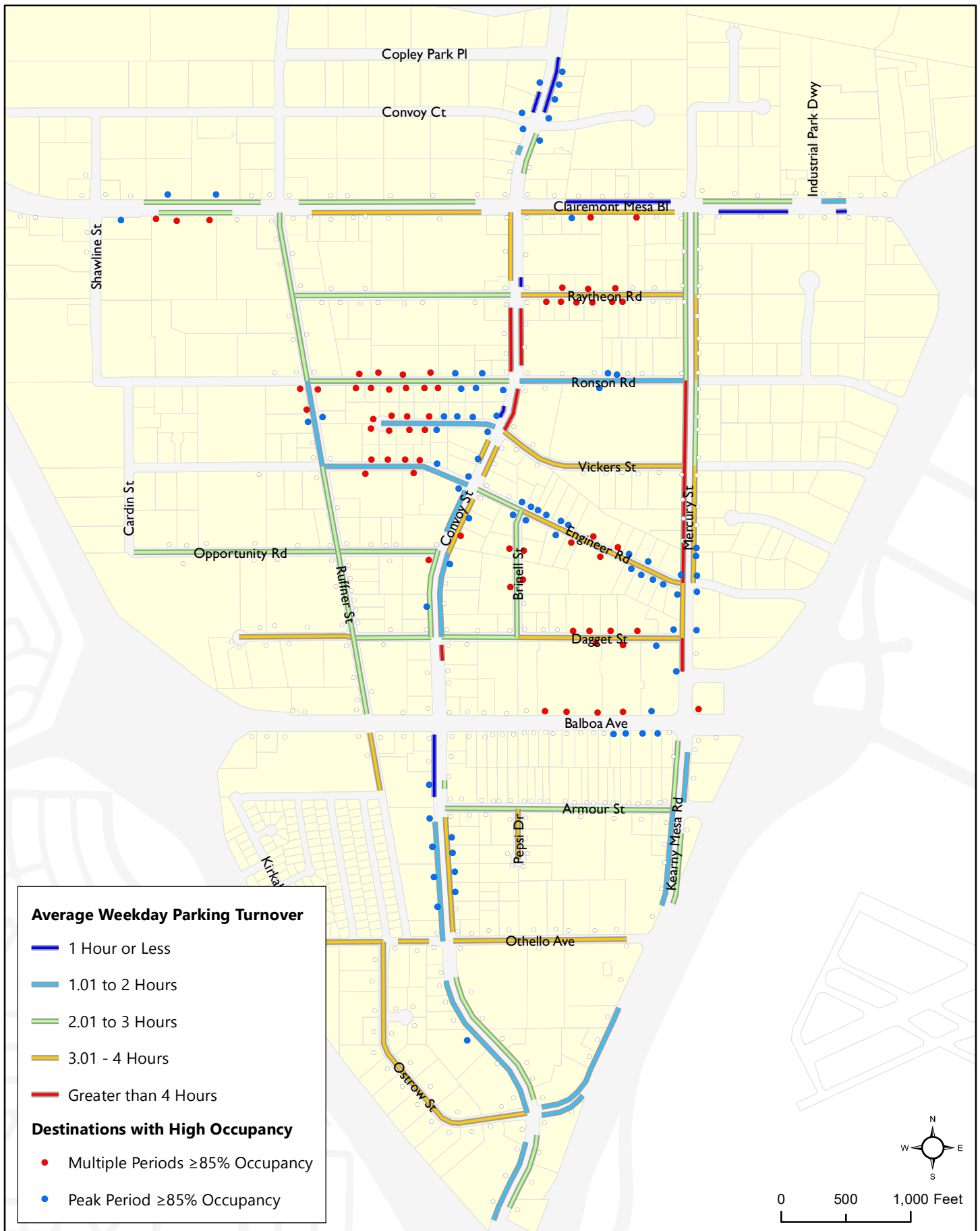
Parking turnover was estimated within the study area during the time span of parking occupancy data collection, excluding vehicles parked after 7pm. **Table 2.2** summarizes the frequency of parking durations by sections and locations of the study area. On-street parking along Convoy Street in the **Central** (1.2 hours) and **South** (1.9 hours) sections of the study area have an average turnover below two hours. Side street parking turnover is generally lower on average (meaning, with longer durations) compared to on-street parking along Convoy Street in the study area. Vehicles parked for durations longer than four hours are more prevalent along the side streets of the study area than along Convoy Street, though some sections of Convoy Street also have sizable share of longer duration parking visits. These longer visits are likelier to be commuters than visitors, given that commuter trips have significantly lower turnover trip activity than shopping and dining trips (residential trips are also lower turnover, though there is currently no residential land use within the study area).

Table 2.2 - Weekday Public Parking Turnover by Study Area Section and Location

S E C T I O N	Location							Unique Vehicles Observed	Average Duration
		Less than 1 Hour	1 to 2 Hours	2 to 3 Hours	3 to 4 Hours	4 to 8 Hours	More than 8 Hours		
N o r t h	Convoy Street	58.0%	7.2%	5.8%	8.7%	14.5%	5.8%	69	2.3 Hours
	Side Street	57.5%	7.8%	9.7%	1.7%	12.0%	11.3%	424	2.5 Hours
	Total	57.6%	7.7%	9.1%	2.6%	12.4%	10.5%	493	2.4 Hours
C e n t r a l	Convoy Street	82.6%	3.0%	2.3%	3.4%	8.2%	0.5%	437	1.2 Hours
	Side Street	51.0%	6.7%	5.1%	9.0%	19.9%	8.4%	987	2.8 Hours
	Total	60.7%	5.5%	4.2%	7.3%	16.3%	6.0%	1,424	2.3 Hours
S o u t h	Convoy Street	68.3%	5.8%	4.8%	4.8%	11.5%	4.8%	104	1.9 Hours
	Side Street	57.3%	4.7%	1.8%	8.1%	22.4%	5.7%	492	2.6 Hours
	Total	59.2%	4.9%	2.3%	7.6%	20.5%	5.5%	596	2.5 Hours

*Excludes vehicles parked after 6pm

Figure 2.11 shows average weekday parking turnover by block in the study area overlaid with destinations with high surrounding parking occupancy. The side streets with highest destination-based parking occupancies typically have low average parking turnover (between three and four hours). These locations are all east of Convoy Street, along Clairemont Mesa Boulevard (eastbound), Raytheon Road, Engineer Road, and Dagget Street. Notably, the side streets west of Convoy Street with the highest occupancies do not have low turnover. This includes Vickers Street and Engineer Road (both one to two hours, on average), and Ronson Road (two to three hours). Notably, two blocks of Convoy Street (between Raytheon Road and Vickers Street) have very low average turnover, however the destinations along these blocks do not experience parking occupancy greater than 85%, so the presence of low turnover there is less critical.



3.0 Weekend Parking Conditions

3.1 Weekend Parking Occupancy

Weekday Peak Conditions

Figure 3.1 shows the peak parking time period on the weekend in the study area using destination-based occupancy. Locations are also identified where the magnitude of the peak is greater than 85% (critically high) for one or more periods. As shown, parking demand throughout the study area is much lower on the weekends compared to weekdays. There are just a few areas, clustered at Convoy Street and Engineer Road and south to Dagget Street, and on Clairemont Mesa Boulevard west of Ruffner Street where parking demand exceeds 85% for multiple time periods.

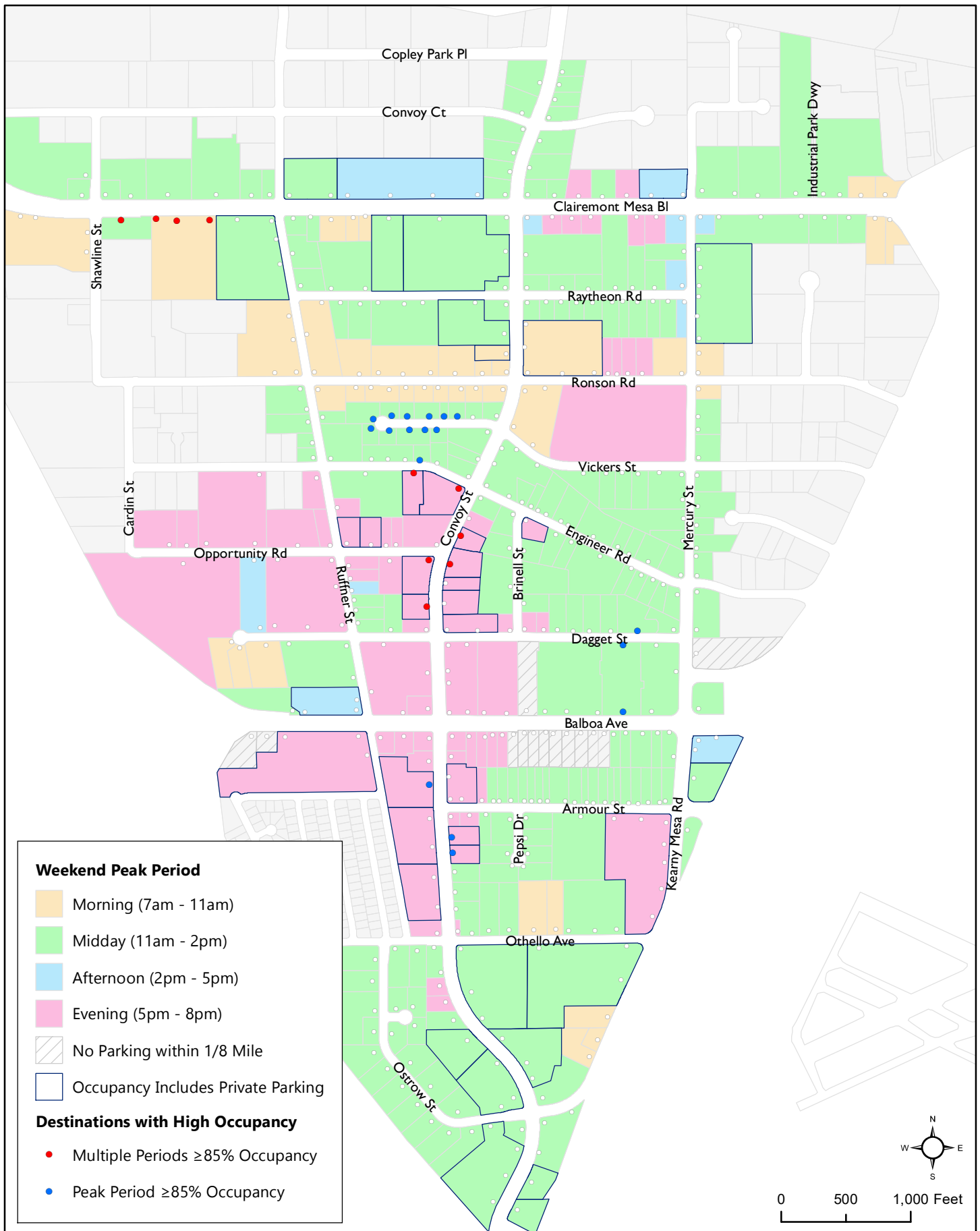
Generally peak parking occupancies on the weekend in the **Central** section exceed the other sections and is highest midday (including exceeding 85% along Vickers Street west of Convoy Street) and evening. Most of the **North** section peaks in midday. The **South** section peak parking occupancy is midday and evening on the weekend.

Table 3.1 summarizes weekend parking occupancy by section, location, and the four periods analyzed. Relative to the weekday, there is a considerable decline in parking occupancy on the weekend in the study area (with one notable exception). Compared to the data in Table 2.1, there is a comparatively less parking supply occupancy in all locations during the Morning period. For the Midday period, lower parking occupancy was found in the North and Central sections, while the South section remained about the same; the Afternoon period shows a similar pattern. The Evening period saw a comparatively lower parking occupancy in North and Central, and slightly less but very similar in the South. Notably, no section of the study area exceeded the critical threshold of 85% occupancy throughout the entire weekend day. The midday period was the peak for all three sections of the study area on the weekend.

Table 3.1 - Weekend Public Parking Occupancy by Study Area Section and Location

Section	Location	Morning 7am-11am	Midday 11am-2pm	Afternoon 2pm-5pm	Evening 5pm-8pm
North	Convoy Street	26%	33%	26%	18%
	Side Street	33%	34%	31%	30%
	Total	33%	34%	30%	29%
Central	Convoy Street	64%	80%	70%	77%
	Side Street	48%	60%	54%	56%
	Off-Street	6%	37%	31%	47%
	Total	41%	57%	51%	56%
South	Convoy Street	33%	41%	38%	49%
	Side Street	38%	48%	42%	39%
	Total	37%	46%	41%	41%

*Peak period in bold



Morning (7am to 11am)

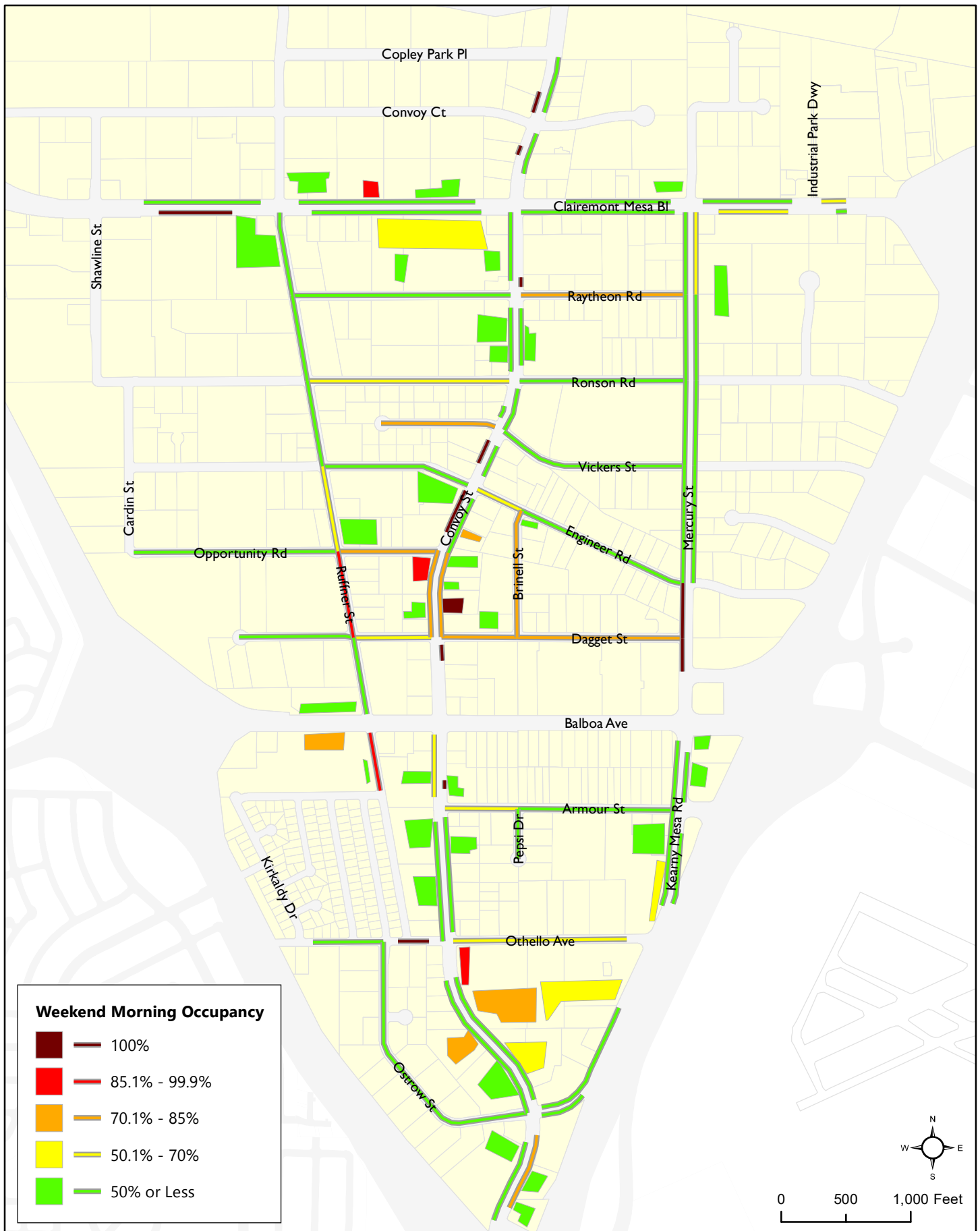
Figure 3.2 displays weekend parking occupancy for the morning period between 7am and 11am. As was the case during the weekday, weekend parking occupancy was highest in the Central section of the total study area, with occupancy highest along Convoy Street south of Engineer Road to Dagget Street, along Opportunity Road, Ruffner Street, Mercury Street, and Dagget Street. Parking occupancy in this area exceeds 85% in several locations, including two private off-street lots along Convoy Street. The North section also reports portions (blocks) at 85% or greater occupancy along Clairemont Mesa Boulevard west of Convoy Street (one lot and on-street parking west of Ruffner Street). Convoy Street on the west side north of Clairemont Mesa Boulevard also reaches 85% occupancy. The South section shows occupancies above 50% on Othello Avenue, and in three lots along Convoy Street south of Othello Avenue. There is also higher demand along the east side of Convoy Street near Aero Drive.

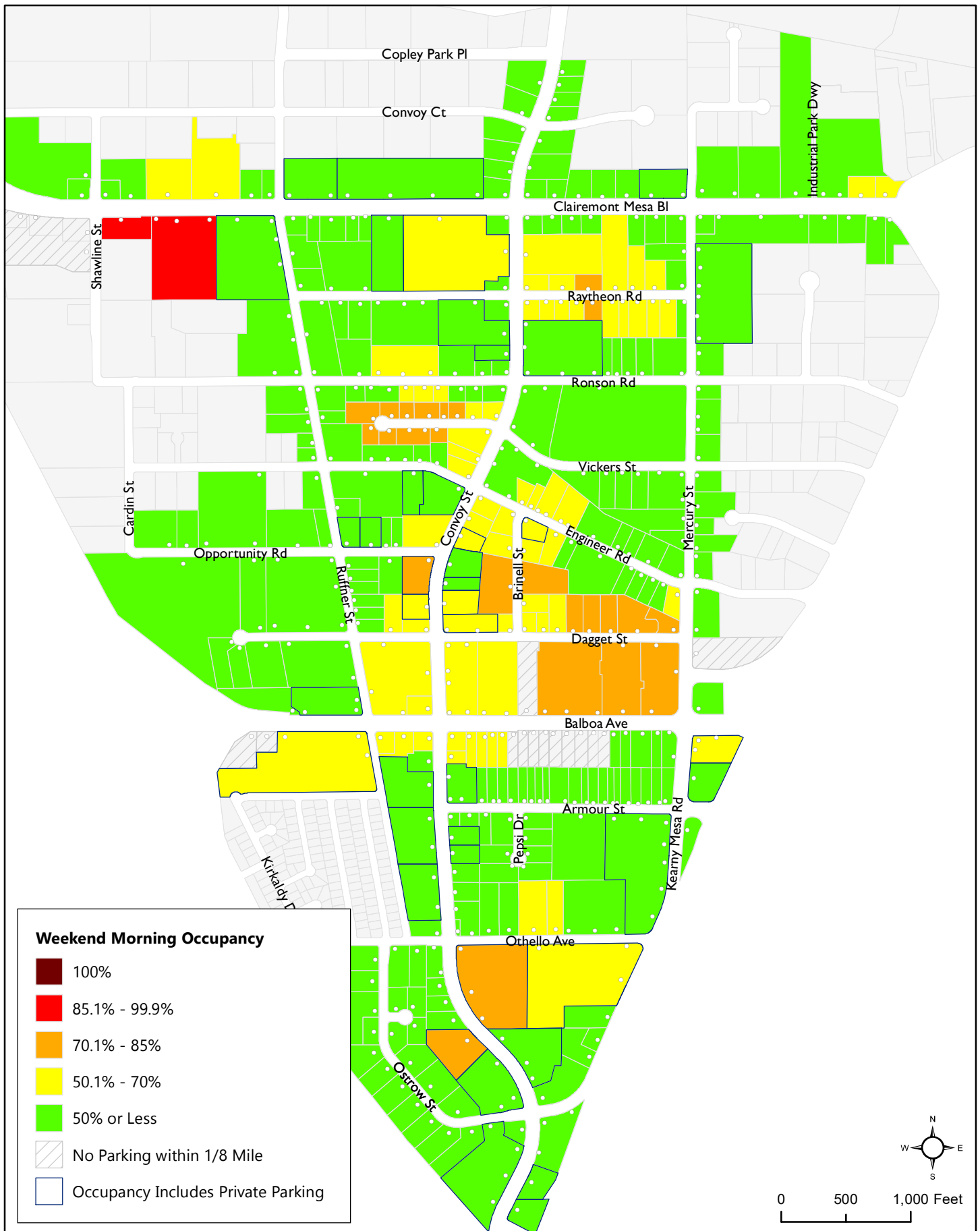
Figure 3.3 shows the destination-based occupancy in the study area. The first notable observation is that only a single part of the entire study area had parking occupancy exceeding 85%; it is located at Clairemont Mesa Boulevard, near Shawline Street. The highest parking occupancy is otherwise concentrated in the Central section of the study area, especially along Vickers Street, Convoy Street at Opportunity Road, Brinell Street, Dagget Street, and Balboa Avenue. The North section of the study area shows comparatively lower occupancy relative to the weekday, with the exception of the aforementioned single area along Clairemont Mesa Boulevard exceeding 85%. The South section shows only high parking demand along Convoy Street south of Othello, and none of this section exceeds 85% occupancy.

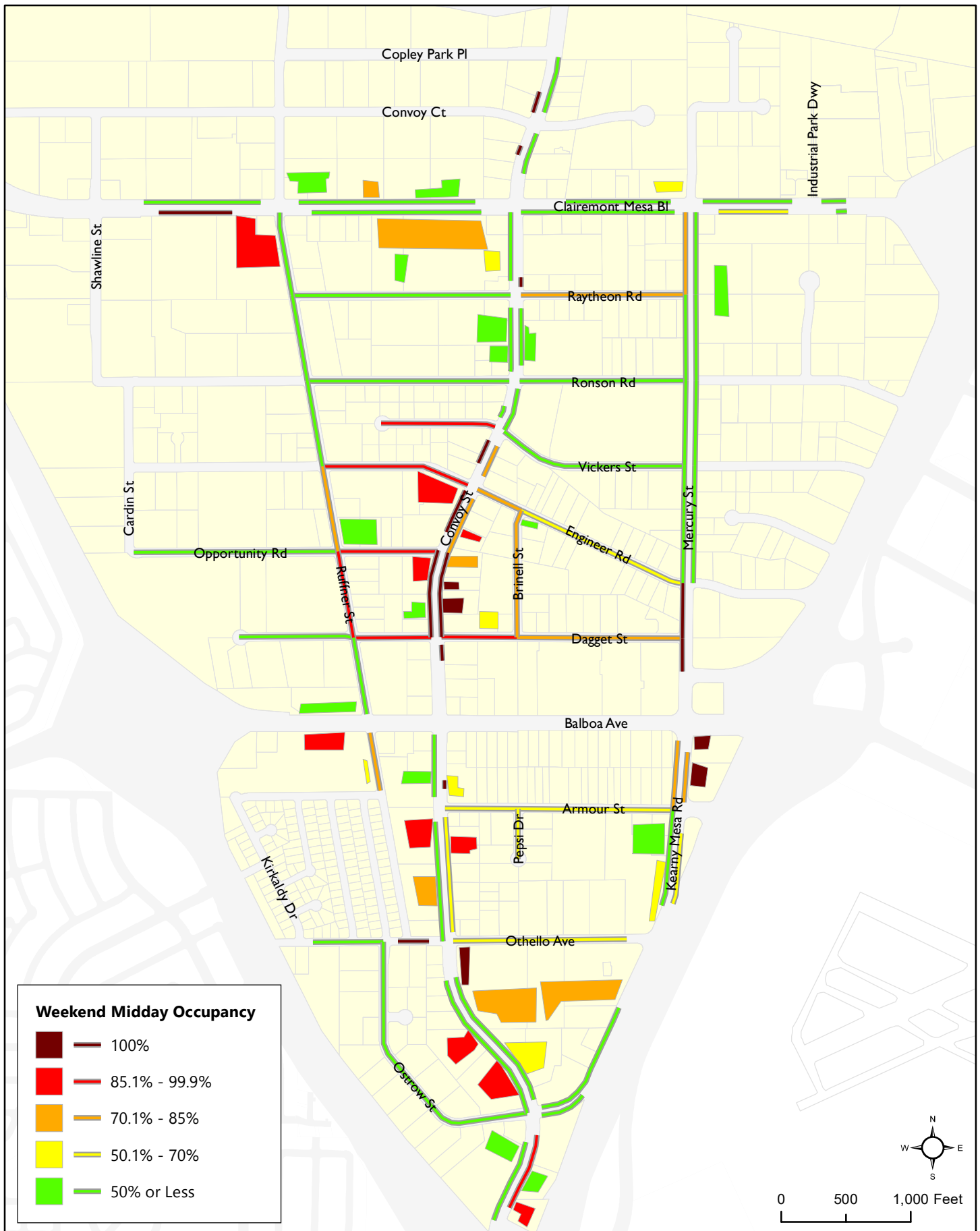
Midday (11am to 2pm)

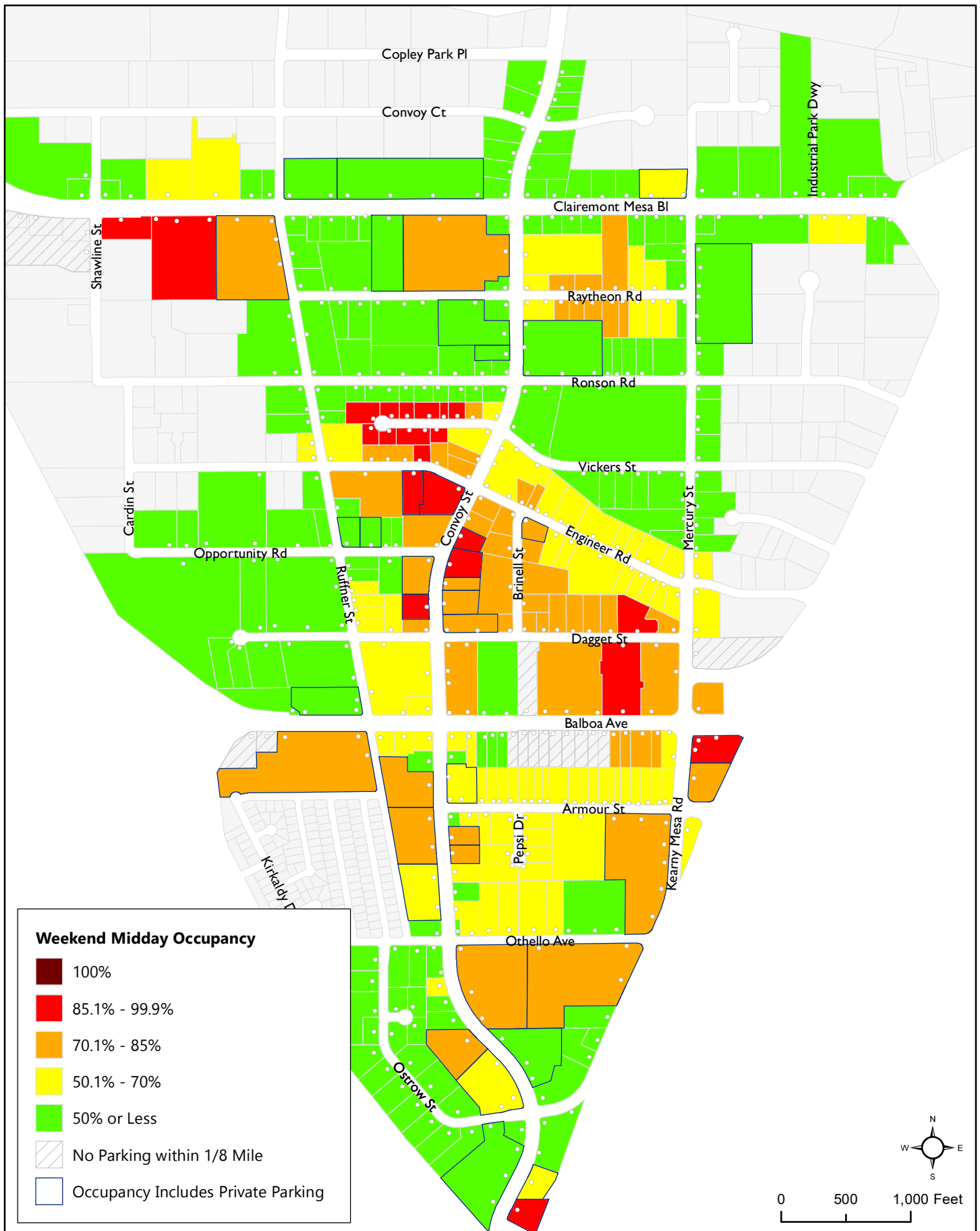
Figure 3.4 displays weekend parking occupancy for the midday period between 11am and 2pm. Midday weekend parking occupancy in the Central section saw an increase from the morning; parking occupancy is again highest along Vickers Street (west of Convoy Street), Convoy Street south of Vickers Street to Balboa Avenue, along Opportunity Road, Ruffner Street, Mercury Street, and Dagget Street. Notably, much of this parking occupancy exceeds the 85% critical threshold. The North section also showed increased occupancy relative to the morning, with off-street parking lots along Clairemont Mesa Boulevard seeing greater occupancy. There is also high demand at Raytheon Road and Convoy Street, and along Raytheon Road east of Convoy Street. The South section also showed an increase in occupancy during the midday; particularly within private parking lots along Convoy Street and on-street parking on the east side of Convoy Street near Aero Drive exceed 85% occupancy.

Figure 3.5 shows the destination-based occupancy in the study area. Parking supply occupancy is again highest in Central section of the study area along Convoy Street from Engineer Road to Balboa Avenue, Vickers Street (west of Convoy Street), Engineer Road (especially west of Convoy Street), Brinell Street, Dagget Street, and Balboa Avenue. Destinations along Vicker Street, Convoy Street, Engineer Road, Dagget Street and Balboa Avenue exceeded the 85% critical threshold. The North section of the study area shows a modest increase in parking demand along Clairemont Mesa Boulevard and Raytheon Road, relative to morning observations; the aforementioned single area at Clairemont Mesa Boulevard east of Shawline Street remains at parking demand exceeding 85%. The South section shows increasing parking demand along Convoy Street, south of Othello Avenue, with one destination near Aero Drive exceeding 85% occupancy.









Afternoon (2pm to 5pm)

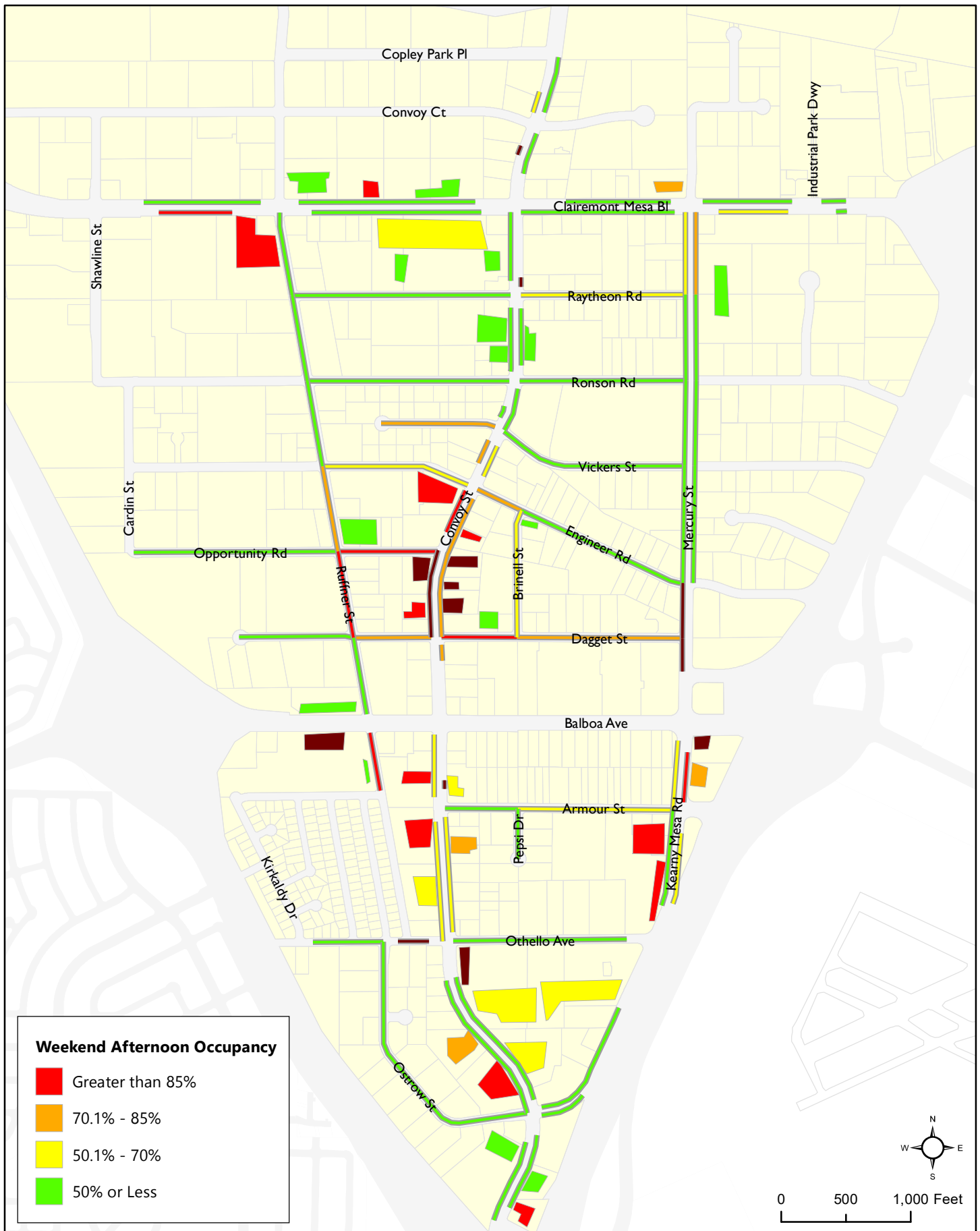
Figure 3.6 displays weekend parking occupancy for the afternoon period between 2pm and 5pm. In the Central section of the study area, Convoy Street from Engineer Road to Dagget Street (both on-street and off-street lot parking) remained at occupancy levels exceeding 85%; otherwise, the Central section experienced a decline in parking occupancy relative to midday. The North section also showed reduced occupancy relative to the midday, with the exception of two private parking lots along Clairemont Mesa Boulevard exceeding 85%, and on-street parking on the south side of Clairemont Mesa Boulevard west of Ruffner Street. The South section also showed a reduction in parking occupancy compared to midday, particularly off-street lots along Convoy Street south of Othello Avenue; notably Convoy Street exceeded 85% occupancy in three private parking lots from Othello Avenue to Aero Drive.

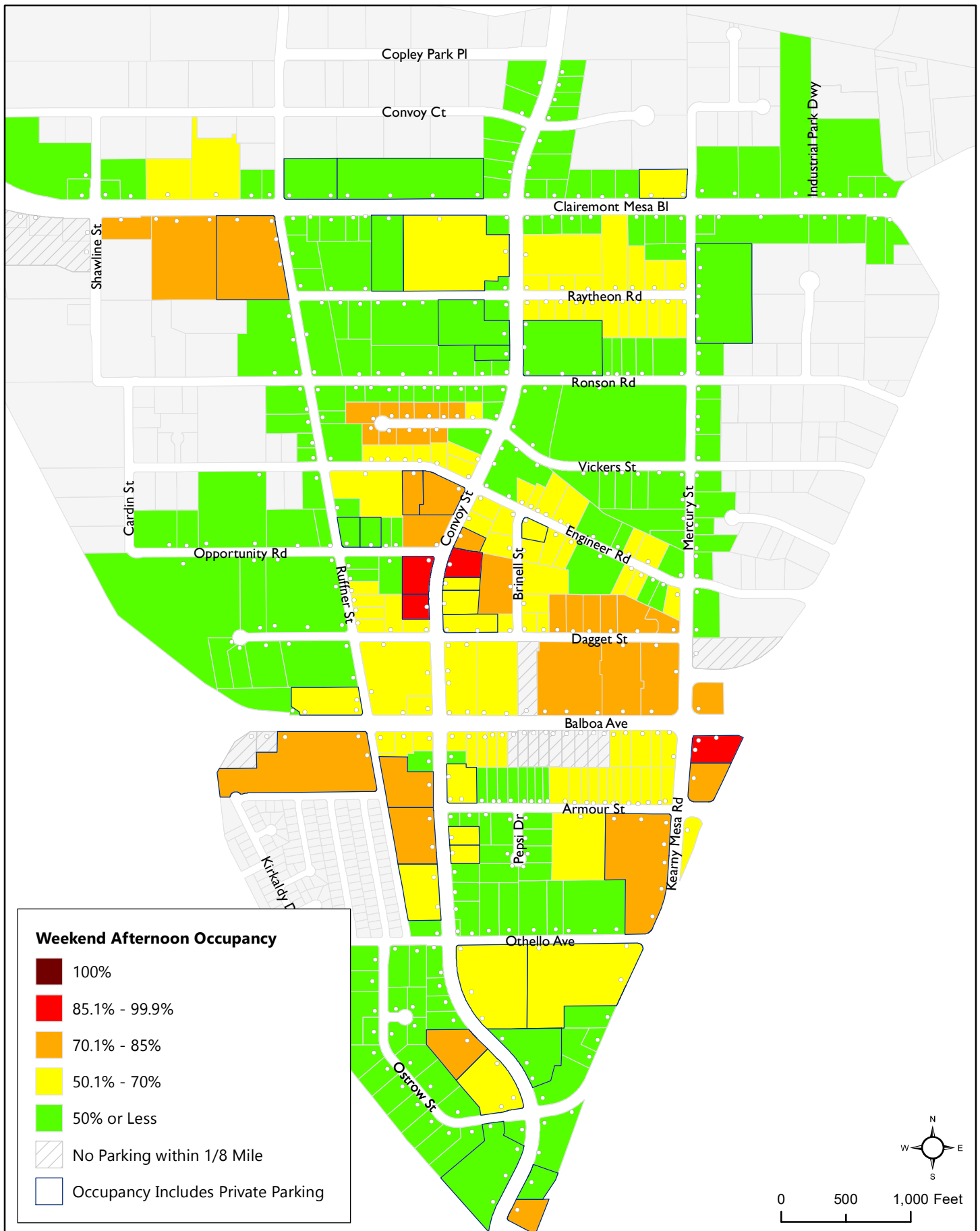
Figure 3.7 shows the destination-based occupancy in the study area. Parking supply occupancy in the Central section shows a reduction relative to midday. Convoy Street from Engineer Road to Balboa Avenue, Vickers Street (west of Convoy Street), Engineer Road (west of Convoy Street), Brinell Street, Dagget Street, and Balboa Avenue remain the streets with the greatest parking occupancy, with destinations along Vickers Street, Convoy Street, Engineer Road, Dagget Street and Balboa Avenue exceeding the 85% critical threshold. The North section of the study area shows a decrease in parking demand, now with no areas exceeding the 85% threshold. The same is true for the South section, except for one destination on the southeast corner of Balboa Avenue and Kearny Mesa Road.

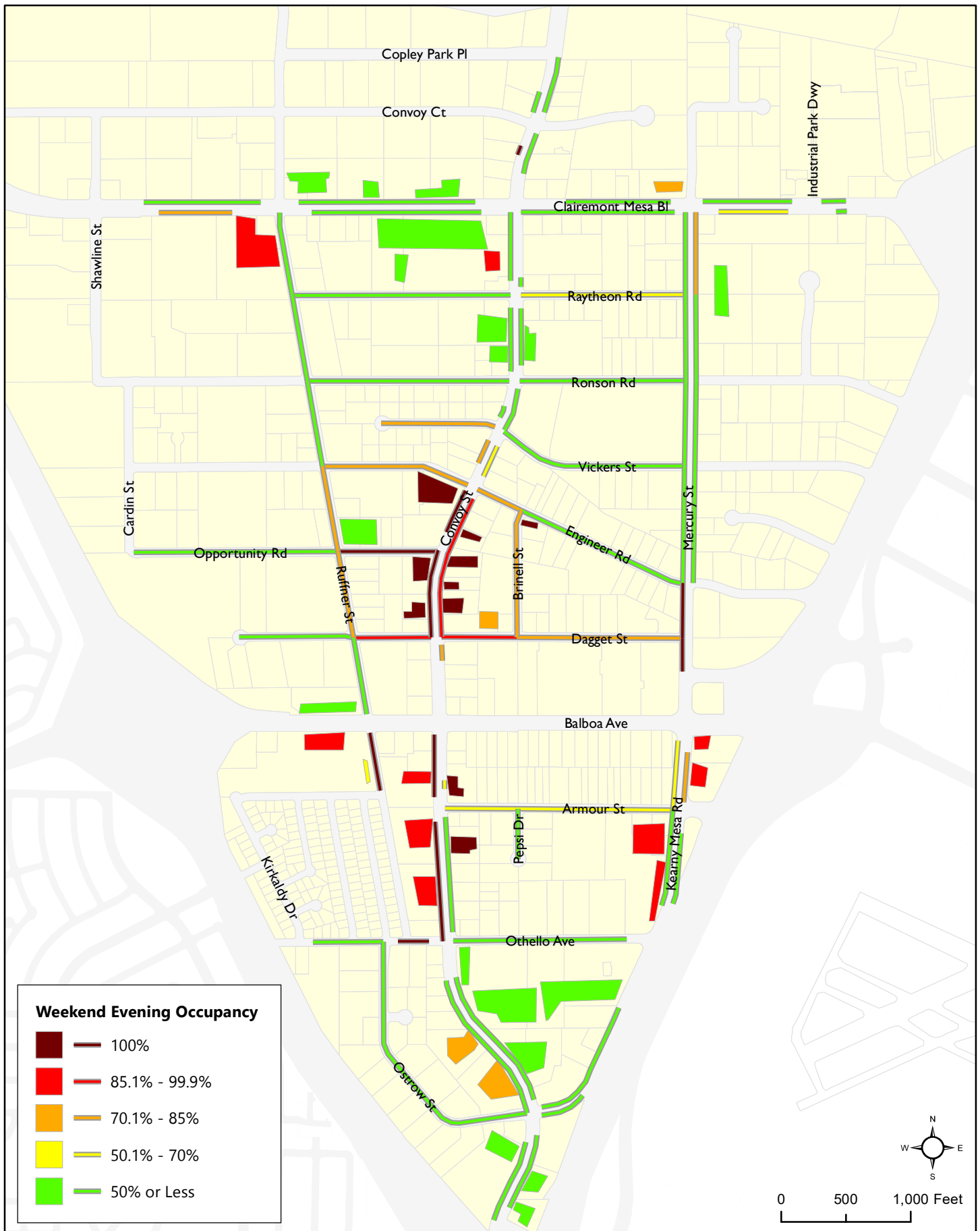
Evening (5pm to 8pm)

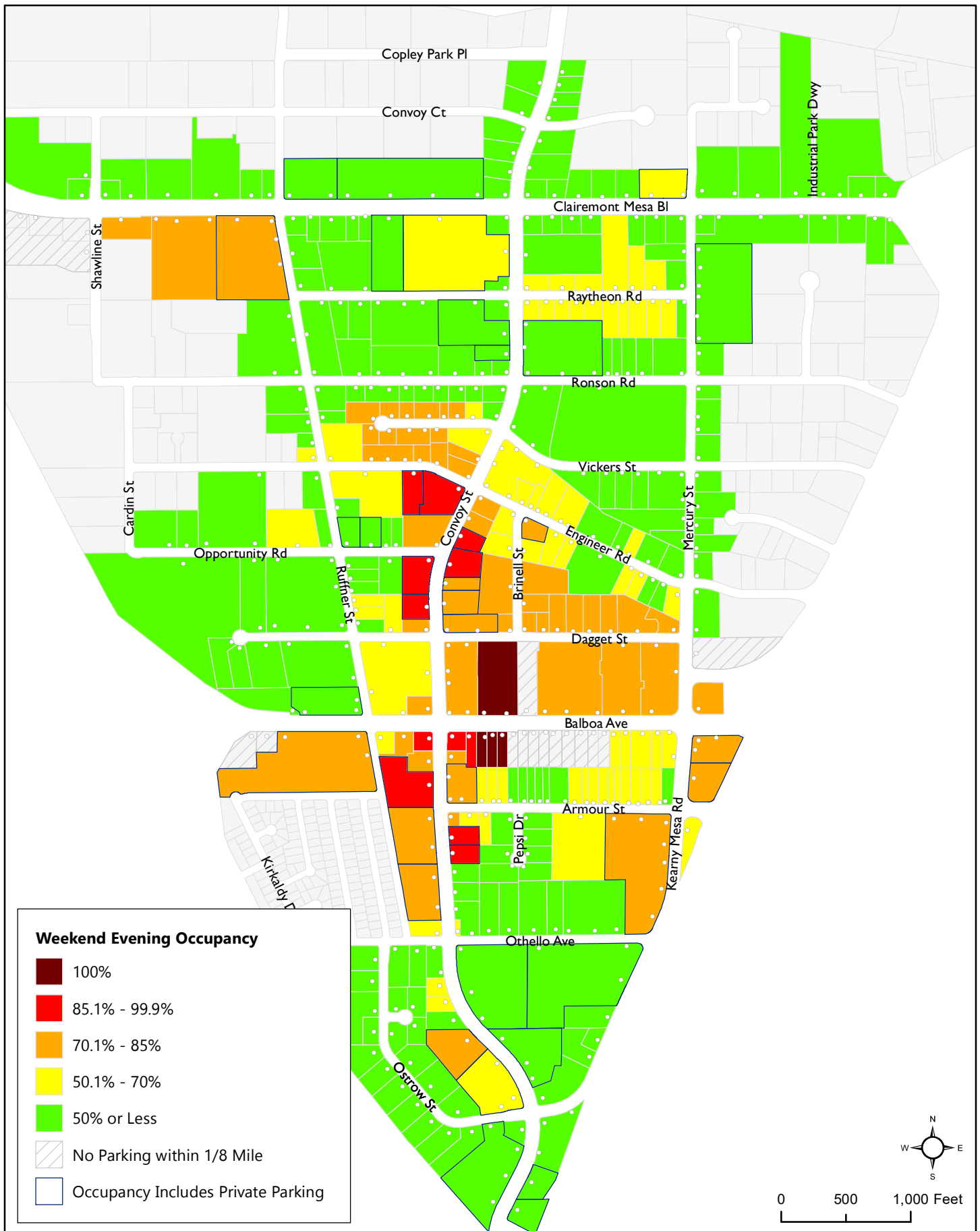
Figure 3.8 displays weekend parking occupancy for the evening period between 5pm and 8pm. In the Central section of the study area, parking occupancy picks up again, reaching 85% and greater along Convoy Street from Engineer Road to Dagget Street (both on-street and off-street lot parking), on Opportunity Road (west of Convoy Street), and Dagget Street (east and west of Convoy Street). High occupancy was also observed on Mercury Street, south of Engineer Road, and Ruffner Street, between Engineer Road and Dagget Street. The North section also showed further reduced occupancy relative to the earlier periods, with the exception of the one private parking lot on Clairemont Mesa Boulevard at Ruffner Street that exceeded 85%. The South section also showed an increase occupancy along Convoy Street, between Balboa Avenue to Othello Avenue, including 85% or higher occupancy in 10 private off-street lots, and along the west side of Convoy Street. By contrast, parking occupancy decreased south of Othello Avenue.

Figure 3.9 shows the public parking occupancy to within 1/8th of a mile of each parcel in the study area. Parking occupancy in the Central section increased relative to the afternoon, with demand exceeding 85% along Convoy Street at Engineer Road to Dagget Street, and at Balboa Avenue east of Convoy Street. Parking demand increased in the same part of the Central section that typically has the greatest demand: Convoy Street from Engineer Road to Balboa Avenue, Vickers Street (west of Convoy Street), Engineer Road (west of Convoy Street), Brinell Street, Dagget Street, and Balboa Avenue. The North section of the study area showed a further decrease in parking demand. By contrast, the South section showed an increase in parking demand, including reaching the 85% and greater threshold at destinations near the intersection of Balboa Avenue and Convoy Street, and along Convoy Street from Balboa Avenue to south of Armour Street. Parking occupancy south of Othello Avenue decreased to its lowest levels relative to all previous time periods.









Weekend Parking Occupancy Summary

Overall, the existing condition data collection show the following pattern for each of the sections:

Central

During the morning, the Central section experiences high demand for parking which is generally dispersed among various side streets such as Vickers Street, Brinell Street, Dagget Street, Mercury Street, and Balboa Avenue. Observations in the field indicate that the vehicles parked along these side streets are mainly parked overnight by nearby businesses and other uses, unlike weekday occupancy where on-street parking is usually associated with early morning work schedules. As the day progresses into midday, there is a further increase in parking demand within the Central section, especially along Convoy Street, likely due to the popularity of restaurants located in this area. However, during the afternoon period, parking demand slightly decreases, reflecting a pattern that is typically associated with lunch time parking demand. As evening approaches, parking demand on Convoy Street rises again, reflecting dinner-time parking needs, while the demand for parking on side streets drops to its lowest level on the weekend. In general, during weekends, the demand for parking in the central area is focused on Convoy Street, particularly between Engineer Road and Balboa Avenue. Additionally, the adjacent side streets, such as Opportunity Road, Dagget Street, Engineer Road, and Vickers Street (to the west of Convoy Street), also experience higher parking demand.

North

During the weekend, the North section doesn't encounter high parking demand likely because the majority of industrial businesses remain closed on weekends. The highest parking demand is observed on Raytheon Road, from Convoy Street to Mercury Street. This specific segment experiences an occupancy level of 70.1% to 85% during the morning period, but parking demand declines throughout the day. The high demand for parking in the morning is likely connected to nearby light industrial businesses, including several auto-repair and stereo installation businesses that operate only until midday on weekends.

South

Parking demand in the South section remains consistently low throughout the day, usually below 50%. However, a slight variation in parking demand is observed during the evening period, similar to weekdays. There is an increase in demand along Convoy Street to the south of Othello Avenue and north of Ostrow Street, while the demand decreases south of Ostrow Street. The areas facing restaurant and retail businesses along Convoy Street are the only places where high parking demand is seen, while other parts of Convoy Street and side streets have surplus parking availability nearby. Field observations indicate that the vehicles parked along Armor Street, from Convoy Street to Kearny Mesa Road, are mostly parked overnight by nearby businesses and other users.

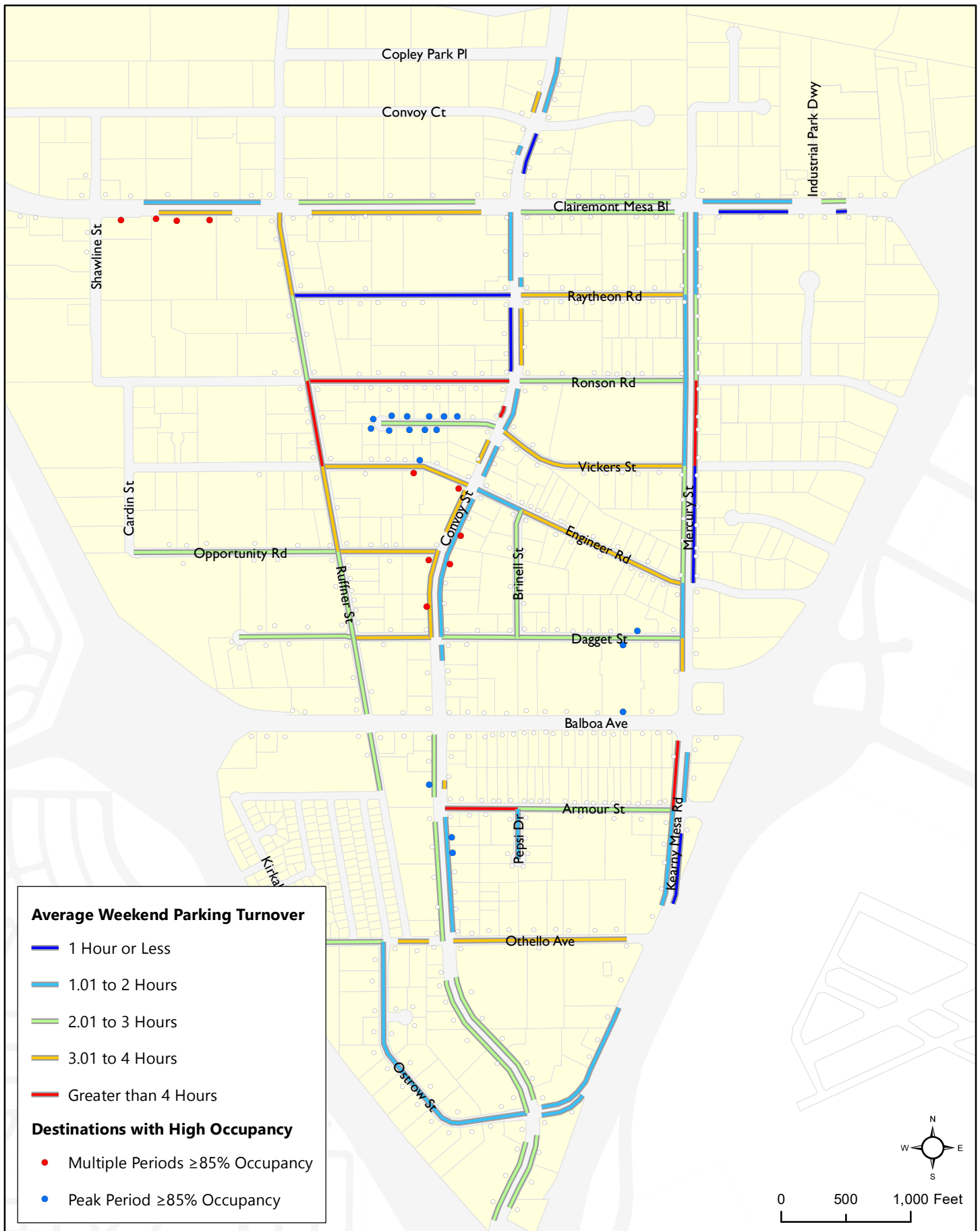
3.2 Weekend Parking Turnover

Table 3.2 summarizes the frequency of parking durations by sections and locations of the study area, excluding vehicles parked after 6pm. On-street parking along Convoy Street in all three sections of the study area have an average turnover of two hours or less. Side street parking turnover is lower on average compared to on-street parking along Convoy Street in the study area (also the case on the weekdays). Turnover along Convoy Street in the Central section of the study area, despite being an average of two hours, is significantly lower turnover on weekends compared to weekdays, when its average was 1.2 hours. The opposite is true in the North section of the study area, where the turnover of parked vehicles on Convoy Street on weekends (average duration of 1.7 hours) is significantly higher than on weekdays (2.3 hours).

Table 3.2 - Public Parking Turnover by Study Area Section and Location

S E C T I O N	Location	Turnover by Duration						Unique Vehicles Observed	Average Duration
		Less than 1 Hour	1 to 2 Hours	2 to 3 Hours	3 to 4 Hours	4 to 8 Hours	More than 8 Hours		
N o r t h	Convoy Street	75.4%	5.8%	2.9%	2.9%	5.8%	7.2%	69	1.7 Hours
	Side Street	57.5%	6.0%	6.4%	4.1%	17.8%	8.3%	614	2.6 Hours
	Total	59.3%	6.0%	6.0%	4.0%	16.5%	8.2%	683	2.5 Hours
C e n t r a l	Convoy Street	67.9%	4.3%	4.8%	2.4%	16.7%	3.8%	209	2.0 Hours
	Side Street	53.4%	8.9%	6.3%	3.4%	19.9%	8.1%	1,219	2.6 Hours
	Total	55.5%	8.2%	6.1%	3.3%	19.4%	7.5%	1,428	2.5 Hours
S o u t h	Convoy Street	67.8%	7.9%	5.7%	1.8%	8.8%	7.9%	227	2.0 Hours
	Side Street	61.3%	5.0%	5.8%	3.5%	19.7%	4.6%	517	2.2 Hours
	Total	63.3%	5.9%	5.8%	3.0%	16.4%	5.6%	744	2.1 Hours

Figure 3.10 shows average weekend parking turnover by block in the study area overlaid with destinations with high surrounding parking occupancy. Turnover is slightly lower in the study area on weekends; however, occupancies are also generally much lower on weekends compared to weekdays, with very few locations experiencing 85% parking occupancy. Turnover is lower on the side streets in the study area. West of Convoy Street, Clairemont Mesa Boulevard (eastbound), Ronson Road, Ruffner Road, Engineer Road, Opportunity Road, Dagget Street and Othello Avenue (west of Ostrow Street) all have average turnovers of at least three hours. East of Convoy Street, turnover averages three hours or more on Raytheon Road, Vickers Street, Engineer Road, Armour Street (west of Pepsi Drive) and Othello Avenue. Notably, Convoy Street between Ronson Road and Balboa Avenue has a significant directional split in average turnover where all southbound blocks have an average of at least three hours, and all northbound blocks have an average of one to two hours. The average for Convoy Street in the Central section on weekends is 2 hours.



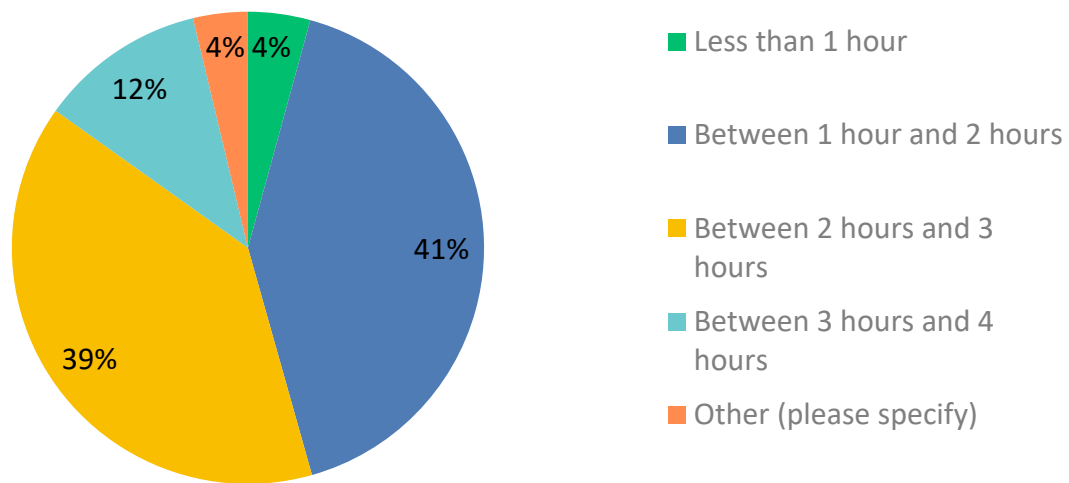
4.0 Responses from Stakeholder Surveys

To understand the perspectives of business patrons and business owners in the Convoy Corridor, two surveys were conducted, one of each group.

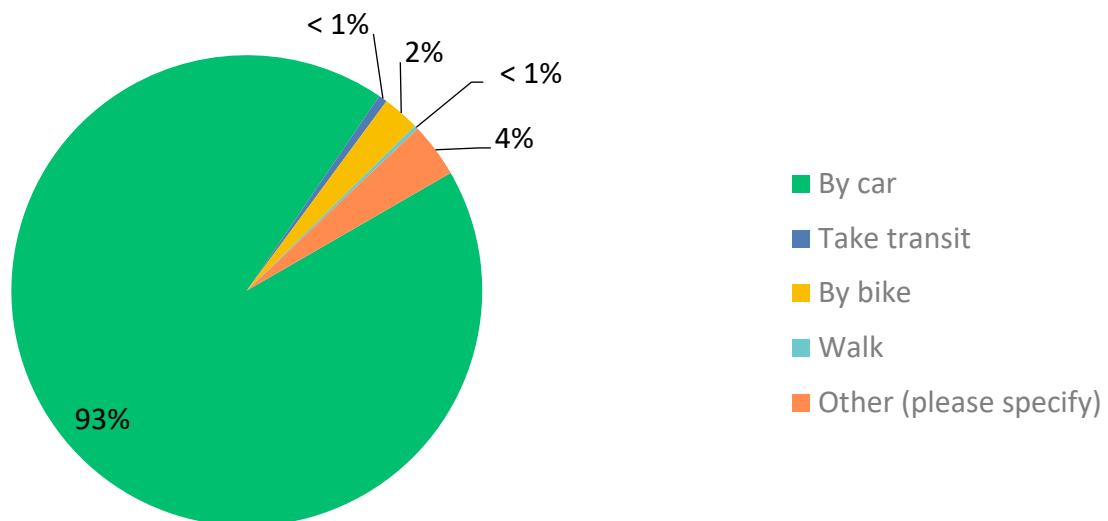
4.1 Business Patrons Survey

A survey of business patrons was prepared by the Project team, in coordination with the City of San Diego. It was primarily circulated by the Convoy Corridor Business Association at meetings and through their website. The survey received 1,026 responses, collected between December 26, 2022, and February 13, 2023 (approximately 75% of the surveys were received on January 2 and January 9, 2023). Business patrons who took the survey had the opportunity to respond to the five questions, graphical representations business patrons' responses are provided below.

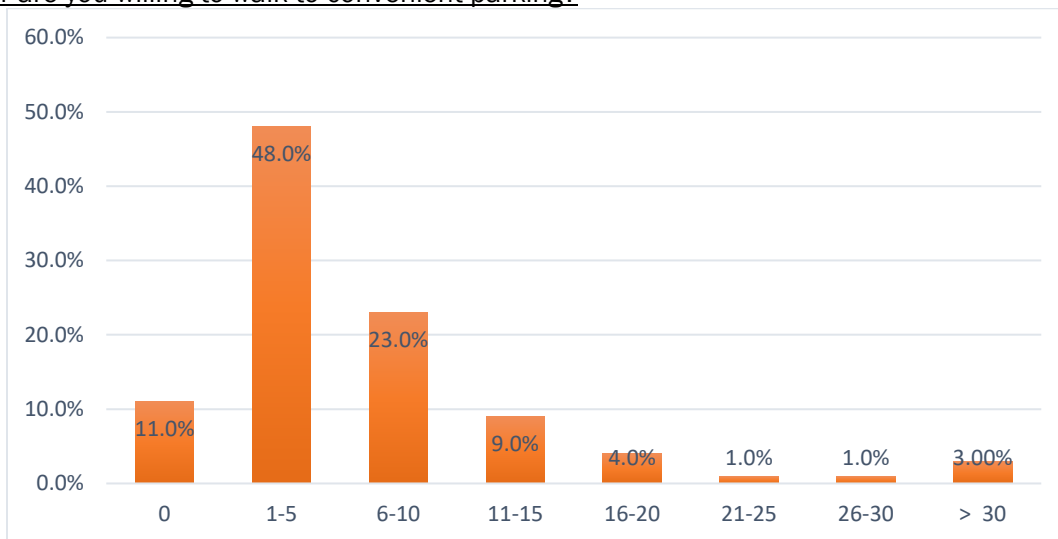
How long do you visit businesses in Kearny Mesa?



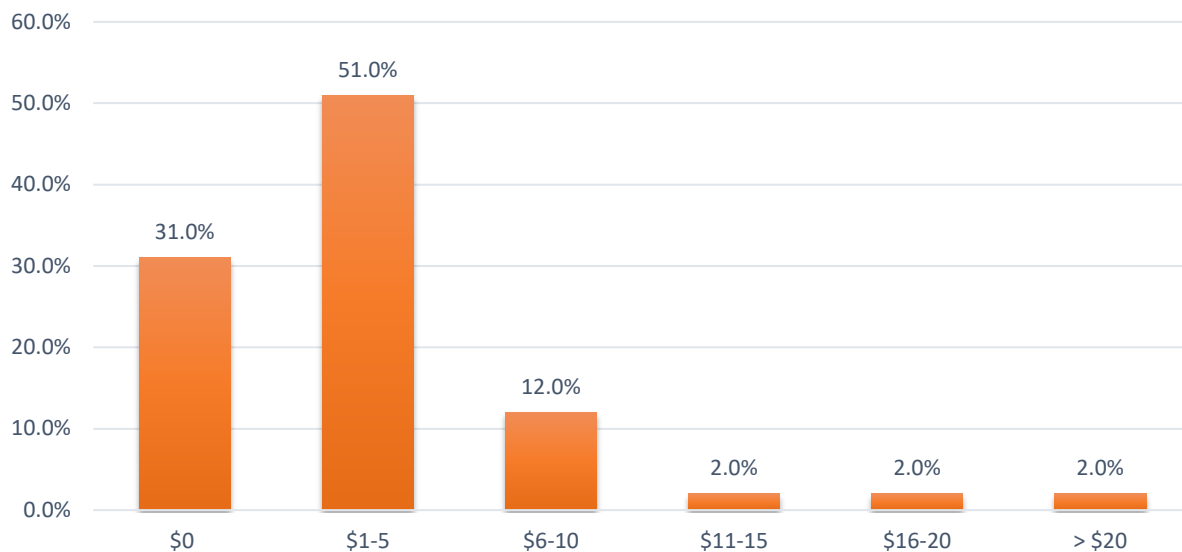
How do you get to Kearny Mesa?



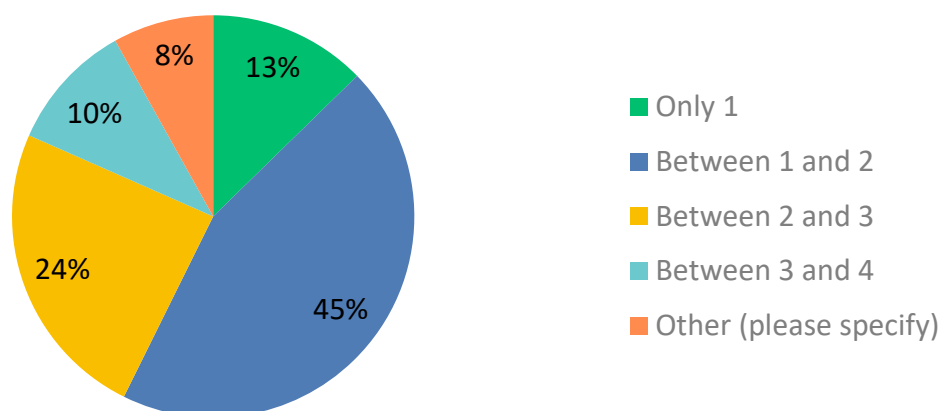
How far are you willing to walk to convenient parking?



What is the maximum that you are willing to pay for convenient parking?



Do you visit more than one business in Kearny Mesa in a day?



As shown, most respondents (81%) indicated between 1 and 3 hours, about half of which (42%) between 1 and 2 hours. A smaller percentage (11%) stay between 3 and 4 hours. Nearly all of the patrons who participated in the survey (92%) reach Kearny Mesa by car, whereas only 3% of respondents reported cycling to the area. The survey results showed that respondents were prepared to walk for an average of 8 minutes to access a business within the project area, with the highest percentage of respondents (48%) willing to walk for 5 minutes. Most patron respondents (92%) get to Kearny Mesa by car. More than half of the surveyed individuals (51%) expressed their willingness to pay a maximum of \$5 for parking that is conveniently located. Moreover, around 45% of respondents visit two businesses during each trip to the Convoy Corridor.

4.2 Business Owners Survey

A survey of business owners was prepared by the Project team, in coordination with the City of San Diego. The survey of business owners received 21 responses collected between November 2, 2022, and January 2, 2023. The survey includes questions about the business, such as the address, type of business, number of employees, busiest and operating hours, employee parking, transportation incentives, customer discounts, parking lot capacity, support for time-limited parking and the creation of a parking district, willingness to support parking meter installation and paid parking lots, and any shared parking agreements with neighboring businesses. Respondents are also given the opportunity to share any additional information or suggestions.

Nearly two-thirds of the responses came from restaurant owners, while about one-fifth were offices with a small, shared parking lot. Retail, Entertainment and Auto Repair business owners accounted for the remaining responses. The average number of employees working on a given day (working at the businesses who responded to the survey) were between 10 and 15 employees.

Just over half of the business owners who responded indicated their employees park on-street, while slightly under half park on-site in a private parking lot. Only one of the 21 respondent business owners provides incentives to employees who don't drive.

About 43% of business owner respondents would be in favor of time-limited parking. While there is less support for time-limited parking, there is more support for the creation of a parking district. All 21 business owner respondents answered this question, with 67% answering "Yes," while 33% answered "No." The same enthusiasm for a parking district is tempered considerably (a reversal, in fact), when parking meters were introduced as part of parking district formation. Of the 21 business owner respondents who answered this question, only 24% answered "Yes," while 76% answered "No." Yet, when asked if the revenue from parking meters was used for parking and street improvements, affirmative replies increased to 43% (from 24%). All 21 business owner respondents were split on the question whether it would be beneficial to have paid parking lots in the area, with a narrow majority replying "No" (52%).

Table 4.1 shows the receptiveness to possible measures for addressing parking demand shown by businessowner respondents. Respondents expressed the most interest in motor-vehicle-based solutions, particularly shared parking agreements with other businesses, shuttles to parking structures and employment centers/mobility hubs, and electrical vehicle car sharing. Micromobility/active transportation solutions were not of interest for most business owner respondents.

Table 4.1 - Businessowner Receptiveness to Measures for Addressing Parking Demand

Answer Choices	Respondent Interest
Shared parking agreement with other businesses	73%
Electric Vehicle Car sharing and charging infrastructure	36%
Shuttle to/from a shared off-site parking lot/structure	27%
Shuttle to/from nearby major employment centers or a mobility hub (transit station)	18%
Designated area for micromobility devices such as electric scooters and bikes	9%
Secure bike parking	9%
Transit subsidy to reduce the cost of bus/trolley trips	0%
Other (specify)	0%

*Respondents were able to select more than one option

5.0 Analysis of Parking Conditions with Project

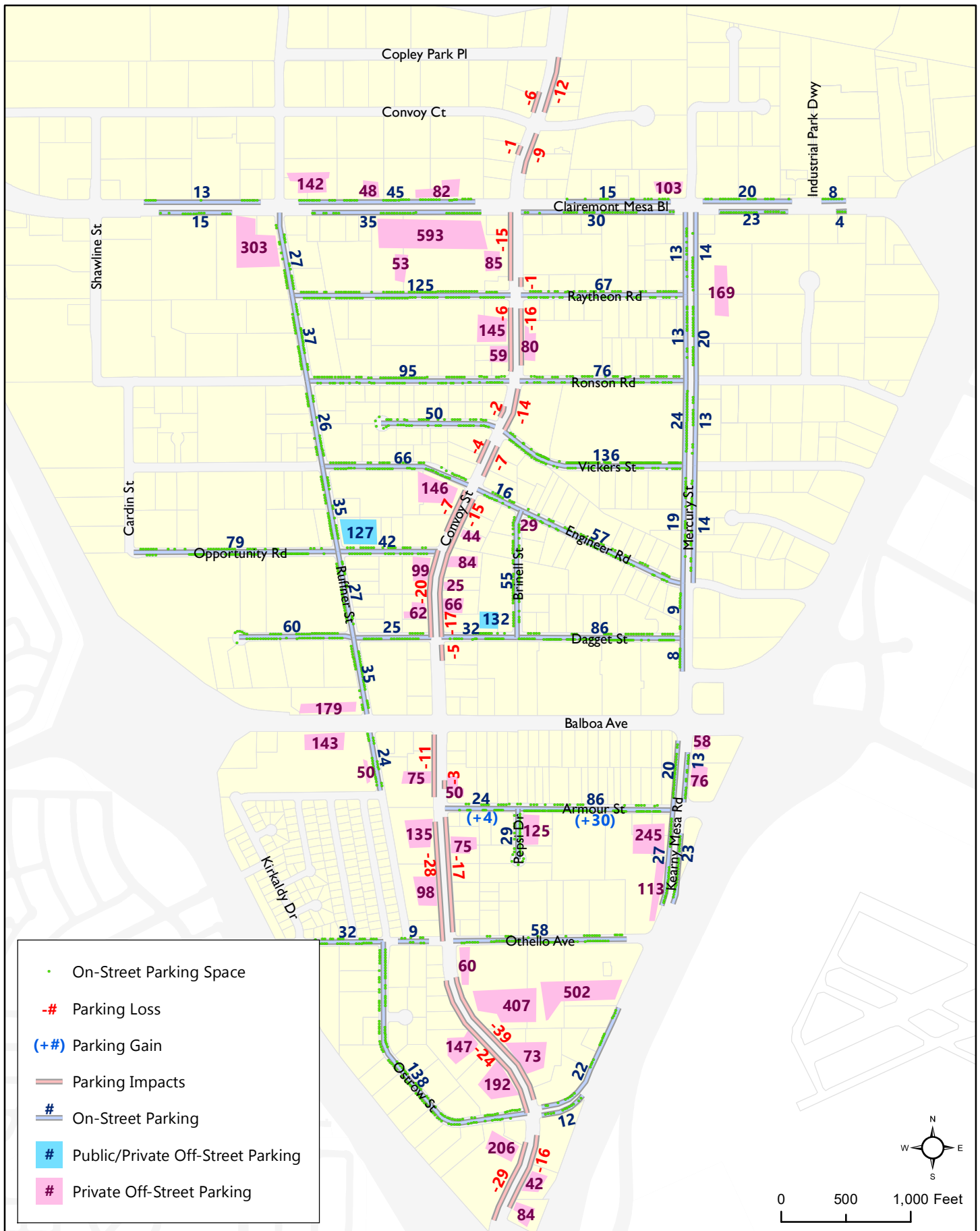
A primary purpose of this study is to determine the effect on parking availability with the installation of bicycle facilities along Convoy Street. For purposes of this section the term “project” refers to the repurpose of on-street parking along Convoy Street for buffered bicycle facilities and the conversion of on-street parallel parking to angled parking along Brinnell Street, Pepsi Drive and Armour Street (between Engineer Road and Daggett Street). Due to the street width and number of driveways, Brinnell Street, Pepsi Drive and Armour Street were identified as suitable locations for angle parking conversion during the parking study.

Implementation of the project will result in the repurposing of approximately 324 on-street parking spaces along Convoy Street between Copley Park Place and Aero Drive for buffered bicycle facilities and the striping of 16 new on-street parking spaces along Armour Street between Convoy Street and Kearny Mesa Road, 6 new on-street spaces along Brinnell Street, between Engineer Road and Daggett Street, and 6 new spaces along Pepsi Drive, south of Armour Street. This creates a net loss of 296 public parking spaces in the study area. **Figure 5.1** shows the study area public parking supply under project conditions, with the blocks where parking supply changes occur emphasized.

Table 5.1 shows parking supply with project conditions by section of the study area factoring the estimated loss of 324 on-street parking spaces on Convoy Street, and the addition of 28 side street public parking spaces. Project conditions do not assume changes to any private parking supply analyzed under existing conditions.

Table 5.1 - Total Public Parking Supply Within the Study Area with Project

Location	North	Central	South	Total Study Area
Convoy Street	n/a	n/a	n/a	n/a
Side Street Public Parking	695	920	505	2,120
Off-Street Public Parking	n/a	259	n/a	259
Total Public Spaces with Project	695	1,179	505	2,379



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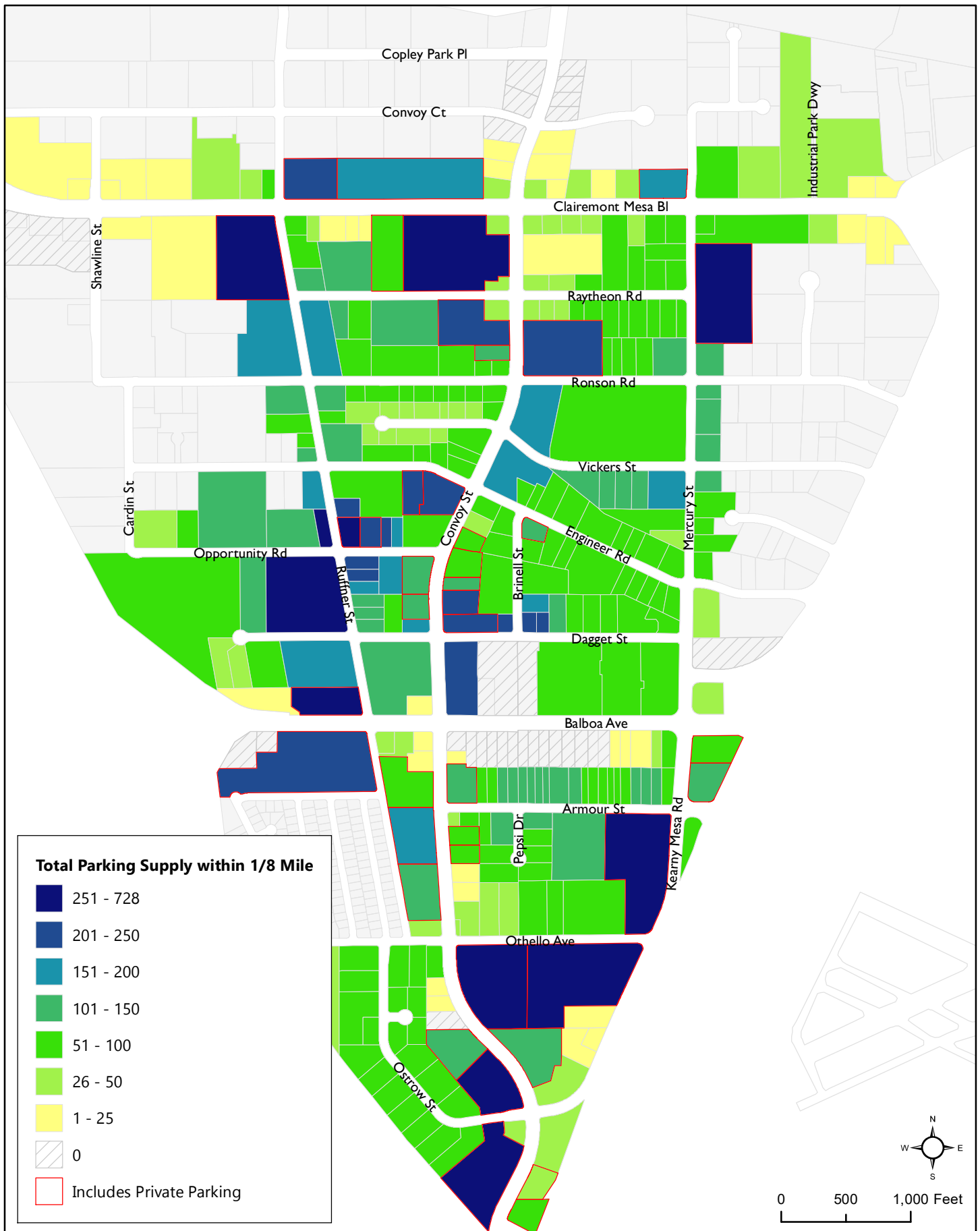
Figure 4.1
Parking Supply with Project

Table 5.2 summarizes how the decrease in 296 parking spaces changes the parking supply in each section of the study area. As shown, the largest decrease in parking supply (a 145-parking space loss, or 22% of the current public parking supply) occurs in the South section, which is all parts of the study area south of Balboa Avenue.

Table 5.2 - Net Change in Public Parking

Location	North	Central	South	Total Study Area
Existing Public Parking Supply (Table 1.1)	761	1,264	650	2,675
Public Parking Supply with Project (Table 4.1)	695	1,179	505	2,351
Net Change	-66 (-8.7%)	-85 (-6.7%)	-145 (-22.3%)	-296 (-11.1%)

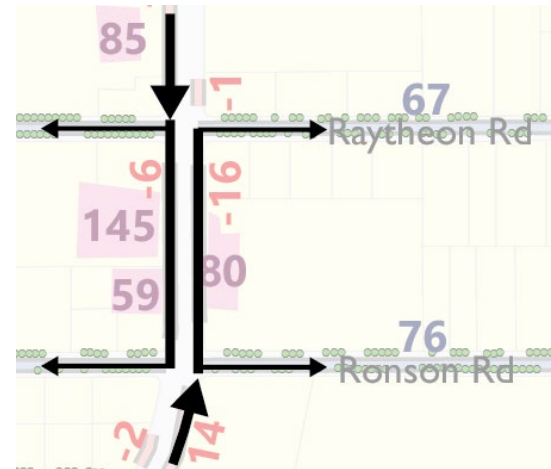
The total public parking supply within 1/8 of a mile of each parcel with project is shown in **Figure 5.2**. Note that select private parking data included in this study (indicated in Figure 5.2 with red borders) refers only to the property that the private parking serves. Several new destinations along Balboa Avenue slightly east of Convoy Street lose access to public parking within the study area. Several destinations along Convoy Street between Copley Park Place and Convoy Court also lose access to public parking within the study area, however Convoy Court has on-street parking that was not included in the study area and several of these sites have their own supply of private parking, also not observed in the study. Parking supply accessible by destination without and with project can be compared in Figures 2.1 and 5.2.



5.1 Parking Reassignment Methods

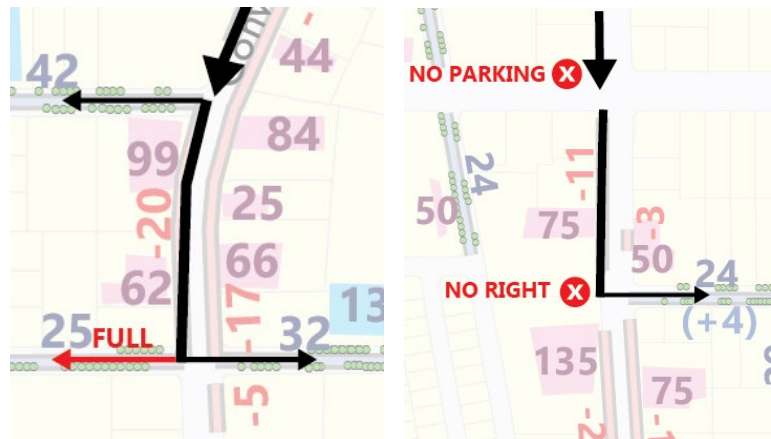
Destination-based occupancy, used in the preceding chapters to analyze existing weekday and weekend parking conditions, provides a useful mechanism for assessing how changes to the supply of parking may alter the spatial arrangement of demand for parking from locations within the study area assuming existing parking demand remains constant.

To simulate what happens to existing parking demand given the changes in parking supply under project conditions, parking occupancy counts collected along displaced sources of parking were reassigned to the nearest adjacent block by direction of travel along Convoy Street. This analysis simulates typical driver behavior when searching for parking. For example blocks accessed by right-turn from Convoy Street were given reassignment priority as right-turns represent the path of least resistance for a motorist cruising for parking. Parking occupancy displaced along Convoy Street heading southbound, would be reassigned to adjacent cross-streets west of Convoy Street at the near- and far-side of the block. Parking occupancy displaced along Convoy Street heading northbound, would be reassigned to adjacent cross-streets east of Convoy Street at the near- and far-side of the block.



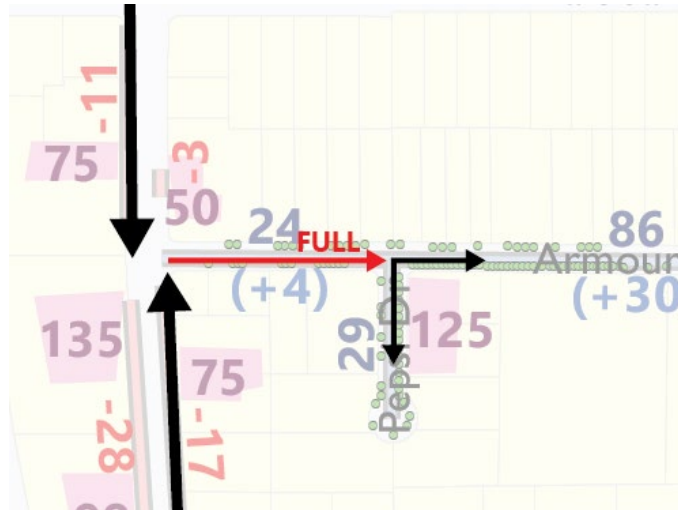
Reassignment priority was given to cross-streets accessible by right-turn.

How parking was reassigned proportionally between the near-side and far-side cross-street considered several possibilities. If the displaced parking that was along a given Convoy Street block was distributed evenly across that block, then parking would be reassigned equally to both the near- and far-side cross-streets accessible by right-turn. If the parking that was along a given block was more heavily concentrated closer to one of the two cross-streets accessible by right-turn, then more reassignment was given to the closer cross-street. If one cross-street accessible by right-turn had no spare capacity (or if there was a three-leg intersection with no street accessible by right-turn) then reassignment that would have been destined for that location was assigned to the other right-turn block or the left-turn block (where left turns were permitted).



Reassignment considered cross-streets accessible by left-turn when cross-streets accessible by right-turn options were exhausted.

Where parking reassignment exceeded the capacity of shorter side street blocks (for example, blocks east of Convoy Street shortened by nearby parallel streets such as Brinell Street and Pepsi Drive), then leftover reassignment was distributed to the intersecting parallel street and the block past the intersecting parallel street as their block occupancy conditions allowed.



Reassignment was split between parallel and near to Convoy Street (such as Pepsi Drive) and next block of cross-street when cross-street block adjacent to Convoy Street capacity was exhausted.

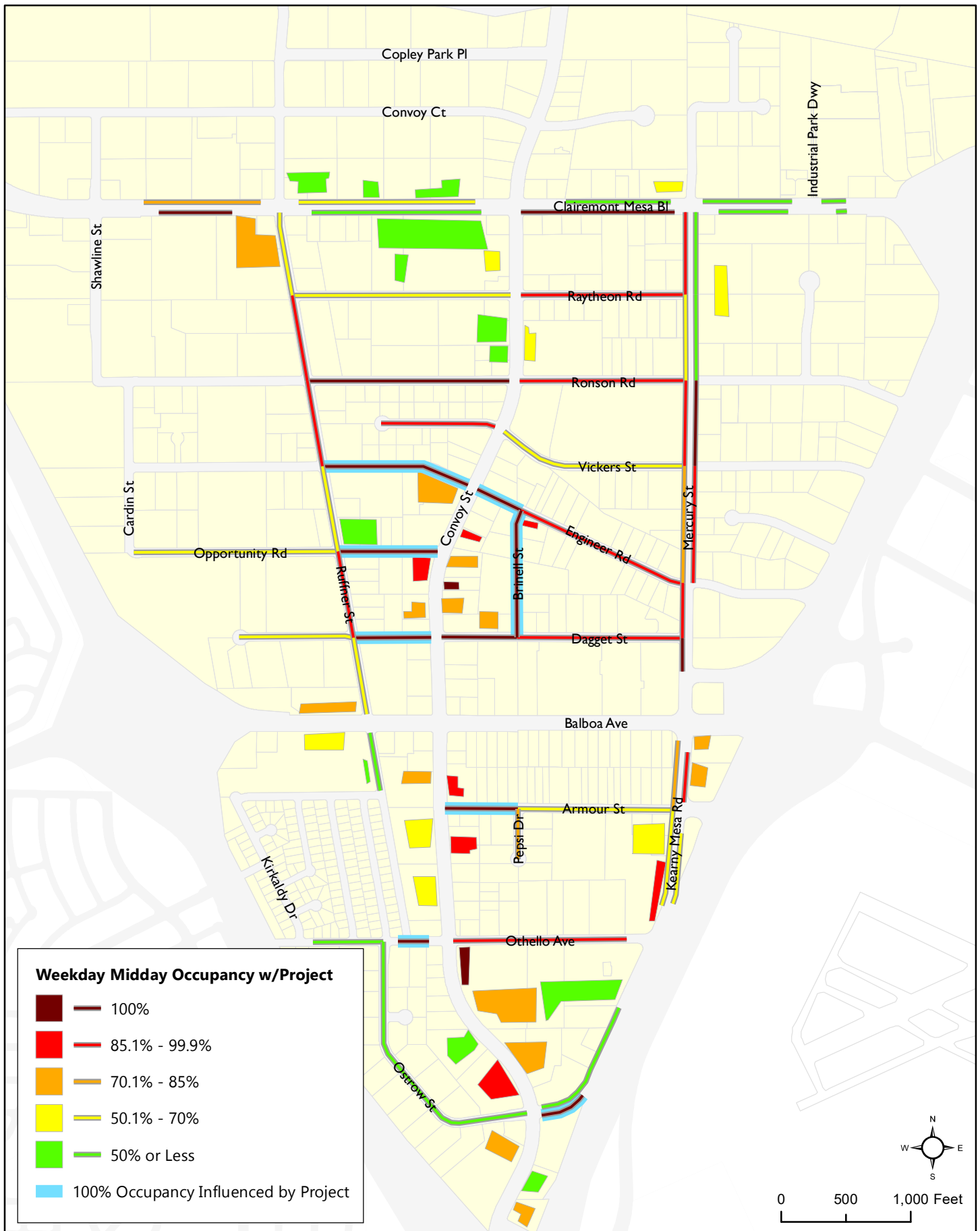
5.2 Weekday Conditions with Project

The midday (11am-2pm) and evening periods (5pm-8pm) were analyzed under project conditions for both weekday and weekend. Collectively, these periods accounted for a sizable majority of the peak conditions in the study area for both weekday and weekend (Figures 2.2 and 3.1, respectively), and thus represent the worst-case scenario.

Midday (11am to 2pm)

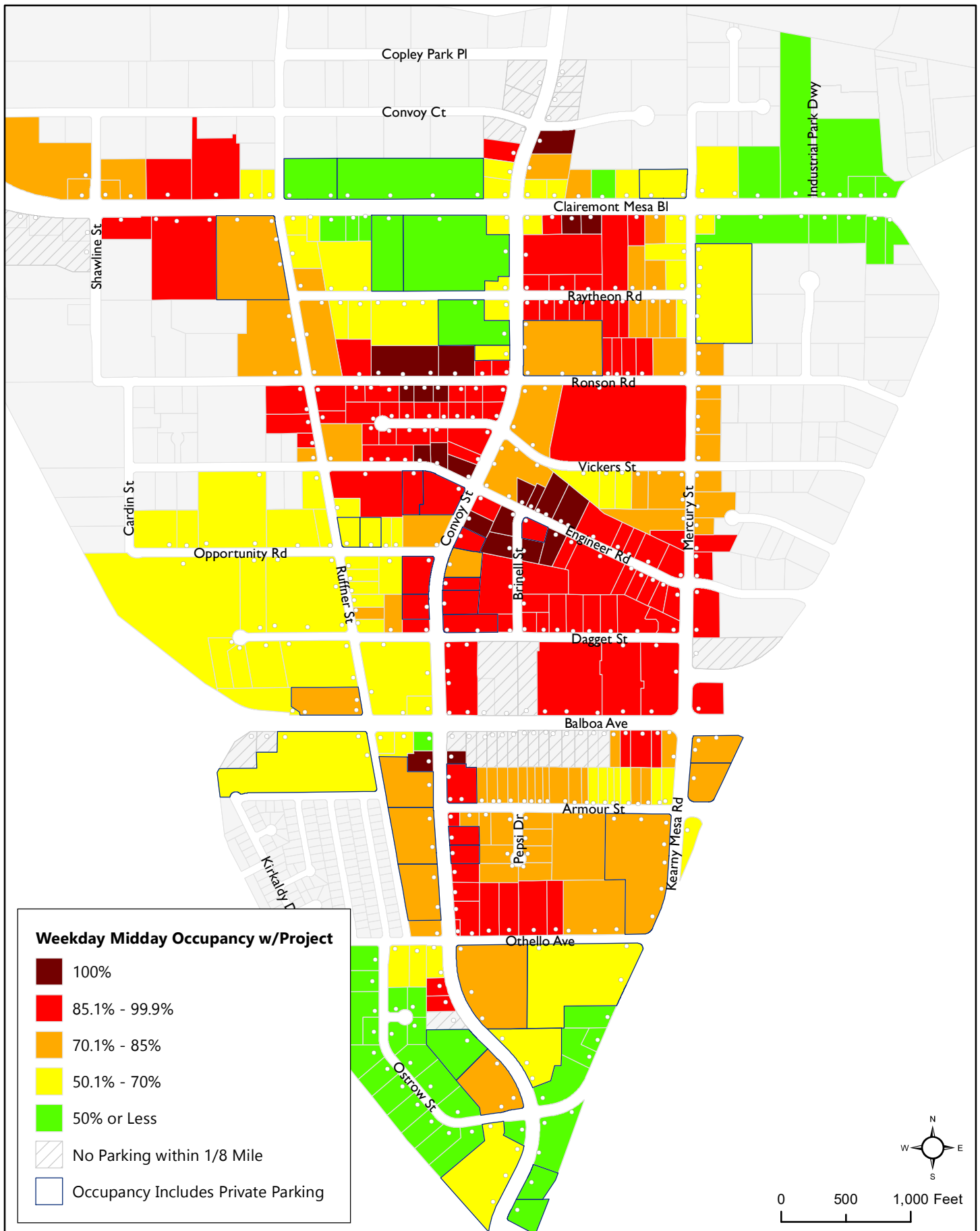
Figure 5.3 displays predicted weekday parking occupancy for the midday period between 11am and 2pm with project conditions (refer to figure 2.5 for comparison to weekday/midday existing conditions). During this period, with project conditions in place, occupancies reach critical levels (85%) and full capacity (100%) in the Central and South sections of the study area. In the Central section, capacities at 100% influenced by the project are predicted for Engineer Road (east and west of Convoy Street), Opportunity Road (between Convoy Street and Ruffner Street), and Dagget Street (also between Convoy Street and Ruffner Street). Note that the public/private shared parking lots in this part of the study area (Jasmine Seafood at Dagget Street near Brinell Street, and 7670 Opportunity Road, near Ruffner Street) are predicted to remain below critical occupancy. In the South section there is less critical parking capacity predicted than the Central section, with three locations showing 100% occupancy under project conditions. These are on Armour Street from Convoy Street to Pepsi Drive, Othello Avenue west of Convoy Street, and on the south side of Kearny Mesa Road east of Convoy Street. The North section is predicted to show no occupancies at critical or full levels due to project conditions.

Figure 5.4 shows the predicted weekday destination-based occupancy in the study area during the midday under project conditions (refer to figure 2.6 for comparison to weekday/midday existing conditions). Highest demand is unsurprisingly concentrated in the Central section, with some destinations predicted at full capacity demand on Engineer Road west of Convoy Street, and Convoy Street (between Engineer Road and Opportunity Road). In the North section, full capacity demand for some destinations is predicted along Ronson Road west of Convoy Street, on Clairemont Mesa Boulevard east of Convoy Street, and at Convoy Court. In the South section, occupancy is predicted to reach 100% capacity for two smaller destinations just south of Balboa Avenue.



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Figure 5.3
Weekday Midday Parking Occupancy by Supply with Project (11am - 2pm)



Evening (5pm to 8pm)

Figure 5.5 displays predicted weekday parking occupancy for the evening period between 5pm to 8pm with project conditions (refer to figure 2.9 for comparison to weekday/evening existing conditions). In the Central section, capacities at 100% influenced by the project are predicted for Engineer Road east of Convoy Street to Brinell Street Opportunity Road from Ruffner Street to Convoy Street, and Dagget Street from Ruffner Street to Brinell Street. Note again that the public/private shared parking lots (Jasmine Seafood at Dagget Street near Brinell Street, and 7670 Opportunity Road, near Ruffner Street) are predicted to remain below critical occupancy. In the South section 100% occupancy is predicted again on Armour Street from Convoy Street to Pepsi Drive, Pepsi Drive, and on Othello Avenue west of Convoy Street. The North section is predicted to show no occupancies at critical or full levels due to project conditions.

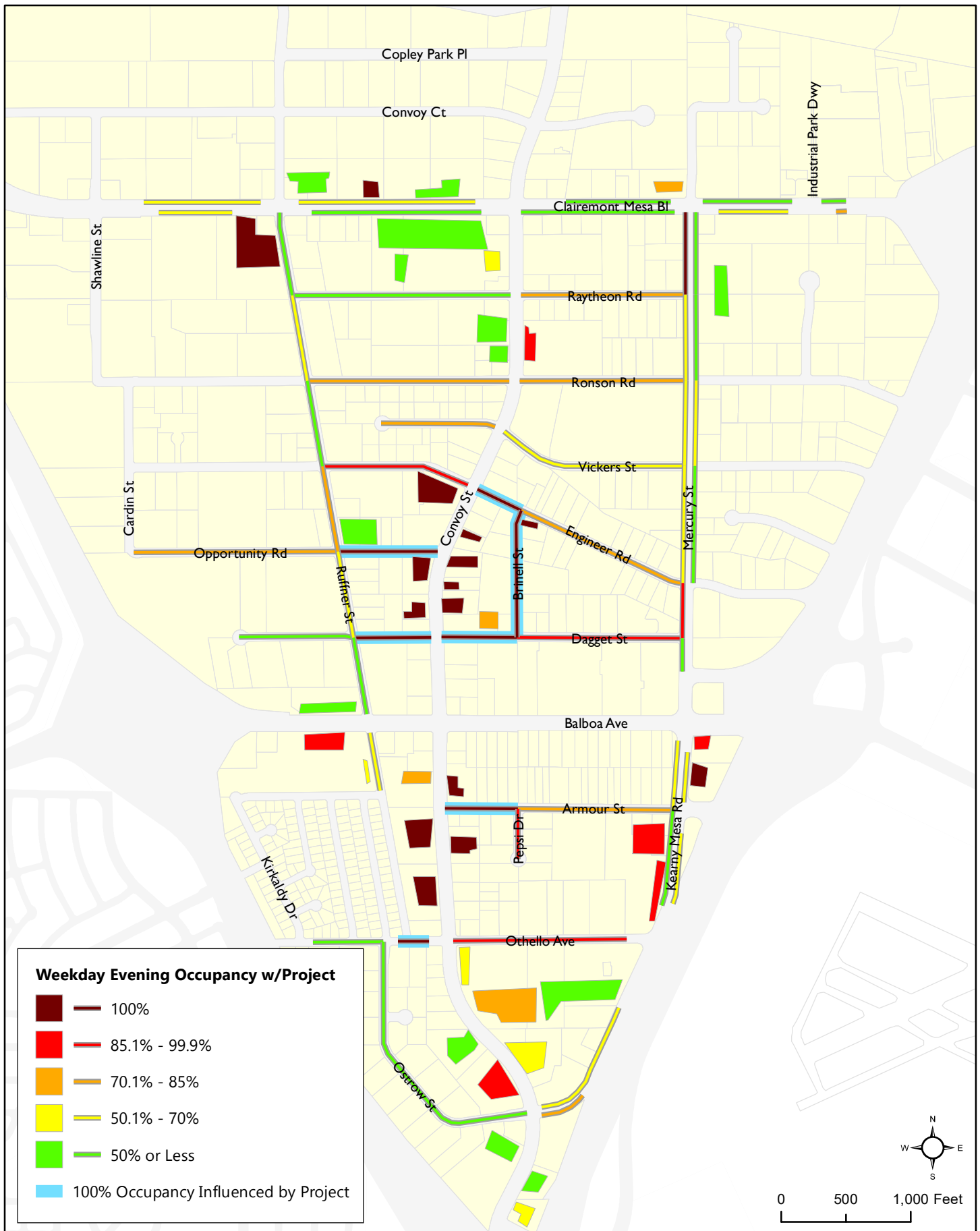
Figure 5.6 shows predicted weekday destination-based occupancy in the study area during the evening under project conditions (refer to figure 2.10 for comparison to weekday/evening existing conditions). The Central section reveals increased predicted demand reaching critical levels at destinations near Convoy Street and Engineer Road, and at Brinell Street and Dagget Street. Only one destination, mid-block along the east side Convoy Street between Engineer Road and Dagget Street, is predicted to have full capacity. There is a more dramatic shift in demand to the South during the weekday evening, where full capacity (100%) is predicted for destinations along Convoy Street near Armour Street and Othello Avenue, as well as just south of Othello Avenue. In the North section, no destination is expected to reach full capacity demand with project conditions in place.

5.3 Weekend Conditions with Project

Midday (11am to 2pm)

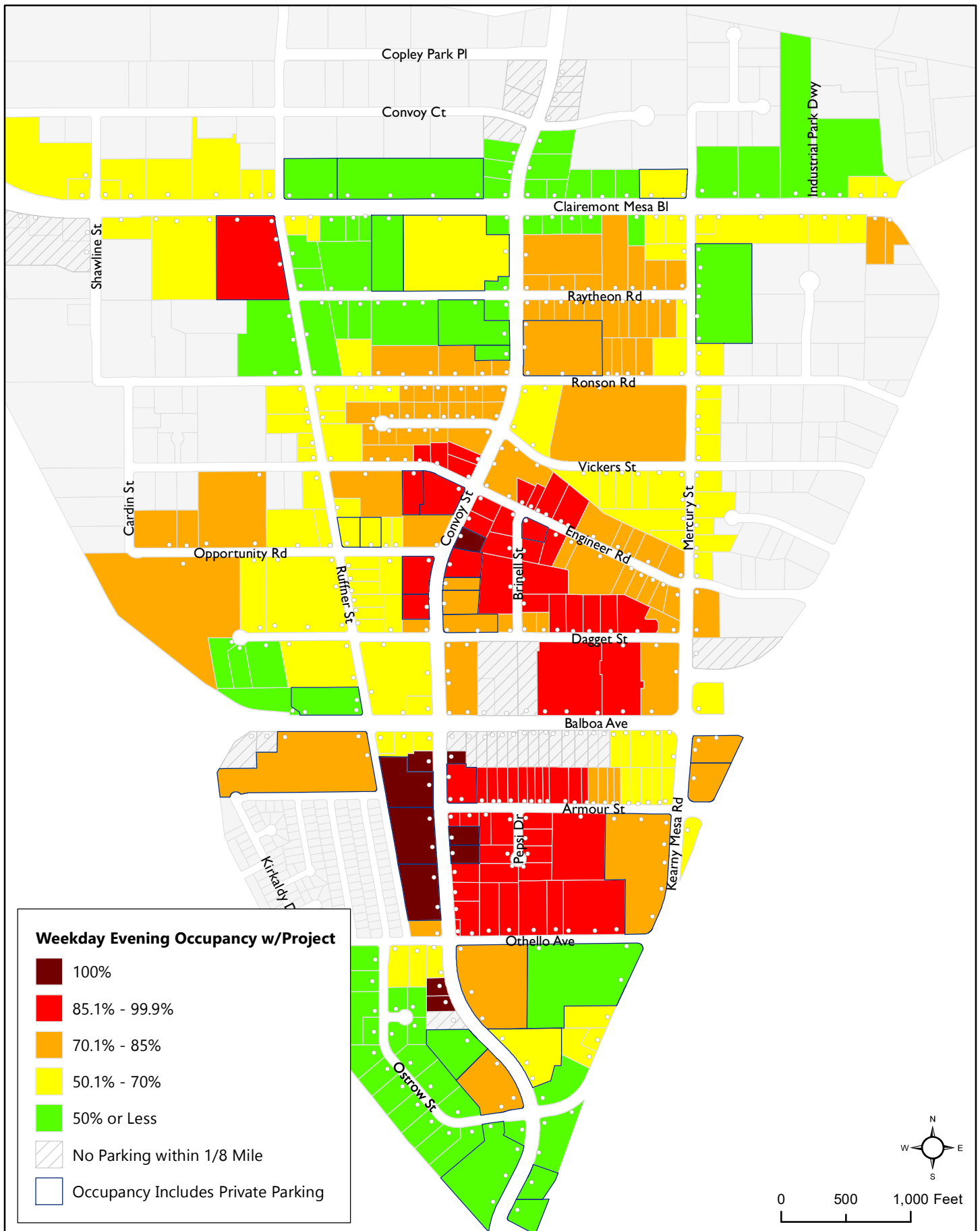
Figure 5.7 displays predicted weekend parking occupancy for the midday period between 11am and 2pm with project conditions (refer to figure 3.4 for comparison to weekday/midday existing conditions). During this period, with project conditions in place, occupancies reach critical levels (85%) and full capacity (100%) in the Central and South sections of the study area. In the Central section, capacities at 100% influenced by the project are predicted for Engineer Road (from Convoy Street to Brinell Street), Opportunity Road (between Ruffner Street and Convoy Street), and Dagget Street (also between Ruffner Street and Brinell Street). Note that the public/private shared lots (Jasmine Seafood at Dagget Street near Brinell Street, and 7670 Opportunity Road, near Ruffner Street) are predicted to remain below critical occupancy levels. In the South section there is less critically high parking capacity predicted than the Central section, with two locations showing 100% occupancy under project conditions; these are on Armour Street from Convoy Street to Pepsi Drive, and on the south side of Kearny Mesa Road east of Convoy Street. The North section is predicted to show no occupancies at critical or full levels due to project conditions.

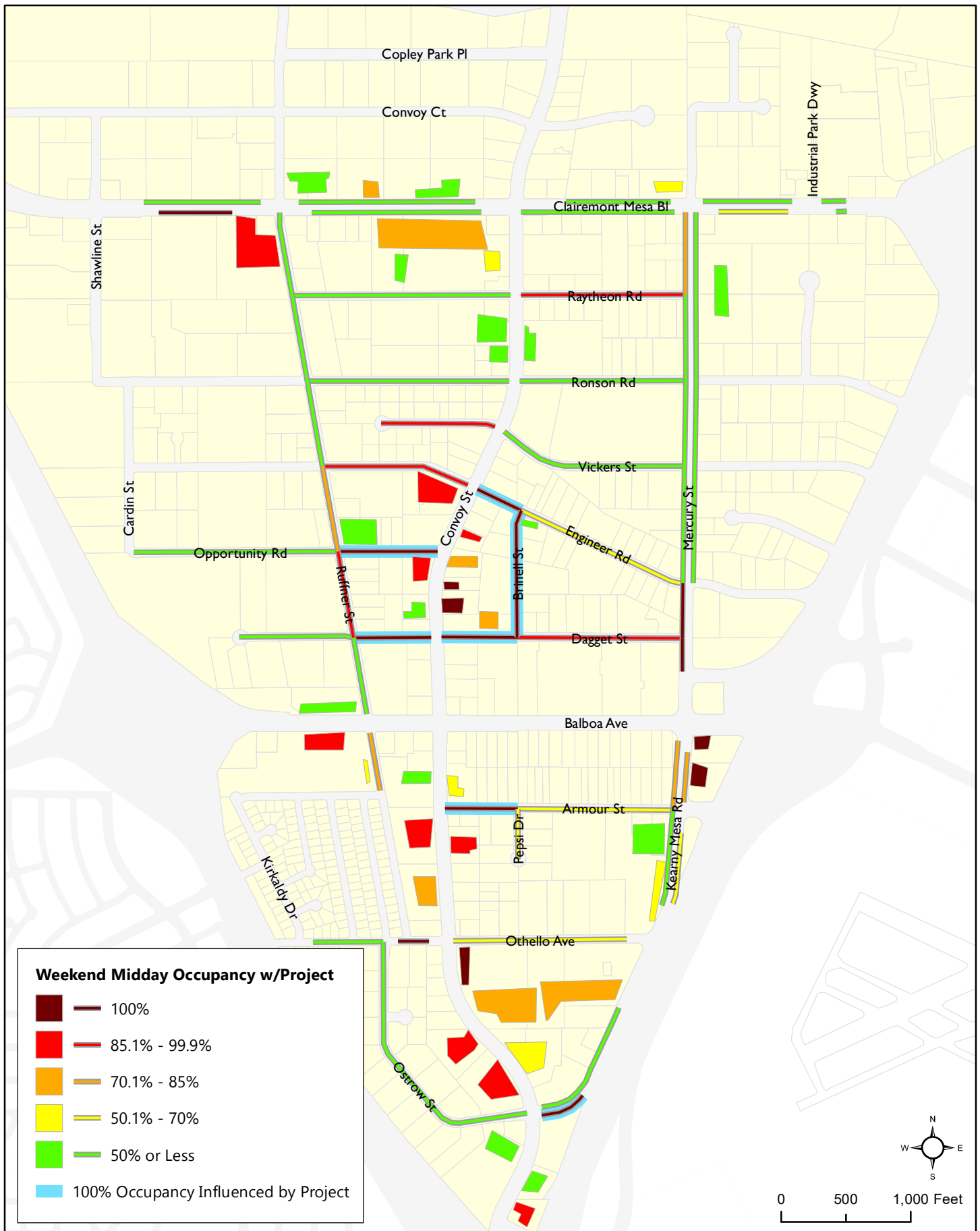
Figure 5.8 shows the predicted weekend destination-based occupancy in the study area under project conditions during the midday (refer to figure 3.5 for comparison to weekday/midday existing conditions). Demand is predicted to increase in the Central section, concentrated once again along Convoy Street at Engineer Road, Brinell Street, Dagget Street, and Vickers Street, but none is predicted to reach 100% capacity. In the North section, greater capacity demand is predicted along Raytheon Road, but no parcels predict demand at 100%. In the South section, occupancy is predicted to increase along Convoy Street parcels between Balboa Avenue and Othello Avenue, but only two smaller parcels just south of Balboa Avenue show a predicted occupancy of 100%.

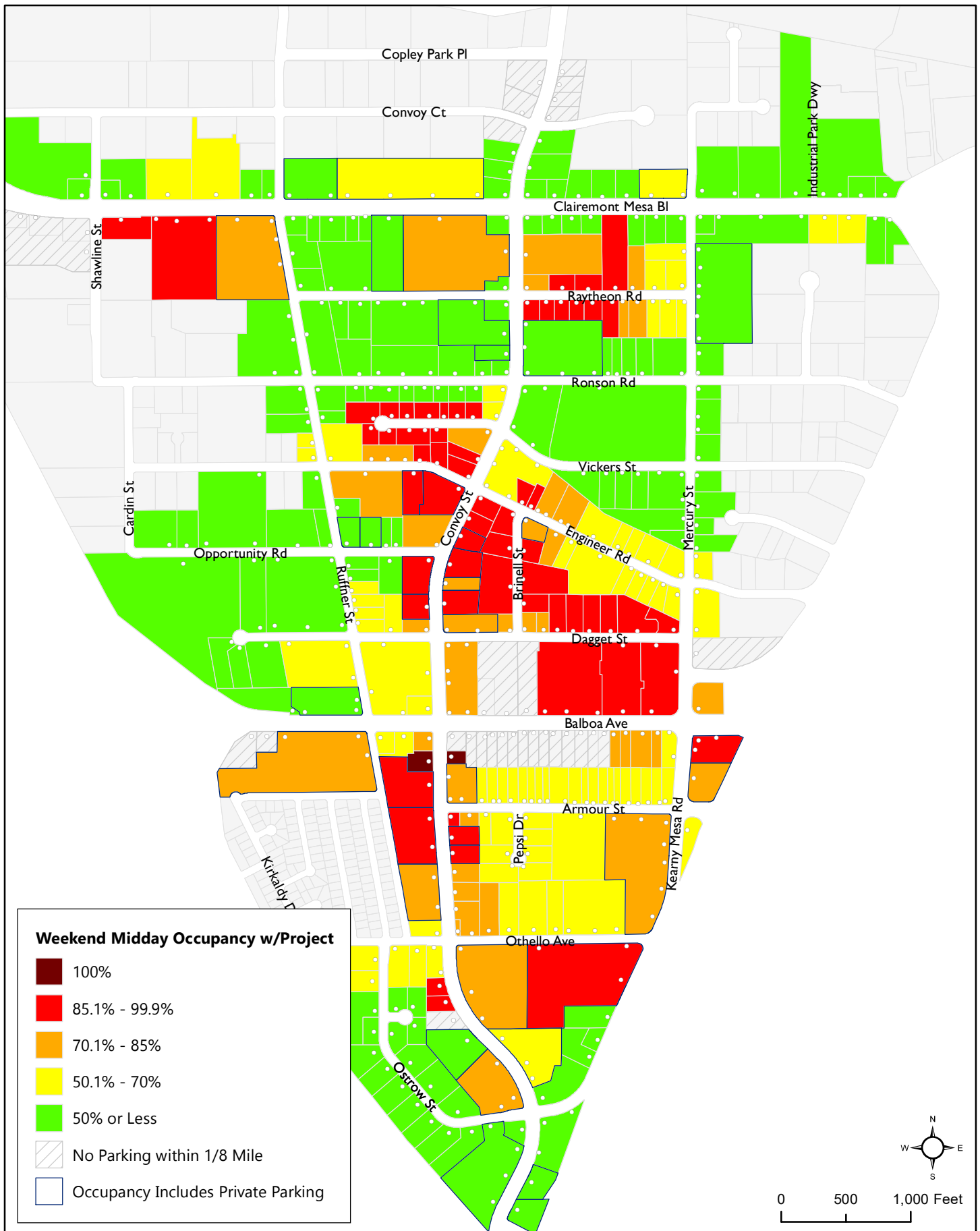


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Figure 5.5
Weekday Evening Parking Occupancy by Supply with Project (5pm – 8pm)



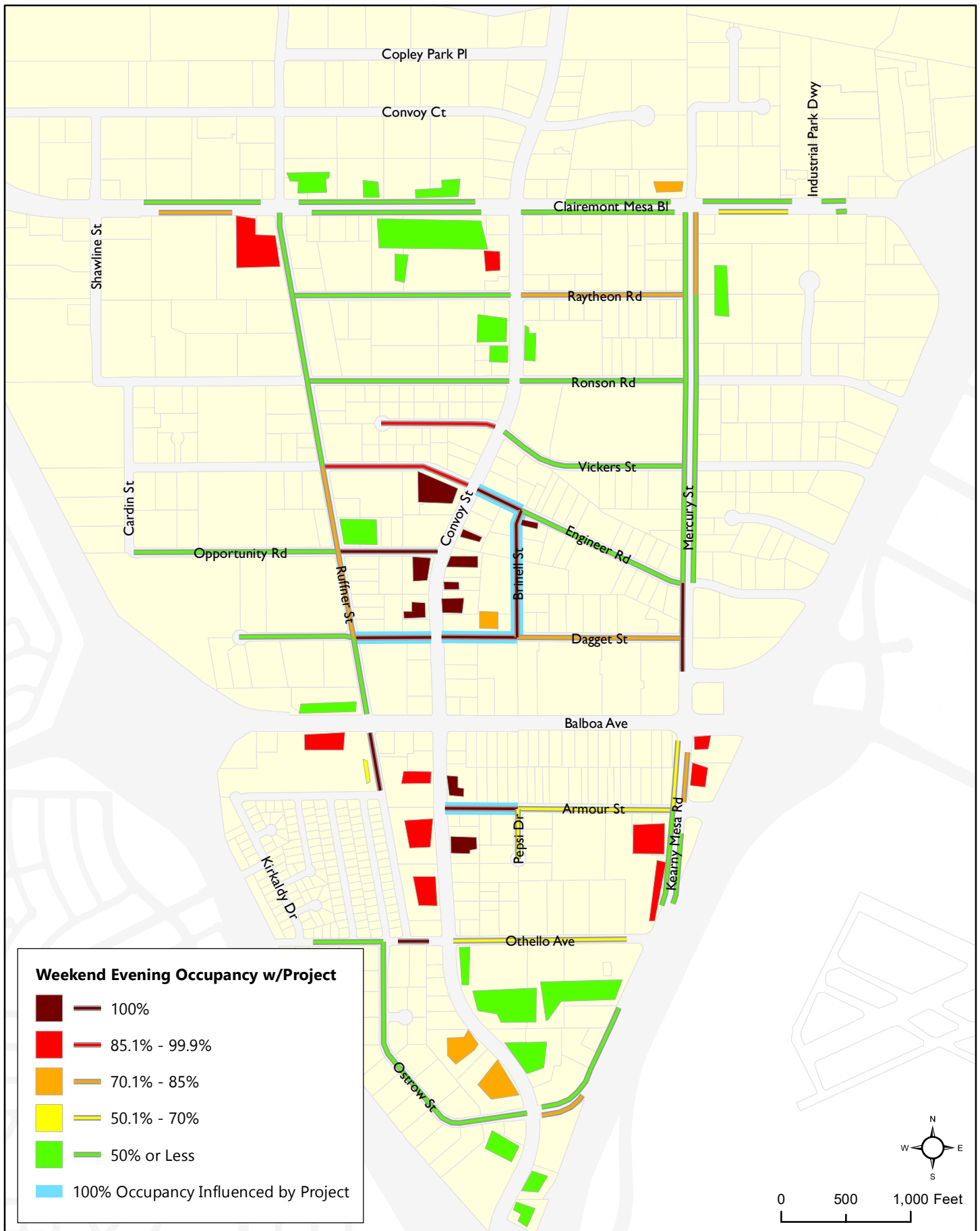


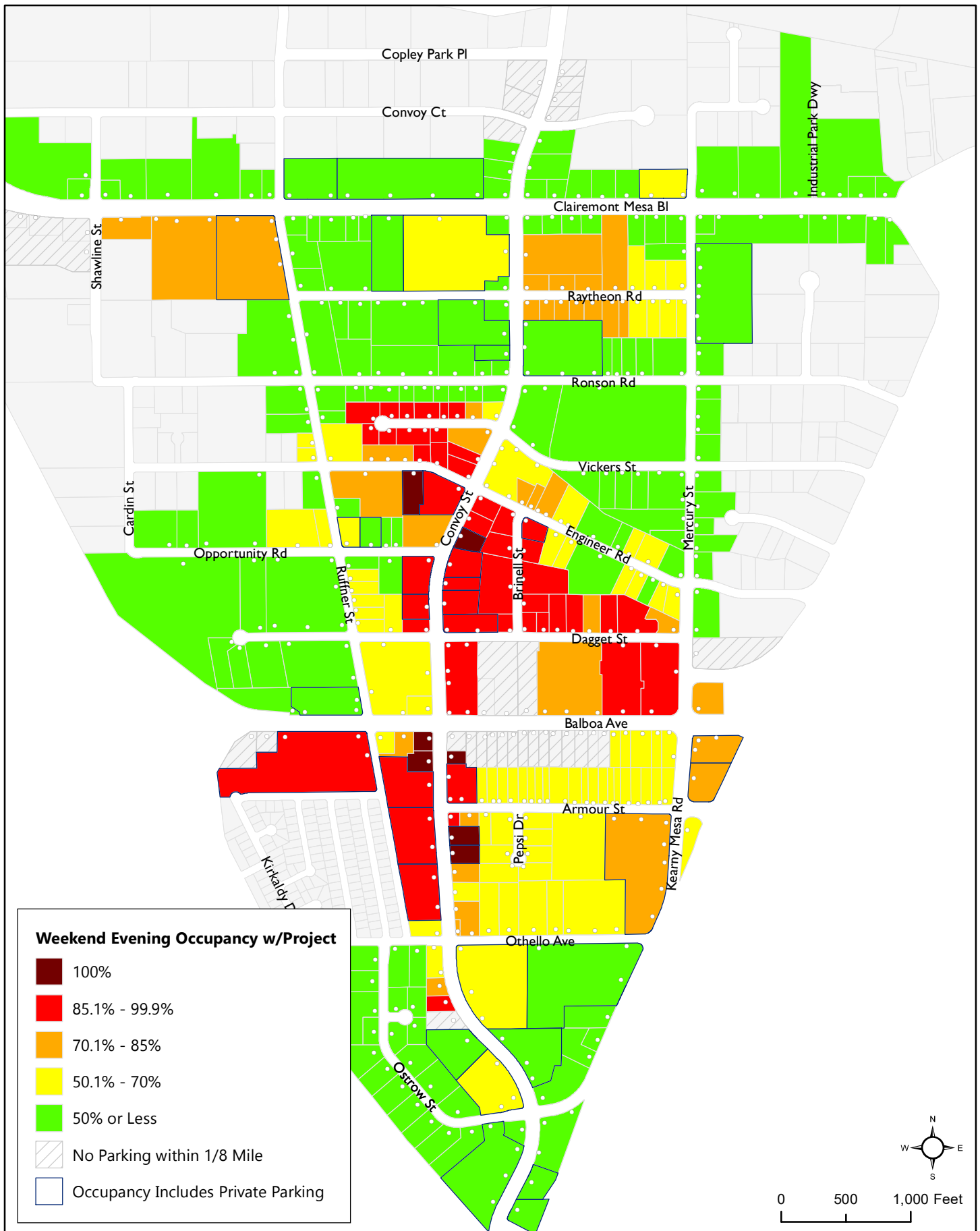


Evening (5pm to 8pm)

Figure 5.9 displays predicted weekend parking occupancy for the evening period between 5pm to 8pm with project conditions (refer to figure 3.8 for comparison to weekday/evening existing conditions). In the Central section, capacities at 100% influenced by the project are predicted for Engineer Road east of Convoy Street to Brinell Street, and Dagget Street from Ruffner Street to Brinell Street. Note once more that the public/private shared lots (Jasmine Seafood at Dagget Street near Brinell Street, and 7670 Opportunity Road, near Ruffner Street) are predicted to remain under critical occupancy. In the South section 100% occupancy is predicted again on Armour Street from Convoy Street to Pepsi Drive, but nowhere else in this section. The North section is predicted to show no occupancies at critical or full levels due to project conditions.

Figure 5.10 shows predicted weekend destination-based occupancy under project conditions during evening (refer to figure 3.9 for comparison to weekday/evening existing conditions). Both the Central and South sections are predicted to experience greater parking demand due to project conditions. The Central section reveals increased predicted demand reaching critical levels at destinations near Convoy Street and Dagget Street, and on Engineer Road west of Convoy Street; destinations along Convoy Street, Engineer Road, Brinell Street, Dagget Street and Balboa Avenue are predicted to be at critical levels (between 85% and 99.9%). Higher predicted demand continues to the South during the weekend evening, where full capacity (100%) is predicted for destinations along Convoy Street near Balboa Avenue, Armour Street and Othello Avenue (including five destinations predicted to reach 100% occupancy). In the North section, no destination is expected to reach critical or full capacity demand.





6.0 Parking Management Recommendations

The following are preliminary recommendations to consider for the study area considering the findings from the weekday and weekend conditions analyzed in the preceding chapters and feedback from the public surveys. The goal of the recommendations is to provide a comprehensive suite of parking management strategies to better utilize the existing parking supplies and manage future parking supplies, especially facilitating shared parking agreements between parcels with different temporal peaks.

Formation of a Parking District

A parking district is a specific geographic region that is managed independently in terms of parking regulations, enforcement, and pricing. Typically, the formation of a parking district involves the installation of parking meters, and its main purpose is to manage and increase parking turnover and availability within the district on behalf of the City of San Diego. The parking district can fund a variety of measures to guide drivers to less crowded parking lots, including community circulators, promote shared parking arrangements, establish signage to assist with wayfinding, enforce parking regulations, and enhance mobility conditions to encourage customers to walk to and from local businesses.

Numerous communities have established parking districts to handle tasks such as parking management, enforcement, wayfinding, community shuttle services, improvements to public transit, and other mobility-related requirements within the locality. As these districts are typically managed by entities from the same community they serve, they possess an understanding of the community's everyday challenges and are better equipped to deal with issues specific to their community. For more information regarding parking districts please visit www.sandiego.gov/parking/resources.

Parking Wayfinding

The purpose of parking wayfinding is to guide visitors to suitable parking areas, particularly to the underutilized paid public parking lots located near Convoy Street. As demonstrated by the survey results, customers are willing to pay for convenient parking spaces close to their destination, and implementing effective wayfinding would be a critical first step in making the most out of these underused lots, including the public parking lot located at 7670 Opportunity Road. This lot's occupancy rate never surpasses 28%, despite being only a short distance from Convoy Street.

Wayfinding signage can also incorporate digital parking counters that indicate the nearest lots with available parking spaces. By providing clear information on parking availability, the use of digital parking counters would reduce driver hesitation and encourage the use of paid lots.

Shared Parking

The utilization of shared parking agreements has the potential to increase parking efficiency in the study area. Shared parking occurs when several businesses share the same parking supply, taking advantage of the fact that their peak operational hours complement each other. As detailed earlier in this report, parking demand associated with industrial land use tends to peak in the early morning and afternoon, whereas demand for retail and restaurant parking peaks in the afternoon and evening. This suggests that private off-street parking spaces could be converted into public paid parking spaces during non-operating hours, and shared parking arrangements could be implemented similar to those at 7670 Opportunity Road and Jasmine Seafood Restaurant.

Another form of shared parking agreement that could be established between businesses is one that is solely focused on employee parking. For instance, if an industrial business is interested in renting out their parking spaces but prefers to keep it exclusive to employees, the parking district could

facilitate and manage the lot as an employee-only parking area. This would divert employee parking demand to designated lots, freeing up on-street parking for patrons.

Angled Parking Conversions

As a component of this project, an additional 28 parking spaces will be generated along Armour Street, Brinell Street, and Pepsi Drive by changing the on-street parallel parking to angled parking. At the time this study was concluded, the City was evaluating additional angled parking conversions and excess red curb within the study area that could create additional parking capacity. These evaluations were not finalized as part of this study, however, the City should continue to evaluate and convert existing parallel parking to angled parking where feasible.

Improve Walkability

As part of the outreach process, the Project team was informed that both employees and patrons are willing to walk a reasonable distance to reach their destination. However, some employees have expressed reluctance to walk to certain areas within the study area due to insufficient pedestrian-scale lighting and other safety concerns. The establishment of the parking district could mitigate and address some of these concerns by using parking revenues to improve the walking environment. Possible enhancements may consist of broader sidewalks, pedestrian-scale lighting, pedestrian wayfinding, area-wide security services, placemaking elements such as gateway monumental signage, and trees that provide shade.

Local Shuttle

Employing remote parking along with a privately-operated shuttle service, similar to Downtown San Diego's FRED shuttle or the Hillcrest Lunch Loop, could improve the accessibility of parking for any destination within the study area. This shuttle service could also serve as a convenient means of transporting employees from nearby major employment centers to the Convoy District during lunch hours. Additionally, in the evening, the shuttle could serve various purposes, including shuttling patrons between outer lying parking lots and the central section, as well as transporting employees to designated employees-only parking lots at the end of the night.

Mobility Hubs

A mobility hub is a transportation center that provides a variety of transportation options and services in one location. It's designed to improve connectivity and make it easier for people to travel between different modes of transportation, such as buses, light-rail, bike-sharing services, car-sharing services, and ride-hailing services. A mobility hub may also offer amenities like parking, wayfinding information, ticketing, and waiting areas. The goal of a mobility hub is to make it easier for people to get around without relying on a personal vehicle, reduce congestion, and promote sustainable transportation options. Mobility hub can also be incorporated directly into a mixed-use development as a feature for both the development and the community.

All of these recommendations are consistent with the Kearny Mesa Community Plan.