City of Carlsbad

# Carlsbad Village, Barrio, and Beach Area Parking Study

## PARKING MANAGEMENT PLAN

FINAL • September 14, 2017

Kimley»Horn

## Table of Contents

**Glossary** ..... 1

**Executive Summary** ..... 4

- **Parking Management Plan Goals** ..... 4
- **Parking Study** ..... 4
- **Key Findings** ..... 6

**Introduction** ..... 14

- **Study Overview** ..... 15
- **A Successful Parking System** ..... 15

**Existing Parking Behaviors** ..... 18

- **Parking System Data Collection** ..... 18
- **Public Outreach** ..... 25

**Current City Of Carlsbad Parking Management Practices** ..... 31

**Best Management Practices – Peer City Review** ..... 48

**Future Parking Conditions** ..... 59

- **Park+ Model** ..... 59
- **Scenario Analysis** ..... 63

**Parking Management Strategies** ..... 71

- **On-Street Parking Reconfiguration And Curb Lane Management** ..... 71
- **Parking Time Limits** ..... 79
- **Enforcement And Ambassadors** ..... 83
- **Shared And Leased Parking** ..... 87
- **In-Lieu Fees** ..... 93
- **Reduced Parking Requirements** ..... 98
- **Residential Parking Program** ..... 101
- **Paid Parking** ..... 103
- **Parking Wayfinding** ..... 106
- **Curb Cafes** ..... 108

**Transportation Demand Management ..... 109**

Evaluation Of TDM Impacts In The Study Area ..... 109

Tdm Strategies That Support The Parking Program ..... 110

**Parking Program Administration ..... 114**

Parking Program Structure ..... 114

Ongoing Data Collection And Analysis ..... 115

Technology Needs And Management ..... 120

Financial Assumptions ..... 123

**Phasing Of Parking Management Strategies ..... 126**

**Appendix A – Technical Memorandum #1 ..... PROVIDED UNDER SEPARATE COVER**

TM1-A: On-Site Survey .....

TM1-B: On-Site Survey Responses and Graphs .....

TM1-C: Online Survey Questions .....

TM1-D: Online Survey Responses .....

TM1-E: Parking Data Collection .....

TM1-F: Community Workshop #1 Responses .....

**Appendix B – Technical Memorandum #2 ..... PROVIDED UNDER SEPARATE COVER**

**Appendix C – Technical Memorandum #3 ..... PROVIDED UNDER SEPARATE COVER**

TM3-A: Peer Reviews .....

## List of Figures

**Figure 1: Study Area ..... 16**
**Figure 2: Existing Parking Inventory ..... 19**
**Figure 3: Summary Of Parking Occupancy By Facility Type ..... 20**
**Figure 4: July Peak Existing Conditions (2016) – All Study Area Parking (7 P.M.) ..... 21**
**Figure 5: July Peak Existing Conditions (2016) – Public Only (7 P.M.) ..... 22**
**Figure 6: July Peak Existing Conditions (2016) – Private Only (7 P.M.) ..... 23**
**Figure 7: May And July Average Length Of Stay By Neighborhood For On-Street Facilities ..... 24**
**Figure 8: Summary Of On-Site Survey Responses ..... 26**
**Figure 9: Existing Study Area Parking Restrictions (As Noted In The Municipal Code) ..... 34**
**Figure 10: Time Limit Regulations In Relation To Commercial Land Uses ..... 35**
**Figure 11: Overnight Restrictions In Relation To Residential Land Uses ..... 36**
**Figure 12: Peer City Locations Map ..... 49**
**Figure 13: Comparison Of In-Lieu Fees With Peer Cities ..... 58**
**Figure 14: Scenario 1 (2035): Parcels Identified For Future Growth For Master Plan Buildout ..... 62**
**Figure 15: Example Of Curb Lane Structure ..... 76**
**Figure 16: Example Of Curb Lane Signage ..... 77**
**Figure 17: Time Limit Expansion Opportunity Area ..... 82**
**Figure 18: Lease And Shared Parking Opportunity Areas ..... 92**
**Figure 19: In-Lieu Fee Program Expansion Area ..... 97**

## List of Tables

**Table E-1: Summary Of Parking Management Strategies ..... 7**
**Table 1: Summary Of Online Survey Responses ..... 27**
**Table 2: Public Comments And Relevant Areas In The Pmp ..... 29**
**Table 3: Typical Parking Regulation Guidelines By Land Use ..... 32**
**Table 4: Parking Requirements[1] ..... 38**
**Table 5: In-Lieu Parking Zone Participation Requirements ..... 45**
**Table 6: Parking Best Management Practices ..... 50**
**Table 7: Parking Requirement Rates Comparison With Peer Cities ..... 55**
**Table 8: Future Scenario Analysis (2035): Parking Occupancy By Neighborhood At Peak (7 P.M.) ..... 66**
**Table 9: Future Scenario Analysis (2035): Parking Occupancy By Type Of Facility At Peak (7 P.M.) ..... 67**
**Table 10: Parking Rates ..... 99**
**Table 11: Data To Be Collected Annually ..... 117**
**Table 12: Summary Of Parking Management Strategies ..... 126**

# Glossary

The following terms and concepts are used throughout this Draft Parking Management Plan to describe the performance of the parking system or individual components of the parking system. When used in the document, the term is shown in blue text and links back to this section for reference.

### *Context-sensitive strategies*

Context-sensitive strategies tailor recommended policy or infrastructure improvements to the needs and desires of the community for which they are proposed.

### *Curb Lane Management*

A curb lane management program provides structure for managing the various competing curb lane uses (i.e., on-street parking, commercial loading, curb cafes, traffic flow, loading, bicycle and pedestrian mobility). The program prioritizes these uses based on the goals of the community (e.g., greater emphasis may be placed on encouraging alternative modes) and the needs of the surrounding land uses (access to business for customers and commercial loading). The program allows for making consistent decisions regarding curb lane uses so that there is structure and consistent reasoning behind the decision-making process.

### *Effective Capacity*

Effective capacity is an industry-accepted occupancy threshold for parking facilities that indicates the efficiency of the facility or system. Based on industry standards, the primary threshold is 85percent of the total capacity of the parking system and/or certain areas within the system. This is the threshold that indicates whether the parking system is operating effectively. For example, when observed or projected occupancies are under this threshold, users can typically locate spaces easily. When observed or projected occupancies are at or above this threshold, users cannot typically find available parking easily.[1]

### *In-lieu Fee*

In-lieu fee, as provided for in the existing Village Master Plan and Design Manual, is a cash payment made by a developer to the city instead of providing the total number of minimum parking space or spaces required by the code. These payments are typically calculated on a per space basis to reduce a portion or all a development's parking requirement. Fees are collected and used in a defined area to provide additional parking supply, or parking-related infrastructure and services. Under the existing program, the in-lieu fee program is available only to non-residential projects.

[1] "Parking 101: A parking Primer: A Publication of the International Parking Institute", International Parking Institute, 2015; "Shared Parking, Second Edition", Urban Land Institute

### *Leased Parking*

Leased parking is an arrangement among two or more parties, whereby a lessee(s) provides some form of compensation in exchange for use of a lessor's parking space(s) to satisfy the lessee's off-street parking requirement.

### *License Plate Recognition Technology (LPR)*

License plate recognition technology is a computer-based optical system that can sense the presence of a license plate from its reflective material. Once a license plate is detected, the plate number may be recorded in addition to state of origin. This technology can be used for data collection to better understand parking behaviors and/or perform parking enforcement activities.

### *Met Demand*

Met demand is the number of occupied parking spaces in a facility during an observed or projected period or of time.

### *Park+*

Park+ is a computer model used to estimate future parking conditions. Primary inputs include existing parking conditions, future development patterns, and anticipated future activity in and around a study area.

### *Parking Ambassador*

A parking ambassador is an employee of a parking management entity who acts as a resource for users to learn how to use the parking system. An ambassador will also assist in enforcement activities. Ambassadors are typically dressed in approachable, clearly identifiable, and non-enforcement-type clothing.

### *Parking Demand*

Parking demand is the metric representing the projected quantity of parking generated by employees, patrons, residents, visitors, and others associated with a business or land use within the parking system. Each business or land use generates a certain quantity of demand for parking spaces to accommodate their users. The total number of spaces generated by business or land use patrons at a given time is the parking demand for that business or land use. This demand is based on the land use intensity (building square footage or number of units) and the land use type (restaurant, office space, retail, single and multi-family residential, etc.). Parking demand may differ from the actual parking supply or standard parking requirements.

### *Parking Duration*

Parking duration is a measure of how long vehicles are parked in a parking space. This metric is analyzed through data collection efforts and is used to help define policies such as parking time limits.

### *Parking Facility*

A parking facility refers to any on- or off-street location designated for parking.

### *Parking Occupancy*

Parking occupancy is the percentage of occupied spaces in a parking facility at a given time. Parking occupancy is calculated by dividing the number of observed or projected vehicles parked in a facility by the number of total spaces in the facility.

### *Parking System*

Parking system refers to the entire collection of parking spaces, parking facilities, technologies, equipment, policies, regulations, and personnel that work together to provide the parking needs of employees, patrons, residents, visitors, and other users in a study area.

### *RSMeans*

RSMeans is a web-based service that provides current unit price cost information to assist contractors with providing accurate project estimates and making cost projections on construction projects. The service is available at www.rsmeans.com and is used by construction professionals in numerous sectors ranging from healthcare to education to commercial development.

### *Shared and leased parking*

Shared and leased parking is a voluntary situation in which two or more land uses share a set of parking spaces because their peak demands vary throughout the day. For example, an office and a restaurant could share a set of spaces because the office demand occurs during late morning and afternoon periods, while the restaurant demand occurs in evening periods.

### *Transportation Demand Management Program (TDM)*

A Transportation Demand Management, or TDM, program is a set of policies, economic, programmatic, and other measures that seeks to reduce vehicle miles traveled, traffic congestion, and parking demand, to gain resulting environmental, conservation, and sustainability benefits. TDM programs include measures that work to reduce single occupancy vehicle (SOV) trips, increase vehicle *occupancy*, and shift travel to other modes or to non-peak travel periods. This is achieved through employer actions, financial incentives, alternative work arrangements, or local infrastructure and land use policy that constrains parking supply, densifies uses, and provides a convenient suite of transportation options including walking, bicycling, transit, and rideshare.

### *Unmet Demand*

Unmet demand is parking demand generated by land uses within a parking system that cannot be accommodated by the nearby available parking supply. This can be due to specific parking restrictions, lack of available parking, lack of travel alternatives, or parking being unavailable within acceptable walking thresholds.

## Executive Summary

Carlsbad Village (Village) and the adjacent residential neighborhood known as the Barrio were the City of Carlsbad's (city) first neighborhoods and remain the center of civic life for the city. Located adjacent to the beach, these communities draw residents and visitors. In support of the proposed Village and Barrio Master Plan vision and parking standards and strategies, the city conducted a comprehensive parking study and developed a Parking Management Plan for the Village, Barrio, and adjacent beach area. The adjacent beach area has been included to provide the full picture of parking along the coast and its potential impact on the Village.

### Parking Management Plan Goals

- Make parking more convenient for community members, employees and visitors
- Promote more efficient use of existing parking
- Support future parking needs and mobility options
- Explore options to make the project area more inviting for pedestrians, bicyclists, and people who use public transportation
- Support the vision outlined in the Draft Village and Barrio Master Plan (April 2016)

The Parking Management Plan provides implementable short-term (by year 2020), medium-term (by year 2025), and long-term (by year 2035) strategies to improve the efficiency and effectiveness of the *parking system*. These strategies focus on the Village and Barrio and, in turn, the proposed Village and Barrio Master Plan.

## Parking Study

The Parking Management Plan began with a comprehensive study capturing the existing parking conditions in the study area. Parking *occupancy* and parking *duration* data were captured, and an updated inventory of on- and off-street parking spaces was created. Further analysis included public outreach, peer city review, and scenario planning as described in the full report and summarized in this section.

### *Public Outreach*

- 2,139 on-site surveys and 825 online surveys provided in English and Spanish
- Public workshop, Planning Commission Meeting and 11 stakeholder and community outreach events to various neighborhood groups
- Website and e-newsletter announcements
- Social media
- Postcard mailings
- Local media

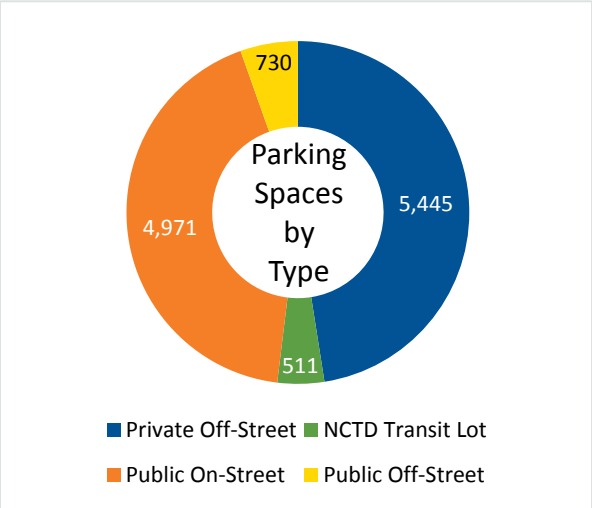
### *Parking Demand Scenario Planning*

Future parking conditions and needs were evaluated based on the anticipated development of the study area as defined in the various city documents, including the General Plan Environmental Impact Report, and as determined by staff. A parking demand scenario planning tool, called *Park+*, was used to evaluate future parking *demand* based on the full buildout of the study area by the year 2035.

The detailed methodology and results of the data collection and analysis, peer city reviews and best practices, and the Park+ scenarios were thoroughly documented in three Technical Memorandums that informed this Draft Parking Management Plan and are included as appendices to the full report.

## Key Findings

The study produced an inventory of all available public and private (privately-owned and dedicated to a specific property) parking spaces in the study area which totaled 11,657 parking spaces, excluding parking associated with single-family homes and properties with controlled access.




Additionally, the study analyzed the availability and use of the *parking system* during the peak and off-peak seasons. Results determined that demand for parking collectively peaked at 7 p.m. on a weekend in July 2016.

There are pockets of high demand where parking occupancy has reached *effective capacity*, leading to difficulty finding parking in those areas. High-*demand* areas include on-street facilities west of the railroad tracks, Village Faire parking lot, and on-street facilities in the Village center on Grand Avenue, Carlsbad Village Drive, and State Street. However, the study did reveal that the current and future parking supply is adequate to meet demand if the parking system, as part of the larger transportation system, is actively managed.

Given the adequate supply of parking within the parking system to meet current and future projected parking demand, it is not recommended that the city invest in construction of additional parking supply at this time. Rather, to address the observed parking *demand* imbalance and maximize the efficient use of the *parking system*, the draft Parking Management Plan recommends that the city implement a comprehensive Parking Management Program that consists of the following strategies summarized in Table E-1 and discussed in greater detail in the full report. Each strategy listed in the table below is described in detail in the full report with recommendations for phasing and implementation. These recommendations should not preclude private business owners and developers in providing or expanding private supply of parking to meet their individual needs, as they may see fit.

*Table E-1: Summary of Parking Management Strategies*

| PARKING STRATEGY | CURRENT CONDITIONS | SHORT-TERM (BY 2020) | MID-TERM (BY 2025) | LONG-TERM (BY 2035) |
|---|---|---|---|---|
| On-Street Parking Reconfiguration and Curb Lane Management | The city has curb lane markings and signage that indicate where and when on-street parking is permitted | • Review red curbs and driveway closures to identify potential opportunities to create additional parking<br>• Consider angled parking where conditions allow<br>• Develop a *curb lane management* policy and program | • Implement *curb lane management* policy and program<br>• Continuation of previous recommendations | • Evaluate effectiveness of *curb lane management* policy and adjust as needed<br>• Continuation of previous recommendations |
| Parking Time Limits | 2- and 3-hour time limits on-street in select areas (See Figure 7)<br>In some areas parking is not allowed between<br>2 a.m.—5 a.m.<br>3 a.m.—5 a.m. | • Enforce existing time limits<br>• Reduce time limit to 24-hours for RVs<br>• Revise the Oversized Vehicles Ordinance to continue to allow RV access to the beach while restricting long-term parking on surrounding city streets<br>• Revise overnight parking restrictions in residential areas<br>• Provide time limit information on the city website | • Extend parking time limits after 5 p.m. to 4-hours<br>• Consider reducing time limits to 1-hour to encourage more turnover in high *demand* areas<br>• Evaluate extending time limits to new areas based on collected data<br>• Continuation of previous recommendations | • Continuation of previous recommendations |

| PARKING STRATEGY | CURRENT CONDITIONS | SHORT-TERM (BY 2020) | MID-TERM (BY 2025) | LONG-TERM (BY 2035) |
|---|---|---|---|---|
| Enforcement and *Ambassadors* | Enforcement Hours:<br>7 a.m. – 6 p.m. Mon-Sat.<br>Enforcement is handled by the city's Police Department on a complaint response basis | • Implement proactive enforcement on a more regular basis in areas with the highest parking demand<br>• Implement first offense warnings<br>• Evaluate cost-effective options for administering enforcement<br>• Provide enforcement regulation information, such as fines and how to contest a citation, on the city website for simplified public access | • Expand enforcement if data demonstrates that parking duration is an issue.<br>• Extend enforcement hours to 8 p.m. to cover the peak period<br>• Consider implementing an ambassador approach to parking enforcement<br>• Implement a graduated fine structure | • Re-evaluate enforcement needs and adjust enforcement levels as necessary.<br>• Continuation of previous recommendations |
| *Shared and Leased Parking* | The city allows property owners to enter into shared and leased parking agreements where they can share a common off-street and/or off-site parking resource to meet their parking needs, if the shared or leased parking facility is within 300 feet (within the Village) or 150 feet (outside the Village) of the subject land uses. | • Document inventory of shared and leased parking opportunities<br>• Within the Village, allow the walking distance to be 1,320 feet and allow varying shared and leased parking agreements<br>• Develop shared and leased parking agreement templates | • Evaluate shared and leased parking opportunities for employee parking<br>• Evaluate shared and leased parking opportunities for valet parking locations<br>• Continue leasing NCTD spaces<br>• Coordinate with NCTD to enter a lease agreement to | • Continuation of previous recommendations |

| PARKING STRATEGY | CURRENT CONDITIONS | SHORT-TERM (BY 2020) | MID-TERM (BY 2025) | LONG-TERM (BY 2035) |
|---|---|---|---|---|
| | | and resources, including a standard city liability policy<br>• Define development/ business incentives for participating<br>• Broker shared and leased parking agreements with property owners | use railroad right-of-way, between Oak Avenue and Tamarack Avenue, on the east and west sides of the railroad tracks, for public parking. Work with NCTD to investigate opportunities to incorporate public parking into future non-rail development on NCTD property. | |
| *In-Lieu Fees* | The city allows developers of properties east of the railroad tracks in the Village to pay a fee of $11,420 per space in-lieu of providing the parking required by the adopted Village Master Plan and Design Manual (2013). | • Maintain existing in-lieu fee rate<br>• Use development regulations to encourage participation in the program<br>• Use funds to support shared and leased parking<br>• Make program transparent by posting information on program utilization on the city website | • Evaluate program performance and review fees annually.<br>• Adjust fees if the program is underutilized or if the fee falls below 60 percent of the cost to construct a parking space (based on *RSMeans*).<br>• Consider expanding program west of the tracks if commercial development increases in this area<br>• Continuation of previous recommendations | • Continuation of previous recommendations |

| PARKING STRATEGY | CURRENT CONDITIONS | SHORT-TERM (BY 2020) | MID-TERM (BY 2025) | LONG-TERM (BY 2035) |
|---|---|---|---|---|
| Reduced Parking Requirements | Existing parking requirements may be reduced in the Village area. Requirements may vary depending if the development is located within or outside of the Coastal Zone. Barrio parking requirements are generally the same as the rest of the city. | • Adopt the proposed parking requirements in the Draft Village and Barrio Master Plan based on observed parking ratios<br>• Monitor implementation and *demand*<br>• Evaluate the effectiveness of the TDM Ordinance to determine if the timing for the parking reductions is in alignment with first mile and last mile transportation opportunities | • Monitor development *demands* and adjust ratios accordingly | • Consider implementing parking maximums |
| Residential Parking Program (RPP) | None | • Monitor parking occupancies annually. If occupancies consistently reach 85 percent in residential areas, evaluate whether a RPP would be appropriate. | • Define the locations and criteria for implementation<br>• Implement RPP if neighborhood meets program criteria | • Evaluate RPP on an ongoing basis<br>• Continuation of previous recommendations |
| Paid Parking | On-street and off-street parking is free with exception of the | • Determine threshold for implementing paid parking | If data dictates, then:<br>• Implement paid parking | If data dictates, then:<br>• Define locations to implement paid parking |

| PARKING STRATEGY | CURRENT CONDITIONS | SHORT-TERM (BY 2020) | MID-TERM (BY 2025) | LONG-TERM (BY 2035) |
|---|---|---|---|---|
| | Tamarack State Beach and two private businesses. | • Evaluate *parking system* annually<br>• Create an ordinance that defines the parameters for implementing paid parking in the future | • Define technology to manage *parking system*<br>• Establish a Parking Benefit District<br>• Evaluate parking system annually and adjust fees as needed to manage demand | • Establish a Parking Benefit District<br>• Evaluate parking system annually adjust fees as needed to manage demand |
| Parking Wayfinding | Themed wayfinding signage to public off-street parking | • Develop additional signage for new public parking facilities created through shared and leased parking<br>• Evaluate and select a smartphone application that provides real-time parking information<br>• Create a map of public parking facilities (location and number of spaces) and post to the city website | • Continuation of previous recommendations | • Continuation of previous recommendations |
| Curb Cafes | Pilot program permitting curb cafes expired; several cafes previously approved remain in use; Property owners are currently allowed to pay a fee to | • Subject to curb café program approval, continue to allow existing curb cafes and review parking occupancies | • Continuation of previous recommendations | • Continuation of previous recommendations |

| PARKING STRATEGY | CURRENT CONDITIONS | SHORT-TERM (BY 2020) | MID-TERM (BY 2025) | LONG-TERM (BY 2035) |
|---|---|---|---|---|
| | the city for use of on-street space(s) to operate a Curb Cafe | prior to approval of new facilities<br>• Monitor occupancies annually. Restrict the use of curb cafes when parking occupancies reach 85 percent in areas around and serving the location(s) of the curb café(s) in consideration | | |

# PARKING MANAGEMENT PLAN

## Introduction

The city is currently in the process of developing a Village and Barrio Master Plan (proposed Master Plan) which establishes a vision for future development and land uses in these two historic neighborhoods. The proposed Master Plan would replace the existing Village Master Plan and Design Manual (existing Master Plan) and encompass the Barrio area, which currently is outside the existing Master Plan and is subject to the regulations of the city-wide Zoning Ordinance, Title 21 of the Carlsbad Municipal Code (CMC). The boundaries of the proposed Master Plan are shown on **Figure 1**. Note that the proposed Master Plan includes portions of all three neighborhoods in the study area – the Village, Barrio, and Beach Area. **Figure 1** also shows the Coastal Zone boundary, which is part of the city's Local Coastal Program. As noted throughout, properties within the Coastal Zone often are subject to different parking standards than those outside.

During the master planning process, it was determined that a more thorough analysis of existing parking conditions was needed to provide community-specific recommendations for the management and operation of existing and future parking assets. Therefore, an in-depth analysis of parking within the study area was conducted to inform this Parking Management Plan, which recommends near-, medium-, and long-term strategies that maximize parking efficiency and improve mobility within and around the study area. The DRAFT Carlsbad Village, Barrio, and Beach Area Parking Management Plan was developed with the following goals in mind:

- Make parking more convenient for community members, employees, and visitors
- Promote more efficient use of existing parking
- Support future parking needs and mobility options
- Explore options to make the project area more inviting for pedestrians, bicyclists, and public transit riders.
- Support the vision outlined in the proposed Master Plan

The driving force behind the parking study was to obtain accurate data to better understand current parking conditions – particularly parking *occupancy*, *demand*, and behavioral data – and to estimate how future community growth would impact the need for parking infrastructure and management in the area.

Because parking is integral to transportation, economic development, and community character, the parking strategies discussed in this plan are provided within the context of several other city-wide initiatives, including:

- City Community Vision (Envision Carlsbad)
- General Plan (including the Mobility Element)
- Climate Action Plan (CAP)
- Carlsbad Municipal Code (including the zoning ordinance)
- Local Coastal Program
- Coastal Mobility Readiness Plan
- Village Master Plan and Design Manual, 2013 (existing Master Plan)
- Draft Village and Barrio Master Plan (proposed Master Plan)

- *Transportation Demand Management (TDM)* Ordinance (under development)

## Study Overview

The intent of the parking study was to evaluate existing parking regulations, policies, and practices and analyze parking inventory and behaviors (*occupancy* and *duration*) in the study area to project future parking conditions.

The parking study included the following elements:

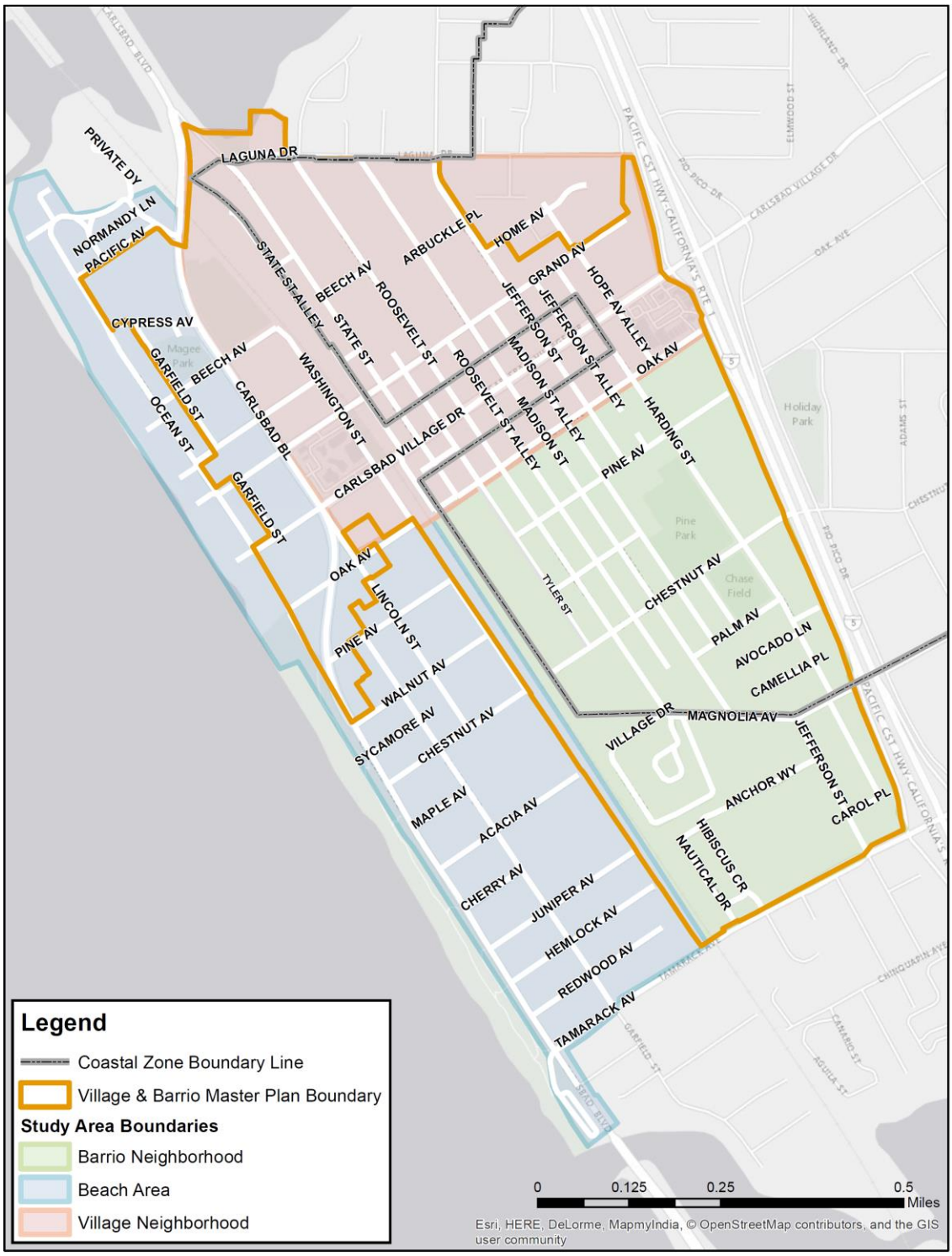
1. **Existing Parking Behaviors** – A combination of field-collected data and public outreach results were used to define a baseline of existing conditions and perceptions within the study area.
2. **Peer City Review** – Research and interviews with comparable California coastal cities that have faced similar parking challenges and implemented unique solutions applicable to the city.
3. **Existing and Future Parking Demand Modeling** – The *Park+* model was used to predict future parking impacts based on growth within the study area. TDM strategies were also analyzed to understand the impact on parking *demand*.
4. **Recommended Strategies and Implementation Plan** – Use field data collected and stakeholder input, best management practices from peer cities, and Park+ modeling results to develop *context-sensitive strategies* that support the community's vision.

### A Successful Parking System

- Supports connectivity to transportation, land use, and economic development
- Provides access to businesses and other destinations, linking it to the economic vitality of the community
- Serves as a transition point where drivers become pedestrians, or transition to transit, linking to larger mobility options in the area
- Plays a role in sustainability measures by reducing traffic, congestion, and greenhouse gas emissions

The study area is shown in **Figure 1** on the following page.

*Figure 1: Study Area*



# EXISTING PARKING BEHAVIORS

## Existing Parking Behaviors

The impetus for this study was to develop a deeper understanding of the *parking system* and how it operates. To fully understand the parking behaviors unique to the study area, a comprehensive data collection process was conducted, including evaluation of inventory, field observations for *occupancy* and *durations* in the various areas within the study area, and robust community outreach to document perceptions related to parking behaviors. Together, this multifaceted approach shed light not only on how the system was operating from a technical standpoint, but also how the system was working from the perspective of the community.

Two rounds of weekday and weekend data collection efforts were conducted in 2016 to capture the existing parking conditions in the study area. Parking occupancy and duration data was captured and an updated inventory of on- and off-street parking spaces was tabulated. Community participation and feedback was also a crucial component of this study. Stakeholder feedback was captured through on-site surveys, online surveys, and community meetings.

### Parking System Data Collection

Parking inventory and behavioral data (occupancy and duration) was collected to determine weekday, weekend, and seasonal parking *demands* throughout the study area.

#### *Parking Inventory and Data Collection Methodology*

Parking occupancy data was collected during the off-peak season (May 2016) and peak season (July 2016) using License Plate Recognition (LPR) technology. This technology automatically processes parking occupancy and duration within the study area during the morning, mid-day, and evening peaks. Data was collected from all off-street and on-street parking facilities. **Figure 2** illustrates those parking facilities where data was collected for the study.

Off-peak (May) and peak season (July) data was collected at the same locations using the same data collection methods. Peak season data collection hours were extended based on feedback from citizens raising concerns about adequately capturing the residential demand. Therefore, another observation period occurred at 11 p.m. in July 2016 for the on-street parking only.

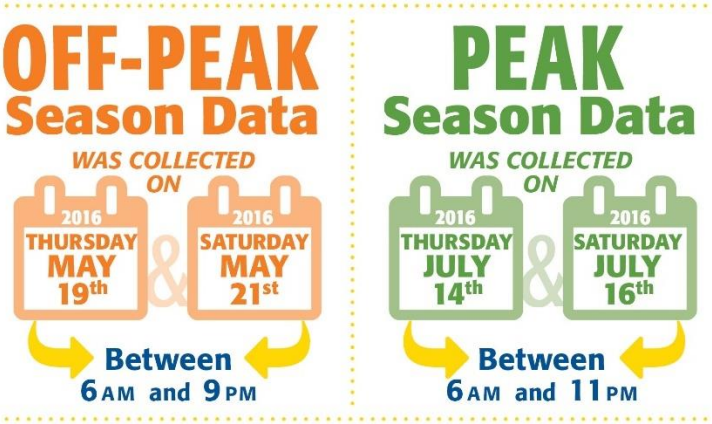
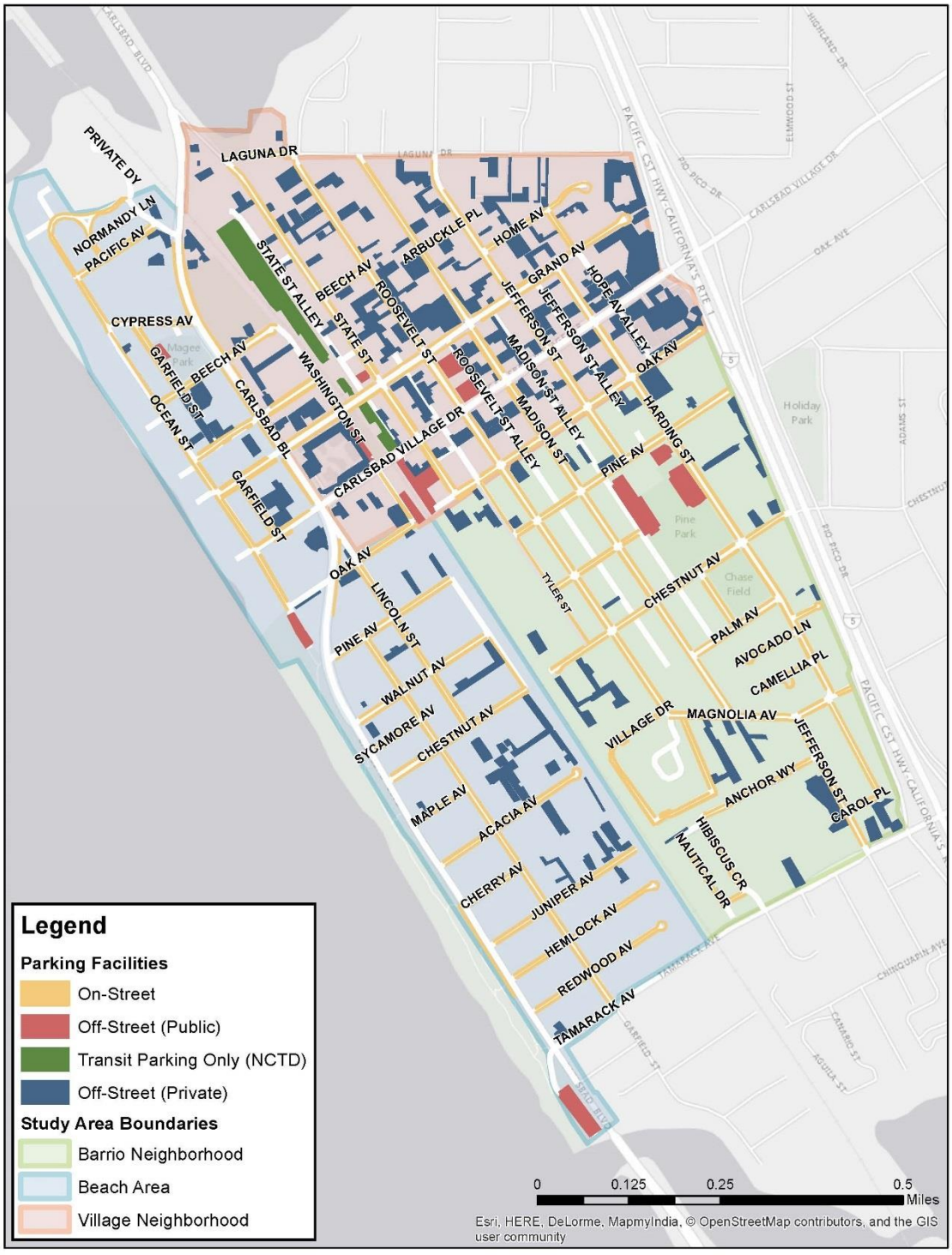


*Figure 2: Existing Parking Inventory*



### *Parking Occupancy*

The observed parking facility *occupancy* within the study area peaked at 7 p.m. during the July weekend collection period. However, different facilities of the *parking system* peaked at various times throughout the day due to the differences in how and when those facilities are used. During this 7 p.m. peak hour, the entire system experienced an average occupancy of 54 percent (including both public and private parking facilities). Technical Memorandum #1 provides a more detailed analysis of the parking demands and community parking behaviors. For more information regarding various peak periods throughout the study area, refer to Appendix A for Technical Memorandum #1. A parking system is considered at capacity when it is 85 percent occupied during the peak time of day. When occupancies reach 85 percent, it becomes difficult to find the remaining open parking spaces. At this level of occupancy, those looking for parking will have to "circle" to find available spaces which adds to traffic congestion, greenhouse gas emissions, and general frustration at the lack of readily available parking.

With an average occupancy of 54 percent, the system was generally considered underutilized. However, even with the overall surplus, areas of imbalance exist within the system. On-street and isolated private off-street facilities near the beach and around the center of the Village reached much higher occupancies, some exceeding 90 percent occupancy, indicating high-*demand* areas where parking conditions would have been difficult. The following data shown in **Figure 3** summarizes the results for the on-street, public off-street, and private off-street facilities during the system-wide peak (July, weekend at 7 p.m.).

*Figure 3: Summary of Parking Occupancy by Facility Type*

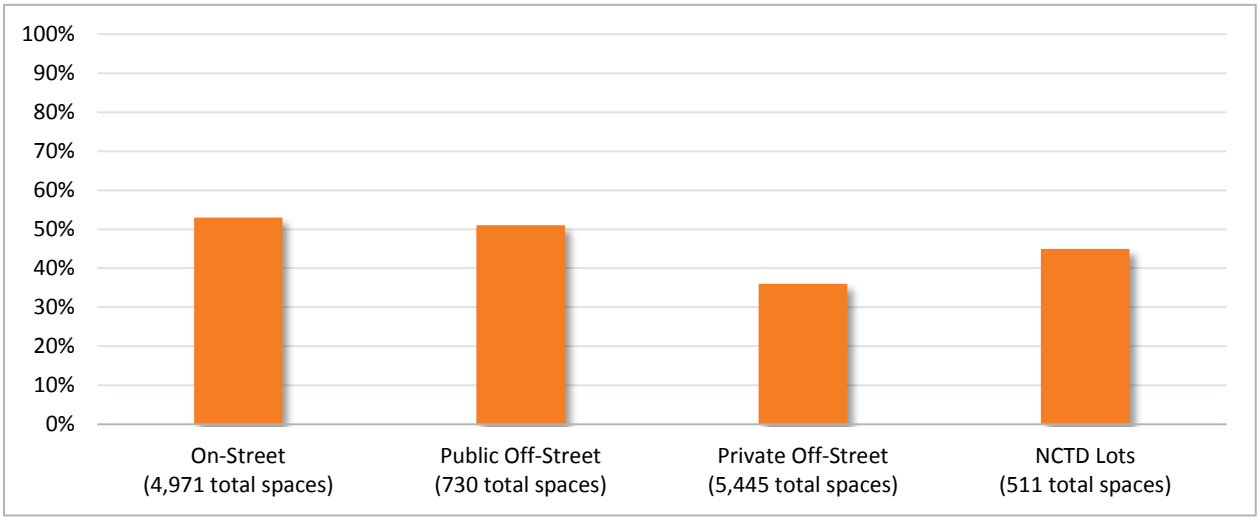



**Figure 4** on the following page displays the results during the July peak for the entire study area. High-*demand* areas include on-street facilities west of the railroad tracks, Village Faire parking lot, and on-street facilities in the Village center on Grand Avenue, Carlsbad Village Drive, and State Street. Most private lots were utilized less than 50 percent, however. **Figure 5** illustrates the same results, but highlights the public and NCTD parking facilities only. **Figure 6** also shows the same results but for the private facilities only.

*Figure 4: July Peak Existing Conditions (2016) – All Study Area Parking (7 p.m.)*

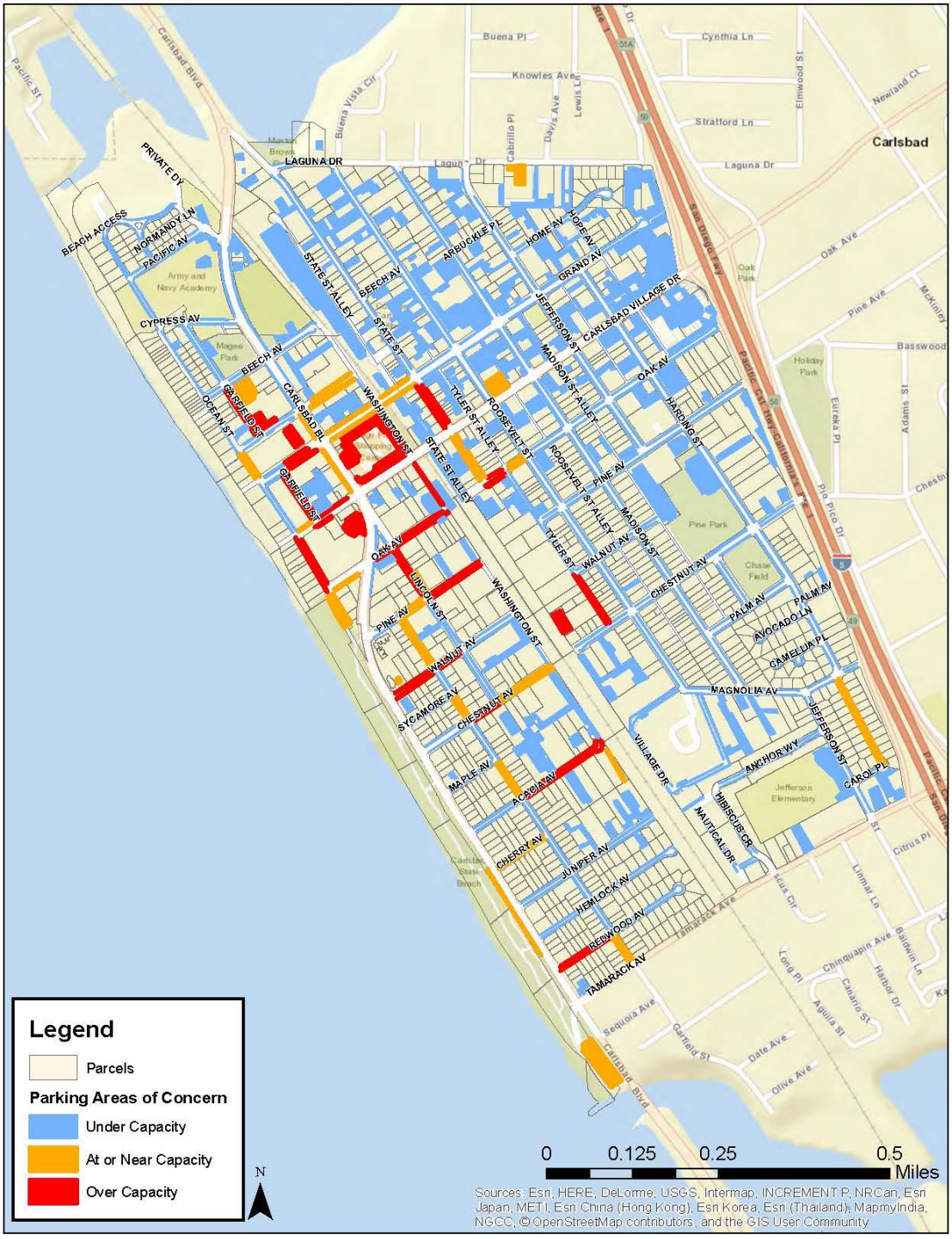


*Figure 5: July Peak Existing Conditions (2016) – Public Only (7 p.m.)*

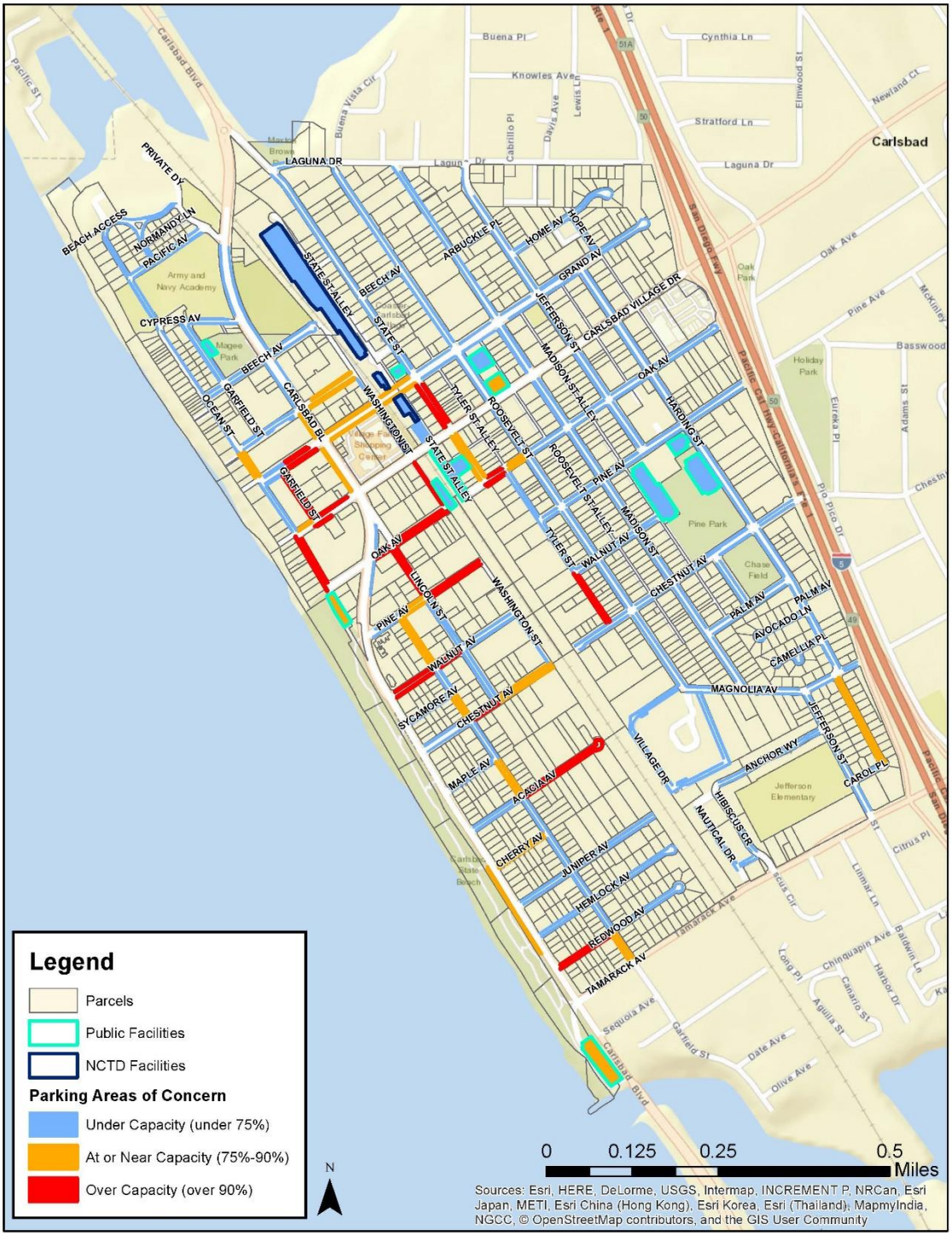
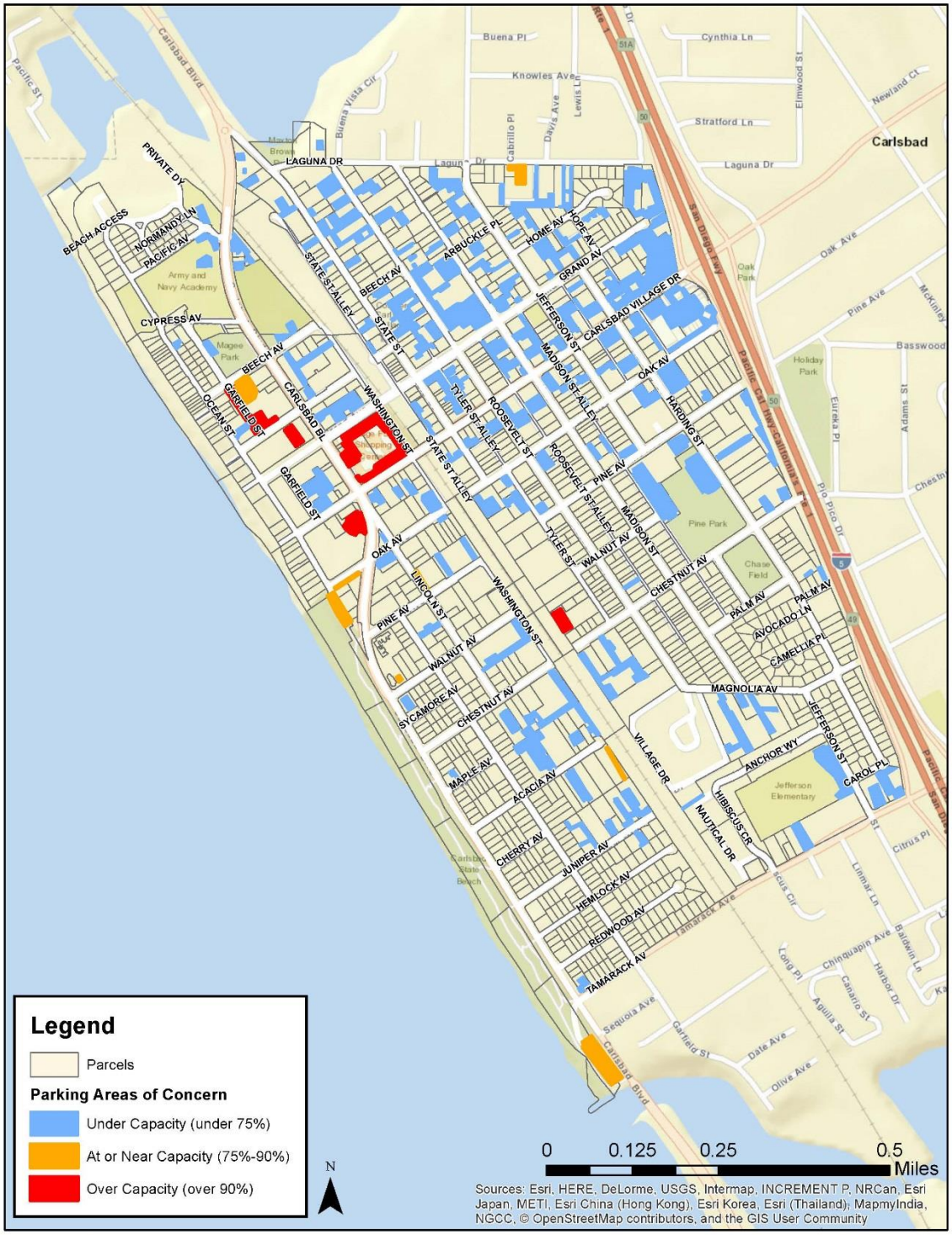


*Figure 6: July Peak Existing Conditions (2016) – Private Only (7 p.m.)*

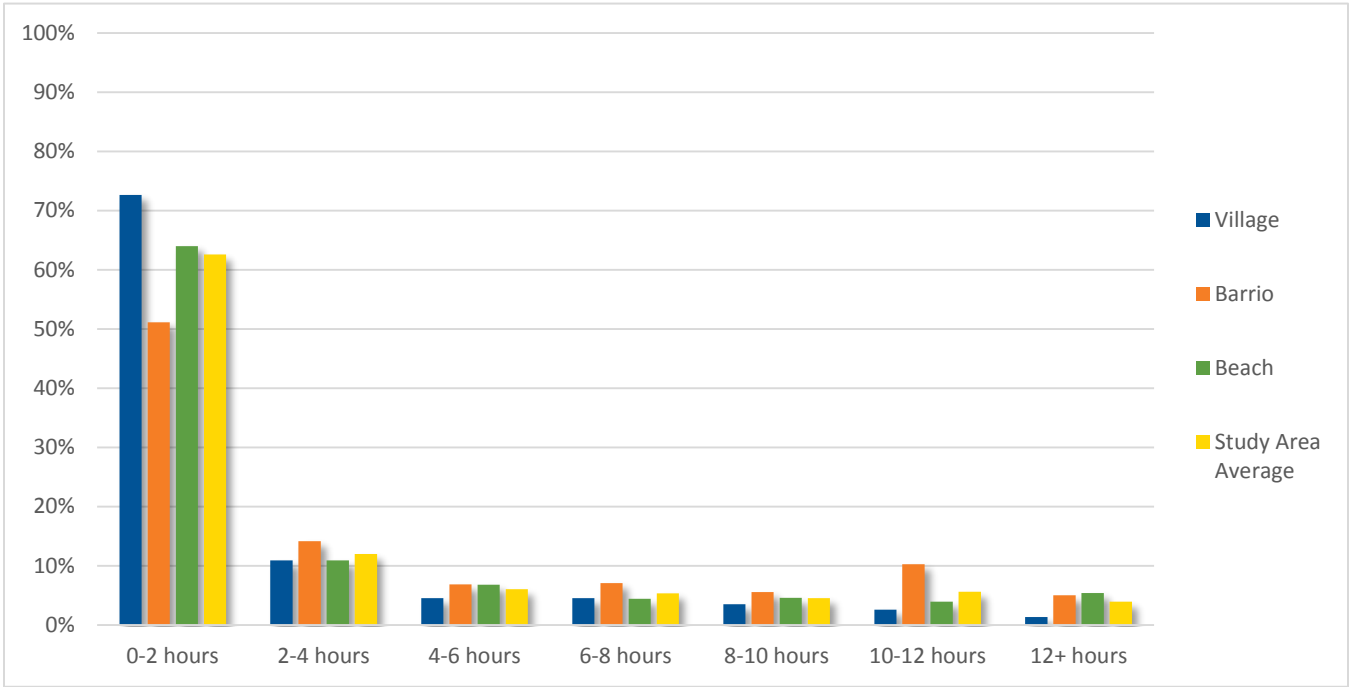


### *Parking Duration*

In addition to *occupancy* data, the LPR technology was used to analyze parking *duration*, or length of stay, for on-street parking facilities. Higher rates of turnover are typically encouraged for on-street parking to improve access to businesses, whereas long-term parkers (such as employees of the business district and commuters) are encouraged to use off-street facilities.

May and July presented similar duration trends, indicating that most users (average of 63 percent) park on the street for two hours or less. In the Barrio neighborhood, nearly half (49 percent) of people park on the street for periods longer than two hours. This is indicative of the residential development in that neighborhood. This parking behavior varies greatly from that experienced in the Village, where 73 percent of people park for two hours or less which is commensurate with a more mixed-use neighborhood. The beach has a similar land use mix to the Barrio that is mostly residential but experiences higher turnover (64 percent). This higher turnover is likely due to beach goers utilizing on-street spaces in the residential areas. Where these neighborhoods intersect, strategies may be sought to balance the competing parking behaviors. Length of stay data for on-street facilities is shown in **Figure 7**.

*Figure 7: May and July Average Length of Stay by Neighborhood for On-Street Facilities*




**Categorized times represent ranges. For instance, "0-2 hours" represents vehicles that were observed in the study area for 120 minutes or less, whereas "2-4 hours" includes vehicles observed in the study area at least 121 minutes but not more than 240 minutes, and so on.*

## Public Outreach

Public involvement and community input was an important component of the study. Public outreach related to this study included on-site surveys, an online survey, a community workshop, Planning Commission meeting and 13 community outreach and stakeholder meetings. The city sent 4,420 postcard mailings regarding the study to residents, businesses, and associations; posted information regarding the study via newsletters, social media, and local media; attended meetings with neighborhood groups, community organizations, and various City Commissions and Committees; hosted a public workshop in August 2016 to solicit feedback; and presented initial findings to the city's Planning Commission in September 2016. This section describes each of these efforts and summarizes the responses from the community.

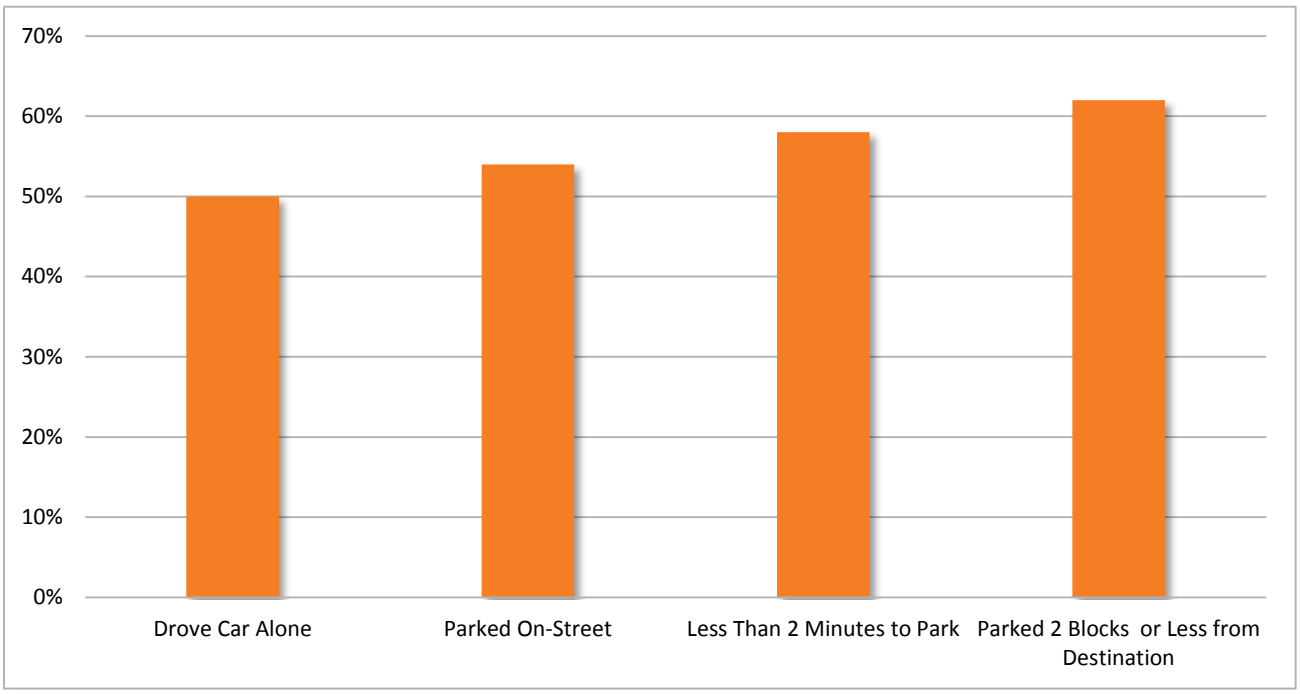
### *On-Site Surveys*

As part of the parking study, on-site surveys were collected to solicit input and gather information from community residents and visitors about their parking behaviors within the study area. Questions included where and why people parked and how they traveled to the area. The surveys were conducted in May and June, with the intent of identifying parking behaviors on typical weekdays and weekends for those traveling within the study area. Surveys were conducted in both months to capture responses during both the off-peak season (May) and peak season (June).

Professional, bilingual surveyors asking questions in both English and Spanish were stationed at several of the Barrio Neighborhood survey locations.

**Figure 8** summarizes all responses received during the on-site surveys conducted in May and June. Detailed on-site survey results can be found in Appendix A – Technical Memorandum #1.

*Figure 8: Summary of On-Site Survey Responses*




### *Online Surveys*

An online survey was created, in both English and Spanish, to capture opinions and feedback from a broader range of users than those who participated in the on-site survey. The purpose of the online survey was to determine general parking behaviors and identify issues within the *parking system* from the perspective of residents, visitors, employees, and business owners.

The survey was posted on the city's website and was available from May 12, 2016 to August 31, 2016. To promote the website and encourage participation, bilingual business cards with the survey's web address were distributed during the on-site surveys and were provided to businesses and other popular destinations in the study area. Additionally, 4,420 postcards were also mailed to residents within the study area. At the time the survey was closed, 825 responses were collected.

Unlike a scientific study, the online survey samples may not be representative of all project stakeholders and the responses cannot be generalized to the larger population with a known margin of error. Input from this survey was considered in a similar way to input received during public comment at a City Council meeting, remarks at a public workshop, or comments provided via email to city staff.

**Table 1** provides a summary of the online survey responses by user type. Additional online survey results, including responses to all questions, can be found in Appendix A - Technical Memorandum #1.

*Table 1: Summary of Online Survey Responses*

| USER | RESPONSES |
|---|---|
| **Residents** | Residents are those who live within the boundaries of the study area. Parking needs for this group typically focus on availability of spaces near their residence for themselves and guests. Summary of responses:<br>• 296 participants identified themselves as "Residents"<br>• 71 percent noted they have designated parking at their homes |
| **Business Owners** | Business owners are those who own or manage a business in the study area. Parking needs for this group focus on available parking for their customers within what respondents deemed to be an appropriate distance of their business. Summary of responses:<br>• 70 participants identified themselves as "Business Owners"<br>• 54 percent said they don't provide employee parking<br>• 98 percent said their customers typically park two blocks away or less |
| **Employees** | Employees are those that work within the study area. Parking needs for this group focus on the ability to park near their place of employment (typically within one to two blocks) but also being able to park long-term. Summary of responses:<br>• 104 participants identified themselves as "Employees"<br>• 53 percent noted they can find parking in less than two minutes<br>• 52 percent noted they usually park in a parking lot close to their workplace<br>• 63 percent reported they park directly adjacent to where they work |
| **Visitors** | Visitors are those who live outside of the study area and can be from a nearby city, another part of the City of Carlsbad, or outside of the state or country. These users may not be as familiar with the *parking system* as those who reside or work in the study area. They provide a different perspective on the parking system. Summary of responses:<br>• 355 participants identified themselves as "Visitors" in the survey<br>• 75 percent of visitors noted they can find parking in five minutes or less<br>• 59 percent of visitors noted they could park within one block of their destination |

Common themes among the general comments provided by respondents from all user groups include the following:

- The parking situation in the study area is adequate
- Paid parking is not desirable
- Off-street parking that is centralized between the Village and beach areas was recommended
- Enforcing time limits is recommended

When asked about the greatest challenge with parking in the study area, most respondents considered consistently finding an available space close to their destination to be the greatest challenge.

***Meetings (Community Meetings and Workshop)***

On August 24, 2016, the city held a parking study community workshop during which the study team presented the data and findings from the surveys and data collection. The workshop was designed to provide a forum for community attendees to express their concerns, provide potential ideas, and point out specific locations where they saw issues or opportunities for parking within the study area.

Approximately 90 workshop attendees provided 83 comments written on maps and 20 comment cards. These comments are summarized below in **Table 2**. Table 2 also summarizes comments received from Planning Commission, City Council, and a second round of public comments. A complete transcription of all written comments made during the workshop is provided in Appendix A -Technical Memorandum #1.

*Table 2: Public Comments and Relevant Areas in the PMP*

| COMMENT THEME | WHERE PMP ADDRESSES THE THEME |
|---|---|
| **Opposition to parking garage due to concerns about location and fit within community** | Parking garage not proposed due to study showing it's not needed, very costly, and not in support of community aesthetics. Evidence showing lack of data to support need for a parking garage:<br>• Future Parking Conditions, Scenario 3 Parking Garage<br>The Plan recommends that the city should not invest in a parking garage; however, if a private property owner wishes to construct a parking garage, they are able to do so. Assuming proper approvals are obtained, a private developer may construct any type of parking. |
| **Opposition to paid parking** | Paid parking not recommended at current time.<br>Discussion of if, and when, to implement paid parking:<br>• Best Management Practices<br>• Parking Management Strategies |
| **Concern about too many cars in study area** | Plan incorporates ways to reduce cars on road. Discussion of how *Transportation Demand Management (TDM)* can reduce traffic is in the TDM section |
| **Long-term RV parking on public streets taking up valuable spaces** | Plan recommends reducing time RVs can park on street, using permits and proactive enforcement.<br>• Discussion of RV best practices is provided in the Parking Management Strategies section (Parking Time Limits) |
| **Utilizing parking permits in residential neighborhoods where residents have difficulty finding parking due to community parking for business, events, etc.** | Residential permits are not recommended at this time. However, Plan suggests considerations to monitor parking occupancies annually. If occupancies in residential areas consistently reach 85 percent, then evaluate whether a RPP would be appropriate. Discussion of how and where, when warranted, to consider residential parking programs:<br>• Best Management Practices<br>• Parking Management Strategies (Residential Parking Program) |
| **Support to enhance enforcement of existing time limits to encourage more turnover of parking and reduce employees parking for long periods in front of businesses** | Plan recommends enhanced enforcement as a top priority. Discussions on time limits and enforcement:<br>• Best Management Practices<br>• Parking Management Strategies (Time Limits and Enforcement) |

| COMMENT THEME | WHERE PMP ADDRESSES THE THEME |
|---|---|
| **Why is a plan needed; there are no parking problems** | For planning purposes, this parking plan addresses future as well as current needs. The plan's data shows that while the overall *parking system* provides sufficient parking, there is lack of public parking primarily in highest *demand* areas during peak hours.<br>Discussion of where existing parking issues are located and an assessment of existing parking policies is located:<br>• Existing Parking Behaviors, Observations of Parking Conditions and Current City Parking Management Practices |
| **Safety of pedestrians and bicyclists** | Plan considers pedestrian safety and bicycle safety throughout as an underlying theme. Discussions on pedestrian and bicycle safety specifically are located in:<br>• Parking Management Strategies (On-Street Parking Reconfiguration and Curb Lane Management; TDM Strategies that Support the Parking Program) |
| **Meeting the needs of persons with disabilities** | Discussions on ADA accessibility are located in:<br>• Parking Management Strategies (On-Street Parking Reconfiguration and Curb Lane Management) |
| **Concerns about the in-lieu fee amount** | Plan recommends that the in-lieu fee should remain unchanged for now, but should increase in the future based on a number of variables outlined in the Plan. The reason for keeping it unchanged is to encourage more participation in the program. Discussions on in-lieu fees are located in:<br>• Parking Management Strategies (In-Lieu Fees) |
| **Mention trolley to improve circulation** | Plan supports the use of a circulator service, such as a trolley to reduce vehicular traffic and parking demand. Discussions on the trolley or other circulator are located in:<br>• Parking Management Strategies (In-Lieu Fees) |
| **Desire that the Plan be adaptable** | Plan is designed to be adaptable and to adjust as changes occur in the community. Decisions on how and when to implement parking management strategies should be based on data, which is collected and analyzed annually, and determined by the parking manager. Discussions on the trolley are located in:<br>• Parking Management Strategies (Parking Program Administration) |
| **Confusion over what shared parking is and how it works** | Shared parking is intended to be an option that two or more private property owners or incoming developers can participate in to meet their parking needs and optimize the use of parking supplies. The city's role is to administer and monitor the program and to communicate and provide |

| COMMENT THEME | WHERE PMP ADDRESSES THE THEME |
|---|---|
| | information to interested parties. The can also participate in shared parking through lease of parking spaces for public use. |

***Public Outreach Key Findings***

The importance of public outreach is to provide context to the data obtained through field observations. Data can provide numbers and patterns; however, hearing from the public provides a greater level of understanding of how people use parking in the study area, where common obstacles to finding parking may exist, and how parking can be improved.

From the input gathered in the on-site surveys, the online survey, and the workshop, there are areas where parking is difficult to find, which creates frustration; however, overall, a parking space can be found in less than five minutes and within two blocks of a destination. This indicates that parking is not scarce in the study area, but that parking needs to be proactively managed to balance supply and demand.

## Current City of Carlsbad Parking Management Practices

To identify appropriate recommendations for improving parking management, the city's current parking policies and practices were evaluated. The following summarizes the city's current parking management strategies:

- **On-Street Parking Regulations** – Currently, public on-street parking in the study area is free and managed with time limit restrictions on certain streets using posted signs indicating the time limits. The intent of time limits is to encourage turnover in high-*demand* areas so that more spaces become available and access to businesses and other destinations are maintained. The City currently has two-hour and three-hour time limit restrictions in the Village. **Figure 9** illustrates the time limit regulations in relation to adjacent commercial land uses. Shorter time limits (two- and three-hours) are more appropriate in locations dominated by commercial businesses that experience a high level of customer turnover. Examples of such businesses include retail, grocery, or convenient stores, and uses with drop-off services such as banks, laundromats, or some offices. Other businesses benefit from longer parking periods, such as restaurants and theaters, as their patrons stay for periods longer than three hours. **Table 3** provides general guidelines for appropriate parking regulations by land use. Disabled Parking, both for on-street and off-street public parking has historically been provided on a request basis, handled through the City's ADA Compliance Process (http://www.carlsbadca.gov/ada.asp). Parking for private lots is regulated.

*Table 3: Typical Parking Regulation Guidelines by Land Use*

| LAND USE TYPOLOGY | HIGH PARKING DEMAND AREAS | LOW PARKING DEMAND AREAS |
|---|---|---|
| **Residential** | • Limit spillover from other uses<br>• Residential parking programs<br>• Must move vehicle every 24 hours | • Limit vehicle storage on street<br>• Must move vehicle every 48 to 72 hours |
| **Commercial** | • Encourage high turnover to accommodate as many customers as possible<br>• Limit employee parking<br>• Restrictions from 15 minutes to 2 hours | • Limit vehicle storage on street<br>• Time restrictions during peak periods from 30 minutes to 3 hours<br>• Must move vehicle every 24 hours |
| **Office** | • Encourage moderate turnover to accommodate visitors and guests<br>• Prevent employees from moving vehicle during lunch to avoid violation<br>• Restrictions from 30 minutes to 3 hours | • Limit vehicle storage on street<br>• Time restrictions during peak periods from 1 to 4 hours<br>• Must move vehicle every 24 hours |

Based on the data collected, most visitors to the Village are not parking for more than two hours suggesting that the current time limits adequately support the surrounding land uses. The location of existing time restrictions and the concentration of commercial land uses within the study area, as shown in **Figure 10**, also support the current time limits.

Even though time limit restrictions are in place, the online survey revealed that employees park in on-street spaces adjacent to their employer for their work shift. This is likely due to a lack of proactive parking enforcement. As a result, those who know the *parking system* well, and know that they likely will not receive a citation, are not incentivized to conform to the regulations. This causes the system to operate less efficiently than it could, contributes to frustrations for those trying to find available parking near their destinations, and reduces access to surrounding businesses. In summation, the length of the existing parking time limits and location of the time limits are appropriate for the study area. It is the enforcement of the time limits that is inadequate and allows people to cheat the parking system, thus making it difficult for people to park near their destinations, which was noted as the greatest challenge by the public in the survey.

In addition to time limits, the city also has overnight parking restrictions to prevent people from camping in their vehicles overnight and facilitate street sweeping. Parking is restricted between 3 a.m. and 5 a.m. on select streets in the Village, Barrio, and on a couple of streets in the beach

area. Additionally, in the southern portion of the beach area on-street parking along the west side of Carlsbad Boulevard is restricted between 2 a.m. and 5 a.m. An issue faced by residents is that these overnight restrictions can prevent residents or their guests from parking on the street, limiting their available parking, particularly along the north end of State Street where residential development is occurring and planned. As more residential development occurs along State Street, the overnight restrictions on this street could make parking difficult for the residents or their guests along this street. While parking requirements provide for on-site resident parking, properties along State Street and in the rest of the Village outside of the Coastal Zone, have no guest parking requirement. **Figure 11** illustrates the residential land uses in the area in conjunction with the overnight parking restrictions.

- **Enforcement** – The enforcement hours stated in CMC Chapter 10.40 are currently from 7 a.m. to 6 p.m., Monday through Saturday (except for holidays). Depending on the street and area, parking is not allowed between 2 a.m. and 5 a.m., and 3 a.m. and 5 a.m. Signs are posted indicating parking restrictions and hours of enforcement. Time restrictions are discussed further in the next section. Parking Violation Enforcement is regulated under CMC 10.42.010, including special enforcement unit for disabled parking violations under 10.42.020.

  While the time restrictions are posted, enforcement by the police department is reactive and driven by community complaints. This reactive approach leads to policies and regulations that are easily violated with little risk of recourse. The lack of consistent enforcement impacts the ability for parking spaces to turnover and for patrons to find available parking near commercial destinations.
- **Off-street (public) parking regulations** – There are a few lots within the study area that are restricted by time limits and enforcement hours. The enforcement hours are 7 a.m. to 6 p.m. and the time limits are three hours. Overnight parking is prohibited in public lots for oversized vehicles. Additionally, the NCTD lots, although not public, are restricted for transit users only.

*Figure 9: Existing Study Area Parking Restrictions (as noted in the Municipal Code)*

*Figure 10: Time Limit Regulations in Relation to Commercial Land Uses*

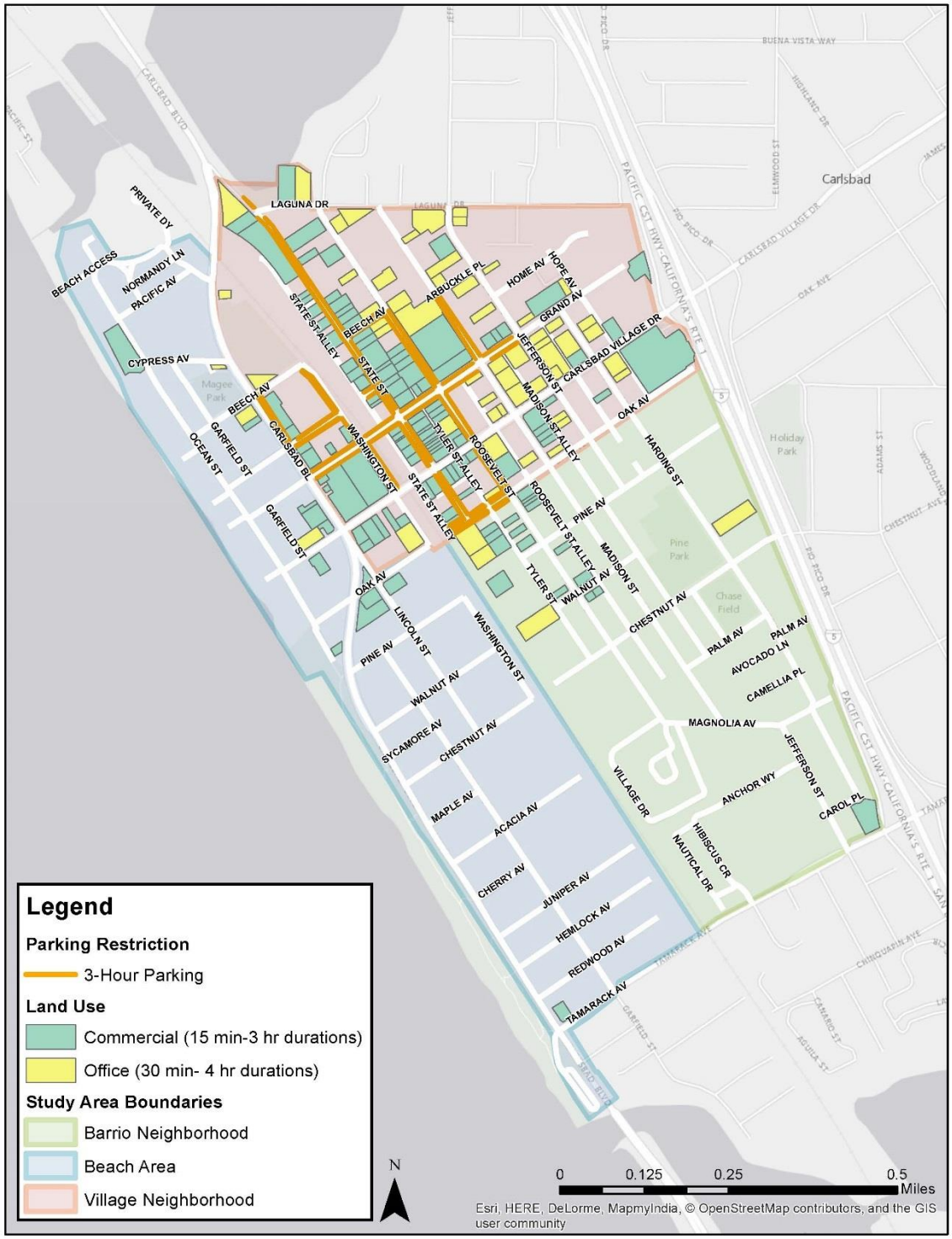
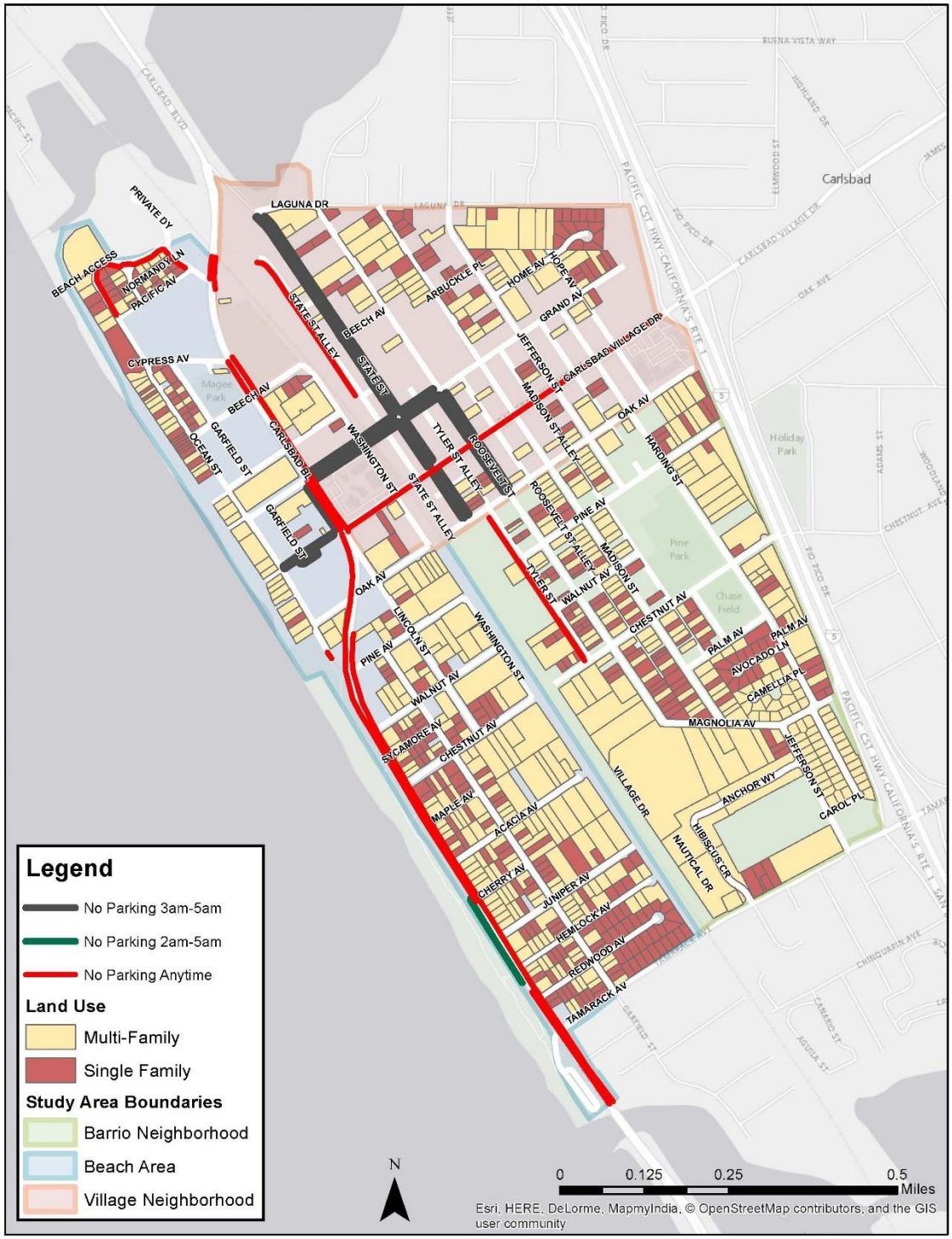


*Figure 11: Overnight Restrictions in Relation to Residential Land Uses*



- **Off-Street Parking Requirements** – Developers in the Village area are required to build on-site parking per the existing Master Plan. Developers in the Barrio outside the existing Master Plan and in the Beach Area are required to build on-site parking per Title 21 (Zoning Ordinance) of the CMC. These standards are in place to ensure the generated parking *demands* associated with the respective type of development are satisfied. It should be noted that the parking requirements in the current, April 2016 draft of the proposed Master Plan are not final and may be modified based on this study's findings. The current draft of the proposed Master Plan is available at www.carlsbadca.gov/villagebarrio. For the purposes of this study, both the existing and proposed master plans are used.

  Both the CMC and the existing Master Plan allow for waivers, modifications, and reductions to off-street parking requirements. Parking waivers and modifications may be permitted for uses with minimal numbers of employees/occupants, or when needed to accomplish a specific objective, such as to encourage affordable housing. Reductions in parking standards may be realized for uses that share a parking lot or to encourage reuse of existing buildings.

**Table 4** summarizes the parking requirements for different types of land uses present in the city and study area. Chapters 21.44 and 21.45 of the CMC provide parking regulations in the portions of the Barrio not within the boundaries of the existing Master Plan. Chapter 21.44, 21.45, and 21.82 of the CMC provide regulations for those parts of the Beach Area not within the boundaries of the existing Master Plan. As noted in the table, existing Master Plan regulations are different inside and outside the Coastal Zone. See **Figure 1** for proposed Master Plan boundary information. For the detailed parking regulations, refer to the documents listed under "Requirement Source" in the table.

*Table 4: Parking Requirements*[1]

| REQUIREMENT SOURCE | RESIDENTIAL | | | COMMERCIAL | RESTAURANT | OFFICE | HOTEL |
|---|---|---|---|---|---|---|---|
| | SINGLE FAMILY | MULIT-FAMILY | GUEST | | | | |
| **Carlsbad Municipal Code (CMC 21.44)** | 2 spaces/ unit | 1.5-2 spaces/unit | 0.3 spaces/unit (up to 10 units); 0.25 spaces/unit (more than 10 units) | 3.3-5 spaces/ 1,000 sf[3] | 1 space/100 sf if < 4,000 sf; if 4,000 sf or more, 40 spaces plus 1 space/ 50 sf in excess of 4,000 sf | 4-5 spaces/ 1,000 sf | 1.2 spaces/room |
| **CMC 21.45 (Planned Developments)** | Same as CMC 21.44 | Same as CMC 21.44 | Same as CMC 21.44, except guest parking may be permitted on-street | n/a | n/a | n/a | n/a |
| **CMC 21.82 (Beach Area Overlay Zone)** | Same as CMC 21.44 | Same as CMC 21.44 | Same as CMC 21.44 | n/a | n/a | n/a | n/a |
| **Existing Master Plan – inside the Coastal Zone (Chapter 6)** | Same as CMC 21.44 | Same as CMC 21.44 | 0.5 spaces/unit (up to 10 units); 0.25-0.3 spaces/unit (more than 10 units) | 3.3 spaces/1,000 sf | Same as CMC 21.44 | 3.3 spaces/ 1,000 sf | Same as CMC 21.44 |

| REQUIREMENT SOURCE | RESIDENTIAL | | | COMMERCIAL | RESTAURANT | OFFICE | HOTEL |
|---|---|---|---|---|---|---|---|
| | SINGLE FAMILY | MULIT-FAMILY | GUEST | | | | |
| **Existing Master Plan – outside the Coastal Zone (Chapter 6)** | Same as CMC 21.44 | 1-2 spaces/unit | None | 3.3 spaces/ 1,000 sf | 1 space/125 sf | 2.9 spaces/ 1,000 sf | Same as CMC 21.44 |
| **Proposed Master Plan (Section 6.4, 2016 Draft)** | Same as CMC 21.44 | 1-1.5 spaces/unit | "ND" and "ED" Districts: 0.3 spaces/unit (up to 10 units); 0.25 spaces/unit (more than 10 units) All other districts: None | 2.8 spaces/1,000 sf | 1 space/125 sf | 2.8 spaces/ 1,000 sf | 1 space/ room |

*[1]This table is a representative list of parking requirements for common uses. Please refer to the respective document for a complete list of all parking standards.*

*[2]The Planned Developments and Beach Area Overlay Zone chapters apply to residential properties only outside the existing Master Plan; they also would not apply to the proposed Master Plan.*

*[3]"sf" stands for "square feet."*

*[4]Parking requirements inside the existing Master Plan are based on net square footage. Parking requirements outside the existing Master Plan are based on gross square footage.*

Compared to the rest of Carlsbad, there are unique attributes in the Village that are reflective of its mixed use and walkable nature and affect parking, including:

- **Converting Uses in Redevelopment** – Oftentimes, the conversion of a developed tenant or building space to another use can drastically alter the parking demand associated with the use. For example, a retail space converted to restaurant space could increase parking demands tenfold[2]. The city requires no additional spaces if the new use has the same parking requirement as the former use. If the new use has a higher requirement, then additional parking is required. For areas outside the Coastal Zone, the city does not currently require reuse of existing buildings in the Village to meet parking requirements from use conversion beyond that achievable on the property, even if the proposed use has a greater parking requirement. The Draft Village and Barrio Master Plan proposes that this practice extend to areas inside the Coastal Zone. This practice is consistent with mixed-use environments found in both the peer cities and throughout the country and is a good business development incentive to promote small business growth in the community.
- **Parking In-Lieu Fee Program** - The city allows non-residential uses east of the railroad tracks that are also within the existing Master Plan boundary to pay a fee per space in-lieu of providing some or all of the required parking on-site.
- **Curb cafes** - In specific areas of the Village with on-street parking supply, five restaurants have replaced one to two parking spaces with temporary outdoor dining decks as part of a now-expired pilot program, which was limited to 11 total curb cafes. Curb cafes can enhance the vibrancy of the community.

The city has taken strides in recent years to provide parking requirements in the Village that are consistent with a mixed use and walkable community. Accordingly, these requirements are in some cases reduced in comparison to the city-wide parking standards contained in the CMC. Further, they provide greater flexibility for developers to create a business that supports the community's vision, while also providing flexible options for developers to realize business potential and mitigate parking *demands*. As Table 4 indicates, the proposed Master Plan considers additional reductions and would provide CMC parking standards for the Barrio.

- **Shared, Leased, and Off-Site Parking** – The city allows property owners to enter into lease agreements to share a common off-street and/or off-site parking resource to meet their parking needs. Shared, leased, and off-site parking are available to non-residential uses only.
    - **Shared Parking** – Land uses can share parking if their operating hours do not conflict with one another. Current CMC and existing Master Plan regulations provide for the following:

[2] Institute of Transportation Engineers

- Up to 50 percent of parking required for a use with daytime demands can be accommodated by the parking facility for a use with nighttime parking demands, and vice versa
- Up to 100 percent of required parking can be satisfied for a church by facilities that primarily have weekday, daytime parking demands
- Up to 50 percent of required parking for churches can also be utilized by on-site day care use, so long as the operating hours for the church and day care do not conflict with one another
- Outside the Village, properties sharing off-street parking must be within 150 feet of the parking facility
- Inside the Village, properties sharing off-street parking must be within 300 feet of the parking facility
- Interested participants must apply to the city and demonstrate that the uses do not have conflicting operating hours

The shared parking provisions defined by the city largely allow for business-to-business sharing and place the responsibility of entering and maintaining agreements with the participating businesses. This typically leads to limited shared parking that is only initiated out of need but still restricts that parking to limited businesses. Additionally, the 300-foot distance listed in the ordinance is very short for a walkable environment and likely restricts the ability for businesses to mitigate parking *demands* through shared parking agreements.

*Underutilized private parking*

- **Off-Site Parking** – One or more developers can separately or jointly locate required parking off-site-in and out of the Village.
    - Inside the Village, existing properties looking to fulfill their parking requirements off-site must be within 300 feet of the parking facility. Outside the Village, the distance is 150 feet.
    - Property owners have two options for off-site parking: 1) lease spaces from an existing facility, or 2) purchase land and build parking for their needs. The property owners can collectively fund new parking and share the spaces if desired. In either situation, the off-site parking must satisfy the parking requirements for the combined, standalone uses. If the parking facility is 5,000 square feet or larger, each of the businesses or properties that share the parking facility can reduce their respective requirements up to 15 percent.

*Underutilized private parking*

In the city, shared and leased parking is primarily an agreement between private businesses. Its application is more common outside the Village and includes business parks with on-site parking. Within the Village, shared parking, whether on-site or off-site, is less common with only two such arrangements in place. Low participation in the shared-use program could stem from a variety of factors:

- A history of high parking minimums for a walkable community has left the study area with a more than adequate supply of parking that is not effectively utilized as demonstrated by the data collected.
- The requirement that shared parking must be within 150-300 feet of the uses it serves severely limits the possible arrangements to share parking. The distance visitors are willing to walk from a parking space to their destination is likely higher than these thresholds, especially as the Village continues to intensify and become more walkable. The Draft Village and Barrio Master Plan proposes an increase in the maximum distance between properties to 1,320 feet.
- The city does not actively engage property owners to broker shared or leased parking agreements.

- Generally, lower-density development does not have on-site space constraints that would cause a developer to be interested in a shared or leased parking arrangement.

The city can, and does, participate in *leased parking* opportunities with other public entities at a per space rate. The city currently leases 102 parking spaces from NCTD to provide public parking in lots on the east and west sides of the railroad tracks between Washington Street and State Street. The lease rate is approximately $44,000 annually, or $431 per space. However, the city does not have a standard liability insurance policy that would allow it to easily lease parking spaces from private landowners, which hinders the ability for private property owners to open their parking facilities to the public in evening hours are at other times of the day when their property has little use of their parking lot, such as banks at night and on weekends. The provision of liability insurance for participating owners could reduce the risk associated with providing shared public parking. Thus, freeing up more private parking spaces for public use.

*Underutilized NCTD Lot*

- **Parking In-Lieu Fee Program** – The city allows non-residential uses east of the railroad tracks that are also within the existing Master Plan boundary to pay a fee per space in-lieu of providing required parking Master Plan. The *in-lieu fee* program area is split into two "zones" with Zone 1 centered around the core of the Village and Zone 2 on the surrounding periphery. Participation requirements differ whether a property is inside or outside the Coastal Zone.

In the Coastal Zone, and because of its more centralized location and proximity to public parking resources, Zone 1 allows participants to offset a greater portion of the required parking than Zone 2. Zone-based options for participants are shown in **Table 5**. Actual amount of offset for any given project is subject to approval by the appropriate decision-making authority (City Planner, Planning Commission, or City Council).

*Table 5: In-Lieu Parking Zone Participation Requirements*

| CONDITION | ZONE 1 | ZONE 2 |
|---|---|---|
| **Property is outside of Coastal Zone** | Up to 100 percent of required parking may be offset by in-lieu fee | Up to 100 percent of required parking may be offset by in-lieu fee |
| **Property is within Coastal Zone and there is/will be public parking within 600 feet in the next three years** | Up to 100 percent of required parking may be offset by in-lieu fee | Up to 50 percent of required parking may be offset by in-lieu fee |
| **Property is within Coastal Zone and there is not/will not be public parking within 600 feet in the next three years** | Up to 50 percent of required parking may be offset by in-lieu fee | Up to 25 percent of required parking may be offset by in-lieu fee |

In both zones, the property owner or developer can participate in the program and pay a fee-per-space instead of providing the required on-site parking. Currently, the city's *in-lieu fee* program does not apply to residential developments. Residential developments must provide the required parking on site.

Since the start of the program in 2000, 13 development projects have participated in this program, totaling 168 spaces, or approximately $1,877,000, that has been paid for through the program. Since 2000, there have been seven years where no one participated in the program, five years where fewer than ten spaces were paid for using in-lieu fees for an individual development, and four years where an individual development paid for more than ten spaces through the program. Since 2013, there have been spaces paid for by the in-lieu fee program each year, for a total of 49 spaces. This indicates historically, relatively low and inconsistent participation in the program. Technical Memorandum # 3 presents a more in-depth review of the in-lieu fee program participation. The city uses this revenue to purchase and maintain existing parking. In 2009, the city purchased property for a public parking lot that provides 50 public spaces at 3045 State Street for

$1.15 million. In 1976 and 1989, the city began leasing two NCTD-owned lots, located east and west of the railroad tracks between Washington Street and State Street. These provide an additional 102 spaces with total expenditure to date of approximately $1.4 million (since 2009).

The inconsistent participation in the program is likely indicative of the ease of building on-site surface parking for development within the community. As the area continues to intensify, this ease to build on-site parking will likely lessen and there could be a need for better participation in the program. More participation is encouraged so that the existing parking supply is used more efficiently (e.g., shared or leased parking rather than constructing new parking when the existing parking is underutilized). Recommendations later in this plan outline strategies to enhance the in-lieu fee program to provide more services and offerings for participants. The other contributing factor to low participation in the program is that some recent projects are residential developments, and therefore not part of the *in-lieu fee* program.

- **Curb Lane Management** – The city has curb lane markings related to traffic safety and time restrictions. The following summarizes these curb lane restrictions:

*Curb Lane Signage*

  - **Red zones** – No stopping, standing, or parking at any time, except for buses if the zone is marked for buses.
  - **Yellow zones** – No stopping, standing, or parking between 7 a.m. and 6 p.m. unless loading or unloading passengers and materials. Loading and unloading procedures cannot exceed 20 minutes.
  - **White zones** – No stopping, standing, or parking except for loading and unloading passengers and materials for no more than three minutes, between 7 a.m. and 6 p.m. (except in front of hotels and theaters, where the zone always applies).
  - **Green zones** – No standing or parking for longer than 20 minutes for any reason between 7 a.m. and 6 p.m.

- **Blue zones** – Americans with Disabilities Act (ADA) accessible parking only.

Decisions regarding the placement and type of curb markings are made on a case-by-case basis by the City Traffic Engineer. Curb lane markings are reevaluated as part of new development proposals and by community request. Much like time-restrictive areas, curb lane restrictions are generally enforced through community complaints and are not actively enforced.

*Example of the City's wayfinding signs*

- **Messaging and Wayfinding** – The city has installed eight monument signs to identify off-street parking facilities and approximately 30 wayfinding signs that direct people to the public parking facilities. In addition, the city installed approximately 50 pedestrian and bicycle wayfinding signs to direct people to local destinations. These signs have successfully served to help patrons navigate throughout the study area, and recommendations later in this report aim to continue this practice and strengthen wayfinding opportunities.

- **Oversized Vehicle Parking** – Oversized vehicles, including RVs, are restricted from parking on any street between 2 a.m. and 5 a.m. without a valid permit, per CMC Section 10.40.180. Permits are available at no cost for any city resident and allow RVs to park up to 72 consecutive hours, four times per month. Permits do not allow sleeping or camping in the RV. The vehicle must be parked at the street curb immediately adjacent to the residence, or within 400 feet of that person's residence if there are parking restrictions in that area. City residents can apply for a temporary guest permit. This free permit, which can be renewed annually, allows residents to have guests with a RV park at or within 400 feet of their residence for up to 72 consecutive hours, six times a year. Since the

*Oversized vehicle parking restriction*

adoption of the Ordinance in 2013, approximately 300 permits have been issued annually. This number is increasing: as of May 2017, 337 permits have been issued.

Even though restrictions are in place, enforcement by the Police Department is largely complaint-based due to other law enforcement priorities. Therefore, RVs often park for longer periods than allowed, creating frustration for residents who use on-street parking to access their homes. The penalty for violating the Oversized Vehicle Ordinance is $50 per incident, regardless whether it is the first violation or tenth. The city has received feedback that the fine amount is too low to discourage some from exceeding the parking regulations. Later in this report, recommendations are presented to curb this practice and dissuade habitual offenders.

## Best Management Practices – Peer City Review

As part of this study, eight California coastal communities were identified as peer cities. The intent of conducting peer city reviews was to: (1) identify strategies that similar cities are using; (2) determine whether they are appropriate for the city; and (3) if they are appropriate, decide how they can potentially be adapted to meet the needs of the Village, Barrio, and beach areas. The eight peer cities selected are listed below and mapped in **Figure 12** to illustrate the location of these cities in relation to the city.

- Santa Monica
- San Luis Obispo
- Monterey
- Laguna Beach
- Dana Point
- Encinitas
- San Clemente
- Huntington Beach

As part of this study, Best Management Practices (BMPs) from each city were evaluated. Table 6 presents a summary of the in-depth review that was conducted for each of the eight cities and the BMPs considered. For each BMP, a description and key components to consider when implementing the BMP are provided. Additionally, the table highlights examples from the peer cities where the BMP was used and how it could be applicable and beneficial to the city. For an extensive discussion on each peer city and the strategies they are currently using, refer to Appendix C - Technical Memorandum #3.

*Figure 12: Peer City Locations Map*

*Table 6: Parking Best Management Practices*

| BEST MANAGEMENT PRACTICES | DESCRIPTION | IMPLEMENTATION CONSIDERATIONS | FEATURED PEER CITY | IMPORTANCE TO CARLSBAD |
|---|---|---|---|---|
| **Enforcement Practices** | Consistent enforcement ensures that users comply with the parking regulations. This allows the *parking system* to function more efficiently by promoting the turnover of parking spaces to increase availability and provide greater access to the surrounding businesses. Having enforcement practices and regulations that promote turnover can have a beneficial economic impact to surrounding businesses. | • Enforcement officers as *ambassadors*<br>• Warnings for first offenders<br>• Graduated fine structure for repeat offenders<br>• Advanced technology reduces staff needed for enforcement | **Monterey** – uses License Plate Recognition (LPR) technology to monitor their system<br><br>**San Luis Obispo** – ambassador program provides enhanced customer service | The City currently does not have the resources to proactively enforce parking time limit regulations. Lack of enforcement promotes abuse of the time limit regulations, which in turn restricts access to businesses and contributes to customer frustrations. Improving enforcement practices in the city ensures people comply with the parking regulations, resulting in more available parking. By enhancing policy, practice, and technology associated with enforcement, the city could achieve better usage of the system, which should support businesses, residents, and guests in the community. |
| **Use of Time Limits to Encourage Turnover** | Time limits regulate how long vehicles can park in spaces, with appropriate times set to support adjacent uses. The intent is to encourage the turnover of spaces so more parking is available for customers, thereby providing better access to businesses.<br>The use of time limits also encourages short-term parkers to use on-street parking and directs people who will park for longer periods of time (e.g., employees, beach-goers, etc.) to off-street parking facilities. The intent is to create more parking availability in the prime spaces and make more efficient use of the entire system. | • Use different time limits to support the different uses<br>• Review the time limits annually | **San Luis Obispo** – uses different time limits in different parts of the downtown area based on parking demands (longer time limits in areas with less demand and shorter time limits in high-demand areas). | Most time limit regulations present in the study area are durations that sufficiently accommodate customer needs (2-and 3-hours) and are effectively placed (i.e. near commercial businesses). On the other hand, time limits in residential areas, such as the overnight restrictions at the north end of State Street, may be problematic for residents. Consistent enforcement of the time limits in the study area can encourage turnover and create more access for customers of neighborhood businesses by encouraging employees to utilize off-street facilities. |
| **Reduced Minimum Parking Requirements** | Parking requirements dictate how much parking a new development should provide. However, many times the requirements for parking are not based on actual data or need, but rather a prediction of how much parking that development may need in a standalone environment. Aligning the number of spaces required ensures residences and businesses have adequate parking supply to meet *demand*. Aligning parking requirements with actual market demand supports the transition to a shared and leased parking supply. | • Establish parking requirements appropriate for the use and based on actual parking demand, which is determined by evaluating actual data collected to represent that development<br>• Monitor the parking *occupancy* and *duration* annually<br>• Revise parking requirements as necessary based on monitoring | **San Luis Obispo and Dana Point** – parking requirements in the downtown areas of both cities are half of what is required in the greater portions of the cities, which results in a more walkable and pedestrian-oriented downtown. **Table 7**, which follows this table, provides a comparison of the parking requirements for the City as well as each of the peer cities. | Parking requirements should align with the parking demands for land uses in the study area. While the Draft Village and Barrio Master Plan proposes reduced requirements, this strategy aims to maintain alignment with the parking demands so that an overabundance of parking isn't created in the study area. |

| BEST MANAGEMENT PRACTICES | DESCRIPTION | IMPLEMENTATION CONSIDERATIONS | FEATURED PEER CITY | IMPORTANCE TO CARLSBAD |
|---|---|---|---|---|
| **Shared, Leased, and Off-Site Parking** | Shared and leased parking allows two or more land uses to utilize the same parking facility provided their operating hours do not conflict. The intent is to optimize the use of the parking facility. The off-site parking site must be within a reasonable walking distance of the development. | • Maintain and broker shared and leased parking arrangements to encourage development<br>• Utilize shared and leased parking opportunities to create employee parking<br>• Utilize shared and leased parking opportunities for valet parking<br>• Allow participants to *lease parking* spaces in the shared facility, adding monetary value to the spaces (city with private businesses, business to business)<br>• Monitor the *parking system* annually with reports prepared by the Parking Manager and shared publicly to inform property owners of their options as new developments and expansions occur. | **Laguna Beach** – leases spaces from underutilized private parking facilities located on the periphery of the downtown. During the week, the spaces are for city employees, but in the evenings (after 5 p.m.) and on the weekends, the spaces are available to the public.<br><br>**San Clemente** – transit station parking is shared with the public. Posted signs notify users that prior to 9 a.m. the spaces are for transit users only. After this time, the public can park in the lot. | The city's current standards restrict shared parking to a small distance around a participating business. The standards should allow the leasing of private spaces for public use, allow for greater flexibility for sharing private spaces between businesses, allow for longer walking distances between business and parking, and allow for creative opportunities to encourage more shared and leased parking (e.g., public parking after 5 p.m. as in Laguna Beach). Furthermore, increased public use of NCTD facilities, such as existing transit station parking, should be explored (see also "Preferential Transit Commuter Parking" in this table below). |
| **Parking In-Lieu Fee Program** | A parking *in-lieu fee* program allows developers to build less parking than is required by the code by paying the City a fee for each space that they are not providing on-site. The fee is then used to construct or *lease parking* spaces, or to implement transportation improvements that reduce parking *demands*. | • Adjust fees annually based on an index such as the Consumer Price Index<br>• Allow the program to expand into new areas as developments change and commercial areas grow over time<br>• Allow funds to pay for other transportation related community improvements that support an effective *parking system* in the plan area<br>• Provide transparency of in-lieu fee information (how the fee is derived, fee boundaries, etc.). | All the peer cities, except for Encinitas, have a parking in-lieu fee program.<br><br>**Santa Monica and Monterey –** adjust fees annually based on the consumer price index. **Figure 11** provides a comparison of the in-lieu fees for each peer city. | While the City has an existing in-lieu fee program, implementing incremental adjustments based on parking demand, program demand, and cost of effective parking management strategies would improve developer participation in the in-lieu fee program by aligning the price of the fee with the benefits of the program, which would result in increased funds for the City, better use of the existing parking supply, and encourage economic growth in the study area. |
| **Residential Parking Program** | A residential parking permit allows permit holders to utilize the restricted areas of participating residential streets during certain times. The program should be reserved for high-*demand* areas where the spillover impacts of parking becomes a nuisance for residents. | • Establish only with neighborhood support<br>• Establish consistent management strategies for the residential areas<br>• Collaborate with other City departments to establish evaluation criteria for neighborhood participation<br>• Evaluate the need for residential parking opportunities<br>• Utilize shared and leased parking opportunities for valet parking<br>• Allow participants to lease parking spaces in the shared facility | **Santa Monica –** established a **program** to accommodate the needs of the residents and their guests by allowing those with a valid permit to be exempt from the parking restrictions on the street within a two-block radius of their registered address. | A residential parking permit program will allow residents to have on-street parking access by restricting non-residential users (area employees, beach goers, etc.) from clogging the on-street parking spaces. The program needs to only be implemented when all other considerations, including the implementation of TDM, a curb lane management program, validation of time restrictions, and other parking management strategies, are exhausted and data clearly |

| BEST MANAGEMENT PRACTICES | DESCRIPTION | IMPLEMENTATION CONSIDERATIONS | FEATURED PEER CITY | IMPORTANCE TO CARLSBAD |
|---|---|---|---|---|
| | | | | indicates there is a parking problem within the community. |
| **TDM** | *TDM* strategies are implemented in a community to influence travel behavior and reduce parking *demand* related to the traditional single-occupancy vehicle (SOV) trip. TDM strategies promote walking, biking, transit, carpooling, vanpooling, and shared mobility services (Uber, Lyft) through policy, incentives, regulations, and management practices such as parking pricing. | • Coordinate the parking and TDM programs<br>• Transparency of information<br>• Implement multiple *TDM* strategies to realize compounded benefits<br>• Evaluate TDM annually and recalibrate as needed every five years based on a comprehensive survey and data collection | **San Luis Obispo Council of Governments (SLOCOG)** – takes a very active role in TDM and provides a single website that consolidates information on many TDM programs and offers resources and incentives to commuters that do not drive alone.<br>**Santa Monica** – has a TDM ordinance that requires businesses to implement a trip reduction program as part of an Emission Reduction Plan. A trip reduction program identifies several strategies that would reduce the number of commute trips by a personal vehicle.<br>**Huntington Beach, Laguna Beach, and San Clemente** – require at least 15percent of their employee parking spaces be designated as carpool only. | The city is currently developing a TDM ordinance that will identify specific TDM strategies to support mobility and access in the study area. The TDM program will be intimately tied and coordinated with the parking efforts as they both influence and support one another. |
| **Curb Lane Management** | A *curb lane management* program provides structure for managing the various competing curb lane uses (on-street parking, commercial and passenger loading, curb cafes, traffic flow, EV parking, rideshare/carshare parking, bicycle and pedestrian mobility, and safety concerns). The program prioritizes these uses based on the goals of the community (e.g., greater emphasis may be placed on encouraging alternative modes) and the needs of the surrounding land uses (access to business for customers and commercial loading). The program allows for making consistent decisions regarding curb lane uses so that there is structure and consistent reasoning behind the decision-making process. | • Prioritize competing uses along the curb<br>• Create standardized block faces<br>• Develop a consistent process for identifying and converting new on-street parking supply created by restriping to angled parking<br>• Dedicated disabled parking<br>• Enforcement of spaces<br>• Flexible curb space so that the curb transitions from one use to another by time of day (e.g., commercial loading during the day and passenger loading at night) | **Huntington Beach** – is identifying curb space for rideshare drop-off and pick-up (Uber and Lyft) to reduce traffic congestion and improve safety for those unloading and loading from vehicles. | The city should implement a consistent *curb lane management* approach that supports the City's investment in multimodal infrastructure and livability.<br>A management program would help define the curb lane uses including when, where, and how to implement curb changes. |

| BEST MANAGEMENT PRACTICES | DESCRIPTION | IMPLEMENTATION CONSIDERATIONS | FEATURED PEER CITY | IMPORTANCE TO CARLSBAD |
|---|---|---|---|---|
| **Paid Parking** | Paid parking encourages people to choose between the priced transaction or making alternative decisions such as parking further away or in a lower priced facility, or using an alternative transportation option to reach their destination. This can create more available spaces in high-*demand* areas, which in turn increases access to businesses. | • Decision to implement paid parking should be driven by parking behavioral data<br>• Transparency of information<br>• Use technology efficiently | Dana Point – does not currently have paid parking; however, the City of Dana Point adopted an ordinance that outlines the details of the paid parking program, so if/when they do implement paid parking, the code supports the change. | Although paid parking is not recommended now, it is something to consider as a future strategy when the demands of the study area dictate that it is necessary to help balance and manage the system. |
| **Parking Program Administration** | The parking program administration refers to how the parking program is housed and managed within the city's administrative structure. There are many options to consider, but the primary approach is to bring coherence to and streamline the implementation and administration of parking management strategies. The program should align with the overall goals of the community. | • Initiate communication between city departments<br>• Form a parking program unit or department<br>• Plan for growth | **San Luis Obispo** –parking system follows a Vertically Integrated model, which consolidates the roles and responsibilities of the parking program under a single department, Parking Services. | Currently, parking management is dispersed through several departments with little coordination. Policies are set by one department, enforcement is handled by the police, and any data collection and analysis in relation to the parking are handled separately. Combining all parking functions under one manager will consolidate efforts and provide comprehensive management of the parking system. |
| **Messaging and Wayfinding** | Consistently themed signage allows the city to communicate parking and destination locations and helps users easily navigate the entire *system*. | • Develop a plan for wayfinding needs<br>• Develop a consistent theme and brand<br>• Include shared and leased private facilities | **Dana Point** – recently implemented new wayfinding signage with the goal of distributing the demands in the few highly-utilized facilities to those on the periphery. | The city's current wayfinding system should evolve as the parking program evolves to help users navigate the system efficiently. Wayfinding improvements will allow people to find parking easily and plan for where they are going to park before they start their trip. |
| **Parking Benefit District** | This district is created, with community consensus, where funds that are earned in excess of operating costs (funds through permits, paid parking, citations, etc.) are reinvested back into the district and used for transportation-related improvements in the community. | • Involve community and local stakeholders<br>• Amend the Municipal Code<br>• Establish a fund<br>• Use revenues to fund the parking program and for community improvements | **Dana Point** – implemented this strategy as a policy to allow the City of Dana Point to reinvest any revenues from the parking system back into the District to fund the program and to enhance *TDM* strategies or other parking improvements. | Although it is not recommended now, this strategy should be considered when/if paid parking is implemented to ensure that the revenues generated from paid parking are invested back into the community. |
| **Trolley or Shuttle Circulator** | Trolley or shuttle services are beneficial for connecting people to multiple destinations in a community, moving people throughout an area without requiring them to move their vehicles. This works well with promotion of a "Park Once" philosophy, where vehicle trips within the study area are minimized as people use a variety of transportation options to access multiple destinations. | • Evaluate service annually<br>• Seek funding so that the service can be offered for little or no charge | The cities of Santa Monica, San Luis Obispo, Monterey, Laguna Beach, Dana Point, and Huntington Beach have a trolley system that is used to move people throughout the community. The City of San Clemente is currently in the planning process for their trolley. In these cities, the trolley circulator connects or will connect popular destinations | The city is currently evaluating the feasibility of a trolley circulator to promote the "Park Once" concept and encourage the use of multimodal transportation. The intent is to help disperse demand by allowing users to park in a single location (preferably an underutilized lot or street on the periphery of the study area) and use the trolley to access |

| BEST MANAGEMENT PRACTICES | DESCRIPTION | IMPLEMENTATION CONSIDERATIONS | FEATURED PEER CITY | IMPORTANCE TO CARLSBAD |
|---|---|---|---|---|
| | | | (hotels, restaurants, tourist destinations, and beach access points) within the downtown areas. | businesses and popular destinations in the high-demand areas. |
| **Shared Mobility Options** | As part of a *TDM* program, rideshare services reduce parking *demands* since users are delivered to their destination rather than driving and requiring a dedicated parking space. | • Establish rideshare loading zones or areas as part of *curb lane management*<br>• Consider other shared mobility options<br>• Education, incentives, and promotion | **Huntington Beach** – identifies curb space for rideshare drop-off and pick-up (Uber and Lyft) to reduce traffic congestion and improve safety for those unloading and loading from vehicles.<br>**Dana Point** – works with Lyft to promote the use of rideshare options as an alternative to driving into town. The City of Dana Point reimburses new Lyft users with a $20 credit by using a code posted on the city website and has also designated curb space for rideshare drop-off and pick-up. | Shared mobility options are currently available in the City of Carlsbad; however, they should be strengthened and encouraged as viable forms of transportation to reduce overall parking demand. The benefit of promoting shared rides is a reduction in parking demand within the community. Designated curb space should be provided to safely accommodate these services. |
| **Recreational Vehicle (RV) Parking** | Establishing RV-specific parking regulations helps to protect residential areas and parking facilities from becoming camping areas. A good policy should balance the competing uses along the curb while allocating available space to meet the needs of RV users. In the Coastal Zone, a well-crafted policy will ensure that adequate visitor and public access to the coast is protected. | • Reduce the amount of time RVs can park on the street, while maintaining public access to the coast<br>• Use date stamped permits to manage the system<br>• Constant and consistent enforcement<br>• Implement a graduated fee for repeat offenders | **Huntington Beach** – has implemented RV parking restrictions to manage and help balance the competing curb space users. Additionally, the City of Huntington Beach restricted the length of time that RVs can park, providing 24 hours for loading and unloading purposes. | The lack of enforcement and the 72-hour regulation create an environment where RVs can abuse the *parking system* and park on the street for long periods of time, causing frustration with residents who also compete for on-street parking spaces. |
| **Preferential Transit Commuter Parking** | Transit lots that are not being used to their full capacity provide an opportunity for shared and leased parking. Preferential parking during a dedicated timeframe can be provided to commuters. After that time, the parking becomes open to the public and commuters. | • Coordinate with NCTD<br>• Establish appropriate regulations<br>• Provide consistent enforcement<br>• Provide transparency of information to reduce confusion and frustration | **San Clemente** – posted signs notifying the public that prior to 9 a.m. the spaces are for transit users only. As a result, the transit lot gets more usage while still maintaining space for the commuters. | Currently, the NCTD lot is underutilized. Sharing this lot optimizes its use by accommodating the NCTD transit users while also making the remaining spaces that are not in use available for the public. The City should continue working with NCTD to identify opportunities to incorporate public parking into future non-rail development on NCTD property. |

**Table 7** provides a summary comparison of the parking requirements for the City of Carlsbad, peer cities, and Park+ rates, which are based on the parking occupancy data collected as part of this study. Park+ was used to identify current parking rates within the study area based on actual data (parking occupancy and the unique mixture of land uses in the study area). Whereas the other rates are derived from assumptions and other calculations, the Park+ rates are based on community data unique to the study area. Park+ is explained in greater detail in the Future Parking Conditions section.

The table below shows that the parking requirements for residential and hotel developments in the City of Carlsbad are comparable to the other peer cities. However, the City of Carlsbad requires more parking for commercial and office land uses than some peer cities do. Additionally, the table compares the various existing rates that are present within the study area and compares them to the proposed rates in the Village and Barrio Master Plan and the Park+ rates. The table indicates that the proposed rates are appropriate for meeting projected demands.

*Table 7: Parking Requirement Rates Comparison with Peer Cities*

| CITY | RESIDENTIAL | | | COMMERCIAL | RESTAURANT | OFFICE | HOTEL |
|---|---|---|---|---|---|---|---|
| | SINGLE FAMILY | MULTI-FAMILY | GUEST | | | | |
| **Carlsbad Municipal Code (CMC 21.44)** | 2 spaces/ unit | 1.5-2 spaces/ unit | 0.3 spaces/ unit (up to 10 units); 0.25 spaces/ unit (more than 10 units) | 3.3-5 spaces/ 1,000 sf | 10 spaces/1,000 sf if < 4,000 sf; if 4,000 sf or more, 40 spaces plus 20 spaces/1,000 sf in excess of 4,000 sf | 4-5 spaces/ 1,000 sf | 1.2 spaces/ room |
| **CMC 21.45 (Planned Developments)** | Same as CMC 21.44 | Same as CMC 21.44 | Same as 21.44, except guest parking may be permitted on-street | n/a | n/a | n/a | n/a |
| **CMC 21.82 (Beach Area Overlay Zone)** | Same as CMC 21.44 | Same as CMC 21.44 | Same as CMC 21.44 | n/a | n/a | n/a | n/a |
| **Existing Master Plan – inside the Coastal Zone (Chapter 6)** | Same as CMC 21.44 | Same as CMC 21.44 | 0.5 spaces/ unit (up to 10 units); 0.25-0.3 spaces/ unit (more than 10 units) | 3.3 spaces/ 1,000 sf | Same as CMC 21.44 | 3.3 spaces/ 1,000 sf | Same as CMC 21.44 |
| **Existing Master Plan – outside the Coastal Zone (Chapter 6)** | Same as CMC 21.44 | 1-2 spaces/ unit | None | 3.3 spaces/ 1,000 sf | 8 spaces/1,000 sf | 2.9 spaces/ 1,000 sf | Same as CMC 21.44 |

| CITY | RESIDENTIAL | | | COMMERCIAL | RESTAURANT | OFFICE | HOTEL |
|---|---|---|---|---|---|---|---|
| | SINGLE FAMILY | MULTI-FAMILY | GUEST | | | | |
| Proposed Master Plan (Section 6.4, 2016 Draft) | Same as CMC 21.44 | 1-1.5 spaces/ unit | "ND" and "ED" Districts: 0.3 spaces/ unit (up to 10 units); 0.25 spaces/ unit (more than 10 units) All other districts: None | 2.8 spaces/ 1,000 sf | 8 spaces/1,000 sf | 2.8 spaces/ 1,000 sf | 1 space/ room |
| Study Area (Park+ Results**) | 1.5 spaces/ unit | 1.04 spaces/ unit | - | 2.7 spaces/ 1,000 sf | 13 spaces/1,000 sf | 2.4 spaces/ 1,000 sf | 0.69 spaces/ room |
| Santa Monica | 1.5 spaces/ unit | - | - | 2-3.3 spaces/ 1,000 sf | 5 spaces/1,000 sf | 2 spaces/ 1,000 sf | 0.5 spaces/ room |
| San Luis Obispo | 2 spaces/ unit | 0.5-1-1.5 spaces + 0.5 spaces for each additional bedroom/ unit; 0.5/ 5 units (more than 5 units) | - | 3.3 spaces/ 1,000 sf | 17 spaces/1,000 sf + 10 spaces/1,000 sf of food prep areas | 3.3 spaces/ 1,000 sf | 1 space/ room |
| Monterey | 2 spaces/ unit | 1-2.2 spaces/ units | 1 space/ 4 units | 2 spaces/ 1,000 sf | 1 space/4 seats or 20 spaces/1,000 sf | 3.6 spaces/ 1,000 sf | 1 space/ room |
| Laguna Beach | 2 spaces/ unit | 1.5-2 spaces/ unit | 1 space/ 4 units end every 4 thereafter | 4 spaces/ 1,000 sf | 10 spaces/1,000 sf or 1 space/3 seats (whichever is greater) | 4 spaces/ 1,000 sf | 1 space/ room |
| Dana Point | 1 space/1,000 sf | 0.5-2 spaces/ unit | 0.2 spaces/ unit | 2 spaces/ 1,000 sf* | 10 spaces/1,000 sf | 2 spaces/ 1,000 sf* | 2 spaces/ 1,000 sf* |
| Encinitas | 2 spaces/ unit | 1-2.5 spaces/ units | 0.25 spaces/ unit | 4-5 spaces/ 1,000 sf | 10 spaces/1,000 sf | 4 spaces/ 1,000 sf | 1.25 spaces/ room |
| San Clemente | 1 spaces/ unit or bedroom | 1.5-3 spaces/ unit | .333 spaces/ unit | 2.5 spaces/ 1,000 sf | 1 space/4 seats; single destination over 3,000 sf: 8.3 spaces/1,000 sf | 5 spaces/ 1,000 sf | 1 space/ room |
| Huntington Beach (District 1) | - | - | - | 3 spaces/ 1,000 sf | - | 2 spaces/ 1,000 sf | - |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Huntington Beach (All Other Districts)** | - | 1-2.5 spaces/ unit | 0.5 spaces/ unit | 5 spaces/ 1,000 sf | <12 seats: 5 spaces/200 sf; >12 seats: 17 spaces/1,000 sf or 10 spaces/1,000 sf when on a site with 3 or more uses | 4 spaces/ 1,000 sf | - |
| **National Parking Standards[3]** | 1-1.2 spaces/ unit | 0.59-1.52 spaces/ unit | - | 3.6-4.5 spaces/ 1,000 sf | - | 2.4-2.84 spaces/ 1,000 sf | - |
| **San Diego Region[4]** | - | 1.75-2.5 spaces/unit | - | 4 spaces/1,000 sf | - | 3.6 spaces/ 1,000 sf | - |

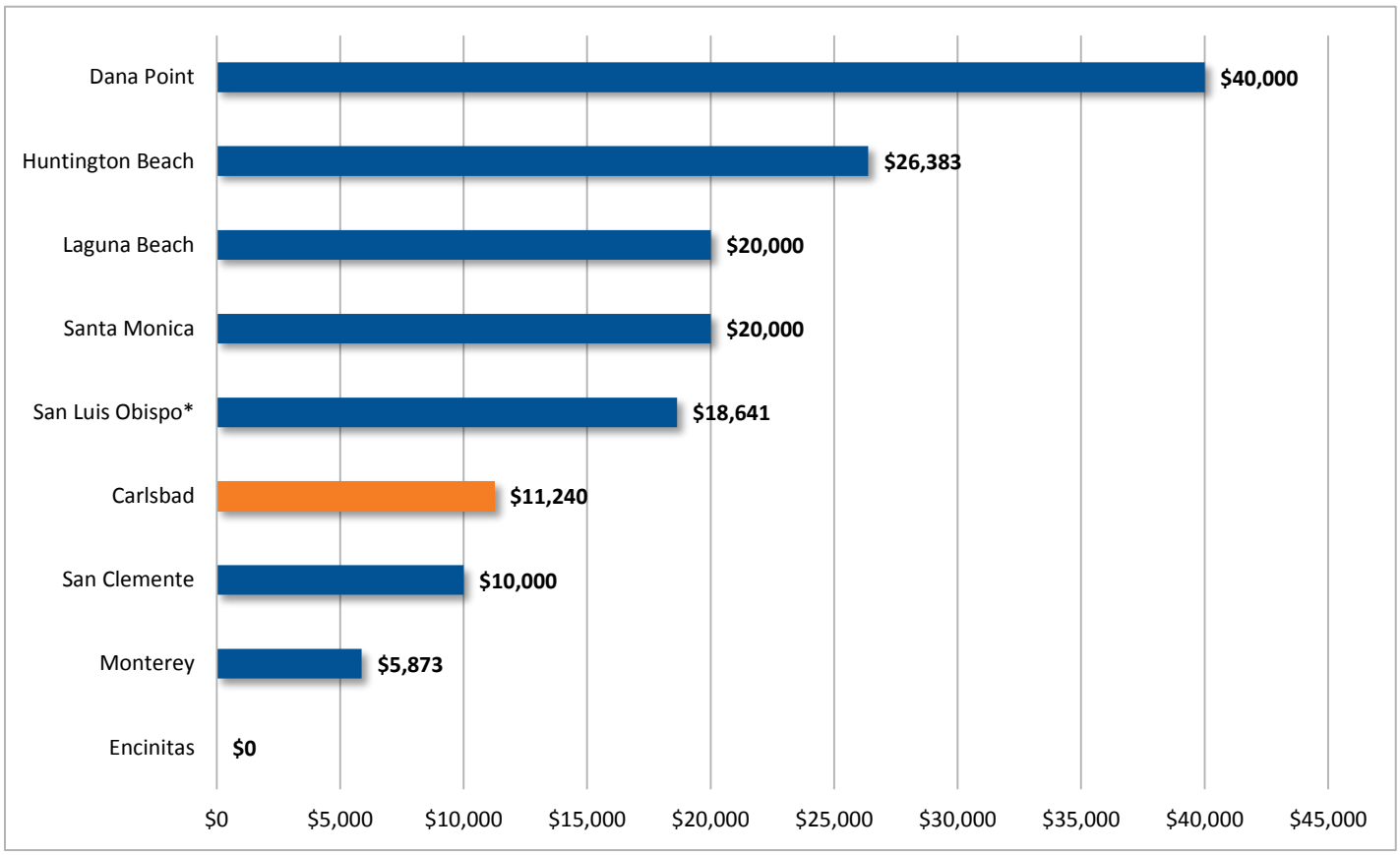
**If parking is not made available to the public, then the citywide zoning requirements for parking apply*
***Park+ and the generation of these rates is discussed in Technical Memorandum #2*
*This table is a representative list of parking requirements for common uses. Please refer to the respective document for a complete list of all parking standards.*
****The Planned Developments and Beach Area Overlay Zone chapters apply to residential properties only outside the existing Master Plan; they also would not apply to the proposed Master Plan.*
*****"sf" stands for "square feet."*
******Parking requirements inside the existing Master Plan are based on net square footage. Parking requirements outside the existing Master Plan are based on gross square footage.*

In addition to parking requirements, the peer cities were reviewed specifically for comparison of their in-lieu fee programs. The peer cities represent a comparable market for the city based both on size and character. **Figure 13** compares the in-lieu fees for each of the peer cities to the city's existing fees. The table illustrates the wide range of fees between each of the communities. Of the peer cities that have an *in-lieu fee* program, two of the peer cities have fees that are lower than the City of Carlsbad's, while the others are nearly double or more than double the City of Carlsbad's fee.

Full details for each of the best management practices provided above are provided in Appendix C - Technical Memorandum #3.

[3] "Residential and office rates from ITE Parking Generation, Retail rate from ULI Shared Parking
[4] Parking Strategies for Smart Growth" SANDAG (June 2010)

*Figure 13: Comparison of In-Lieu Fees with Peer Cities*




**San Luis Obispo has a fee of $4,660 per space fee for a change in the occupant. The higher fee of $18,641 is the per space fee for new construction.*

## Future Parking Conditions

Three parking management scenarios were evaluated and are summarized below. Each scenario evaluated the *parking system* based on full build out of the study area in 2035. The projections included in full build-out are intended to provide a basis on which to guide decision-making as it relates to parking demand generation and allow the parking system to operate more efficiently. These projections may change over time and should be regularly considered along with the review of implemented parking strategies. The Park+ model is meant to display aggregate changes to the system based on behaviors and preferences of the majority of the study area population. It is not intended to capture every change and nuance in the area. A full analysis of the scenarios is provided in Appendix B – Technical Memorandum #2.

- **Scenario 1** – Evaluates impacts to the parking system in the study area if no parking management or demand management strategies are implemented.
- **Scenario 2** – Evaluates the impacts of shared and leased parking to distribute and reduce the parking *demand* in the study area.
- **Scenario 3** – Evaluates primarily the Village portion of the study area and the impact of constructing a new public parking garage facility.

### Park+ Model

The *Park+* modeling software program was used to evaluate three future scenarios in terms of how they impacted the parking facilities in the study area. The model was based on existing land use types and intensities and existing parking *occupancy* data. The data collected in May 2016 and July 2016 was used to establish baseline conditions for the model.

The model also accounted for the different parking relationships present in the study area. For instance, if parking on-site of a specific business was restricted to only those going to that business (patrons and employees), then that relationship was built into the model as restricted parking. Similarly, publicly available parking (off-street and on-street) was left unrestricted indicating anyone could use that parking.

Walking tolerance was another component that was factored into the model. A quarter mile was established (based on the draft Village and Barrio Master Plan) as a comfortable or reasonable walking distance within the study area. This distance was used to determine how far people were willing to walk from a parking space to their destination in the study area. It is based on an urban planning principle that recognizes if streets are safe, comfortable, and interesting, most people will walk a distance of about a quarter mile (about two to three blocks in the Village) or approximately five minutes.

Once the baseline conditions were established, new developments and parking programmatic changes (such as shared and leased parking) were added into the model to predict future parking demands and parking behaviors. The future scenarios were selected for two reasons:

1. To determine the full buildout impact of the study area on the parking facilities
2. To evaluate different approaches to mitigate the effects of the future development. The results of the scenario evaluation informed the selection of parking management strategies that could improve the parking conditions in the study area.

The concept of *effective capacity* was used throughout the following scenarios to display the efficiency and effectiveness of the *parking system* in the study area.

### *Park+ Model Assumptions*

The model was based on the peak conditions established during the existing parking conditions analysis. The peak period was July (peak tourist time of year), on a weekend at 7 p.m. All the scenarios were evaluated under these same peak conditions.

The development intensities, type, and locations included in each scenario were provided by the city and based on four sources:

- The estimated new commercial and hotel development (to buildout) from the General Plan Environmental Impact Report[5].
- The distribution of commercial development in the Village and Barrio based on potential "opportunity" sites identified for the city's Envision Carlsbad process in 2012 and updated by staff[6].
- The distribution of hotel development based on proposed, approved, or under construction projects and potential hotel locations identified by staff.
- The estimated residential dwelling unit buildout projections prepared as part of the city's Housing Element, updated in 2017[7].

These estimates call for the following, and are shown in **Figure 14**:

[5] General Plan Environmental Impact Report, Section 2.0, available at http://www.carlsbadca.gov/services/depts/planning/update/documents.asp.

[6] Envision Carlsbad "Land Use Concepts" report, Section 3.2, prepared January 2012 and available at http://www.carlsbadca.gov/search/default.asp?q=envision+carlsbad+working+papers

[7] City of Carlsbad General Plan Housing Element, available at http://www.carlsbadca.gov/services/depts/planning/general.asp.

- 137,400 square feet of commercial development
- 1,280 residential units
- 260 hotel rooms

A growth factor was also applied to the model to account for increased parking *demands* due to population growth (as opposed to new parking demands generated by new developments) in the study area. SANDAG provided growth projections specifically for the study area between 2012 and 2035. The annual average growth rate between this time was 1.4 percent[8].

Parking associated with the future development in the buildout condition was not included in this scenario for several reasons. First is that it is likely that some of the existing parking will be replaced with either new parking or new development. However, the location and extent of parking space removal is not known and therefore arbitrarily removing and adding spaces to the system would reduce the effectiveness of the Park+ planning tool.

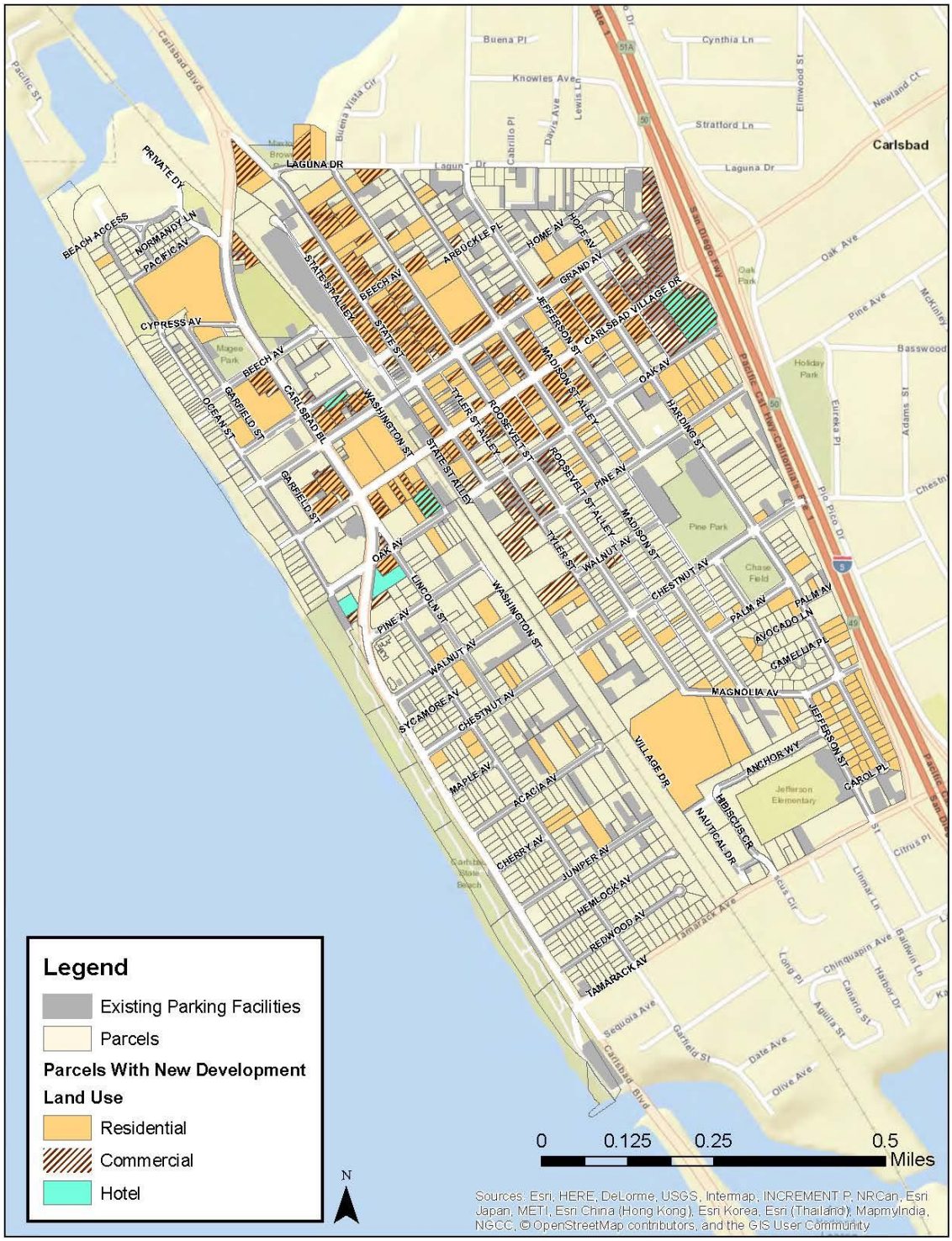
Secondly, it can be assumed that participation in the in-lieu fee program will continue. Based on the historical participation data provided by the city, approximately 10 spaces per year will not be constructed due to participation in the program. Understanding the parking conditions without assumptions made for additional private parking supply allows the city to change the stipulations of the program or suspend or terminate it to help the parking system as a whole function more effectively.

Third, and for reasons similar to the in-lieu fee program, it is also assumed that the current Village Master Plan and Design Manual provision that permits conversion of non-residential space from one approved use to another without the requirement to add parking beyond what a site can accommodate will continue and may be expanded into the Coastal Zone. This provision contributes to building reuse and Village vibrancy.

Lastly, the existing conditions analysis, discussed in Appendix A - Technical Memorandum #1, showed a surplus of total parking spaces system wide. However, these parking spaces are private and not accessible to the public. Therefore, users experienced frustrations finding available parking that was not private parking. The intent of using the Park+ model is to determine the impacts of implementing various parking management strategies so that the system operates more efficiently and investments to increase supply in the system are based on data. This could include new parking supply, and/or a more efficient use of existing supply within the system.

[8] SANDAG Series 13 Regional Growth Forecast

*Figure 14: Scenario 1 (2035): Parcels Identified for Future Growth for Master Plan Buildout*



## Scenario Analysis

### *Scenario 1 – Master Plan Buildout (2035)*

Scenario 1 assumes complete future buildout and maintaining current parking management approaches.

Scenario 1 includes the growth assumptions described previously and evaluates the impacts on the parking facilities within the study area if a build out to the expected capacity allowed by current development standards occurs. This estimates the greatest increase in *demand* or a reasonable "worst case scenario." This scenario assumed that current parking management approaches remain the same and no other changes were made. For instance, NCTD parking facilities are currently restricted to transit users. In this scenario, that restriction remained intact. The only difference between this scenario and the existing parking conditions was the inclusion of new development and growth in the study area.

### *Scenario 2 – Shared and Leased Parking (2035)*

Scenario 2 assumes maximum future buildout with shared and leased parking facilities and maintaining current parking management approaches.

Scenario 2 includes the buildout growth assumptions described in Scenario 1, but also incorporated the use of shared and leased parking. Under this scenario, private facilities in the Village and northern beach area that had occupancies of 0-50 percent were changed in the model so that the parking was unrestricted, allowing the public to park in those underutilized facilities. Areas in the Village and northern beach observed as underutilized (50 percent occupancies or lower) were categorized to unrestricted (available to the public) facilities in the model. The model projected underutilized facilities, as observed under existing conditions, to meet their current demands as well as accommodate demands from surrounding businesses. This scenario assumed that current parking management approaches remain the same, with the only change being the underutilized private facilities absorbing more of the parking demand.

### *Scenario 3 – New Public Parking Garage (2035)*

Scenario 3 assumes maximum future buildout and a new public parking facility adding 500 spaces to the public parking system while maintaining current parking management approaches.

Scenario 3 includes the buildout growth assumptions previously included in scenarios 1 and 2, along with current parking management strategies in place. However, this scenario evaluated the impacts of constructing a new parking facility in the study area that would provide an additional 500 public parking spaces. These spaces were added to the model to help mitigate the demands generated by the businesses

and various area land uses. New parking facilities are most effective in serving the greatest quantity and types of users when the facility is placed in high-*demand* areas. For the city, this would be in the Village and the beach area north of Oak Avenue.

***Scenario Evaluation Observations:***

While there are isolated areas of concern in the existing conditions, at future buildout (2035) some of the parking in the study area (particularly in the Village and the on-street parking in all areas) is of concern because they are projected to be over capacity. The following are specific observations made from projecting the future demands and evaluating the parking in the study area.

- The *occupancy* in the study area during the peak conditions (July weekend at 7 p.m.) was approximately 60 percent across all three scenarios. This indicates that the parking in the overall study area was underutilized and has the capacity to absorb the projected demands. However, certain parking facilities throughout the study area have reached *effective capacity* (85 percent occupied), such as the beach area and on-street facilities throughout the Village Neighborhood, making parking difficult in these areas.
- Parking demands in the study area increase by 8 percent when factoring in future growth and development.
- For the existing conditions, the on-street parking occupancy is at or below 50 percent occupied. However, on-street occupancy increases in the Village and northern beach area where parking is predicted to be above *effective capacity* (85 percent occupied) at full buildout.
- Private off-street parking facilities remained generally underutilized (37 to 46 percent occupied between the three scenarios), compared with on-street parking at *effective capacity*. This suggests that parking management strategies should be implemented to encourage people to park in off-street facilities to balance demand and increase on-street parking availability.
- Public off-street parking experienced greater occupancies than private off-street parking. This presents an opportunity to share and lease parking resources to balance the demands between the public and private facilities.
- Parking demands were widespread throughout the study area and not concentrated to a single location. This makes constructing new parking difficult because a single facility, or even two facilities, would struggle to absorb the unmet demands throughout the entire study area. As stated previously, a quarter-mile walking tolerance was used as the acceptable norm for the study's

population. Therefore, the impact of a new garage would be limited to the area within that quarter-mile walking distance. While a garage centrally located at Carlsbad Village Drive and Roosevelt Street, for example, would be within walking distance of much of the Village, it would not effectively serve much of State Street north of Beech Avenue and properties west of Carlsbad Boulevard. Shared and leased parking combined with *TDM* strategies, as discussed in greater detail below, could have a wider ranging impact throughout the study area.

- The model analysis concludes that parking issues in the study area are not related to a lack of parking supply, but rather the inefficient use of available parking between the parking facilities types (public off-street, on-street, and private off-street parking). Scenario 2 (Shared and Leased Parking) had the biggest impact on reducing the *demand* for on-street parking spaces. Under Scenario 3 (New Garage), the private parking and NCTD parking facilities remained underutilized because they remained restricted to customers or transit users. However, parking facilities throughout the study area remain at or above *effective capacity* (85percent occupied), making parking difficult in these areas. Notably, this included the on-street facilities throughout much of the study area, as well as the off-street facilities in the northern section of the beach area and the west side of the Village, among others.

**Table 8** summarizes the parking supply, *met demand*, and *occupancy* for the entire study area as well as results from the Village, Barrio, and beach areas under each parking management scenario described above per the future conditions listed, projected to 2035. Met demand is the number of occupied parking spaces in a facility during an observed or projected period or of time.

*Table 8: Future Scenario Analysis (2035): Parking Occupancy by Neighborhood at Peak (7 p.m.)*

| SCENARIO | NEIGHBORHOOD | PARKING SUPPLY | MET DEMAND | AVERAGE PEAK OCCUPANCY | CHANGE IN OCCUPANCY FROM SCENARIO 1 |
|---|---|---|---|---|---|
| *1. Master Plan Buildout (2035)* | **Village** | 5,251 | 2,920 | 56 percent | - |
| | **Barrio** | 2,952 | 1,561 | 53 percent | - |
| | **Beach** | 3,454 | 2,622 | 76 percent | - |
| | **Study Area Total** | **11,657** | **7,103** | **61 percent** | **-** |
| *2. Shared and Leased Parking (2035)* | **Village** | 5,251 | 3,332 | 63 percent | + 7 percent |
| | **Barrio** | 2,952 | 1,511 | 51 percent | - 2 percent |
| | **Beach** | 3,454 | 2,369 | 69 percent | - 7 percent |
| | **Study Area Total** | **11,657** | **7,212** | **62 percent** | **+ 1 percent** |
| *3. New 500-Space Parking Garage (2035)* | **Village** | 5,501 | 2,812 | 51 percent | - 4 percent |
| | **Barrio** | 2,952 | 1,562 | 53 percent | No Change |
| | **Beach** | 3,704 | 2,719 | 73 percent | - 3 percent |
| | **Study Area Total** | **12,157** | **7,093** | **58 percent** | **- 3 percent** |

**Table 9** provides the *met demand* and *occupancy* by parking facility type, including data for on-street, public off-street, private off-street, and NCTD facilities.

*Table 9: Future Scenario Analysis (2035): Parking Occupancy by Type of Facility at Peak (7 p.m.)*

| SCENARIO | FACILITY TYPE | PARKING SUPPLY | MET DEMAND | AVERAGE PEAK OCCUPANCY | CHANGE IN OCCUPANCY FROM SCENARIO 1 |
|---|---|---|---|---|---|
| *1. Master Plan Buildout (2035)* | **On-Street** | 4,971 | 4,288 | 86 percent | - |
| | **Public Off-Street** | 730 | 442 | 61 percent | - |
| | **NCTD** | 511 | 50 | 10 percent | - |
| | **Private Off-Street** | 5,445 | 2,323 | 43 percent | - |
| | **Study Area Total** | **11,657** | **7,103** | **61 percent** | **-** |
| *2. Shared and Leased Parking (2035)* | **On-Street** | 4,971 | 3,826 | 77 percent | - 9 percent |
| | **Public Off-Street** | 730 | 420 | 58 percent | - 3 percent |
| | **NCTD** | 511 | 486 | 95 percent | + 85 percent |
| | **Private Off-Street** | 5,445 | 2,480 | 46 percent | + 3 percent |
| | **Study Area Total** | **11,657** | **7,212** | **62 percent** | **+ 1percent** |
| *3. New 500-Space Parking Garage (2035)* | **On-Street** | 4,971 | 4,073 | 82 percent | - 4 percent |
| | **Public Off-Street** | 730 | 440 | 60 percent | 0 percent |
| | **New Garage** | 500 | 500 | 100 percent | Not Applicable |
| | **NCTD** | 511 | 50 | 10 percent | No Change |
| | **Private Off-Street** | 5,445 | 2,030 | 37 percent | - 5 percent |
| | **Study Area Total** | **12, 157** | **7,093** | **58 percent** | **- 3 percent** |

*NOTE: The table represents the parking conditions during the system-wide peak period. Individual facilities may peak at different times of the day.*

Appendix B – Technical Memorandum #2 provides greater detail on the analysis for each scenario.

Although the future development is going to further constrain the parking facilities, there is still ample parking supply within the study area. With proper management, the existing parking can be utilized more efficiently so

that parking remains available throughout the study area. The Parking Management Strategies section discusses in greater detail how this can be achieved.

***Recommendations for Implementation***

The evaluation of the future parking conditions in the study area concluded that while there are certain areas of the *parking system* that experience constraints, overall the parking system in the study area was underutilized. This suggests that the city's parking system is not balanced. With proper management, the system could be more efficient and can create greater availability of existing parking in high-demand areas.

The evaluation, using the *Park+* model, showed that the use of shared and leased parking could more efficiently distribute and absorb *demand*. Also, using the results from the model, coupled with the case study research, the evaluation determined that the shared and leased parking strategy could be more effective at improving the parking conditions in the study area than construction of a new garage. Based on the results of the analysis, it is recommended that the city move forward with the shared and leased parking approach under Scenario 2 and implement *TDM* and other parking management strategies to manage the *parking system* more effectively prior to constructing a new public parking garage. The following summarizes the reasoning for the recommendation of Scenario 2.

> *Based on the results of the analysis, it is recommended that the City move forward with the shared and leased parking approach and implement TDM and other parking management strategies to manage the parking system more effectively and create greater parking availability in high-demand areas.*

***Scenario 2 can produce similar, if not better, results than constructing new parking without the substantial economic investment.***

The frustrations with parking in the study area do not stem from a lack of parking supply, but rather how much of that supply is available for the public to use. Therefore, the investment in new parking is not necessary when a more cost-effective and beneficial solution is to manage the existing and planned parking supply. Scenario 2 evaluates the impacts of one parking management strategy, shared and leased parking.

Sharing existing parking facilities is a management solution that could benefit the entire community by making better use of the existing parking supply, creating availability of more spaces, and relieving frustrations from those using the parking facilities. Shared and leased parking could be encouraged in private, underutilized lots throughout the study area. These lots can meet their business demands and have available spaces for other users. Those extra spaces could be opened to the public. Specific recommendations regarding shared and leased parking can be found in the Parking Management Strategies section.

The city should actively promote shared and leased parking to move towards the creation of an integrated network of parking offerings that provides a benefit to private landowners as well as the parking users. Often, municipalities provide incentives to private parking facilities to open their lots to employees or visitors dependent on complementing each user group's peak *demand* hours or available supply. Incentives used in other communities include providing annual striping or other maintenance services for the facility, providing direct financial payment funded through *in-lieu fees* or revenues from the parking system, or provide marketing and advertising platforms that network participating businesses to promote cross-patronage.

This is a more cost-effective solution to balancing the parking demands in the study area than building new parking. For cost purposes in this study, it was assumed that these spaces would be constructed in an above-ground parking garage based on cost estimates for underground facilities that vary greatly dependent on the site. Since a specific site is not identified for this study, generalizations had to be made to consider the cost estimates. The city can explore the option of underground parking; however, it is more expensive than above-ground parking.

It is estimated that the cost of constructing an above-ground parking garage is $20,000 per space[9]. Therefore, a facility with 500 spaces would cost approximately $10 million for construction only. This excludes costs associated with land acquisition and other associated costs for surveying, design, etc. The cost to build the 500 spaces is independent of the footprint or number of facilities, as it is based on a per space average cost. In addition to this cost, operation and maintenance costs range between $500 and $800 per space annually (approximately $250,000 to $400,000 per year for the facility). From a land perspective, a three-level facility with 500 spaces would require approximately 1.6 acres of land. The cost for construction, operation, and maintenance is discussed in greater detail in Appendix B – Technical Memorandum #2.

Furthermore, the future of vehicle ownership over the next 10 to 30 years is in question due to the rise of participation in rideshare options (Uber and Lyft) as well as the anticipated introduction of the autonomous vehicle. Many garage developers are considering adaptive design of garages. If the garage is no longer necessary in the future it can easily be converted to another use[10, 11]. The change to a car-light society will be gradual and there is no way of knowing when the impacts will affect the city. However, it should be considered as the parking program progresses because the way we park over the next 10 to 30 years will change and an investment in a garage, when it is not needed, may not be the best use of public funds.

[9] "Parking Structure Cost Outlook for 2016", Carl Walker
[10] LA Times, *When Car Ownership Fades, This Parking Garage Will Be Ready for its Next Life*, April 16, 2017
[11] Road and Track, *A Big Makeover Is Coming to the Parking Garage of the Future Thanks to Autonomy*, July 16, 2016

***Scenario 2 improves mobility and access throughout the entire study area.***

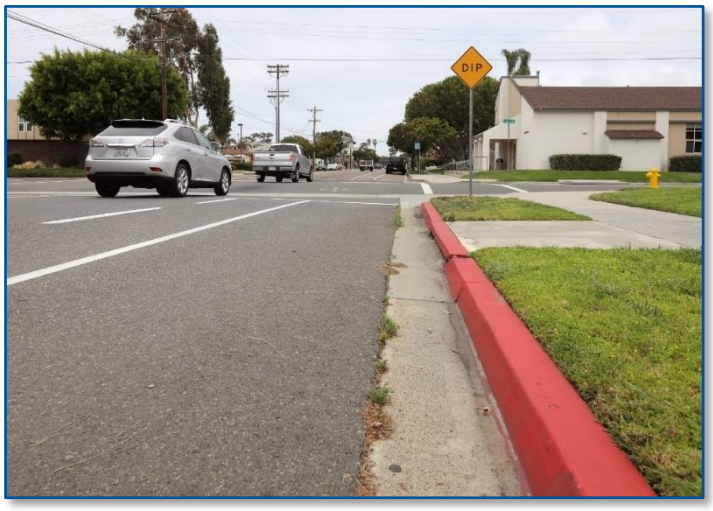
A goal of the city is to provide greater mobility options in the study area and reduce greenhouse gas emissions. Construction of new parking may improve mobility for vehicles in the area where the parking facility is constructed, but does little to improve mobility for other types of transportation such as walking, bicycling, and transit. Scenario 2 focuses on parking management through shared and leased parking. As a result, congestion and mobility in the area will improve because drivers won't have to circle to find available parking.

***Scenario 2 supports the city's initiatives to become more sustainable.***

Construction of a new parking facility does not support the city's sustainability goal. A new parking facility reinforces and encourages the use of personal vehicles. It is not sustainable to invest long-term in auto-centric strategies, but rather to improve mobility across all modes of transportation.

For these reasons, it is recommended that the city not construct a new parking garage at this time, but rather strengthen and improve shared and leased parking in the study area and implement other parking management and *TDM* strategies to create a more balanced and efficient *parking system*.

## Parking Management Strategies




Parking management strategies consist of policies and practices working together to improve parking efficiency. The data analyses described in previous sections indicate that frustrations with parking stem from inefficiencies and imbalances in the system, not a lack of parking spaces. To address the *demand* imbalance and maximize the use of available spaces, it is recommended that parking management strategies be implemented prior to construction of a new parking garage.

Parking management strategies improve access to businesses, balance the entire system, reduce occupancies by guiding people to appropriate places to park, and relieve user frustrations. Additionally, when coupled with *TDM* strategies, parking management supports the mobility, access, and sustainability goals of the city.

A number of the parking management strategies will be proposed, funded, and implemented through the annual Capital Improvement Program (CIP), which is developed through a collaborative process involving different city departments and ultimately adopted by the City Council. CIPs related to parking management include reconstructing curb returns to provide additional on street parking; reconfiguring streets to designate space for walking, biking and parking; and for curb lane management projects. Other parking management strategies are programmatic in nature (such as parking enforcement, shared and leased parking, paid parking, etc.) and will be implemented through annual budget appropriations and/or through public/private and interagency agreements.

The following sections describe parking management strategies recommended for the city.

### On-Street Parking Reconfiguration and Curb Lane Management

There are currently 4,971 on-street parking spaces in the study area which are most visible to visitors and business patrons. This section discusses strategies for possible reconfiguration of on-street spaces. This section also addresses curb lane management strategies to balance user needs including commercial and passenger loading, on-street parking, safety restrictions, ADA access, etc.

### *On-Street Parking Reconfigurations*

Reconfiguring existing parking can add spaces to the system. The following methods can result in new spaces.

*Red curb to parking spaces*

Red curb areas restrict parking and past installation practices have been inconsistent and seemingly haphazard; however, as development and land use changes, these red curbs may no longer be necessary allowing them to be converted into parallel and angled parking. Thoughtful consideration into the application, periodic review, and maintenance of red curbs should be given to ensure that they are appropriate and their intended use is fulfilled.

Red curbs exist for safety, including providing safe sight-lines near intersections and driveways and safe access for parked vehicles, transit stops, and fire hydrant access and often for bicycle parking 'corrals'. As land use and infrastructure conditions change, the need for a portion or the entire red curb may no longer be required. To assess the need for a red curb to remain when land use changes occur, a technical review and analysis should be conducted. This analysis must include traffic safety best practices, the city's street design manual, and surrounding context along the curb to determine whether a red curb area could be converted into parking spaces or other public use. These reviews should be conducted on a case-by-case basis as developments change or if questioned by the public, developer, or city.

If deemed unnecessary, the curb area can be converted to vehicle parking if contiguous 24-foot for parallel spaces or 12-foot sections for diagonal spaces of curb are available. An additional 5 feet of buffer on either end of an angled parking area or space is also necessary. While this strategy may only yield a limited number of new parking spaces, it is a highly cost-effective method for delivering new parking and should be pursued when applicable and appropriate.

*Curb cuts and driveways to parking spaces*

Unnecessary curb cuts can limit on-street parking supply. The city should carefully analyze curb cuts to define areas where closures can occur and additional on-street parking can be implemented.

Curb cuts and driveways provide access to properties and facilitate efficient movement between the property and the roadway. Regulated by city code and development agreements, some curb cuts and driveways may no longer be necessary as land uses and access needs change over time. To convert a curb cut or driveway into new parking, a study must be conducted to determine if access remains necessary. If determined to be unnecessary, the curb cut or driveway is chained off or new curb is installed. Red curb related to the driveway also may be removed. If there is enough space for parked vehicles along the new curb, additional spaces could be added into the *parking system* for each contiguous 22-foot for parallel spaces or 12-foot for angled spaces

segment of conversion. An additional 5 foot of buffer on either end of an angled parking area or space is also necessary. Even though the amount of curb cut and driveway removal is likely limited in the study area and any new spaces are likely to be limited, this method for providing additional on-street parking should be pursued.

*Parallel parking spaces to angled parking spaces*

Some roadways have large amounts of right-of-way dedicated to vehicular travel. In certain instances, this right-of-way can be minimized to reconfigure parallel parking spaces into angled parking spaces, providing additional parking capacity and the added benefit of traffic calming. Additionally, restriping parallel parking to angled parking is a relatively low cost option for providing more on-street parking supply. This conversion type requires several factors:

- At least 49 feet of right-of-way for angled parking along both curbs
- At least 44 feet of right-of-way for angled parking along one curb
- Low traffic volumes and low vehicular speeds
- Recommended on roads with two lanes of travel – Roads with four lanes could be acceptable in certain conditions as determined by the city, however, four lane roads typically have higher traffic volumes and higher speeds. Providing angled parking on four lane roadways increases the likelihood of crashes and conflicts with other motorists and bicyclists.

If these conditions are met, further analysis of safety conditions and street design standards will help determine the feasibility of creating additional parking spaces. A new angled parking space may be created for each 12 feet of contiguous curb space and 5 feet of buffer on either end of the angled parking area. Because multiple roadways meet the criteria for parallel to angled parking conversion, a significant number of new spaces might be created pending site-specific analysis.

There are two types of angled parking spaces:

- **Front-In Angled Parking** – This type of angled parking requires the user to pull into a parking space with the front of their vehicle in the direction of travel on the roadway. Front-in angled parking is the most common form of angled parking and is easy for users to enter the space. It is, however, difficult to back out of parking spaces with this configuration, since visibility is nearly often obscured and drivers back into the street 'blind', making this configuration less safe than back-in angled parking (see below) for bicyclists.

*Front-in angle parking in Carlsbad*

- **Back-In Angled Parking** – This type of parking requires the user to back into a parking space with the rear of the vehicle in the opposite direction of travel. The back-in angled parking strategy has been adopted because of the safety enhancements realized for users leaving a parking space. A user can easily see oncoming traffic (and bicyclists) and exit the parking space in a much safer manner.

*Back-in angled parking in Oceanside (Image: Google Street View)*

Angled parking uses more right-of-way than parallel parking and may preclude additional bicycle enhancements along the roadway. If a bikeway is planned adjacent to an area with angled parking, back-in angled parking is recommended to enhance sight lines between drivers and bicyclists. Back-in angle parking is safer for bicyclists, and as noted above, is usually safer for drivers as well. Many drivers initially feel uncomfortable with back-in angle parking because it is uncommon and requires a backing movement within an active travel lane. This, however, is a less complicated

movement than the typical parallel parking maneuver that drivers are well accustomed to.

Intentional consideration of on-street parking and development of a consistent policy that incorporates the process for on-street parking configurations while balancing other curb lane uses is provided through Curb Lane Management, which is discussed in greater detail below.

### *Curb Lane Management*

The city should consider the implementation of a curb lane program that helps define a more prioritized and dynamic use of the curb lane as the community evolves. A curb lane management program defines practices, policies, and tools to better utilize curb space in an urban setting.

Establishing a curb lane management program creates a cohesive and consistent curb structure that is easy to understand, use, and manage, which helps the city achieve its larger community goals. A curb lane management program prioritizes and organizes curb lane uses in a manner that:

- Supports business vitality, without compromising the character and vitality of residential neighborhoods
- Creates a clear and consistent messaging and management system that reduces confusion and promotes use of transit and other modes of transportation
- Helps manage expectations when parking and will therefore improve the parking experience

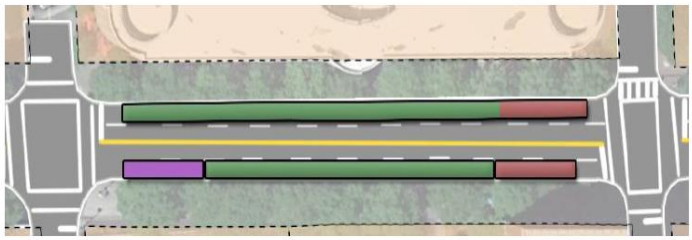
Additionally, the curb lane management program is adaptable to changing conditions as the city grows over time. Curb lane management helps guide management and implementation decisions for new developments, thus maintaining the established structure of curb lane uses over time. Curb lane uses are consolidated along each block, in accordance with the surrounding land uses, to provide a standard structure. A standard structure with supportive policies creates predictability, which decreases the amount of confusion on knowing where to park. Curb lanes can also be made flexible to accommodate different user during different times of the day (e.g. commercial loading zones in the morning and general public use for passenger pick-up and drop-off in the evening).

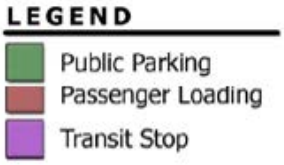
**Figure 15** illustrates the concept of curb lane management. The image on the left provides an example of unstructured curb lane uses. The space along the curb is inefficiently used, with most of the curb along the north (top) dedicated to passenger loading and the southern curb not used to its full potential. The image on the right demonstrates structured curb uses in which the same curb uses are consolidated to use available curb space more efficiently.

*Figure 15: Example of Curb Lane Structure*

**Example of Unstructured Curb Lane Uses**

**Example of Structured Curb Lane Uses**






The strategies of a curb lane management program are intended to improve overall mobility throughout the study area. People can easily navigate to appropriately designated curb space, thus reducing the number of conflicts and parking violations and improving access to businesses. Signage associated with curb lane management should have the same theme, branding, and messaging style as the wayfinding signage already implemented in the study area. **Figure 16** compares images of existing curb lane signage in the study area and an example that illustrates signage incorporated into a consistent city-wide parking theme. Disabled Parking spaces should be located at the tail end of the block so that users can easily access the existing ADA curb ramps. The 2010 ADA Standards for Accessible Design and the Public Rights of Way Accessibility Guidelines provide details on space placements and frequency.

*Figure 16: Example of Curb Lane Signage*

**Example of Signage Without Branding Theme**

*Existing street signage in Carlsbad*

**Example of Signage Incorporated into Brand Theme**

*Source: City of Seattle*

### *Recommended On-Street Reconfiguration and Curb Lane Management Strategies*

The following strategies are recommended for the City:

- **Review red curbs and driveway closures on a programmatic basis** – Using red curb location data collected (Spring 2017) during the development of the PMP and other data sources, the city engineer should conduct a comprehensive and area-wide review to determine safety and access priorities of each red curb and driveway to determine the possibility of removal or closure. If acceptable to remove red curb markings or close driveways based on safety protocols, the city can then determine whether there is sufficient space to convert to on-street parking. An on-street parking space requires 24 feet of contiguous space in a parallel parking configuration. If 24 feet is not available, a new parking space cannot be added to the curb lane. When adequate space is available, there is an opportunity to convert that space to on-street parking.
- **Consider angled parking** – Angled parking, either front-in or back-in, could replace existing parallel parking on roadways that meet the following criteria:
    - At least 49 feet of right-of-way for angled parking along both curbs

- At least 44 feet of right-of-way for angled parking along one curb
- Low traffic volumes and low vehicular speeds
- Recommended on roads with two lanes of travel – Roads with four lanes could be acceptable in certain conditions as determined by the city, however, four lane roads typically have higher traffic volumes and higher speeds. Providing angled parking on four lane roadways increases the likelihood of crashes and conflicts with other motorists and bicyclists.

These conversions will be identified based on the programmatic review of curb lane restrictions.

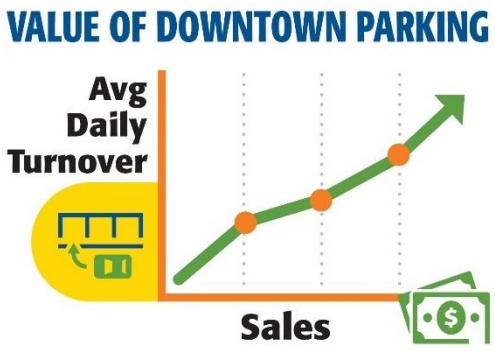
- **Develop a specific curb lane management program** – Define a consistent approach for reconfiguration of the curb lane, including parking, transit, loading (passenger and commercial), and business support. Curb lane management strategies should support the City's investment in livable streets, which recognizes the street as a public space and ensures that the public space serves everyone (elderly, children, bicycles, pedestrians, persons with disabilities, etc.) within the urban context of that system (e.g., accounting for all adjacent land uses). Vehicle parking is only one consideration. Examples of curb lane strategies include the following:
  - **Structure delivery services** – The city has received complaints about delivery vehicles blocking travel lanes during peak times of day. To address this, the city should consider prioritizing commercial loading during off-peak times (e.g., times of day that avoid 7 p.m. on a weekend and 1 p.m. on a weekday) or require delivery services to use alleys (through signage) during peak conditions to reduce the potential conflict. The prioritization of loading could include flexible loading areas (e.g., all on-street parking spaces) in morning periods and restrictive loading areas (e.g., limited loading zones spread throughout the area) in peak conditions.
  - **Prioritize curb lane uses** – It is important to identify block-face priorities and develop guiding standards that follow these prioritizations. The guidelines communicate how the city intends to manage parking and other curb lane assets to businesses and landowners who wish to request certain business-supporting uses along the curb. Business-supporting uses include loading areas, valet staging, curb cafes, and other business-specific uses that only serve the adjacent use rather than the community as a whole.

**Peer City Highlights**

None of the peer cities reviewed for this study has a coordinated curb lane program; however, several cities identified for the development of the San Diego Association of Governments (SANDAG) Regional Parking Management Toolbox had strategies and practices related to the curb lane. Although not a peer city, the City of Charlotte completed the Uptown Curb Lane Management Program in 2011, developed in response to public feedback related to signage and confusing messaging about curbside parking requirements. The goal of the program was to provide a clear and consistent curb lane structure and ensure that the curb lane uses made sense in relation to the adjacent land uses. The program's mission was to properly serve and support business, residents, commuters, employees, and other users.

*Source: SANDAG Regional Parking Management Toolbox,* http://www.sdforward.com/mobility-planning/parking-toolbox

## Parking Time Limits




One of the basic initial tools to manage parking allocation and *demand* is to implement parking regulations in the form of time limits. This approach provides guidance on the proper use of parking and is intended to help balance demands between short- and long-term users and allocate demand appropriately among resources. This technique is particularly effective in the on-street parking environment, where spaces need to turnover to support short-term transactions at retail and commercial businesses. An example of a long-term user is an employee, who will be parked for multiple hours, if not all day. There is an existing imbalance between parking within the study area where long-term parkers are using on-street spaces rather than off-street spaces. For instance, the public survey responses indicated that 64 percent of the employees said they were parking in on-street spaces, directly in front of or close to their place of work. These employees are occupying on-street spaces for long periods of time when they should be parking in an off-street facility. The on-street spaces should be made available for customers and short-term parkers so that access to businesses is maintained. As demonstrated in the Vancouver Peer City Highlight box later in the plan, higher parking turnover equates to increased sales.

The technique is only as effective as the enforcement practices that support the policies. If enforcement is consistent, the time limits will promote turnover. If enforcement is inconsistent, the public will take more chances because they know they are likely to get away with parking violations.

The following strategies are recommended for the city:

- **Maintain and enforce existing time limits** – data collected and analyzed as part of this study indicate that the two- and three-hour time limit restrictions are currently adequate for supporting turnover in the study area. The data showed that most people in the Village (where time limit regulations are currently posted) parked for two hours or less. This indicates that the existing time limits of two and three hours is reasonable for the study area. However, the survey data also indicated that employees of businesses in the study area park in on-street spaces directly adjacent to their destination. This indicates the need for proactive enforcement to encourage employees to park off-street.

  The annual collection of parking *occupancy* and duration data can be used to adjust time limit regulations to meet the changing needs of the community. In some instances, it may be suitable to implement shorter time limits to influence turnover or longer time limits to influence a shift in *demand*.

**Peer City Highlights**

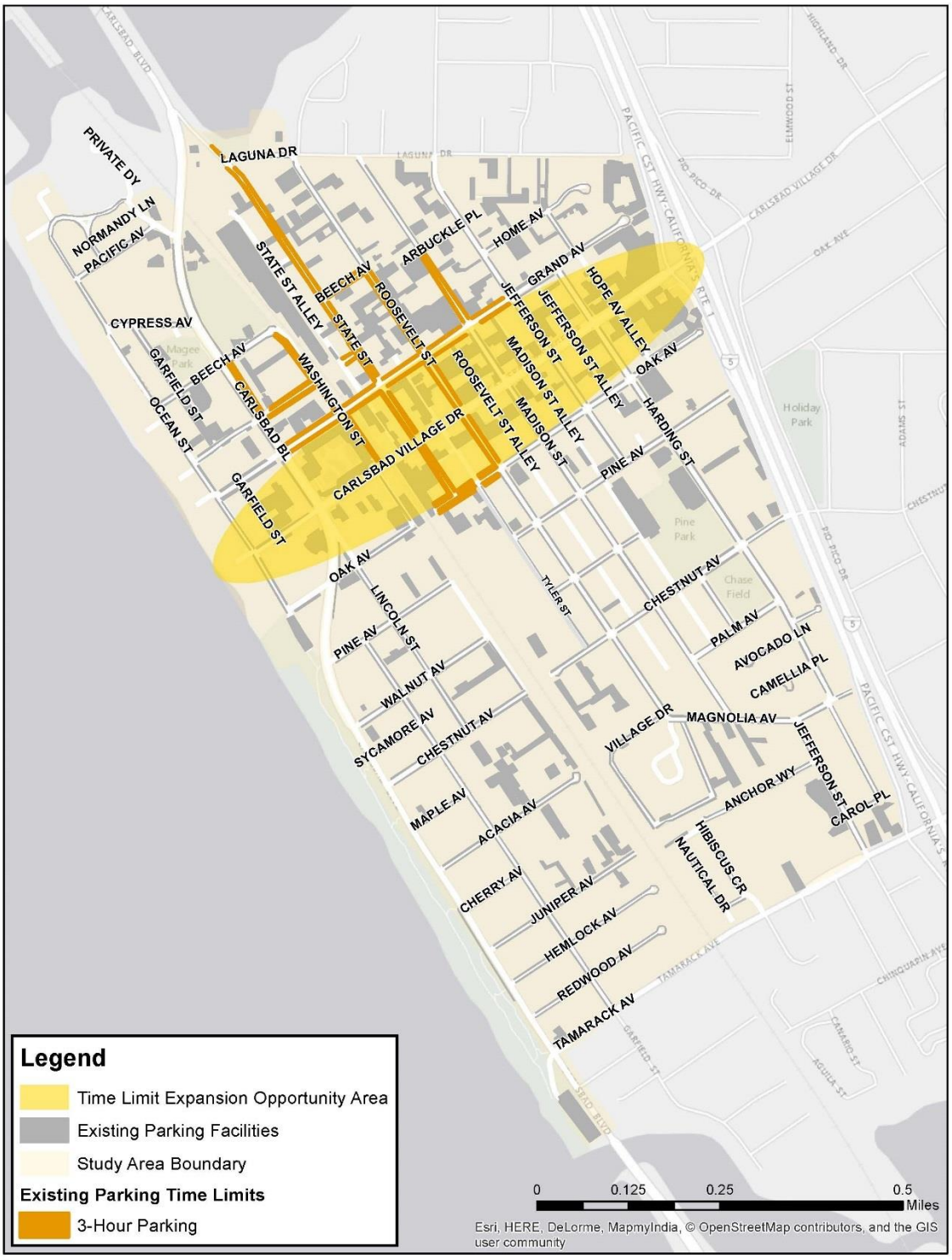
San Luis Obispo – Variable time limits in different parts of the downtown area are based on actual parking demands to help manage access to businesses in areas with a higher competition for spaces. Longer time limits are applied in areas where lower demands are observed, while shorter time limits are applied in areas with higher observed demand.

- **Extend time limits to new areas** – According to the buildout (2035) projections, commercial development is planned to intensify in the Village, particularly along Grand Avenue through the length of the study area (from Ocean Street to I-5), and on streets between Grand Avenue and Oak Avenue. To encourage turnover in these areas and support business access, it would be beneficial to implement time limit restrictions along those streets. Although the Master Plan calls for future growth in these areas, real growth may occur differently than what is anticipated. Therefore, the city should evaluate parking occupancies and *duration* annually in conjunction with a review of commercial developments to identify areas of commercial growth and expand the time limit restrictions to support those developments. In the beach area, this annual review is of particular importance so coastal access is maintained. During annual review, the beach areas should be evaluated separately, as well as in conjunction with the larger system, to determine the best approach for managing parking time limits in that area. **Figure 17** illustrates the opportunity area for expanding time limits.
- **Extend parking time limits after 5 p.m. to 4 hours –** If parking enforcement hours are extended to 8 p.m., the time limits during this time should also be adjusted. In the evening, people come to the area

for nightlife activities, such as dining. Parking for restaurants requires a slightly longer time period than retail, which for retail is about two or three hours. The existing daytime parking limits are adequate to accommodate the daytime *demands*; however, the city should extend the time limits to four hours after 5 p.m. to allow patrons to visit restaurants and other nightlife destinations without worrying about receiving a citation. It is important to maintain parking time limit restrictions after 5 p.m. to encourage turnover of spaces, since 7 p.m. is the peak parking period in the study area.

- **Revise overnight parking restrictions** – The current overnight parking restrictions are in place to prevent non-residential users from parking on the street. However, this has restricted access to on-street parking by the residents, especially at the north end of State Street where more residential housing is being constructed. Going forward, the city should assess the necessity of maintaining the overnight restrictions, then resort to other parking management solutions if necessary.
- **Revise Oversize Vehicle Ordinance** – During the public outreach process, many participants noted that RVs, trailers, and other oversized vehicles are parking on-street for long periods of time. The Oversized Vehicles Ordinance allows RVs and other oversized vehicles to park on the street for a consecutive 72-hours. It is recommended that the city consider reducing the time RVs are allowed to park on-street to 24-hours. The city should also implement a graduated fine for repeat offenders. Each time the same RV is in violation of the parking regulation, the fine will increase. The intent of this recommendation is to limit long-term RV parking or camping on city streets while maintaining public access to the beach for recreational purposes. It is not recommended to provide off-street parking for oversized vehicles as this will unintentionally encourage “camping” in the off-street parking facilities.
- **Provide time limit information on city website** – Develop program information to be placed on the city’s existing website. This includes an interactive map that shows parking facilities, number of spaces available and any associated time limits or restrictions. The intent is to provide easy-to-access information on parking regulations throughout the study area.
- **Evaluate and Update Municipal Ordinance** – The ordinance should be updated to support the changes to time limits, such as streets with time limits, time limit restrictions, oversize vehicle ordinance, and enforcement.

*Figure 17: Time Limit Expansion Opportunity Area*



## Enforcement and Ambassadors

Enforcing existing and proposed parking regulations is critical to the success of the program. Parking enforcement should be conducted regularly and consistently and with a focus on customer service. For instance, if an area has two-hour time limits, the route for the enforcement personnel needs to be completed in two hours. Active enforcement encourages compliance with the parking regulations through education and citations, thus maximizing the use of the existing parking resources.

The following strategies are recommended for the city.

- **Prohibition of On-Street Storage of Oversized and Recreational Vehicles** – To discourage possible long-term storage of oversized and recreational vehicles or urban camping on public right-of-way, and increase coastal access for the general public, increased enforcement effort of overnight parking prohibitions would effectively manage the abuse of on-street parking by oversized vehicles.
- **Evaluate parking enforcement resources and strategies** – The findings of this study conclude that proactive enforcement is necessary to ensure compliance with parking time limits. Based on conversations with Police Department staff, the city currently does not have the resources to proactively manage enforcement operations on a regular basis. It is recommended that the City phase in more regular enforcement in high demand areas and expand enforcement as resources allow. Proactive enforcement is required for the parking within the study area to function. The recommendations held within this Plan will be ineffectual if proper enforcement is not implemented. Therefore, finding enforcement resources is paramount to the success of the parking program. Options for enforcement include:
  - **Self-Operation** – The city operates the parking program itself. This entails that the Police Department maintains responsibility for enforcement and commits to proactive enforcement. This requires that the Police Department dedicates some portion of staff to regularly enforcing the parking system. Regular enforcement, however, does not mean that an officer needs to make rounds hourly, or even daily throughout the study area. It means that an officer must make rounds periodically and frequently enough to encourage compliance. Please see the recommendation below for more information on this sporadic approach to enforcement.
  - **Management Contract** – The city contracts a private parking management firm to handle day-to-day operations and maintenance through a management contract. Through the management contract, the private parking management firm is either paid a fixed management fee and/or a percentage of gross revenues and is reimbursed by the city for all costs incurred in the operation. Contract options are discussed in greater detail in the Parking Program Administration section.
  - **Concession Agreement** – The city contracts a parking management firm to assume full responsibility for all aspects of the operation, including expenses, and the parking management firm pays the city a guaranteed amount and/or a percentage of gross revenues (or a combination).

- The city may investigate contracting enforcement operations to a third party that that could handle day-to-day enforcement. The contracted company could be instructed by the city through either the Police Department, which currently enforces parking, or through the Public Works Department under the direction of the new parking manager. Enforcement could occur according to how the city dictates (first offense warnings, ambassador-style approach, etc.).

**Peer City Highlights**

The cities of San Luis Obispo, Monterey, and Dana Point all have dedicated park staff ranging from 5 to 10 full time equivalents. San Luis Obispo and Monterey both operate as enterprise funds meaning that all revenue generated is reinvested into the parking system and operations. Both also operate within separate parking divisions of the city. All three enforce violations with punitive fines unless there is an extraordinary circumstance or new regulation in which case short educational periods of warning citations are used.

- **Sporadic enforcement patterns** – Introduction of a consistent enforcement presence can cause some members of the public to react negatively because parking has been unregulated, and change is sometimes uncomfortable. To minimize the presence of enforcement, enforcement can be conducted on sporadic schedules. The same pattern of enforcement should not be repeated each day. Rather, a few days a week of intensive, targeted enforcement should occur in the study area. The sporadic nature of enforcement keeps the public from learning the enforcement pattern. The public is then more likely to comply with parking regulations and use the parking spaces as intended.
- **Consistency with enforcement** – Increase enforcement resources over time to be more consistent if necessary. This would include providing more routine enforcement in high-*demand* commercial areas and increased focus in areas with high levels of repeat offenses.
- **Extend enforcement hours to 8 p.m. –** The peak parking period in the study area is 7 p.m.; therefore, the parking should be enforced at least through 7 p.m. to ensure that turnover occurs to provide more parking availability. The enforcement hours need to be consistent with the business peaking to ensure that patrons can find parking and employees are not allowed to park on-street directly in front of or adjacent to businesses.
- **Enforcement officers as ambassadors** – Parking enforcement personnel should be trained to serve as community ambassadors, serving the dual role of enforcing parking time limit regulations and providing friendly customer service by helping patrons navigate the community and orient themselves within the various areas of the city.
- **First offense warnings** – Do not penalize first-time offenders with a citation, but rather use the opportunity to educate on how and where to park legally with a friendly warning. A warning should have a different look from a regular citation (e.g., different color paper) and provide information on

parking regulations in the study area (e.g., time limits, hours of enforcement). The warning also could include a map of restricted parking locations and available off-street public parking. The intent is to encourage compliance through education rather than through citation. People will appreciate that they did not receive a ticket, thus creating a positive perception of enforcement and parking in the area. Additionally, they will likely park correctly the next time, which contributes to the system operating more efficiently for all people in the area.

- **Graduated fine structure** – In conjunction with the first-time warning approach, implement a graduated fine structure that becomes more punitive for habitual offenders. Citation information should be recorded and saved in a database so that officers in the field can access the data using hand-held devices to determine if the vehicle has multiple offenses. Database management tools are discussed in the Technology section of this report. As an example, the fine structure could be structured as follows:
  - **1st Offense** – $0 fine with a warning educating the user
  - **2nd Offense** – $25 fine with an explanation on the ticket of how and where to park. The intent is to ensure compliance through education, not harsher punishments
  - **3rd Offense** – $50 fine
  - **4th Offense** – $100 fine
- **Use advanced technology** – The Police Department has recently invested in handheld technology for streamlining enforcement practices. The handheld devices are efficient for capturing violation and vehicle data and issuing citations. The data is entered manually by an officer as they make the rounds. This type of technology is adequate for the current parking system in the study area. However, as the area becomes more developed and the parking system more complex, another form of technology may be necessary to further enhance enforcement operations.

  This PMP recommends the city acquire advanced parking enforcement equipment, including mobile vehicle mounted license plate recognition (LPR) and ticketing devices to use in day-to-day operations and support ongoing data collection. This equipment will improve staff efficiency and allow for better communication with data servers that can be accessed to manage permit and citation data. The city is currently investing in stationary LPR cameras along major roadways as part of safety and traffic enforcement. Since these cameras will be stationary, it will be difficult to enforce parking throughout the study area as the cameras will not be able to capture license plates from a great distance. As the enforcement program expands, mobile LPR cameras mounted on enforcement vehicles will be necessary to quickly cover an expanded enforcement area. These technologies are discussed in the Technology section of this report.
- **Provide information to public** – Publish enforcement information, including citation types and fine structure on the city website. Use this location to also educate users about where to park based on parking type (e.g., short-term vs. long-term, or patron vs. employee). After years of little enforcement, people have become accustomed to parking wherever they want for as long as they want. Once enforcement becomes consistent and regular, people may become frustrated if not warned that enforcement practices are changing. Transparency of information and education on

the changes (why they are happening, where they are taking place, and what it means for people) will reduce frustrations. First-offense warnings and enforcement officers as ambassadors also help to soften the negative perception of parking enforcement.

- **Evaluate and Update the Carlsbad Municipal Code** – Ordinance should be updated to support the changes to enforcement, such as authorities, enforcement hours, enforcement practices, rate structures, etc.

**Peer City Highlights**

Although not a peer city, a study in Vancouver, BC concluded that sales increased due to higher parking turnover rates because each parking space could accommodate more customers throughout the day. Having enforcement practices and regulations that promote turnover can have beneficial economic impacts. With a turnover rate of 5.6 vehicles per day, average retail transaction of $31.55, and 303 shopping days in a year, the potential retail sales per occupied stall was found to be $53,534 per year.

*Source: Employee Parking in Downtown Vancouver, WA, City of Vancouver, WA (2014)*

## Shared and Leased Parking

Shared and leased parking allows two or more land uses to utilize the same parking facility without conflict. The intent is to optimize the use of the parking supply so that parking is not underutilized. The practice of shared and leased parking works best with a mixture of nearby land uses that have offsetting peak conditions, such as an office and a church. Typically, shared and leased parking is a tool that is used between private businesses. However, cities can and do participate in shared and leased parking opportunities. Businesses closed on weekends and evenings, for example, present opportunities the city could explore as potential public parking resources throughout the Village.

Shared and leased parking is an option for private property owners and the city who wish to participate in the program. The intent is to provide more options for property owners to make meeting parking demands more affordable by optimizing the use of existing parking resources. A shared parking agreement may exist between the city and private property owners, or two or more private property owners (this includes existing and new development). The city's role will be to standardize the process, broker agreements, analyze parking supplies and demands annually and relay this information to property owners and developers and the public so that they understand the data and what it could mean for their business or property.

The following modifications are recommended to the city's Shared Parking policy.

- **Develop standard liability language** – The city currently does not have standard liability coverage for shared and leased parking agreements. The parking manager, discussed later in this document, should explore standard shared and leased parking agreements from peer and/or other example cities, such as San Clemente's Offsite Shared Parking Agreement, for appropriate liability and other agreement language that would be desirable by the city.
- **Maintain and broker shared and leased parking agreements to encourage development** – The parking program should be responsible for actively brokering shared and leased parking agreements for existing businesses and new development using the known inventory of parking spaces, *occupancy* data from this study, and subsequent updates based on annual data collection efforts to help define opportunity areas. For shared and leased parking to be successfully implemented, the city needs to play a very active role in both identifying shared and leased parking opportunities in high-*demand* areas and negotiating agreements for the shared use of the parking facility. Shared and leased parking can be between two or more private businesses (existing and/or new development) or between the city and private businesses (existing and/or new development), where the private business decides to open its parking facility to the public during non-business hours.
    - Identify parking that is underutilized (50 percent or lower occupancies) and is within 1,320 feet (quarter mile, which has been identified in the Draft Village and Barrio Master Plan as an acceptable walking tolerance in the study area) to the business. Underutilized parking facilities will be identified on an annual basis as part of the annual data collection.

- For instance, in the *Park+* modeling, facilities observed at 50 percent occupied or less were identified and recategorized to demonstrate the impact of such agreements on the parking demand distribution. This metric, however, can be adapted as opportunities are reviewed, if needed.
- While any facility that is consistently observed below *effective capacity* can be a good candidate for a shared and leased parking agreement, the greatest impact will be achieved through incorporation of those facilities with lower occupancies that can realistically absorb more vehicles. For instance, a surface lot with 100 parking spaces that averages 50 percent occupancy may provide a greater return on effort in negotiating an agreement than a surface lot of the same size that averages 80 percent occupancy. However, if the lot with the lower occupancy is in an area that does not already experience high *demand*, a shared or leased parking agreement will have little to no effect on redistributing the demand. Therefore, both *occupancy* and location must be evaluated in identifying shared and leased parking opportunities.

- Revise existing distance requirements for shared parking from 300 feet (as stated in the existing Village Master Plan) to the longer distance of 1,320 feet, which is generally considered an acceptable 5-minute walk and is recommended in the proposed Master Plan.
- Annual data collection results should be made public with specific analysis of shared and leased parking efficiencies and areas of opportunity provided to private property owners in order to inform them regarding their options regarding parking as it relates to future new developments and expansions.
- Use incentives to encourage businesses and developers to participate in shared and leased parking agreements. Incentives successfully utilized in other communities include:
  - Reductions to parking minimum requirements
  - Maintenance services (e.g. line striping or lot cleaning)
  - Provision of liability insurance to help cover risk for private property owners
- As with any parking facility, the pedestrian experience should be considered when evaluating potential facilities for shared and leased parking opportunities. This includes a safe path of travel between the parking facility and destination that is well illuminated, has clear wayfinding and signage, and is designed to promote a walkable, park-once mentality for residents, employees, and visitors in the area. Also, it is important to keep in mind that many pedestrians need to utilize assistive devices, such as wheelchairs and walkers. 'Universal' accommodations should be provided.

- **Utilize shared and leased parking opportunities to create off-site employee parking** – Define specific employee parking opportunities where employees who work in the study area can park in the designated facility. This can be accomplished through outreach and education or through a

permit program. This approach works best when on-street parking is regulated with time limits or paid parking, because employees must choose among:

1. receiving a citation for a time limit violation;
2. moving their vehicle every two or three hours to avoid a citation.

Permits can be provided at no cost to further incentivize their use. The city should administer the permits to employees, with proof of employment in the study area. For instance, the EasyPark Employee Parking Program in Anchorage, Alaska provides employees of the central retail district with reduced cost permits that provide access to specific shared and public parking facilities, but require employees to demonstrate continued employment within the qualifying area on a regular basis.[12] Large-scale permit programs such as these generally permit based on license plates to prevent pass-back entries often associated with card systems or doubling up on placards.

- **Utilize shared and leased parking opportunities for valet parking** – Parking valet services can simplify the parking experience for visitors and is appropriate for popular destinations like the Village. Underutilized off-street parking facilities can be used to house vehicles that use valet services, where applicable. The city should broker agreements between valet companies and parking facility managers to determine the amount of parking that could be set aside for valet use and the times and days of the week it would be appropriate to share the parking facility. Not only does this support improved utilization of existing parking assets, but may provide new developments an additional parking resource.

  As previously mentioned, each application of this strategy will be unique to the location and should be carefully reviewed to determine the optimal location of the valet station, loading zone and queues, the location of the storage lot, and parking method, as well as the impact of traffic along the route from the generating land use(s) to the storage lot. Policies should be set to determine how far a storage lot can be from the destination and around valet service operations should be managed to ensure neighborhoods are not detrimentally impacted.

  - The valet could be managed through a centralized valet that serves primary destinations in the Village. A centralized valet uses one valet operator stationed at strategic locations throughout the area to serve a large section of the community. This centralized operation allows patrons to drop their vehicle at one location, walk between multiple destinations, and pick up their car from another valet stand at another location. This concept provides greater access to businesses in a district and promotes more active use of the district. Coral Gables, Florida has a centralized valet program along their Miracle Mile shopping area that is supported by adjacent businesses and promotes a much more active environment and has resulted in higher sales returns for restaurants and businesses in the area.

- **Lease parking spaces in existing facilities for public use** – Investigate the potential to *lease parking*

[12] Downtown Employee Parking Program – Parking Incentive for Downtown Workers, July 15, 2016 http://www.easyparkalaska.com/latest-news/16-07-15/Downtown_Employee_Parking_Program_%E2%80%93_Parking_Incentive_for_Downtown_Workers.aspx

spaces in underutilized facilities to open those spaces to the public and optimize the available parking supply in the study area. These locations could be used as Park Once locations that are served by mobility services that access areas outside of a reasonable walking distance of the leased lots.

- **Lease parking spaces in NCTD facilities for public use** – NCTD currently owns a significant portion of right of way along the railroad tracks through the study area. Current plans to double-track the railroad would use additional right of way, but still leave a surplus of useable space in the future. This space would be predominately along the western part of the tracks between Tamarack Avenue and Oak Avenue. Parking along the tracks could provide additional parking for beach access, which in turn would relieve parking conflicts on residential streets between residents and beach-goers. **Figure 18** on the following page illustrates opportunity areas for leasing additional spaces from NCTD.

  While a portion of this area is currently farther away from many commercial or shared-use opportunity areas within the Village and northern beach area, the area close to the Village is able to provide new parking supply that could be of great use and benefit to the Village. Furthermore, even though the southernmost portion is further from the Village, it could provide substantial parking resources for beachgoers in the southern portion of the study area. This could alleviate some of the residential concerns with use of on-street parking by beachgoers. Additionally, if plans to connect the street or pedestrian network across the tracks are realized, there is a significant opportunity for the location to serve local businesses, visitors, and employees, especially on the northern end of the potential parking area. If the connectivity and transportation improvements are not made, the lot could still serve as a Park Once lot if paired with regular or high-quality mobility services like a trolley or circulator.

  All plans for improving parking should include an evaluation of whether adequate disabled parking is provided in the facility.

- **Monitor shared and leased parking system annually** – Annually audit the shared and leased parking program by collecting parking *occupancy* data and feedback regarding the business and patron experience. At the same time, the city should also assess the status of any shared and leased parking agreements in place and how well they are functioning. The city could adjust the program to meet the needs of the community as it evolves. Refer to the Parking Program Administration section of this document for further details on data collection and analysis processes.

*NCTD Rail Corridor – Potential to add more parking as a shared resource*

  - While participation in shared and leased parking agreements by private business owners and developers is optional, including providing access to such private parking facilities

for ongoing data collection and analysis of the parking system for the area, the City should encourage such participation so as to better inform future parking decisions that will impact all destinations with the given area.

  - Additionally, private properties that participate in shared and leased parking agreements are only bound to the negotiated and agreed upon terms of the agreement specific to their property or parking facility. The property owner has the flexibility to determine the length of time they wish to participate in shared or leased parking. For instance, an agreement may be renewable on an annual basis, and the property owner (or lessee for that matter) may opt to not continue with the arrangement in favor of expanding their primary building and change their parking supply, subject to city approval. Property owners must still comply with the city's parking standards and seek proper approvals and permits for any changes to parking.

- **Evaluate the proposed Master Plan and Carlsbad Municipal Code, as appropriate**– Draft and existing standards should incorporate, as appropriate, recommendations to support shared and leased parking such as the city process for brokering and managing shared parking agreements, and other strategies listed above.

**Peer City Highlights**

The City of Laguna Beach leases spaces from private parking facilities that are underutilized and remotely located. During the week, the spaces are for City of Laguna Beach employees, but in the evenings (after 5 p.m.) and on the weekends, the spaces are available to the public. Consistent wayfinding signage and messaging have been highly effective in directing the public to the appropriate parking facilities based on time of day.

*Figure 18: Lease and Shared Parking Opportunity Areas*

## In-Lieu Fees

To encourage economic growth, maintain character, and encourage pedestrian-friendly downtown areas, a growing number of municipalities allow developers to pay for the construction of parking spaces that they do not provide on-site, which can then be used for shared and leased parking or other mobility improvements that reduce parking *demand*. The city currently has an *in-lieu fee* program, but this study recommends that the current program be restructured to minimize underutilized parking facilities and to contribute to mobility improvements in the area.

In-lieu fee programs are important to not only support economic development in a downtown area, but they also are a significant funding source for the community. In many communities, in-lieu fee programs fund non-parking infrastructure improvements, such as alternative transportation measures that reduce parking demand. The following strategies are recommended for the city.

- **Maintain the current in-lieu fee rate** – While the city's current in-lieu fee is less than most of the peer cities reviewed as part of this Plan (refer to **Figure 11** for a comparison of rates), it is recommended that the city maintain its existing fee. Maintaining the in-lieu fee rates will incentivize developers to participate in the program, as participation to date has been lower than optimal for supporting a shared and leased parking environment. The current fee ($11,240) is 60 percent of the estimated cost to construct a structured parking space in San Diego ($20,000 at the lower end of the estimated range) and does not include land acquisition or other soft costs. However, because a parking garage was not found to be necessary to accommodate future demand, the current rate provides a viable revenue source to supply new surface parking ($3,500 - $5,000 per space plus land and maintenance costs), fund *leased* and shared parking, and to support implementation of parking management strategies. Furthermore, maintaining the fee encourages developers to participate in the program. The city should continually monitor participation in the in-lieu fee program as well as public parking *occupancy* rates. The fee should be re-evaluated periodically as participation rates, program needs, and cost of alternatives change over time.
- **Review fees annually** – Evaluate the in-lieu fee annually and adjust as needed to prioritize reinvestment of collected fees with the goals of the overall parking and transportation system. The goal is to maintain a fee that encourages participation in the program and promote shared parking, and is high enough to fully fund implementation of a range of parking management strategies. The city should refer to *RSMeans* data to evaluate their fees annually. RSMeans data provides construction costs and will enable the city to determine the cost of constructing a parking space. Over time, the city should set the in-lieu fee to be no higher than 60 percent (based on current conditions) of the cost of constructing a structured parking space in the community to encourage participation in the program. All fees should be used to reinvest back into the parking system and parking management strategies.
    - Fees are typically a one-time fee per parking space, and this is currently how the city collects in-lieu fees. However, there could be future consideration of implementing an annual fee per parking space, especially if the primary use of the fee is to lease parking spaces.

- Annual fee – although not recommended, an annual fee could be paid over time, rather than the full rate per space upfront. This method of payment is not common practice and no peer city currently uses this form of payment for their in-lieu fee programs. However, the potential benefits could be increased participation in the in-lieu fee program. Property owners and developers may be more inclined to participate in the program if the cost is more affordable upfront.

  While this approach could increase participation, it is not recommended for the city due to the drawbacks associated with this approach. This includes increased management and enforcement by the city. There will have to be repercussions for those who do not pay their annual fee, and a process in place for properties that change ownership or building use. This approach also places greater importance on annual, if not more frequent, review of the in-lieu fee program. An annual rate may increase participation in the program substantially and therefore parking supply and demands, and program usage need to be closely monitored to ensure a balance of parking is provided.

- **Use development regulations to encourage participation in the in-lieu fee program** – Current development in the study area provides ample space to build parking; therefore, there is little incentive for developers to participate in the *in-lieu fee* program. As infill development occurs in the study area, developers will be encouraged to pay the in-lieu fee rather than construct new parking because the relative value of available space for other uses will increase. The city could also use development regulations that limit the ability to build surface parking for good urban design reasons: more efficient use of land, improve aesthetics, reduce heat islands, promote walkability, etc. These regulations could include location and placement of surface parking, setback requirements, and general requirements to minimize lots that are primarily composed of surface parking and a smaller building. An outcome of pursuing such policy may be an even higher participation in the in-lieu fee program and encouragement of alternatives such as *shared and leased parking*. Additionally, the city should actively promote the program during the development review process to encourage participation.
- **Allow funds to pay for parking program improvements** – Amend the policies related to the in-lieu fee program to allow the collected funds to support shared parking and *leased parking* that the city will broker. Funds should also be used to support strategies that reduce parking *demand* in the area. Eligible projects could include valet services, transit, bicycle, and pedestrian amenities or programs that encourage ridesharing, which would reduce the need for on-site parking at businesses and encourage the use of centralized shared parking.
- **Consider geographic expansion in the future** – As the community develops, the city should evaluate the need to expand the in-lieu fee area west of the railroad tracks to support new public demands and maintain proximate walking distances from future shared public parking facilities. If there is a significant amount of commercial development, the city should re-evaluate the need for

expansion. **Figure 19** illustrates the areas where future development may present an opportunity to expand the in-lieu fee program west of the tracks.

- **Evaluate the program annually** – The intent of evaluating the program annually is to monitor participation and make changes to structure and rate. Historically, use of the program has been relatively low. However, in recent years, the usage appears to be increasing. Additionally, the number of spaces purchased through the program varies. Sometimes a developer only pays for a couple of spaces and others pay for over 60 spaces. Therefore, it is important that the following metrics be reviewed annually so that informed decisions can be made regarding the in-lieu fee program. The following metrics should be tracked and evaluated. The parking manager (discussed in the Parking Program Administration section) should develop a database to track these metrics and coordinate with other departments in the city to obtain the necessary information. The results of these metrics should be released to the public and used as a way of educating and informing private property owners and the development community so they understand their options, rights, and abilities to meet their parking needs.
    - **Parking occupancy in and around new developments** – Parking occupancy should be used as the metric that determines when changes to the in-lieu fee program need to occur. The City should consider adding more public parking through *leases* and shared spaces when the parking occupancy threshold within the in-lieu fee boundary reaches 85 percent occupancy.
    - **Type, size, and location of new developments** – Understanding where new development is occurring, the type of developments (residential vs. non-residential), and how large developments are in terms of square footage or number of units can help the City make informed decisions about where the in-lieu fee program should expand. This expansion should primarily occur where developments, such as commercial and office, are generating higher levels of parking demand and provide the opportunity to implement *shared and leased parking*. In the future, if non-residential development starts to expand to the residential areas in the study area, the City should consider expanding the boundary of the in-lieu fee area.
    - **Revenue generated** – Understanding how much revenue is generated by the in-lieu fee program will help inform investment decisions of parking management strategies. If the program is not generating enough revenue to cover parking management strategies (e.g. lease rates for shared spaces), the city should consider discontinuing portions of the *shared parking* program funded by in lieu fees that do not impact participants.
    - **Compare the number of developments participating in the program vs. not participating** – Reviewing how many developments are using in-lieu fees to pay for parking compared to those that don't will indicate whether the program and supporting policies provide enough incentive to encourage participation. As the area becomes more developed, it is anticipated that more developers will opt to participate in the program so that they aren't encumbered by the economic burden of having to provide on-site parking. To help encourage in-lieu fee participation, leased spaces and TDM

improvements should be implemented within a reasonable walking distance (1,320 feet) to the participating developments.

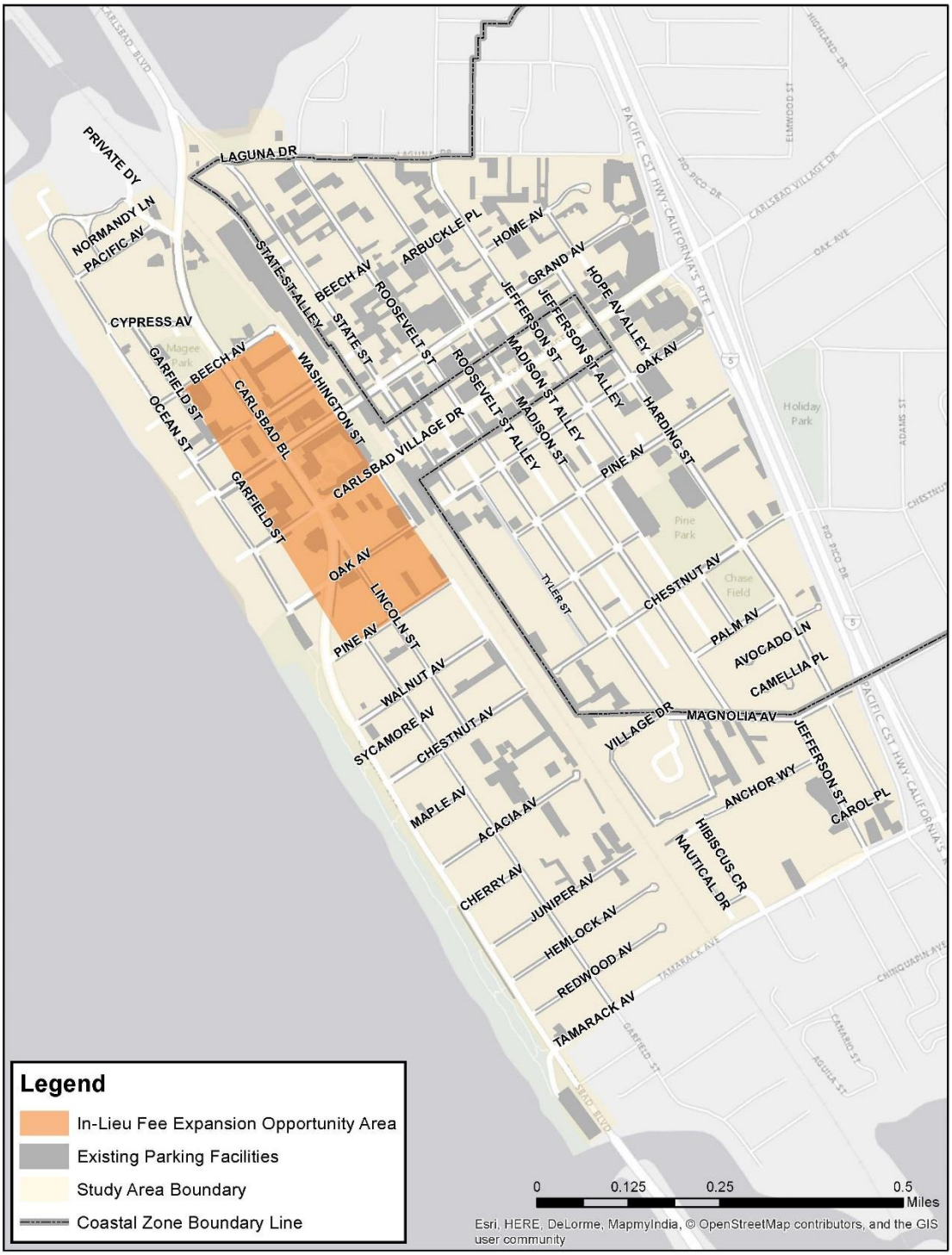
  - **Number of spaces paid for with the in-lieu fee vs. spaces actually provided (by development and annual total) –** Tracking this will allow the city to easily quantify how much parking is being added to the *parking system* (both public and private) in the study area, and the rate at which parking is being paid for through the *in-lieu fee*. This information coupled with parking *occupancy* data (public vs. private) will inform the city whether the public parking supply is efficiently meeting *demands* of participating developments and the community at large.

- **Make the program transparent** – Provide information about how the in-lieu fees are utilized to help promote transparent application of the collected fees. The program website should document current and historic usage of the fee to help the community understand how the program is working. Part of this transparency should stem from information released to the public and business community regarding economic impacts and how they are related to parking availability. It needs to be made clear to the public and businesses that it is not more parking that supports businesses, but access to available parking and increased mobility that will contribute to economic success.
- **Consider revisions to the proposed Master Plan** – The drafting of the Village and Barrio Master Plan should incorporate the recommended changes to the in-lieu fee program.

**Peer City Highlights**

Most of the peer cities reviewed had some form of an in-lieu fee program except the City of Encinitas. The peer cities represent a comparable market for the City of Carlsbad based both on the size of the city or the character of the community. As such, their in-lieu fee rates were reviewed to determine the market rates for the area. See Table 5 in Appendix C – Technical Memorandum #3.

*Figure 19: In-Lieu Fee Program Expansion Area*



## Reduced Parking Requirements

Parking requirements define the amount of on-site parking that various developments must provide. Traditionally, these requirements have been applied to ensure that specific land uses have adequate parking supply to meet *demand*. Although common in many communities, the requirement for each land use to provide a minimum amount of parking could become detrimental to the economic growth and preservation of pedestrian-friendly character in the Village and beach area. The intent of establishing reduced parking requirements is to better align parking requirements with actual parking needs in the community and to transition to a system that utilizes *shared and leased parking* supply. Shared and leased parking in combination with reduced parking requirements for new development would optimize the use of existing parking while still allowing developers new developments to provide necessary parking on-site. A reduced number of spaces required encourages mixed-use, pedestrian-scaled development, and can stimulate economic growth in the area. Given the underutilization of the overall *parking system*, as observed and modeled in *Park+* and previously discussed in the Future Parking Conditions section, a combination of shared and leased parking initiatives, participation in the *in-lieu fee* program, and reduced parking requirements could promote a more efficient use of existing parking facilities. New developments should only add the parking necessary to support demands, as outlined in the following strategy recommendations below.

- **Implement the parking requirements stated in the Draft Village and Barrio Master Plan** – It is recommended that the city implement the currently proposed rates in the Draft Village and Barrio Master Plan. As shown in the Park+ modeling (discussed in the Future Conditions section and detailed in Appendix B – Technical Memorandum #2), current parking requirements have resulted in an unbalanced distribution of parking assets. The Park+ model generated parking rates are representative of land use and observed parking occupancies in the study area. National standards are based on parking *occupancy* case studies from around the country.

  **Table 10** compares the study area's existing rates to the rates in the existing and proposed Master Plans and the Park+ model. With the exception of restaurants, the table shows that the rates in the proposed Master Plan are comparable to those derived from the Park+ model, with the Park+ model being slightly lower.

  Since the proposed parking requirements in the Draft Master Plan are consistent with findings from the Park+ model and similar (with the exception of restaurants) to parking requirements of the peer cities (Table 7), it is recommended that these rates be adopted.

  The use of these reduced parking requirements for future developments should help to reduce the amount of underutilized parking in the study area and move to both right-size the *parking system* and promote *shared and leased parking*, especially as involvement in the city's in lieu program increases. Though the restaurant parking rate in the proposed Master Plan is lower than the Park+ model (requiring 8 spaces per 1,000 square feet versus 13 spaces per 1,000 square feet, respectively), adequate parking supply exists in the study area and the parking management strategies identify opportunities, such as shared and leased parking, to further increase and enhance supply. Strategies also recommend monitoring implementation of parking requirements as well as parking demand and adjustment of parking rates if necessary.

Parking requirements are not intended to be reduced to a level where parking spaces are no longer required for new developments or buildings expansions. Rather, any reductions or changes to parking requirements will be as a result of parking data collected each year and the resulting analysis of demands and utilization in the subject area(s). This annual evaluation of the parking system will allow the parking manager to make informed decisions regarding supply levels, demand, and mode split usage (transit and shuttle, bicycling, walking, etc.) to determine whether parking minimums should be decreased or increased.

*Table 10: Parking Rates*

| CITY | RESIDENTIAL | | | COMMERCIAL | RESTAURANT | OFFICE | HOTEL |
|---|---|---|---|---|---|---|---|
| | SINGLE FAMILY | MULTI-FAMILY | GUEST | | | | |
| **Carlsbad Municipal Code (CMC 21.44)** | 2 spaces/unit | 1.5-2 spaces/unit | 0.3 spaces/unit (up to 10 units); 0.25 spaces/unit (more than 10 units) | 3.3-5 spaces/ 1,000 sf[3] | 10 spaces/1,000 sf if < 4,000 sf; if 4,000 sf or more, 40 spaces plus 20 spaces/1,000 sf in excess of 4,000 sf | 4-5 spaces/ 1,000 sf | 1.2 spaces/ room |
| **CMC 21.45 (Planned Developments)** | Same as CMC 21.44 | Same as CMC 21.44 | Same as CMC 21.44, except guest parking may be permitted on-street | n/a | n/a | n/a | n/a |
| **CMC 21.82 (Beach Area Overlay Zone)** | Same as CMC 21.44 | Same as CMC 21.44 | Same as CMC 21.44 | n/a | n/a | n/a | n/a |
| **Existing Master Plan – inside the Coastal Zone (Chapter 6)** | Same as CMC 21.44 | Same as CMC 21.44 | 0.5 spaces/unit (up to 10 units); 0.25-0.3 spaces/unit (more than 10 units) | 3.3 spaces/1,000 sf | Same as CMC 21.44 | 3.3 spaces/ 1,000 sf | Same as CMC 21.44 |
| **Existing Master Plan – outside the Coastal Zone (Chapter 6)** | Same as CMC 21.44 | 1-2 spaces/unit | None | 3.3 spaces/1,000 sf | 8 spaces/1,000 sf | 2.9 spaces/ 1,000 sf | Same as CMC 21.44 |
| **Proposed Master Plan (Section 6.4, 2016 Draft)** | Same as CMC 21.44 | 1-1.5 spaces/unit | "ND" and "ED" Districts: 0.3 spaces/unit (up to 10 units); 0.25 spaces/unit (more than 10 units) All other districts: None | 2.8 spaces/1,000 sf | 8 spaces/1,000 sf | 2.8 spaces/ 1,000 sf | 1 space/ room |
| **Study Area (Park+ Results)** | 1.5 spaces/ unit | 1.04 spaces/ unit | - | 2.7 spaces/ 1,000 sf | 13 spaces/ 1,000 sf | 2.4 spaces/ 1,000 sf | 0.69 spaces/ room |

- **Monitor implementation and demand** – Annually monitor the new parking *demand* associated with development and adjust parking requirements accordingly. With evolving transportation patterns associated with driving behaviors, travel mode choice, and changing automobile characteristics (rideshare, autonomous and connected vehicles), it will be critical for the city to observe *demands* and adjust the parking requirements based on evolving *occupancy* and community development.
- **Consider further parking rate reductions** – As discussed in greater detail in Technical Memorandum #3, many of the peer communities included in the study currently provide reduced parking requirements in select areas that have adapted parking demand management strategies such as shared and leased parking and fee-in-lieu. In the future, as the area continues to develop, and the impacts of parking management and TDM strategies are realized, consideration for reducing the parking rates should be revisited. The data needed to analyze future changes is discussed in the Parking Program Administration section of this document. Even further into the future, possibly beyond the scope of this Plan, the city should consider implementing parking maximums within the study area. Parking maximums place a cap on how much parking new developments provide and helps to encourage walkability. The city could allow developers to provide more parking than the maximum allowed under the condition that any surplus spaces be made available to the public.

**Peer City Highlights**

In the cities of San Luis Obispo and Dana Point, parking requirements in their downtowns are half of what is required outside of the downtown areas. As a result, businesses can develop in a more walkable and pedestrian-oriented fashion in the downtown areas, contributing to improved economic vitality of the communities.

Dana Point: Municipal Code, Section 9.35.080

San Luis Obispo: Zoning Regulation 17.16.060 Parking Space Requirements

## Residential Parking Program

A residential parking permit program (RPP) allows permit holders (residents or visitors with visitor passes) to park on-street in select residential neighborhoods while restricting those without a permit from parking on-street in the area during select times. Although a permit does not guarantee a permit holder a space, or a space directly in front of their home, this type of program prevents non-residential users from occupying spaces in residential areas. This type of program should be reserved for high-*demand* areas where the occupancies have consistently reached 85 percent and spillover impacts of parking become a nuisance for residents. All efforts should be made to maintain the public nature of public streets, until congestion and parking demand impacts residents' ability to park at their homes.

The implementation parameters of a program need to include measured *occupancy*, resident complaints, and willingness to fund the operation and enforcement of the program through paid residential permits. Based on the observed and projected parking occupancies, the residential areas bordering the Village Neighborhood to the south and southwest could be considered a candidate for further monitoring and evaluation.

Many regulations can be implemented with a RPP. For instance, permits can restrict non-residential users all day, every day. However, it is advised that parking restrictions reflect peak residential demand and be implemented during peak periods in the evenings and overnight. Cities often have distinct regulations in differing residential areas, which requires additional administrative oversight, but helps to cater the restrictions to the specific issues of that neighborhood.

Any new RPP should be supported by data showing spillover trends from non-residential uses, utilization rates above the effective maximum *occupancy*, and an extensive community engagement process to weigh the needs of the greater community with that of the neighborhood residents. Furthermore, establishment of a RPP should be considered after the implementation of other parking management strategies has been exhausted.

The following strategies are recommended for the city.

- **Consider a RPP only if necessary** – Consideration of a RPP may be advisable in select areas due to growing impacts of visitors parking in residential areas, restricting on-street parking access for residents and their guests. However, the program should only be implemented when all other management practices are exhausted and data clearly indicates there remains a serious parking problem within the community. A RPP would preserve on-street parking for residents and their guests, limiting the conflict to find available on-street parking. With regard to coastal access, the RPP is intended to balance the on-street parking demands, while maintaining access for residents and visitors. The program should be considered in neighborhoods that meet the criteria listed below. These criteria should be made publicly available on the city's website.
    - **Pre-permit implementation occupancy levels** – Prior to the implementation of a permit program, the neighborhood streets must exhibit consistent occupancies that are 85 percent of total capacity. If the residential area is already regulated by time limits, or will become regulated by time limits in the future, the use of a permit would allow residents in those areas to park longer than the time limits without being penalized.

  - **Neighborhood support** – Neighborhoods should have petitioned signatures from at least 51 percent of the residents in the neighborhood.
  - **Permit cost and application** – Residents will need to apply for permits, based on permanent address, and are eligible for up to two permits per home and no more than five guest permits per year. Guest permits should be good for up to two weeks. Applicants must pay a fee per year for each permit. The cost for the fee should be set by the city and should cover the cost of administering the program.
- **Conduct public outreach prior to implementation** – When a neighborhood meets the criteria for inclusion in a permit program, the city should conduct outreach to the impacted residents and adjacent businesses to communicate the parameters of the program, as well as potential impacts.
- **Evaluate the application of residential permit time limits** – In areas adjacent to commercial districts, the city should implement time limit restrictions on parking during daytime hours to allow non-residential users to park when residents are not typically home. In the evening, nighttime and overnight restrictions should prohibit anyone without a residential permit from parking on the streets. Residents will be allowed to park in on-street spaces overnight, as well as guests with an appropriate visitor permit.
- **Provide consistent enforcement in residential areas** – The success of the residential program will require proactive enforcement. This could include responding to neighborhood complaints in a timely manner, as well as providing enforcement of restricted areas. The enforcement practices can be sporadic (a few times a week at different times and different areas), but must be proactive instead of reactive so that people are compliant with the program. Lack of enforcement will allow people to potentially disregard the program, thus rendering the program ineffective.
- **Provide ongoing evaluation of the program** – Evaluation should include data collection related to *occupancy* of parking spaces and impacts to adjacent residents and businesses. Impact evaluation should include citation issuance and payment, as well as registered complaints from neighbors, businesses, and/or patrons.
- **Evaluate and update the Carlsbad Municipal Code and other standards** – City codes, including any master plan for the Village and Barrio, should be revised as necessary when and if a residential parking program is implemented.

**Peer City Highlights**

The City of Santa Monica's program requires each neighborhood participating in the program to adhere to the same regulations. The City of Santa Monica's preferential parking permit program was established to accommodate the needs of the residents and their guests by allowing those with a valid permit to be exempt from the parking restrictions on the street within a two-block radius of their registered address. Only residents living on a block that has preferential parking restrictions may apply for the permit.

## Paid Parking

When parking *demands* in an area become so high that parking facilities (on- and off-street) operate above the system's *effective capacity* (85 percent *occupancy*), paid parking becomes a highly effective way to influence behavior, redistribute parking demands, and promote economic activity through turnover of parking spaces. It is critical to note that paid parking should not be implemented with the intent to increase revenue. Implementation of paid parking must be driven by the parking demands experienced in the study area and the need to create access to businesses.

The fee for parking encourages people to choose the priced transaction, park further away in a lower priced facility, or use an alternative transportation option to reach their destination, thus creating more available spaces in high-demand areas and facilitating access to businesses. The provision of options to park in other locations or use alternative transportation helps to redistribute parking demand throughout the area.

Additionally, it is also important to understand the various components tied to paid parking. It is important to understand that while parking in the study area is currently largely free, there is still a cost that is passed onto people unbeknownst to them. It requires money to construct, designate, regulate, and manage parking, whether it is on the street, in a lot, or a garage. These costs are absorbed by private property owners, store tenants, facility managers, and the city. As a result, these costs are usually passed on to the customers through marked up prices on goods and services but the cost to park is subsidized. By managing parking appropriately and providing a cost to it, the consumer is able to make informed decisions on how they spend their money.

The following strategies are recommended for the city.

- **Determine the threshold for implementing paid parking** – Based on the findings of the parking supply and demand analysis (see Appendix B -Technical Memorandum #2 for detailed information), consider implementing paid parking in the future as the area continues to develop. The city should continue to monitor parking demands in the short term and develop plans for evaluating technology, pilot projects, and implementation as parking demands reach thresholds approaching the *effective capacity* of the public system (consistently 85 percent occupied). To prepare for the potential implementation of paid parking, the city should pass an ordinance that establishes a framework for paid parking, including occupancy thresholds, rate structures, and criteria for future monitoring.
- **Define locations to implement paid parking** – Annually analyze collected data to identify locations within the study area that are reaching the *effective capacity* faster than other locations in the study area. Occupancies in the Village and beach areas north of Oak will likely reach occupancies of 85 percent before the Barrio. From a cost perspective, it would be beneficial to implement meters in a smaller area rather than study area-wide. Over time, the paid *parking system* can expand as parking demands dictate. It may also be beneficial to implement a Residential Parking Program at the same time paid parking is implemented to mitigate impacts of spillover into areas surrounding the paid parking area. Off-street and on-street public parking areas should be evaluated in conjunction with each other and priced to encourage the desired parking behaviors (i.e., short-term parkers in on-street spaces and long-term parkers in off-street parking).

- **Define technology to manage the system** – Identify technology that works to accomplish the goals of the parking program. Technology to be considered include:
    - **Smart Meters** – Evaluate available smart meter technology to determine the most effective use of resources within the area (multi-space meters, single-space meters, and the various vendors that provide these meter types). The city should also consider how well the available smart meter technology integrates with existing and future software and technology systems, payment options available for users, ease of use (e.g., how far users must walk, how complicated the machine interface is, etc.), cost, ability to collect and retrieve backend system data (transaction information), and additional technology enhancements (pay-by-cell, solar options, etc.). Additionally, the use of smart meters helps to support enforcement practices by quickly indicating to enforcement personnel that a meter is expired, unpaid, broken, etc. If enforcement officers are equipped with handheld devices that communicate in real-time with the smart meters, they can be informed immediately of these issues which streamlines enforcement and operation practices.
    - **Pay-on-foot stations** – In the off-street surface parking environment, pay-on-foot stations work well because they require minimal infrastructure and can be configured to accept pay-by-space, pay-and-display, or pay-by-license plate transactions.
    - **Gated access** – In the off-street structured parking setting, gate access with either pay-in-lane or pay-on-foot configurations will help manage access and payments, while minimizing the enforcement needed in the structure.
    - **Smartphone applications and parking space readers** – Applications can be used to illustrate the location of parking (including disabled), and the availability of parking within the system and allows users to reserve or pay for the parking transaction. This remote payment method provides greater flexibility to the customer. However, the accuracy of the system will require real-time space detection capability or a data aggregation system that can be used to define historic trends and predict parking availability. This does not require a paid *parking system* to implement, but the presence of paid parking will provide a better set of data (transactions and durational information) to inform a prediction system.

Before study-area wide implementation, the city should consider a pilot project to test these technologies in small areas, obtain user feedback, and make an informed decision on what type of technology is appropriate for the community.

- **Establish a Parking Benefit District where paid parking is implemented** – As the community continues to develop, evaluate possible implementation of Parking Benefit Districts in high-*demand* areas and where paid parking has been implemented. The intent is to create synergy between the community and *parking system*, allowing the city to collect revenue from the parking system and reinvest that back into the community in a transparent and collaborative manner. Parking Benefit Districts have been used effectively in California to support appropriate use of the parking system

through paid parking and community enhancements through the application of fund revenues to implement aesthetic and transportation improvements in the community.

- **Evaluate the parking system regularly** – Annual evaluation of the parking system (on-street and off-street) is recommended to review parking behaviors and identify whether the *occupancy* has reached a point where it is necessary to implement paid parking. Parking occupancy and *duration* metrics should be used to determine the need for paid parking. The threshold occupancy for indicating the implementation point is when the system (on-street and off-street) reaches a peak occupancy of 85 percent for average periods. Thresholds for duration depend on adjacent land uses and prevailing peak occupancies. **Table 3** in the Existing Parking Behaviors section details these thresholds.
- **Evaluate and update the Carlsbad Municipal Code and other standards** – City codes, including any master plan for the Village and Barrio, should be revised as necessary when and if paid parking is implemented.

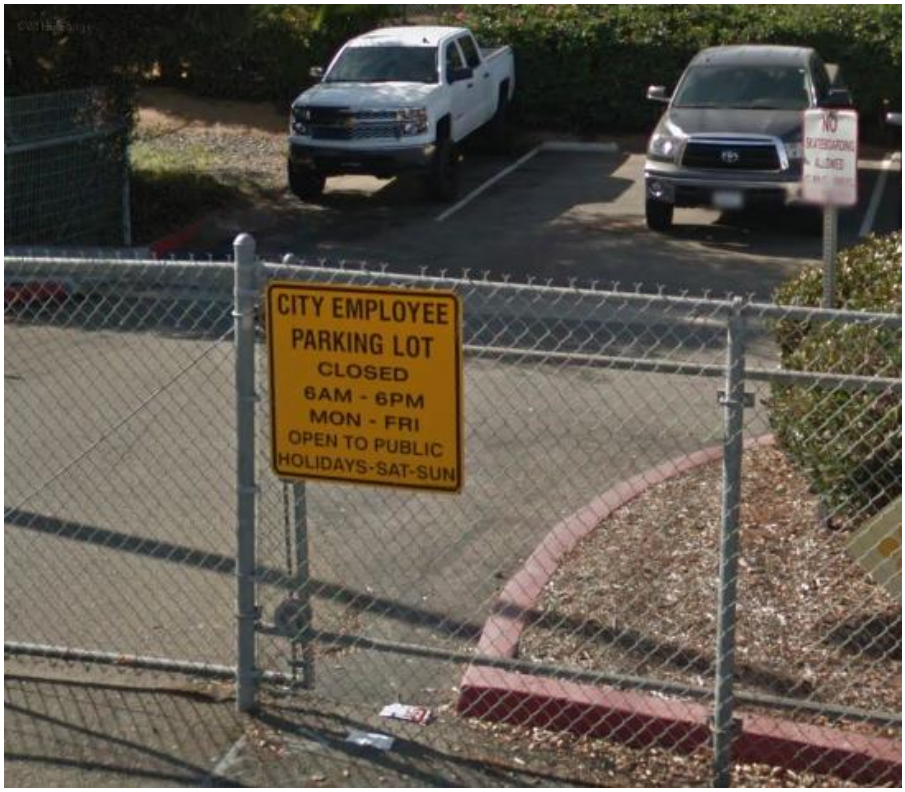
**Peer City Highlights**

Just like the City of Carlsbad, the City of Dana Point currently does not have paid parking. However, the City of Dana Point is prepared from a regulatory standpoint for when they do need to implement paid parking. An ordinance was passed in the City of Dana Point that outlines the specific criteria for a paid parking program so that if/when it does implement paid parking, the code supports the change. The City of Dana Point established a parking district where paid parking is to be implemented, and set the maximum rate to not exceed $1 an hour. The parking system will be reviewed annually, and if the parking occupancies exceed 80 percent the City of Dana Point can increase the rate by $0.25 an hour but not to exceed the $1 an hour limit.

## Parking Wayfinding

Parking wayfinding is extremely helpful in directing people to desired parking locations. Effective means of conducting wayfinding is through stationary signage, dynamic signage (electronic signs that change messages to indicate how many spaces are open in a facility), digital maps posted on websites, and smartphone applications. A few years ago, the city implemented themed wayfinding signage throughout the study area to direct people to public parking facilities, and it has been received successfully by the community. The following are recommendations to expand upon the success of the current wayfinding to allow people to find parking easier and faster and improve traffic congestion associated with searching for parking.

- **Additional signage for lots where the City leases spaces** – As more off-street facilities are made available to the public through *shared parking* agreements or leased spaces by the city (for shared parking or valet), appropriate signage is needed to let people know that they are allowed to park in these locations. If there are times of the day when the parking is not open to the public, messaging should be included on the signage to relay this information. For instance, an office may restrict parking to its employees and visitors during the day but will make its spaces publicly available in the evening. Any new signs should be similarly themed and consistent with the existing wayfinding signage, even if the new public parking facilities is created through shared and leased parking. Similarly, signage for valet should be included and themed similarly to minimize confusion on where to park in the study area.




*Example of city lot that is restricted but has times when it is open to the public. Themed signage should be developed for lots such as this.*

- **Smartphone applications** – The city should use a smartphone application that provides a map of the study area and identifies both on-street and public off-street parking. The city could work with private parking managers to include their parking on the map as well. The map should also provide information on parking regulations (time limits, enforcement hours, etc.). The intent is to enable people to make informed decisions on where to park before they even enter the study area. This knowledge could help to distribute parking *demands* since people will know that they are allowed to park and may choose to park a block further than their destination since they know it would be available rather than try to compete for parking directly adjacent to their destination. Having this information could alleviate traffic congestion and greenhouse gas emissions created by circling for parking. Eventually, the city should provide this data to online mapping platforms (e.g., Google Maps) to reach an even wider audience of people who are visiting the City of Carlsbad.
    - **Real-time parking information** – Real-time data can provide people with necessary information to know whether the parking near their destination is full or available. Although obtaining real-time *occupancy* information is reliant on technology investments (discussed in the Technology Needs and Management section below), it is effective at distributing demands and encouraging people to park in lower *demand* areas because they can see where parking is available.

- **Post parking map on website** – Parking location information and real-time occupancy information (if available) should also be posted to the city's website. Although most people have smartphones, not everyone does. Therefore, posting the same information on the website is another way of helping people plan their trip and reduce the time it takes to find available parking near destinations. Businesses should be educated to direct their patrons and employees to this website to support its use and help their patrons make better decisions about how and where to park.
- **Evaluate the Carlsbad Municipal Code and proposed Master Plan for possible changes to support additional wayfinding signs** – The city should review applicable standards to ensure wayfinding signs, particularly those that direct motorists to public parking on private property, are supported.

## Curb Cafes

In areas with on-street parking supply, curb cafes are tools to enhance vibrancy of the community and to better utilize city assets. Curb cafes were introduced in parts of the Village through a pilot program, which expired in March 2016. The program required the property owner to lease the space from the city for $1,200 per space, per year. The patios are required to be moveable in case of street-related construction. Since the end of the pilot program, no additional permits have been issued.

*Curb cafe in the Village*

Curb cafes can be very positive for both businesses and the city. Assuming the city permits curb cafes again, when parking reaches the effective maximum occupancy (85 percent occupancy), new curb cafes should be restricted. For instance, the on-street parking along State Street between Grand Avenue and Carlsbad Village Drive exceeds 85 percent occupancy. Therefore, this block should be restricted from further allowance of curb cafes, unless a proper parking mitigation plan can be determined to provide the necessary parking that would be lost due to the curb café. If additional *TDM* strategies or valet locations are implemented on the block that would help balance parking *demands*, more curb cafes could be allowed since parking demands would be mitigated through TDM or valet parking. (Note: It is acknowledged that two additional and unbuilt curb cafés along this block were processed prior to the expiration of the pilot program and before parking study recommendations were developed. Therefore, these curb cafés may potentially proceed without the recommended mitigation plan.)

## Transportation Demand Management

Transportation Demand Management (*TDM*) strategies consist of programs, services, and policies designed to encourage transportation alternatives. Implementation of TDM measures helps mitigate traffic impacts and parking *demand* associated with single occupancy vehicle (SOV) trips. TDM measures vary and can include bicycle- and pedestrian-facility improvements; promotion of vanpool, carpool, and transit; provision of other shared mobility services like on-demand rideshare and shuttle services; and commute incentive programs to encourage employees to use transit, bike, or walk to work.

TDM complements parking management strategies and is a cost-effective approach to improve mobility within the area. The implementation of TDM also helps to support sustainability goals and greenhouse gas reductions identified in the city's Climate Action Plan (CAP). The city is currently developing a TDM ordinance and program, which will advance the goals of the Climate Action Plan, the Mobility Element of the General Plan, and the Coastal Mobility Readiness Plan. The ordinance will identify community-specific TDM strategies that reduce vehicle trips. As such, the parking management program and TDM program support each other and should be coordinated to advance program goals. The 2035 CAP goals include a:

- 10 percent overall increase in alternative mode share by workers in the City of Carlsbad
- 40 percent alternative mode share by workers in new non-residential buildings
- 30 percent alternative mode share by workers in existing non-residential buildings[13]

In addition to mitigation of parking demand, coordination between the parking program and TDM can help promote multimodal transportation, reduce greenhouse gas emissions, and improve access within the community.

### Evaluation of TDM Impacts in the Study Area

During this study, the impact of TDM strategies on parking demand was considered. The goal of TDM strategies are to reduce the number of SOV trips. When SOV trips are reduced, parking demands are also reduced. To reduce SOV trips, the City supports the Park Once concept where parking is centralized, allowing people to park in a single location and walk, bike, or take transit to other locations. The following TDM strategies were identified by the City for potential inclusion in the TDM ordinance and future investments. The potential parking demand reductions associated with each strategy are compiled from the Victoria Transport Policy Institute, which is an industry-recognized resource for parking and TDM planning.

- **Walking and Cycling** – Improve walking and cycling conditions in the city to support a Park Once environment that makes it easier for people to travel throughout and between neighborhoods by bicycle, on foot, or in a wheelchair. For example, increase and improve bicycle infrastructure including multiuse paths and adequate secure public bike parking. (Estimated parking *demand* reduction 10 percent [14].) These improvements could be considered in the area where there are

[13] City of Carlsbad Climate Action Plan, Section 4.8, available at http://www.carlsbadca.gov/services/depts/pw/environment/cap.asp

[14] Victoria Transport Policy Institute, http://www.vtpi.org

"alternative streets". Should the city decide to improve these streets, they should be improved in a manner that also considers bicycle and pedestrian connectivity with the provision of sidewalks, bike lanes, appropriate markings, and lighting where appropriate.

- **Mobility Management** – Implement operational improvements that encourage efficient travel to destinations. For example, accommodate ride-sharing, provide shuttle or circular services that connect popular destinations in the study area, and improve transit options frequency. (Estimated parking demand reduction 20percent [13].)
- **Financial Incentives/Disincentives** – Develop programs that encourage or discourage certain behaviors by making transportation options more or less expensive. For example, offer reduced cost transit, subsidies for vanpooling, or a guaranteed ride home program. (Estimated parking demand reduction 20 percent [13].)
- **Parking Regulations** – Implement parking regulations that promote efficient use of existing parking resources. For example, eliminate free parking and utilize demand-based pricing. (Estimated parking demand reduction 20 percent [13].)
- **User Information and Marketing** – Establish user information and marketing platforms such as mobile apps, maps, websites, etc. to locate available parking spaces in real time, so users know where to go to park thereby reducing "hunting" for spaces. This promotes sustainability through reduced carbon emissions and increases customer convenience. (Estimated parking demand reduction 10 percent [13].)
- **Smart Growth Design** – Develop parking standards that encourage higher density, mixed-use development. (Estimated parking demand reduction 20 percent [13].)
- **Improved Enforcement** – Enforcement ensures that parking regulations are followed which allows the system to operate more efficiently and provides equitable availability of parking resources for all *parking system* users. (Estimated parking demand reduction 10 percent [13].)

## TDM Strategies that Support the Parking Program

Currently, most parking in the study area is free and underutilized. Under these conditions, people are less motivated to bike, walk, or take transit as an alternative to driving. To positively influence travel choices, comprehensive *TDM* strategies to consider include:

- **Develop and adopt the TDM Ordinance** – Adopt a TDM ordinance and establish a formal TDM program that encourages transportation alternatives to the private automobile. The TDM program should align with the parking program and coordinate with the objectives and regulations of the proposed Village and Barrio Master Plan. For example, TDM strategies that incentivize employees of businesses in the Village to use transportation alternatives can help reduce parking *demand*.
- **TDM outreach and encouragement** – Outreach, education, and marketing of the TDM program is critical. Promoting information and incentives will increase awareness of TDM and encourage people to make informed decisions about how they travel. Information on the TDM program should be posted on the City's website and provide clear instructions on how to participate in or

use various TDM programs and services. The website should provide all information in a single location so that people don't have to search to find information on a specific TDM strategy.

In conjunction with the messaging on the website, the City should continue to lead (or encourage other groups and organizations to lead) promotional events such as a bike-to-work day or rideshare week. An additional benefit of these promotional events is that they foster relationships between the City and area businesses. The City continues to find new ways to partner with SANDAG to promote commuter programs and services such as rideshare to residents and employees, and should leverage this partnership to improve transportation conditions in the community.

- **Ongoing coordination with the City department responsible for managing the TDM program** – Collaboration between the parking program and the TDM program is critical. As both programs develop, regular meetings should be established to discuss strategies and make mutual decisions where both parking and TDM are impacted.
- **Provide ongoing evaluation of the program** – Collect data related to primary travel mode and parking *occupancy*. Mode share data can be collected via employee surveys. The City should also encourage employers to join the employer services program of iCommute, the region's TDM program, which conducts surveys to assess employee commuting travel behavior.
- **Expand wayfinding signage** – Current wayfinding signage in the study area directs people to off-street public parking facilities as well as pedestrians and bicyclists to a variety of destinations. The signage should be expanded to incorporate transit stops, shuttle stops, rideshare stop locations, and popular bicycle routes. The signage should be developed in the existing theme, which has been well received by the community.
- **Consider providing a circulator-type transit service within the Barrio, Village, and beach areas** – A circulator service, such as a trolley, can reduce parking *demand* by allowing residents to travel from their homes to the Village, Village Station, Barrio, and beach areas without driving. Similarly, it would allow visitors to travel through the area without moving their vehicles, promoting Park Once. The city is currently conducting a Trolley Feasibility Study to help stakeholders and constituents understand the recommended resources for potentially establishing future trolley services in the city. The results of the feasibility study will help the city determine whether trolley services are a viable option in the study area.
- **Identify and dedicate passenger pick-up/drop-off locations throughout the study area** – Several locations throughout the study area could serve as drop-off and pick-up locations for both trolley services and on-demand

*Example of potential passenger pick-up/drop-off location*

rideshare services like Lyft or Uber. On the periphery of the study area, these locations should be underutilized parking facilities.

The city should work with private property owners to allow public use of their private lots. For the use of these periphery lots to be effective, the lots will need to be adequately signed and well maintained to provide a safe and secure environment for riders. These lots will only serve the efficient use of the *parking system* with consistent access to shuttles and rideshare services.

The city should consider leasing railroad right of way between Oak Avenue and Tamarack Avenue on both the east and west sides to provide additional public parking (as discussed in the *Shared and Leased Parking* section of this document). This can provide another option where people can catch a trolley or rideshare to travel into the higher *demand* locations.

Trolley stops and dedicated rideshare curb space should be placed in the high-demand areas to facilitate shuttle access as an alternative to driving to these periphery parking areas. These areas, as well as the streets and sidewalks connected to these areas, should be well lit to provide safety and encourage use. An example of a high-demand area is the area around the Village Faire and beach access points. If people can park in the underutilized peripheral parking facilities and take a shuttle or rideshare to these destinations, then parking demand in these destination areas should be reduced. Education and business owner support will be critical for successful implementation of this strategy.

- **Provide employer based TDM programs** – The city should encourage employer participation in the *TDM* program by sharing information about incentives such as pre-tax commuter benefits, subsidized transit passes, and preferential parking for carpool and vanpool participants. The intent of these incentive programs is to not only give employees options on how they travel to work but also to incentivize the choice to not drive a personal vehicle by offering some type of monetary compensation. The personal vehicle remains the most convenient travel choice in many situations. However, if incentives are provided that make other options enticing, people could opt to change their behavior, which will lead to decreases in parking demands. The city will continue to partner with the SANDAG iCommute program and leverage regional TDM services for employers and employees.
- **Build out a protected bicycle network with amenities** – Safe bicycle facilities and bicycle amenities, such as designated bike lanes, secure bike parking, repair stations, and protected cycle tracks throughout the study area encourage biking as a convenient alternative and can help reduce parking demand. Protected cycle tracks and designated bike lanes through the Village and Barrio areas could encourage residents to bicycle between destinations while running errands. This network is intended to increase biking comfort for short and medium trips within and between the Barrio and Village. Cycle tracks could connect to existing bike lanes to create a seamless bicycle network that attracts a variety of users. Additionally, provision of bicycle parking at multiple destinations throughout the study area further encourages people to bike more because they know they have a safe, secure place to leave their bike while visiting the area. Bicycle parking requirements for new developments are being addressed in the TDM ordinance.

*Buffered bike lane along Carlsbad Boulevard*

- **Build out an enhanced pedestrian network** – Enhance pedestrian network through north-south and east-west streets that feature wide, tree-covered sidewalks, curb extensions and wide curb ramps, safe crosswalks with rectangular rapid flash beacon (RRFB) indicators where needed, and expansion of the existing pedestrian wayfinding signage. This network is intended to increase walking comfort for short trips within and between the Barrio and Village, thus reducing parking *demand*. This network enhancement provides excellent opportunities for persons with disabilities to get around the area as well. In addition, should the city decide to eliminate "alternative street" designations, these streets should be improved to accommodate pedestrian connectivity when applicable.
- **Promote the use of transit through transit-focused infrastructure upgrades** – Include enhanced bus stops (bench, shelter, trash can, lighting, route and system information), bus stop curb extensions (to create room for increased amenities and speed up service), next bus arrival digital displays, and bus priority treatments (bus-only lanes and queue jumps).

# Parking Program Administration

To help effectively manage the *parking system*, the city should consolidate the parking program under a single department responsible for all parking management decisions. Under a consolidated department, the program should be led by a manager with assistance from support staff. The department director would have complete authority and responsibility for the management of all parking-related program decisions (e.g., off-street parking facilities, on-street parking, residential parking programs, program financial performance, system planning, and enforcement). Typical locations where the program could be housed include public works, transportation, economic development, or planning departments.

## Parking Program Structure

The Parking Management Plan is intended as a guide for the city and Parking Manager, but is developed to be adaptable and flexible to allow the parking manager to make decisions in the future based on data and realities experienced in the community at that time. The program will likely take a few years to form. At the start of the program, a manager should be identified as the leader who can coordinate the early actions required to establish the parking program (policies, enforcement, shared and leased parking, outreach and education, curb lane management, data collection and analysis, etc.). Over time as the parking program grows, additional staff may be required to support this initiative. The following sections provide an overview of some of the key staffing roles and responsibilities associated with the parking program.

### *Program Manager*

The city should hire a parking manager responsible for providing management oversight for parking policies, programs and operations. This includes:

- **On-Street** – Coordinate annual data collection and analysis to evaluate program success and inform policy decisions that improve parking. Oversee time limits, enforcement, and the *curb lane management* program.
- **Off-Street** – Analyze data in all off-street facilities, both publicly and privately owned, to identify opportunities for improving and balancing the parking.
- **Shared Parking and Leased Parking** – Develop and implement a proactive shared parking program. Identify opportunities for shared parking or leased parking in high demand areas and broker shared parking arrangements or lease agreements. Review *shared and leased parking* agreements annually in conjunction with *occupancy* data to determine if shared parking is working effectively.
- **Communications and Marketing –** There is an opportunity to share the marketing and communication responsibilities with the *TDM* program so that both programs benefit from streamlined management of messaging. This also inherently creates consistency in messaging between the programs, which is critical as they intricately support one another.
- **Residential Parking Program** (RPP)– If an RPP is established in the future, review participation in the RPP annually in conjunction with annual occupancy data to determine whether the program is performing adequately or whether changes need to be made. Metrics to use as indicators for whether the program is effective are:

In the short-term, the parking manager will help with building the parking program. This will include enacting the policies and programs identified as early actions in this draft Parking Management Plan; determining the best method for administering parking enforcement; determining immediate contractor and equipment/technology needs; and conducting outreach and education.

After the program is more established, the parking manager will need to focus more on program maintenance helping to ensure that the system is self-sustaining and financially accountable. The longer-term role of the parking manager will include evaluating program management, helping to implement new parking assets and policy, and strengthening the connection between mobility and the parking program.

## Ongoing Data Collection and Analysis

Collection of parking data allows the city to make informed decisions. Over time, the city will accumulate historical data so that trends can be realized. As changes occur in the study area (e.g., more development, implementation of parking strategies or *TDM* strategies), the city can be prepared to predict changes and proactively manage the *parking system*. Data collection can be shared with the TDM program so that the analyses performed are consistent between the parking and TDM programs. Additionally, it would reduce duplicative processes between the programs since both programs will rely on similar data to inform management decisions. The city can conduct the data collection and analysis in-house or contract staff to conduct parking data collection efforts twice annually, including off-peak season (spring or fall) and on-peak season (summer). These collection periods should be consistent year over year to better define changes in the program and community. For consistency purposes, the data should be collected during the same time periods conducted for this study.

*Data Collection Methodology*

The city should oversee data collection twice a year during off-peak season and on-peak season. Use of technology, such as License Plate Recognition (LPR) technology, enables faster and easier data collection and analysis.

- **Times of day to collect –** Data should be collected in the morning, afternoon, evening, and late night times of day to capture peak periods and trends throughout the day.
    - Morning timeframe is defined as 7 a.m. to 11 a.m.
    - Afternoon timeframe is defined as 11 a.m. to 4 p.m.
    - Evening timeframe is defined as 4 p.m. to 7 p.m.
    - Late night timeframe is defined as 7 p.m. to 11 p.m.

Each parking facility (on-street and off-street) should be counted at least one time during each timeframe.

- **Parking facilities to collect** – All parking facilities should be collected at least once during each timeframe. Parking facilities include:
    - On-street parking
    - Off-street parking (public and private)
        - *Shared parking* facilities
        - Leased parking facilities
    - Residential areas
- **Data to collect - Table 11** provides a list of ideal data to collect bi-annually for each parking facility. From the data that is collected, several analyses can be performed to determine how the *parking system* is functioning and to identify areas where changes may need to be implemented.

*Table 11: Data to be Collected Annually*

| DATA TO BE COLLECTED | WHAT IT CAN TELL US | HOW IT IS COLLECTED |
|---|---|---|
| Parking Inventory<br>• Type of space (on-street, off-street, public, private)<br>• Regulations (time limits, enforcement hours)<br>• Location | Provides the baseline for analysis and allows the city to track changes to the *parking system* over time and the impacts of those changes (e.g., removal/addition of parking, regulatory changes). | Bi-annual system field review conducted manually or using GPS-enabled technology that can geolocate each space or block face and record relevant data (e.g., number and type of space and regulator information). |
| *Parking Occupancy* | Indicates how well the system is being used and when parking strategies need to be implemented or adjusted. Time limit policies can be adjusted to either encourage or discourage use.<br>Parking Management Strategy Data will inform:<br>• Time limits<br>• Shared, leased, and off-site parking<br>• Parking requirements<br>• Residential parking program<br>• TDM effectiveness<br>• Paid parking<br>• Trolley or shuttle circulator<br>• Parking benefit district<br>Areas with higher occupancies will likely have more users, more turnover, a greater variety of time limits or other regulations, and more violations. Parking management | Bi-annual vehicle counts performed manually or with the use of *LPR* technology (which is recommended for enforcement practices). Data for on-street and off-street facilities within the study area should be collected.<br><br>Occupancy data should be collected during the morning time frame, afternoon timeframe, evening timeframe, and late night timeframe as defined previously. |

| DATA TO BE COLLECTED | WHAT IT CAN TELL US | HOW IT IS COLLECTED |
|---|---|---|
| | decisions could include more *Parking Ambassadors* assigned to these areas as appropriate to enforce the higher degree of complex parking regulations, adjustments to time limits (reductions to encourage more turnover or implement time limits in new areas). | |
| *Parking Duration* | Indicates how long people are staying in given locations. Pricing and timing policies can be adjusted based on the surrounding uses and turnover rate.<br>Parking Management Strategy Data will inform:<br>• Time limits<br>• Paid parking | Bi-annual vehicle counts performed manually or with the use of *LPR* technology (which is recommended for enforcement practices). Data for on-street facilities within the study area should be collected.<br>To allow for decisions to be made regarding time limits, durational data should be collected hourly. |
| Number of Citations | Indicates how many citations are issued over a given period of time. An analysis of this information can show whether citations are increasing and may lead to further analysis to figure out why that is happening and if an adjustment in the parking strategies and policies is needed.<br>Parking Management Strategy Data will inform:<br>• Residential parking program<br>• Time limit restrictions<br>• Paid parking<br>• Shared and leased parking | *Parking Ambassadors* will collect citation information. A combination of *LPR* and citation data management technology is required. Refer to the Technology Needs and Management section for further information. |

| DATA TO BE COLLECTED | WHAT IT CAN TELL US | HOW IT IS COLLECTED |
|---|---|---|
| Location of Citations | This metric identifies whether violations are occurring in isolated areas, and as such if there is a specific parking problem in an area that must be addressed.<br>Parking Management Strategy Data will inform:<br>• Residential parking program<br>• Time limit restrictions<br>• Paid parking<br>• Shared and leased parking | *Parking Ambassadors* will collect citation information. A combination of *LPR* and citation data management technology is required. Refer to the Technology Needs and Management section for further information. |
| Type of Citations | This metric indicates whether a specific type of violation is occurring and would provide insight as to what parking strategy would be appropriate to implement.<br>Parking Management Strategy Data will inform:<br>• Residential parking program<br>• Time limit restrictions<br>• Paid parking<br>• Shared and leased parking | Parking ambassadors will collect citation information. A combination of LPR and citation data management technology is required. Refer to the Technology Needs and Management section below for further information. |

** While it is recommended that the city work to collect data for all parking facilities serving the area in order to have a complete view of parking behaviors of the areas customers, residents and employees, only those private properties that do not expressly decline participation should be included.*

## Technology Needs and Management

Technology platforms provide data for the continual management and evolution of the program, and support policy decisions. The following section highlights the technology that can support the previous strategies at the time that his plan was written.

### *Program Administration*

The city should acquire a management platform that can store data related to *LPR*, citations, *occupancy*, *duration*, etc. This could either be a software that the city purchases and administers or a third party contracted to house and manage the city's parking data. The latter is preferable since the third party will be able to quickly synthesize and present the data in a format that the city can then use. For instance, companies can take data that cities or parking managers collect (from LPR technology, gate control equipment, transaction data from meters or pay-on-foot stations) and process that data to present meaningful occupancy, revenue, and duration statistics. As a requirement in the solicitation for proposals, the city could also request that the management software integrate with existing city software, including city GIS and management platforms, during the solicitation for the software.

### *Enforcement*

Investment in enforcement technology should be a considered as the city initiates the parking program. This includes technology used to help identify parking violations and issue citations, and technology that helps to store and manage the citation data.

- **Technology for in-field enforcement** – The city should consider the purchase of mobile vehicle mounted *LPR* to pair with their handheld ticketing devices to use in day-to-day operations. This equipment will improve the staff's efficiency and allow for better communication with back-end parking management systems that manage permit and citation data. This equipment, if configured correctly, can also be used for *occupancy* and *duration* data collection annually, allowing the city to do more to manage their system without having to invest in more technology. Companies can provide LPR equipment that links to citation management and data management software that can be accessed by the city to view parking and citation data.
- **Technology for management of citations** – The city should acquire an online parking citation management database for collection, management, and operational improvements. The city should require that the citation management system communicate with the overall program management platform.

*Wayfinding and Parking Availability*

The following describe technology options for enhancing wayfinding in the study area.

- **Real-time parking availability** – Real-time parking availability is useful to help direct people to available parking spaces as they enter the study area. This reduces the amount of time it takes for people to find parking, thus reducing traffic congestion and greenhouse gas emissions. To accomplish this, real-time data should be made available in a smartphone application so that people can access the information from their smartphone devices easily. The major obstacle with real-time data is how to get it without spending a fortune. Technology options for obtaining real-time data are presented below.
  - **Sensors** – Sensors can detect vehicles in defined parking spaces and relay information to a cloud-based data management program, which can be accessed by the city, and which then relays real-time parking information to websites and a smartphone application. Sensors come in many forms, such as pucks which are installed in the ground, and pole-mounted cameras which can be mounted to light poles. Companies offer both in-ground and pole-mounted sensors with cloud database management capabilities.
    - In-ground sensors – These sensors are placed in the parking space, but it is not necessary to place a sensor in each parking space. Sensors can be placed in every other space and positioned so that they collect data for two spaces per sensor. In-ground sensors are effective for providing real-time data; however, they are expensive (both capital and ongoing costs) and the inaccuracies with data make this option less cost-effective compared to other technology types that can achieve relatively the same level of accuracy for less money.
    - Pole-mounted sensors – These sensors perform similar functions as the in-ground sensors, but are pole-mounted and therefore able to detect vehicles in larger areas. Depending on the sensor size, they can detect 16 to over 300 parking spaces. Pole-mounted sensors cover large areas, thus capturing more spaces with fewer sensors. There are some limitations with coverage if the area has trees or other obstructions.
  - **LPR and data management software** – If the city chooses to purchase mobile vehicle mounted *LPR* technology, then the data used to determine whether vehicles are parking legally or not can also be used to provide *occupancy* information. LPR technology works by reading individual license plates. With each circulation route a *Parking Ambassador* runs, the reads can be used to determine where a vehicle is parked (based on GPS data) and how long it has parked (based on license plate number, GPS data, and time stamp). If the city were also to invest in data management software, that software could be used to provide real-time parking data to the city. The city would have to then have a means of communicating the data to their website or smartphone application. Many

smartphone app vendors can extract this data from the management system to inform their application system.

- **Google** – Over the next few years, Google is planning to roll-out parking information in cities across the United States in its Google Maps platform. This parking information will be related to how easy parking is to find near a destination. Although the city will have no control or access over this application, it should be aware that this information will be available on the Google Map interface, which most people already use to find destinations and directions. The city should embrace this approach, provide aggregated and anonymous data to the Google Maps platform, and use it to the best of their ability when it becomes available in the city.
- **Smartphone Applications** – The city can partner with smartphone application developers to display the real-time parking information in a mobile format for customer's ease of use. The city could also partner with the Carlsbad Village Association to develop a unique mobile application to provide business and parking information.

- **Paid parking** – Although paid parking is not recommended at this time, the city may consider it in the future to help manage parking *demands*. Parking revenue control technology is changing rapidly. What is popular now may be obsolete in five years. It isn't clear what type of technology will be available if/when the city decides to implement paid parking. Furthermore, when the city decides to implement paid parking, the *parking system* will operate differently than it operates today. Therefore, recommending specific technologies at this time would not be prudent. When that time comes, the city should conduct a study to evaluate the most appropriate and effective technologies available to meet their needs and goals. A pilot study can be conducted to test multiple technology types in conjunction with a public survey to obtain public feedback on the technology and its user-friendliness. The city should analyze the results of this pilot test and identify an optimal technology (or combination of technologies) to be implemented in the study area. Technology today related to paid parking consists of the following:
  - **Smart meters** – These meters can be multi-space or single-space meters that accept credit card, cash, coin, and pay-by-phone payment. The meters will clear once the allotted time has been reached, which makes it easier to identify vehicles that are parking longer than for the paid transaction length. Smart meters are also connected to software installed in the city's servers to manage and store transaction data, maintenance data, and collections information. This data can be exported to useable formats so that the city can determine parking *occupancy* and *durations* based on transaction data. This occupancy data will not be real-time, but it allows cities to periodically monitor their parking occupancy without having to do manual field work.
  - **Smartphone applications** – Smartphone applications allow people to pay for parking using an app. This provides greater flexibility for the user since payment through smartphones for nearly everything is growing in popularity. This type of payment

technology may be the most popular form of paying for parking, which would make smart meters obsolete. Many smartphone payment platforms allow users to pay as well as extend their transaction, which is beneficial for infrequent visitors who are concerned they might receive a ticket.

  - **Gated access and pay-on-foot stations –** These technologies are beneficial for off-street parking lots and garages should the city decide to implement paid parking in off-street facilities. Gated access allows the city to monitor facility use (both transient and permit holding parkers). Similar to smart meters, transaction data can be used to help monitor the facility.

- **Outreach and education** – The city should create a robust online presence for the parking program. Much of the communication with the parking patron should occur through a consolidated webpage. This site should include information on how and where to park (interactive map), the regulations associated with parking, citation information, links to the Municipal Code sections that contain the parking policies, and contact information should the user have questions. It should also link to the *TDM* program webpage on the city's website for information on alternative modes of transportation. The webpage should be designed to be mobile responsive since it will likely be viewed from a mobile device.

## Financial Assumptions

A range of possible costs associated with various parking management strategies are presented in this section. They illustrate several technologies and options for staffing that the city and its parking manager could consider. These costs can vary and will change over time so the administrative and capital costs below should be treated as estimates for reference purposes. The city will need to evaluate their priorities and resources to determine the best approach for investing in the parking program. Initially, the City should invest in hiring the parking manager to establish the program and guiding policies.

### *Administrative Expenses*

- Staffing Costs (for program manager): estimated at $125,000 per year for salaries and internal administrative costs.
- Management Fee (contracted management): $100,000-150,000 for initial contracted parking management. The actual fee will need to be defined by the procured parking management staff through the request for proposal process.
- Enforcement Fees: to be paid by the contracted management program, through the management fee. Officer responsibilities will be determined by the size of the program.
  - A basic formula for the city to consider is one *Parking Ambassador* for every 500 spaces. With 4,971 on-street parking spaces, the city will likely need 5-10 Parking Ambassadors, based on the frequency of enforcement

- This number of spaces includes both regulated and unregulated spaces. Those regulated spaces will need to be enforced more frequently than unregulated, which could mean less enforcement needs and thus less staff
- A sporadic approach to enforcement initially could also mean less staffing needs initially
- The number of officers grows within the program as the number of spaces and areas grows

***Capital Costs***

- Enforcement Technology:
  - $47,500 per *LPR* vehicle (Car - $25,000, LPR - $18,000)
  - Handheld device and printer: $4,500
- Data Collection Technologies:
  - Parking sensors: $300 per space capital and $30 per space per month for data service
  - Camera-based data collection: $300 per camera plus per space rate for monthly service
- Back-End Management Software
  - Initial Capital Implementation Cost: $50,000 - $75,000
  - Ongoing Service Fees: $30,000 - $50,000 annually, with escalations for program size
- Smartphone Applications:
  - Use of existing platform: ongoing service fees, with development fees likely minimal
- Paid Parking Technology:
  - Single-Space Smart Meters: $500 per meter, plus annual service contract and transaction fees
  - On-Street Pay Station: $5,000 - $7,500 per station, plus annual service contract and transaction fees
  - Pay-by-Phone Application: Usually free implementation with transaction fees ($0.35 - $0.50 fees per transaction)
  - Off-street gate controls: $5,000 - $15,000 per lane, plus annual service contract
- Parking Facilities:
  - Leasing existing spaces: $44,000 annually (based on city's current annual lease rate with NCTD for 102 spaces)
  - New Parking lot: $3,500 - $5,000 per space (construction only)
  - Garage: $20,000 (average cost for construction only)

### *Investment Priorities (Parking Management vs. New Structured Parking)*

The cost to provide parking can be substantial for businesses. On average, in the State of California, construction of above-ground structured parking is estimated at approximately $20,000 per space[15] without land acquisition. Surface parking spaces could range anywhere from $3,500 to $5,000 per space for construction alone, not inclusive of land acquisition costs or other soft costs. However, this cost can vary throughout the state. The cost for underground parking is substantially more expensive. The cost for underground parking increases with each level that is constructed underground.

One option that many cities use is an *in-lieu fee* program to pay for structured parking, by collecting fees from new and redeveloping businesses in lieu of them building on-site parking. However, the city's current *in-lieu fee* program does not generate the funds necessary to cover the costs of constructing structured parking. On average, 10 spaces a year are paid for with *in-lieu fees*, equating to approximately $112,400 annually. Since its inception in 2000, the *in-lieu fee* program has earned $1.9 million and has an approximate balance (as of October 2016) of $790,000. At the current rate of participation in the *in-lieu fee* program, the revenue earned through the program is not enough to pay for the construction of structured parking. Given the adequate supply of parking within the parking system to meet current and future projected parking demand, it is not recommended that city invest in construction of additional parking supply at this time. Rather, to address the observed parking *demand* imbalance and maximize the efficient use of the *parking system*, the draft Parking Management Plan recommends that the revenues earned through the program should be reinvested into funding *shared parking* and lease parking opportunities and other parking program management strategies. These recommendations, however, should not preclude private business owners and developers in providing or expanding private supply of parking to meet their individual needs, as they may see fit.

[15] "Parking Structure Cost Outlook for 2015", Carl Walker

## Phasing of Parking Management Strategies

The strategies identified as part of this study have been summarized in **Table 12** according to implementation planning horizons.

*Table 12: Summary of Parking Management Strategies*

| PARKING STRATEGY | CURRENT CONDITIONS | SHORT-TERM (BY 2020) | MID-TERM (BY 2025) | LONG-TERM (BY 2035) |
|---|---|---|---|---|
| On-Street Parking Reconfiguration and Curb Lane Management | The city has curb lane markings and signage that indicate where and when on-street parking is permitted | • Review red curbs and driveway closures to identify potential opportunities to create additional parking<br>• Consider angled parking where conditions allow<br>• Develop a *curb lane management* policy and program | • Implement *curb lane management* policy and program<br>• Continuation of previous recommendations | • Evaluate effectiveness of *curb lane management* policy and adjust as needed<br>• Continuation of previous recommendations |
| Parking Time Limits | 2- and 3-hour time limits on-street in select areas (See Figure 7)<br>In some areas parking is not allowed between<br>2 a.m.—5 a.m.<br>3 a.m.—5 a.m. | • Enforce existing time limits<br>• Reduce time limit to 24-hours for RVs<br>• Revise the Oversized Vehicles Ordinance to continue to allow RV access to the beach while restricting long-term parking on surrounding city streets | • Extend parking time limits after 5 p.m. to 4-hours<br>• Consider reducing time limits to 1-hour to encourage more turnover in high *demand* areas<br>• Evaluate extending time limits to new areas based on collected data | • Continuation of previous recommendations |

| PARKING STRATEGY | CURRENT CONDITIONS | SHORT-TERM (BY 2020) | MID-TERM (BY 2025) | LONG-TERM (BY 2035) |
|---|---|---|---|---|
| | | • Revise overnight parking restrictions in residential areas<br>• Provide time limit information on the city website | • Continuation of previous recommendations | |
| Enforcement and *Ambassadors* | Enforcement Hours:<br>7 a.m. – 6 p.m. Mon-Sat.<br>Enforcement is handled by the city's Police Department on a complaint response basis | • Implement proactive enforcement on a more regular basis in areas with the highest parking demand<br>• Implement first offense warnings<br>• Evaluate cost-effective options for administering enforcement<br>• Provide enforcement regulation information, such as fines and how to contest a citation, on the city website for simplified public access | • Expand enforcement if data demonstrates that parking duration is an issue.<br>• Extend enforcement hours to 8 p.m. to cover the peak period<br>• Consider implementing an ambassador approach to parking enforcement<br>• Implement a graduated fine structure | • Re-evaluate enforcement needs and adjust enforcement levels as necessary.<br>• Continuation of previous recommendations |
| *Shared and Leased Parking* | The city allows property owners to enter into shared and leased parking agreements where they can share a common off-street | • Document inventory of shared and leased parking opportunities | • Evaluate shared and leased parking opportunities for employee parking | • Continuation of previous recommendations |

| PARKING STRATEGY | CURRENT CONDITIONS | SHORT-TERM (BY 2020) | MID-TERM (BY 2025) | LONG-TERM (BY 2035) |
|---|---|---|---|---|
| | and/or off-site parking resource to meet their parking needs, if the shared or leased parking facility is within 300 feet (within the Village) or 150 feet (outside the Village) of the subject land uses. | • Within the Village, allow the walking distance to be 1,320 feet and allow varying shared and leased parking agreements<br>• Develop shared and leased parking agreement templates and resources, including a standard city liability policy<br>• Define development/ business incentives for participating<br>• Broker shared and leased parking agreements with property owners | • Evaluate shared and leased parking opportunities for valet parking locations<br>• Continue leasing NCTD spaces<br>• Coordinate with NCTD to enter a lease agreement to use railroad right-of-way, between Oak Avenue and Tamarack Avenue, on the east and west sides of the railroad tracks, for public parking. Work with NCTD to investigate opportunities to incorporate public parking into future non-rail development on NCTD property. | |
| *In-Lieu Fees* | The city allows developers of properties east of the railroad tracks in the Village to pay a fee of $11,420 per space in-lieu of providing the parking required | • Maintain existing in-lieu fee rate<br>• Use development regulations to encourage participation in the program | • Evaluate program performance and review fees annually.<br>• Adjust fees if the program is underutilized or if the fee falls below 60 percent of the | • Continuation of previous recommendations |

| PARKING STRATEGY | CURRENT CONDITIONS | SHORT-TERM (BY 2020) | MID-TERM (BY 2025) | LONG-TERM (BY 2035) |
|---|---|---|---|---|
| | by the adopted Village Master Plan and Design Manual (2013). | • Use funds to support shared and leased parking<br>• Make program transparent by posting information on program utilization on the city website | cost to construct a parking space (based on *RSMeans*).<br>• Consider expanding program west of the tracks if commercial development increases in this area<br>• Continuation of previous recommendations | |
| Reduced Parking Requirements | Existing parking requirements may be reduced in the Village area. Requirements may vary depending if the development is located within or outside of the Coastal Zone. Barrio parking requirements are generally the same as the rest of the city. | • Adopt the proposed parking requirements in the Draft Village and Barrio Master Plan based on observed parking ratios<br>• Monitor implementation and *demand*<br>• Evaluate the effectiveness of the TDM Ordinance to determine if the timing for the parking reductions is in alignment with first mile and last mile transportation opportunities | • Monitor development *demands* and adjust ratios accordingly | • Consider implementing parking maximums |

| PARKING STRATEGY | CURRENT CONDITIONS | SHORT-TERM (BY 2020) | MID-TERM (BY 2025) | LONG-TERM (BY 2035) |
|---|---|---|---|---|
| Residential Parking Program (RPP) | None | • Monitor parking occupancies annually. If occupancies consistently reach 85 percent in residential areas, evaluate whether a RPP would be appropriate. | • Define the locations and criteria for implementation<br>• Implement RPP if neighborhood meets program criteria | • Evaluate RPP on an ongoing basis<br>• Continuation of previous recommendations |
| Paid Parking | On-street and off-street parking is free with exception of the Tamarack State Beach and two private businesses. | • Determine threshold for implementing paid parking<br>• Evaluate *parking system* annually<br>• Create an ordinance that defines the parameters for implementing paid parking in the future | If data dictates, then:<br>• Implement paid parking<br>• Define technology to manage *parking system*<br>• Establish a Parking Benefit District<br>• Evaluate parking system annually and adjust fees as needed to manage demand | If data dictates, then:<br>• Define locations to implement paid parking<br>• Establish a Parking Benefit District<br>• Evaluate parking system annually adjust fees as needed to manage demand |
| Parking Wayfinding | Themed wayfinding signage to public off-street parking | • Develop additional signage for new public parking facilities created through shared and leased parking<br>• Evaluate and select a smartphone application that | • Continuation of previous recommendations | • Continuation of previous recommendations |

| PARKING STRATEGY | CURRENT CONDITIONS | SHORT-TERM (BY 2020) | MID-TERM (BY 2025) | LONG-TERM (BY 2035) |
|---|---|---|---|---|
| | | provides real-time parking information<br>• Create a map of public parking facilities (location and number of spaces) and post to the city website | | |
| Curb Cafes | Pilot program permitting curb cafes expired; several cafes previously approved remain in use; Property owners are currently allowed to pay a fee to the city for use of on-street space(s) to operate a Curb Cafe | • Subject to curb café program approval, continue to allow existing curb cafes and review parking occupancies prior to approval of new facilities<br>• Monitor occupancies annually. Restrict the use of curb cafes when parking occupancies reach 85 percent in areas around and serving the location(s) of the curb café(s) in consideration | • Continuation of previous recommendations | • Continuation of previous recommendations |