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EXECUTIVE SUMMARY

Phase 1 of the Clark County Parking Study examined parking supply and demand, through field surveys, for a sample of retail, industrial, resort hotel, and place of worship sites in urban towns of unincorporated Clark County. The surveys revealed that the standard parking ratios in the County’s parking code result in parking oversupply except for places of worship. Additionally, sometimes parking is provided in excess of the Code requirement, which results in further parking oversupply in some instances.

Parking oversupply is in conflict with the smart growth and sustainable development goals and policies in the County’s Comprehensive Plan, the Regional Transportation Commission’s (RTC) Regional Transportation Plan (RTP), and the Southern Nevada Strong Regional Plan. Reducing parking code ratios for certain land uses to better align parking supply with actual parking demand and improving parking lot and landscaping design would have a positive impact on a variety of economic, social, and environmental concerns including:

- Increased economic potential of a site by allowing for more building square footage;
- Reduced sprawl and encouraging a more compact urban design;
- Enhanced access for alternative modes of transportation;
- Helping alleviate traffic congestion;
- Improved streetscapes and accessibility;
- Improved air and water quality; and
- Improved public safety and health.

Based on its research and findings, Phase 1 concluded that changes to the parking code, including parking reductions, are warranted. The specifics of the changes are determined in this Phase 2 Study through further investigation and evaluation of the issues, and through stakeholder and public outreach.
The draft proposed changes to the Code include the following key areas:

- **Reduce parking requirements for shopping centers, industrial uses, and resort hotels.**
  - **Shopping Center:** Reduce the current ratio of 4:1,000 square feet of gross floor area (GFA) by 25 percent to 3:1,000 square feet of GFA.
    - Restaurants generally demand more parking and are a source of concern in smaller shopping centers. It is proposed that restaurants in shopping centers up to 50,000 square feet of GFA shall be parked at their individual restaurant ratio of 10:1,000 square feet of GFA (plus 4:1,000 square feet for outside dining) instead of the proposed single shopping center ratio of 3:1,000 square feet of GFA.
  - **Resort Hotel:** Reduce the current ratios by 30 percent.
  - **Industrial:** Reduce the current ratio of 2:1,000 square feet of GFA by 25 percent to 1.5:1,000 square feet of GFA.
  - **Office and Financial Services:** Reduce the current ratio of 4:1,000 square feet of GFA to 3:1,000 square feet of GFA. There are no changes to medical/dental offices (i.e., keep the current ratio of 4:1,000 square feet of GFA).

- **Provide parking reduction credits for qualifying programs and incentives including the following.**
  - Proximity to transit
  - Provision of long-term and short-term bicycle spaces
  - On-street parking credit (i.e., a portion of the on-street parking counts toward the development’s parking requirement)
  - Provision of design elements to facilitate Transportation Network Companies
  - Sites with priced parking
  - Automated (robotic) parking facilities

  These credits are most appropriate for urbanized areas within Clark County, and would generally not be applicable in rural areas.

- **Introduce bicycle parking requirements:** Short-term bicycle parking spaces (bicycle racks) for specified land uses. Bicycle parking is not required for resort hotels. Additionally, rural townships are exempt from the bicycle parking requirements.

- **Modify parking lot design requirements to promote smart growth.** Pedestrian connection requirements for commercial and mixed-use developments; bicycle facilities design; and revised parking lot landscaping requirements are proposed.

- **Accommodate cases where additional parking is desired more than 20 percent over the Code requirement with smart growth and sustainability conditions.** This does not apply to structured parking facilities. Additionally, rural townships and resort hotels are exempt from these conditions.

- **Reduce loading space requirements for certain uses.**
The revised parking standards would apply to new development and redevelopment. There are no impacts to existing developments. For redevelopment, the new parking lot design requirements (walkways, landscaping, etc.) would only apply to the new parking area(s) associated with a new pad site or building expansion. If the existing available parking is adequate for the entire site including the new pad site or building expansion, then there would not be a need for a new parking area, and thus, there would not be any new design requirements.

The proposed changes provide more flexibility, allowing requirements to be context sensitive as opposed to applying the same standards for all situations. Reduced parking ratios do not limit developers from building the parking they need. The proposed changes would provide flexibility to allow a business to meet their specific parking demand to successfully operate their business, while simultaneously allowing a better balance between the development potential of their property and actual parking demand.

More and more communities are evaluating new ways to manage parking supply and demand as part of their overall smart growth initiatives and goals. The proposed changes accommodate the parking needs of developments, balanced by the needs of pedestrians, bicyclists, and environmental sustainability, and thus promote smart growth.
1.0. INTRODUCTION

1.1. Study Background and Purpose

Phase 1 of the Clark County Parking Study examined parking supply and demand, through field surveys, for a sample of retail/shopping, industrial/commercial, resort hotel, and place of worship sites in unincorporated Clark County, Nevada. The surveys were conducted on days that correspond to a “busy,” but not the “busiest” day of the year for the particular land use category. The surveys revealed that the standard parking ratios in the County’s parking code (Chapter 60 of Title 30, also referred to as Chapter 30.60 or the Code herein) result in parking oversupply except for places of worship. Additionally, sometimes parking is provided in excess of the code requirement, which results in further oversupply of parking in some instances (Figure 1-1).

Figure 1-1: Phase 1 Study Survey Findings

Parking oversupply is in conflict with the smart growth and sustainable development goals and policies in the County’s Comprehensive Plan, the Regional Transportation Commission’s (RTC) Regional Transportation Plan (RTP), and the Southern Nevada Strong Regional Plan. Oversupply of parking stimulates auto travel and is a disincentive to alternative modes like walking, biking, or taking transit. It furthers urban sprawl which leads to increased travel and environmental costs. High parking code ratios reduce the development potential of a site, requiring more land to be used for parking instead of a more productive use.

---

1 In Clark County’s Comprehensive Plan, such policies are listed in the Long Range Plan Policies under the Land Use Element, and in the Energy Policies under the Public Facilities and Services Element. In the RTP, sustainable transportation is a major theme throughout the Plan. Southern Nevada Strong Regional Plan promotes smart growth and sustainability in all aspects of the Plan; as such policies are an integral part of the Plan Vision.
The purpose of the Clark County Parking Study is to identify ways to better align the County’s parking code with the smart growth and sustainable development policies, initiatives, and goals in the Comprehensive Plan, the RTP, and the Southern Nevada Strong Regional Plan. Smart growth parking principles aim to identify the “right-sized” amount of parking. Table 1-1 below illustrates key differences between conventional and smart growth parking policies.

**Table 1-1: Conventional versus Smart Growth Parking Policies**

<table>
<thead>
<tr>
<th>Conventional Parking Policies</th>
<th>Smart Growth Parking Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managed only for motorist convenience</td>
<td>Managed for transportation system efficiency</td>
</tr>
<tr>
<td>Maximum parking supply</td>
<td>Optimal parking supply (not too little, not too much)</td>
</tr>
<tr>
<td>Prefers free parking</td>
<td>Prefers priced parking (user pays directly)</td>
</tr>
<tr>
<td>Dedicated parking facilities</td>
<td>Shared parking facilities</td>
</tr>
<tr>
<td>Favors lower-density, dispersed development</td>
<td>Favors compact development</td>
</tr>
</tbody>
</table>

*Source: Victoria Transport Policy Institute*

The Phase 1 Study, completed in 2015, was the conceptual framework that examined if a change in the County’s parking policies is warranted. Based on its research and findings, Phase 1 concluded that such a change is, indeed, warranted; and that the specifics of the required changes should be determined through further investigation and evaluation, including stakeholder and public outreach. Findings and recommendations of the Phase 1 Study were presented to the Board of County Commissioners on June 3, 2015. The Board accepted the Study. The specifics of the changes are identified in this Phase 2 Study. The recommended changes to the Code were developed based on:

- Surveys and research in Phase 1;
- Additional parking surveys conducted in Phase 2;
- Comparison with parking codes in similar communities in the region;
- Research on parking standards nationwide that have recently reevaluated their codes for smart growth consistency;
- Industry best practices for smart growth parking design and management strategies; and
- Stakeholder and public outreach.

The Phase 2 Study follows the tasks/steps listed below.

- Perform additional parking surveys to validate the data collected during Phase 1.
- Evaluate and identify potential changes to the parking ratios in the Code.
- Review existing provisions in the Code that allow reduced parking and flexible parking options, and identify potential revisions and new provisions based on best practices.
- Research best practices and develop potential parking design standards to be included in the Code.

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2 Phase 1 Study Report is available for download at the RTC’s website under the planning studies and project link. http://www.rtcsnv.com/planning-engineering/transportation-planning/planning-studies-projects.
CLARK COUNTY PARKING STUDY PHASE 2

- Meet with industry stakeholders and Town Advisory Boards (TABs) and Citizens Advisory Councils (CACs) to solicit their input on the recommended potential changes.
- Hold a public open house to provide information to the public, and solicit public input.
- Prepare a study report that documents the supporting information and research, and proposed draft changes to the Code that incorporate stakeholder, public, agency, TAB, and CAC input.
- Present the study report findings and recommendations to the Board of County Commissioners and the County Planning Commission.
- Prepare a draft ordinance if directed by the Board of County Commissioners and the Planning Commission.
- Present the draft ordinance to TABs and CACs.
- Present the draft ordinance to the Board of County Commissioners and the County Planning Commission, and request direction to move forward with a final ordinance.

1.2. Why Change the Code?
The current parking code (Chapter 30.60) is included in Appendix A of this Report. There are various reasons as to why a change in the Code is necessary:

- The parking surveys conducted specifically for this Study reveal that the existing parking ratios in the Code overestimate demand for most of the studied land uses. Resources, both local and national, point to the negative impacts of parking oversupply. For example, RTC’s Complete Streets Guidelines states off-street parking is a non-productive use and the amount required should be reduced to the maximum extent possible. The Southern Nevada Strong Regional Plan specifically recommends agencies to evaluate and revise their parking standards. Section 2.0 and Section 3.0 discuss the parking surveys conducted specifically for this Study along with a sample of other parking surveys and studies that address parking oversupply and its impacts.

- Chapter 30.60, in general, is not context-sensitive. The parking ratios are applied without taking site-specific factors such as availability of transit, walkability, location, etc., into account. This lack of flexibility for site-specific adjustments typically results in parking oversupply. Additionally, infill developments are often not viable because providing the code required parking is not possible. There are some existing provisions in Chapter 30.60 that allow reduced parking and alternative parking standards; however, these provisions are typically not fully utilized and/or are insufficient. The Code should be updated to provide more flexibility in its policies, allowing requirements to be context sensitive as opposed to applying the same standards for all situations. The existing provisions should be reevaluated, updated, and expanded to encourage their use. Section 4.0 discusses the impacts of site-specific factors on parking demand along with a range of available strategies for adjustments to base parking ratios.

- A change in the County’s parking code is not unprecedented. More and more communities are evaluating new ways to manage parking supply and demand as part of their overall smart growth initiatives and goals. Section 5.0 includes a review of parking standards for communities nationwide that have recently reevaluated their parking codes for smart growth consistency.
• Parking lots in many commercial developments in the County are directly adjacent to the street, buffering the buildings and stores from the street front. Additionally, they lack effective pedestrian connections. Such site designs are auto-oriented, and conflict with smart growth principles. As discussed in Southern Nevada Strong Regional Plan, this type of site design increases the perceived distances and lack of connectivity between locations and contributes to an unfriendly pedestrian realm. The presence of underutilized parking lots between businesses and the street can also contribute to a perception that businesses along the corridor are underperforming because activity is less visible. The Code should be updated to include standards that allow better pedestrian, bicycle, and transit user access. Section 6.0 includes a summary of industry best practices that accommodate all users, including pedestrians, bicyclists, and transit users.

• There are no maximum parking limits in Chapter 30.60. Imposing parking maximums in addition to minimums is a recommended best practice for parking management, and many communities impose such limits. As discussed previously, parking is sometimes provided in excess of the code requirement, which results in further parking oversupply. It is understood and acknowledged that developers may prefer the flexibility to provide as much parking as they deem necessary to accommodate anticipated demand based on their business knowledge and experience. There are options other than imposing a maximum parking cap to prevent parking oversupply, and the Code should incorporate such options.

• There is no bicycle parking requirement in the Code, while almost all other reviewed codes, including those of local agencies in Southern Nevada, require some level of bicycle parking. RTC, in its Regional Bicycle and Pedestrian Plan Update, lists requiring or incentivizing bicycle parking facilities as one of the Plan policy recommendations to local agencies. Providing bicycle parking in prominent, convenient, and secure locations is a smart growth best practice as it encourages cycling. The Code should be updated to include bicycle parking requirements for appropriate land uses.

• Driver behavior has been changing due to shifting demographics and the rapid advancement of technology including e-commerce and ride-sharing. These changes impact the transportation system (in terms of driving declines, i.e., fewer miles driven) and ultimately the need for parking. Development codes are generally conservative based on traditional planning methods and do not take into account these changing preferences and consumer behavior trends that result in reduced parking demand. This paradigm shift is yet another reason to re-evaluate and update current parking regulations. A literature review on this topic was performed in Phase 1 and is available in the Phase 1 Report.

Supporting data and research for each of these areas are discussed in Section 2.0 through 6.0. Section 7.0 provides a summary of the outreach activities for the Study. Building upon these preceding sections, Section 8.0 documents the draft proposed changes to the Code. The intent of the changes is to create parking regulations that promote more efficient use of land, enhance urban form by encouraging more compact and walkable developments, and reduce traffic congestion. The proposed changes accommodate the parking needs of developments, balanced by the needs of pedestrians, bicyclists, and environmental sustainability, and thus promote smart growth.
2.0. PARKING SURVEYS

2.1. Survey Sites

In Phase 1, 26 sites were surveyed, consisting of nine shopping/retail, five industrial/commercial, seven resort hotel, and five place of worship sites in selected urban towns of unincorporated Clark County.\(^3\) To supplement and potentially validate the data collected in Phase 1, additional surveys were completed in Phase 2. A total of seven sites were surveyed in Phase 2, consisting of one local resort hotel, three shopping centers, and three industrial/commercial sites. Additional surveys for place of worship sites were not conducted in Phase 2 because parking data collected in Phase 1 did not support a reduction or further evaluation.

Figure 2-1 illustrates the locations of the Phase 2 survey sites. Appendix B includes exhibits that show the individual assessor’s parcel numbers (APNs) for each site. Sections 2.1.1 through 2.1.3 describe each selected site. Site selection criteria and the methodology used to conduct the surveys were consistent with the criteria and methodologies used in Phase 1.

Figure 2-1: Phase 2 Study Sites

\(^3\) Phase 1 Report can be reviewed for information on Phase 1 survey sites, results, and methodologies. This Phase 2 Report does not repeat that information, and instead, documents the surveys for the Phase 2 Study only.
2.1.1. Shopping Centers

One large and two medium shopping centers were surveyed. In Title 30, “shopping center” is defined as “any structure or group of structures housing any assemblage of commercial and/or retail with a minimum 25,000 square feet of gross floor area (GFA)” upon a single lot or parcel of land, or upon contiguous parcels of land which have common ingress and egress, shared parking, and cross access.” Commercial/retail sites with less than 25,000 square feet of GFA are not defined as shopping centers. In Phase 1, a sample of such sites referred to as “small shopping sites,” was also surveyed (in addition to large and medium shopping centers).

The large shopping center site is the Las Vegas South Premium Outlets located in Enterprise Township. Figure 2-2 shows the site layout. Access to the site is provided on South Las Vegas Boulevard, Warm Springs Road, and Robindale Road via multiple driveways. The site has a GFA of approximately 725,000 square feet. Some of the smaller building pads, which are mostly restaurants, front Las Vegas Boulevard. There is also a gas station (with a convenience store) on the northwest corner of the site.

*Figure 2-2: Large Shopping Site*

Both of the medium shopping centers are located along Rainbow Boulevard in Enterprise Township. The first site (Figure 2-3) is located in the northeast corner of Rainbow Boulevard and

---

4 In Title 30, floor area requirements are based on the gross floor area. As defined in Title 30, “Gross Floor Area” means the total area enclosed; and when referring to a use, includes all floor area with interior access to the use.
Maule Avenue and has a GFA of approximately 43,000 square feet. This site consists of smaller-size retail stores and restaurants. The buildings are set back from the front street toward the rear of the site with the parking lot buffering them from the street. The second medium shopping center site is relatively small, with a GFA of approximately 35,000 square feet. It is located along Rainbow Boulevard between Maulding Avenue and Robindale Road (Figure 2-4). The site contains a drug store, a financial office, and two restaurants.

**Figure 2-3: Medium Shopping Site 1**

![Medium Shopping Site 1](image1)

**Figure 2-4: Medium Shopping Site 2**

![Medium Shopping Site 2](image2)
2.1.2. Industrial/Commercial Sites

Three industrial/commercial sites, all in Paradise Township, were surveyed during this phase of the Study. The three sites are described below. The descriptions include a percentage comparison of the retail and recreational uses (e.g., restaurant, grocery, cleaners, repair, hair/spa salons, gym, etc.) versus more industrial and/or non-retail uses (e.g., warehouse, manufacturing, office, showroom, etc.).

The first two sites are adjacent to each other, divided by a wall. They are shown in Figure 2-5 and Figure 2-6. They collectively include approximately 70 percent light industrial uses and 30 percent retail, recreational, and restaurant uses.

Figure 2-5: Industrial/Commercial Site 1
The third industrial/commercial site is shown in Figure 2-7. This site has a more industrial nature. Of the roughly 70 active businesses on this site, two of them are recreational uses (a rock climbing gym and an indoor golf facility), and the rest are light industrial.
2.1.3. Resort Hotels
The location and layout of the selected local resort for Phase 2 are shown in Figure 2-8.

*Figure 2-8: Local Resort Site*

2.2. Survey Dates and Hours
Table 2-1 summarizes the survey dates and hours for the Phase 2 survey sites. The surveys were conducted on days that correspond to a “busy,” but not the “busiest” day of the year, consistent with the methodology used in Phase 1.

*Table 2-1: Survey Dates and Hours*

<table>
<thead>
<tr>
<th>Site</th>
<th>Survey Date</th>
<th>Survey Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shopping centers</td>
<td>Saturday, December 12, 2015 (Holiday Shopping Season)</td>
<td>11 AM to 4 PM</td>
</tr>
<tr>
<td>Local resort</td>
<td>Sunday, February 7, 2016 (Super Bowl Sunday)</td>
<td>3 PM to 8 PM</td>
</tr>
<tr>
<td>Industrial/Commercial 1 and 2</td>
<td>Wednesday, January 20 (Typical Weekday)</td>
<td>12 PM to 6 PM</td>
</tr>
<tr>
<td>Industrial/Commercial 3</td>
<td>Wednesday, January 20 (Typical Weekday)</td>
<td>1 PM to 6 PM</td>
</tr>
</tbody>
</table>
2.3. Survey Data Results

2.3.1. Observed Parking Occupancy Rates

This section presents survey data results for the Phase 2 sites through a series of parking occupancy rate charts. Results for the Phase 1 survey sites can be reviewed in the Phase 1 Report.

The parking occupancy rate is a measure of parking utilization. It is the percentage of the parking supply that is observed to be occupied during a given period and is calculated as parking demand (total number of vehicles parked) divided by parking supply (total number of parking spaces on site). Figures 2-9 through 2-11 present parking occupancy rate charts for shopping center sites; Figures 2-12 through 2-14 present parking occupancy rate charts for industrial/commercial sites, and Figure 2-15 presents the parking occupancy rate chart for the resort site. The charts depict parking demand in 30 minute increments. The peak parking occupancy rate is highlighted in red. The raw survey data is included in Appendix B.

It should be noted that the parking occupancy rates documented in this section are the observed demand divided by the total number of parking spaces on site (i.e., field-counted supply). The total number of provided parking spaces is often more than the Code requirement. The parking occupancy rates shown in this section, therefore, do not provide a direct comparison of demand with the Code requirement. Section 3.0 provides an analysis of the demand compared against the Code requirement, and the amount of excess parking spaces the Code requires.

**Figure 2-9: Survey Result: Large Shopping Site**
Figure 2-10: Survey Result: Medium Shopping Site 1

Total Parking Spaces in the Field = 191

<table>
<thead>
<tr>
<th>Time of Day</th>
<th>Parking Occupancy</th>
<th>Total Vehicles Parked</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:00</td>
<td>45.0%</td>
<td>86</td>
</tr>
<tr>
<td>11:30</td>
<td>56.5%</td>
<td>108</td>
</tr>
<tr>
<td>12:00</td>
<td>50.8%</td>
<td>97</td>
</tr>
<tr>
<td>12:30</td>
<td>55.0%</td>
<td>105</td>
</tr>
<tr>
<td>13:00</td>
<td>52.4%</td>
<td>100</td>
</tr>
<tr>
<td>13:30</td>
<td>57.1%</td>
<td>109</td>
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<tr>
<td>14:00</td>
<td>56.5%</td>
<td>108</td>
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<tr>
<td>14:30</td>
<td>49.2%</td>
<td>94</td>
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<tr>
<td>15:00</td>
<td>56.5%</td>
<td>108</td>
</tr>
<tr>
<td>15:30</td>
<td>51.8%</td>
<td>99</td>
</tr>
<tr>
<td>16:00</td>
<td>56.0%</td>
<td>107</td>
</tr>
</tbody>
</table>

Figure 2-11: Survey Result: Medium Shopping Site 2

Total Parking Spaces in the Field = 165

<table>
<thead>
<tr>
<th>Time of Day</th>
<th>Parking Occupancy</th>
<th>Total Vehicles Parked</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:00</td>
<td>31.5%</td>
<td>52</td>
</tr>
<tr>
<td>11:30</td>
<td>41.8%</td>
<td>69</td>
</tr>
<tr>
<td>12:00</td>
<td>50.9%</td>
<td>84</td>
</tr>
<tr>
<td>12:30</td>
<td>54.5%</td>
<td>90</td>
</tr>
<tr>
<td>13:00</td>
<td>45.5%</td>
<td>75</td>
</tr>
<tr>
<td>13:30</td>
<td>54.5%</td>
<td>68</td>
</tr>
<tr>
<td>14:00</td>
<td>41.2%</td>
<td>61</td>
</tr>
<tr>
<td>14:30</td>
<td>37.0%</td>
<td>50</td>
</tr>
<tr>
<td>15:00</td>
<td>39.4%</td>
<td>65</td>
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<td>15:30</td>
<td>37.0%</td>
<td>61</td>
</tr>
<tr>
<td>16:00</td>
<td>39.4%</td>
<td>65</td>
</tr>
</tbody>
</table>
Figure 2-12: Survey Result: Industrial/Commercial Site 1

![Survey Result: Industrial/Commercial Site 1]

Total Parking Spaces in the Field = 459

<table>
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<td>12:00</td>
<td>26.4%</td>
<td>121</td>
</tr>
<tr>
<td>12:30</td>
<td>27.0%</td>
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<tr>
<td>13:00</td>
<td>28.3%</td>
<td>130</td>
</tr>
<tr>
<td>13:30</td>
<td>28.1%</td>
<td>129</td>
</tr>
<tr>
<td>14:00</td>
<td>27.2%</td>
<td>125</td>
</tr>
<tr>
<td>14:30</td>
<td>27.7%</td>
<td>127</td>
</tr>
<tr>
<td>15:00</td>
<td>27.0%</td>
<td>124</td>
</tr>
<tr>
<td>15:30</td>
<td>27.9%</td>
<td>128</td>
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<tr>
<td>16:00</td>
<td>22.9%</td>
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</tr>
<tr>
<td>16:30</td>
<td>21.4%</td>
<td>98</td>
</tr>
<tr>
<td>17:00</td>
<td>18.7%</td>
<td>86</td>
</tr>
<tr>
<td>17:30</td>
<td>18.5%</td>
<td>85</td>
</tr>
<tr>
<td>18:00</td>
<td>17.2%</td>
<td>79</td>
</tr>
</tbody>
</table>

Figure 2-13: Survey Result: Industrial/Commercial Site 2

![Survey Result: Industrial/Commercial Site 2]

Total Parking Spaces in the Field = 92

<table>
<thead>
<tr>
<th>Time of Day</th>
<th>Parking Occupancy</th>
<th>Total Vehicles Parked</th>
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</thead>
<tbody>
<tr>
<td>12:00</td>
<td>42.4%</td>
<td>39</td>
</tr>
<tr>
<td>12:30</td>
<td>46.7%</td>
<td>43</td>
</tr>
<tr>
<td>13:00</td>
<td>50.0%</td>
<td>46</td>
</tr>
<tr>
<td>13:30</td>
<td>51.1%</td>
<td>47</td>
</tr>
<tr>
<td>14:00</td>
<td>46.7%</td>
<td>43</td>
</tr>
<tr>
<td>14:30</td>
<td>39.1%</td>
<td>36</td>
</tr>
<tr>
<td>15:00</td>
<td>40.2%</td>
<td>37</td>
</tr>
<tr>
<td>15:30</td>
<td>38.0%</td>
<td>35</td>
</tr>
<tr>
<td>16:00</td>
<td>33.9%</td>
<td>32</td>
</tr>
<tr>
<td>16:30</td>
<td>22.8%</td>
<td>21</td>
</tr>
<tr>
<td>17:00</td>
<td>23.3%</td>
<td>21</td>
</tr>
<tr>
<td>17:30</td>
<td>22.8%</td>
<td>21</td>
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<tr>
<td>18:00</td>
<td>28.3%</td>
<td>26</td>
</tr>
</tbody>
</table>
**Figure 2-14: Survey Result: Industrial/Commercial Site 3**

Total Parking Spaces in the Field = 1,113

<table>
<thead>
<tr>
<th>Time of Day</th>
<th>Parking Occupancy</th>
<th>Total Vehicles Parked</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:00</td>
<td>35.9%</td>
<td>400</td>
</tr>
<tr>
<td>13:30</td>
<td>38.1%</td>
<td>424</td>
</tr>
<tr>
<td>14:00</td>
<td>37.8%</td>
<td>421</td>
</tr>
<tr>
<td>14:30</td>
<td>36.9%</td>
<td>411</td>
</tr>
<tr>
<td>15:00</td>
<td>36.8%</td>
<td>410</td>
</tr>
<tr>
<td>15:30</td>
<td>33.3%</td>
<td>371</td>
</tr>
<tr>
<td>16:00</td>
<td>29.7%</td>
<td>331</td>
</tr>
<tr>
<td>16:30</td>
<td>29.6%</td>
<td>329</td>
</tr>
<tr>
<td>17:00</td>
<td>22.4%</td>
<td>249</td>
</tr>
<tr>
<td>17:30</td>
<td>19.4%</td>
<td>216</td>
</tr>
<tr>
<td>18:00</td>
<td>18.1%</td>
<td>201</td>
</tr>
</tbody>
</table>

**Figure 2-15: Survey Result: Local Resort Site**

Total Parking Spaces in the Field = 5,704

<table>
<thead>
<tr>
<th>Time of Day</th>
<th>Parking Occupancy</th>
<th>Total Vehicles Parked</th>
</tr>
</thead>
<tbody>
<tr>
<td>15:00</td>
<td>71.1%</td>
<td>4,055</td>
</tr>
<tr>
<td>15:30</td>
<td>73.2%</td>
<td>4,174</td>
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<tr>
<td>16:00</td>
<td>73.8%</td>
<td>4,209</td>
</tr>
<tr>
<td>16:30</td>
<td>74.5%</td>
<td>4,252</td>
</tr>
<tr>
<td>17:00</td>
<td>73.8%</td>
<td>4,210</td>
</tr>
<tr>
<td>17:30</td>
<td>74.7%</td>
<td>4,189</td>
</tr>
<tr>
<td>18:00</td>
<td>74.7%</td>
<td>4,262</td>
</tr>
<tr>
<td>18:30</td>
<td>74.3%</td>
<td>4,240</td>
</tr>
<tr>
<td>19:00</td>
<td>72.3%</td>
<td>4,122</td>
</tr>
<tr>
<td>19:30</td>
<td>67.7%</td>
<td>3,861</td>
</tr>
<tr>
<td>20:00</td>
<td>61.0%</td>
<td>3,481</td>
</tr>
</tbody>
</table>
3.0. **ACTUAL PARKING DEMAND COMPARED TO CODE REQUIREMENT**

3.1. **Current Parking Requirements in Chapter 30.60**

The current parking ratios in Chapter 30.60 for the land uses surveyed in this Study are summarized in Table 3-1. The land uses shown in this table are for the primary land uses at the survey sites. Occasionally, there were other land use types at some sites. For example, a few of the industrial/commercial sites included recreational facilities for which a different parking ratio exists. These other minor uses are not included in the table. Chapter 30.60 in Appendix A and the parking calculations in Appendix B provide the parking ratios for all land-use categories.

*Table 3-1: Current Parking Ratios in Chapter 30.60*

<table>
<thead>
<tr>
<th>Land use</th>
<th>Parking Spaces Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shopping Center*</td>
<td>4:1,000 sq.ft. of GFA</td>
</tr>
<tr>
<td>Resort Hotel</td>
<td>1: guestroom up to 500+ rooms</td>
</tr>
<tr>
<td></td>
<td>1:2 guestrooms over 500 up to 1,000+ rooms</td>
</tr>
<tr>
<td></td>
<td>1:4 guestrooms over 1,000+ rooms</td>
</tr>
<tr>
<td></td>
<td>6:1,000 sq.ft. of GFA for all areas accessible to the public except convention facilities</td>
</tr>
<tr>
<td></td>
<td>1:1,000 sq.ft. of GFA for convention facilities and areas not accessible to the public</td>
</tr>
<tr>
<td>Industrial</td>
<td>2:1,000 sq.ft. of GFA (including incidental such as office uses)</td>
</tr>
<tr>
<td>Restaurant (not in a shopping center)</td>
<td>10:1,000 sq.ft. of GFA (Plus 4:1,000 sq. ft. for Outside Drinking, Dining, and Cooking)</td>
</tr>
<tr>
<td>Office (including Medical/Dental Clinics)</td>
<td>4:1,000 sq.ft. of GFA</td>
</tr>
</tbody>
</table>

* The 4:1,000 applies to all uses in a shopping center regardless of the types of uses within the center. Commercial/retail sites with less than 25,000 sq. ft. GFA do not fall in the “shopping center” definition, and their Code required parking is calculated based on the parking rate of each use in the site.

For each survey site, the parking requirement per Chapter 30.60 was calculated based on the current status of the development (i.e., the mix of current land uses). The most recent available site plans were obtained for each site to calculate the code required parking. For some sites, the available site plans did not reflect the current status of the development. In other words, the current uses were different from the uses shown on the site plans. In these cases, information from the site plans was combined and compared with other sources, such as assessor’s data and County staff reports, to identify the necessary input (e.g., GFA, the number of hotel rooms, etc.) for the parking calculations. The code required parking calculations for each site along with the site plans and staff reports are included in Appendix B. Table 3-2 presents a summary of the calculations, along with the parking spaces indicated on the site plans and parking spaces counted in the field. The Phase 1 Report can be reviewed for similar information on Phase 1 survey sites.
3.2. Actual Parking Demand versus Chapter 30.60 Requirements

The previous section summarized the code required parking for each Phase 2 survey site. This section compares code required parking to the actual demand to determine if there is parking oversupply.

Before comparing with the Code requirement, the observed parking demand was adjusted (increased) for each site based on the following two factors:

- **Vacancy Factor:** There were some vacant or partially occupied buildings at some of the sites. Prior to comparing with the Code, the observed demand was increased to represent 100 percent building occupancy. The objective was to calculate how many vehicles would have parked if existing buildings were fully occupied, and then compare that adjusted (i.e., increased) demand to what the Code requires. The vacancy adjustments were made by increasing the observed parking demand by approximately 15 percent. All of the sites were 85 percent or more occupied, and thus, a 15 percent increase was deemed appropriate.

- **Ideal Utilization Factor:** A parking facility that is 90 percent or more occupied is perceived as full. One hundred percent occupied is considered undesirable because motorists must search or wait for available parking and may be tempted to park illegally. Additionally, such high parking occupancy rates do not allow flexibility for special circumstances or events including temporary loss of spaces due to construction staging or incorrectly parked vehicles (e.g., a car taking two spaces). Thus, 90 percent is referred to as the “ideal utilization rate” per industry standard for parking studies. Before comparing with the Code requirement, an ideal utilization adjustment was applied to the observed parking demand by increasing it approximately 10 percent.

5 As part of the site selection criteria, sites with building occupancies estimated to be lower than 85 percent were not selected for surveys.
A series of charts (Figures 3-1 through 3-4) present the field surveyed demand (adjusted for the above factors) against the Code requirement for each surveyed land-use category. The “difference” designation in the charts represents the number of excess parking spaces the Code requires. These charts incorporate the Phase 1 sites to provide an overall context for the amount of parking oversupply.

Figure 3-1 and Figure 3-2 present the comparison for large and medium shopping center sites respectively. For large shopping sites, the difference between the actual demand and the Code requirement is relatively small, with a range between 2 percent and 28 percent. The 2 percent difference is for the large shopping site in Phase 2 and represents the lowest excess parking percentage amongst all survey sites.

Figure 3-1: Parking Demand versus Chapter 30.60 Requirement - Large Shopping Centers

The difference between the demand and the Code required parking spaces is more significant for medium shopping sites. The range is between 17 percent and 59 percent. As seen in Figure 3-2, the Phase 2 sites had a lower difference (both 17 percent) compared to Phase 1 sites.
Figure 3-2: Parking Demand versus Chapter 30.60 Requirement - Medium Shopping Centers

Figure 3-3 presents the comparison for the industrial/commercial sites. The results again indicate that the Code required parking exceeds the actual demand. The comparison shows a difference between 27 percent and 69 percent.

Figure 3-4 presents the comparison for the resort sites. There were no Strip resorts surveyed in Phase 2; however, Strip resorts are also included in the chart for reference, because the requirements related to parking for local and Strip resorts are the same. For the three local resorts, the differences range from 11 percent to 53 percent. For the Strip resorts, the differences range from 31 percent to 55 percent.
**Figure 3-3: Parking Demand versus Chapter 30.60 Requirement – Industrial/Commercial Sites**

*Calculated by adjusting the actual observed demand to account for 100% building occupancy. An additional 10% increase is allowed to account for 90% ideal utilization.*

**Figure 3-4: Parking Demand versus Chapter 30.60 Requirement – Resorts**

*Calculated by adjusting the actual observed demand to account for 100% room occupancy. An additional 10% increase is allowed to account for 90% ideal utilization.*
Figure 3-5 presents a summary of the comparison for all categories surveyed in Phase 2. The parking oversupply shown for each land-use category is based on the average of excess parking percentage for each site in that particular category. As seen, there is parking oversupply for all of the surveyed land-use categories. Figure 3-6 illustrates empty parking spaces at a study survey site.

**Figure 3-5: Parking Demand versus Chapter 30.60 Requirement – Average for All Sites**

**Figure 3-6: A Study Survey Site Demonstrating Parking Oversupply**

*Mission Center, Paradise Township*
3.3. Parking Requirements in Other Codes

Parking code ratios of select communities in the neighboring and nearby states, as well as other local agency codes in Nevada, were reviewed for comparison with the ratios in Clark County’s Code. The range of parking ratios adopted by other communities provides context to any potential change to Clark County’s parking requirements. The research included cities and counties in the west such as Phoenix, Portland, Reno, Washoe County, Denver, El Paso, San Diego, Seattle, Tempe, Tucson, Albuquerque, and Salt Lake City, and local jurisdictions of Las Vegas, Henderson, and North Las Vegas. Tables presenting the parking ratios in all of the reviewed codes are included in Appendix C.

Parking codes of cities that have recently updated their codes toward more progressive policies, were also reviewed, including the City of Hartford’s code, which was adopted in 2016; and the City of Miami’s code, referred to as Miami 21, which was adopted in May of 2015. A form-based code template referred to as Smart Code, that incorporates smart-growth principles was also reviewed. Smart Code is a model ordinance based on the rural-to-urban transect that is designed to be calibrated to local circumstances. This additional research, which is also provided in Appendix C, was useful for comparison with codes that embrace smart-growth and sustainable development policies.

ITE’s Parking Generation publication was also reviewed. Parking Generation is a major source of data for jurisdictions in the United States for estimating parking demands. It should, however, be reiterated that ITE’s Parking Generation is limited in its applicability because of the constraints in the data utilized. Data in this publication are mostly obtained from suburban sites with a single land use and free parking with little or no influence from transit or pedestrian/bicycle facilities. In other words, the ITE Parking Generation is more auto-centric in nature, reflecting traditional automobile friendly development. Nonetheless, this well-known resource was also reviewed and was helpful to understand the spectrum of potential ratios.

All of these resources were utilized to support the identification and justification of proposed changes to the parking ratios in Clark County’s Code.

3.4. Other Local and Nationwide Parking Surveys and Studies

A number of other local and national parking studies and surveys also point to an oversupply of parking. A recent local example is the parking study conducted for the T-Mobile Arena and Park. The Arena study looked at existing conditions regarding available parking for the proposed (now open) 19,500 seat arena. The study consultant conducted a parking inventory and parking occupancy counts in February and March 2013 during the NCAA College Basketball Championship and in July 2013 during the 4th of July Holiday at the major existing parking facilities adjacent to the proposed arena site: the New York New York Garage and the Monte Carlo garages (employee and guests). The survey results showed parking oversupply in these existing parking facilities. The study concluded that the parking needs of the Arena could be accommodated using the available parking in the Monte Carlo garages and the New York New York Garage.

Southern Nevada Strong Regional Plan identifies an abundance of surface parking in its Maryland Parkway Report. It recommends adjustments to parking requirements, including reduced minimum parking requirements and implementing parking limits.
A 2015 Transportation Research Record article, titled *Parking in Mixed-Use U.S. Districts*, references numerous research efforts that have shown parking is routinely oversupplied in both single-use and mixed-use districts in the United States. For the particular research, the researchers studied parking supply and use in 27 mixed-use districts around the country, the largest sample of districts examined in this type of study. The research found that parking is oversupplied by 65 percent on average. Furthermore, the surveys showed that oversupply in places that had perceived parking shortages averaged 45 percent. The study concluded that given the perception of shortage even where there is a documented oversupply, better parking management rather than an increase in supply could be a more effective tool for mitigating perceived shortages.

A 2009 Zoning Practice article, titled *Parking Management Best Practices*, references the following sample of studies that point to parking oversupply:

- A parking demand study of Southern California suburban offices found that conventional standards are nearly twice as high as needed. A survey of 10 office buildings in California found that the peak parking demand averaged only 56 percent of capacity.
- A University of Iowa study found that parking supply exceeded peak-period demand by 16 to 63 percent at various commercial centers.
- Parking surveys in 26 Seattle neighborhoods found that most had only 40 to 70 percent peak-period occupancy.
- In Minnesota, peak-period parking supply at several St. Paul-area shopping centers exceeded occupancy by an average of 31 percent. Planners recommended reducing municipal parking requirements to about half of conventional standards.

According to *Parking – A Livability Fact Sheet (2014)* by AARP, Inc., peak parking demand at nine suburban office parks near Philadelphia and San Francisco averaged only 47 percent of capacity.

The Urban Land Institute (ULI) found that the recommended parking requirements for shopping centers provide an oversupply of parking spaces for all but 19 hours a year, and leave at least half of all spaces vacant for more than 40 percent of the time a shopping center is open for business.

A 1999 technical paper titled *Parking Lots*, published for Nonpoint Education for Municipal Officers (NEMO), indicates typical zoning regulations require more parking spaces than are utilized. The study explains: “Space utilization studies show that the common zoning standard of 4 parking spaces for every 1,000 square feet of GFA (for shopping centers) generates twice the number of parking spaces used. Most parking standards are based on peak hour traffic volumes or “peak hour, in peak season” demand. While the lots may be filled during this peak period, they are often greatly underutilized the rest of the year. As a case in point, from 1965 to 1981 shopping mall parking lots were designed for use at the 10th busiest hour of the year, using a standard of 6 spaces per 1,000-sq. ft. of retail space. In 1981 a study by the Council of Shopping Centers suggested shaving the standard to 4 spaces per 1,000-sq. ft. using the 20th busiest hour. Designing for the 20th busiest hour still leaves at least half of a shopping center's parking spaces vacant a minimum of 40 percent of the time.” The same NEMO paper also discusses how zoning traditionally requires a minimum number of parking spaces, allowing developers to provide more spaces if they wish, and recommends using maximum ratios along with minimum ratios. The
paper concludes that “it is this “bigger is better” approach that has resulted in excess parking, particularly at big box retail sites where developers routinely build more parking spaces than required by zoning.”

Des Moines Area MPO’s Parking Management and Design Best Practices states; “parking oversupply results in part from minimum parking requirements.” It references studies of suburban business parks that found that zoning codes often demand 3-4 parking spaces per 1,000 square feet of development or one space per employee while the actual average parking utilization rate is 2.2 spaces per 1,000 square feet. This equates to a 26 percent oversupply. This best practices document recommends elimination of minimum requirements. It emphasizes that “removing minimums would not ban new parking from being built; it would simply allow market forces to determine the necessary amount of parking.”

A 2011 Environmental Practice article, titled Why and How to Reduce the Amount of Land Paved for Roads and Parking Facilities, suggests that jurisdictions have tended to demand higher than necessary parking requirements. According to this article, the reason is “outdated policies.”

According to the article titled Smart Growth Alternatives to Minimum Parking Requirements from the Urban Street Symposium in 2003, the approach used by many jurisdictions to establish minimum parking requirements – “typically a generic formula based on satisfying maximum demand for free parking” - allows planners to err on the side of caution by providing higher than necessary parking requirements. The article talks about how several jurisdictions are imposing maximum parking limits instead of (or in addition to) requiring minimums. The City of Portland, Oregon is used as an example: According to the article, Portland’s code was amended to restrict offices in the central business district to 0.7 parking spaces per 1,000 square feet and retail to 1.0 space per 1,000 square feet of net building area; and contrary to expectation, this has not led to a parking shortage because of the availability of transportation choices. Similar to Portland, several other communities have also reevaluated their parking codes toward smart growth consistency. Section 5.0 of this Report reviews a sample of those communities.

3.5. Impacts of Parking Oversupply

Numerous studies and surveys, such as the examples discussed in the previous section, identify high code ratios as the main reason for parking oversupply. According to these studies, ratios are high because they are typically drawn from generic parking ratios (such as ITE’s Parking Generation formulas) irrespective of site-specific and project-specific characteristics; and/or from the ratios used in nearby cities, which propagates mistakes and fails to reveal where the requirements came from in the first place. Many of these studies then emphasize negative impacts of parking oversupply and discuss how parking policies that lead to excess parking create disincentives to smart growth development and redevelopment. A comprehensive section on impacts of parking oversupply, through a literature review, is available in the Phase 1 Report. For this Phase 2 Report, the following language from the Smart Growth Parking Best Practices is a great summary of the issues associated with parking oversupply: “There are many problems associated with current parking ratios and the subsequent oversupply of parking. These traditional approaches to regulating parking lead to vast expanses of parking which in turn separate land uses, reduce densities, impair walkability, and create obstacles to providing transit

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6 This document is published by the Governor’s Office of Smart Growth in Maryland.
and pedestrian friendly communities. From a developer’s perspective, high parking ratios reduce the development potential of a site, requiring more land to be used for parking as opposed to a higher and better use, and adding significant costs to development projects. In fact, some development projects may not be financially feasible under current local parking policies.” This best practice document continues to say: “Addressing these concerns require local jurisdictions and developers to work together to revise parking policies to more appropriately manage parking. Revised parking policies should accommodate necessary parking, while at the same time encouraging attractive, pedestrian and transit friendly urban design.”

There are numerous other resources on this topic with similar sentiments that recommend shifting the focus of parking requirements from “quantity to quality.” Many of them recommend jurisdictions reevaluate and revise their parking ordinances to incorporate changes such as:

- Reduce minimum parking requirements;
- Include mechanisms to tailor parking requirements to specific development projects that take locational and demographic factors into account;
- Allow reductions to minimum parking requirements for developer’s commitment to implement transportation demand management programs;
- Adopt maximums to complement minimum parking requirements;
- Allow for shared parking at mixed-use development projects; and
- Improve the design of surface parking.

These best-practice recommendations align with Clark County’s initiative to update the Code. Reducing parking code ratios for certain land uses to better align parking supply with actual parking demand and improving parking design would have a positive impact on a variety of economic, social, and environmental concerns including:

- Increased economic potential of a site by allowing for more building square footage;
- Reduced sprawl and encouraging a more compact urban design;
- Enhanced access for alternative modes of transportation;
- Helping alleviate traffic congestion;
- Improved streetscapes and accessibility;
- Improved air and water quality; and
- Improved public safety and health.
4.0. FLEXIBLE AND CONTEXT-SENSITIVE PARKING STANDARDS

4.1. Impacts of Site-Specific Factors on Parking Demand

Chapter 30.60, in general, is currently not context-sensitive. The parking ratios are applied without taking site-specific factors into account. There are some programs and incentives in the Code that allow reduced parking based on certain criteria. However, they are usually not fully utilized, or are insufficient and need expansion.

At sites with multiple transportation choices, such as those with good transit access and/or within pedestrian-friendly environments located in high-residential-density areas, the lack of flexibility and site specific adjustments typically result in an oversupply of parking. Additionally, due to the lack of flexibility, infill developments are often not viable because providing the code required parking is space prohibitive.

Implementing programs and incentives to achieve reduced parking, due to site-specific factors, is an effective parking best practice for smart growth and sustainable development. Smart Growth Parking Best Practices (cited in the previous section) describes this best: “Rather than imposing inflexible requirements, local zoning ordinances could incorporate mechanisms to tailor parking requirements to specific development projects. The list of factors includes locational factors and demographic factors. For example, if a project is well served by mass transit, the project might generate a lower parking demand than what would otherwise be anticipated if relying on generic parking generation formulas. Moreover, if the proposed project is located amidst high-density development with a mix of land uses, there might be existing parking facilities nearby, thus reducing the demand for parking on-site. Users may also access the project and other nearby uses on foot, further reducing parking demand. The demographics of the anticipated users of a project, including employees, customers, and residents, will impact parking demand. For example, due to the high cost of car ownership, low-income residents have lower levels of car ownership than that of the general public. If the anticipated users of a proposed project have low levels of car ownership, the project might generate a lower parking demand than what would otherwise be anticipated. The age distribution of anticipated users will also be indicative of parking demand. For example, if the anticipated users of a proposed project are seniors, the project will necessitate less parking than what would otherwise be anticipated.” The best practices document continues to say “in addition to tailoring parking requirements for locational and demographic factors, local zoning ordinances might also prescribe reductions to minimum parking requirements on a project-by-project basis in exchange for a developer’s commitment to a transportation demand management program or payment of fees in lieu of providing the required parking.” A more comprehensive literature review of various site-specific factors and their impact on parking demand was conducted in Phase 1, and available in the Phase 1 Report.

RTC’s Complete Streets Guidelines states the following: “The key to parking strategies is creating a supply of available parking that is shared by many uses, whose peak parking demands will be at different times of the day and the week. This, together with a strong transit component and an attractive walking and biking environment, will reduce the required amounts of parking, which in turn will reduce costs, increase real estate utilization, improve environmental performance, and improve the urban environment for people. In larger neighborhood centers that require large off-street parking lots, the size of the lots can be reduced if they are shared by uses whose peak parking demand is in the daytime (offices) and uses whose peak use is at night (e.g.,
dinner restaurants and residences). Reducing parking saves cost, improves environmental performance, and improves the urban environment for people.”

4.2. Potential Programs and Incentives for Reduced Parking

The following programs and incentives were researched for possible inclusion in Chapter 30.60 as opportunities for reduced parking. These programs and incentives are identified through research of best practices and parking codes of several similar communities in the region. Adjusting parking requirements at a particular site to account for some of these factors would reduce the potential for parking oversupply, thereby contributing to a more sustainable overall parking and transportation program.

- **Bicycle credits:** Several parking codes, including current Chapter 30.60, offer automobile parking space reductions for providing bicycle spaces. The offered reductions differ amongst the codes. Some codes offer reductions only for the provision of long-term bicycle spaces while others offer reductions regardless of long-term or short-term. Clark County’s current program is limited as it allows a reduction of up to 10 spaces or 5 percent, whichever is less and requires several conditions to be met.

- **Transit credits:** Almost all of the reviewed codes offer some level of parking reduction based on the nearby transit service frequency and quality of service.

- **Transportation Demand Management (TDM) credits:** All of the reviewed codes offer some level of parking reduction for implementation of different TDM strategies, such as telecommuting, flexible work schedules, guaranteed ride home programs, car-share programs, and cash/in-kind financial incentives for the use of transit or carpooling. Chapter 30.60 also allows for reductions for similar strategies; however, the availability of the program is not well emphasized in the Code. Additionally, it is only available as a factor to justify a waiver of standards application.

- **On-street parking credits:** Counting on-street parking toward parking requirements is a recommended parking best practice. For example, RTC’s Complete Streets Design Guidelines states “amount of parking should be reduced to the extent possible by utilizing on-street parking.” Some of the codes reviewed offer credits for on-street parking (i.e., they count the availability of on-street parking toward the total parking requirements).

- **Unbundled parking credit:** Parking best practices include parking reductions for sites that unbundle parking as a recommended strategy (i.e., rent or sell parking separately rather than automatically including with building space). Some of the reviewed codes offer this credit.

- **Shared-parking reductions:** Almost all of the reviewed codes, including current Chapter 30.60, offer reduced parking for developments which allow parking spaces to be shared between various land uses that operate at different times from one another throughout the day. The number of eligible categories in the shared-parking table in current Chapter 30.60 (Table 30.60-2) is limited.

- **Walking and bicycling environment:** Parking best practices suggest parking can be reduced for sites near more pedestrian and bicyclist friendly environments with robust networks, such as those near urban trails.
- **Demographics:** Reviewed resources, including best practices, suggest that parking can be adjusted to reflect variations identified in the census and travel survey data for vehicle ownership rates, age, income, and auto ownership.

- **Residential and employment density:** Resources suggest that parking can be reduced for areas with high residential and employment densities. In such areas, residents are in proximity to services and employment. Automobile trips are lower than low-density areas, resulting in lower parking demand.

- **Reductions for adaptive reuse:** Some codes allow eligible existing properties to reduce the amount of required off-street parking. The idea is to encourage reinvestment in established neighborhoods, promote neighborhood preservation, revitalize neighborhoods, and endorse sustainability.

- **Sustainably designed parking facility credits:** Reduction of stormwater runoff through innovative and low-impact stormwater management systems is a recommended best practice. Some codes offer parking reduction credits for such designs. Additionally, a few of the reviewed codes offer credits for sites designed with energy-efficient parking systems such as the use of solar panels and electric car charging stations. In some codes that the study team reviewed, providing electric vehicle charging stations for a portion of the total parking spaces is a requirement. Southern Nevada Strong’s recommendations include incentivizing the construction of electric vehicle charging stations in local government zoning codes by offering parking reductions and other zoning related incentives.

Section 8.0 documents the proposed programs and incentives for addition to the County’s Code, selected amongst the above potential options. The proposed changes documented in Section 8.0 incorporate stakeholder and public feedback.

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7 The City of Hartford’s code requires 3 percent of the total parking spaces to be electric vehicle charging stations for uses with over 35 spaces. Similarly, California’s CALGreen Code (California Code of Regulations, Title 24 - Part 11) requires mandatory electric vehicle charging spaces for all non-residential new construction with over 50 parking spaces. California’s current requirement is also 3 percent.
5.0. NATIONWIDE PARKING STANDARDS FOR SMART GROWTH CONSISTENCY

Reevaluation of parking standards for sustainability and smart growth is not unprecedented. More and more communities in the United States are evaluating new ways to manage parking supply and demand as part of their overall smart growth initiatives and goals. This section includes a review of parking standards for a sample of those communities.

**Hartford, Connecticut**

Hartford, Connecticut revised its zoning regulations in January 2016 to reflect the parking principles related to smart growth. The revised zoning regulations reduce parking requirements, eliminating them entirely in downtown zones, eliminating and reducing minimums for uses outside of downtown, and instituting parking maximums everywhere. Table 5-1 consists of the changes made in the 2016 Zoning Regulations for the land uses that are closest to the shopping and industrial land uses that were investigated in the Clark County Parking Study.

**Table 5-1: Comparison of 2015 and 2016 Parking Requirements in Hartford, Connecticut**

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Section 954 - Restated Zoning Regulations April 28, 2015</th>
<th>Section 7.0 - Zoning Regulations January 19, 2016</th>
</tr>
</thead>
</table>
| Retail     | Minimum: One (1) space for every six hundred (600) square feet net floor area  
Maximum: Five (5) spaces for every one thousand (1,000) square feet net floor area | Minimum: None  
Maximum: Three (3) spaces for every one thousand (1,000) square feet net floor area devoted to retail space |
| Industrial | Minimum: One (1) space for every four (4) employees  
Maximum: One (1) space for every one thousand (1,000) square feet net floor area | Minimum: One (1) space for every four (4) employees  
Maximum: Four (4) spaces for every four (4) employees |
| Restaurant | No minimum or maximum requirement stated | Minimum: None  
Maximum: Three (3) spaces for every five (5) persons based on maximum capacity |

The Hartford case study was the only study where both the previous and the new requirements are readily available for comparison. It appears that information on previous versions of other jurisdictional codes is removed after the changes have been made to eliminate confusion. The case studies listed below provide a general description of the changes in parking requirements that were enacted in a sample of other jurisdictions.

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Miami, Florida⁹

Miami has amended its Miami 21 Code more than once for various parking related issues. Mandatory parking requirements led to a parking oversupply in Miami, and in 2010, the city dropped parts of its zoning code that required a minimum number of spaces for each new unit. The change contributed to the start of new high-rise developments downtown, some of which contain no parking at all.

The following are the most recent and relevant amendments:

- (2011 – Legislative ID #11-00585zt): Parking requirements for office and commercial land uses in certain transects can be reduced by thirty (30) percent for projects within a ½ mile radius of a Transit Oriented Development or within a ¼ mile radius of a Transit Corridor.
- (2014 – Legislative ID #08-01015zt1): Minimum and maximum required parking standards set for the Miami World Center District, a mixed-use development planned for Downtown Miami (Table 5-2).

Table 5-2: Miami World Center Parking Requirements

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Section 11 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail and Commercial (assumed to include Restaurant)</td>
<td>Minimum: One (1) space for every one thousand (1,000) square feet</td>
</tr>
<tr>
<td></td>
<td>Maximum: One (1) space for every three hundred (300) square feet</td>
</tr>
<tr>
<td>Office</td>
<td>Minimum: One (1) space for every one thousand (1,000) square feet</td>
</tr>
<tr>
<td></td>
<td>Maximum: One (1) space for every six hundred (600) square feet</td>
</tr>
</tbody>
</table>

- (2015 – Legislative ID #14-1076zt1): Parking requirements can be reduced by more than thirty (30) percent to not more than fifty (50) percent by process of Waiver and by payment into a transit enhancement Trust Fund, or by one hundred (100) percent for any structure with a floor area of ten thousand (10,000) square feet or less.

Portland, Oregon¹⁰

Title 33 of the Portland City Code was revised in 2002 to encourage the use of alternative transportation modes and to better align parking supply and demand by developing minimum and maximum parking requirements. The code assigns minimum parking requirements to Standard A and maximum parking requirements to Standard B (Table 5-3). Select employment and commercial zones have restrictive maximum parking requirements.

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⁹ Miami 21 Code. City of Miami (Florida), 2014.
¹⁰ Title 33, Planning and Zoning. City of Portland (Oregon), 2015.
The zoning ordinance specifies that the purpose of such provisions is to promote the efficient use of land, enhance urban form, encourage the use of alternative modes of transportation, provide for better pedestrian movement, and protect air and water quality. The imposition of maximum parking requirements has not led to a parking shortage because of the increased provision of, and availability of alternative transportation choices in the area.

**Table 5-3: Parking Requirements in Portland, Oregon**

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Table 266-2 2002</th>
</tr>
</thead>
</table>
| Manufacturing | Standard A: One (1) space for every seven hundred fifty (750) square feet of net building area  
Standard B: One (1) space for every five hundred (500) square feet of net building area |
| Retail | Standard A: One (1) space for every five hundred (500) square feet of net building area  
Standard B: One (1) space for every one hundred ninety-six (196) square feet of net building area |
| Restaurant | Standard A: One (1) space for every two hundred fifty (250) square feet of net building area  
Standard B: One (1) space for every sixty-three (63) square feet of net building area |
| Office | Standard A: One (1) space for every five hundred (500) square feet of net building area  
Standard B: One (1) space for every two hundred ninety-four (294) square feet of net building area |

**San Francisco, California**

San Francisco passed a bicycle parking ordinance in 2013 which:

- Identifies separate requirements for two types of bicycle parking: long-term parking for residents and employees (Class One - lockers or bike rooms with controlled access), and short-term parking for visitors (Class Two - bike racks with uncontrolled access).
- Defines requirements for multiple use categories based on anticipated generated bike trips for each use.
- Increases bicycle parking requirements for all uses, based on other similar urban cities: Vancouver, Portland, New York, and National Standards.
- Prioritizes easy and direct access to bicycle parking facilities through location and placement requirements.
- Allows conversion of required car parking to bicycle parking.

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11 [http://sf-planning.org/bicycle-parking-requirements](http://sf-planning.org/bicycle-parking-requirements)  
http://www.parkabike.com/city-bike-ordinance-san-francisco
Establishes design, layout, and clearance standards through user-friendly graphics in a Zoning Administrator Bulletin.
Prohibits obtaining a variance for the quantity of bicycle parking.
Establishes new, increased requirements for the provision of showers and lockers based upon use type and occupied floor area.
Allows payment of in-lieu fee to satisfy portions of Class two bicycle parking requirements.
Establishes a bicycle parking fund for the provision of short-term bicycle parking.
Requires existing city-owned buildings and garages to conform to the new requirements within a one year period.

Berkeley, California

Berkeley has supported parking policies and regulations that reduce vehicle use to reduce impacts on the community and the environment, and amended their code in 2012 to reinforce those values specific to certain land uses. As reported in the Parking Code Guidance: Case Studies and Model Provisions (2012), the citizens of Berkeley have embraced multi-modality. The city has excellent transit access, and fifteen percent of employed Berkeley residents commuted to work on foot and nine percent of employed Berkeley residents commuted by bicycle. Berkeley’s parking requirements establish maximum rates for retail, restaurant, and office uses, as shown in Table 5-4.

**Table 5-4: Parking Requirements in Berkeley, California (2012)**

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Section 23E.64.080 2012</th>
</tr>
</thead>
</table>
| Manufacturing | Minimum: One (1) space for every one thousand (1,000) square feet of floor area.  
Maximum: None |
| Retail    | Minimum: None  
Maximum: Four (4) spaces for every one thousand (1,000) square feet of gross floor area |
| Restaurant | Minimum: One (1) space for every three hundred (300) square feet of floor area  
Maximum: Five (5) spaces for every one thousand (1,000) square feet of gross floor area |
| Office    | Minimum: None  
Maximum: Four (4) spaces for every one thousand (1,000) square feet net floor area |

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The zoning officer may approve a reduction in required off-street parking spaces in Berkeley’s commercial districts based on findings, including:

- The use is located one-third of a mile or less from a Bay Area Rapid Transit (BART) station, intercity rail station or rapid bus transit stops.
- The use is located one-quarter of a mile or less from a publicly accessible parking facility, the use of which is not limited to a specific business or activity during the use’s peak parking demand.
- A parking survey conducted under procedures set forth by the Planning Department finds that within 500 feet or less of the use, on non-residential streets, at least two times the number of spaces requested for reduction are available through on-street parking spaces for at least two of the four hours of the use’s peak parking demand.
- The use includes one of the following neighborhood-serving uses: Retail Products Store(s), Food Service Establishments, and/or Personal/Household Service(s). These uses include, but are not limited to Dry Cleaning and Laundry Agents, Drug Stores, Food Products Stores, Household Items Repair Shops, and/or Laundromats.
- The parking requirement modification will meet the purposes of the district related to improvement and support for alternative transportation, pedestrian improvements and activity, or similar policies.
- There are other factors, such as alternative transportation demand management strategies or policies in place that will reduce the parking demand generated by the use.

**Sacramento, California**

The City of Sacramento, in 2012, made significant reductions in minimum parking standards and also established maximums for office uses, with the result being a fairly narrow band of parking ratios.

- In the Central Business District (CBD): Not more than 1 space per 500 gross sq. ft.
- Within the Central City but outside the CBD: Not less than 1 space per 450 gross sq. ft. (2.2 spaces per 1,000 gross sq. ft.) and not more than 1 space per 400 gross sq. ft. (2.5 spaces per 1,000 gross sq. ft.).
- Outside the Central City: Not less than 1 space per 400 gross sq. ft. (2.5 spaces per 1,000 gross sq. ft.) and not more than 1 space per 275 gross sq. ft. (3.6 spaces per 1,000 gross sq. ft.).

These changes were feasible because of the rail transit system that provides access to the CBD and the Central City with radial routes.

**Philadelphia, Pennsylvania**

Philadelphia has been steadily improving bike facilities throughout the city, and in 2009 it amended its zoning code with a new bike ordinance. The new standards require all new commercial, multi-family residential, recreational, hotel, and transit-adjacent properties to

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provide secure and convenient bike parking. The ordinance sets specific location, security and design standards for the bike racks. These requirements are applied to new developments, changes in uses of existing buildings and additions of more than 10% of the gross floor area.

Borough of Metuchen, New Jersey\textsuperscript{15}

The Metuchen Parking Authority completed a Downtown Parking Study in 2014 that determined there is sufficient supply of parking in its downtown. It recommended that the Land Development Ordinance be amended to reduce minimum parking requirements, establish maximum parking requirements, and permit payments in lieu of parking (PILOP) in the downtown. These recommendations were then adopted by the Planning Board in an amendment to the Metuchen Master Plan on June 19, 2014. In February 2015, the borough adopted Ordinance 2015-04 implementing these new protocols, cutting the parking requirements by 50 percent in the downtown area and establishing the PILOP.

Oakland, California\textsuperscript{16}

Oakland City Council recently (September 2016) approved sharp reductions to its parking requirements. The changes reduce the amount of parking required for residential and commercial buildings throughout the city, with the largest reductions concentrated in areas closest to major transit hubs. In those areas, the new regulations reduce the required parking to zero and instead set a cap on the maximum amount of parking allowed. The regulations provide incentives, and in some cases requirements, for developers to offer car sharing spaces or transit bus passes. The new rules also require property owners to charge tenants separately for parking, rather than including it with the rent unless those tenants live in affordable housing. The council approved amendments to the proposal that requires a review of the new regulations in two years and creates a method for the city to ensure that car sharing spaces or transit passes are maintained even when a building changes owners.

\textsuperscript{15} Effective Parking Management. Sustainable Jersey, 2016.

\textsuperscript{16} http://www.eastbaytimes.com/2016/09/20/oakland-council-approves-sweeping-reductions-to-parking-for-new-developments/
6.0. BEST PRACTICES FOR PARKING DESIGN

Chapter 30.60 does not currently have a comprehensive section on parking design. There are design standards on items such as parking stall dimensions, mobility impaired accessible spaces, loading spaces, and maneuvering; however, overall parking lot layout, especially for the accommodation of pedestrians and cyclists, is not covered. Other relevant chapters of Title 30, such as Chapter 56 (Site Development Standards), do not include parking lot layout design either, except for Chapter 64 (Landscaping Standards) which includes a section on parking lot landscaping.

Lack of comprehensive parking lot design standards may lead to improperly designed parking facilities, which has many consequences including:

- An environment that is uninviting to pedestrians, bicyclists, and transit users.
  - Lack of pedestrian access and circulation paths, making walking or taking transit to the site difficult or impractical.
  - Unsafe conditions for pedestrians due to vehicular conflict points.
  - Lack of bicycle facilities, preventing bicycling to the site.
- Unwelcome visual conditions created by open expanses of paving, especially when combined with a lack of proper landscaping.
- Increased heat island effect by vast expanses of asphalt or concrete surfaces.
- Unfiltered stormwater runoff due to impervious surfaces that can harm natural drainage patterns and ecosystems.

Many of these issues are prevalent in Clark County. Parking lots in many shopping centers are auto-oriented. They are directly adjacent to the street, buffering the buildings and stores from the street front. Parking lots located between the sidewalk and buildings make walking more onerous. Developers have typically provided parking areas in front of retail uses where it is highly visible and readily available. However, the placement of parking facilities in front of buildings has a negative effect on people as they walk or even drive by. Such site designs directly conflict with the smart growth and sustainable development goals of the County and the RTC.

The study team reviewed a number of resources, including parking design code requirements from a sample of other communities, to identify industry best practices that promote better parking lot designs and can inform Clark County’s Code. The following specific resources were reviewed:

- Local city codes in Clark County (City of Las Vegas, City of Henderson, and City of North Las Vegas).
- Codes from other communities in the region with generally more progressive parking codes, including Portland and Seattle.
- Parking codes nationwide in communities that have recently reevaluated them for smart growth consistency.
- Southern Nevada Strong Regional Plan’s recommendations related to parking design.
• Relevant ITE publications such as *Transportation and Land Use, Traffic Engineering Handbook*, and *Promoting Sustainable Transportation through Site Design: An ITE Proposed Recommended Practice*.

• Recommendations related to parking design from RTC’s Complete Streets Design Guidelines.

• Southern Nevada Regional Planning Coalition’s *Recommended Best Practices for Urban Trees in Southern Nevada*.

• A sample of smart growth design publications and resources:
  - *Pedestrian and Transit-Friendly Design: A Primer for Smart Growth*. Based on a manual prepared for the Florida Department of Transportation and published by the American Planning Association.
  - Nonpoint Education for Municipal Officers (NEMO) guidelines for sustainable parking lot design.
  - Website of Smart Growth America, a national coalition of state and local organizations working for smart growth across the country.\(^\text{17}\)

• Select documents from other communities with more comprehensive parking design guidelines:
  - Suburban Community Design Guide for Chester County, PA
  - Design and Construction Standards and Specifications for Development for City of Everett, WA
  - Design Standards for Commercial and Community Facility Parking Lots for New York City
  - Best Practices: Parking Management and Design, Des Moines Area MPO
  - Chester County, PA Comprehensive Policy Plan

• Parking lot design standards in Clark County Overlay Districts, specifically Mixed Use Overlay District, Cooperative Management Area (CMA) Overlay District, South of Sahara Avenue (SOSA) Overlay District, and Draft Maryland Parkway Overlay District.

Common best practices themes identified from these resources, for potential inclusion in Chapter 30.60, are listed below. The proposed design changes to the Code are selected amongst these best practices, and documented in Section 8.0. The proposed changes in Section 8.0 incorporate stakeholder and public feedback.

\(^{17}\) http://www.smartgrowthamerica.org/2014/08/12/smarter-parking-codes-to-promote-smart-growth.
- Design sites such that vehicles are not the dominant feature. Create an environment that is inviting to pedestrians, bicyclists, and transit users. Provisions for pedestrian circulation and safety are essential.
  - Provide wheelchair accessible pedestrian pathways throughout the lot.
  - Provide pedestrian and wheelchair access from public sidewalks and bus stops to building entrances through the use of pedestrian paths which are physically separated from vehicle traffic areas.

A pedestrian connection. Source: City of Henderson Development Code

Dedicated bus stop connection. Source: Parking Lots: Where Motorists Become Pedestrians
• The pedestrian pathways should be landscaped and or delineated by non-asphaltic material in a different color or texture from the parking area to enhance pedestrian safety and improve the appearance of the parking lot.

Source: Driving Urban Environments: Smart Growth Parking Best Practices

• Parking lots and structures should be located behind buildings rather than in front of them, so they do not dominate street frontage. The location of parking facilities behind buildings is vital in creating more welcoming and pedestrian-friendly streetscapes that will attract users over and over again. Putting parking behind buildings creates more walkable streets and active storefronts. Additionally, front buildings provide shading for sidewalks.

Source: Quantity versus Quality in Off-Street Parking Requirements

• If front yard parking is permitted, limit parking and driveway coverage.
• Minimize the number of access points to parking lots along streets. Consolidate parking access points with those of adjacent sites. Allowing for shared vehicular access points helps to reduce the number of conflict points along the street, while still allowing for direct access to businesses.
• Link parking areas of adjacent sites through continuous, cross-property parking aisles. This linking allows individuals to travel between sites without having to access the adjacent road/path system, reducing trip distances and times. It also helps to reduce overall parking requirements by allowing sites to share parking.

• Separate parking rows with plantings and/or walkways to provide pedestrian refuge, define the vehicle circulation system, prevent high-speed diagonal movements, and improve aesthetics.

• Orient parking rows perpendicular to building entrances and access routes to minimize the number of traffic aisles that pedestrians must cross and prevent cutting between parked cars.

• Large parking lots should be broken up into sub-area lots. Breaking up large parking lots into two or more areas can reduce the total amount of impervious surface and disconnect paved surfaces, thereby reducing stormwater runoff and facilitating groundwater recharge. This practice also breaks up the perceived visual mass of parking facilities and can help to integrate “big box” uses into neighborhood shopping districts.

• Parking lots should be well landscaped. Landscaping provides a canopy cover and reduces the urban heat island effect in the summer. Landscaping not only provides shade on hot days, absorbs carbon dioxide, and reduces pollutants emitted by vehicles as they sit in the sun, but also breaks up the visual impact, making the parking lot feel smaller and less overwhelming.

Example landscaping design criteria. Source: Design Standards for Commercial and Community Facility Parking Lots for New York City

• Consider underground or structured parking as an option to large parking lots. Underground and structured parking minimizes land consumed for parking and provides opportunities to increase development densities. At the same time, less surface parking reduces walking and cycling distances and minimizes the conflict points between pedestrians and vehicles. Additionally, impervious surfaces are reduced.
A retail center in Maryland, with a structured parking facility to accommodate the necessary parking - this view is the back of the structure; the front of the structure incorporates retail uses. 

Source: Driving Urban Environments: Smart Growth Parking Best Practices

- Provide uniform signage throughout the parking lot for autos, pedestrians, and bicyclists.
- Bicycle parking design should consider security, placement, and quality of facilities, and provision of signs directing bicyclists to the parking facilities.
- Loading docks and service functions should be designed to not conflict with pedestrian entrances from sidewalks into the facility.
- The amount of impervious surfaces should be reduced. Parking lots should be designed to reduce water pollution through innovative stormwater management systems including, permeable pavement, alternative pavers, bio-swales and filter strips, bio-retention areas, open sections, and depressed medians.

A sample treatment to reduce stormwater runoff. Source: City of Henderson

Figure 6-1 illustrates a site design that incorporates some of the above best practices.
Figure 6-1: An Example Site Design that Incorporates Design Best Practices
7.0. OUTREACH

7.1. Stakeholder Outreach
The study team identified an initial set of potential changes to the Code based on all of the supporting information discussed in Sections 2.0 through 6.0. This initial set of draft changes was presented at two stakeholder group meetings held on September 19 and 21, 2016 at the Clark County Government Center. A total of 38 individual stakeholders attended the meetings, including representative members of the local business, gaming, and development community. Liaisons to the Clark County Commissioners, as well as staff from other local city governments also attended these meetings. Appendix D includes the invitation list and the sign-in sheets.

The meeting presentation and the handouts of the draft changes that were made available to the attendees at the September 2016 stakeholder meetings are provided in Appendix D. Stakeholders provided comments during the meetings as well as during a two-week comment period following the meetings. Invitees that could not attend were also given the opportunity to comment by providing them with the meeting material. The stakeholder comments and responses are compiled in a series of comment matrices and are provided in Appendix D.

Two additional stakeholder group meetings were held on January 18 and 19, 2017 at the Clark County Government Center. A revised set of draft changes to the Code were presented at these second stakeholder group meetings. The revised set of changes, which were made available to the invitees in advance, incorporated stakeholder and public feedback on the initial set of draft changes presented at the first stakeholder group meetings in September 2016. A total of 25 individual stakeholders attended these January 2017 meetings. The attendees again included representative members of the local business, gaming, and development community; liaisons to the Clark County Commissioners; and staff from other local city governments. The comments made at these second stakeholder meetings are also provided in Appendix D.

7.2. Town Advisory Board and Citizens Advisory Council Presentations
The initial set of draft changes (i.e., those made available to the stakeholders) were presented to the Clark County Town Advisory Boards (TABs) and Citizens Advisory Councils (CACs) during the week of October 10, 2016. The TABs/CACs accepted and commented on the Study. These comments were generally supportive of the potential recommended changes. The TABs/CACs also made several recommendations. These comments and recommendations along with responses are included in the comment matrices provided in Appendix D.

7.3. Public Outreach
A public open house was held to obtain the general public’s feedback on the Study and the potential changes to the Code. The draft code changes presented to the stakeholders and TAB/CACs were refined and revised based on their feedback, and these revised versions were presented at the open house. Appendix D includes these draft changes to the Code as presented at the public open house.

Prior to the public outreach activities, a public information plan was developed and executed to publicize the public open house. The intent of this plan was to document the various methods by which the open house would be noticed to the general public. The Public Information Plan is included in Appendix D.
The public open house was noticed via the following methods. The open house invitation/flyer is shown in Figure 7-1.

- Announcements at TAB/CAC meetings
- Open house announcement flyers at Clark County community centers and libraries
- Flyers at Clark County Government Center Department of Comprehensive Planning front counter
- As part of the Maryland Parkway Coalition’s outreach efforts for their meeting
- Posting on American Planning Association (APA) Nevada Chapter’s website

**Figure 7-1: Public Open House Invitation/Flyer**

The open house was held jointly with the Maryland Parkway Coalition’s October 2016 meeting at the Boulevard Mall. Maryland Parkway Coalition consists of interested business owners, residents, and community leaders that live or conduct business within the Maryland Parkway corridor. They meet quarterly to discuss issues and solutions for the corridor. Their meeting was selected as a venue to present the Clark County Parking Study, as Maryland Parkway Coalition’s goals align well with the goals of the Clark County Parking Study. Additionally, the Coalition includes an engaged group of individuals that could provide valuable feedback on the proposed changes.

A total of 46 individuals, mostly Maryland Parkway Coalition stakeholders, attended the Maryland Parkway Coalition/Clark County Parking Study open house. Appendix D includes the sign-in sheets along with the other public open house materials such as the information boards, presentation, and handouts. The attendees provided comments at the open house. They were also given an opportunity to provide additional feedback during a two-week comment period following the open house. The comments and responses to comments are compiled in a comment matrix and provided in Appendix D. A summary memorandum for the open house is also provided in Appendix D.
8.0. **DRAFT PROPOSED CHANGES TO THE CODE**

This section documents the draft proposed changes to the Code. The proposed changes incorporate stakeholder, TAB, CAC, agency, and public comments. These draft proposed changes, along with the supporting Study information and findings will next be presented to the Board of County Commissioners and the County Planning Commission for feedback and further direction.

8.1. **Parking Ratio Changes**

Section 3.0 presented the survey data and other supporting information for potential changes to parking ratios. The proposed parking ratio reductions are presented below for each studied use.

**Retail/Shopping Center:** Reduce the current ratio of 4:1,000 square feet of GFA by 25 percent to 3:1,000 square feet of GFA.

The survey data indicated an average of 25 percent excess parking for shopping centers (based on average of medium and large shopping centers that are surveyed), which is the primary basis for the above recommendation. The more recently updated codes for other communities nationwide generally require less than the 4:1,000 square feet of GFA ratio. For example, the City of Hartford’s code requires a maximum of 3:1,000 square feet of net floor area. Some of the cities that were reviewed had ratios as low as 2:1,000 square feet of GFA. Tables that present the parking ratios in all of the reviewed codes are included in Appendix C.

In Phase 1, a sample of shopping sites with a variety of commercial and/or retail uses with less than 25,000 square feet of GFA was also surveyed. As discussed previously, such sites do not fall into the “shopping center” definition, and per Chapter 30.60, their minimum parking is calculated based on the parking ratio of each use within the site. The Phase 1 Study, based on a survey of three such sites, had concluded that this “individual use” approach might result in parking oversupply. Consequently, the Phase 1 Study recommended that such sites (i.e., smaller than 25,000 square feet of GFA) should be considered for inclusion in the “shopping center” definition, and thus, be parked at the single shopping center parking ratio. After further consideration and stakeholder concerns raised in Phase 2, it was decided not to expand the shopping center definition to sites smaller than 25,000 square feet of GFA. Additionally, since restaurants generally demand more parking and a source of concern in smaller shopping centers, the following is proposed: Restaurants in shopping centers up to 50,000 square feet of GFA shall be parked at their individual restaurant ratio of 10:1,000 square feet of GFA (plus 4:1,000 square feet for outside dining) instead of the proposed single shopping center ratio of 3:1,000 square feet of GFA.

**Resort Hotel:** Reduce the current ratios by 30 percent and remove the following clause from Item 3D in Table 30.44-1: “Parking shall not be reduced by more than 30 percent of the parking spaces required”. The new ratios would be:

- 0.7: guestroom up to 500 rooms
- 0.7: 2 guestrooms over 500 rooms up to 1,000 rooms
- 0.7: 4 guestrooms over 1,000 rooms
- 4.2: 1,000 square feet for all areas accessible to the public except convention facilities
- 0.7: 1,000 square feet for convention facilities and areas not accessible to the public
With the current Code, a 30 percent reduction has been granted to resorts that request such a reduction through a “parking deviation” based on the above-referenced clause in Chapter 30.44. The proposed 30 percent reduction is consistent with this current practice. The average excess parking from the survey data is 36 percent, and therefore also supports this recommendation.

**Industrial:** Reduce the current ratio of 2:1,000 square feet of GFA by 25 percent to 1.5:1,000 square feet of GFA.

Industrial sites were included in the surveys to identify any parking issues or impacts related to the commercial use/conversion of these sites. The selected industrial sites, therefore, included a mixture of commercial uses such as retail, recreational uses and health/fitness centers. The survey results showed no adverse impacts of such conversions. In fact, the average excess parking at these industrial/commercial sites was approximately 50 percent. Therefore, a reduction in parking ratios for industrial use was deemed appropriate. A 25 percent reduction was proposed, consistent with the proposed reductions for shopping centers. A 50 percent reduction was deemed too high without future investigation and additional data collection.

**Office and Financial Services:** Reduce the current ratio of 4:1,000 square feet of GFA to 3:1,000 square feet of GFA.

The Study surveys did not include sites for standalone office uses. However, based on available national data and reviewed codes, including ITE’s *Parking Generation*, parking ratios for general office is lower than that for retail uses. Therefore, a reduction in the office ratio of 4:1,000 was deemed appropriate to at a minimum match the new proposed shopping center ratio.\(^\text{18}\)

### 8.2. Programs and Incentives for Reduced Parking

Section 4.0 documented a comprehensive list of potential programs and incentives for reduced parking that can be added to the Code. The following additions to Section 30.60.040 of the Code are proposed and were selected amongst those potential programs.

It should be noted that these proposed changes do not include TDM programs. The current Code already includes such programs. However, the County should consider expanding those existing TDM programs in the future and include them as part of available parking reduction credits, as opposed to the current Code language where TDM is only an available factor to justify a waiver of standards application. The initial set of recommended changes, which are included in Appendix D, includes language for an expanded version of the current TDM program in the Code (as a program for a parking reduction credit), and the County can utilize that expanded version in the future Code updates.

### 8.2.1. Parking Reduction Credits

The Zoning Administrator may authorize credit (i.e., parking reduction) towards on-site parking requirements for all uses, as appropriate, for achieving one or more of the following credits. Existing developments can take advantage of these incentives. If any conditions or agreements required by this section are no longer available or in force, then parking shall be provided as otherwise required in this chapter. The maximum cumulative reduction that will be granted using a combination of these credits is 30 percent.

\(^\text{18}\) Reductions to medical/dental offices are not proposed. The current ratio of 4:1,000 square feet of GFA for medical/dental offices is appropriate for medical/dental offices.
Transit Credits:

- Reductions up to 5 percent are allowed if the development is within 1,320 feet of a current or planned RTC transit stop or existing Las Vegas Monorail stop. This distance is the walking distance (using the nearest pedestrian route) measured from the transit stop to a public, pedestrian entrance to the use. To be eligible for this credit, the transit service shall provide frequencies of 20 minutes or less (based on RTC’s and Monorail’s published schedule) during the site’s peak activity periods as defined by the Urban Land Institute, Institute of Transportation Engineers, and/or American Planning Association’s parking utilization statistics.

- Reductions up to 5 percent are allowed if the developer provides a bus stop with shelter adjacent to the site. The applicant must provide confirmation from RTC indicating RTC will use the facility. A walkway that connects the bus shelter to the primary building entrance shall be provided.

- Large commercial centers where at least one street lot line abuts an RTC transit street may substitute transit-supportive plazas, as described below, for required parking.
  - Transit-supportive plazas may be substituted for up to 5 percent of the required parking spaces on the site.
  - The plaza must be adjacent to and visible from the transit street. If there is a bus stop along the transit street, the plaza must be adjacent to the bus stop.
  - The plaza must be at least 300 square feet in area.
  - The plaza must include all of the following elements:
    - The owner must record a non-revocable public access easement that allows public access to the plaza.
    - A bench or other sitting area with at least 10 linear feet of seating.
    - A shelter or other weather protection. The shelter must cover at least 30 square feet. If the plaza is adjacent to the bus stop, RTC must approve the shelter.
    - At least 10 percent, but not more than 25 percent of the transit-supportive plaza must be landscaped.

Bicycle and Motorcycle Credits:

- For all uses, the provision of short-term bicycle parking over and above the required bicycle parking (per Section 8.3) may be credited against the vehicular parking requirement at a rate of one vehicular parking space credit for every 6 short-term bicycle parking spaces.

- The provision of long-term bicycle parking may be credited against the vehicular parking requirement at a rate of one vehicular parking space credit for every 3 long-term bicycle parking spaces. Wherever shower and changing facilities for bicyclists are provided, credit may be granted at the rate of 2 vehicular spaces per 1 shower in addition to the bicycle space credit.19

19 The shower credit is provided in the current Code (as written herein), and included here for reference.
• Reductions up to 5 percent of the vehicular parking space requirement are allowed through bicycle (short-term and long-term combined) and shower credits.
• Up to 0.5% of the required vehicular spaces can be provided as motorcycle spaces.

**On Street Parking Credit:**

• Where parking spaces are available on a public street (where allowed) along the frontage adjacent to the use, one-half of the on-street parking spaces along the street frontage may be counted toward the off-street parking requirement for the development.

**Transportation Network Companies:**

• Reductions up to 3 percent are allowed if the developer provides design elements to facilitate drop-off/pickup in convenient locations for Transportation Network Companies (e.g., Uber, Lyft). Taxi cab companies are allowed to use these locations also, so long as Transportation Network Companies are allowed convenient pickup/drop-off.

**Other Credits:**

Reductions up to 5 percent based on the following site-specific factors can be granted.

• For sites with priced parking.
• Development projects that unbundle parking (i.e., rent or sell parking separately rather than automatically including with building space) or provide rebates to households with no vehicles and will not use their allotted parking space or spaces.
• For multi-family residential neighborhood commercial, and other neighborhood uses (e.g., community center, church), parking requirements can be reduced in low auto ownership areas. The applicant must be able to demonstrate low auto ownership based on census and/or RTC travel demand model data.
• For multi-family residential, neighborhood commercial, and other neighborhood uses (e.g., community center, church), parking requirements can be reduced in walkable and bicycle friendly areas (i.e., those with a network of pedestrian and bicycle facilities that connect to the site). The applicant must demonstrate the existence of these facilities as well as their use through pedestrian and bicycle volume studies. The existence of a typical five-foot sidewalk network adjacent to and in the vicinity of the site does not by itself qualify that site for this credit.

These credits are most appropriate for urbanized areas within Clark County, and would generally not be applicable in rural areas.

**8.2.2. Shared Parking Schedule**

Table 8-1 shows the proposed update to the Shared Parking Schedule Table (Table 30.60-2) in the Code. The new table includes additional uses and offers more flexibility.

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20 It should be noted that residential uses have not been surveyed as part of this Study, and therefore, parking ratio changes are not proposed for residential uses. However, some of the recommended changes (such as this one in the parking reduction credits section) apply to residential uses also, as appropriate.
8.2.3. Automated (Robotic) Parking

The current Code includes a section on automated (robotic) garages, which can be reviewed in Appendix A. The current Code does not offer any incentives for providing such facilities. Instead, it simply states such facilities may be permitted. These facilities are typically more efficient; therefore, they should be encouraged by offering parking credits. The following revised language for automated parking garages provides the flexibility to take advantage of the increased efficiency of such facilities.

An alternative quantity of required parking can be considered for an automated (robotic) parking garage system for all commercial, mixed use, and high-rise residential development. Factors to be considered as part of the application include, but are not limited to, the following:

- Evidence that demonstrates fewer spaces than required by Table 30.60-1 are adequate for the automated parking facility than a typical parking facility.
- Where applicable, the automatic (robotic) garage system will provide convenient access to available (or proposed) pedestrian connections.
- All building facades of an automated (robotic) parking garage system shall be architecturally compatible and designed to blend with the surrounding development.

Table 30.60-2 Shared Parking Schedule

<table>
<thead>
<tr>
<th>General Land Use Classification</th>
<th>Weekdays</th>
<th></th>
<th></th>
<th>Weekends</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mid-7am</td>
<td>7am-6pm</td>
<td>6pm-Mid</td>
<td>Mid-7am</td>
<td>7am-6pm</td>
<td>6pm-Mid</td>
</tr>
<tr>
<td>Office, Medical, Dental Offices and Clinics, Financial Services, Industrial</td>
<td>5%</td>
<td>100%</td>
<td>5%</td>
<td>0%</td>
<td>60%</td>
<td>10%</td>
</tr>
<tr>
<td>Retail</td>
<td>0%</td>
<td>100%</td>
<td>80%</td>
<td>0%</td>
<td>100%</td>
<td>60%</td>
</tr>
<tr>
<td>Residential</td>
<td>100%</td>
<td>55%</td>
<td>85%</td>
<td>100%</td>
<td>65%</td>
<td>75%</td>
</tr>
<tr>
<td>Restaurant, Bar/Lounge/ Tavern, Hookah Lounge</td>
<td>50%</td>
<td>70%</td>
<td>100%</td>
<td>45%</td>
<td>70%</td>
<td>100%</td>
</tr>
<tr>
<td>Hotel</td>
<td>100%</td>
<td>65%</td>
<td>90%</td>
<td>100%</td>
<td>65%</td>
<td>80%</td>
</tr>
<tr>
<td>Cinema/Theater</td>
<td>0%</td>
<td>70%</td>
<td>100%</td>
<td>5%</td>
<td>70%</td>
<td>100%</td>
</tr>
<tr>
<td>Place of Worship</td>
<td>0%</td>
<td>5%</td>
<td>20%</td>
<td>0%</td>
<td>100%</td>
<td>40%</td>
</tr>
<tr>
<td>Health/Fitness Studio/ Recreational Uses</td>
<td>0%</td>
<td>60%</td>
<td>100%</td>
<td>0%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

How to use the Parking Schedule: Calculate the number of spaces required for each use if it were freestanding per Table 30.60.1. Applying the applicable general land use category to each proposed use, use the percentages to calculate the number of spaces required for each time period, (6 time periods per use). Add the number of spaces required for all applicable land uses to obtain a total parking requirement for each time period. Select the time period with the highest total parking requirement and use that total as your shared parking requirement. The Zoning Administrator may approve other similar uses if justified by the applicant.
8.3. Bicycle Parking Requirements

There is currently no requirement in Chapter 30.60 for the provision of bicycle parking spaces. Many communities have chosen to institute minimum bicycle parking requirements in their codes, including other local jurisdictions in Nevada. The codes also include design and location standards for required bicycle parking such as bicycle space dimensions and rack styles, a minimum distance from building walls, and visibility and accessibility of the parking. RTC, in its Regional Bicycle and Pedestrian Plan Update, lists requiring or incentivizing bicycle parking facilities as one of the Plan policy recommendations to local agencies. Southern Nevada Strong Regional Plan recommends establishing an off-street bicycle parking policy, which considers security, placement, and quality of facilities, and provision of signs directing bicyclists to the parking facilities. Providing for bicycle parking in prominent, convenient, and secure locations is a smart growth best practice as it encourages people to bike between places for certain trips. In light of these benefits, bicycle parking requirements were incorporated in the recommended changes to the Code.

The proposed requirements are based on a review of bicycle parking requirements in several other codes, including local agency codes in Clark County, and modifying them as appropriate to fit Clark County’s needs and to incorporate stakeholder comments. The supporting research is provided in Appendix E. Short-term bicycle parking is proposed; however, in the future, as the bicycle facilities network expands, the County should consider long-term bicycle parking requirements for employees for appropriate land uses. The initial set of draft changes provided in Appendix D includes long-term bicycle parking recommendations, and the County can consider those recommendations for the future Code updates.

Following is the proposed bicycle parking language for the Code. The proposed bicycle parking design standards are addressed on the next page.

**Proposed Short-Term Bicycle Parking Quantities:**

The purpose of bicycle parking requirements is to encourage bicycle use as a mode of transportation, by ensuring convenient and safe access to secure bicycle parking. Required short-term bicycle parking spaces (bicycle racks) for specified land uses are listed in Figure 8-2. Long-term bicycle parking spaces (enclosed) are not required, but encouraged. Vehicular space reduction credits are available for the provision of long-term bicycle parking per Section 30.60.040 (Parking Reduction Credits).
Table 8-2: Proposed Required Short-Term Bicycle Parking Spaces

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Short-Term Bicycle Spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-Family Dwellings</td>
<td>1 per 40 dwelling units</td>
</tr>
<tr>
<td>Retail and service uses</td>
<td>1 per 5,000 sq. ft.</td>
</tr>
<tr>
<td>Office</td>
<td>1 per 20,000 sq. ft.</td>
</tr>
<tr>
<td>Colleges/Universities</td>
<td>1 per 10,000 sq. ft.</td>
</tr>
<tr>
<td>Place of Worship</td>
<td>1 per 3,000 sq. ft.</td>
</tr>
<tr>
<td>Health or Fitness Studio, Recreational Uses</td>
<td>1 per 2,000 sq. ft.</td>
</tr>
<tr>
<td>Library and Museums</td>
<td>1 per 8,000 sq. ft.</td>
</tr>
<tr>
<td>Industrial (except for uses with fewer than 10 employees such as warehouses and data centers)</td>
<td>4 spaces</td>
</tr>
</tbody>
</table>

Notes:
- For all of the above uses, minimum number of short-term bicycle spaces is 4 (i.e., 2 bicycle racks)
- Sites with property lines within a half-mile on each side of Las Vegas Boulevard between Sahara Avenue and Russell Road are excluded.
- Resort hotels are exempt.
- Rural townships are exempt from these requirements.

Bicycle Parking Design

- Short-term bicycle parking spaces may be indoors or outdoors. Outside racks should be visible, well lit, distributed throughout the site, and placed within 100 feet of the primary entrances to the buildings they are intended to serve.
- Bicycle racks shall be provided for each short-term parking space and shall be designed to accommodate both chain and U-shaped locking devices supporting the bicycle frame at 2 points. Racks may be floor-mounted or wall-mounted, and they must be securely affixed or bolted to the floor or wall. Racks shall enable the frame and one or both wheels to be secured. A post and loop, inverted U (staple), or A-rack (staple) shown in Figure 8-1 are the recommended example designs, but other alternatives may be considered if they can meet the characteristics listed in this clause.

Figure 8-1: Preferred Short-Term Bicycle Rack Designs

Source: Association of Pedestrian and Bicycle Professionals
• Racks shall be installed a minimum of 2 feet from any wall or other obstruction, except for wall mounted racks. Use of racks shall not obstruct or intrude into any pedestrian walkways, building entries/exits, drive aisles, or parking spaces.

• Bicycle parking spaces must have adequate spacing to allow for accessibility without having to move another bicycle. Allow a minimum of 3 feet between bicycle racks when mounted in a row. If multiple rows of bicycle racks are installed, allow for a minimum aisle width of 7 feet measured tip to tip of bike racks across the space between the rows of bike racks. See Figure 8-2.

Figure 8-2: Bicycle Rack Spacing Requirements

• Use on-site signage to direct users to long-term bicycle spaces. A “Bicycle Parking” sign shall also be displayed on or adjacent to any indoor room or area designated for long-term bicycle parking.

• Long-term bicycle spaces must be located in a limited-access enclosure protecting bicycles from heat, precipitation, and theft, such as enclosed indoor bicycle rooms, bicycle sheds, bicycle lockers, and weather-protected bicycle parking spaces that are monitored by an attendant or security system, such as bike boxes. See Figure 8-3.

Figure 8-3: Long-Term Bicycle Parking

Source: Association of Pedestrian and Bicycle Professionals
• Bicycle parking facilities shall be separated from vehicular parking areas to protect parked bicycles and vehicles from damage. The separation may be accomplished through grade separation, distance, or physical barriers, such as curbs, wheel stops, poles, or other similar features.

8.4. Proposed Changes for Parking Design

Section 6.0 discussed industry best practices for parking lot design. The proposed design updates to Chapter 30.60 are selected amongst these best practices and revised as appropriate to best serve Clark County’s needs and incorporate stakeholder input.

8.4.1. Vehicular Parking Design

• All commercial and mixed-use developments shall provide a network of wheelchair-accessible walkways with a minimum width of 5 feet throughout the parking lot. Location of walkways will depend on the context of the site; but at a minimum, walkways shall provide pedestrian connections for the following areas and purposes:
  o Between adjacent bus stop(s) and principal building(s) entrances.
  o Between adjacent public sidewalks/trails and principal building(s) entrances.
  o In between buildings on the site, including pad site buildings.
  o Internal walkways within the parking lot to allow users to get more safely to the buildings from their cars. 1 walkway for approximately every 4 double-loaded driving aisles must be provided for this purpose. The walkways that connect the sidewalks/bus stops and the buildings and those in between buildings across vehicular use areas can be counted for this purpose so long as there is an average of 1 walkway for every 4 double loaded aisles throughout the lot.

• Landscaping along the walkways is desirable, provided the actual width of the walking area is a minimum of 5 feet.

• Pedestrian walkways shall be physically separated from vehicle traffic and maneuvering areas, and shall be constructed in a manner that they cannot be used as a holding area for shopping carts or outdoor retail displays.

• Pedestrian walkways must be clearly distinguishable from auto traffic areas by painted markings, pavement material, texture, or be raised in elevation. They must have adequate lighting for security and safety, conform to all current ADA design standards, and not include barriers that limit pedestrian access between the subject property and adjacent properties.

• Where pedestrian circulation crosses vehicular routes, enhanced lighting and a change in grade, materials, texture, color, or another form of enhanced paving shall be provided to emphasize the conflict area and improve its visibility and safety. All crossings shall be ADA compliant.

• Large parking lots with more than five hundred parking spaces should be divided into well landscaped, smaller sub-area parking lots that contain two hundred fifty or fewer parking spaces. Buildings, pedestrian walkways, private drives, or landscape areas with a minimum width of fifteen feet should be used to delineate the sub-area parking lots.

• Parking aisle length should not exceed 400 feet without a break for circulation.
• No parking lot shall be directly adjacent to any building. A minimum 5 feet wide sidewalk or a minimum of 7 feet wide buffer consisting of a minimum five feet wide sidewalk with the remaining width landscaped should be used to separate buildings from parking spaces.

• Loading areas with roll-up, overhead doors, and areas intended for large semi-truck parking shall be located in the rear of the complex in a service yard unless adequate screening is provided to obscure their view from public streets. Customer parking shall not be located in the vicinity of these areas, and pedestrian walkways shall not cross or traverse these areas.

• Each provided motorcycle space must be at least 4 feet wide and 8 feet deep.

• Overhangs of up to 2 feet into landscaped areas or medians may be counted as part of the required stall length. Overhangs over walkways/sidewalks are not allowed regardless of the width of the walkway/sidewalk. A wheel stop at least 4 inches high and 6 inches wide shall be installed at least 2 feet from the walkway/sidewalk to prevent any overhang over walkways/sidewalks.

• Providing preferential parking spaces with charging facility for electric or alternatively fueled vehicles is encouraged with the appropriate land use approvals.

• Parking lots shall be designed to reduce water pollution through stormwater management measures including, but not limited to porous paving, filter strips, bio-retention areas, open sections, and depressed medians. Any such measure shall not conflict with the low impact development (LID) best management practices (BMPs) in Clark County Regional Flood District’s Hydrologic Criteria and Drainage Design Manual.

8.4.2. Automobile Parking Layout Proposed Revision

A revision to the automobile parking layout section in the current Code is recommended to simplify the current table (Table 30.60-3) and enhance the current exhibit (Figure 30.60-1). Table 8-3 and Figure 8-4 shows the proposed revisions to this section. Appendix A can be reviewed for the current table and exhibit.

Table 8-3: Proposed Revision to the Automobile Parking Layout Table

<table>
<thead>
<tr>
<th>Parking Angle</th>
<th>Aisle Width (A) One way/Two way</th>
<th>Bay Width (B) One way/Two way</th>
<th>Curb Length (C)</th>
<th>Stall Depth (D)</th>
<th>Stall Width (E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0° (parallel)</td>
<td>12'/20'</td>
<td>N/A</td>
<td>21'</td>
<td>9'</td>
<td>9'</td>
</tr>
<tr>
<td>30°</td>
<td>11'/20'</td>
<td>46'/55'</td>
<td>18'</td>
<td>17.5'</td>
<td>9'</td>
</tr>
<tr>
<td>45°</td>
<td>13'/20'</td>
<td>51'/58'</td>
<td>13'</td>
<td>19'</td>
<td>9'</td>
</tr>
<tr>
<td>60°</td>
<td>16'/20'</td>
<td>56'/60'</td>
<td>10.5'</td>
<td>20'</td>
<td>9'</td>
</tr>
<tr>
<td>75°</td>
<td>20'/20'</td>
<td>60'/60'</td>
<td>9.5'</td>
<td>20'</td>
<td>9'</td>
</tr>
<tr>
<td>90°</td>
<td>24'/24'</td>
<td>60'/60'</td>
<td>9'</td>
<td>18'</td>
<td>9'</td>
</tr>
</tbody>
</table>

1Overhangs of up to 2 feet into landscaped areas or medians may be counted as part of the required stall length. See 30.60.050 (a) (1) (D).
8.4.3. Parking Lot Landscaping Design

Providing effective landscaping is amongst the recommended parking best practices. Chapter 64 of Title 30 includes a section on parking lot landscaping. Those current parking lot landscaping standards in Chapter 30.64 (included in Appendix A for reference) were reviewed. Following are the proposed language to replace the current parking lot landscaping section in Chapter 30.64.

- Surface parking lots are to be landscaped to interrupt the pavement expanse, increase permeability to mitigate stormwater runoff, reduce the heat island effect, improve visual appearance, improve pedestrian and vehicular circulation, and provide shade.

- Design: There are two options available for parking lot landscape design. See Figure 8-5 (Figure 30.64-14 in Title 30). Either option or a combination of the two is allowed.
  - Landscape islands shall be provided at the end of each row (terminal islands).
  - Landscape islands shall also be provided between parking spaces within the rows to break up longer rows (landscape island fingers). Landscape island fingers shall be installed to provide a maximum of 12 spaces in a row when there is a planting strip, and a maximum of 6 spaces in a row when there is no planting strip.
  - Landscape islands shall have a minimum width of 6 feet as measured from inside of curb.
  - All landscape islands shall have a minimum length equal to the length of the adjacent parking spaces.
  - Planting strips shall have a minimum width of 8 feet as measured from inside of curb. When a walkway (minimum 5 feet wide per 30.60.050) is provided along a planting strip, the minimum width of the planting strip can be reduced to 6 feet as measured from inside of curb.

---

Figure 8-4: Proposed Revision to the Automobile Parking Layout Exhibit

Figure 30.60-1: Automobile Parking Layout

---

One Way

Two Way
Where feasible, trees in planting strips shall be installed in-line with the parking lane stripes to prevent damage by car bumpers.

Curbing shall be installed around the perimeter of landscape islands where parking or vehicular access aisles are directly adjacent to the landscape islands.

- Landscape trees shall be installed using the following ratio: 1 large canopy tree for every 6 parking spaces or 1 medium canopy tree for every 4 parking spaces.

- When parking is adjacent to perimeter landscaping, the perimeter landscape trees can be counted toward the minimum landscape tree ratio requirements.

- Landscaped islands are encouraged to contain a variety of planting materials (which could include shade trees, plants with seasonal interest, low shrubs and climate-tolerant groundcover).
  - They shall include a minimum of four 5-gallon shrubs for every required tree.
  - Species and soil selection should be per the Southern Nevada Regional Planning Coalition’s *Recommended Best Practices for Urban Trees in Southern Nevada*.
  - Palm trees are not allowed in the interior of the parking lots (including along the perimeter as a shade tree when parking is adjacent to the perimeter), as they provide minimal shade.

- Landscape islands and planting strips shall include a 2-inch minimum layer of ground cover or rock mulch.

- Preservation of existing mature trees is encouraged. When redeveloping a site, the tree ratio can be reduced to 1 large canopy tree per 8 parking spaces if the existing large trees are maintained.
Figure 8-5: Proposed Revision to the Parking Lot Landscaping Exhibit in Chapter 30.64

Option 1

Option 2

Note: A combination of Option 1 and Option 2 can be used.

Raised curb required for landscape islands and must be more than 2" above the level of ground cover to retain water.

Curb Detail

FIGURE 30.64-14
8.5. Other Changes

This section summarizes the other proposed changes that are not covered in the previous sections.

8.5.1. Proposed Language for Cases Where Additional Parking is Desired

There is no maximum parking cap in Chapter 30.60. It is understood that developers may prefer the flexibility to provide as much parking as they deem necessary to accommodate anticipated demand based on their knowledge and experience. Other than imposing a maximum parking cap, the study team recommended that certain conditions be met to provide parking beyond a certain limit over the Code requirement. The intent is to ensure that public benefits related to smart growth and sustainable development initiatives are addressed while allowing developers to provide the parking they deem appropriate for their needs. The proposed language to achieve this is as follows:

If the proposed number of parking spaces exceeds the requirements in Table 30.60-1 by more than 20 percent, the following two requirements must both be met. These requirements are not necessary if the applicant provides the additional parking (beyond 20 percent) within a building footprint (e.g., parking structure, rooftop parking, below grade parking). Resort hotels and developments in rural townships are exempt from these requirements.

- The applicant must demonstrate that the proposed parking spaces are required to meet anticipated parking demand. The applicant shall submit a parking utilization analysis that demonstrates, based on parking use surveys of other similar uses within the community or within like communities, that the number of required spaces per Table 30.60-1 is inadequate. The parking surveys shall use a methodology approved by Clark County such as the methodology outlined in ITE’s Parking Generation. Surveys conducted on Friday after Thanksgiving or Saturday before Christmas Day for commercial/retail uses will not be accepted.

- Provide at least one of the below smart growth and sustainability conditions which may mitigate potential impacts of additional vehicular spaces.
  - Additional landscaped pedestrian walkways beyond the minimum requirements.
  - Improved outdoor public areas (plazas, courtyards, etc.), located adjacent to transit stops, bicycle parking, and passenger pick-up and drop-off areas, and integrated with the main pedestrian circulation.
  - A sheltered bus stop with bench and trash can, as approved by RTC, with a walkway connecting from the bus stop to the primary building entrance(s).
  - An easement for the placement of bus stop(s) away from the sidewalk.

Each of the above provisions would be eligible for additional parking of two percent of the base required parking. For example, if the base requirement is 1,000 spaces, each of the above provisions would be eligible for an additional 20 spaces. Note that providing up to 20 percent above the requirement is automatically allowed; therefore, for the given example, these additional provisions are not required up to 1,200 spaces. If one of the above provisions is built, 1,220 spaces may be provided.
### 8.5.2. Electric Vehicle Charging Station Requirements

Title 30 treats electric vehicle charging stations like gas stations, and therefore, the fueling area cannot be counted towards required parking spaces in the current Code. It is recommended that the electric vehicle spaces be counted towards the required parking spaces. The following language is proposed to be added in Title 30: “Parking spaces with charging facility for electric vehicles with the appropriate land use approvals can count toward the parking space requirements. Signage that indicates these spaces are reserved for electric vehicles is required.”

Per discussions with the County staff, the County will address electric charging stations in a separate update to Title 30.

### 8.5.3. Revised Schedule of Loading Space Requirements

Table 8-4 is the proposed revision to the Schedule of Loading Space Requirements table. The intent is to eliminate or reduce the requirement for certain uses and to simplify the regulations.

#### Table 8-4: Revised Schedule of Loading Space Requirements

<table>
<thead>
<tr>
<th>Uses</th>
<th>Loading Spaces Required per Square Footage of GFA</th>
</tr>
</thead>
</table>
| Hotels, motels, hospitals, schools, theaters  | Less than 12,000 : 0  
1 : 12,000 up to 120,000  
1 : each additional 120,000 |
| Resort hotels                                  | Less than 12,000 : 0  
12,000 - 200,000 : 1  
1 : each additional 200,000 |
| Assisted living congregate care               | Less than 100,000 : 0  
Over 100,000 : 1 |
| Restaurants                                   | Less than 25,000 : 1  
Over 25,000 : 2 |
| Retail sales, shopping centers                | Less than 5,000 : 0  
5,000 - 15,000 : 1  
15,000 - 40,000 : 2  
1 : each additional 100,000 |
| Industrial, warehouse                          | Less than 5,000 : 0  
5,000 - 12,000 : 1  
12,000 - 30,000 : 2  
1 : each additional 100,000 |
| Office                                        | Less than 30,000 : 0  
30,000 - 200,000 : 1  
1 : each additional 200,000 |
8.5.4. Other Minor Changes
Chapter 30.60 was reviewed in its entirety to ensure any miscellaneous section or clause that requires a clarification or re-organization is updated as part of this major code update effort. Some such instances were identified. Additionally, relevant sections in other Title 30 chapters were reviewed to ensure that changes to Chapter 30.60 are consistent or updated otherwise.

8.6. How do the Changes Apply?
The revised parking standards would apply to new development and redevelopment. There are no impacts to existing developments even though the new parking ratios also apply to existing developments. For redevelopment:

- New (reduced) vehicle parking ratios would apply to the entire site.
- A building remodel, such as a façade or a roof change, or a change in building use or intensity would not necessitate any changes to the existing parking design. The design requirements would only apply when new parking areas are constructed.
- Requirements to be met when Code parking is exceeded by more than 20 percent would not apply.21
- If there is no new parking area required for the new pad site or building expansion (because existing available parking is adequate for the entire site including the newly added square footage), then there would be no new design requirements.
- Bicycle parking would be required for the new pad sites.

8.7. Future Code Updates due to Changing Trends
Driver behavior is changing due to shifting demographics and the rapid advancement of technology. These changing trends impact the transportation system, including parking demand. Taking these changing preferences into account was one reason to re-evaluate the current parking regulations and led to some of the above-proposed Code changes.

The County should continue to evaluate its parking code and consider future updates and amendments to the Code based on future trends. One such trend is the automated and connected vehicle technologies. In recent years, information and communication technologies have been increasingly incorporated into every component of the transportation infrastructure. Automated and connected vehicle technologies are some of the most heavily researched technologies today, and this trend is expected to continue. Connected, fully autonomous vehicles are considered a revolution because of their wide-ranging impacts on human society. The advent of autonomous vehicles, at a minimum, is expected to:

- Improve safety,
- Change vehicle ownership and travel patterns,
- Reduce congestion, and
- Increase vehicle miles traveled.

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21 These do not apply to existing developments also. Existing developments are not required to apply for a waiver of development standards to exceed the requirements in Table 30.60-1 by more than 20 percent.
Consequently, in the next few decades, significant changes are expected in the planning and development of urban areas. Autonomous vehicles will be able to drop passengers at their destinations and park themselves or join the shared autonomous fleet of vehicles and serve other passengers. When needed, the autonomous vehicles will be able to return and pick-up passengers. It is clear that the need for parking in urban areas will change (likely reduce) due to these capabilities. Narrower parking stalls and more remote off-site parking areas can also be envisioned in a future with autonomous vehicles. However, at this point, fully autonomous vehicles are not commercially available; and the rate of adoption of autonomous vehicles and the resulting impacts on parking requirements are also uncertain. During the transition to fully autonomous driverless vehicles, some vehicles will still be operated by drivers; therefore, the current size of some parking spaces cannot be reduced. Once their adoption reaches a critical mass and more research is available on the ownership, usage, and travel patterns (and consequent impacts on parking), autonomous vehicles should be an important consideration for future updates to the Code. At that point, some of the design considerations would be as follows:

- Narrower parking spaces can be provided for autonomous vehicles.
- A dedicated area in the parking facility will be required for autonomous vehicles, exclusive of parking areas for vehicles operated by human drivers.
- Designated drop-off/pick-up areas would need to be incorporated in the site design for autonomous vehicles to drop-off passengers and leave, and to pick them up later.

A dedicated study that identifies the full impact of autonomous vehicles on parking ratios and design may be warranted before updating the County’s Code to incorporate such emerging technologies.
9.0. NEXT STEPS

The proposed Code changes documented in this Report incorporate stakeholder, agency, TAB, CAC, and public input. The proposed changes provide more flexibility, allowing requirements to be context sensitive as opposed to applying the same standards for all situations. Reduced parking ratios do not limit developers from building the parking they need. Instead, they provide flexibility to allow a business to meet their specific parking demand to successfully operate their business, while simultaneously allowing a better balance between the development potential of their property and actual parking demand. The proposed changes accommodate the parking needs of developments, balanced by the needs of pedestrians, bicyclists, and environmental sustainability, and thus promote smart growth. Reducing parking code ratios for certain land uses to better align parking supply with actual parking demand would increase economic potential of a site by allowing for more building square footage.

The study team intends to draft these proposed changes into an ordinance to amend Title 30. Below are the next steps toward a final ordinance:

- Present the findings of this Report, specifically the proposed draft changes documented in the previous section, to the Board of County Commissioners and County Planning Commission.
- Prepare a draft ordinance if directed by the Board of County Commissioners and the Planning Commission.
- Present the draft ordinance to TABs and CACs.
- Present the draft ordinance to the Board of County Commissioners and the Planning Commission, and request direction to move forward with a final ordinance.

The study team will also present the findings of this Report to the RTC’s Metropolitan Planning Subcommittee (MPS) and Executive Advisory Committee (EAC), as well as to the RTC Board of Commissioners.