CITY OF BEND

2017

City of Bend, Oregon
Downtown Strategic Parking Management Plan

Report of the Downtown Stakeholder Advisory Committee (DSAC)

Project Summary and Recommendations for Parking Management

DRAFT FINAL REPORT
May 9, 2017 (v2)

RICK WILLIAMS CONSULTING
Parking & Transportation

ACKNOWLEDGMENTS

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City Of Bend: Downtown Strategic Parking Management Plan

I. INTRODUCTION

The attractiveness of Bend and the vibrancy of downtown are undeniable. Impacts of the great recession are largely in the past and Bend's economy is growing once again. Demands for vehicle parking and levels of pedestrian activity, great bellwethers of a healthy downtown, have reached pre-recession levels. In recognition of this, Bend's City Council directed a public process to determine effective methods of optimizing public parking resources and enhancing the experience of visiting downtown. The Bend Downtown Parking Management Plan is the culmination of this effort and is presented in detail in this final report.

Downtown residents, employees, employers, and property owners were joined by community members as a Downtown Stakeholder Advisory Committee (DSAC). The City Council commissioned these individuals to liaise with their representative groups and work collaboratively to shape a parking management plan they would support through adoption and implementation. Over the course of 18 months and 10 committee meetings, these representatives crafted goals, weighed evidence, determined needs, and conceived strategies to address a broad range of challenges. The committee concluded with a multitude of recommended strategies to produce solutions that benefit all stakeholders and the community as a whole.

Goals and guiding principles were established to define desired outcomes and serve as a framework for determining balanced approaches to improving downtown parking conditions. A central tenet of the committee was to rely on data and technical analysis to verify the issues and prove the effectiveness of proposed solutions. Because issues often impacted stakeholders differently, the committee frequently devised a set of strategies to produce a more balanced and complete solution.

The plan presented herein provides a comprehensive set of parking management strategies, sequenced to ensure a management structure is properly constructed, funded, staffed, and implemented. Plan priorities link directly back to the goals and guiding principles. Flexibility is embedded in the strategies to enable responsiveness and adaptation to changing issues. Insight, support and guidance from a standing committee of downtown representatives ensures that a new Parking Demand Manager, Downtown Parking Advisory Committee (DPAC) and City Council are in regular communications with those most directly impacted and benefited by plan implementation. Ultimately the Parking Management Plan will successfully "get the right parker to the right parking spot," ensuring convenience and efficiency.

II. EXECUTIVE SUMMARY

Rick Williams Consulting was retained by the City of Bend to conduct an overall evaluation of the downtown parking system and develop a comprehensive Strategic Parking Management Plan. The RWC team also includes Kittelson & Associates (KAI) and Anne E. George Facilitation, Mediation + Public Involvement (AG).

The evaluation entailed review of existing parking operations and previous study findings, public engagement/outreach, and comprehensive data collection. All recommended strategies have been informed by in-depth discussions and topic-specific work sessions with the Downtown Stakeholder Advisory Committee (DSAC), as well as additional community input.

This Executive Summary outlines the key strategies proposed for implementation in downtown Bend. More detailed summaries and descriptions of the process, data findings and the strategies themselves are provided herein, beginning on page 44 of this report. Additional information and summaries are included in the Attachments provided at the end of the report.

The consultant believes the strategies recommended and developed in concert with project staff, Downtown Stakeholder Advisory Committee, and the community effectively respond to the unique environment, goals, and objectives of Downtown Bend.

A. Findings – System Performance

Substantial data was collected, analyzed and reported to the Downtown Stakeholder Advisory Committee and to the Bend community through various public engagement efforts. Highlights of the discoveries made through these technical efforts include the following:

- **Solutions:** There is a finite supply of parking in downtown Bend. Currently, there is availability in the on-street and off-street supplies. New systems need to be implemented to direct users to available supplies. If Bend is to have a customer-first parking management system, the system must appeal to and accommodate customers and visitors, and identify safe and accessible parking for employees and residents.

- **Use:** Summer is the peak season, with the number of vehicle trips downtown and use of the supply about 12.5% higher than in spring.

- **Parking Behavior:** There is no significant change in parking behavior between the two seasons for either people parking long-term or customers and visitors. This includes average duration of stay, number of employee permits, rates of violation, and turnover.

- **High-Use Areas (On-Street):** In spring and summer, there is a defined area of high parking activity in the downtown core, which shows sustained occupancy rates of 85% or greater. This area of parking constraint operates much differently than the east side of downtown, which is underutilized in spring and summer. Given this, modifying the parking management district or managing parking by zone may make sense.

- **Off-Street Parking Availability:** Although parking activity is higher in summer, the off-street system still has a meaningful amount of unused parking, particularly in the parking garage.

- **Shared Use:** There are opportunities for shared use of off-street parking facilities. For example, three publicly controlled lots[1] could accommodate employee and off-peak event parking. Partnerships with owners of private parking lots present a significant opportunity.

- **The Mirror Pond lots** are consistently constrained at or above 85% occupancy. Strategies should be developed to address this.

- **Surrounding Neighborhoods:** Surrounding neighborhoods may benefit from a separate engagement process that investigates the trade-offs of neighborhood parking management to further protect resident and guest parking access.

[1] Includes the City-owned parking garage, the Newport Lot, and County parking facilities.

B. Policy and Organizational Action Strategies[2]

Incorporating parking system management into the City's development policy ensures that the goals of the Parking Management Plan can be met. The following strategies should be implemented within **12 months** of plan adoption.

1. Formalize the Guiding Principles as policies in appropriate City documents.
2. Adopt the 85% Rule as the standard for measuring performance of the parking supply and triggering specific management strategies, rate ranges and efforts by discrete zone.
3. Centralize the management and administration of parking in a Parking Services Division, integrated with the broader program of transportation services management.[3]
4. Create the position of Parking Demand Manager for the City of Bend. Develop a job description and submit a service package to hire an appropriate individual.
5. Establish a Downtown Parking Advisory Committee to assist in implementation and ongoing review of the parking plan.
6. Evaluate collection of data to measure parking impacts in select neighborhoods adjacent to the downtown, as well as feasibility and cost of neighborhood permit programs (e.g., administration, process and stakeholder education).
7. Develop funding options to support parking management, maintain the existing parking supply, and support future growth, ensuring the financial feasibility of the system.
8. Create a cohesive pricing policy for on- and off-street parking in downtown Bend. Establish a fair market rate to ensure that prices:
   - Support businesses;
   - Encourage neighborhood parking management; and
   - Encourage the use of alternative modes.
9. Evaluate and implement solutions to safety impediments that create inconvenient and inefficient connections to parking, e.g., lighting, sidewalk/paths, lot conditions, etc.

2 These strategies would revise the municipal code to support long-term planning and efforts to "right-size" parking in new development. They will be developed in Phase 2 of the larger city-wide parking study, integrating specific recommendations related to the downtown. Recommendations from this process will be brought back to the DSAC and City Council for review and input.

3 The Parking Division must coordinate with transportation staff to achieve balanced access across all transportation modes.

C. Parking Management Strategies - OPERATIONS

The following strategies should be implemented within **12 to 24 months** of plan adoption.

10. Establish business-to-business and residential outreach on parking issues, including education and planning, and a *Customer First* Partnership with the Downtown Bend Business Association.

11. Identify off-street shared-use opportunities based on data from the 2016 parking study. Establish goals for transitioning permit users and long-term parkers out of on-street parking, begin outreach to opportunity sites, negotiate agreements, and assign permittees to facilities.

12. Implement variable-rate pricing for on-street permits based on location, demand, and availability of parking. This will create pricing differentials between "premium" and underutilized locations.

13. Reduce or phase out the number of "2-Hour or as Otherwise Specified" on-street stalls in coordination with Strategies 11 and 12 above to simply "2-Hour Parking".

14. Based on documented parking behavior, establish four distinct on-street parking management zones in the downtown parking district. Use 2016 occupancy data to define the boundaries.

15. Improve safety and security at Mirror Pond lots and eliminate free parking for the first two hours.

16. Create a critical path timeline to a new parking brand that can be utilized at all City-owned lots and shared facilities, and in marketing/communications.

17. Standardize the design of on-street parking signage in the parking management district and incorporate the new brand/logo.

18. Rename all public parking facilities by address.

19. Establish best-practice protocols and performance metrics for enforcement personnel and support enforcement with appropriate technology.

20. Where practical, expand the bike parking network to connect parking and the downtown, encouraging employee bike commute trips and drawing customers to downtown businesses.

21. Develop a reasonable schedule of data collection—no less than once every 24 months—to assess performance of the parking supply and support the 85% Rule for decision-making.

22. Using data collected per **Strategy 21**, evaluate on-street pricing by zone in high-occupancy areas. If peak occupancy exceeds 85%, implement on-street pricing during enforcement hours where appropriate.

    - If on-street pricing is implemented, review on-street time stays established in **Strategy 14**.

23. Eliminate free parking in the public garage when on-street parking is priced and garage occupancies exceed 85%. Implement demand-based pricing for all hours of enforced parking—e.g., hourly, evening, weekend, overnight, and event rates.

D. Parking Management Strategies: INFRASTRUCTURE

The following strategies build upon and are facilitated by work completed in Strategies 1 through 23. They should be implemented within **24 to 48 months** of plan adoption.

24. Develop and implement improvements at the downtown public parking garage to enhance its appearance, identity, safety, revenue control, communications technology, and pedestrian access.

25. Solicit firms to establish wayfinding and dynamic signage systems in the public right of way, integrated with the off-street system and using the brand/logo developed per **Strategy 16**.

26. If existing parking becomes limited, explore expanding access capacity with new transit and parking.

27. Develop cost forecasts and feasible financing methods for preferred parking supply and transit/shuttle options, coordinated with **Strategy 7**.

28. Expand capacity as necessary and feasible.

The City and DSAC may elect to reorder, accelerate, or moderate strategies depending on community support and consensus, opportunity, and/or funding. All strategies will require consistent and dedicated management with active participation by the private sector.

E. Summary

The Bend Downtown Strategic Parking Management Plan is the culmination of efforts by the Downtown Stakeholder Advisory Committee and community members who contributed input to the issues, guiding principles, and final strategies that comprise the plan. The strategies are organized to follow a logical sequencing of activities that build on one another. They begin with efforts to organize, fund and staff the management program and then incrementally improve the efficiency and attractiveness of the parking system. A Downtown Parking Advisory Committee is recommended as a critical sounding board for the Parking Demand Manager to interact with. Monitoring of system performance is central to defining ongoing issues and selecting appropriate strategies to implement. Implementation of the plan is expected to provide a safe, secure, financially sound downtown parking system that is well-integrated with all modes of access to downtown.

The strategies envisioned here will be implemented over a minimum of four years, informed by the 85% Rule and documented parking demand. Overall, the strategies are designed to "get the right parker to the right parking spot" in a manner that supports the Guiding Principles established as a part of this plan.

III. FORMAT OF INFORMATION – GETTING TO SOLUTIONS

This project has allowed the City and stakeholders to take a fresh look at the parking situation in Bend with a view to improving the quality and ease of access in the downtown.

This report summarizes:

- Public Involvement (**Section IV**.WHAT WE HEARD – PUBLIC INVOLVEMENT)
- Guiding Principles for parking (**Section V**. GUIDING PRINCIPLES – ELEMENTS OF PARKING MANAGEMENT)
- Summary of downtown parking inventory (**Section VI**. PARKING INVENTORY SUMMARY)
- Measuring performance (**Section VII**. MEASURING PERFORMANCE)
- Key findings related to parking utilization (**Section VIII**. KEY FINDINGS – PARKING UTILIZATION)
- Recommended Parking Management Strategies (**Section IX**. RECOMMENDED DOWNTOWN PARKING MANAGEMENT STRATEGIES)

The strategies outlined within this document are intended to spark discussion between the City of Bend and downtown stakeholders on policies and actions that will support a vital and growing downtown. As the City and its partners consider these strategies, discussion of the "who, what, and how" of implementation will be essential, and it may be determined that strategies should be reordered or implemented concurrently. Such refinements will be based on opportunities and challenges that arise, momentum, resource identification, and broader community input. The plan presented here is a new approach to parking in downtown Bend, and changes can be expected.

IV. WHAT WE HEARD – PUBLIC INVOLVEMENT

Public Involvement Goals and Stakeholders

1. Public Involvement Goals

Early in the process, the following goals were identified for the public involvement plan.

- Inform the community about existing downtown parking conditions and foster the exchange of ideas;
- Document community interests and concerns;
- Identify parking management needs and objectives;
- Involve affected or interested stakeholders in the development of downtown parking management planning; and
- Develop a community supported Bend Downtown Parking Plan that will enhance the vitality of downtown Bend.

2. Stakeholder Identification

The project sought engagement from downtown stakeholders and the greater community throughout the study. With a focus on engaging those affected by or interested in the outcomes of the project, the project specifically targeted the following groups for their participation:

- Downtown business owners / managers/ organization directors
- Downtown employees
- Downtown business association
- Downtown property owners/developers
- Downtown residents
- Community at large
- Multimodal advocates
- Accessibility community

3. Community Involvement

The process was designed to be open, transparent, and engaging for stakeholders. Public involvement began with informational **Parking 101 meetings** for the community and the formation of a **Downtown Stakeholder Advisory Committee** (DSAC) comprising representative community stakeholders in early 2016. A **Technical Advisory Committee** (TAC) of City staff and community technical experts was also formed at that time. A **project website** was created to keep the community engaged and informed throughout the project.

In August 2016, downtown businesses, employees, property owners, and residents were invited to a series of informal **coffee klatches** following the creation of the DSAC-developed Guiding Principles for the study. In addition, **DSAC meetings** were open to the public and posted, and opportunities for community input were provided at every meeting. **Project updates** were also provided during the study to the Downtown Bend Business Association, the Bend Economic Development Advisory Board, the Bend Planning Commission, Old Bend Neighborhood Association, River West Neighborhood Association, and the Bend City Council.

A final **Community Open House** was held on May 11, 2017, to share DSAC Draft Strategies for downtown parking management with the community and seek community input for possible further refinement of DSAC parking strategies recommendations. (A section will be added post-open house with the results of the open house and any changes made to the Draft Strategies as a result of community input.)

The community was informed about meetings and events throughout the process via the website, press releases, social media announcements, event flyers throughout downtown, and emails to interested parties and individuals.

4. Public Involvement Activities

Downtown Bend Parking Study Website
A website was created to share study data and analysis, public meeting information, outreach summaries, reports, and public comments for the advisory committees.

Parking 101 Community Sessions
The project team offered three Parking 101 Sessions in February 2016 for the community at downtown locations. These sessions were best practices seminars and provided community members with opportunities to learn more about how other communities approach parking planning, as well as industry practices. The sessions also provided opportunities for the project team to hear concerns from community members about downtown parking and answer questions. Community members played a critical role in determining the study area and outcomes of the parking study.

Downtown Stakeholder Advisory Committee (DSAC)
The DSAC is a community advisory group appointed by the Bend City Council, representing downtown businesses, employees, property owners, residents, as well as at-large community members, the accessibility community, multimodal advocates, event planners, and Deschutes County. The committee was tasked with developing downtown parking strategies for parking management in the downtown area, with input from community stakeholders, the TAC, and the project management team. Over a period of 13 months, the DSAC held 10 meetings to identify concerns, review parking data, request additional data when needed, and develop a set of guiding principles for their task. The committee found agreement on a full set of downtown Bend parking

management strategies following extensive discussion and public input. A complete listing of DSAC members is provided in the Acknowledgements page of this report.

Technical Advisory Committee
The Technical Advisory Committee (TAC) comprised technical experts in downtown development and parking management and included City staff, City officials, and community experts. The TAC supported both the project team and the DSAC in providing expert information and data.

Downtown Bend Engagement - Guiding Principles Coffee Klatches
In August 2016, the DSAC sought feedback on their "Draft Guiding Principles" from downtown businesses, employees, property owners, and other interested community members. A series of four coffee klatches were hosted at downtown businesses. This engagement was designed to help the DSAC obtain early feedback from downtown stakeholders on needs and priorities around parking. Over 120 businesses and offices were visited in advance of the klatches to encourage participation. The project team also posted flyers throughout downtown and provided announcements electronically via the Downtown Bend Business Association and project interested parties lists.

Sixteen stakeholders attended at least one coffee klatch or DBBA meeting on the Draft Guiding Principles. In addition, information about the Parking Study and how to stay updated and engaged was shared with over 200 downtown stakeholders via outreach efforts. Stakeholders shared generally positive feedback on the DSAC Guiding Principles. A summary of these events, "Downtown Bend Parking Study Downtown Stakeholder Engagement Summary August 2016" can be found in **Attachment F** of this document.

DSAC Communications with City Council
Bend City Council members were updated throughout the project. At the start of the study, the project team provided an update to Council that included project phasing, the study area, and a review of best practices in parking management on April 6, 2016.

The project management team returned to update the Council in August 2016 to present the Draft Guiding Principles the committee created to guide their process. The Council unanimously voted to support the DSAC Guiding Principles and the DSAC continued work on the study.

Representatives of the DSAC provided Council with an additional update on April 19, 2017, when they presented their draft strategies for Council. Council members were invited to ask questions and provide input to the DSAC as they worked to complete their strategies. Council indicated they supported the direction and work of the DSAC on their parking strategy development and encouraged the committee to continue to consider long-term parking needs in their report. The DSAC intends to present its final downtown Bend Parking Management Study Report to the Council on May 17, 2017, following a project public open house on May 11, 2017. The Bend City Council holds ultimate decision making authority for the adoption of the plan.

5. Additional Communications

As mentioned, the project team also presented project and DSAC updates to the Bend Economic Development Advisory Board and the Bend Planning Commission for their input and review in April 2017. Presentations were also provided to the Old Bend Neighborhood Association, River West Neighborhood Association, and the Downtown Bend Business Association during the study period.

6. Community Open House

This section to be added following May 11, 2017 Community Open House

Additional Information

For additional information, including meeting summaries, as well as draft and final reports, please see the project website at http://www.bendoregon.gov/parkingstudy.

V. GUIDING PRINCIPLES – ELEMENTS OF PARKING MANAGEMENT

Parking is a vital tool in any downtown's economic development toolbox, and must be properly managed to ensure an efficient system of access that meets the needs of priority users. In downtown Bend, the priority user of the City-owned parking system has been identified as the customer and visitor. The Downtown Stakeholder Advisory Committee (DSAC) concluded that the goal of parking management in downtown should be:

> *"To support a vibrant, diverse, attractive, and uniquely identifiable downtown. The components of this plan need to be simple and intuitive for the user. The parking system must be safe, secure, financially sound and well-integrated with all modes of access to downtown. Access to downtown should not be cost-prohibitive to downtown users."*

The Guiding Principles outlined here were developed by the DSAC over several work sessions, further informed through public outreach, and approved by the Bend City Council in August 2016. They are designed to encourage the use of parking resources to support economic development goals, and to effectively serve the diversity of people who come to downtown Bend. They have been organized into seven categories:

- City Role and Coordination
- Priority Users
- Active Capacity Management
- Information Systems (Supply- and Customer-Based)
- Integration with Other Modes
- Planning for Future Supply
- Financial Viability

Ideally, these Guiding Principles will establish a basis for consensus and provide near- and long-term direction for parking management in downtown Bend. They are presented here in no particular order or priority.

A. City Role and Coordination

1. **Primary Role (City of Bend). The City's primary role in providing parking will be to prioritize and plan for customer and visitor access downtown, and facilitate residential and guest access in adjacent neighborhoods.**

   The cost of providing parking, especially off-street, is very high, and the City cannot be responsible for providing parking to all users. The City must prioritize its public system for

customers and visitors in commercial areas, and for residents and their guests in residential areas.

2. **<u>Primary Role (Private Sector)</u>. The private sector's primary role will be to provide parking for employees and residents of the downtown.**

   The private sector must take a lead role in providing transportation and parking options for downtown residents and employees. The City must complement this role through partnerships with the private sector, and by providing safe, reliable, and effective non-auto access to downtown.

3. **<u>Centralized Management</u>. Management of public parking will be centralized to ensure optimal use.**

   The City must be focused, coordinated, and strategic in the daily management of its parking supply, and deliver near- and long-term parking solutions that include participation from the private sector. This should be implemented through a Parking Services Division, led by a qualified and well-supported Parking Manager.

4. **<u>Effective Communications</u>. High-quality, user-friendly communications will be provided to ensure customers and visitors can easily access parking near their destination.**

   The Parking Services Division must ensure that signage and wayfinding direct users to available parking suited to their needs. This may require real-time monitoring of available parking. Parameters of use (permitted length of stay, pricing, etc.) must be clear and not detract from the image of downtown. To the greatest degree possible, communications systems should be reliable and easy to use and understand.

5. **<u>Stakeholder Support</u>. A representative body of affected private and public constituents will routinely inform decision-making.**

   Active participation by those affected guarantees understanding of and agreement on parking management. This will be best accomplished through a Parking Advisory Committee that reviews performance, serves as a sounding board for issues, and acts as a liaison to the broader stakeholder community.

6. **<u>Coordinated Management</u>. Parking will be managed to support the unique character of existing and emerging downtown neighborhoods. Where appropriate, parking will be administered by defined area or district.**

   The downtown comprises several unique economic enclaves (e.g., the core, areas with adjacent parks and periphery, buffer areas in commercial neighborhoods). As the areas differ economically, so too do the character and needs of their patrons. This may require a management approach tailored to each area

B. Priority Users

1. **<u>On-Street System (Downtown)</u>. The most convenient on-street parking will be prioritized for customers and visitors.**

   The on-street parking system in the downtown must be formatted to ensure turnover and minimize conflicts between priority and other users. For the most part, employees and downtown residents should not park on-street, particularly when demand for customer/visitor parking is high. When demand is low or there is a surplus of available parking, the system can accommodate non-priority users.

2. **<u>On-Street System (Adjacent Neighborhoods)</u>. The most convenient on-street parking will be prioritized for residents and their guests.**

   As with on-street parking in the downtown, neighborhood parking must be formatted to ensure priority access and minimize conflicts between residential and other users. Residential areas may encompass public buildings such as churches or libraries; their users are also considered residents or guests. For the most part, employees should not park on-street, particularly when demand for resident/guest parking is high. When demand is low or there is a surplus of available parking, the system can accommodate non-priority users.

3. **<u>On-street Turnover</u>. The on-street parking system is a finite resource and will be managed to ensure a turnover rate that supports a vital business district.**

   Growth in parking demand downtown will, over the long term, need to be accommodated by use of off-street locations. Longer-term parking, as by employees, must be managed so as not to conflict with short-term customer parking, particularly on-street. This will require parallel efforts by the City and private sector to increase alternative mode options.

4. **<u>Off-street System</u>. Off-street parking resources, both public and private, will be coordinated to meet demand that cannot be met by safe and reliable walking, biking, transit use, and carpooling/ridesharing.**

   All parking strategies, particularly those that affect employees and residents, should be coordinated with the City's broader transportation demand management goals and objectives to ensure that users have reasonable options available. This effort should be pursued as a partnership between the City and the private sector.

C. Active Capacity Management

1. **<u>Optimize Utilization</u>. The public parking system will be managed using the 85% Rule to inform and guide decision-making.**

When 85% of the parking supply is routinely occupied during peak periods, more intensive and aggressive management strategies are called for. This "85% Rule" will facilitate decisions regarding time limits, enforcement, and other issues related to capacity management.

2. **<u>Resolve Constraints</u>. Parking demands in excess of 85% will require best practices to minimize constraints.**

   Strategies to be triggered by the 85% Rule will be identified in the Downtown Parking Management Plan. The City and Parking Advisory Committee will commit to moving forward with recommended strategies when parking demand requires them. Changes to the status quo can be difficult, but continued constraints in parking and access will adversely impact the downtown's success and ability to absorb growth.

3. **<u>Shared Off-Street Parking</u>. Shared parking will be encouraged in areas where parking is underutilized. This will require partnership with owners of private parking.**

   Private parking facilities in some downtown locations may be underutilized. Efforts should be made to facilitate shared-use agreements and direct excess parking demand to these facilities. Parking data collected by the City should include capacity assessments of private facilities.

4. **<u>Capacity Expansions</u>. Capacity will be created through strategic management of existing public and private parking, reasonable enforcement, leveraging parking with alternative modes, and new supply.**

   Active effort must be made to manage the parking system on a daily basis. This will require partnerships with the private sector to leverage existing off-street supplies and coordinate management to support the development and growth of alternative modes. Capacity expansion can be achieved through strategies that increase turnover and/or encourage alternative mode use, as well as code provisions and regulations that govern the creation of parking. These types of actions should be fully evaluated prior to building new parking supply.

D. Information Systems (Supply- and Customer-Based)

Supply-Based

1. **<u>Monitor and Report Utilization</u>. Performance measurements and reporting will be used to facilitate decision-making.**

Committing to a routine, objective system of measurement and reporting ensures that decision-making will be informed. Key metrics include occupancy, turnover, average duration of stay, rate of violation, and customer input. Performance monitoring also provides a basis for routine evaluation of program effectiveness.

Customer-Based

2. **Product Quality. The on- and off-street parking systems and related programs, such as communications, will be safe, reliable, user-friendly, and attractive. They will complement the quality of downtown and attract visitors and customers.**

   The quality of the parking system and its supporting programs should reflect the quality of downtown Bend itself. On-street parking should be uniformly managed and enforced to ensure an intuitive, reasonable sense of time limits. Off-street facilities should be of uniform quality and identity to create a clear sense of safety, convenience, understandability, and coordination with the pedestrian environment. Communications systems should be cutting-edge, professional, and effectively coordinated. All systems should, to the highest degree possible, be reliable and easy to use and understand.

3. **System Communications. Communications will be uniform and strategically coordinated. Existing information resources will be improved and new ones created.**

   Systems to improve understanding, awareness, and ease of use of parking should be upgraded. A clear schedule should be maintained for the dissemination of information, possibly coordinated through a partnership between the City, the Downtown Bend Business Association, and other entities. High-quality communication and marketing materials should be integrated into a comprehensive package of services to accurately inform and guide the parking public.

4. **Branding and Wayfinding. The existing wayfinding system that links parking assets and provides directional guidance will be upgraded and expanded, preferably using a common brand/logo.**

   Parking resources should be clearly identified and explained through branding and signage. A common brand unifies marketing materials, signage systems, and other communications, simplifying customer recognition and use of the system.

E. Integration with Other Modes

1. **Downtown Multi-Modal. Use of alternative travel modes, particularly by employees, will be encouraged and facilitated.**

Private vehicles should not be the only option for accessing the downtown. Every parking stall occupied by an employee means a lower rate of turnover and less access for customers and visitors. Employees should be given reasonable access to parking, but encouraged to use alternative modes that include walking, biking, transit, and ridesharing. Nearby residents should be encouraged to use Bend's sidewalk and trail system. Community members from greater distances should be encouraged to bicycle and ride transit. Providing safe and reliable non-auto modes of access relieves pressure on the parking system, enhances the attractiveness of downtown, and accommodates nearly all types of users. This will require active partnerships with the private sector.

2. **Bicycle Parking. The broader bicycle network will be enhanced by increasing bike parking on- and off-street.**

   The City of Bend's bike parking network should be as effectively formatted as the auto parking system. On- and off-street parking facilities for bicycles are efficient and low-cost.

3. **Connections to Remote Vehicle Parking. Remote parking locations and transit/bike connections will be explored to minimize the need for new parking structures.**

   As the City explores new parking supply options, scenarios should include remote locations connected by transit and bike networks. Such options may be more cost-effective than structured parking and/or may be necessitated by land supply constraints in the downtown.

F. Planning for Future Supply

1. **Planning and Funding. Planning for future parking supply will be strategic and routinely evaluated to ensure the City is ready to respond to growth. Funding for new supply will require a varied package of resources and partnerships.**

   The City must plan for its future needs and initiate long-term planning efforts to assemble funding and partnerships necessary to meeting them. Future needs include parking for bicycles as well as cars, and multiple modes should be addressed in any system. When considering parking supply needs, all modes should be evaluated in the effort to increase access to downtown.

G. Financial Viability

1. **Fiscal Stewardship. All parking operations will be financially sustainable.**

   Parking revenues should cover the cost of operations, as well as provide a reasonable surplus. Ensuring the highest quality of access, convenience, safety, system maintenance, and service delivery will require multiple sources of revenue. These may include leases, enforcement fees, meter and other user fees, urban renewal funds, and/or partnerships with the private sector.

VI. PARKING INVENTORY SUMMARY

The consultant team inventoried the entire supply of on- and off-street parking in the downtown. This section summarizes that effort.[4]

Study Area

The study area was determined by the City of Bend and the consultant team during the initial project scoping process.

It is generally bounded by NW Portland Avenue on the north, with a southern boundary that includes portions of NW Franklin Avenue, NW Lava Road, and NW Idaho and Kansas Avenues. Parkway is on the east, with the western boundary moving from a small section of NW Riverside Boulevard north along the Deschutes River to NW Olney Avenue. **Figure A** (page 20) illustrates the study area.

It is important to note that the inventory study area (solid black line in **Figure A**) incorporates an area larger than the current downtown Parking District (broken black line). The purpose of the larger area was to capture information on parking patterns in areas adjacent to the Parking District, providing information on spillover, differences in duration of stay and/or occupancy, etc.

The study area also includes all parking that falls within the Downtown Economic Improvement District. The Downtown EID is represented by a solid red line in

4 Attachments B and C at the end of this report provide a detailed Parking Utilization Summary that includes the complete inventory and utilization analysis for both the spring and summer 2016 data collection efforts. This section provides a shortened version of those reports.

Figure A.

Total Supply (On- And Off-Street)

There are 5,803 total parking stalls in the study area, of which 1,805 are on-street and 3,998 off-street. The off-street stalls are distributed among 158 unique parking facilities.

Figure A: Parking Area Study Boundary

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Parking Inventory (On-Street)

On-street parking in the study area encompasses a total of 1,805 stalls. Table 1 analyzes on-street stalls by type for both the total inventory and the sample used in the 2016 occupancy and utilization studies. The sample included 1,333 stalls (73.9% of the total supply) and represents a statistically valid subset of all on-street stalls (see **Section VIII**. KEY FINDINGS – PARKING UTILIZATION).

Table 1: Downtown Bend: On-Street Parking Inventory (total and sampled)

Stalls by Type	Inventory Area Stalls	% of Total	Sampled Stalls	% of Total
15 Minutes	22	1.2%	20	1.5%
30 Minutes	1	< 1%	1	< 1%
30 Minutes (Unless Otherwise Specified)	10	< 1%	10	< 1%
2 Hours	706	39.1%	678	50.9%
2 Hours (Unless Otherwise Specified)	242	13.4%	242	18.2%
No Limit	766	42.4%	326	24.5%
ADA 'Accessible'	41	2.3%	39	2.9%
Authorized Vehicles Only	9	< 1%	9	< 1%
Police Only	8	< 1%	8	< 1%
Total Parking Supply	1,805	100%	1,333	73.9%

As indicated in the table, on-street parking in the downtown includes a mix of time limits comprising of nine categories.

- All on-street parking is currently free.
- The most common stall type is No Limit, constituting 42.4% of the total supply. No Limit parking is unsigned.
- The second most common stall type allows for two-hour parking and comprises 39.1% of the total supply.
- Two-hour stalls marked "Unless Otherwise Specified" make up 13.4% of the total supply. They generally allow for a two-hour stay, but also accommodate employees with authorized permits, who may use these stalls for all-day parking.

- The number of stalls allowing all-day stays (i.e., No Limit and 2-Hour permit stalls) represents a large portion of the supply at 55.8%. When compared to on-street parking in other successful downtowns, the number of long-term stalls in Bend is unusual, especially given that customers and visitors have been envisioned as the priority users.

Summary (On-Street Inventory)

The on-street parking supply in downtown Bend covers a large area and comprises more than 1,800 stalls. Two-hour time-limited stalls in the core represent just 39% of the total supply. With more than half the supply given over to No Limit and employee permit parking, the current format favors long-term parking, unusual for a downtown with such a high level of retail activity. Observed occupancy levels are relatively high at present (see **Section VIII**. KEY FINDINGS – PARKING UTILIZATION), indicating that reformatting time limits to include more short-term parking should be considered as a means to support retail development and growth.

Parking Inventory (Off-Street)

During the inventory process, 158 off-street parking facilities with a total of 3,998 stalls were identified in the study area. For data collection purposes, 46 sites comprising 2,650 stalls were sampled, about 66% of the total supply. Sites were selected based on size, type, and location to ensure a representative sample.

Table 2 briefly summarizes the total and sampled off-street inventories. **Figure B** (page 24) color-codes sites by size. A complete list of all 158 sites, as well as those sampled, is provided in **Attachments B and C**. Actual use characteristics of the sampled off-street sites are summarized in **Section VIII**. KEY FINDINGS – PARKING UTILIZATION and described in detail in **ATTACHMENT B** and **ATTACHMENT C**.

Table 2: Downtown Bend: Off-street Inventory

Stall Type	All Stalls	% of Total	Sampled Stalls	% of Total
Off-Street	3,998 (158 sites)	100%	2.650 (46 sites)	66.3%

Summary (Off-Street Inventory)

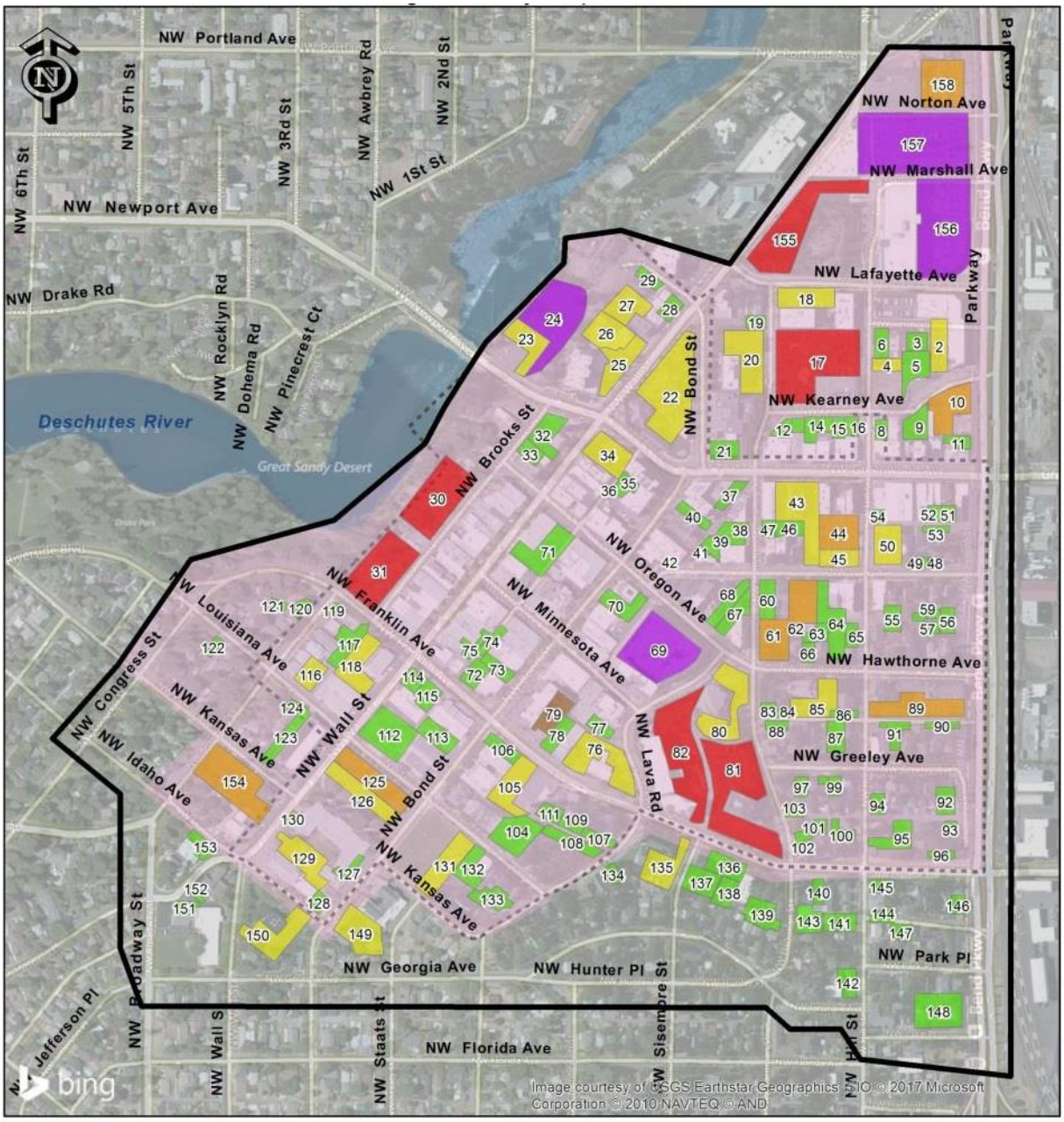
There is a significant amount of parking in off-street facilities in the downtown. These lots account for a very large percentage of the downtown's surface area, and present themselves as opportunity sites for future development. The majority of off-street parking is under private ownership. The City controls eight of the 158 parking facilities in the downtown, totaling 989 stalls, about 25% of the total off-street supply. City parking lots include:

Table 3: City Parking Facilities

Parking Facility	Stalls
Public Garage (NW Lava)	547
Newport Lot (NW Newport Avenue	104
Mirror Pond North and South	176
NW Greenwood @ NW Wall Street	33
City Hall	20
Surface lot between NW Louisiana/NW Kansas	41
NW Louisiana across from City Hall	68

The current balance of private and public parking is not unusual for downtowns, but does mean that shared-use agreements can be more complex, involving negotiations and partnerships with individual owners of private lots.

Figure B: Downtown Bend: Study Area - Off-street Parking Supply



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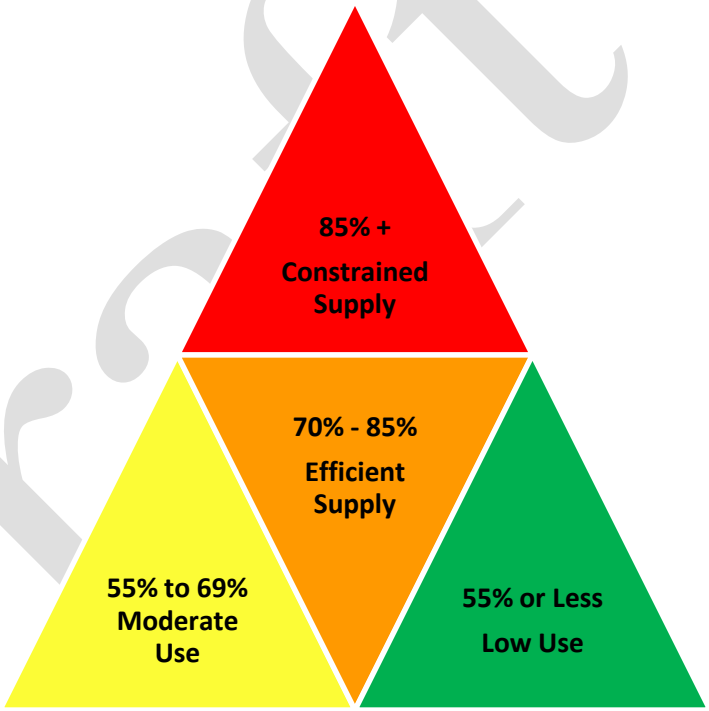
VII. MEASURING PERFORMANCE

Parking is considered to be constrained when 85% or more of the available supply is routinely occupied during the peak hour. In a constrained system, finding an available spot is difficult, especially for infrequent users such as customers and visitors. This can cause frustration and negatively affect perceptions of the downtown. Continued constraint can make it difficult to absorb and attract new growth, or to manage fluctuations in demand—for example, seasonal or event-based spikes.

Occupancy rates of 55% or less indicate that parking is readily available. While availability may be high, this may also indicate a volume of traffic inadequate to support active and vital businesses.

Occupancy rates between these two thresholds indicate either moderate (55% to 69%) or efficient (70% to 85%) use. An efficient supply of parking shows active use but little constraint that would create difficulty for users. Efficient use supports vital ground-level businesses and business growth, is attractive to potential new users, and is able to respond to routine fluctuations.

RWC's analysis of parking in Bend uses these categories to evaluate the performance of the system.



VIII. KEY FINDINGS – PARKING UTILIZATION

Data on utilization and occupancy of the parking system was collected over two days in each of two seasons, spring and summer. Data collection days were selected in consultation with the City and the DSAC, chosen to represent a typical day of robust activity during spring and summer. Survey days were:

Spring 2016

- Thursday, April 28
- Saturday, April 30

Summer 2016

- Wednesday, July 20
- Friday, July 22

This section summarizes key findings from that effort.[5]

A. On-Street Data Collection - Methodology[6]

Surveyors recorded the license plate numbers of all vehicles parked in the study area during each hour of the 10-hour period between 10:00 AM and 7:00 PM. This was done for each of the four survey days. As described in the Parking Inventory Summary (**Section VI.** PARKING INVENTORY SUMMARY), a total of 1,333 on-street stalls were surveyed, representing 73.9% of all on-street parking in the study area, a statistically valid sample.

All survey days were unaffected by adverse weather, as they were dry and sunny with temperatures in the high 70s–low 80s.

B. Off-street Data Collection - Methodology

Off-street facilities were surveyed on the same days and in the same manner over the same 10-hour period. As described in the Parking Inventory Summary (**Section VI.** PARKING INVENTORY SUMMARY), a total of 2,650 stalls were surveyed across 46 unique lots, representing 66.3% of all off-street parking in the study area, a statistically valid sample.

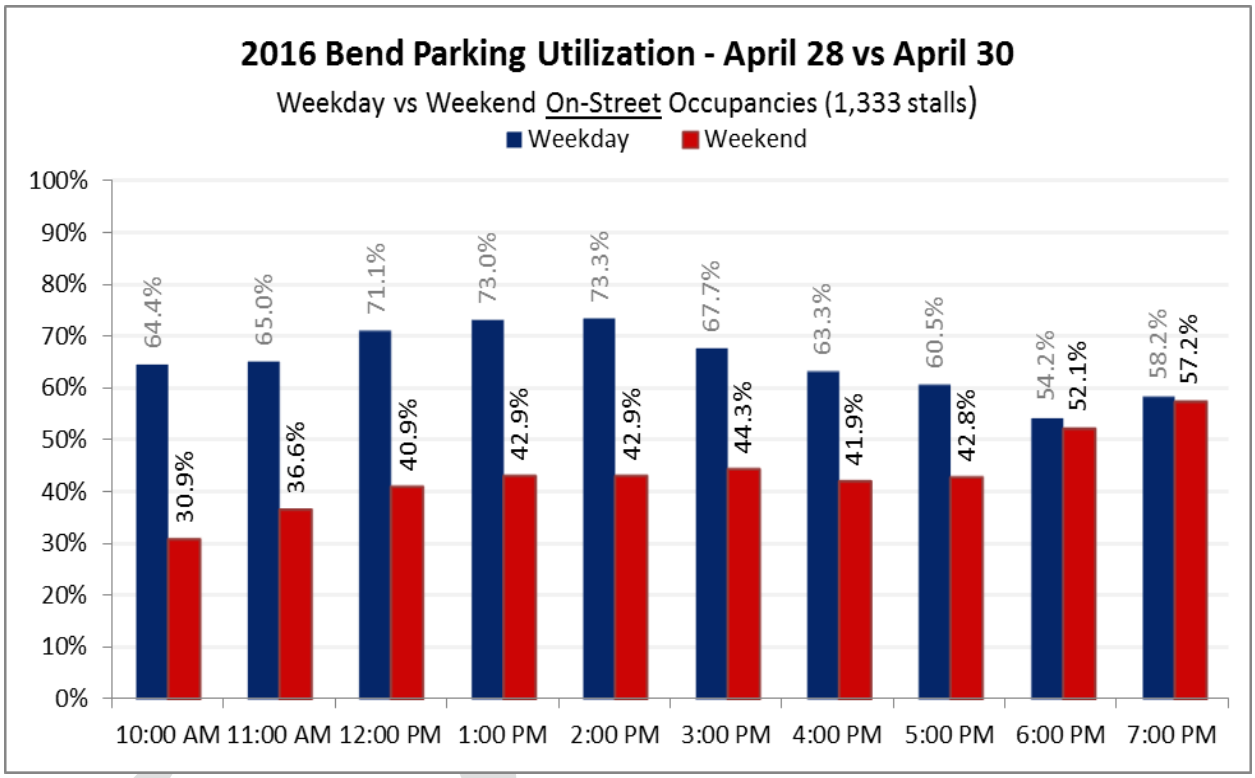
5 As with information related to the parking inventory, Attachments B and C, at the end of this report, provide detailed Parking Utilization Summary Data Reports.

6 A detailed technical memorandum (dated 3/23/2016) outlining the complete data collection methodology is provided in Attachment D at the end of this report.

C. On-Street Occupancies – Spring 2016 (Thursday/Saturday)

Figure C provides an hour-by-hour look at occupancy performance for each of the spring 2016 survey days (April 28 and April 30).

Figure C: Downtown Bend Hourly On-street Utilization (Spring 2016)



Weekday (Thursday, 4/28/2016)

- The weekday peak hour for on-street parking is from 2:00 to 3:00 PM. During this hour, 977 (73.3%) stalls are occupied, leaving 356 stalls empty.
- Occupancy rates decline in every hour between 3:00 PM and 6:00 PM before rising at 7:00 PM.
- Based on the performance measurement described in **Section VII**. MEASURING PERFORMANCE, peak parking utilization is efficient (between 70% and 85%).
- There are certain block faces and areas of the downtown where parking is constrained, which can create access problems for users (see **Figure D**, below).

Weekend (Saturday, 4/30/2016)

- The weekend peak hour for on-street parking is from 7:00 to 8:00 PM. During this hour, 762 stalls (57.2%) are occupied, leaving 571 stalls empty.
- Occupancy rates increase in eight of 10 hours, dropping slightly between 4:00 and 6:00 PM.
- Overall weekend vehicle activity is much less than weekday activity.
- Weekend evening activity (6:00 to 8:00 PM) is comparable to the weekday.
- Based on the performance measurement described in **Section VII**. MEASURING PERFORMANCE, parking utilization for most of the operating day is low (less than 55%), rising to moderate in the evening.
- Even with lower occupancy rates overall; there are certain block faces and areas of the downtown where parking is constrained, which can create access problems for users (see **Figure E**, below).

D. Peak-Hour Occupancy – Heat Map (Spring)

Figure D and **Figure E** (pages 29 and 30) illustrate on- and off-street peak hours for each of the spring survey days using a "heat map" format. Heat maps use color to show degree of use by block face, based on the diagram in **Section VII**. MEASURING PERFORMANCE above.

As both maps illustrate, there are concentrated pockets of constrained activity (an occupancy rate of 85% or greater) in the on-street system. Constrained areas can be found during the weekday in the south end of downtown and within the core north of NW Minnesota. On the weekend, constraints are concentrated in the core area between NW Franklin and NW Greenwood.

Though the maps show areas of low to moderate use, consistent with the occupancy rates in **Figure C** above, clusters of very high activity can create a perception by users of constraints in specific areas of the downtown.

Figure D: Downtown Bend Weekday (4/28/2016) Peak Hour Occupancy Heat Map

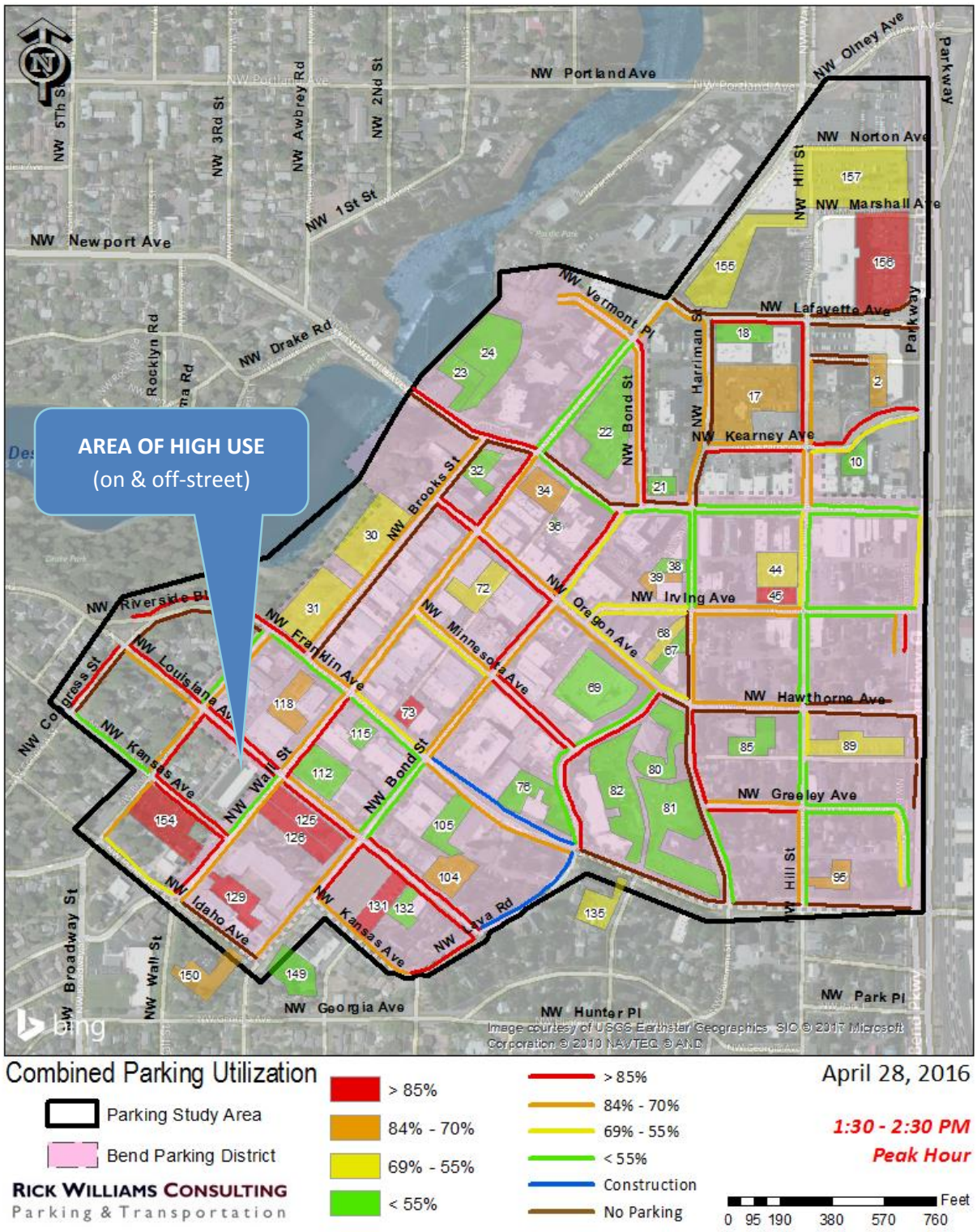
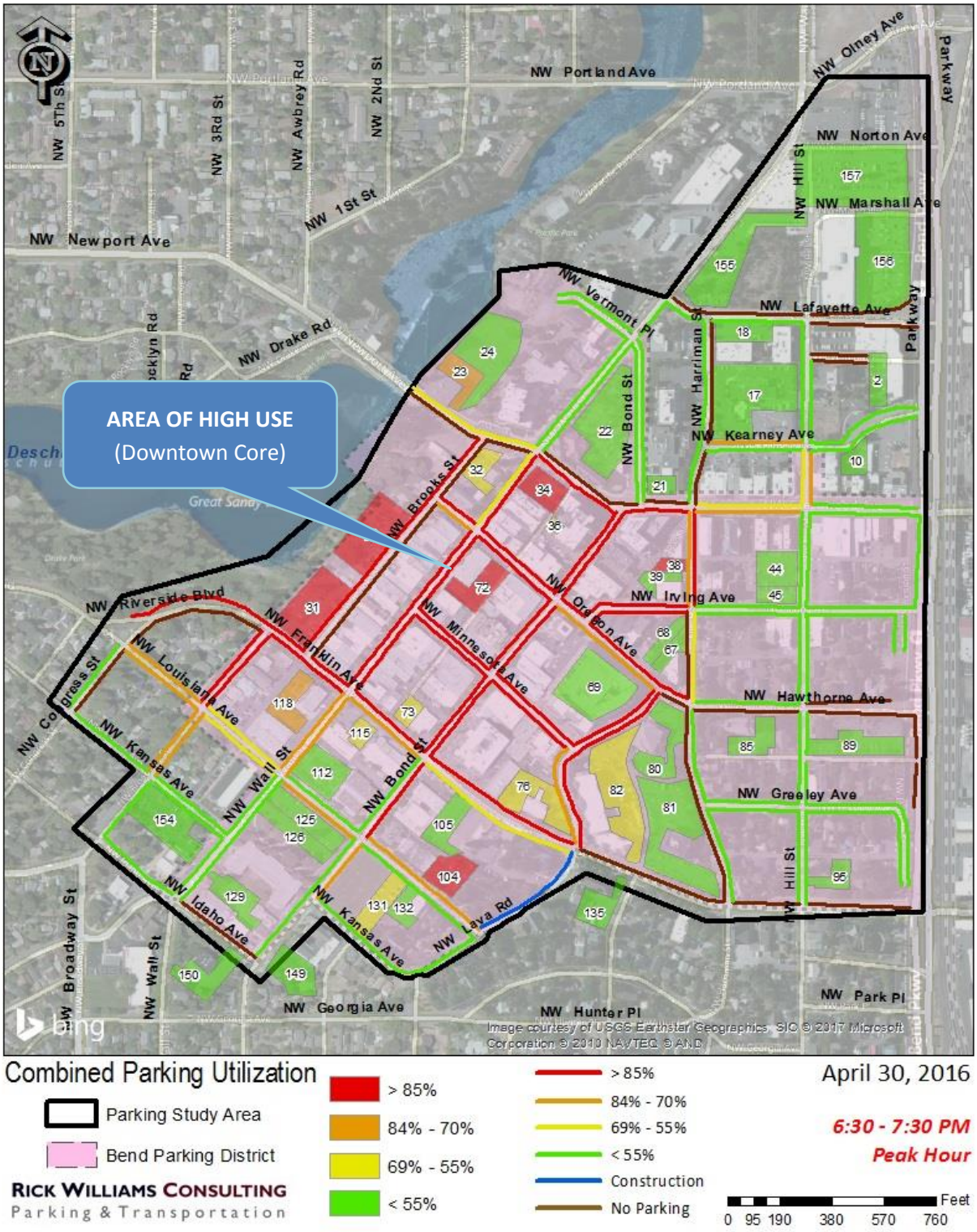


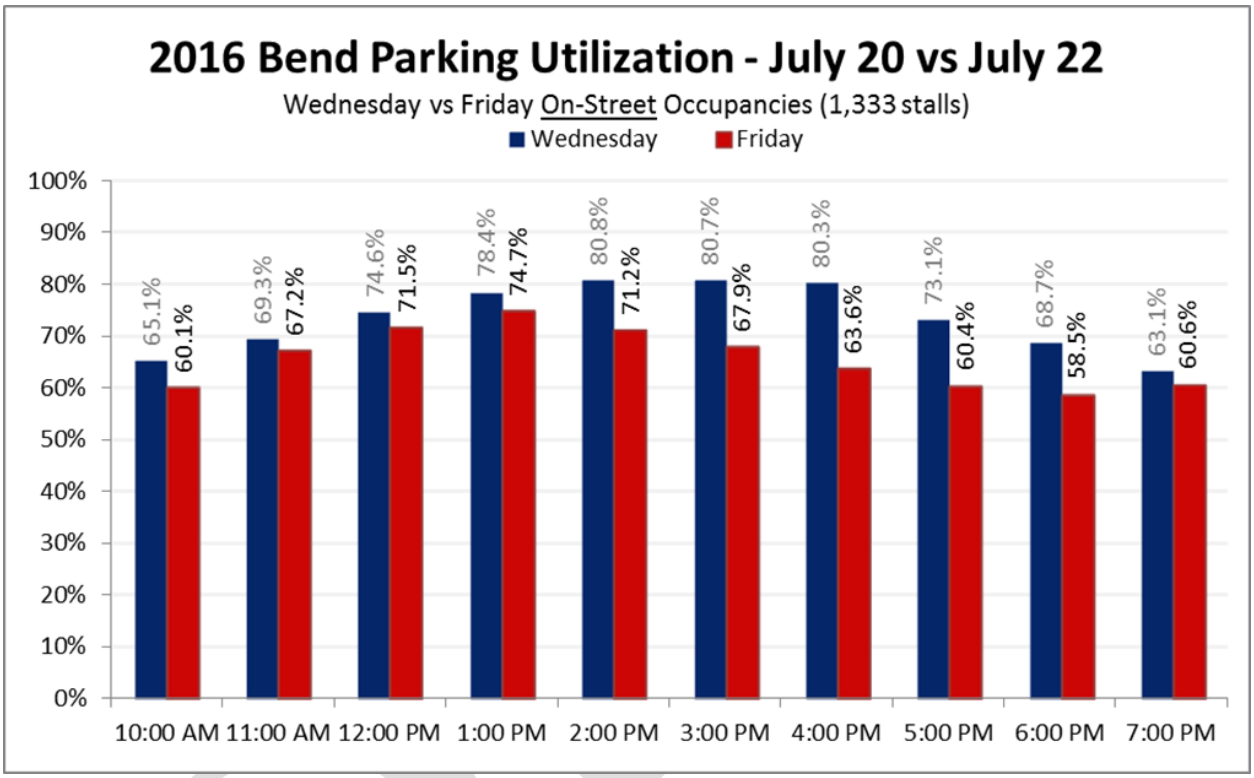
Figure E: Downtown Bend Weekend (4/30/2016) Peak Hour Occupancy Heat Map



E. On-Street Occupancies – Summer 2016 (Wednesday/Friday)

Figure F provides an hour-by-hour look at occupancy performance for each of the summer 2016 survey days (July 20 and July 22).

Figure F: Downtown Bend Hourly On-street Utilization (Summer 2016)



Weekday (Wednesday, 7/20/2016)

- The peak hour for Wednesday on-street parking is from 2:00 to 3:00 PM. During this hour, 1,077 stalls (80.8%) are occupied, leaving just 256 stalls empty.
- Occupancy rates decline in every hour between 3:00 and 7:00 PM, falling from 80.7% to 63.1%.
- Based on the performance measurement described in **Section VII**. MEASURING PERFORMANCE, peak parking utilization is efficient (between 70% and 85%). When compared to the spring weekday peak of 73.3%, summer occupancy rates are 7.5 percentage points higher.

Weekday (Friday, 7/22/2016)

- The peak hour for Friday on-street parking is from 12:30 to 1:30 PM. During this hour, 996 stalls (74.7%) are occupied, leaving 337 stalls empty.

- Occupancy rates decrease in each hour between 2:00 and 6:00 PM, from 71.2% to 58.5%, then rise slightly to 60.6% at 7:00 PM.
- Overall, Friday vehicle activity is moderately lower than on Wednesday.
- Based on the performance measurement described in **Section VII**. MEASURING PERFORMANCE, peak parking utilization is efficient (between 70% and 85%).

F. Peak-Hour Occupancy – Heat Map (Summer)

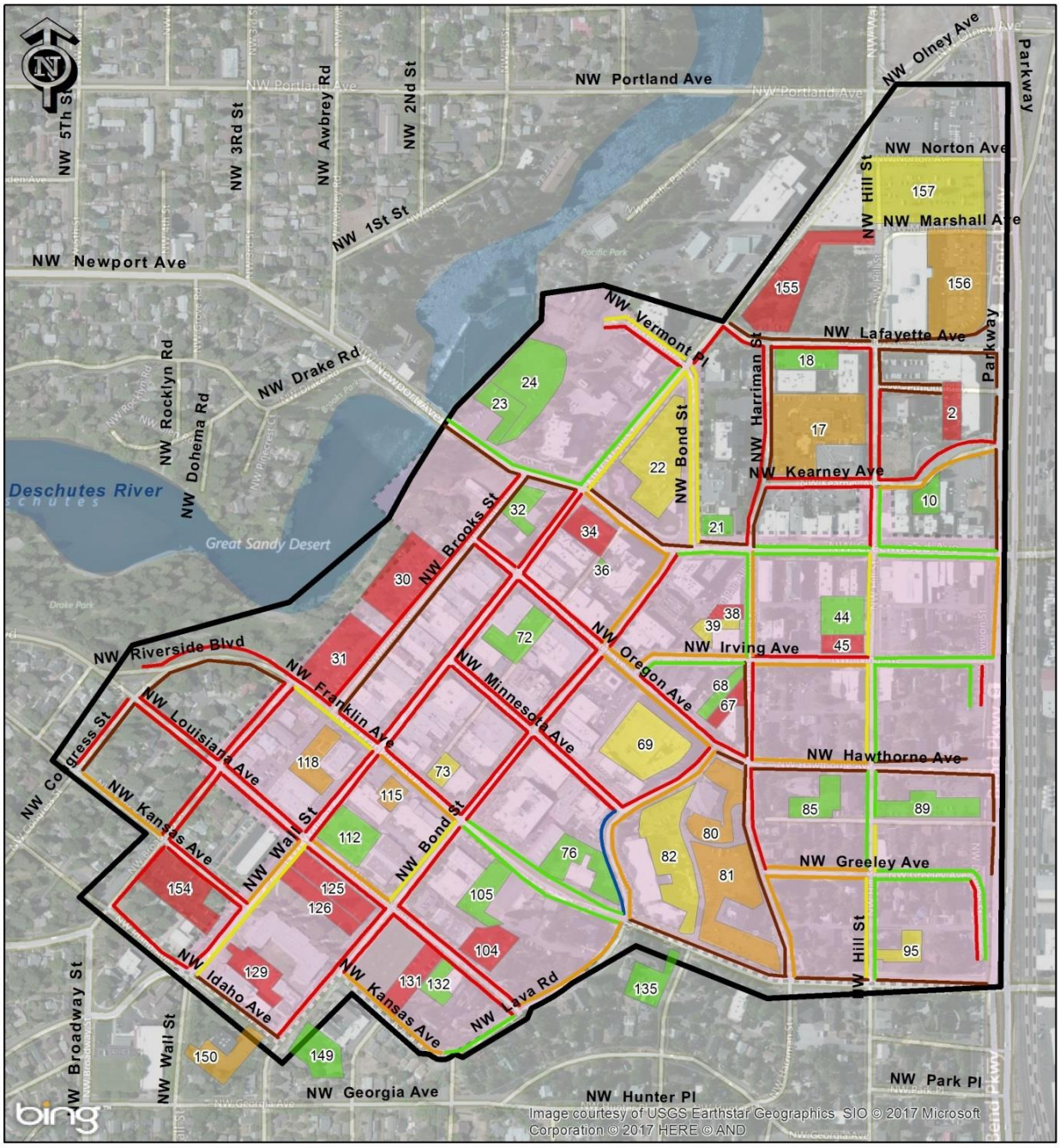
Figure G and **Figure H** (pages 33 and 34) illustrate on- and off-street peak hours for each of the summer survey days in heat map format.

As both maps illustrate, there are concentrated pockets of constrained activity (an occupancy rate of 85% or greater) in the on-street system. For both days, constrained activity is significantly more widespread than in the spring survey.

Wednesday constrained areas include most block faces in the area between NW Greenwood and NW Idaho Avenues (see **Figure G**). This constrained area extends east to NW Harriman. Areas east of NW Harriman (between NW Greeley and NW Kearney Avenues) are much less constrained.

On Friday, constraints are similar to those demonstrated on Wednesday in the area between NW Greenwood and NW Idaho Avenues (see **Figure H**). However, the area east of NW Harriman (between NW Greeley and NW Kearney Avenues) is less constrained than on Wednesday.

Figure G: Downtown Bend Wednesday (7/20/2016) Peak Hour Occupancy Heat Map



Combined Parking Utilization

July 20, 2016

Parking Study Area

Bend Parking District

> 85%

84% - 70%

69% - 55%

< 55%

2:30 - 3:30 PM

Peak Hour

0 95 190 380 570 760 Feet

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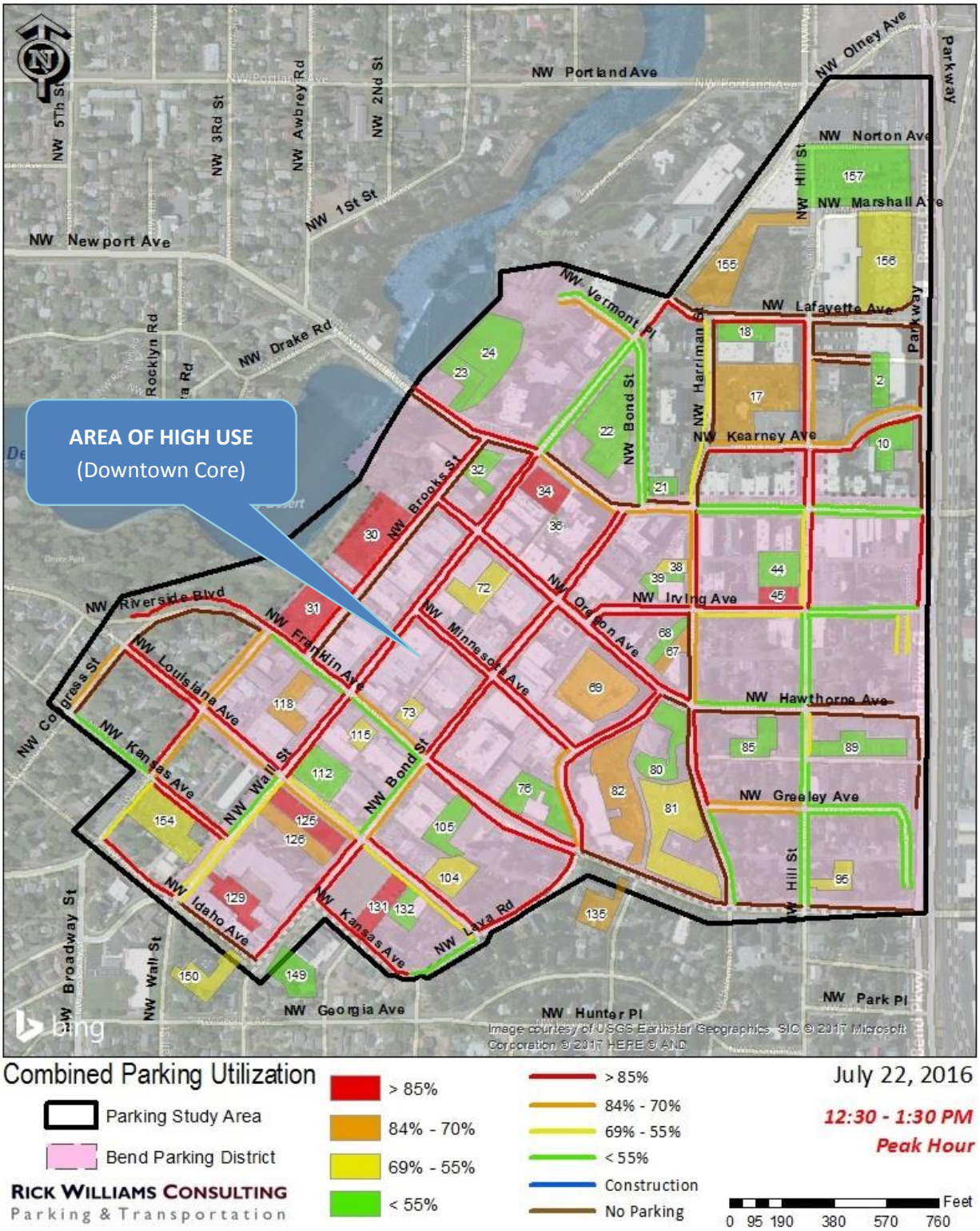
Figure H: Downtown Bend Friday (7/22/2016) Peak Hour Occupancy Heat Map



G. On-Street: Other Characteristics of Use (Seasonal Comparison)

Table 4 compares additional on-street performance metrics for 2016, including average duration of stay, total number of unique vehicles, number of vehicles moving to evade citations, and rate of violation.

Table 4: Downtown Bend- Characteristics of Use (Comparative by Season and Day)

Survey Day (season)	1 Average Length of Stay (including permit users)	2 Average Length of Stay (excluding permits)	3 Unique Vehicles	4 Moving to Evade	5 Turnover Rate (Including permits / excluding permits)	6 Violation Rate
Wednesday (Summer)	2 hr / 4 mins	1 hr /40 min	4,677	210	4.80 / 5.36	9.6%
Friday (Summer)	2 hr / 0 mins	1 hr /36 min	4,318	184	4.98 / 5.45	8.4%
Thursday (Spring)	2 hr / 4 min	1 hr /37 min	4,156	199	4.85 / 5.52	8.8%
Saturday (Spring)	1 hr / 43 min	1 hr /30 min	3,307	124	5.01 / 5.81	8.,4%

1. Average Duration of Stay (including permit users)

   Bend allows holders of valid permits, typically employees, to park in stalls designated "2 HR – Unless Otherwise Specified." The average duration of stay for all users reflects the impact of permit holders. As illustrated in **Table 4,** Column 1, the average duration of stay for all users does not vary much by season or day—for the most part; users are staying about two hours. The average stay on Saturday in spring is one hour and 43 minutes, which is most likely reflects a lower number of employees in the downtown.

2. Average Duration of Stay (excluding permit users)

   A more accurate average duration of stay can be calculated when observed permits holders are removed from the equation. As Column 2 in the above table demonstrates, average stays drop 13-24 minutes, ranging from a high of one hour and 40 minutes on the summer Wednesday to a low of one hour and 30 minutes on the spring Saturday. These findings indicate that the current two-hour time-limited stalls meet the needs of the average customer or visitor.

3. Number of Unique Vehicles

The recording of license plate numbers allows us to identify the total number of unique vehicles using the on-street system on a given survey day.[7] As Column 3 in the above table shows, 4,677 unique license plates were recorded on the summer Wednesday between 10:00 AM and 7:00 PM. This translates to approximately 468 vehicles arriving each hour over the course of an average business day in the study area. On the summer Friday, volume dropped by about 359 cars to 4,318.

It is clear that activity is much higher in summer than in spring. The spring Thursday saw 4,156 vehicles access the system, a difference of 521 vehicles (about 12.5%) when compared to the summer peak.

The lowest volume of activity was recorded on the spring Saturday, when 3,307 unique license plates were observed—a drop of 849 vehicles from the spring peak of 4,156.

Given that the studies were conducted using an inventory sample of 1,333 parking stalls, these daily totals indicate that overall vehicle activity is robust across all four data sets.

4. Moving to Evade

"Moving to evade" refers to moving vehicles between time-limited on-street stalls over the course of a day in order to avoid being cited. This metric can indicate abuse of the system, particularly if those moving their vehicles are employees. Users who shuffle their vehicle from one stall to the next reduce the number of on-street parking opportunities for visitors and customers, creating an artificial constraint on the system. Ideally, those wanting to park for longer periods of time would be directed to the permit program or off-street lots, preserving on-street stalls for higher turnover uses.

When these numbers are combined with the number of permits allowing all-day parking on-street, it can be argued that a meaningful percentage of long-term parkers are using the short-term supply.

As Column 4 of **Table 4** indicates, the number of vehicles found to be moving to evade ranged from 124 on the spring Saturday to 210 on the summer Wednesday. At the upper end, this represents 4.4% of all vehicles using the on-street system; at the lower end, it is 3.7%.

[7]This does not represent all vehicles in the study area, as license plate numbers were not recorded in off-street facilities.

When these numbers are combined with the number of employee permits allowing all-day parking on-street, it can be argued that a meaningful percentage of long-term users are using the short-term supply. Moving these vehicles into the off-street system would reduce abuse of short-term stalls and improve turnover and visitor access on-street.

5. Turnover: Efficiency of the Parking System

In most cities, the primary time limit allows for calculation of an *intended turnover rate.* For example, if the intended use for a stall is two hours, the stall should be expected to turn over 5.0 times during a 10-hour survey period.[8] If the turnover rate were demonstrated to be less than 5.0, the system would not be operating at its intended efficiency. A rate in excess of 5.0 would indicate a system that is operating at or above its intended efficiency.

As summarized in Column 5 of **Table 4**, the on-street parking system in downtown Bend maintains an average turnover rate that ranges from 4.80 on the summer Thursday to 5.01 on the spring Saturday when all users are included. Three of the four study days fall below the recommended industry standard of 5.0.

However, when permit holders are excluded, turnover rates exceed the industry target on all four survey days, from a low of 5.36 on the summer Thursday to a high of 5.81 on the spring Saturday.

Another way to look at the impact of turnover on vehicle trip capacity is to quantify the difference between the lowest observed rate of 4.80 (summer Thursday, including permits) and the highest rate of 5.81 (spring Saturday, excluding permits). **Table 5** illustrates this.

Table 5: Downtown Bend – Turnover and Vehicle Trip Capacity

Turnover Rate (TO)	Stalls Sampled (STALLS)	Employee Permits Parked on-street (peak hour)	Potential Vehicle Trip Capacity (TO X STALLS)
5.81	1,333	17	7,744
4.80	1,333	151	6,398
Net Daily Difference in Vehicle Trip Capacity			***1,346***

[8] Calculated by dividing the average time stay into the 10-hour study day.

Permit holders are lowering the average rate of turnover, which translates into fewer vehicles having access to the on-street supply.

As the table demonstrates, use of employee permits is adversely affecting potential access by customers or visitors. Permit holders are lowering the average rate of turnover, which translates into fewer vehicles having access to the on-street supply. If permit parking were significantly reduced, the system could serve an additional 1,346 vehicles per day.

The City of Bend should, over time, look to shift a greater number of permit holders to the use of off-street facilities or alternative modes. This will have significant positive benefits, putting more paying customers on-street and closer to ground-level businesses.

6. Excessive Time Stay (Rate of violation)

The parking industry sets a best-practice target for violations of 5-8% of unique vehicles.[9] A violation is defined as a single vehicle parked in excess of the posted time limit. In Bend, the violation rate ranges from 8.4% to 9.6% (see Column 6, **Table 4**), just exceeding the high end of the recommended range. Small adjustments in deployment of enforcement personnel should be considered to lower the rate to less than 8.0%, particularly in summer when on-street occupancy rates are highest and supplies constrained.

A violation is defined as a single vehicle parked in excess of the posted time limit. In Bend, the violation rate ranges from 8.4% to 9.6%, just exceeding the high end of the recommended range.

Summary (on-street)

Data indicates that the on-street parking system has areas of constraint that can create access issues. Constraints vary by season, with summer months generating the most significant issues.

Overall, parking behavior does not vary much by day or season. Customer duration of stay is consistent at less than 2 hours, as is the level of compliance with time limits. The format of time limits is heavily weighted towards long-term stays, with more than 55% of the on-street supply in the study area dedicated to either No Limit parking or parking that allows all-day stays with a valid permit. The effect of this has been to reduce turnover of the supply and limit the overall capacity for vehicle trips to the downtown. A strategy to move permit holders into off-street facilities or use of alternative modes should be pursued.

[9] This is not an indication of the number of actual tickets that would be written, only a standard to measure whether existing enforcement deployment and protocols are maintaining a best-practice range of compliance.

Enforcement is good, but rates of violation are beyond the 5-8% range the parking industry recommends for efficient parking systems). In addition, as many as 210 vehicles per day are moving to avoid citations, a portion of which likely belong to employees not in the permit program. This further reduces turnover and contributes to parking constraints. More strategic deployment of enforcement personnel can address this.

Heat map data demonstrates that parking is very constrained on weekdays in summer, particularly between NW Greenwood and NW Idaho Avenues west of NW Harriman. Areas east of NW Harriman demonstrate lower occupancy rates, which is replicated in spring. This area should be considered for different treatment as new management strategies are developed.

H. Off-Street Parking Occupancy

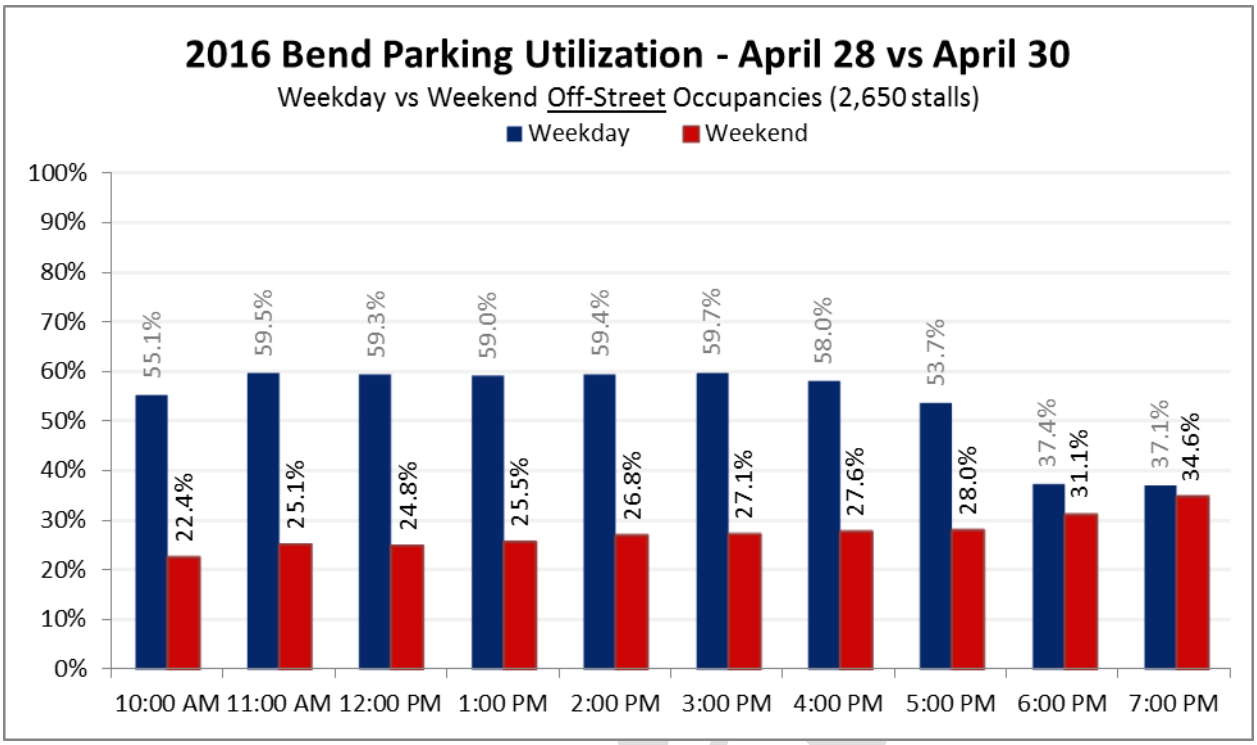
A sample of 46 lots comprising 2,650 stalls was selected for data collection. This sample represents 66.3% of all off-street parking in the study area, and accurately reflects the overall system in terms of type, size, and location. As with the on-street system, occupancy counts were conducted at each lot every hour between 10:00 AM and 7:00 PM; unlike the on-street survey, however, license plate numbers were not recorded.

Heat map representations of the off-street system may be found on pages 29 and 30 (spring) and pages 33 and 34 (summer). Detailed data findings for each surveyed lot are provided in Spring and Summer Data Summary Reports in **ATTACHMENT B** and **ATTACHMENT C** at the end of this report.

Spring 2016 (Thursday/Saturday)

Figure I provides an hour-by-hour look at occupancy performance for each of the spring 2016 survey days (April 28 and April 30).

Figure I: Downtown Bend: Off-street Hourly Occupancy Rates (Spring Comparative)



Weekday (Thursday, 4/28/2016)

- The peak hour for weekday off-street parking is from 3:00 to 4:00 PM. During this hour, 59.7% of off-street stalls are occupied.
- The very flat level of activity between 10:00 AM and 4:00 PM indicates employee use.
- Occupancy rates decline significantly after 5:00 PM.

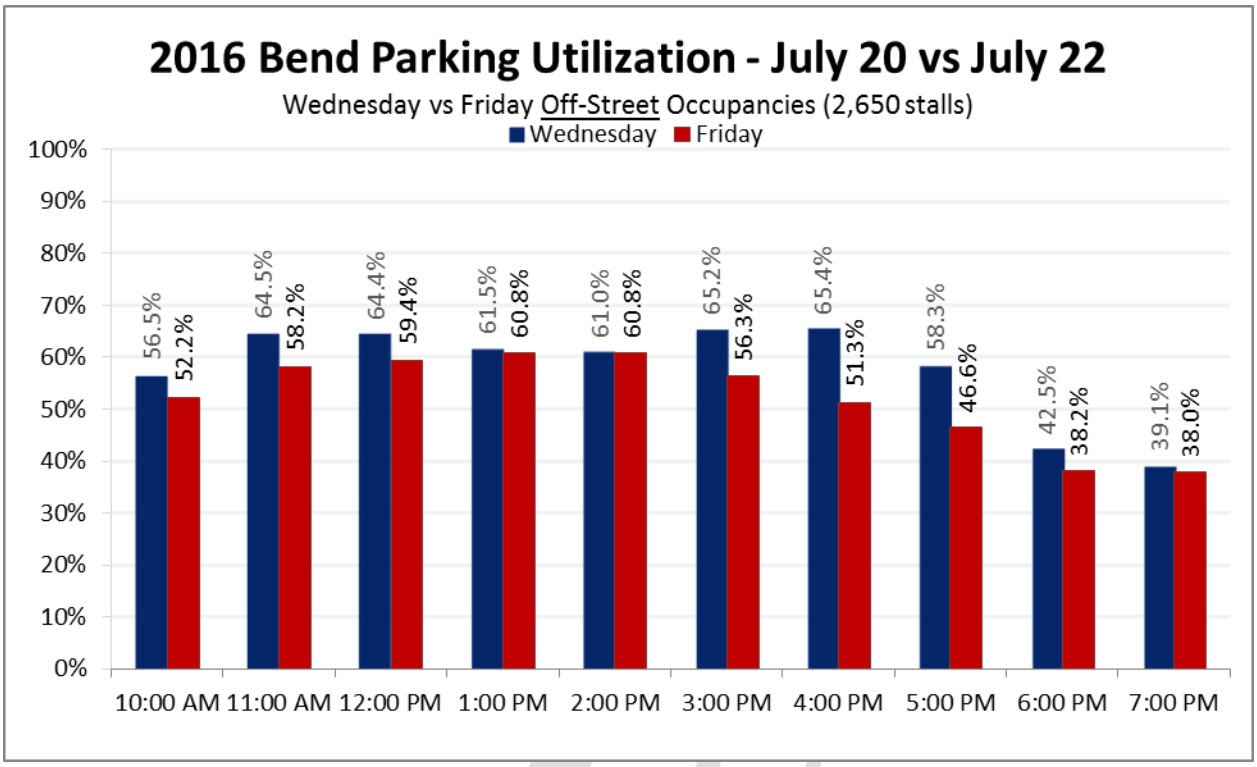
Weekend (Saturday, 4/30/2016)

- The peak hour for weekend off-street parking is from 7:00 to 8:00 PM. During this hour, 34.6% of off-street stalls are occupied.
- As with the weekday data, flat levels of activity throughout the day, particularly between 10:00 AM and 5:00 PM, indicates employee use.
- Occupancy rates increase after 5:00 PM, indicating new users coming into the downtown for evening activities.

Summer 2016 (Wednesday/Friday)

Figure J provides an hour-by-hour look at occupancy performance for each of the summer 2016 survey days (July 20 and July 22).

Figure J: Downtown Bend: Off-street Hourly Occupancies (Summer Comparative)



Wednesday (July 20, 2016)

- The peak hour for Wednesday off-street parking is from 4:00 to 5:00 PM. During this hour, 65.4% of off-street stalls are occupied.
- Occupancy rates decline between noon and 2:00 PM, increasing between 3:00 PM and 5:00 PM, then dropping steadily through 7:00 PM.
- At the peak hour, there are 917 empty stalls in the surveyed off-street lots. When extrapolated to the entire off-street supply, this indicates approximately 1,383 stalls empty at the peak hour (see summarized findings in **Table 6**, below).

Friday (July 22, 2016)

- The peak period for Friday off-street parking is from 1:00 to 3:00 PM. During these hours, 60.8% of off-street stalls are occupied.
- Occupancy rates decrease each hour between 3:00 and 7:00 PM, falling from 56.3% to 38%.
- At the peak hour, there are 1,038 empty stalls in the surveyed off-street lots. When extrapolated to the entire off-street supply, this indicates approximately 1,567 stalls empty at the peak hour (see summarized findings in **Table 6**, below).

Overall, the off-street system shows moderate use. In just the sampled supply of 2,650 stalls, the number of empty stalls in the peak hour ranges from 917 on the summer Wednesday to 1,733 on the spring Saturday. If the sample data is extrapolated to the entire supply, this range increases to 1,383-2,615. **Table 6** summarizes this finding.

Overall, the off-street system shows moderate use.

Table 6: Downtown Bend: Off-street Supply Capacity (Comparative Season/Day)

Survey Day (season)	Peak Hour *(Occupancy)*	Empty Stalls in Surveyed Supply *(extrapolated)*	City Garage
Wednesday (Summer)	4:00 – 5:00 PM *(65.4% occupancy)*	**917** empty stalls *(1,383 extrapolated)*	**174** empty stalls (< 68% occupied)
Friday (Summer)	1:00 – 3:00 PM *(60.8% occupancy).*	**1,038** empty stalls *(1,567 extrapolated)*	**156** empty stalls (<71% occupied)
Thursday (Spring)	3:00 – 4:00 PM *(59.7% occupancy)*	**1,067** empty stalls *(1,611 extrapolated)*	**286** empty stalls (<50% occupied)
Saturday (Spring)	7:00 – 8:00 PM *(34.6% occupancy)*	**1,733** empty stalls *(2,615 extrapolated)*	**285** empty stalls (<50% occupied)

Data from the City's public garage alone demonstrates that parking in this key facility is underutilized. Here the number of empty stalls at the peak hour ranges from 156 on the summer Friday to 285 on the spring Saturday.

Summary (off-street)

The 2016 data analysis of off-street parking in downtown Bend indicates that the system is operating at a moderate level of use. Regardless of season or day, at least 35% of the off-street supply is empty at the peak hour. Extrapolated to the entire supply, this means a minimum of 1,383 stalls are going unused during a period when the on-street system is both constrained and heavily used by employees and long-term parkers. This unused supply is a resource that could be capitalized on to manage and support future growth in parking demand.

Strategies to respond to data findings are detailed in **Section IX**. RECOMMENDED DOWNTOWN PARKING MANAGEMENT STRATEGIES below.

IX. RECOMMENDED DOWNTOWN PARKING MANAGEMENT STRATEGIES

From discussions with the City and stakeholders, specific parking management strategies have been identified and are recommended for implementation. They are informed by evaluation of current policies and practices, stakeholder outreach, discussions with the DSAC, analysis of 2016 parking utilization data, and the consultants' experience with industry best practices.

Twenty-eight strategies have been developed for consideration. Strategies for operations and infrastructure are intended to be phased in over 48 months, beginning with adoption of the plan. They are presented in an order whereby each strategy builds upon the work and outcomes of previous strategies. Near-term strategies are intended to focus management and decision-making, leverage opportunities in the existing supply of parking, reformat pricing structures, better communicate options and expectations, and continue to use data to facilitate decision-making. Longer-term strategies include new approaches to pricing, infrastructure and access capacity needs, and funding.

Any and all strategies can be implemented on an accelerated schedule or be reordered based on opportunity and resources.

The discussion below is organized as follows:

- Policy and Organizational Action Strategies: Immediate/Near Term (0-12 months)
- Recommended Parking Management Strategies: Phase 1 (12 – 24 months)
- Recommended Parking Management Strategies: Phase 2 (24 – 48 months)

*A summary of all recommended strategies is attached as an Implementation Schedule at the end of this report (**ATTACHMENT A**).*

A. Policy and Organizational Action Strategies

These strategies incorporate parking management into the City's development policy. It is recommended that they be adopted and implemented in the very near term (**within 12 months** of plan adoption).

STRATEGY 1:

Formalize the Guiding Principles as policies in appropriate City documents.

Incorporating these principles into City policy ensures that parking management goals established in this plan can be met. This will require actions by the City Council. The Guiding Principles are fully detailed in **Section V**. GUIDING PRINCIPLES – ELEMENTS OF PARKING MANAGEMENT, above.

Estimated Costs (STRATEGY 1):

It is estimated that costs associated with this strategy would be minimal and mostly expended in efforts of existing staff to develop resolutions and ordinances through routine city planning processes.

STRATEGY 2:

Adopt the 85% Rule as the standard for measuring performance of the parking supply and triggering specific management strategies, rate ranges and efforts by discrete zone.

When parking occupancy rates during the peak hour routinely reach or exceed 85%, the 85% Rule requires that additional strategies be implemented to reduce constraints.

Data from 2016 indicates that many areas of the downtown are constrained during peak hours. Formalizing the 85% Rule as policy will ensure that a process is in place for evaluating and appropriately responding to parking constraints.

Estimated Costs (STRATEGY 2):

It is estimated that costs associated with this strategy would be minimal and mostly expended in efforts of existing staff to develop resolutions and ordinances through routine city planning processes.

STRATEGY 3:

Centralize the management and administration of parking in a Parking Services Division, integrated with the broader program of transportation services management.[10]

The success of any multi-faceted parking system depends on centralized, strategically coordinated management. This includes daily supervision of facilities, oversight of third-party vendors, financial

[10] The Parking Division must coordinate with transportation staff to achieve balanced access across all transportation modes.

accounting and reporting, marketing and communications, customer service, and strategic and capital planning.

The current parking management system in Bend is neither centralized nor strategically coordinated. Given the complexity of the system and the level of technical and response capability called for in the Parking Management Plan, a single clear point of responsibility is needed. *Parking issues are too complicated and prevalent for status quo approaches to management.*

It is recommended that the City begin internal discussion on restructuring parking management, creating a Parking Services Division under the purview of a professional Parking Demand Manager who will direct daily operation of the system, implement policies and programs, and plan for growth.

Estimated Costs (STRATEGY 3):

At this time, costs associated with this strategy are unknown. There may be efficiencies, and there may be new costs (see **Strategy 4**, below). It is recommended that any new costs be supported by revenue from the parking system.

STRATEGY 4:

Create the position of Parking Demand Manager for the City of Bend. Develop a job description and submit a service package to hire an appropriate individual.

As indicated in **Strategy 3** above, a single person should be assigned to oversee all aspects of parking in the downtown. Consolidating parking operations in a single department under a Parking Demand Manager creates administrative and operational efficiencies; integrates on- and off-street parking, enforcement, and strategic planning; provides a point of accountability; and ensures that policy is fully implemented. The process for approving this service addition should be completed immediately (0–12 months) to facilitate near-term hiring or restructuring of an existing position (see discussion below).

Ideally, this person will staff a committee of stakeholders to routinely review parking activity (see **Strategy 5**). This group would use performance data to evaluate "action triggers" and implement appropriate strategies.

The Parking Demand Manager will need demonstrated experience in the following, which she or he will, at minimum, be responsible for:

- Coordinating and implementing all aspects of the Parking Management Plan.
- Overseeing all personnel (City and third-party) involved in the delivery of municipal parking services.
- Acting as liaison among businesses, users, and other agencies.
- Coordinating with Administrative Services to create consolidated financial reporting systems for parking.

- Creating annual budgets for parking services.
- Overseeing third-party management agreements for parking operations or enforcement services in City facilities.
- Ensuring contract compliance by third-party providers.
- Coordinating policy and code changes approved in the Parking Management Plan with relevant departments and divisions.
- Developing new signage and communications systems.
- Developing and implementing marketing and communications programs.
- Routinely assessing rates and fees and recommending adjustments based on demand dynamics.
- Overseeing data collection as defined by policy.
- Coordinating the transition to new revenue collection technologies for performance-based pricing, as called for in Phase 2 of the Parking Management Plan.
- Developing RFPs for parking services, equipment, and technology.
- Coordinating review and selection of service, equipment, and technology providers.
- Assessing further upgrades (e.g. signage, lighting, security, maintenance, enforcement) as necessary.
- Developing and negotiating contract agreements.
- Developing tracking and reporting systems to measure and monitor programs.
- Troubleshooting program glitches.
- Hosting and facilitating the work of a Downtown Parking Advisory Committee.

Improvements in efficiency, coordination, and communications could be made within the City's existing parking operations. These might include:

- Increasing the total FTE responsible for administration.
- Establishing a Parking Management Work Group, facilitated by a designated parking coordinator, that routinely reviews operations, performance, and rates, and supports responsive and strategic decision-making.
- Designating a Parking Coordinator to oversee the work of a Parking Advisory Committee.
- Consolidating reporting and performance monitoring.

Though the City currently has staff involved in the downtown parking program, the existing management format does not have a central point of responsibility. As mentioned above, this is of particular importance given the complex and dynamic nature of the parking strategies in this plan, and

for this reason, the consultant team and DSAC has recommended creation of a new Parking Demand Manager position.

Estimated Costs (STRATEGY 4):

Costs associated with reorganizing parking management into a single division under a Parking Demand Manager are being developed by City staff for review by City Council during budget deliberations in May 2017. It is recommended that any new costs be supported by revenue from the parking system.

STRATEGY 5:

Establish a Downtown Parking Advisory Committee to assist in implementation and ongoing review of the parking plan.

The City should develop and approve a process through which a representative cross-section of downtown stakeholders *routinely* assists in the review and implementation of the Parking Management Plan. It is recommended that the City Council formally appoint members to the Parking Advisory Committee. The current Downtown Stakeholder Advisory Committee (DSAC) is an excellent example of the type of representation needed for a new Parking Advisory Committee.

A consistent schedule of meetings should be established, using this plan as a template for discussion.

Estimated Costs (STRATEGY 5):

There should be no additional costs associated with this strategy if it can be maintained as a volunteer effort, hosted by the City and/or downtown business interests through the Downtown Bend Business Association.

STRATEGY 6:

Evaluate collection of data to measure parking impacts in select neighborhoods adjacent to the downtown, as well as feasibility and cost of neighborhood permit programs (e.g., administration, process and stakeholder education).

The work scope for the 2016 downtown data collection did not provide for extensive evaluation of parking activity in residential areas bordering the downtown. Therefore, it was not possible to provide objective data on parking overflow or use of residential areas by non-residents, or to establish a baseline of purely residential parking occupancy rates.[11]

[11] Data on residential occupancy is best collected after mid-night to provide a 'pure" count of vehicles likely to be associated with adjacent residential properties. This data can then be compared to day time counts to determine the level of overflow.

The DSAC recognized the potential impacts of current and future parking demand in the downtown on adjacent neighborhoods. They also recognized that parking management in neighborhoods may require different solutions than in the downtown. The DSAC recommends that, in the near term, the City undertake a study in residential areas that:

a. Engages stakeholders in discussions of parking impacts in adjacent neighborhoods and provides information on best-practice residential parking management strategies.

b. Establishes boundaries of residential impact areas.

c. Collects data using methodologies appropriate to measuring residential overflow.

d. Uses data findings to develop targeted residential strategies. These could include:

   - Residential Parking Permit Programs
   - Reevaluation of parking time limits in residential areas.
   - Evaluation of surpluses and constraints in residential areas.
   - Shared parking programs in areas of surplus.

Estimated Costs (STRATEGY 6):

It is estimated that costs associated with a neighborhood parking study and engagement process would range from $35,000 to $50,000. Costs will be greatly affected by the size of the study area.

STRATEGY 7

Develop funding options to support parking management, maintain the existing parking supply, and support future growth, ensuring the financial feasibility of the system.

A wide range of funding sources and revenue streams could be used to implement an enhanced parking management plan and develop new parking or transit capacity in Bend. Given the cost of infrastructure, considering new funding mechanisms is prudent.

The list of potential sources here is not exhaustive, nor are these sources mutually exclusive. Funding for parking facilities, particularly garages, in emerging urban areas generally requires multiple sources, some of which may already be in place in Bend. The use of fees continues to evolve as various state laws or city ordinances are authorized. Implementation of fees should be reviewed by the City Attorney to determine their feasibility in light of applicable laws.

The funding options below assume a more detailed discussion of the role of the City in future funding of parking and transit, and public discussion regarding use of public funds to build and operate new systems.

Options Affecting Customers

User Fees

Many cities collect revenue through parking meters and/or sale of permits, and direct it to parking or transportation development enterprise funds. Transit or shuttle riders pay in the form of fares. These funds can be used to construct or bond for additional parking or transit capacity.

Event Ticketing Surcharges

Surcharges may be imposed in conjunction with local and regional facilities (e.g., performing arts, sports, and concert arenas) to support development of access systems. Fees are generally applied to ticket costs.

Parking Fines

Revenues are collected for parking violations and a portion directed to parking development enterprise funds.

Options Affecting Businesses

Parking and Business Improvement Area or District (BIA or BID)

An assessment on businesses rather than property owners, BIAs or BIDs can be based on assessed value, gross sales, square footage, number of employees, or other factors established by the local legislative authority. Salem, Oregon assesses a fee on businesses in its downtown parking district to support parking services. Portland assesses a business tax through the State of Oregon to support transit.

Options Affecting Property Owners

Special or Local Improvement District (SID/LID)

An SID or LID is a property tax assessment that requires buy-in by property owners within a specifically identified boundary. LIDs usually result from a petition process requiring a majority of owners to agree to an assessment for a specific purpose—in this case, a parking facility or transit infrastructure improvement.

Options Affecting Developers

Cash/Fee-in-Lieu

Developers may be given the option to pay a fee in lieu of providing parking with a new private development. Cash-in-lieu fees provide the developer access entitlements to public parking facilities near the development site.

Cash-in-lieu fees can be assessed up to the full cost of parking construction. Generally, these do not provide sufficient revenue to fully fund parking facilities, and are combined with other revenue sources.

If a cash-in-lieu fee is considered as a realistic funding source for new parking supply, there needs to be clarity and consensus on the intent and purpose of the fee and its use in increasing capacity either through new parking supply or through enhancement of alternative mode programs. Lack of specificity in this regard limits discussion of the type of fee, the rate, and the programs and strategies that would need to be in place to reach desired outcomes. A useful guide to the diversity of cash-in-lieu programs and their advantages and disadvantages is Donald Shoup, *Journal of Planning and Education Research*, 18:307-320, 1999.

Public/Private Development Partnerships

Development partnerships are generally associated with mixed-use projects in which parking is used to reduce the cost of private office, retail, or residential development. Public/private development can occur through a variety of arrangements, including:

1. Public acquisition of land and sale or lease of land/air rights not needed for parking to accommodate private use.
2. Private development of integrated mixed-use development with sale or lease-back of the public parking portion upon completion.
3. Responsibility for public sector involvement directly by the City, through a public development authority or other special purpose entity, such as a public facility district created for the project district or downtown area.

Options Affecting the General Public

General Obligation (GO) Bonds

Local jurisdictions may issue voted or non-voted bonds to develop parking or transit infrastructure, subject to overall debt limit requirements. With GO bonding, the municipality pledges its full faith and credit to repayment of the debt from general fund resources. In effect, general fund revenues would be reserved to repay debt that could not be supported by parking or transit revenues alone. Again, there may be imposed limits on the municipality for voter-approved or non-voted debt.

Refinancing GO Bonds

This involves refinancing existing debt at lower rates, and pushing the savings from the general fund to debt coverage for new infrastructure. In these times of lower interest rates, the City of Bend may have already maximized this option.

Revenue Bonds

Revenue bonds dedicate parking fees and other designated revenue sources to the repayment of bonds, but without pledging the full faith and credit of the issuing authority. Revenue bonding is not appropriate in situations where a local jurisdiction's overall debt limit is a factor and projected revenues are insufficient to cover required debt service.

63-20 Financing

A potential alternative to traditional GO bonds, revenue bonds, and LID bond financing, 63-20 financing allows a qualified nonprofit corporation to issue tax-exempt bonds on behalf of a government. Financed assets must be capital and must be turned over free and clear to the government by the time bonded indebtedness is retired. When a municipality uses this technique to finance a public facility, it can contract for the services of a nonprofit corporation as the issuer, and a builder. The issuer acts on behalf of the municipality, but has no real business interest in the asset being acquired.

State and Federal Grants

In the past, a variety of state and federal grant programs have been applied to funding parking and transit infrastructure in business districts. In the current environment of more limited government funding, there may no longer be readily identifiable programs suitable for parking facility development, though transit may be more feasible.

General Fund Contribution

Local jurisdictions may make either one-time capital or ongoing operating contributions to a downtown parking or transit/shuttle program.

Estimated Costs (STRATEGY 7):

This is very much a process task, requiring research and conversations with City policy- and decision-makers and legal counsel, and discussion with a range of potentially affected stakeholders. For the purposes of this discussion, it is assumed that costs would be absorbed internally by the City and through implementation of the parking management plan.

STRATEGY 8:

Create a cohesive pricing policy for on- and off-street parking in downtown Bend.

Parking rates are a key element of parking management and sound fiscal policy. Understandably, adjusting rates is a controversial topic. For the DSAC, it is critical that Bend establish a fair market rate that supports businesses and encourages neighborhood parking management and use of alternative modes.

Rates should be routinely reviewed and adjusted in the context of a clear, fair, and objective policy framework. If adjustments are made only when fiscal challenges or occupancy patterns necessitate, justifiable increases can be seen as reactive rather than strategic and based in policy. Bend does not currently have a routine, policy-based approach to evaluating and adjusting parking rates. The City should establish a formal system in the municipal code to provide a basis for rate-setting in both the on- and off-street systems, including enforcement.

Best practices suggest that rates be adjusted periodically in order to:

- Cover normal increases in operating costs.

- Reflect demand patterns, e.g., using an occupancy standard such as the 85% Rule as a trigger for adjusting rates upward or downward.
- Encourage efficient use of the entire system, minimizing surpluses in the public off-street supply.
- Provide for future need as part of a comprehensive funding strategy. This includes normal capital planning and projected growth of the system.

In the last five years, a number of cities have instituted this process of regular adjustments. For example, SFpark in San Francisco adjusts on-street rates every six weeks in response to occupancy conditions as measured by in-pavement sensors. Seattle adjusts rates annually based on manual parking occupancy studies. Redwood City and San Mateo California have adopted similar approaches. A sample rate policy from South San Francisco, California is provided in **Attachment E** of this document.

Estimated Costs (STRATEGY 8):

It is estimated that costs associated with developing a formal policy for Council review and approval would be minimal and mostly expended in efforts of existing staff to develop resolutions and ordinances through routine city planning processes. This strategy would assure that the financial viability of the system is maintained and reduce overall costs to the City, as revenue would be, at minimum, equal to expenses.

STRATEGY 9

Evaluate and implement solutions to safety impediments that create inconvenient and inefficient connections to parking, e.g., lighting, sidewalk/paths, lot conditions, etc.

The DSAC asserted early on that connections between the downtown core and parking assets outside the core are lacking. Infrequent users are especially inconvenienced by the lack of signage directing them to, through, and between the downtown and adjacent areas. Inadequate street lighting and the poor condition of some facilities create negative safety perceptions, and alternative mode options that could allow users to park once and access all of the downtown easily are not strategically coordinated or managed.

It is recommended that the Downtown Parking Manager and DPAC undertake a comprehensive inventory and evaluation of impediments to connectivity and develop solutions for each. This might necessitate engaging a third party to assist in cataloguing issues, drafting solutions, and forecasting costs. Input from and participation by other relevant City divisions, as well as Cascades East Transit, will be important. An action plan would be developed for presentation to City Council and other affected entities for their review, consideration, and approval.

Potential elements of the action plan could include:

- Installing wayfinding signage at key access portals to direct users to available parking and help them find efficient routes between parking and their destinations.
- Evaluating improved transit connections between parking locations and destinations in and outside the core. This could entail rerouting of existing services and/or new shuttle/circulator programs.
- Improving bikeway links (e.g., safe routes/lanes, directional signage, bike parking).
- Improving pedestrian links.

Findings from this evaluation could help inform other longer term strategies—see **Strategies 20, 24 and 26.**

Estimated Costs (STRATEGY 9)

At this time, the costs associated with developing such an action plan are unknown. It would involve City staff time, work of the DPAC, coordination with other City divisions, and most likely the assistance of a third-party planning firm. For purposes of budgeting, costs for engaging a planning firm could range from $20,000 to $25,000.

B. Parking Management Strategies – Operations (Phase 1)

These strategies should be implemented within **12 to 24 months** of plan adoption.

STRATEGY 10

Establish business-to-business and residential outreach on parking issues, including education and planning, and a *Customer First* Partnership with the Downtown Bend Business Association.

This strategy is most likely an addendum to **Strategy 5**, which uses the Downtown Parking Advisory Committee as a source for targeted strategic communications to downtown businesses, employees, and the broader community. A program of routine visits to businesses, with informational materials and "open ears", would be undertaken by a combination of existing staff (from the City or Downtown Bend Business Association) and/or DPAC volunteers. Results would be catalogued and reported back to the work group. Similar programs are used in cities like Gresham ("Customer First") and Oregon City (through the Oregon City Main Street Partnership).

Example: Gresham, Oregon Customer First Program Logo

Outcomes could include:

- Improved education and communication of parking options to employees, residents, and visitors.
- Maps and other materials to identify parking and rules of use.
- Informational kiosks.
- Co-marketing opportunities with retail shops, hotels, restaurants, event venues.
- Alternative mode education and incentives.
- Interactive website.
- Tying communications to a new brand/logo (see **Strategy 16**).

Estimated Costs (STRATEGY 10)

It is estimated that costs associated with this strategy, including development of materials, could be adequately maintained for approximately $7,500-10,000 annually.

STRATEGY 11

Identify off-street shared-use opportunities based on data from the 2016 parking study. Establish goals for transitioning permit users and long-term parkers out of on-street parking, begin outreach to opportunity sites, negotiate agreements, and assign permittees to facilities.

The majority of parking in the downtown is off-street in privately owned parking assets. The 2016 parking study indicates that the number of *empty parking stalls* during the peak hour ranges from 1,383 to 2,615. This unused resource presents an opportunity to manage and support future growth in parking demand, and could be used to:

- Create designated parking for permit and long-term parkers that includes downtown opportunity areas and remote satellite lots.
- Incentivize employees to park in these areas.
- Improve the safety of these areas and connections to the downtown.
- Serve as a resource for event parking, particularly evenings and weekends.

Directing permit users to these facilities would have a significant impact on on-street occupancy rates during normal peak hours. During events, this supply would also benefit overall access to the downtown and reduce on-street constraints. These efforts should be coupled with **Strategy 10** to increase awareness and create partnerships for use of shared parking supplies.

The City and DPAC should consider the following for completion within 24 months of plan adoption:

a) Using data from the 2016 parking study; identify a subset of the 46 off-street facilities surveyed as potential shared-use opportunity sites. Criteria could include proximity to key downtown destinations, a meaningful supply of empty stalls, pedestrian/bike connectivity, safety and security issues, etc.

b) Based on the above, develop a short list of opportunity sites and identify owners.

c) Establish a target goal for the number of downtown employees to transition into opportunity sites.

d) Begin outreach to owners of private lots.

e) Negotiate shared-use agreements.

f) Obtain agreements from downtown businesses to participate in an employee assignment program.

Estimated Costs (STRATEGY 11):

It is estimated that costs associated with this strategy would be mostly expended in efforts of existing staff and volunteers to identify opportunity sites and conduct outreach to potential private sector participants. Planning may determine that funds are needed to create incentives and/or improve the condition of facilities and connections.

STRATEGY 12:

Implement variable-rate pricing for on-street permits based on location, demand, and availability of parking. This will create pricing differentials between "premium" and underutilized locations.

Variable-rate pricing uses rates to influence behavior. Facilities with low demand and/or less convenient locations would be priced lower than those with high demand or in close proximity to destinations. Effective use of variable-rate pricing results in better distribution of users across facilities, particularly those that are underused.

At present, Bend does not use this type of pricing. A map showing the City's on-street permit parking program is provided on the next page (**Figure K**).

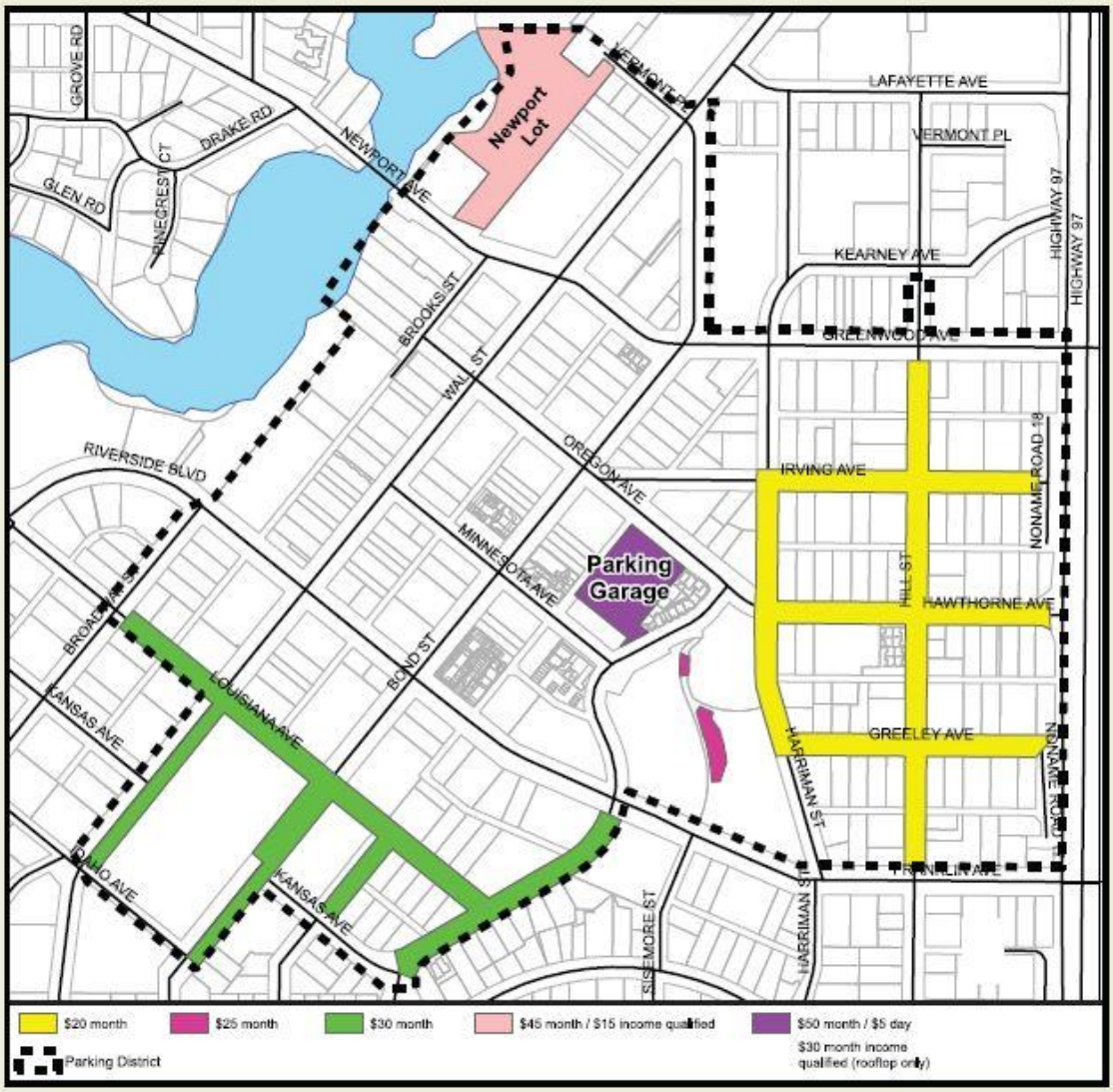
Current permits range from $20 to $50 per month, but the difference in rate is not correlated to demand or desirability of location. For instance, the monthly cost of a permit at the City's Newport Lot is $45 per month. Peak occupancy at this 104-stall lot is only 41%, leaving 61 or more stalls empty on most days. On-street permit parking in and around City Hall, which is more than 85% occupied at the weekday peak, costs just $30 per month.

It is recommended that the City's Parking Demand Manager and DPAC reevaluate current parking permit rates to better correlate them to both location and demand. A suggested rate schedule is provided in **Table 7**. All rate evaluations should include input derived from **Strategy 8**.

Table 7: Downtown Bend: Suggest Variable Rate Schedule – Employee Permit Program

Area/Facility	Current Rate	Peak Occupancy Summer 2016	Suggested Rate
Newport Lot	$45 per month	41%	$20
Garage (Purple)	$50 per month	71%	$40
On-street (Green)	$30 month	>85%	$55
On-street (Yellow)	$20 month	<55%	$20
Hilltop (Purple)	$25 month	78%	$40

Figure K: Downtown Bend: City Parking Permit Program



Estimated Costs (STRATEGY 12):

It is estimated that costs associated with this strategy would be mostly expended in efforts of the Parking Demand Manager and DPAC to review rates and recommend for adjustments. The City could consider a third-party rate study, which would likely be in the range of $15,000 - $20,000. Rate changes could result in additional revenue for the City.

STRATEGY 13:

Reduce or phase out the number of "2-Hour or as Otherwise Specified" on-street stalls in coordination with Strategies 11 and 12 above to simply "2-Hour Parking."

There are currently 242 stalls in the downtown study area designated "2 Hours – Unless Otherwise Specified." These stalls allow short-term visitor parking, but can also be used all day by users displaying a valid permit. These stalls are located in the green and yellow areas in **Figure K**, previous page. At the peak hour, more than 150 of these stalls are occupied by permit holders.

As described earlier, the use of on-street permits lowers the average rate of turnover and reduces access for customers and visitors. As **Table 5** (page 37) illustrated, the system could serve an additional 1,346 vehicles per day if permit parking were significantly reduced, particularly in areas where occupancy rates exceed 85% in the peak hour.

It is recommended that the number of on-street stalls designated for permit use be reduced through a process guided by **Strategy 11** (off-street shared use) and **Strategy 12** (variable-rate pricing).

Estimated Costs (STRATEGY 13):

Costs associated with this strategy would be expended in replacing existing signage. Estimated costs are $30 per sign plus labor.

STRATEGY 14:

Based on documented parking behavior, establish distinct on-street parking management zones in the downtown parking district. Use 2016 and Strategy 21 occupancy data to define the boundaries.

Heat maps (**Figure G** and **Figure H**, pages 33 and 34) demonstrate that parking is very constrained downtown on summer weekdays, particularly between NW Greenwood and NW Idaho Avenues west of NW Harriman. Areas east of NW Harriman show lower occupancy rates in both summer and spring. These areas should be considered for treatment as distinct management zones.

Each management zone would have a standard time limit. Exceptions would be allowed for very short-term (e.g. 15- or 30-minute) high-turnover stalls, loading zones, taxi pickup/drop-off areas, oversize vehicles, etc. The Parking Demand Manager and DPAC would review requests for exceptions.

Data from 2016 suggests the following changes to on-street formatting. Additional refinements could be made based on data collected per **Strategy 21**, below.

- Establish a 2-Hour standard time limit in a "core zone."
- Establish a 3-Hour standard time limit in an "east zone."
- Establish a 3-Hour standard time limit in areas of the parking district not covered by the core and east zones.

- Allow limited employee permit parking in the east zone, coordinated with Strategies 11 and 12 above.
- Establish a periphery zone adjacent to the parking district with a standard time limit appropriate to the residential nature of this area, coordinated with **Strategy 6** above.
- Create a process for requesting exceptions to standard time limits in the management zones, and for subsequent review by the Parking Demand Manager and DPAC.

Estimated Costs (STRATEGY 14):

Costs associated with this strategy would be expended in replacing existing signage. Estimated costs are $30 per sign plus labor.

STRATEGY 15:

Improve safety and security at Mirror Pond lots and eliminate free parking for the first two hours.

Data from both 2016 studies shows that the North and South Mirror Pond lots are at least 85% occupied for significant periods of the day. Observations from Diamond Parking and the DSAC indicate that free parking offered for the first two hours is often used by employees, who park at the lots for two hours before moving to on-street stalls. This takes parking capacity away from customers and visitors.

The lots also need upgrading to improve their appearance and safety. This could include better signage and lighting, and changes to the landscaping to improve sightlines and discourage loitering.

Once a Parking Demand Manager is brought on Board (**Strategy 4**) and a Downtown Parking Advisory Committee empaneled (**Strategy 5**), the current DSAC recommends eliminating two-hour free parking and developing an action plan and budget for the rate transition, to occur concurrently with physical upgrades to the lots. Other considerations forwarded for review by the Parking Demand Manager and DPAC include:

- Implementing progressive hourly parking, with a lower rate for the first two hours, then increasing rates for each additional hour.
- Limiting stays (e.g., a four-hour maximum).
- Extending parking restrictions to 8:00 p.m. to ensure access for priority users.

Estimated Costs (STRATEGY 15):

The existing revenue control system at the lots is capable of implementing the recommended rate change and/or a progressive hourly rate format. Costs associated with new signage, lighting, and landscaping would be developed in an action plan by the Parking Demand Manager and the DPAC.

STRATEGY 16:

Create a critical path timeline to a new parking brand that can be utilized at all City-owned lots and shared facilities, and in marketing/communications.

The Guiding Principles call for effective; high-quality branded communications (see **Section V**. GUIDING PRINCIPLES – ELEMENTS OF PARKING MANAGEMENT). Guiding Principle A.4 recommends that "to the highest degree possible, communications systems should be reliable and easy to use and understand." Guiding Principle D calls for a parking system that links parking assets and communication systems under a common brand or logo.

The intent of these principles is to create a unified public parking system that is easily recognized through use of a common brand or logo, both at parking sites and, ideally, on a wayfinding system located throughout the downtown and on maps, websites, and other communications.

It is recommended that the City and DPAC engage a design firm to develop a parking brand for use at all of Bend's public off-street facilities, and any shared-use facility that offers visitor access.

Examples: Parking Brand/Logos

The design professional would:

a) Work with the City and DPAC to create a new parking brand for Bend.

b) Develop options and assist in developing a final recommended brand/logo.

c) Develop cost estimates for the creation and placement of branded signage at all City-owned off-street sites and shared-use facilities.

d) Assist in signage creation.

Estimated Costs (STRATEGY 16):

It is estimated that engaging a design consultant to carry out the tasks identified above would range from $20,000 to $25,000.

STRATEGY 17:

Standardize the design of on-street parking signage in the parking management district and incorporate the new brand/logo.

Existing signage is inconsistent in design and color, is very small, and is difficult to read from the street. Clear, standardized on-street signage will simplify parking for customers and provide for uniform time limits in parking management zones (see **Strategy 14**).

It is recommended that in Phase 1, the City:

- Make all core-zone parking 2-Hour (per **Strategy 14**).
- Make all non-core zone parking 3-Hour or By Permit (per **Strategy 14**).
- Eliminate or greatly reduce No Limit stalls.

Current Bend On-street Signage

Additionally, a new brand/logo can be incorporated into the on-street system as a means of integrating the on- and off-street systems. This will require coordinating changes in the on-street system to the branding work in **Strategy 16**. A similar branding effort in Springfield, Oregon incorporated a stylized P into on- and off-street signage, as seen in the graphic at right.

Estimated Costs *(STRATEGY 17):*

The following estimates are based on information from other cities:

- A standard signage package consists of two poles with blade signs per block face, one at each end of the block with arrows pointing inward.

Unit Costs—Signage

- Only material costs are provided in these estimates
- Pole unit cost = $470
- Blade sign unit cost = $30
- Unit cost for poles includes hole boring

The number of signs needed would be identified through a signage inventory.

STRATEGY 18

Rename all public parking facilities by address.

Names like Newport, Centennial Garage, or Public Lot do not communicate useful information to users, particularly those who are unfamiliar with the downtown.

Industry best practices for naming off-street parking facilities suggest using an address or intersection associated with the main entrance. Portland, Oregon and Boulder, Colorado do a good job of identifying facilities in this manner—names like 10th & Walnut or 4th & Yamhill intuitively communicate location. Coupled with the system logo, these facilities can easily be integrated into branded communications, apps, wayfinding, and other materials.

Facility Identification: Boulder CO & Portland OR

Bend's current naming format is not customer-friendly or informative. The City should consider renaming its facilities as part of a broader effort to make the parking system more intuitive and easier to use. As shared-use facilities are developed and integrated into the City system, they can be renamed according to this convention. This effort would be coordinated with **Strategies 11, 16, 17, and 24**.

Estimated Costs (STRATEGY 18):

Initial costs would involve changing existing signage and marketing and promotional materials, estimated to range between $5,000 and $10,000.

STRATEGY 19:

Establish best-practice protocols and performance metrics for enforcement personnel and support enforcement with appropriate technology.

Enforcement is the foundation of sound parking management. Without enforcement, systems designed to encourage turnover and deter employees from parking on-street are ineffective.

Data from the 2016 study indicates that enforcement in Downtown Bend is generally good, but rates of violation are just over the high end of the recommended range for efficient parking systems of 5%-8%. Also, as many as 210 vehicles per day are moving to avoid citations, some of which are likely employees not in the permit program. Both factors adversely affect turnover and contribute to parking constraints. Deploying enforcement personnel more strategically can address this.

The DSAC recommends that additional consideration be given to strategies that:

- Revise "move to evade" policies to allow one move in the downtown area.
- Change enforcement hours to reflect actual demand trends.
- Increase fees and fines as necessary to ensure a violation rate of 5-8%.
- Create fees and fines by zone.

As the program evolves, specific enforcement goals for the on-street system should be adopted and tracked. Outlined below is a best-practice approach the City could integrate into its existing protocols and procedures.

Best Practices

The key goal for parking enforcement is promoting compliance with regulations designed to maximize the efficiency and safety of public parking. Emerging best practices combine enforcement with downtown ambassadors who provide information resources to users.

Example: Enforcement Hand Held Technology

Industry guidelines for efficient and effective parking enforcement include:

1. Parking enforcement officers (PEOs) should be routed such that a circuit of the enforcement area is completed every two hours.
2. Rate of violation should be less than 8%.
3. Handhelds should issue electronic tickets, have GPS capabilities, track stall inventory, and track and summarize customer warning programs. Handhelds should also integrate with real-time scofflaw databases. Ideally these are cloud-based.
4. Handheld units should store information for stolen vehicles, warrants, shuffling, and unpaid tickets.
5. PEOs should be dedicated to parking duties and only reassigned under special circumstances.
6. Street signs should clearly indicate the hours of enforcement.
7. Courtesy tickets should be issued to first-time offenders as a gentle reminder that they have overstayed the posted time limit. Courtesy tickets can also serve as a marketing piece, thanking parkers for coming downtown and directing them to areas or facilities where longer stays are allowed.
8. PEOs should be used as downtown "ambassadors" to assist parkers with directions, parking options, and use of the downtown.

Enforcement/Citation Rates

Costs of managing enforcement should not be combined with those of managing the on-street or off-street parking systems. Revenue from citations should cover all operating costs and future needs of the enforcement system. In other words, parkers who obey the rules should not be burdened, through parking rates, with the cost of dealing with those who violate the rules. While the cost of the enforcement program should be included in the downtown parking fund, its expenses and revenues

should be carried as separate line items. The cost of the program should be fully burdened in the citation rate.

Fees for parking violations should be based on three criteria:

1. The cost of maintaining existing operations, including administration, personnel, back office, and equipment.
2. The reasonable cost of future needs, including system growth and replacement and technology improvements.
3. Targeted goals for rate of violation (less than 9%, with an ideal range of 5%-8%).

Fees should be evaluated no less than once every two years based on the above. To support this strategy, the City should:

a. Review existing deployment routes to ensure the highest efficiency of coverage.
b. Evaluate violation data and assess methods to lower the current rate of violation to at most 9%.
c. Develop a reporting format that separates tickets by type, so that the number of tickets issued for parking violations in contrast to non-parking incidents (e.g., expired tags, jaywalking, moving violations, etc.) can be determined.
d. Consider use of courtesy tickets as a means to communicate downtown parking "rules and procedures" and to direct potential users into off-street city facilities.
e. Consider training PEOs as downtown ambassadors.
f. Review citation fees every two years to ensure that revenue covers, at minimum, all operating costs for the enforcement program.

Estimated Costs (STRATEGY 19)

The City and DPAC should work closely with Diamond Parking to develop a PEO and technology plan that deploys labor and technology in a manner that limits stay violations to between 5% and 8%. New costs would be identified through this process. Staff time for establishing procedures for quantifying performance and reporting should be absorbed into existing staff capacity.

STRATEGY 20:

Where practical, expand the bike parking network to connect parking and the downtown, encouraging employee bike commute trips and drawing customers to downtown businesses.

Example: Art Rack Baker City, OR

When we talk about parking management, we're not just talking about cars—communities throughout Oregon support bicycling as a key sustainable transportation

strategy. What downtown Bend may lack at this time is sufficient "trip-end" bike parking amenities on-street, off-street, and in private buildings. Providing adequate bicycle parking will expand the capacity of the overall parking supply downtown.

It is recommended that the City expand its approach to bike parking to include:

a. *Sidewalk bike parking*

   Identify locations for added bike parking in pedestrian amenity zones.

b. *Bike corrals*

   Identify locations for bike corrals on-street and in plaza areas adjacent to high-traffic businesses.[12]

c. *Bike parking on private property*

   Identify areas on private property for bike parking improvements, especially for employees–e.g., interior bike cages, wall rack locations, and other secure areas.

d. *Identify funding/incentives*

   Assemble funding sources necessary to implement a) – c).

Example: Bike Corral Ashland, OR

Example: Interior Wall Racks

It is assumed that these efforts would support future expansion of the City's bike lane network.

Estimated Costs (STRATEGY 20)

The cost of inventorying potential bike parking locations could be incorporated into **Strategy 21** below. Site identification could also be done through volunteer efforts and by working with downtown stakeholders and bike advocates. Costs are likely minimal.

Estimated unit costs for actual bike infrastructure:

- Staple or U racks: $150-$200
- Wall-mounted racks: $130-$150
- Bike Corral $1,200[13]
- Art Rack variable based on design

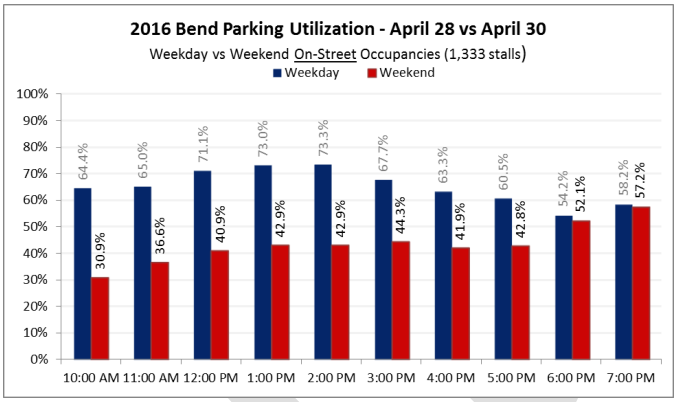
12 Bike corrals can also be considered for seasonal use. Bozeman, Montana and Wenatchee, Washington are examples of cities that use bike corrals during non-winter months, converting spaces back to regular vehicle parking in the winter.

13 Based on City of Portland, Oregon cost estimate for six staple racks (12 bike parking spaces), striping, bollards, and installation.

STRATEGY 21

Develop a reasonable schedule of data collection—no less than once every 24 months—to assess performance of the parking supply and support the 85% Rule for decision-making.

Objective, up-to-date data on occupancy, seasonality, turnover, duration of stay, patterns of use, and enforcement will help the City and stakeholders make better-informed decisions as the downtown grows. The data gathered in 2016 as part of the *Parking Utilization Summary Data Reports* (**Attachments B & C**) is a baseline for future assessments of the parking supply.



The system for supplementing the baseline does not need to be elaborate, but it should be consistent, routine, and structured to answer relevant questions about the metrics listed above. Data can be collected in samples, and other measures of success can be gathered through third-party or volunteer processes. It is recommended that the City, with DPAC input and review:

- Conduct routine turnover and occupancy surveys of the on- and off-street facilities in downtown at least every two years.
- Replicate the 2016 RWC study boundary to have an accurate data comparison.
- Determine a routine schedule and timeline for implementation.
- Use this data to inform ongoing decisions in an objective manner.

The methodology for conducting the 2016 parking inventories and data analyses is provided in **Attachment D**. Additionally, best practice methodologies for parking data collection can be found in Oregon Transportation & Growth Management's *Parking Made Easy: A Guide to Managing Parking in Your Community*, specifically Chapter 7. See www.oregon.gov/LCD/TGM/docs/parkingprimerfinal71213.pdf.

Estimated Costs (STRATEGY 21)

It is estimated that a data inventory and turnover/occupancy study would range from $45,000-$50,000 if conducted by a third party. Costs can be minimized in subsequent surveys through use of the inventory database already in place, as well as through sampling and possible use of volunteers to collect data.

STRATEGY 22

Using data collected per Strategy 21, evaluate on-street pricing by zone in high-occupancy areas. If peak occupancy exceeds 85%, implement on-street pricing during enforcement hours where appropriate.

The 2016 data collection effort demonstrated that the on-street system routinely exceeds the 85% occupancy standard for sustained periods during spring and summer months. **Strategies 10 – 20**, once implemented, are intended to significantly change how parking is used and communicated in the downtown. The impacts of these changes will be objectively quantified in **Strategy 21**. This will allow the City, the DPAC and the community to determine whether these constraints have been mitigated.

Once **Strategy 21** is complete, it is recommended that the Parking Demand Manager and DPAC evaluate paid parking on-street, particularly if frequent constraints are still seen.

Hourly on-street occupancy data can also be used to model potential revenue hours for different rate scenarios. Revenue hours can then be integrated into an expense/revenue pro forma to objectively estimate the feasibility of moving to an on-street pay-to-park program.

Paid parking can support higher turnover, decrease competition between employees and customers or visitors, create a more reasonable value relationship between parking and alternative modes, and provide revenue streams necessary to support operations, marketing/communications, program delivery, and infrastructure.

Actions to be considered include:

a. Updating occupancy and parking utilization databases.
b. Developing expense/revenue models to estimate the financial viability of new revenue collection technology.
c. Determining appropriate revenue collection technology.
d. Considering single meters versus pay stations.
e. Considering pay-and-display versus pay-by-space.
f. Considering seasonal pricing.
g. Finalizing pricing format.
h. Reaffirming time-limit formats and hours of operation (as informed by Strategies 14 and 17).
i. Soliciting vendors for revenue collection technology.

Estimated Costs (STRATEGY 22)

It is assumed that the evaluation process would be incorporated into the routine schedule developed by the Parking Manager and DPAC. Data collection efforts are a part of **Strategy 21**. General equipment costs for revenue technology are:

- Multi-Space Meters (pay stations) $5,000-$7,000 per unit (serving 8–14 spaces)
- Single-Space Meters $500-$700 per unit (serving one space)
- Back office support Varies by system and software selected

Strategy 23

Eliminate free parking in the public garage when on-street parking is priced and garage occupancies exceed 85%. Implement demand-based pricing for all hours of enforced parking—e.g., hourly, evening, weekend, overnight, and event rates.

If the decision is made to price on-street parking, the DSAC recommends that pricing also be implemented in the public garage. Pricing should be demand-based, integrated with on-street pricing, and varied to reflect the unique dynamics of weekday, evening, weekend, overnight, and event situations. In addition, providing the option of longer-term stays at lower rates than on-street parking will encourage turnover in the on-street system and offer convenience to customers and visitors seeking a longer stay.

Estimated Costs (STRATEGY 23)

The garage already has payment protocols for customers parking longer than three hours. However, new equipment and signage may be necessary to transition to a more complex rate format. Such costs will be a part of the infrastructure evaluation recommended in **Strategy 24** below. Over time, pricing at the garage will result in new revenue for the City.

C. Parking Management Strategies – Infrastructure (Phase 2)

It is anticipated that Phase 2 efforts will take place 24 to 48 months from initiation of the parking management plan. These strategies build upon and are facilitated by work completed in Phase 1. Phase 2 focuses on new equipment, capacity growth and management, communication systems, and finalizing funding sources explored in **Strategy 7**.

Any and all Phase 2 strategies can be accelerated or moderated as necessary depending on community support and consensus, opportunity, or funding. As with Phase 1, all strategies will require consistent and dedicated management and coordination, with active participation by the private sector.

STRATEGY 24

Develop and implement improvements at the downtown public parking garage to enhance its appearance, identity, safety, revenue control, communications technology, and pedestrian access.

Example: On-site signage linked to counter system to display stall availability.

Current systems at the City's public garage are outdated and, at times, unreliable. Moreover, they do not provide data and reporting functions essential to high-level management and decision-making.

The DSAC concluded that upgrades to the garage's operating systems are critical to the City's ability to attract new users and establish a sense of safety and convenience. Systems must equip the City to accurately monitor use, calibrate rates, and manage daily and monthly access.

It is recommended that the Parking Demand Manager and the DPAC engage in a facility review of the garage and develop an action plan and budget to implement improvements. At minimum, the following should be evaluated:

- Lighting upgrades
- Entry/exit counter systems to track stall occupancy
- State-of-the-art pay stations
- Exterior signage displaying brand/logo (**Strategy 16**) and occupancy information
- Interior directional signage upgrades
- Pedestrian access (e.g., stairwells, elevator plaza) and internal vehicle circulation

Example: Pay on Foot in elevator lobby – Fountain Square Garage, Cincinnati OH

New technologies offering real-time data on occupancy and use are readily available from companies such as Amano, Digital Technologies, Cale, Scheidt & Bachmann, and McGann. Upgraded systems will create significant efficiencies in time, resources, management, and decision-making.

Estimated Costs (STRATEGY 24)

Recent RWC involvement in upgrading access, revenue control, and signage systems in garages in the Pacific Northwest allows for estimating various equipment systems. The Parking Demand Manager and DPAC will need to work with vendors to refine these estimates. RWC does not have expertise in costing lighting systems.

• Payment system kiosk (credit/debit capable)	$15,000-$25,000
• Pay-in–lane (per lane) (optional)	$10,000-$13,000
• Lane controllers - counter system (per lane)	$2,500-$3,500
• Accounting and revenue control software	$19,000-$22,000
• Monthly pass card reader system (per lane)	$5,000-$8,000
• Ticket tracking software	$5,500-$7,500
• Hotel system integration (e.g., through room keys)	$25,000
• Exterior signage (per sign)	$5,000-$10,000
• Warranties	Varies by vendor
• Installation	Varies by vendor
• Routine vendor support (maintenance/service - monthly)	$400-$750

STRATEGY 25

Solicit firms to establish wayfinding and dynamic signage systems in the public right of way, integrated with the off-street system and using the brand/logo developed per Strategy 16.

Many cities brand their public parking facilities and use dynamic signage in the public right-of-way. These systems inform customers and direct them to available parking. Portland, Oregon, and San Jose, California are good examples (see photo at right).

Dynamic signage is linked to occupancy information collected at individual or multiple parking sites, usually through loop detector/parking counter systems. This information is displayed at building entry plazas and/or at major roadway access portals. The signs provide an address or facility name and real-time stall availability.

The most successful programs tie into a parking brand incorporated into both the on-site and right-of-way signage (see **Strategy 16**). Dynamic signage also complements parking apps and can be linked in real time to smartphones and/or websites.

As an alternative to dynamic signage, Bend could first explore using non-electronic branded wayfinding at key access portals into the downtown, with the intent of upgrading to dynamic signage at a future point. This could be a less costly and timelier means of introducing parking wayfinding.

Engaging a wayfinding firm would bring an industry professional to:

a. Develop a signage package that incorporates a uniform design, logo, and color scheme (**Strategy 16**).
b. Brand each off-street public facility with the logo package.
c. Evaluate off-street facilities for installation of real-time counter systems that link to wayfinding signage.
d. Identify key entry points into the downtown for placement of signage.
e. Explore real-time communications linking multiple facilities, apps, websites, and other resources.
f. Conduct a cost feasibility analysis.
g. Establish an installation schedule.

Estimated Costs (STRATEGY 25)

It is assumed that costing for wayfinding would be incorporated into the solicitation.

STRATEGY 26

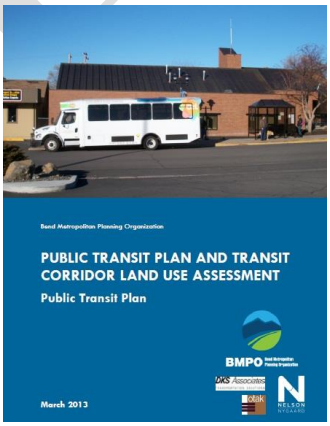
If existing parking becomes limited, explore expanding access capacity with new transit and parking.

As Bend's downtown sees growth in employment, residents, and visitors, existing supplies of parking and alternative mode access will need to be expanded. Adding bicycle trip capacity was discussed above in Phase 1 (**Strategy 20**). In anticipation of growth, the City should evaluate other forms of access capacity as well, including improved transit and/or circulator options and new parking supply.

These types of capacity growth require sophisticated infrastructure and are very costly. It will be important for Bend to give adequate time and effort to determining the most beneficial and cost-effective formats for increasing capacity. Planning for, and finding funding for, new capacity is time-consuming, so focused and objective evaluation will greatly facilitate decision-making before constraints adversely impact the downtown.

Explore shuttle/circulator connections (remote connector)

Transit and shuttles could be especially valuable as a means to improve employee commute options, provide circulation through downtown for visitors, and link remote parking sites.

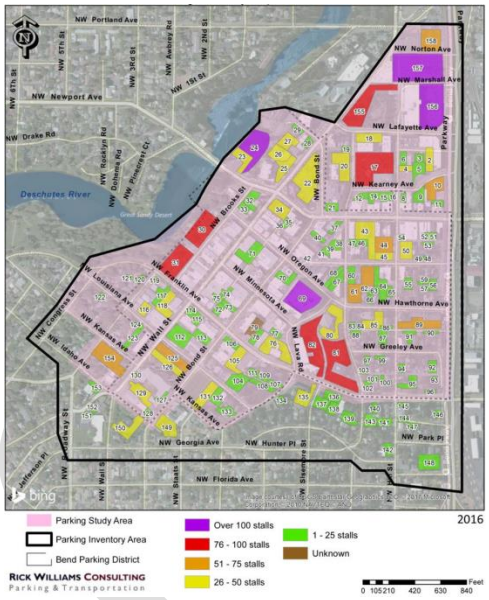


The City and DPAC should involve Cascades East Transit, Community Development, Growth Management, and the community in discussions regarding a transit option that would best serve the downtown and effectively shift an increasing number of trips onto transit. The City's 2013 *Public Transit Plan and Transit Corridor Land Use Assessment* can serve as a foundation for discussion and evaluation.

It is recommended that the Parking Demand Manager and DPAC:

1. Evaluate route options that will strengthen transit access for downtown employees.
2. Explore connections to remote parking in conjunction with data collection efforts in **Strategy 21**.
3. Determine appropriate levels of frequency, vehicle types, and seasonality of service.
4. Explore use of circulator shuttles versus existing transit.
5. Coordinate with Cascades East Transit.
6. Narrow to preferred option(s).

Identify new parking opportunity sites



Capacity can be added through construction of a new parking garage and/or new surface parking in locations outside the downtown, linked by transit. The consultant team conducted an inventory of all 158 downtown off-street parking sites in the 2016 study. Forty-six sites totaling 2,650 stalls were assessed for utilization, creating a list of potential opportunity sites for further evaluation. A map of those sites is provided at right (see also **Figure B**, page 24).

To date there has been no evaluation of potential "remote" sites.

It is recommended that the Parking Demand Manager and DPAC:

1. Establish parking need, coordinated with **Strategies 22 and 27**.
2. Evaluate downtown locations where new parking is possible.
3. Evaluate remote sites that could be connected via transit/shuttle.
4. Evaluate public/private partnerships.
5. Coordinate site evaluation with Community Development.
6. Coordinate with the Downtown Bend Business Association and Chamber of Commerce to develop contacts with potential partners in the private sector.
7. Engage local developers in the evaluation process.
8. Narrow to feasible site(s).

Estimated Costs (STRATEGY 26):

The City and DPAC may wish to retain third-party assistance in this process, particularly regarding the design and formatting of transit/shuttle systems. These systems will impact traffic and circulation and create land use issues. Identifying and locating potential parking sites could be accomplished internally, with assistance from the Downtown Bend Business Association, local developers, and Community Development. As an estimate, the City could incur costs of $25,000-$35,000 for route and system planning for new transit. The active involvement of Cascades East Transit could greatly reduce this estimate.

STRATEGY 27

Develop cost forecasts and feasible financing methods for preferred parking supply and transit/shuttle options, coordinated with Strategy 7.

Strategy 26 will provide information on recommended transit/shuttle and parking enhancements. Parking will have been evaluated as to location, size, and format. Transit/shuttles will have been evaluated as to format, frequency, and routing.

The appropriateness and feasibility of a range of funding options will have been explored and narrowed through work in **Strategy 7**. Funding options would then be applied to the preferred capacity enhancements to meet their cost forecast and support their implementation.

Estimated Costs (STRATEGY 27)

Initial third-party costing of garages and lots in the form of expense/revenue and financing pro formas can range from $5,000 to $7,500. This would be contingent on information already provided to a consultant from **Strategy 26**.

Costs of new parking supply will vary by type. Estimates from projects recently completed in the Pacific Northwest are provided below.

- Structured Underground $35,000-$45,000 per stall
- Structured Above Ground $20,000-$25,000 per stall
- Surface Lot $ 5,000-$7,000 per stall

  NOTE: Does not include operating cost or full cost of land

RWC does not have expertise in costing transit/shuttle systems. These numbers would be provided as a function of **Strategy 26**.

STRATEGY 28

Expand capacity as necessary and feasible.

This strategy would be catalyzed by completion of Strategies 7, 26, and 27 and would complete Phase 2 of the downtown Strategic Parking Management Plan. Within 36–48 months of plan initiation, the City and DPAC will have evaluated and researched the most beneficial and effective option(s) for expanding access capacity in the downtown, funded through a package of finance options that are cost-effective and publicly supported.

X. SUMMARY

The parking management strategies recommended here are intended to provide a template for action that leads to a more efficient and organized parking system for downtown Bend. The strategies would be coordinated by a single Parking Services Division led by a Parking Demand Manager, with insight and direction from the Downtown Parking Advisory Committee.

The strategies envisioned here will be implemented over a minimum of four years, informed by the 85% Rule and by parking demand as measured through routine data collection. Overall, the strategies are designed to "get the right parker to the right parking spot" in a manner that supports the Guiding Principles established as a part of this plan.

ATTACHMENT A

Action Strategies Implementation Summary

Actions and Implementation Schedule

Strategy	Immediate Near Term (0 – 12 months)	Phase 1 (12 – 24 months)	Phase 2 (24 – 48 months)	Comment	Estimated Cost
POLICY ACTION STRATEGIES (Immediate/Near-Term)					
1 Formalize the Guiding Principles as policies in appropriate City documents.	✓			Provides decision-making framework and policy foundation for decisions/actions.	- Existing Staff
2 Adopt the 85% Rule as the standard for measuring performance of the parking supply and triggering specific management strategies, rate ranges and efforts by discrete zone.	✓			The 2016 data findings indicate that many areas of the downtown (on or off-street) approach a high level of constraint at peak hours. Having the 85% Rule formalized in policy will assure that a process for evaluating and appropriately responding to parking activity is in place as constraints develop.	- Existing Staff time
3 Centralize the management and administration of parking in a Parking Services Division, integrated with the broader program of transportation services management.	✓			The success of any multi-faceted parking system is dependent on administration, management, and communication of the City's parking program at all levels. This includes daily management of facilities, oversight of third-party vendors, financial accounting and reporting, marketing/communications and customer service.	- Existing Staff time - Potential for new management staff (Strategy 4)

Strategy	Immediate Near Term (0 – 12 months)	Phase 1 (12 – 24 months)	Phase 2 (24 – 48 months)	Comment	Estimated Cost
4 Create the position of Parking Demand Manager for the City of Bend. Develop a job description and submit a service package to hire an appropriate individual.	✓			A single person should be assigned to oversee and manage all aspects of parking in the downtown, providing the community a single reference point for parking management. Any new costs are supported by revenues derived from the parking system.	- Costs associated with organizational restructuring and hiring a Parking Manager are being developed by City staff for review by City Council during the City's budget deliberations in May 2017.
5 Establish a Downtown Parking Advisory Committee to assist in implementation and ongoing review of the parking plan.	✓			The City should develop and approve a process through which a representative cross-section of downtown interests *routinely* assists the City in the review and implementation of the Parking Management Plan.	- There should be no additional costs associated with this recommendation if it can be initiated as a volunteer effort, hosted by the City and/or downtown business interests through the Downtown Bend Business Association.

Strategy	Immediate Near Term (0 – 12 months)	Phase 1 (12 – 24 months)	Phase 2 (24 – 48 months)	Comment	Estimated Cost
6 Evaluate collection of data to measure parking impacts in select neighborhoods adjacent to the downtown, as well as feasibility and cost of neighborhood permit programs (e.g., administration, process and stakeholder education).	✓			The work scope for the 2016 Downtown data collection effort did not provide for extensive evaluation of parking activity in residential areas bordering the downtown. As such, it was not possible to provide objective data related to issues of overspill and/or use of residential areas by non-residential users.	- $35 - $50,000
7 Develop funding options to support parking management, maintain the existing parking supply, and support future growth, ensuring the financial feasibility of the system.	✓			There are a wide range of potential funding sources and revenue streams that could be used to support implementation of an enhanced parking management plan in the Bend downtown as well as to plan for and support development of new parking and/or transit capacity per Strategy 27.	- Existing Staff time - Internal legal review and recommendation - DPAC consideration and recommendation - Public review and input - City Council approval

Strategy	Immediate Near Term (0 – 12 months)	Phase 1 (12 – 24 months)	Phase 2 (24 – 48 months)	Comment	Estimated Cost
8 Create a cohesive pricing policy for on- and off-street parking in downtown Bend.	✓			Bend does not currently have a routine or strategic approach to evaluating or adjusting its rates; for on-street permits, off-street rates and permits and citations.	- It is estimated that costs associated with this strategy would be minimal and mostly expended in efforts of existing staff to develop resolutions and ordinances through routine city planning processes.
9 Evaluate and implement solutions to safety impediments that create inconvenient and inefficient connections to parking, e.g., lighting, sidewalk/paths, lot conditions, etc.			✓	The DSAC asserted that even though parking surpluses can be found throughout the downtown, connections between the core downtown and parking assets outside the core are lacking. An Action Plan should be developed for presentation to City Council and other affected entities for review, consideration and approval.	- Costs for engaging a third party planning firm could range from $20,000 to $25,000.

Strategy	Immediate Near Term (0 – 12 months)	Phase 1 (12 – 24 months)	Phase 2 (24 – 48 months)	Comment	Estimated Cost
PARKING MANAGEMENT ACTION STRATEGIES – OPERATIONS (PHASE 1)					
10 Establish business-to-business and residential outreach on parking issues, including education and planning, and a *Customer First* Partnership with the Downtown Bend Business Association.		✓		Uses the Downtown Parking Advisory Committee as a source for targeted and strategic communications related to parking to downtown businesses, employees and the broader community.	- Estimated at $7,500 - $10,000 annually
11 Identify off-street shared-use opportunities based on data from the 2016 parking study. Establish goals for transitioning permit users and long-term parkers out of on-street parking, begin outreach to opportunity sites, negotiate agreements, and assign permitees to facilities.		✓		The majority of parking in the downtown is off-street in privately owned parking assets. The 2016 parking study indicates that potential empty parking stalls in the peak hour in existing off-street facilities are significant. This presents an opportunity for Bend as this unused supply is a resource that could be captured to manage and support future parking demand growth.	- It is estimated that costs associated with this strategy would be mostly expended in efforts of existing staff and volunteers to review and identify opportunity sites and conduct outreach to potential private sector participants.

Strategy	Immediate Near Term (0 – 12 months)	Phase 1 (12 – 24 months)	Phase 2 (24 – 48 months)	Comment	Estimated Cost
12 Implement variable-rate pricing for on-street permits based on location, demand, and availability of parking. This will create pricing differentials between "premium" and underutilized locations.		✓		Variable-rate pricing uses rates to influence behavior. The outcome of effective use of variable-rate pricing is better distribution of users into facilities, particularly underused facilities. At present, Bend does not use this type of pricing.	- It is estimated that costs associated with this strategy would be mostly expended in efforts of existing staff (Parking Demand Manager) and DPAC meetings to review and provide recommendations for rate re-calibration. - The City could consider a third-party rate study, which would likely be in the range of $15,000 - $20,000. - Overall, the rate changes could result in additional revenue to the City.

Strategy	Immediate Near Term (0 – 12 months)	Phase 1 (12 – 24 months)	Phase 2 (24 – 48 months)	Comment	Estimated Cost
13 Reduce or phase out the number of "2-Hour or as Otherwise Specified" on-street stalls in coordination with Strategies 11 and 12 above to simply "2-Hour Parking."		✓		There are currently 242 stalls within the downtown study zone designated "2 Hours – Unless Otherwise Specified." These stalls allow short-term visitor parking (2 hours) but also can be used all day by employees displaying a valid on-street parking permit. Data shows these stalls are having an adverse impact on turnover and customer/visitor access to the on-street supply.	- Estimated at $30 per sign for replacement of existing time stay signage (plus labor to install)
14 Based on documented parking behavior, establish distinct on-street parking management zones in the downtown parking district. Use 2016 and Strategy 20 occupancy data to define the boundaries.		✓		Data suggests that different sectors of the downtown perform differently. These unique areas should be considered for management as unique parking management zones, to reflect the nature of demand within them. 2016 data and data derived from Strategy 20 can help inform development of these zones.	- Estimated at $30 per sign for replacement of existing time stay signage (plus labor to install)

Strategy	Immediate Near Term (0 – 12 months)	Phase 1 (12 – 24 months)	Phase 2 (24 – 48 months)	Comment	Estimated Cost
15 Improve safety and security at Mirror Pond lots and eliminate free parking for the first two hours.		✓		Data from both the Spring and Summer 2016 studies show that the North and South Mirror Pond lots are occupied at 85% or greater for significant periods of the day. Also, current conditions at the lot need to be upgraded to improve the visible appearance and safety of the lots. This would include improved signage, better lighting and changes to the landscaping to improve sightlines and discourage loitering in the lot.	- Costs associated with new signage, lighting/safety improvements and landscaping would be developed in an action plan by the Parking Demand Manager and the DPAC.
16 Create a critical path timeline to a new parking brand that can be utilized at all City-owned lots and shared facilities, and in marketing and communications**.**		✓		Create a brand that unifies the public supply of parking and is easily communicated, both at parking sites and, ideally, through a wayfinding system located throughout the downtown and on maps, websites and other communications and promotions.	- It is estimated that engaging a design consultant to carry out the tasks identified above would range from $20,000 - $25,000.

Strategy	Immediate Near Term (0 – 12 months)	Phase 1 (12 – 24 months)	Phase 2 (24 – 48 months)	Comment	Estimated Cost
17 Standardize the design of on-street parking signage in the parking management district and incorporate the new brand/logo.		✓		Creating more clarity in on-street parking would simplify parking for customers and allow a consistent time stay throughout the downtown that is supported by duration of stay findings from the 2016 data study.	- Unit costs: • Pole unit cost = $470 • Blade sign unit cost = $30 - Unit costs would need to be calibrated to numbers identified through a signage inventory.
18 Rename all public parking facilities by address.	✓	✓		Industry best practices for naming off-street parking facilities suggests using addresses associated with the main auto ingress point into a facility.	$5,000 - $10,000
19 Establish best-practice protocols and performance metrics for enforcement personnel and support enforcement with appropriate technology.		✓		The foundation of sound parking management is enforcement. Without enforcement, systems designed to encourage turnover (time stays, pricing) and deter employees from maximizing on-street parking are ineffective.	- Work with Diamond Parking to develop a PEO and technology plan that deploys labor and technology in a manner that limits time stay violations to between 5% and 7%. New costs would be identified through this process.

Strategy	Immediate Near Term (0 – 12 months)	Phase 1 (12 – 24 months)	Phase 2 (24 – 48 months)	Comment	Estimated Cost
20 Where practical, expand the bike parking network to connect parking and the downtown, encouraging employee bike commute trips and drawing customers to downtown businesses.		✓		The downtown is lacking sufficient "trip-end" bike parking amenities, both on-street, off-street and in private buildings. Providing adequate bicycle parking will expand the capacity of the overall parking supply downtown.	Unit costs: - Staple or U racks: $150 - $200 - Wall-mounted racks: $130 - $150 - Bike Corral: $1,200 - Art racks: variable by design
21 Develop a reasonable schedule of data collection—no less than once every 24 months—to assess performance of the parking supply and support the 85% Rule for decision-making.		✓	✓	Objective, up-to-date data on occupancy, seasonality, turnover, duration of stay, patterns of use, and enforcement will help the City and stakeholders make better-informed decisions as the downtown grows.	- It is estimated that a data inventory and turnover/occupancy study would range from $45,000-$50,000 if conducted by a third-party consultant.

Strategy	Immediate Near Term (0 – 12 months)	Phase 1 (12 – 24 months)	Phase 2 (24 – 48 months)	Comment	Estimated Cost
22 Using data collected per Strategy 21, evaluate on-street pricing by zone in high-occupancy areas. If peak occupancy exceeds 85%, implement on-street pricing during enforcement hours where appropriate.		✓	✓	Strategies 10 – 20, once implemented, are intended to significantly change how parking is used and communicated in the downtown. The impacts of these changes will be objectively quantified in Strategy 21. This will give the City, the DPAC and the community an opportunity to see if peak occupancies and constraints identified in the 2016 study have been mitigated through the recommended strategies through the first 24 months of the plan.	Unit costs: - Multi-Space Meters (pay stations): $5,000 - $7,000 per unit - Single-Space Meters: $500 - $700 per unit - Back office support: Varies by system and software selected
23 Eliminate free parking in the public garage when on-street parking is priced and garage occupancies exceed 85%. Implement demand-based pricing for all hours of enforced parking—e.g., hourly, evening, weekend, overnight, and event rates.		✓	✓	If the decision is made to price on-street parking, the DSAC recommends that pricing also be implemented in the public garage. Pricing should be demand based, integrated with on-street pricing and varied to reflect the unique dynamics of weekday, evening, weekend, overnight and event situations.	New equipment and signage may be necessary to transition to a more complex rate format. Estimating these costs will be a part of the infrastructure evaluation recommended in Strategy 23. Over time, pricing at the garage will result in new revenue to the City.

Strategy	Immediate Near Term (0 – 12 months)	Phase 1 (12 – 24 months)	Phase 2 (24 – 48 months)	Comment	Estimated Cost
PARKING MANAGEMENT ACTION STRATEGIES – INFRASTRUCTURE (PHASE 2)					
24 Develop and implement improvements at the downtown public parking garage to enhance its appearance, identity, safety, revenue control, communications technology, and pedestrian access.			✓	Current access, revenue control, lighting and communications systems at the City's public garage are outdated and, at times, unreliable and beyond useful service lives. Moreover, management systems do not provide data and reporting functions that are essential for high-level management and decision-making.	- $100,000 - $150,000 depending on systems selected.
25 Solicit firms to establish wayfinding and/or dynamic signage systems in the public right of way, integrated with the off-street system using City parking brand developed in Strategy 16.			✓	The most successful programs tie into a parking brand incorporated into both the on-site and right-of-way signage. This provides customers a visual cue that translates from their first encounter on the roadway to being able to conveniently identify a parking location with available parking.	- It is assumed that costing for wayfinding would be incorporated into the solicitation.

Strategy	Immediate Near Term (0 – 12 months)	Phase 1 (12 – 24 months)	Phase 2 (24 – 48 months)	Comment	Estimated Cost
26 If existing parking becomes limited, explore expanding access capacity with new transit and parking.			✓	In anticipation of growth, the City should evaluate other forms of access capacity as well, including improved transit and/or circulator options and new parking supply. These types of capacity growth require sophisticated infrastructure and are very costly. It will be important for Bend to give adequate time and effort to determine the most beneficial and cost-effective formats for increasing the capacity of the downtown access system.	- Identifying and locating potential parking sites could be accomplished internally, with assistance from the DBBA, local developers, and Community Development. As an estimate, the City could incur costs of $25,000-$35,000 for route and system planning for a new transit/shuttle options.

Strategy	Immediate Near Term (0 – 12 months)	Phase 1 (12 – 24 months)	Phase 2 (24 – 48 months)	Comment	Estimated Cost
27 Develop cost forecasts and feasible financing methods for preferred parking supply and transit/shuttle options, coordinated with Strategy 7.			✓	Cost forecasting preferred transit and new parking supply options developed in Strategy 26 would be conducted at this time. These costs would be matched with potential funding options developed and narrowed in Strategy 7.	- $5,000 - $7,500 for garage cost pro-forma. Structured Underground: - $35,000-$45,000 per stall Structured Above Ground: - $20,000-$25,000 per stall Surface Lot: - $ 5,000 - $7,000 per stall - Transit or shuttle routes determined in Strategy 26.
28 Expand capacity expansion as necessary and feasible.			✓	This strategy would be catalyzed by completion of Strategies 7, 26 and 27 and would complete Phase 2 of the downtown Strategic Parking Management Plan.	To be determined.

ATTACHMENT B

Parking Utilization Summary Data Report (Spring 2016)

ATTACHMENT C

Parking Utilization Summary Data Report (Summer 2016)

ATTACHMENT D

Data Collection Methodology Memo (3/23/2016)

ATTACHMENT E

Sample Rate Policy (South San Francisco, CA)

ATTACHMENT F

Downtown Bend Parking Study Downtown Stakeholder Engagement Summary August 2016