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April 14, 2017

Mr. TJ Nee
Administrator – SLATS MPO
Stateline Area Transportation Study “SLATS” Metropolitan Planning Organization “MPO”
2400 Springbrook Court
Beloit, WI 53511

Re: City Center Parking Needs Assessment – Final Report

Dear Mr. Nee:

The following final report documents the efforts, findings and recommendations of Walker Parking Consultants for the Parking Needs Assessment for the City Center study area, as defined within the report body.

The final report incorporates the Discovery Report and Preliminary Recommendations into a single document with transition text, and addresses recent comments and questions received from SLATS. The final report also includes an implementation plan and costs for recommendations.

We trust that the revised format and content additions will meet your needs.

Sincerely,

WALKER PARKING CONSULTANTS

Ezra D. Kramer, CPP
Project Manager/Parking Consultant

EDK:edk



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in creative parking solutions

PARKING NEEDS ASSESSMENT

CITY CENTER
BELOIT, WI & SOUTH BELOIT, IL

Prepared for:
SLATS MPO

APRIL 14, 2017

FINAL REPORT



WALKER
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PROJECT NO. 31-7940.00

PARKING NEEDS ASSESSMENT

CITY CENTER

BELOIT, WI & SOUTH BELOIT, IL

Prepared for:
SLATS MPO

APRIL 14, 2017

FINAL REPORT



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EXECUTIVE SUMMARY

Walker Parking Consultants (“Walker”) was contracted by the Stateline Area Transportation Study (“SLATS”) metropolitan planning organization to perform a Parking Needs Assessment for downtown Beloit, WI into South Beloit, IL (“City Center”). The goal of the project was to assist in a long-term planning effort to ensure parking will be provided adequately and with appropriate policies to ensure access to City Center land uses now and in the foreseeable future. Walker was asked to study the area, poll neighbors, review local policy and industry best practice to develop a set of recommendations aimed at improving parking in both perception and reality.

The following bullet points provide background, key findings, and recommendations pertaining to the Parking Needs Assessment prepared for the City Center study area.

BACKGROUND

The boundaries of the study area were set as follows:

- East - Park Avenue,
- West – Fifth Street north of the Rock River (also including the “Courthouse” property) and the Rock River south of the Fifth Street bike path
- North - Barrett Place west of the Rock River, and Bushnell Street east of the Rock River (also including “Angel Museum” property).
- South - Clark Street and Charles Street (amended from the RFP)

The key elements of the study consisted of:

- Parking supply and demand analysis, and parking turnover (length of stay) analysis
- Community engagement through surveys, focus group meetings, public listening sessions, and the project steering committee
- Review of local parking policy and practice
- Industry best practice review
- Development of recommendations

KEY FINDINGS

The following key findings were identified during the community engagement:

- The Steering Committee found parking in the study area to be available and proximate, physical conditions of parking are good, but parking signage could be improved.
- Input received during Focus Groups and the Public Listening Session suggested that parking is currently not an issue most days for visitors, but employee parking is an issue for businesses with small or no parking lots, and for the Ironworks area.



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- The Online Survey respondents reported they rarely or never have a hard time finding a space (82%); typically look for parking no longer than five minutes (72%); find parking within 1-block of their destination (88%); and if they have difficulty finding parking, that occurs first thing in the morning, around lunch, around dinner, and on Saturdays.
- The Online Survey responses also suggest that 93% of respondents drive alone to the study area. Although alternative means of transportation are available and can be encouraged, the reality in the study area is that parking must be made available for drivers

The following key findings were identified during the field surveys and quantitative analysis:

- The Current Weekday Peak occurred at 11:00 AM with 1,769 parked vehicles (31% of Supply leaving 3,863 Available out of 5,632) were observed in the study area. Localized Hotspots during the weekday were observed in Chester Square and the private lot for First National Bank and Trust.
- The Current Weekend Peak occurred at 9:00 AM with 1,234 parked vehicles (22% of Supply leaving 4,328 Available out of 5,632) were observed in the study area. Localized Hotspots during the weekend were observed for the Chester Square block, the block containing the private lot for First National Bank and Trust, and the block containing the Broad Street Lot.
- Future Weekday was projected to have 3,075 available spaces during the 11:00 AM peak. Localized Hotspots were projected at Ironworks area and in 4 blocks on the west side of the Rock River.
- Future Weekend was projected to have 4,562 available spaces during the 9:00 AM peak. Localized Hotspots were projected at Chester Square and the blocks nearest the Farmer's Market.
- There is not an overall parking shortfall in the study area, even during busy weekdays or events. But parking management (policies, programs and enforcement) is needed to shift some parking demand from locations with small localized shortfalls to available and appropriate parking supply.

The following key findings were identified during the parking policy review:

- On-street parking time limits vary throughout the study area, and in some locations several times along the same block face (15-Min; 30-Min; 1-Hr; 2-Hr; 3-Hr).
- Off-street parking time limits vary within some lots for groups of spaces.
- There is currently no minimum parking requirement enforced in the CBD of Beloit.
- The current limitation on location of shared parking would need to be adjusted if a shared parking district is to be established in downtown Beloit. The adjustment would help specifically with relocating employees to otherwise available off-street private supply.
- There is a size limitation on vehicles in diagonal parking stalls – better education (signage/stripping the end limit) would benefit drivers and parkers and reduce this safety concern.



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- Based on observations in the study area and conversations with the community and stakeholders, we believe that the parking system is moving from a condition where simply providing supply is no longer adequate – strategic management of parking resources is required to meet user needs. The strategic management will also require improved enforcement to change user behavior and ensure the system works as intended.

RECOMMENDATIONS

From our quantitative analysis, we found that no significant localized or systemic parking shortfalls¹ exist or are projected in the foreseeable future. The overall parking occupancy during peak periods suggests that if supply and demand were better balanced, small localized areas of high utilization (possibly perceived as shortfalls by drivers) could be alleviated within adjacent blocks. This would require shared use of private off-street supply and policies/programs to shift long-term parkers to more remote public supply. The result would be higher utilization of those parking resources and more availability of on-street parking for short-term users.

Aside from shifting demand to correct small quantitative imbalances, several policies and practices were identified that would help drivers more easily locate public parking supply, and understand parking policies, restrictions and programs in each city.

Zoning code was also considered under this study. Revisions to the current code were recommended for Beloit and South Beloit develop as intended, with a complimentary mix of land uses.

Enforcement of any policies ensuring public safety (related to parking) and/or restricting use of public parking supply is required for the parking system to function properly. We recommend practices and equipment that will aid in achieving the goal of policy compliance.

The following list of action items summarize recommendations presented in detail within this report.

- Create a "Parking" page on the City's website to provide information to the public on the topic of parking - policies, practices, programs, violations, payments, etc. Develop content as described within report.
- Improve compliance of diagonal parking restriction through signage and enforcement, and possibly curb/street markings (not included in costs).
- Introduce wayfinding signage to direct drivers to nearby off-street public parking supply.

¹ A significant localized shortfall is one that cannot be accommodated within available parking supply 1-2 blocks. A significant systemic shortfall would be the majority of the study area with parking occupancy higher than 85% of available parking supply.



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- Improve visibility of off-street public parking supply monument signage by removing visual obstructions, or placing signage in a location where it is more easily seen on approach.
- Ensure lighting is adequate and sidewalks are well-maintained for pedestrian paths to public parking supply in Beloit. Safety and security are needed within, and to and from, the public supply.
- Implement simplified on-street time restrictions; 2-hour core commercial area; 4-hour periphery.
- Eliminate or revise Overnight Alternate Side Parking restriction.
- Reinstate minimum parking requirements in the CBD, supported by a program for reductions and payments to the City for spaces not provided on-site or through an off-site agreement.
- Require (re)development, expansion, or change to more intensive land use within CBD to perform a shared parking study to right-size needs, and potentially share off-site parking supply.
- Adjust code to allow for shared parking with off-site parking supply within 600 feet for visitors/patrons and 1,200 feet for employees.
- Develop a Shared Parking District in which the City strategically identifies surface parking to utilize for the public during non-business hours. Replace signage on these lots as documented in the report.
- Develop sample or template agreements to support Business-to-Business (B2B), Business-to-Consumer (B2C) and Business-to-Government (B2G) shared parking.
- Develop a fee-based system for property owners who opt not to provide required parking on-site or find off-site supply. (e.g. Parking Credit or Payment in Lieu of Parking).
- Develop an employee parking permit program for certain City-owned lots to better manage long-term users, understand long-term parking demand needs, and foster an economic parking market. Permits should be lot-specific to better balance utilization and create availability.
- Introduce and enforce a 3-hour time limit in the Chester Square Lot and 4th Street Lot, as well as certain stalls within City-owned lots where an employee parking permit program is implemented.
- Introduce employee parking permit program in the West Grand Lot for long-term parkers who had used Chester Square Lot, 4th Street Lot, and some from the Ironworks Lots.
- Introduce and enforce a 3-hour time limit (monthly permit parking exempt) within Ironworks Lots, Mill Street Lot, and Broad Street Lot. Shift as many monthly parkers as possible from Ironworks Lots to West Grand Lot after long-term parkers from Chester Square and 4th Street Lot are provided permits and accounted for.



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- Develop an event parking plan for the Farmer's Market and use as a template for other downtown Beloit events. Purchase temporary, removable signage to notify visitors where nearby off-street parking is available.
- Purchase License Plate Recognition (LPR) equipment to improve parking enforcement. LPR uses vehicle-mounted camera equipment with character recognition software, permit databases, and GPS to electronically process whether parking policy is being violated. Equipment could be used to enforce parking restrictions across multiple municipalities in the area, if desired. Equipment can be used for on-street time restrictions and virtual monthly/annual permits.
- Adjust enforcement schedules to match peak parking periods. Add staff for occasional blitzes to improve compliance.
- Revise the current fine structure as described within the report.

INTRODUCTION



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BACKGROUND

The Stateline Area Transportation Study (“SLATS”) metropolitan planning organization retained Walker Parking Consultants (“Walker”) to make recommendations regarding current and future parking needs for downtown Beloit, WI and South Beloit, IL (“City Center”). The intent of the parking needs assessment was to assist in a long-term planning effort to ensure parking will be provided adequately now and in the foreseeable future through supply provision, policy refinement and efficient enforcement.

We prepared the parking needs assessment to generate recommendations to ensure access to City Center land uses. SLATS requested that Walker survey parking conditions in the area, poll neighbors, review local policy and industry best practice to develop a set of recommendations aimed at improving parking in both perception and reality.

Walker prepared this report to convey the study methodology, quantitative and qualitative findings, and our recommendations to improve the user parking experience. Within this report we documented information gathered from the Supply & Demand Analysis, Community Engagement, and Policy & Practice Review. We also provided best practices within the parking industry, which may be applied in the City Center, as appropriate. This information was evaluated to develop a parking improvement plan for the area.

Walker prepared preliminary recommendations to improve the reality and perception of parking within the City Center study area. These recommendations were intended to address quantitative findings from Walker’s field surveys and qualitative concerns raised by the community. The preliminary recommendations were reviewed by members of the project steering committee, and their comments have been addressed within this report.

STUDY AREA

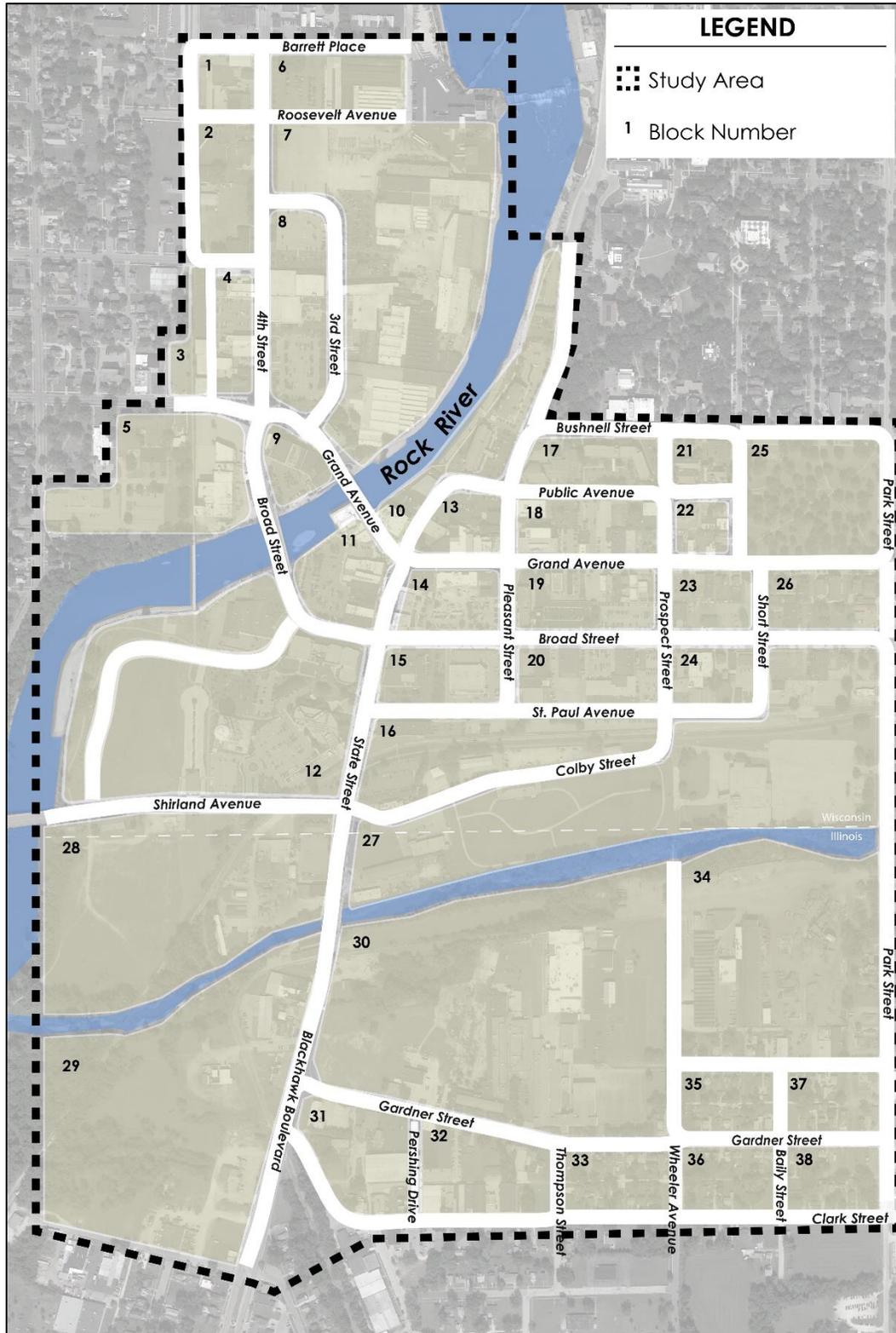
The City Center study area boundaries were set by SLATS, and are depicted in Figure 1. The study area was described by SLATS as follows:

- East - Park Avenue,
- West – Fifth Street north of the Rock River (also including the “Courthouse” property) and the Rock River south of the Fifth Street bike path
- North - Barrett Place west of the Rock River, and Bushnell Street east of the Rock River (also including “Angel Museum” property).
- South - Clark Street and Charles Street (amended from the RFP)

Walker numbered each block for identification purposes to aid in discussing specific locations for parking supply, demand, turnover, and recommended changes throughout the course of the study.



Figure 1: Study Area



Source: Google Earth and Walker Parking Consultants

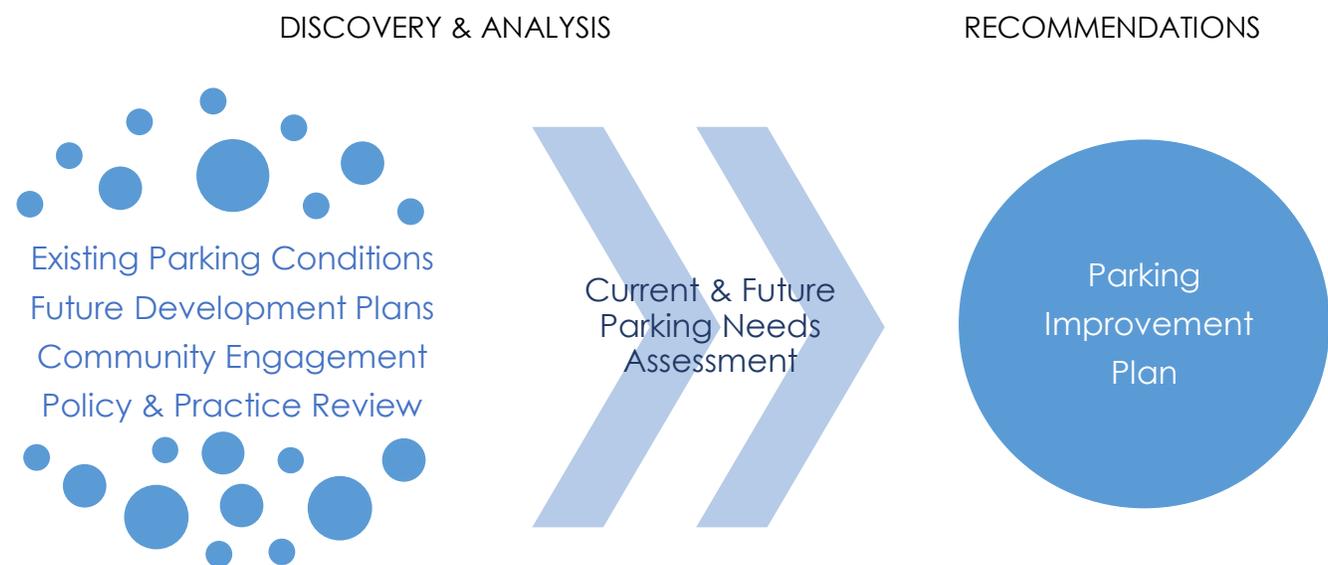
APPROACH & METHODOLOGY

For a project of this type, there are three typical activities performed, which are:

1. Discovery is the collection of available pertinent quantitative and qualitative information (local data and industry best practice);
2. Analysis is the evaluation of that information from several perspectives to reflect qualitative concerns and quantitative findings; and
3. Recommendations are formulated based on Discovery and Analysis inputs.

Walker utilized the approach and methodology outlined below to perform the evaluation of the current condition and formulate recommendations for an improved near-term and future condition. From a presentation standpoint, we divided this report into two main sections; Discovery & Analysis, and Recommendations. The various tasks performed within each section of the report are depicted in Figure 2.

Figure 2: Study Approach



Source: Walker Parking Consultants

The following section provides a brief description of methodology for each task.

QUANTITATIVE ANALYSIS

The quantitative analysis began in May 2016 with a parking inventory detailing location, quantity and restrictions of on-street parking spaces, public off-street parking lots, and private off-street parking lots. Parking occupancy counts of those spaces were performed on Thursday, May 19, 2016, and again on Saturday, May 21, 2016. Parking turnover and duration surveys were performed for specific on-street and off-street spaces within the study area on Thursday, May 19, 2016, and again on Saturday, May 21, 2016.



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Walker compared the parking inventory (supply) to the utilization (demand) to determine the current parking needs during typical market conditions for the weekday and typical event conditions for the weekend day (Farmer's Market).

The parking turnover and duration surveys provided an understanding of whether posted policy was being followed, and how certain block faces and surface lots were being used throughout the day. The findings from this work provide an understanding of current utilization, and the potential impact of improved enforcement or adjustments to policy.

The final piece of the quantitative analysis is projecting future parking needs. Walker worked with City staff and the Downtown Beloit Association to identify vacant built space and proposed (re)developments within Beloit. This information was used to calculate the projected impact each would have on future parking demand on a block-by-block basis. Parking demand ratios were applied to the new (or vacant) land use quantities, then hourly activity factors were applied to account for variations in activity throughout the day. Proposed changes to the existing parking supply were calculated based on footprints of the proposed future developments and any replacement parking noted.

Similar quantifiable information related to vacant space and proposed developments was not available for the South Beloit portion of the study area. Much of the developed land within the South Beloit portion of the study area consists of stand-alone land uses with adjacent parking supply to serve their needs. Based on input from City representatives, we assume that future conditions in the next ten years will largely remain the same. There may be some growth that occurs as a result of the South Beloit Future Land Use Plan and therefore our future parking needs for South Beloit are based on an assumed organic growth in parking demand, rather than growth from a specific new development project.

The final step of the Quantitative Analysis added the projected increase in parking demand for each block in Beloit and South Beloit to the baseline parking utilization data. The total projected demand was then compared to the proposed future parking supply to determine future parking needs.

COMMUNITY ENGAGEMENT

The project was benefitted by engaging the community to provide an understanding of local context, user experiences and existing frameworks. These insights were captured to ensure the fingerprints of the community would be evident in recommended solutions by reflecting community concerns and values.

Walker utilized a four-pronged approach to engage and gather input from the community. Existing policies, frameworks and perceptions were provided by members of the Project Steering Committee in a series of meetings and an online survey. An online survey was also developed for the community and a web-link was provided online and on printed announcements. Walker staff met business owners, employees and residents in small focus group meetings, and engaged in follow-up calls with those who were not available during the two-day community focus groups in Beloit. The final tool was an evening Public Listening Session, which was facilitated by Walker at the Downtown Beloit Association office.



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In summary, Walker obtained input from 2 project steering committee meetings, 109 respondents to the online survey, 3 planned focus group sessions, and 1 public listening session.

POLICY REVIEW

Walker reviewed current parking policy using two formats: 1) review of written materials, and 2) meetings with municipal administrators, officials and staff. The policy review and interactions with the Project Steering Committee helped identify existing frameworks and the history behind some policies and practices.

Walker requested and reviewed documents, which include traffic code, planning/zoning code, parking related ordinances, and historical enforcement information. Special attention was paid to parking requirements for (re)development, parking management policies, and parking enforcement policies.

At the commencement of the project we met with and had telephone discussions with Project Steering Committee members who are directly involved with many of the functions that impact parking in the study area. These individuals included municipal administrators, officials, and staff who focus on transportation, infrastructure planning and development and finance.

PARKING MANAGEMENT BEST PRACTICE

Walker has experience in numerous types of parking markets (urban, suburban, small downtown, major city, airports, hospitals, universities, event venues, and private developments) and in every type of applications (on-street, public/private surface lots, public/private parking structures, and remote valet). This experience has been aggregated over the years to develop best practices for managing parking supply through policy, education, and enforcement. These best practices were evaluated for applicability within the City Center context and helped to guide recommendation development.

RECOMMENDATIONS

Walker formulated a set of recommendations aimed at improving access for impacted user groups. These recommendations utilize the quantitative findings, and reflect both industry best practice and qualitative concerns raised by the community. Walker's goal was to provide localized solutions that improve access for all user groups while considering impacts on the various communities impacted by parking in the study area (residents, business owners, employees, and visitors). Recommendations to improve parking typically fall into one of three categories: Engineer (developing policy and practice), Educate (ensuring the community understands existing and proposed new policy), and Enforce (to reflect the desired outcome policies and practices must be enforced).

DISCOVERY & ANALYSIS



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QUANTITATIVE ANALYSIS

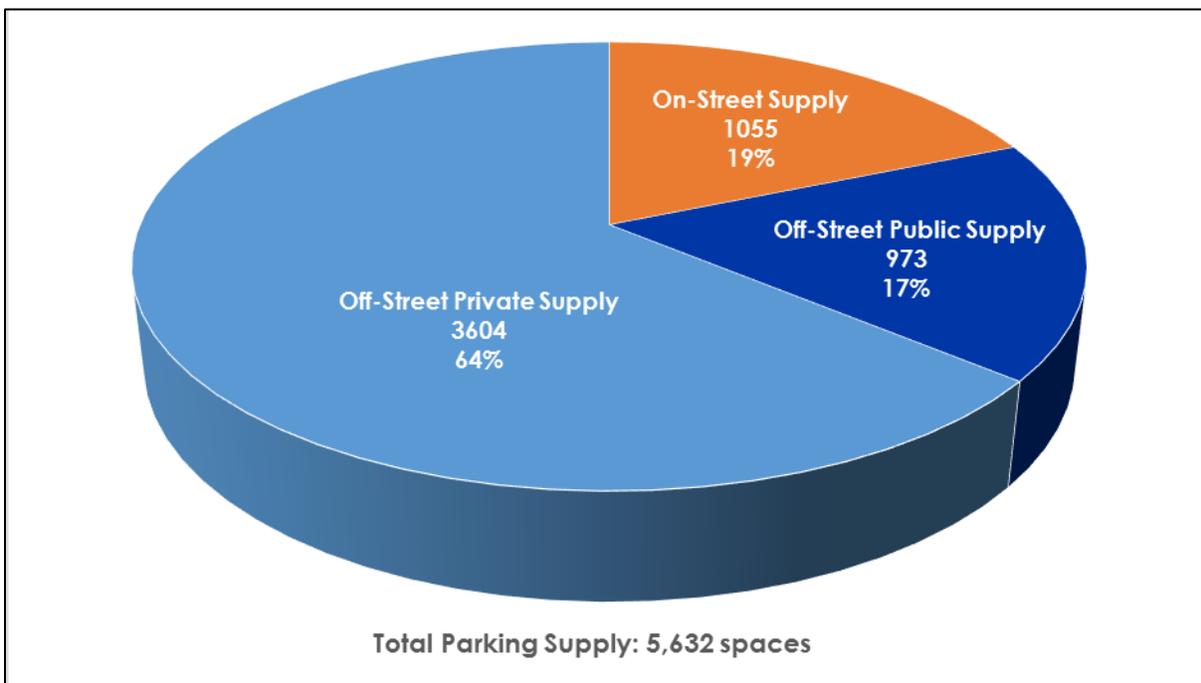
The quantitative analysis provided inputs for determining current and future parking needs. Walker performed parking inventory, occupancy and turnover field surveys in May 2016. This information was used to identify current parking needs. Walker received information related to vacant space and (re)development within the study area from August 2016 through November 2016. These development plans and vacant space were the starting point to project future parking needs.

PARKING INVENTORY

The parking inventory detailing location, quantity and restrictions of on-street parking spaces, public off-street parking lots, and private off-street parking lots was documented during Walker's market observation. The following bullets and figure summarizes the total number of spaces in the study area.

- 1,055 On-Street Spaces
- 973 Off-Street Public Spaces
- 3,604 Off-Street Private Spaces
- 5,632 Total Parking Spaces

Figure 3: Parking Supply Mix

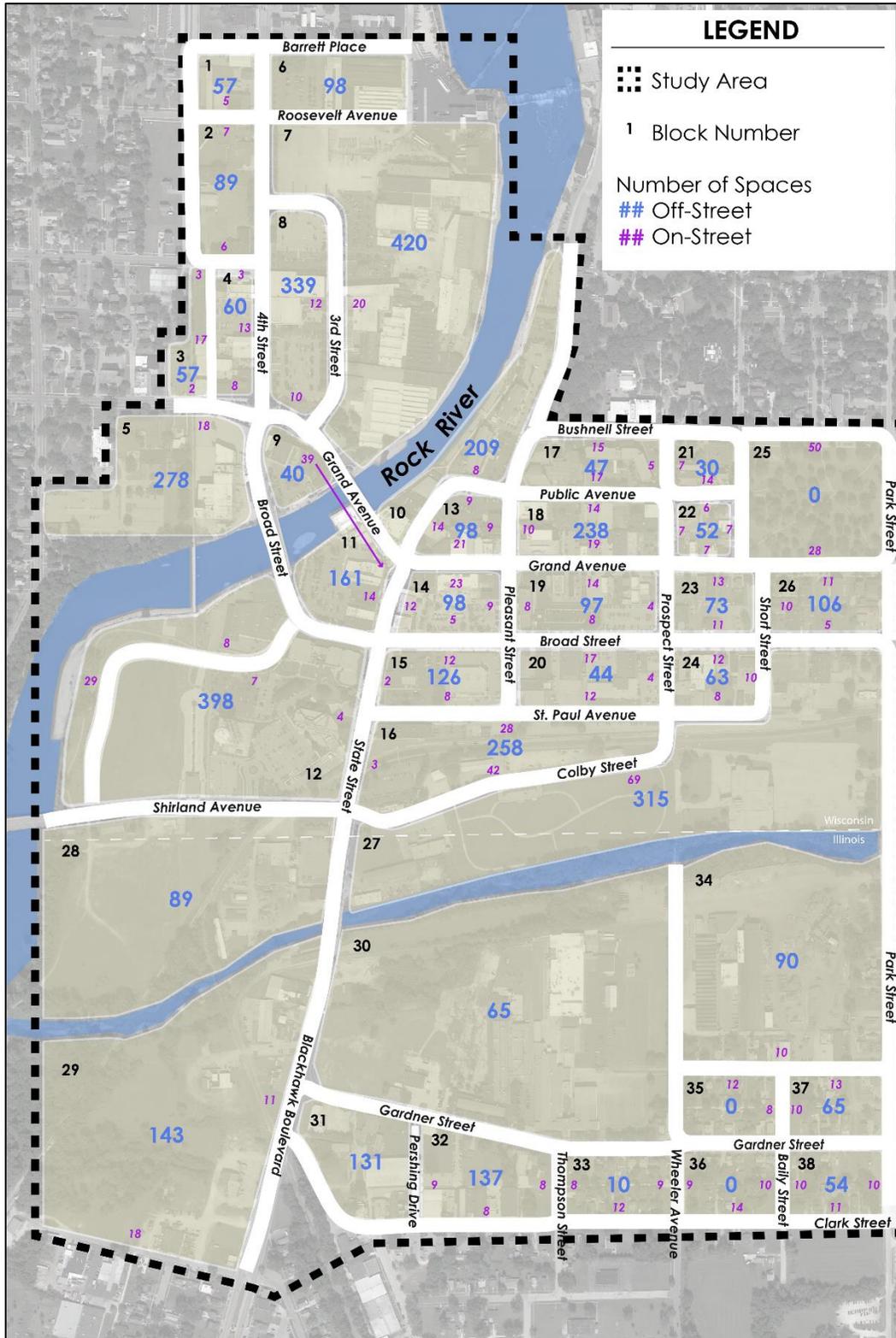


Source: Walker Parking Consultants, May 2016

The parking supply is distributed within the study area as shown in Figure 4. Blue numbers on the map detail the total of off-street parking spaces on the block; purple numbers on the map detail the number of on-street parking spaces along each block face.



Figure 4: Parking Supply – Block-by-Block



Source: Walker Parking Consultants

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A summary of the parking supply on a block-by-block basis was aggregated within Table 1. Walker documented the parking supply in detail, which is provided for reference within the appendices.

Table 1: Parking Inventory

Block #	On-Street Supply	Off-Street Public Supply	Off-Street Private Supply	Off-Street Total	Total Supply
1	5	0	57	57	62
2	13	0	89	89	102
3	22	50	0	50	72
4	24	60	0	60	84
5	18	0	278	278	296
6	0	0	98	98	98
7	20	0	420	420	440
8	22	276	63	339	361
9	39	40	0	40	79
10	8	80	129	209	217
11	14	161	0	161	175
12	48	208	190	398	446
13	53	0	98	98	151
14	49	98	0	98	147
15	22	0	126	126	148
16	73	0	258	258	331
17	37	0	47	47	84
18	43	0	187	187	230
19	34	0	97	97	131
20	33	0	44	44	77
21	21	0	30	30	51
22	27	0	52	52	79
23	24	0	73	73	97
24	30	0	63	63	93
25	78	0	0	0	78
26	26	0	106	106	132
27	72	0	315	315	387
28	0	0	89	89	89
29	29	0	143	143	172
30	0	0	65	65	65
31	0	0	131	131	131
32	25	0	137	137	162
33	29	0	10	10	39
34	10	0	90	90	100
35	20	0	0	0	20
36	33	0	0	0	33
37	23	0	65	65	88
38	31	0	54	54	85
	1,055	973	3,604	4,577	5,632

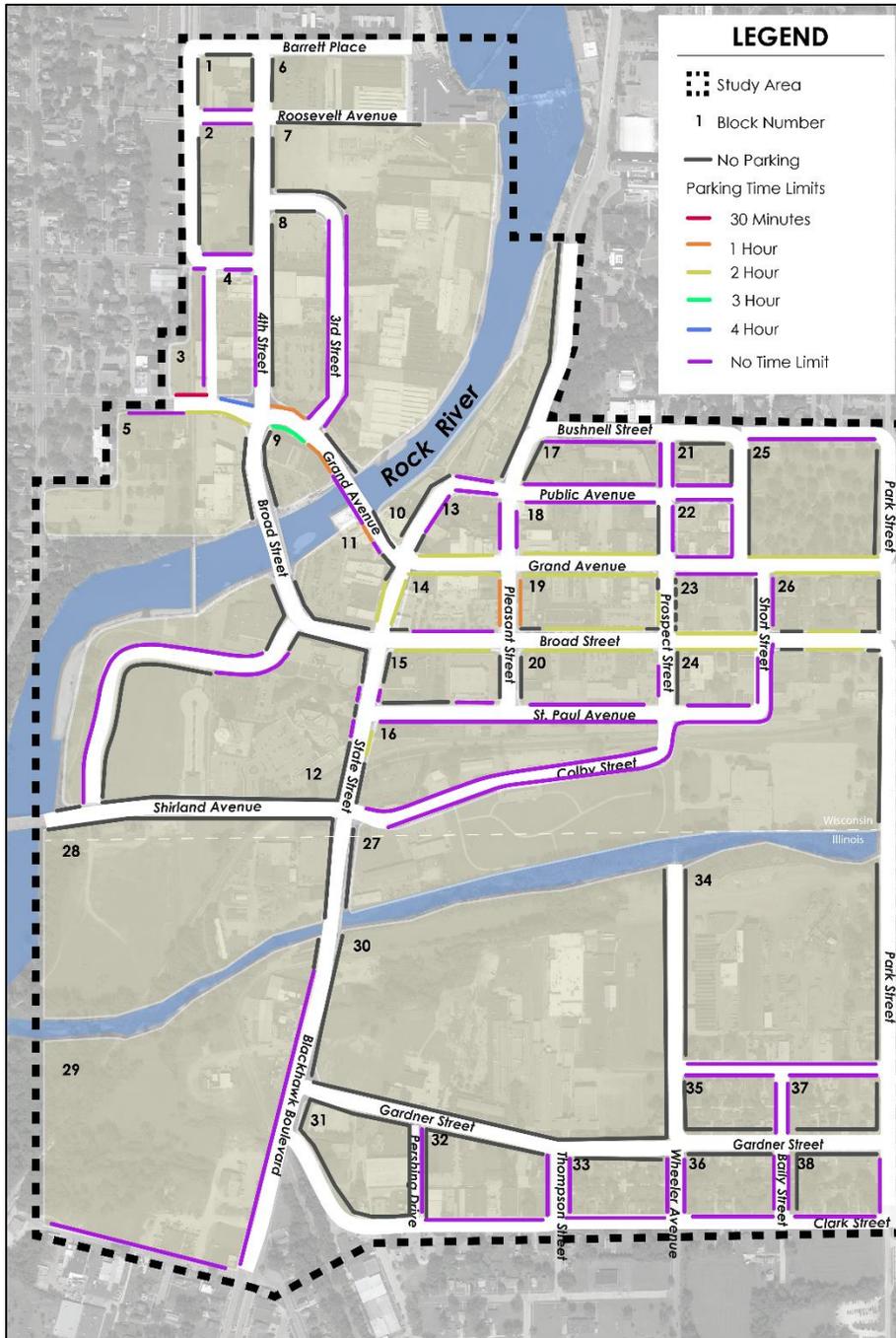
Source: Walker Parking Consultants

Although there were several large public lots and a significant amount of on-street parking, over 60% of parking in the study area was documented to be privately owned. Most of the private off-street parking lots are small, and are restricted based on posted signage for tenants use only, or patrons of a specific business. These restrictions on use typically result in very low utilization during non-business hours for related businesses.

PARKING TIME LIMITS

Time limits varied throughout the study area with most on-street parking being unrestricted. Most spaces near downtown Beloit had a 2-hour restriction; other restrictions were mixed in as well and include 30-minute, 1-hour, 3-hour, and 4-hour limits. In some areas these restrictions vary within the same block, which can be confusing for users and difficult on enforcement personnel.

Figure 5: On-street Parking Time Limits



Source: Walker Parking Consultants

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PARKING OCCUPANCY

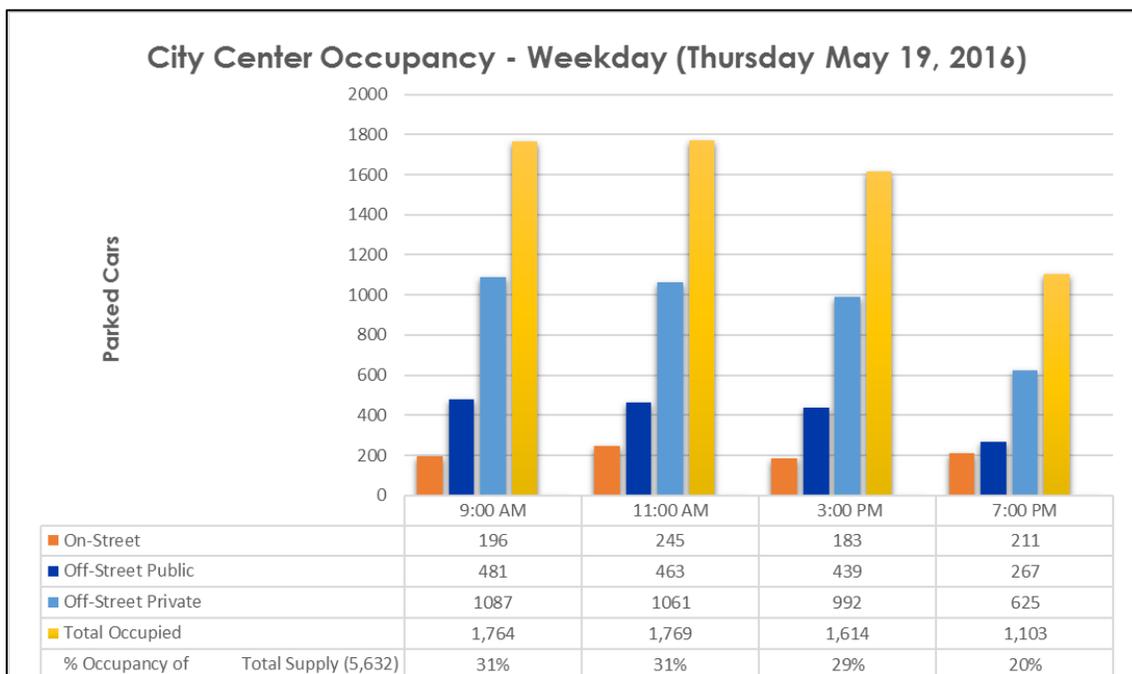
Walker performed parking occupancy counts of the on-street parking supply and the off-street supply that was publicly accessible. The counts were performed beginning at 9:00 AM, 11:00 AM, 3:00 PM, and 7:00 PM on Thursday, May 19, 2016, and again on Saturday, May 21, 2016. The counts performed on Thursday are intended to provide insight into parking conditions for a typical weekday. The counts performed on Saturday are intended to provide insight into parking conditions on a Saturday when the Farmer's Market is in operation.

For the on-street parking supply the number of vehicles present on each block face was documented. For the off-street parking supply the number of vehicles present within each specific lot was documented. Block-by-block parking occupancy data for Thursday and Saturday was summarized in Table 2 and Table 3 on pages 15 and 16, respectively.

The following high-level findings were observed during the Thursday occupancy counts:

- Thursday Peak Period – 11:00 AM
 - 1,769 parked vehicles; 31% Occupancy
 - 810 On-Street Vacant or Unused Spaces
 - 3,053 Off-Street Vacant or Unused Spaces
- Two (2) blocks in the study area experienced ≥85% occupancy in off-street supply; Block 9 had a very small public lot (Chester Square); Block 13 was a private lot for employees.
- Four (4) block faces in the study area experienced ≥85% occupancy in on-street supply; Block 15 had only 2 spaces; Block 13 (west) had 14 spaces with no time restriction; Block 13 (south) had 21 2-Hour spaces; and Block 8 had 10 1-Hour spaces.

Figure 6: Occupancy Count Summary - Thursday



Source: Walker Parking Consultants

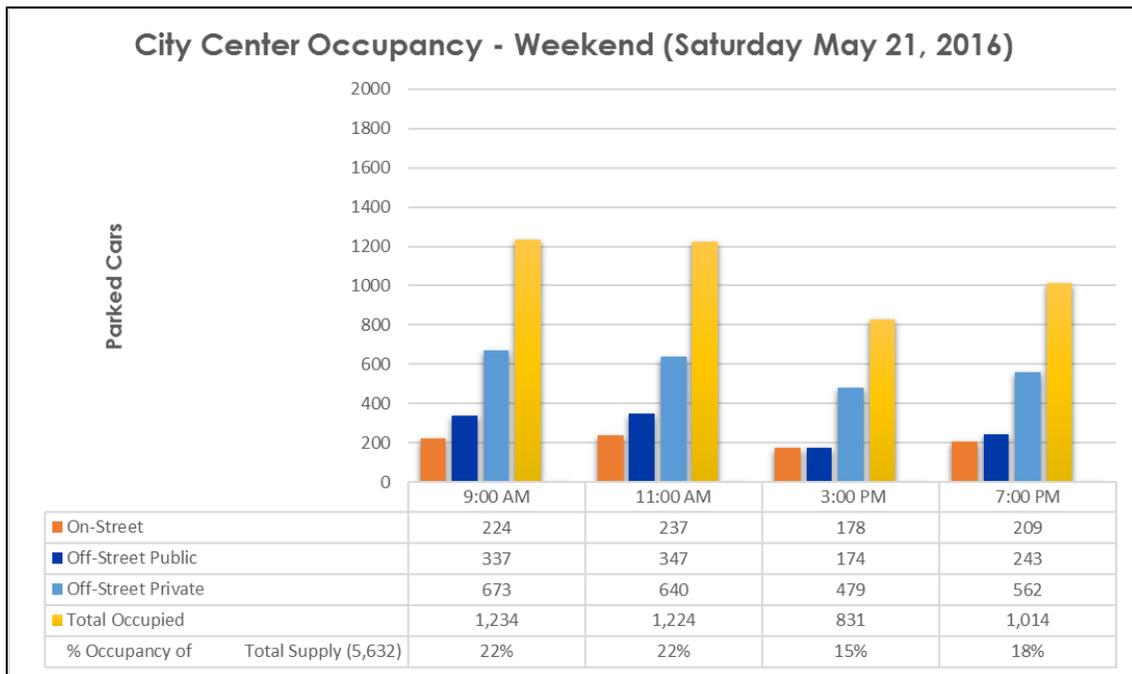
APRIL 14, 2017

31-7940.00

The following high-level findings were observed during the Thursday occupancy counts:

- Saturday Peak Period – 9:00 AM
 - 1,234 parked vehicles; 22% Occupancy
 - 831 On-Street Vacant or Unused Spaces
 - 3,567 Off-Street Vacant or Unused Spaces
- Three (3) blocks in the study area experienced $\geq 85\%$ occupancy in off-street supply; Block 9 had a very small public lot (Chester Square); Block 13 and Block 14 were utilized by Farmer’s Market shoppers and likely also Farmer’s Market staff.
- Eight (8) block faces nearest the Farmer’s Market experienced on-street occupancy $\geq 85\%$; this was expected for on-street parking in these types of settings.

Figure 7: Occupancy Count Summary - Saturday



Source: Walker Parking Consultants

Walker compared the parking inventory (supply) to the occupancy (demand) to determine the current parking adequacy during typical market conditions for the weekday and typical event conditions for the weekend day (Farmer’s Market). We prepared heat maps to provide a visual regarding parking occupancy for each of the peak periods, which are found in Figure 8, on page 17. The maps indicated occupancy percentage² for on-street parking (lines) and off-street parking (block color) using color-coding as indicated in the figure legend. Aside from occupancy percentage, the maps showed the surplus (positive/blue numbers) or shortfall (negative/red numbers)³ of legal parking spaces for each block face, and sum of off-street for each block.

² Occupancy Percentage = Parking Occupancy / Parking Supply

³ Surplus / Shortfall = Parking Supply – Parking Occupancy



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We found that there are no parking shortfalls during the Thursday peak period, but some occupancy percentages were high. A shortfalls was observed during the Saturday peak periods for block 14, adjacent to the Farmer's Market; many of the blocks adjacent to the Farmer's Market experienced high occupancy during that time – which was expected for an event condition. A shortfall was documented because more vehicles were parked in an area than were legally allowed to be parked there. For on-street parking this means vehicles parked in "No Parking" zones; for off-street parking this means double-parking, or parking in unmarked areas. Much of the private off-street parking supply sat largely vacant during peaks in the area due to restrictions on the supply from business owners.

The overall parking occupancy percentage during peak periods suggests that if parking supply and parking demand were better balanced, then perceived localized parking shortfalls could be alleviated within the study area. This would require use of private off-street parking supply to improve utilization of those parking resources, while opening up on-street parking for more appropriate short-term users.

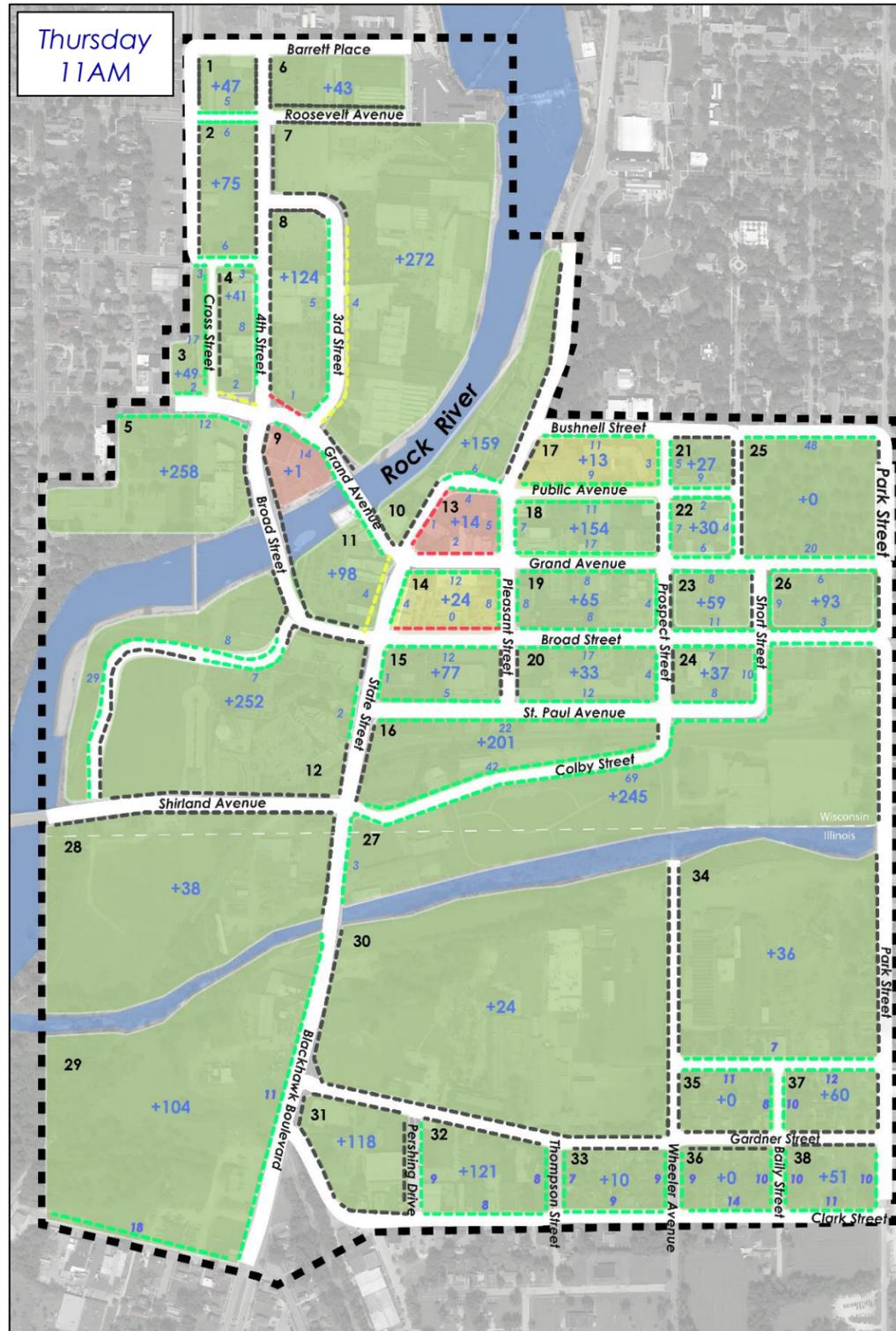
Table 2: Parking Occupancy – Thursday May 19, 2016

Block #	5/19/2016 Occupancy Counts - 9AM					5/19/2016 Occupancy Counts - 11AM					5/19/2016 Occupancy Counts - 3PM					5/19/2016 Occupancy Counts - 7PM				
	On-Street Demand	Off-Street Public Demand	Off-Street Private Demand	Off-Street Total	Total Demand	On-Street Demand	Off-Street Public Demand	Off-Street Private Demand	Off-Street Total	Total Demand	On-Street Demand	Off-Street Public Demand	Off-Street Private Demand	Off-Street Total	Total Demand	On-Street Demand	Off-Street Public Demand	Off-Street Private Demand	Off-Street Total	Total Demand
1	0	0	9	9	9	0	0	10	10	10	0	0	11	11	11	0	0	6	6	6
2	1	0	21	21	22	1	0	14	14	15	1	0	11	11	12	2	0	4	4	6
3	0	1	0	1	1	0	1	0	1	1	0	0	0	0	0	1	0	0	0	1
4	6	7	0	7	13	11	19	0	19	30	7	9	0	9	16	14	28	0	28	42
5	7	0	18	18	25	6	0	20	20	26	6	0	17	17	23	5	0	25	25	30
6	0	0	62	62	62	0	0	55	55	55	0	0	26	26	26	0	0	3	3	3
7	20	0	151	151	171	16	0	148	148	164	16	0	149	149	165	5	0	50	50	55
8	14	219	55	274	288	16	182	33	215	231	13	182	41	223	236	12	74	5	79	91
9	21	40	0	40	61	25	39	0	39	64	26	30	0	30	56	30	28	0	28	58
10	2	20	27	47	49	2	17	33	50	52	6	23	24	47	53	6	10	50	60	66
11	11	73	0	73	84	10	63	0	63	73	7	60	0	60	67	13	35	0	35	48
12	3	69	99	168	171	2	68	78	146	148	3	74	89	163	166	0	27	4	31	31
13	28	0	89	89	117	41	0	84	84	125	25	0	86	86	111	36	0	25	25	61
14	17	52	0	52	69	25	74	0	74	99	18	61	0	61	79	36	65	0	65	101
15	3	0	47	47	50	4	0	49	49	53	1	0	53	53	54	1	0	9	9	10
16	4	0	71	71	75	6	0	57	57	63	0	0	43	43	43	0	0	14	14	14
17	15	0	26	26	41	14	0	34	34	48	10	0	34	34	44	6	0	35	35	41
18	11	0	22	22	33	8	0	33	33	41	7	0	24	24	31	11	0	31	31	42
19	2	0	42	42	44	6	0	32	32	38	5	0	44	44	49	6	0	12	12	18
20	3	0	8	8	11	0	0	11	11	11	1	0	9	9	10	0	0	4	4	4
21	4	0	4	4	8	7	0	3	3	10	4	0	1	1	5	3	0	5	5	8
22	3	0	20	20	23	8	0	22	22	30	3	0	25	25	28	0	0	8	8	8
23	4	0	17	17	21	5	0	14	14	19	4	0	17	17	21	0	0	55	55	55
24	2	0	19	19	21	5	0	26	26	31	2	0	16	16	18	3	0	22	22	25
25	5	0	0	0	5	10	0	0	0	10	5	0	0	0	5	7	0	0	0	7
26	1	0	12	12	13	8	0	13	13	21	1	0	15	15	16	1	0	6	6	7
27	0	0	57	57	57	0	0	70	70	70	0	0	60	60	60	0	0	63	63	63
28	0	0	47	47	47	0	0	51	51	51	0	0	24	24	24	0	0	12	12	12
29	0	0	42	42	42	0	0	39	39	39	2	0	41	41	43	2	0	31	31	33
30	0	0	44	44	44	0	0	41	41	41	0	0	40	40	40	0	0	5	5	5
31	0	0	6	6	6	0	0	13	13	13	0	0	11	11	11	0	0	15	15	15
32	1	0	15	15	16	0	0	16	16	16	0	0	17	17	17	0	0	49	49	49
33	4	0	0	0	4	4	0	0	0	4	4	0	0	0	4	5	0	0	0	5
34	2	0	51	51	53	3	0	54	54	57	3	0	51	51	54	3	0	42	42	45
35	2	0	0	0	2	1	0	0	0	1	1	0	0	1	1	0	0	0	0	1
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	4	4	4	1	0	5	5	6	2	0	10	10	12	2	0	34	34	36
38	0	0	2	2	2	0	0	3	3	3	0	0	3	3	3	0	0	1	1	1
	196	481	1,087	1,568	1,764	245	463	1,061	1,524	1,769	183	439	992	1,431	1,614	211	267	625	892	1,103

Table 3: Parking Occupancy – Saturday May 21, 2016

Block #	5/21/2016 Occupancy Counts - 9AM					5/21/2016 Occupancy Counts - 11AM					5/21/2016 Occupancy Counts - 3PM					5/21/2016 Occupancy Counts - 7PM				
	On-Street Demand	Off-Street Public Demand	Off-Street Private Demand	Off-Street Total	Total Demand	On-Street Demand	Off-Street Public Demand	Off-Street Private Demand	Off-Street Total	Total Demand	On-Street Demand	Off-Street Public Demand	Off-Street Private Demand	Off-Street Total	Total Demand	On-Street Demand	Off-Street Public Demand	Off-Street Private Demand	Off-Street Total	Total Demand
1	0	0	5	5	5	0	0	6	6	6	0	0	6	6	6	0	0	7	7	7
2	1	0	14	14	15	1	0	9	9	10	1	0	5	5	6	2	0	4	4	6
3	0	8	0	8	8	0	1	0	1	1	2	2	0	2	4	2	0	0	0	2
4	3	2	0	2	5	5	8	0	8	13	12	18	0	18	30	21	61	0	61	82
5	5	0	33	33	38	2	0	27	27	29	10	0	24	24	34	2	0	23	23	25
6	0	0	19	19	19	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0
7	9	0	44	44	53	9	0	51	51	60	1	0	9	9	10	0	0	1	1	1
8	11	18	8	26	37	8	29	10	39	47	9	20	3	23	32	7	57	0	57	64
9	37	40	0	40	77	39	38	0	38	77	20	25	0	25	45	16	19	0	19	35
10	5	16	81	97	102	5	28	84	112	117	3	19	50	69	72	7	25	54	79	86
11	0	133	0	133	133	0	123	0	123	123	9	25	0	25	34	6	8	0	8	14
12	3	23	11	34	37	5	25	16	41	46	0	27	4	31	31	0	18	0	18	18
13	23	0	101	101	124	19	0	75	75	94	20	0	27	27	47	35	0	34	34	69
14	17	97	0	97	114	16	95	0	95	111	23	38	0	38	61	29	55	0	55	84
15	10	0	56	56	66	13	0	75	75	88	0	0	22	22	22	0	0	3	3	3
16	4	0	27	27	31	2	0	23	23	25	0	0	9	9	9	0	0	9	9	9
17	11	0	31	31	42	18	0	30	30	48	13	0	29	29	42	9	0	34	34	43
18	26	0	38	38	64	29	0	35	35	64	4	0	20	20	24	17	0	56	56	73
19	21	0	14	14	35	10	0	15	15	25	5	0	19	19	24	6	0	7	7	13
20	3	0	5	5	8	2	0	10	10	12	0	0	5	5	5	4	0	4	4	8
21	4	0	1	1	5	6	0	1	1	7	3	0	1	1	4	2	0	1	1	3
22	0	0	7	7	7	5	0	7	7	12	4	0	7	7	11	2	0	6	6	8
23	1	0	9	9	10	0	0	7	7	7	0	0	14	14	14	2	0	34	34	36
24	2	0	18	18	20	5	0	22	22	27	2	0	19	19	21	9	0	35	35	44
25	5	0	0	0	5	8	0	0	0	8	9	0	0	9	5	0	0	0	0	5
26	7	0	9	9	16	10	0	18	18	28	8	0	16	16	24	1	0	3	3	4
27	0	0	31	31	31	0	0	34	34	34	0	0	48	48	48	9	0	68	68	77
28	0	0	12	12	12	0	0	0	0	0	0	0	5	5	5	0	0	7	7	7
29	2	0	18	18	20	1	0	15	15	16	2	0	26	26	28	0	0	27	27	27
30	0	0	6	6	6	0	0	6	6	6	0	0	6	6	6	0	0	5	5	5
31	0	0	11	11	11	0	0	9	9	9	0	0	19	19	19	0	0	16	16	16
32	0	0	20	20	20	1	0	21	21	22	0	0	34	34	34	0	0	44	44	44
33	6	0	8	8	14	6	0	0	0	6	5	0	0	0	5	6	0	0	0	6
34	5	0	30	30	35	5	0	24	24	29	5	0	32	32	37	6	0	36	36	42
35	3	0	0	0	3	3	0	0	0	3	3	0	0	0	3	1	0	0	0	1
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	3	0	1	1	4	4	0	16	16	20	3	0	40	40	43
38	0	0	6	6	6	1	0	8	8	9	1	0	4	4	5	0	0	4	4	4
	224	337	673	1,010	1,234	237	347	640	987	1,224	178	174	479	653	831	209	243	562	805	1,014

Figure 8: Parking Demand Heat Maps – Observed Conditions



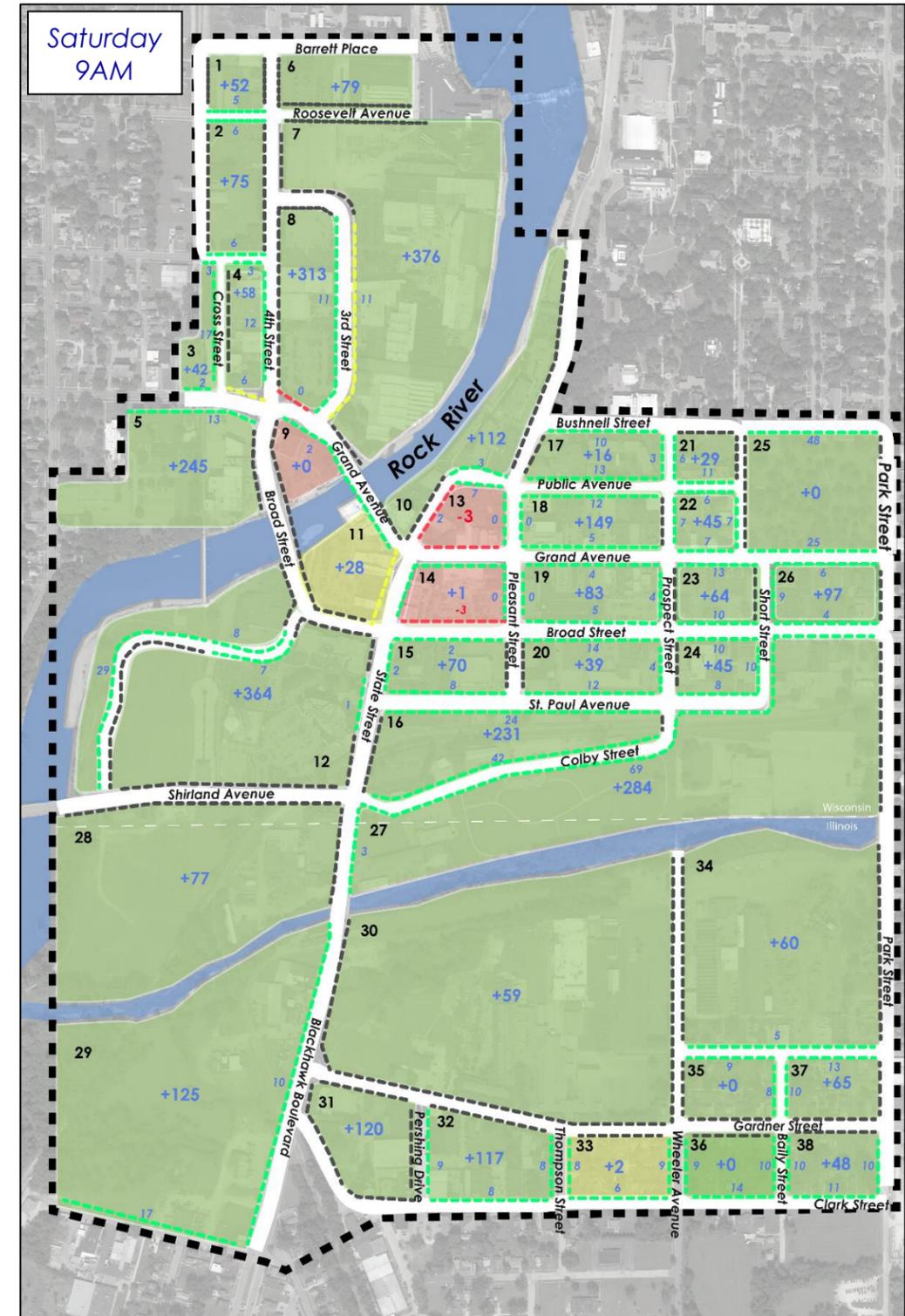
LEGEND

- Study Area
- 1 Block Number

- Off-Street by Block Total
- ## Surplus Off-Street
- ## Surplus Off-Street

- On-Street by Block Face
- ## Shortfall On-Street
- ## Shortfall On-Street

- Occupancy Percentage
- ≤ 69%
- 70% - 84%
- ≥ 85%
- No Parking
- Farmer's Market



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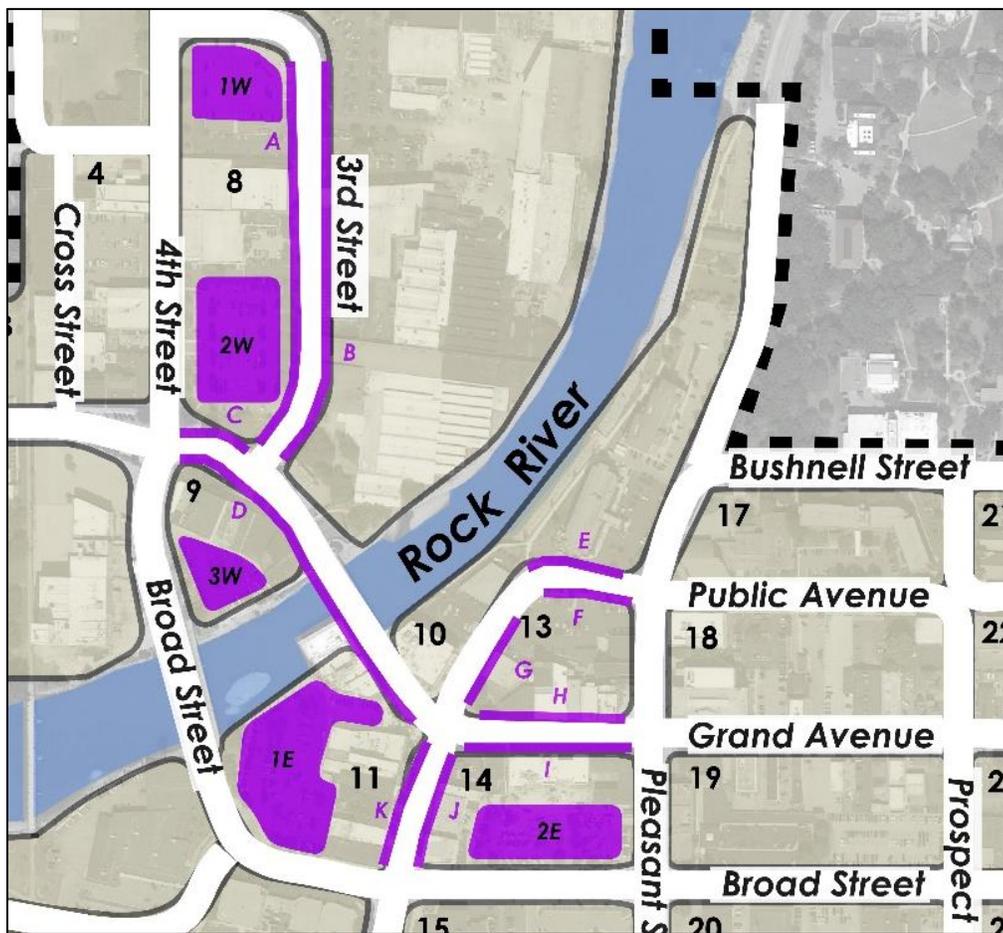
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PARKING DURATION OF STAY

The parking duration surveys provided an understanding of whether posted policy was being followed, and how certain block faces and surface lots were being used throughout the day. These surveys were performed hourly for specific on-street and off-street spaces within the study area on Thursday, May 19, 2016, and again on Saturday, May 21, 2016.

Walker worked with SLATS to identify on-street and off-street locations where these surveys would occur, as shown in Figure 9.

Figure 9: Duration of Stay Study Locations

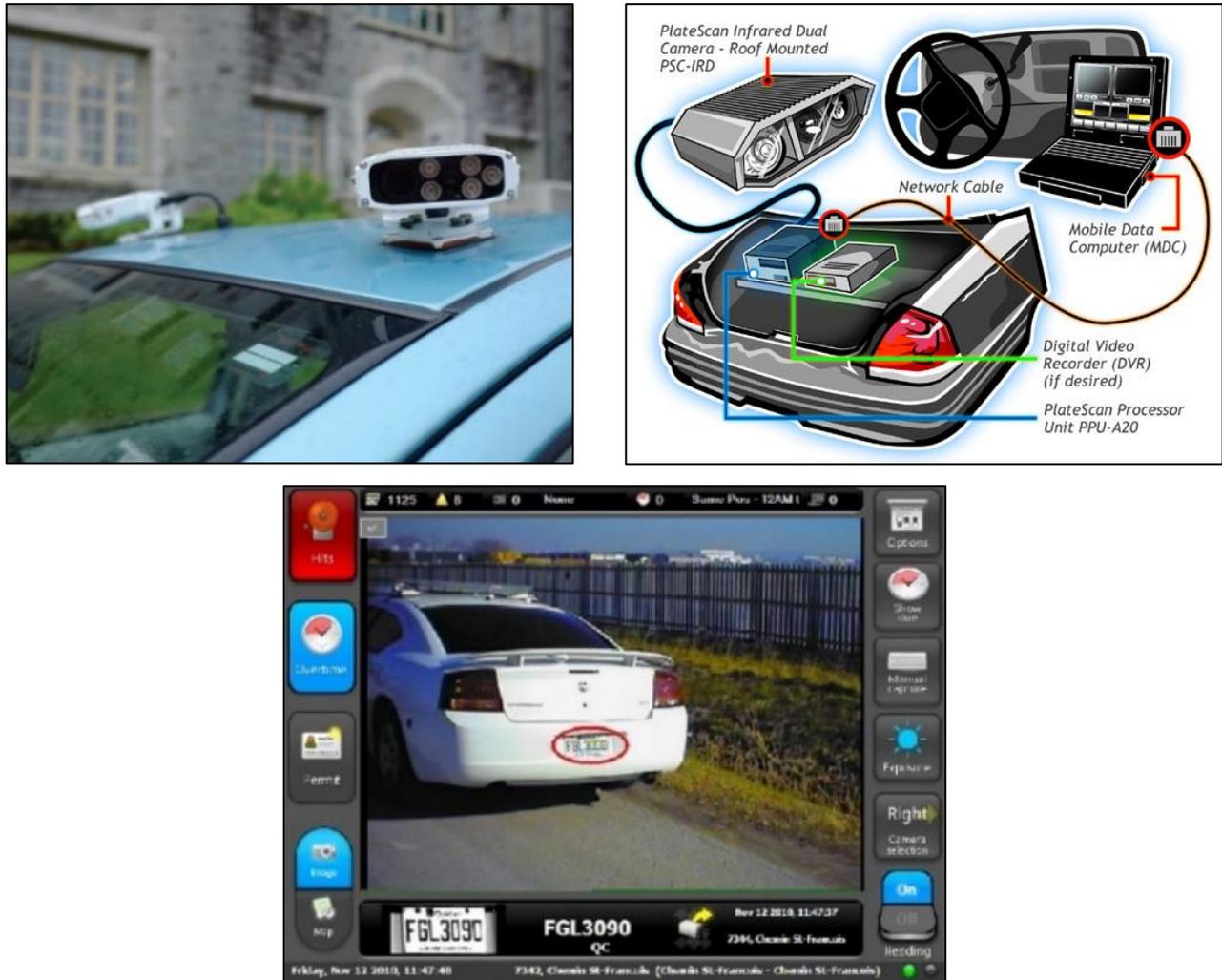


Source: Walker Parking Consultants

Not only did the turnover study provided additional insight into the current demand characteristics associated with specific parking supply, it highlighted the potential impact of improved enforcement and/or policy changes. The findings are summarized as either on-street or off-street and either east of the Rock River or west of the Rock River.

AutoVu equipment was used to capture timestamped and geo-referenced license plate captures. This data was analyzed to identify the length of stay of every vehicle in the parking supply surveyed. This data was evaluated on a total vehicle and space-hour basis.

Figure 10: AutoVu License Plate Recognition (LPR) System



Source: Walker Parking Consultants

Duration of stay was analyzed from two opposite approaches – a user perspective, and a supply perspective. The benefits of this data were therefore two-fold; the data helped to identify the number of parkers from various user groups, and yielded information relating how length of stay impacts available parking during peak periods.

From a user perspective, we evaluated the average length of stay, and a breakdown of the length of stay for parkers; this information is found in Figure 11. Separating user groups allowed us to gauge the likely impact of proposed policy changes. It was important to identify the quantity of parkers we believe to be employees, because policy adjustments were intended to apply to user groups as a whole. The parkers who were observed to be parked for 4 hours or greater are assumed to be employees, and as such can be separated for an evaluation related to how shifting employees may impact the on-street parking adequacy, and adequacy of off-street supply adjacent to popular visitor destinations.

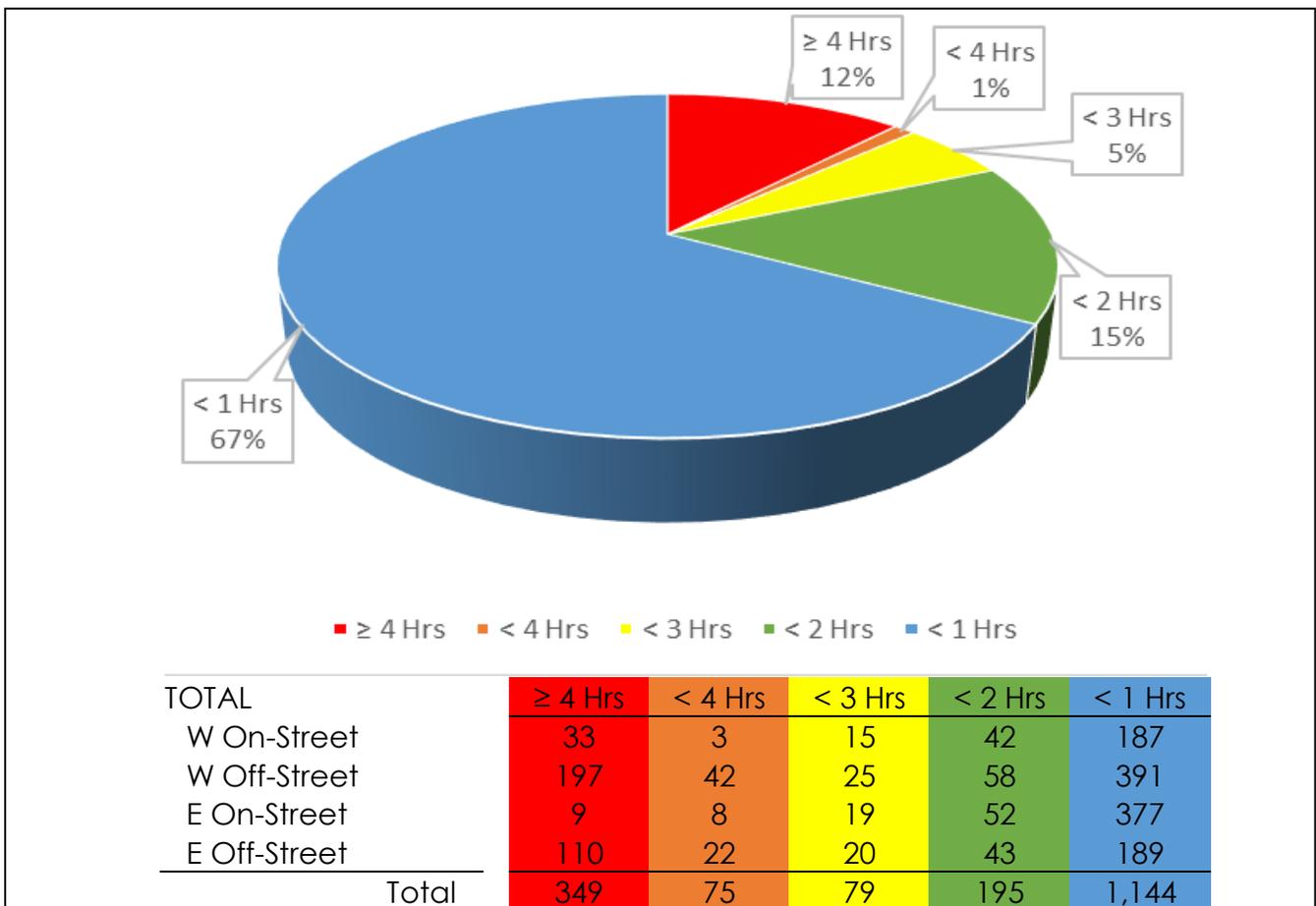
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Looking only at the quantity of vehicles observed within each timeframe we found that a significant number of short-term parkers utilized the public parking supply overall and proportionally more within the on-street supply; most of the long-term parkers utilized the off-street lots. Data indicates that a 3-hour duration was the period when parkers shifted their use of supply from on-street to off-street.

Although it was noted that enforcement was relatively inactive, there was generally a rough compliance with posted time limits; but this was not the case in all areas as vehicles were parked for over 4 hours on-street west of the Rock River.

Figure 11: Duration of Stay - Vehicles



Source: Walker Parking Consultants

From a supply perspective we can evaluate how spaces in specific locations were used throughout the day by parkers – vehicle hours occupied by long-term or short-term parkers – and suggest whether the parking supply is being utilized as intended. This information is presented in Figure 12.

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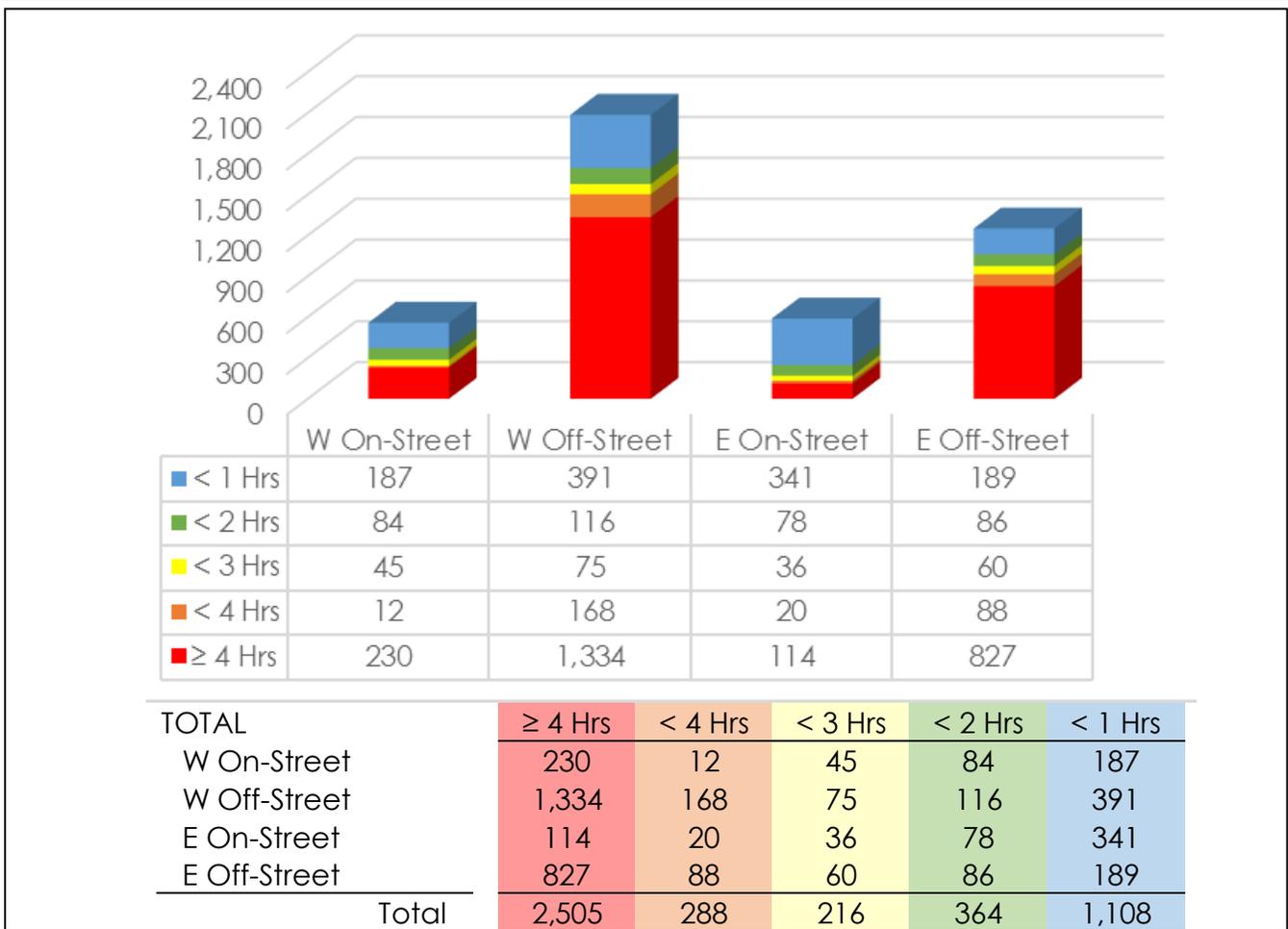
31-7940.00

We also used the vehicle-hour analysis to evaluate the impact of long-term parkers on those looking for parking at peak periods. This information was used to identify whether the mix (long-term and short-term supply) should be adjusted through policy and enforcement.

From the column charts found in Figure 12 we see that the overall balance of on-street and off-street parking, from a length of stay standpoint, was good. Long-term parkers for the most part utilized surface lots, which left on-street spaces available for short-term parkers. Data for the on-street parking west of the Rock River indicated over 40% of the space-hours utilized on-street were occupied by long-term parkers.

When on-street spaces were occupied all day, it could have increased the perception of an overall parking shortfall. This feeling could have been amplified if these spaces were occupied during the overall peak period. If we assume those users to be largely removed through employee parking policies and better enforcement of posted policies, we can then focus on an appropriate parking time restriction to allocate users to available parking supply.

Figure 12: Duration of Stay – Space-hours



Source: Walker Parking Consultants

PROJECTED FUTURE CONDITIONS

The final step of the quantitative analysis is projecting future parking needs. Walker worked with City staff and the Downtown Beloit Association to identify vacant built space and proposed (re)developments within Beloit. This information was provided in terms of land use quantity and type, as well as whether parking would be provided, or if any square footage or parking would be removed.

Table 4: Proposed Future Changes - Beloit

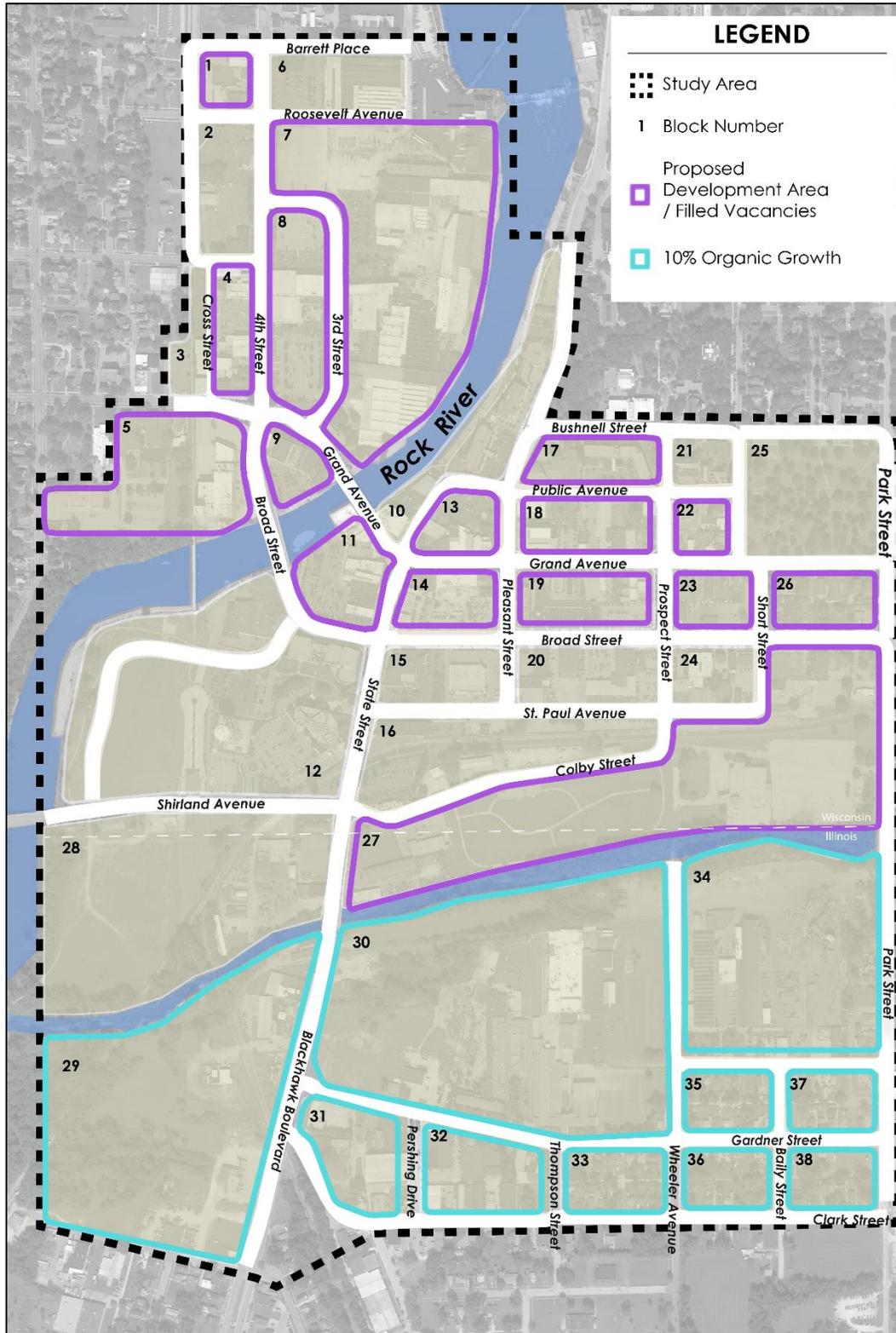
Block No.	Address	LU Type	SF
1	151 Roosevelt	office	2,500
1	816 4th	office	690
4	205 W Grand	office	4,617
9	136 W Grand	office	2,830
13	443 E Grand	restaurant/bar	8,050
14	310 State	office	3,200
14	400 E Grand	office	2,100
18	611 E Grand	office	564
19	522 Broad	office	32,000
19	540 E Grand	office	2,100
22	403 & 405 Prospect	office	2,000
22	620 Public	office	943
23	635 Broad	office	1,647
26	821 Broad	office	2,031
27	822 Broad	office	3,225
5	200 W Grand	Mixed - See Shared Parking	127943
18	419 Pleasant	Mixed - See Shared Parking	Renovation & Reuse
11	80-100 Grand	Mixed - See Shared Parking	37463
17	511 Public	Mixed - See Shared Parking	30000
7	Ironworks	Mixed - See Shared Parking	Renovation & Reuse

Source: Walker Parking Consultants

Most of the vacant space in Beloit was small and distributed throughout the defined study area. The known large (re)developments were identified and those preliminary plans were shared by the developer, which provided proposed land use quantities, parking supply and a footprint of the development (for an evaluation of impact on existing land use and parking). The plans provided by the developer were documented in the appendices of this report.

Similar quantifiable information related to vacant space and proposed developments was not available for the South Beloit portion of the study area. Much of the developed land within the South Beloit portion of the study area consists of stand-alone land uses with adjacent parking supply. Based on input provided by the City, this analysis assumes future conditions in the next ten years will largely remain the same. There may be growth that occurs as a result of the South Beloit Future Land Use Plan and therefore our future parking needs for South Beloit are based on an assumed “organic growth factor”, which assumed 10% more activity for existing land uses. Figure 13 indicates which blocks within the study area were identified to be impacted by proposed future changes.

Figure 13: Location of Identified Future Changes in Parking



Source: Walker Parking Consultants

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The information from Table 4 was used to calculate the projected impact each of the identified land use changes would have on future parking demand on a block-by-block basis. These projections were performed utilizing Shared Parking methodology to generate anticipated parking needs for specific hours of the day, and for a weekday versus a weekend day.

For the stand-alone land uses, parking demand ratios (from Walker's Shared Parking Model) were applied to the new (or vacant) land use quantities, then hourly activity factors (from Walker's Shared Parking Model) were applied to account for variations in activity throughout a typical weekday and weekend day. We also accounted for the local drive ratios for the area using U.S. Census information related to Means of Transportation to Work. Projected parking needs for the identified study area peak periods (weekday and weekend) were documented for each location.

For the larger mixed uses (plans provided within appendices), we prepared a comprehensive shared parking model for each to project parking needs throughout a typical weekday and weekend day. The same steps as those described above for stand-alone land uses were followed, but an additional factor was considered. Some of the developments benefit from captive activity – long-term parkers also generating activity as visitors for other on-site land uses (i.e. Office employees eating lunch at an on-site restaurant). Again, projected parking needs for the identified study area peak periods (weekday and weekend) were documented for each location.

Project footprints of the proposed future developments were used to identify reductions to the existing parking supply and land use, and any replacement parking was noted. The projected future parking changes for Beloit during the peak weekday and weekend day periods were documented in Table 5 on page 26.

The projected change in parking demand for each block in Beloit and South Beloit was added to the baseline parking utilization data from May 2016, then compared to the proposed future parking supply to determine future parking conditions. The future parking conditions for each block in Beloit are detailed in Table 6; blocks with proposed changes were shaded purple; weekend supply was reduced for portions of East Grand and State Street based on closures for the Farmer's Market (70 on-street spaces were removed between Blocks 11, 13 and 14). Heat maps depicting the projected future parking conditions are provided in Figure 14 on page 28.

The following high-level findings were projected during the weekday peak period:

- Weekday Peak Period – 11:00 AM
- ± 3,075 Vacant or Unused Spaces
- Four (4) blocks in the City Center study area experienced parking shortfalls when evaluated under future conditions (red numbers). Occupancy ≥85% was projected for five (5) blocks (red shading for block).
- The shortfall identified for Block 7 (Ironworks) would be largely, if not wholly, supplied and accommodated within the surplus shown for Block 8 (Ironworks North and South Lots). Block 8 is largely a surface parking lot, which is proposed to be expanded under development plans provided by Hendricks (see appendices).



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- A portion of the shortfall for Ironworks may need to be dealt with off-site (leased spaces in Block 5). Note that our supply/demand assumptions for Ironworks includes closure of the E/W portion of 3rd Street as depicted in Hendricks plans (see appendices).
- The limited quantity and patchwork nature of projected shortfalls and high occupancy blocks east of the Rock River suggest the use of a Shared Parking District may alleviate the localized shortfalls there on weekdays. Employers would secure off-site parking for their employees and leave on-street and public lot spaces available for customers.

The following high-level findings were projected during the weekend peak period:

- Weekend Peak Period – 9:00 AM
- ± 4,562 Vacant or Unused Spaces
- Three (3) blocks in the study area experienced parking shortfalls when evaluated under future conditions (red numbers). Occupancy ≥85% was projected for four (4) blocks (red shading for block).
- Again, Block 9 has a small supply, but changing time restrictions and better enforcement may improve conditions there and shift users to West Grand Ave Lot or Ironworks South Lot.
- The weekend shortfalls were projected to occur as a result of the Farmer's Market. Better education through online information and signage regarding the location of lots on the west side of the Rock River should help alleviate the shortfalls experienced on the east side of the river during the Farmer's Market.
- Another potential tool to change behavior is to provide economic incentive to shift to lots west of the river. The Mill Street Lot or the Broad Street Lot could be manned by local charities or community groups who would collect parking fees, and manage the lots.

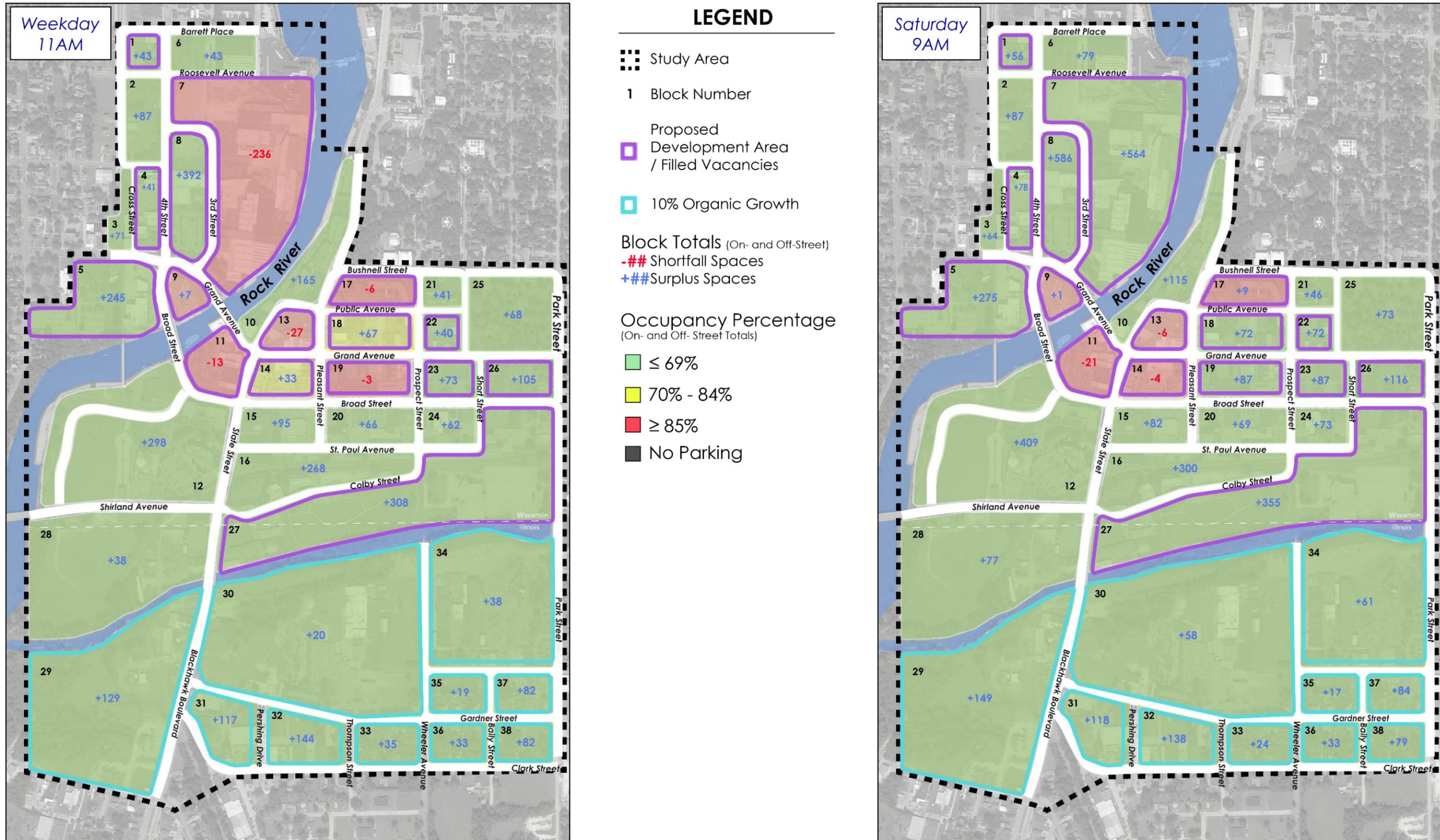
Table 5: Projected Future Parking Changes

Block No.	Address	LU Type	SF	Weekday Peak	Weekend Peak	Removed Demand		Parking Supply	
						Wkdy	Wknd	Added	Removed
1	151 Roosevelt	office	2,500	7	1				
1	816 4th	office	690	2	0				
4	205 W Grand	office	4,617	13	1				
9	136 W Grand	office	2,830	8	1				
13	443 E Grand	restaurant/bar	8,050	53	12				
14	310 State	office	3,200	9	1				
14	400 E Grand	office	2,100	6	1				
18	611 E Grand	office	564	2	0				
19	522 Broad	office	32,000	90	8				
19	540 E Grand	office	2,100	6	1				
22	403 & 405 Prospect	office	2,000	6	0				
22	620 Public	office	943	3	0				
23	635 Broad	office	1,647	5	0				
26	821 Broad	office	2,031	6	0				
27	822 Broad	office	3,225	9	1				
5	200 W Grand	Mixed - See Shared Parking	127943	125	83			100	
18	419 Pleasant	Mixed - See Shared Parking	Renovation & Reuse	120	94	3			
11	80-100 Grand	Mixed - See Shared Parking	37463	95	29				20
17	511 Public	Mixed - See Shared Parking	30000	42	33				
7	Ironworks	Mixed - See Shared Parking	Renovation & Reuse	953	206			803	420
			TOTALS	1560	472	3	0	601	339

Table 6: Projected Future Parking Conditions

Block #	OBSERVED CONDITIONS				Future Supply Net Change	Future Demand		PROJECTED FUTURE CONDITIONS				
	Occ%	Wkdy Peak Surplus	Wknd Peak Surplus	Occ%		Wkdy Peak Net Change	Wknd Peak Net Change	Occ%	Wkdy Peak Surplus	Wknd Peak Surplus	Occ%	
1	16%	52	57	8%	0	9	1	31%	43	56	10%	
2	15%	87	87	15%	0	0	0	15%	87	87	15%	
3	1%	71	64	11%	0	0	0	1%	71	64	11%	
4	36%	54	79	6%	0	13	1	51%	41	78	7%	
5	9%	270	258	13%	100	125	83	38%	245	275	31%	
6	56%	43	79	19%				56%	43	79	19%	
7	37%	276	387	12%	383	895	206	129%	-236	564	31%	
8	64%	130	324	10%	262			37%	392	586	6%	
9	81%	15	2	97%	0	8	1	91%	7	1	99%	
10	24%	165	115	47%				24%	165	115	47%	
11	42%	102	28	83%	-20	95	29	108%	-13	-21	115%	
12	33%	298	409	8%				33%	298	409	8%	
13	83%	26	6	95%	0	53	12	118%	-27	-6	105%	
14	67%	48	-2	102%	0	15	2	78%	33	-4	104%	
15	36%	95	82	45%				36%	95	82	45%	
16	19%	268	300	9%				19%	268	300	9%	
17	57%	36	42	50%	0	42	33	107%	-6	9	89%	
18	18%	189	166	28%	0	122	94	71%	67	72	69%	
19	29%	93	96	27%	0	96	9	102%	-3	87	34%	
20	14%	66	69	10%				14%	66	69	10%	
21	20%	41	46	10%				20%	41	46	10%	
22	38%	49	72	9%	0	9	0	49%	40	72	9%	
23	20%	78	87	10%	0	5	0	25%	73	87	10%	
24	33%	62	73	22%				33%	62	73	22%	
25	13%	68	73	6%				13%	68	73	6%	
26	16%	111	116	12%	0	6	0	20%	105	116	12%	
27	18%	317	356	8%	0	9	1	20%	308	355	8%	
28	57%	38	77	13%				57%	38	77	13%	
29	23%	133	152	12%	0	4	3	25%	129	149	13%	
30	63%	24	59	9%	0	4	1	69%	20	58	11%	
31	10%	118	120	8%	0	1	2	11%	117	118	10%	
32	10%	146	142	12%	0	2	4	11%	144	138	15%	
33	10%	35	25	36%	0	0	1	10%	35	24	38%	
34	57%	43	65	35%	0	5	4	62%	38	61	39%	
35	5%	19	17	15%	0	0	0	5%	19	17	15%	
36	0%	33	33	0%	0	0	0	0%	33	33	0%	
37	7%	82	88	0%	0	0	4	7%	82	84	5%	
38	4%	82	79	7%	0	0	0	4%	82	79	7%	
		3,863	4,328						3,070	4,562		
		Farmers Market Reduced Supply							Farmers Market Reduced Supply			

Figure 14: Parking Demand Heat Maps – Projected Future Conditions



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COMMUNITY ENGAGEMENT

A community engagement effort was undertaken to better understand local context, user experiences and existing frameworks. The Community engagement plan included project steering committee meetings and survey, an online survey for the public, small focus group sessions and one-on-one calls with community stakeholders, and a public listening session. The goal of these efforts was to ensure the fingerprints of the community would be evident in recommended solutions by reflecting community concerns and values.

The engagement approach was developed with aid from the Steering Committee, as depicted in Figure 15.

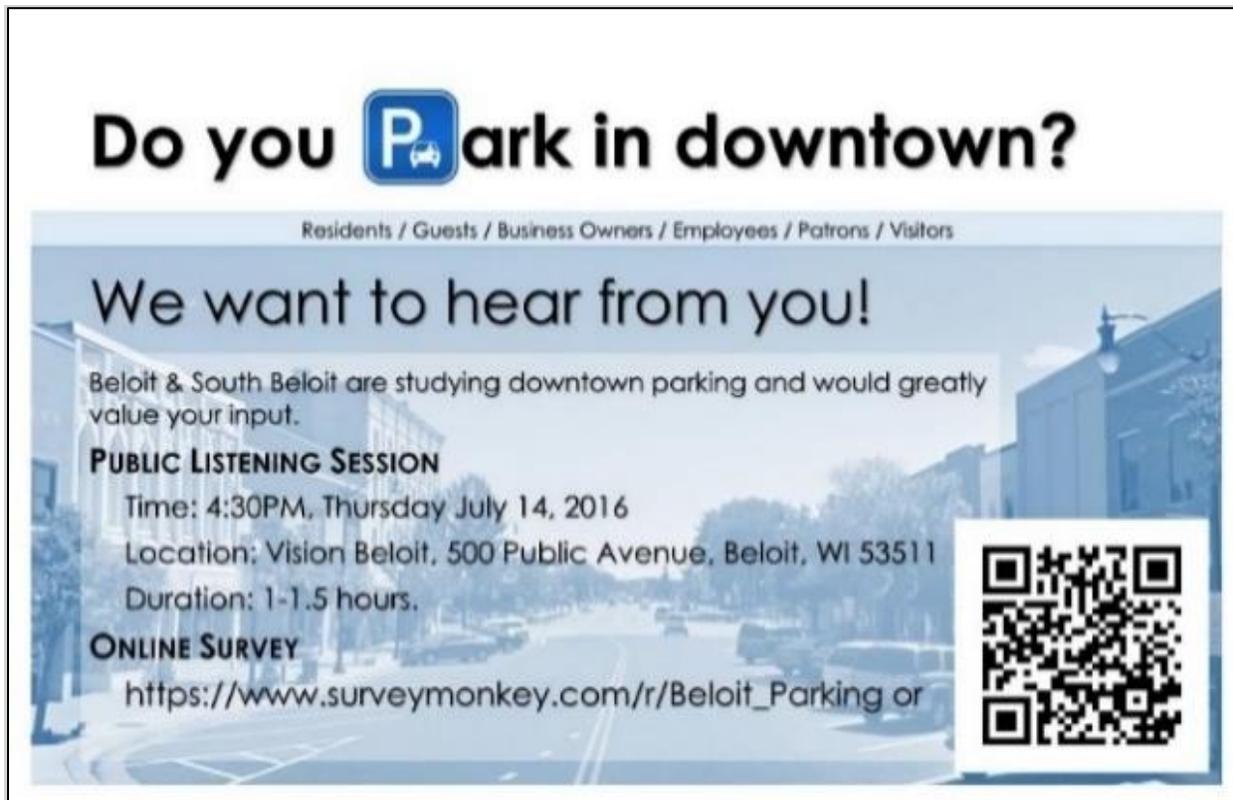
Figure 15: Community Engagement Approach



Source: Walker Parking Consultants

Both the listening session and the online survey for the public were announced using the notice developed by Walker, shown in Figure 16. These notices were printed by the City of Beloit and distributed to area businesses as 11X17 posters and business card size takeaways.

Figure 16: Community Engagement Notice



Source: Walker Parking Consultants

Walker also provided text and format for email invitations to the focus groups and the public listening sessions.

PROJECT STEERING COMMITTEE

The role of governmental and quasi-governmental stakeholders was important in understanding local context and existing frameworks of parking policy and practice. The Steering Committee also served as our guide to the community; they provided direction at critical points within the project lifecycle, including project commencement, community engagement strategy, detailed user experience survey and vetting recommendations.

Project Steering Committee Meetings

During the project kick-off meeting with the Steering Committee, members were introduced to the study areas, goals and tasks for the project. Current challenges were noted as perception among business owners that parking supply was inadequate; parking signage was lacking; pedestrian connections between public supply and downtown was lacking; location of public off-street supply was not obvious (signage/area maps/online). The input sheets used during that session are found in the appendices.

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Detailed User Experience Survey

Walker asked members of the Steering Committee to visit the study area and complete user experience surveys. These surveys were more detailed than community surveys due to the additional discussions related to parking that Walker had with the group. The results suggested that overall parking is available and proximate, physical conditions of parking are good, but parking signage could be improved.

FOCUS GROUP MEETINGS

The intent of Focus Groups was to bring key stakeholders together in small groups and allow them to interact on the topic of parking in the study area. Walker worked with the Steering Committee to identify and contact key stakeholders.

These community stakeholders met in small groups which allowed for active discussions on parking topics they felt strongly about. Walker presented basic information related to parking supply and demand at the beginning of the meetings. The interaction between different user groups aided in creating empathy for other groups, and lively discussion as possible solutions are contemplated.

Three (3) Focus Group meetings were scheduled between July 13 and July 14, 2016 with residents, business owners and employees from within the study area over a two-day period. The following bullet points highlight items discussed during those focus groups.

General comments regarding parking in Downtown Beloit:

- City parking lot is well utilized
- Blood donation center creates a lot of demand; donators take short term parking
- Small businesses are in need of parking; especially employee parking
- General consensus that there is not enough supply
- Overlap of shifts creates supply shortage; also employees in later shifts park far away then have a long walk in the dark late at night
- Lighting and visibility is a concern for businesses that have late shifts; safety is a concern
- People ignore time limits
- Enforcement is perceived as not taking place
- Enforcement is occasional; construction areas were a challenge for those working and not familiar with no parking areas
- Need to consider vacancies and how aggressive Hendricks is in filling empty tenant space
- Question was asked: Why are time limits the way they are?

Business/Organization specific comments:

- Universal Acoustics has a constant amount of demand; employees travel
- YMCA is also going to add demand when they move in to Block 7
- YMCA will have child service, programing, etc.; peak times early in the morning and after 4pm in the evening
- Beloit 2020 projects growth from Grand to Portland (Fourth Street corridor) -- will provide Vision 2020 Plan
- YMCA peak is 190 spaces (January/non-summer months),



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- Q4 is seasonal and is adding about 100 employees
- 165-170 employees, 3 shifts; projected growth to 275 in Q4

Other comments/possible solutions:

- Question was asked: Is money available in a business district improvement fund to make improvements to landscaping or lighting?
- Use Masonic Lodge lot on Block 3 to add supply (this lot is never full)
- Courtesy shuttle for 8am-5pm hours for those who park far from work would be nice
- Assessment fee for Iron Works/Hendricks property to have full time security personnel
- Consensus that meters are not a solution
- Moving the plasma center (blood donation) as a solution was discussed
- Walker Parking Consultants should meet with Hendricks property owners
- Suggested that short term and long term solutions should be an outcome of the study
- Reevaluating where time limits and no parking occur; new generation of businesses create different scenarios

PUBLIC LISTENING SESSION

The purpose of Public Listening Sessions was to allow those not identified as key stakeholders to provide insight into their experience with parking, and input on possible solutions. Notices were distributed electronically, and were made available to area businesses to provide information to their visitors and employees.

Walker presented basic information related to parking supply and demand at the beginning of the meeting. The community shared a range of concerns and suggestions regarding improvements to parking within the defined study area. The interaction between different user groups aided in creating empathy for other groups, and lively discussion as possible solutions were contemplated. The following bullet points highlight items discussed during the July 14, 2016 public input meeting.

General comments regarding parking in Downtown Beloit:

- Concerns about new YMCA and Hendrick's development
- One resident lives walking distance away, but never has had a problem finding parking when he drives
- Perception that walking distance from a parking spot to a destination is a problem by many residents; resident at meeting does not like this perception; does not want a structure; wants street parking
- Parking is not a problem; you just need to walk a few blocks
- Angled parking on bridge is unsafe for biking
- Want commuter bike lanes
- Concerned about where residential cars will be parked
- Alternate side street parking signage is bad; policy is also bad
- E Grand angled parking has issues with larger vehicles; makes street too narrow for traffic and dangerous to back out of spot



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Other comments/possible solutions:

- Signage could be improved
- Private/Public partnerships for shared parking
- Providing shuttles during peak parking conditions
- Streetscape improvements to make area prettier and more walkable
- Map that depicts underutilized supply and identify who would use that space for shared parking
- Clear strategy for Farmer's Market defined
- Really concerned about weeds and the perception that come with them
- Installing lower maintenance landscaping
- Suggested relocation of the plasma center
- Incorporate motorcycle parking stalls
- Incorporate car share downtown

The ideas for improving the parking conditions in the City Center were overwhelmingly positive and constructive with considerations for the overall well-being of the community. However, to the extent that concerns or issues were raised, we attempted to address them within the recommendations formulated for this report.

ONLINE SURVEY

The online survey was intended to gather input from the community related to user experience and perception of parking availability. The survey provided quantitative and qualitative information that was used to help shape parking policy recommendations.

Walker developed questions for the survey and refined them with the aid of the Steering Committee. The community was notified of the survey through the City's website and through print media which provided information related to other community engagement efforts, and a web address and QR code to access the survey.

The online parking survey is one method used to obtain public input but should not be misinterpreted as a public voting mechanism for or against specific parking policy. The survey results are independently evaluated to gain an understanding of local parking characteristics, perceptions, preferences and opportunities for improvement.

The following insight was provided by survey respondents:

- 109 responses were provided
- Mean age of respondents was 48
- Nearly 60% of respondents were in the study area 5+ days per week
- The top 3 reasons for visits were work, shopping and dining
- 93 reported to drive alone; 5 opted to carpool; 3 a-piece walked or biked
- 42% chose to park in public lots; 32% opted for on-street; 24% used private business lots
- 47 respondents reported to stay in the study area for 6+ hours, which suggests employees and residents; the next highest was 1-2 hours, then 2-3 hours
- 72% of respondents reported looking for parking no longer than 5 minutes
- 82% said they rarely or never have a hard time finding available parking



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- Difficulty finding parking was reported to occur most first thing in the morning, around lunch, around dinner, and on Saturdays.
- 88% of respondents reported finding parking within 1-block of their destination
- Respondents reported proximity as the primary factor in deciding where to park, followed by ease of parking (availability), then security, and cost
- Many thought that additional information online or on a mobile device would help locate parking (especially for visitors)
- 47% said they thought parking in the area was good or excellent; 38% said it was average; 15% said it was bad or terrible

The survey also included two open-ended questions to capture direct input from the community. The questions were related to overall parking experience in the study area, noting the best aspects and the biggest opportunities for improvement. Responses to those questions were summarized as follows.

Q21: What do you think are the best aspects of parking in Downtown Beloit?

Top Responses

- 1. Proximate – Spaces near my destination (24 times)**
 - 2. Available – Empty spaces when I arrive (16 times)**
 - 3. Free – No direct cost to park (9 times)**
- *It is safe (3 times)*
 - *Parking lots are well maintained (3 times)*
 - *There are large public lots (2 times)*
 - *Parking is well distributed (2 times)*
 - *There is good lighting for most spaces (2 times)*
 - *There are plenty of on-street spaces (1 time)*

Specific Comments

- *"I can park almost directly next to anywhere I ever want to go for free. Even Saturday morning at the Farmer's Market, when downtown is packed, I park within a block easily. On very rare occasions when I can't, I'm very happy to walk a block or two for free parking."*
- *"Public parking is not only readily available, but easy to find within close proximity of almost everywhere I plan on going in the downtown area."*
- *"Centrally located and ease of access to shops and restaurants."*
- *"It's free and very close to where you want/need to be."*



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Q21: What do you think are the biggest opportunities for improvement of parking in Downtown Beloit?

Top Responses

- 1. More daytime & event parking (25 times)**
 - 2. Improve walkability and bikeability (8 times)**
 - 3. Shared parking with private lot owners (2 times)**
- Broken glass / maintenance (4 times)
 - Better parking and pedestrian wayfinding (2 times)
 - Angled on-street parking is difficult to access and leave (esp. parked next to large vehicles) (2 times)
 - Shuttle and remote lots for special events (2 times)
 - Illegal parking not enforced (2 times)
 - Unclear restrictions in lots (1 time)
 - Lack of uniformity of time limits in parking lots (1 time)
 - Safety/Security from panhandlers in lots (1 time)
 - Employees park on streets (1 time)
 - Lack of disabled on-street parking (1 time)
 - Permit parking structure for downtown employees (1 time)

Specific Comments

- *"More public parking opportunities to accommodate daily workers and events and local business patrons can be challenging when events are happening during the workday."*
- *"Adding a parking garage in front of the Ironworks Building would make it even better, and it would also provide for covered parking during bad weather."*
- *"Remind people how good they have it. Parking is so easy and free here in Beloit. If I'd improve something, it would be more bicycle parking."*
- *"Education, and encouraging walking, make sure lighting is adequate so people feel safe."*
- *"Work out agreements with businesses to share part of their private spaces/lots which are rarely, if ever, used."*

Full online survey and results are available for review in the appendices of this report.

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POLICY & PRACTICE REVIEW

At the commencement of the project Walker met with the Project Steering Committee, which included many city staff who deal with existing policy and practice on a daily basis. Prior to these meetings Walker requested background documents, which include planning/zoning code, parking related ordinances, and historical enforcement information. Walker reviewed these documents prior to the meeting and discussed them with the Project Steering Committee.

Special attention was paid to parking management policies and parking enforcement policies because most of Walker's recommendations will fall under these categories. The goal of this exercise was to gain insight into current policies and how those policies impact them as planners and as enforcement staff. Another focus was to find what currently works (and does not work) within the community, and use these policies and processes as a guide when formulating recommendations.

PARKING PLANNING & MINIMUM REQUIREMENTS - BELOIT

Parking policy related to land use policy are found within the Beloit Municipal Ordinances. These policies are found specifically in *Chapter 19 – Zoning Code under Article VIII Development Standards, Section 8-100 – Off-street Parking and Loading*. Article VIII provides standards typically applied to new or repurposed properties. These standards relate minimum standards for parking and loading quantities and design of those spaces. *Chapter 19 – Zoning Code under Article VIII Development Standards, Section 8-100 – Off-street Parking and Loading* was found to be largely typical compared to Walker's experience in review of hundreds of other cities throughout the United States.

Still, we recommend review and use of the National Parking Association publication, *PCC Recommended Zoning Ordinance Provisions* to help with policy setting at the ordinance level. This document was prepared and refined through various versions to accumulate parking industry best practice for zoning codes. Aside from adding to the City's list of specified land uses with required ratios, there is likely a benefit from review and adjustment of the code sections identified as "atypical" within Table 7.

Table 7: Zoning Ordinances - Parking and Loading - Beloit

Typical	Atypical
<ul style="list-style-type: none"> • Off-Street Parking Exemptions (8-102) • Off-Street Parking Space Requirements (8-103) • Rules for Computing Requirements (8-105) • Location of Required Parking Spaces (8-107) • Use of Required Parking Spaces (8-108) • Accessible Parking for Physically Disabled Persons (8-111) • Vehicle Stacking Areas (8-112) • Parking Area Design Standards (8-113) 	<ul style="list-style-type: none"> • Parking Study (8-104) <ul style="list-style-type: none"> ○ Review by Zoning Officer • Excess Parking; Maximum Number of Spaces (8-106) <ul style="list-style-type: none"> ○ Only residential uses listed • Shared Parking (8-109) <ul style="list-style-type: none"> ○ Limit on location of shared parking area • Off-Site Parking (8-110) <ul style="list-style-type: none"> ○ Limit on location of shared parking area

Source: Walker Parking Consultants

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There were several land uses within the minimum parking requirement table which do not have an established ratio. Instead, code required a parking study, which would then be reviewed and approved by the Zoning Officer. Approval of the parking requirement does not require approval by Planning Commission / City Council, which is typical in many communities.

There was a limitation on location of shared parking that required the shared supply to be within 500 feet of the land use front door. This policy disallowed the use of more distant, possibly available parking supply that may be appropriate for employees. The policy may need to be adjusted if a shared parking district is established to make better use of the overall parking supply in downtown Beloit.

PARKING ORDINANCES - BELOIT

Parking policy related to traffic and legal/illegal locations for parking are found within the Beloit Municipal Ordinances, Chapter 13 Traffic Code. The first section within the chapter began by adopting state of Wisconsin traffic law. Information pertaining to the index of special locations was provided in the next section with details regarding who maintained the index, and stated that City Council may, from time to time, make additions to or deletions from the traffic section. One of the subsections also noted that *removal of parking from an entire block shall be subject to the public participation process found in section 11.35 through 11.40 of the municipal code*. The details in 11.35 through 11.40 are thorough and were at or above what is typically found in municipal code language on the subject of policy change. The process is well-defined, and approvals require input both from the property owners and City Council.

Based on Walker's experience in reviewing ordinances of other cities, most sections found within this chapter of code are typical such as size limitations for diagonal parking. Some of the notable atypical sections within Chapter 13 were also noted in Table 8.

Table 8: Vehicles and Traffic Ordinances – Stopping, Standing and Parking - Beloit

Typical	Atypical
<ul style="list-style-type: none"> • Size Limitation on Diagonal Parking (13.11) 	<ul style="list-style-type: none"> • Overnight Parking Permits for Residents of Business Improvement District (13.05-(3)) <ul style="list-style-type: none"> ○ Issued by City Clerk ○ Is held to posted time-limit standards • Snow Removal Emergency (13.04) - No vehicle, except emergency vehicles, shall park on any street until after the period of declaration has come to an end. • Rock County Parking Lot (13.06) <ul style="list-style-type: none"> ○ 2-hour time limit ○ Enforcement by the Rock County Sheriff's Department and the City Police Department • Penalty (13.25) <ul style="list-style-type: none"> ○ Base violation fees which increase based on time elapsed since issuance of citation

Source: Walker Parking Consultants

Size limitation on diagonal parking (13.11) states that “no vehicle with overall length, including load, of more than 20 feet shall be parked in any diagonal stall in the City”. It was observed by

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Walker staff anecdotally, and from community input as well that compliance with this policy is low. While Walker staff was in town for various trips, no signage or pavement markings were identified that would educate the public on this policy. Better education (signage/stripping the end limit) would benefit drivers and parkers.

Figure 17: East Grand Diagonal Parking



Source: Walker Parking Consultants

One of the atypical sections we documented was related to “All Night Parking Alternate Sides of the Street” (13.03), which is excessive compared to most cities. Walker will discuss potential revisions later in the report related to **ON-STREET PARKING POLICIES** beginning on page 89.

One of the atypical sections we documented was related to “Snow Removal Emergency” (13.04). The notice of such condition may not provide adequate warning for vehicles to be moved off-street. We learned that the result of a violation was a \$50 fine (\$100 after 10 days), and the vehicle was also subject to immediate towing – towing and storage fees would also be assessed. These ordinances are typically reserved for select streets (not all streets) to ensure snow may be plowed and traffic (especially emergency vehicles) can move freely along significant corridors.

One nuance of the code was section 13.06 which provided for concurrent jurisdiction for enforcement of parking regulations in the Rock County parking lot. The lot has a 2-hour limit for those not displaying a sticker (permit).

Section 13.07 defined the parking system for the City of Beloit, which most cities do not include within the municipal code directly. The section detailed which spaces were considered within the downtown municipal parking system, how the cost for operating and maintaining the system was assessed, detailed the marking of spaces and legal parking within designated spaces, and presented time limits that would apply to these spaces.

Within section 13.25(4) The increase in base violation fees if after a specified number of days from the violation/citation date is a policy we see more frequently in the past ten years, although not a recommended practice. This code section was added to improve timely payment of

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finer, but does not encourage compliance with posted rules. The reduction in fine amount is contrary to the goals of the fine structure – compliance with posted rules.

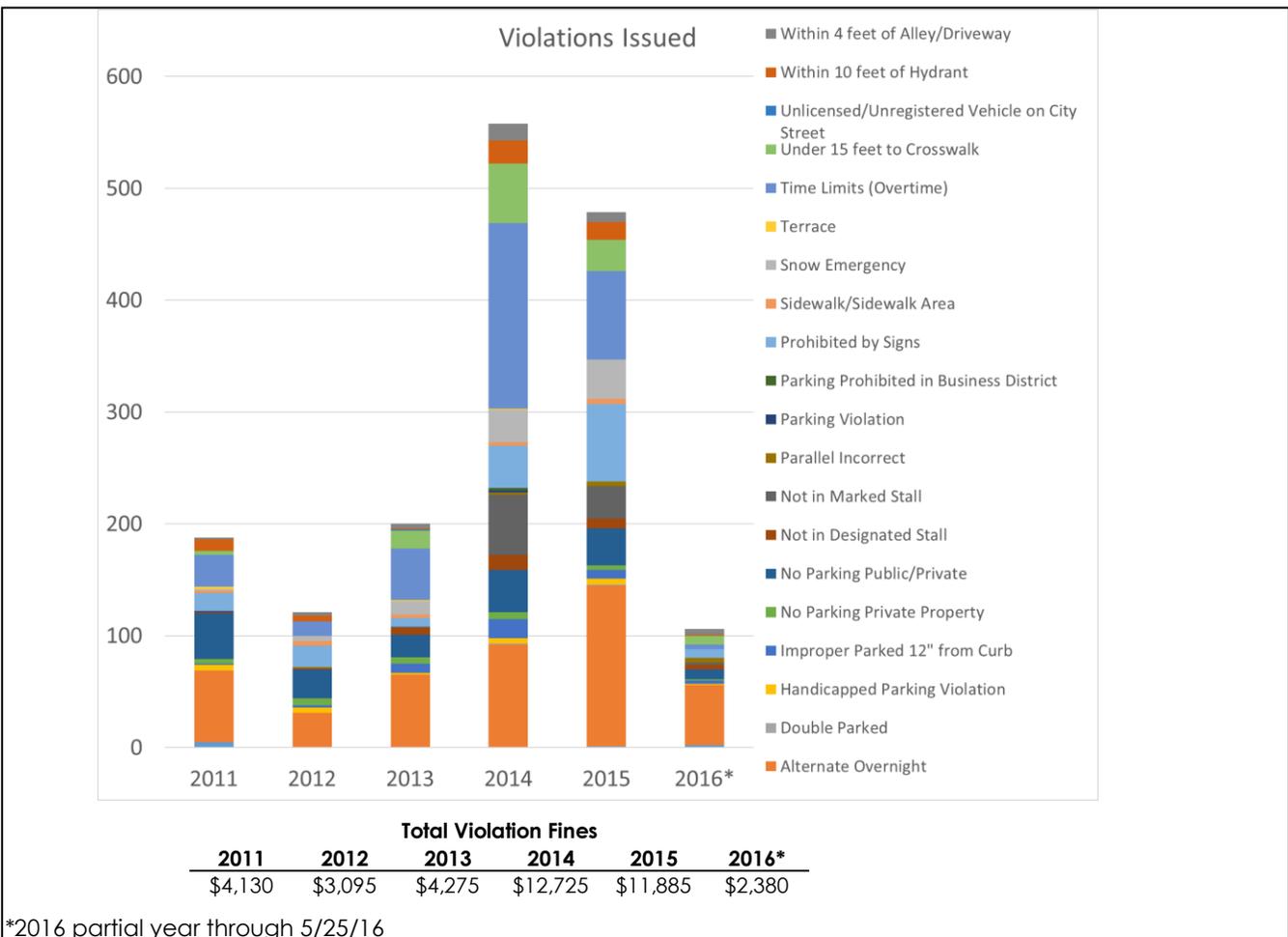
PARKING ENFORCEMENT - BELOIT

At the commencement of the project Walker requested various materials from the City of Beloit. Specifically related to parking enforcement, we requested:

- Copies of current citations related to parking “illegally” (location, time limits, etc.) and corresponding current fine schedule.
- The quantity of citations issued (by category) for the past 5 years, if available.
- The collection rate for citations issued for the past 5 years, if available.
- Current typical enforcement times and locations based on staffing constraints.

The City of Beloit provided Walker with code sections that provide citation type and corresponding fines. Walker also received historical citations by type and revenue associated with citations. Walker summarized the information received within Figure 18.

Figure 18: City-wide Parking Violations Issued - Beloit



*2016 partial year through 5/25/16

Source: City of Beloit

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Based on the information provided, Walker made the following findings:

- Parking enforcement in Beloit has varied widely in recent history.
- Violations from Alternate Overnight parking were the most steadily enforced.
- Similarly, no parking in public/private lots has also been enforced steadily – likely due to requests from private business.
- Overtime parking in time-limited spaces saw a dramatic increase in 2014 (166), then was only half the volume in 2015 (79), and through 5/25/16 was very low (4). There were 28, 13, and 46 violations issued in 2011, 2012, and 2013, respectively for Overtime parking.
- Snow Emergency violations increased in 2014 (29) and 2015 (35) as well. Only 19 total were issued in the prior 3 years.

When there is a noticeable change from one year to the next in the number of violations issued, there are two possible reasons – either more infractions are occurring, or more infractions are being cited. An increase in commercial activity could increase the number of infractions. If it is the case that more infractions are being cited, this could be due to more vigilant attention being paid to this particular infraction by parking enforcement officers, more staffing, enforcement routes being adjusted, or improved technology creating more efficiency.

Walker was provided with recent fine amounts for the various violations, which is detailed in Table 9.

Table 9: Parking Violation Fine Schedule - Beloit

Fine Amounts		Code	Violation Description
Within 10 Days	After 10 Days	Section	
\$30.00	\$60.00	346.52(1d)	Sidewalk/Sidewalk Area
\$30.00	\$60.00	346.52(1f)	Double Parked
\$30.00	\$60.00	346.52(1h)	Prohibited by Signs
\$30.00	\$60.00	346.53(3)	Within 10 feet of Hydrant
\$30.00	\$60.00	346.53(4)	Within 4 feet of Alley/Driveway
\$30.00	\$60.00	346.53(5)	Under 15 feet to Crosswalk
\$30.00	\$60.00	346.54(1a)	Parallel Incorrect
\$30.00	\$60.00	346.54(1d)	Improper Parked 12" from Curb
\$30.00	\$60.00	346.55(3)	No Parking Private Property
\$30.00	\$60.00	346.55(4)	No Parking Public/Private
\$50.00	\$50.00	346.505	Handicapped Parking Violation
\$10.00	\$20.00	13.02	Time Limits (Overtime)
\$15.00	\$30.00	13.03	Alternate Overnight
\$20.00	\$40.00	13.03(1b)	Parking Prohibited in Business District
\$50.00	\$100.00	13.04	Snow Emergency
\$30.00	\$60.00	13.07	Not in Designated Stall
\$30.00	\$60.00	13.07(3)	Not in Marked Stall
\$15.00	\$30.00	13.10	Terrace
\$15.00	\$30.00	13.14	36 Continuous Hours Streets, Alleys, Etc...
\$15.00	\$30.00	13.14(2)	Unlicensed/Unregistered Vehicle on City Street
\$15.00	\$30.00	13.19	Parking Prohibited in Driveway
\$25.00	\$25.00	14.19	Boat Launch

Source: City of Beloit



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The recent and current staffing for parking enforcement was not known for the City of Beloit, as that information was not made available during the course of study.

Typically, Walker presents information related to the number of full-time and part-time staff allocated to parking enforcement, and whether community service officers, or other patrol officers provide additional enforcement from time to time. Typical schedule of that staff would be discussed, as well as the equipment used to perform their duties. We would also provide information related to citation processing, payments and collections.

Although this information was not available at the time of this writing, we will provide industry best practice recommendations related to enforcement.

ORGANIZATIONAL STRUCTURE - BELOIT

The downtown municipal parking system is defined within municipal code section 13.07. Although the physical assets, financing, design, location of legal parking and establishment of time limits are provided, there is no information related to responsible parties for the planning, management, or enforcement of the parking system.

Through discussions with the Project Steering Committee we found that no single role within the City of Beloit structure that was responsible for managing parking as a “program” or “system”.

As a parking system develops, it becomes more important to assign the holistic management responsibility of the system to a single role. In that way, the system is understood on the whole – solutions integrate various system assets and their impact on the system is considered. Coordination of system needs is facilitated as the single role makes decision with input from others, as opposed to having the need to meet as a committee for many decisions. The role would likely not require full-time attention by the City staff member assigned the responsibility.

PERMIT PROGRAMS - BELOIT

The City of Beloit established a program that allows for overnight parking in City owned lots for residents of the business improvement district. The details of this program were found within the municipal code under section 13.05 Parking on City Owned Lots (3) Overnight Parking Permits for Residents of Business Improvement District. The resident parking program, as defined, could be easily adapted to an employee parking permit program, if desired.

PARKING PLANNING & MINIMUM REQUIREMENTS – SOUTH BELOIT

Parking policy related to land use policy are found within the South Beloit Code of Ordinances. These policies are found specifically in *Chapter 118 – Zoning Code under Article IX. – Off-street Parking and Loading*. *Article IX* provides standards typically applied to new or repurposed properties. These standards relate minimum standards for parking and loading quantities and design of those spaces. *Chapter 118 – Zoning Code under Article IX. – Off-street Parking and Loading* was found to be largely typical compared to Walker’s experience in review of hundreds of other cities throughout the United States.

Similar to Beloit, we recommend review and use of the National Parking Association publication, *PCC Recommended Zoning Ordinance Provisions* to help with policy setting at the ordinance

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level. This document was prepared and refined through various versions to accumulate parking industry best practice for zoning codes. Aside from adding to the City's list of specified land uses with required ratios, there is likely a benefit from review and adjustment of the code sections identified as "atypical" within Table 10.

Table 10: Zoning Ordinances - Parking and Loading – S. Beloit

Typical	Atypical
All other sections	<ul style="list-style-type: none"> • Mixed uses (118-343 (7)) - shared parking spaces not permitted • Joint parking facilities (118-343(6)) - allowed if number of spaces is equal to number of spaces required for each separate land use • Parking Schedule of Requirements (118-345) - bases required number of spaces for most commercial uses on number of employees on duty at one time

Source: Walker Parking Consultants

A reduction for shared parking is not allowed by rule in the South Beloit Code, but a reduction may be authorized by the zoning board of appeals for a mixed use conditions with two or more uses located on the same zoning lot or building.

There were several land uses within the minimum parking requirement table which do not have an established ratio. The employee portion of the minimum parking requirement schedule is based on the number of employees on duty at one time, multiplied by the applicable ratio.

There was a limitation on location of joint (shared off-site) parking that required the joint supply to be within 150 feet of a nonresidential land use. This policy disallowed the use of more distant, possibly available parking supply that may be appropriate for employees. The policy may need to be adjusted if a shared parking district is established to make better use of the overall parking supply in the future (especially in accordance with proposed Future Land Use Plan policies).

PARKING ORDINANCES – SOUTH BELOIT

Parking policy related to traffic and legal/illegal locations for parking are found within the South Beloit Code of Ordinances, Chapter 102 Traffic and Vehicles, Article II Stopping, Standing and Parking. Within Chapter 102, section 102.03 adopts the Illinois Vehicle Code as a baseline. Article II, Division 1 focuses directly on parking rules. Based on Walker's experience in reviewing ordinances of other cities, most sections found within this chapter of code are typical. Some of the notable typical and atypical sections within Article II, Division 1 were noted in Table 11.

Table 11: Vehicles and Traffic Ordinances – Stopping, Standing and Parking – S. Beloit

Typical	Atypical
All other sections	<ul style="list-style-type: none"> • Snow Removal Emergency (102-49(c)) - No vehicle, except emergency vehicles, shall park on any street until such street is fully plowed during a snow removal emergency. • 102-54 Payment in lieu of parking fine suggests payment of ticket allows for ticket payment to chief of police or designated individuals to avoid prosecution. • 102-55 Failure to appear upon issuance of a parking ticket results in a warrant and additional fine.

Source: Walker Parking Consultants

One of the atypical sections we documented was related to “Snow Removal Emergency” (102-49). The notice of such condition may not provide adequate warning for vehicles to be moved off-street. We learned that the result of a violation was a \$75 fine, and the vehicle was also subject to immediate towing because it would be deemed a traffic hazard – towing and storage fees would also be assessed.

One nuance of the code was section 102-54 which allowed for payment in lieu of a parking fine. The wording of the code section was difficult to follow, but we believed it suggested that an individual who received a parking ticket would avoid prosecution (ticket would not be on their record) if payment was provided to the chief of police, or an officer or “other person” designated by the chief of police. A receipt would be furnished for the payment. The amount of the payment would be \$10 for illegal parking unless otherwise noted on the citation (in which case the amount of the fine would be no less than \$20). If not paid within five (5) days, the amount of the payment would be \$18 unless otherwise noted on the citation. It was unclear why this provision was established. Based on the fine schedule received from the City of South Beloit the amounts of \$10 and \$18 (if beyond 5 days) do not seem to apply to any violation.

Within section 102.55 the result of failure to appear and make payment is described. The code does not provide a limit on the number of days that may elapse after receiving the citation before issuance of a warrant for arrest. If arrested, the person who failed to appear may post bond for \$50. It seems that this section of code is not enforceable, but would otherwise result in a de facto late fee of \$50 for non-payment or late payment.

PARKING ENFORCEMENT – SOUTH BELOIT

At the commencement of the project Walker requested various materials from the City of South Beloit. Specifically related to parking enforcement, we requested:

- Copies of current citations related to parking “illegally” (location, time limits, etc.) and corresponding current fine schedule.
- The quantity of citations issued (by category) for the past 5 years, if available.
- The collection rate for citations issued for the past 5 years, if available.
- Current typical enforcement times and locations based on staffing constraints.

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The City of South Beloit provided Walker with code sections that provide citation types, and a copy of a blank “Notice of Violation” and indicated corresponding fines. Walker also received historical citations by type (Illegal Parking or Snow Emergency) within the South Beloit portion of the study area. Walker summarized the information received within Table 12.

Table 12: Study Area Parking Violations Issued – S. Beloit

Violation Description	2012	2013	2014	2015
Illegal Parking	0	0	4	2
Snow Removal	4	6	0	12

Source: City of South Beloit

Staff within the South Beloit Police Departments communicated that an estimated 40-50% of all the citations issued in the study area were paid. South Beloit does not have penalties in place to issue a summons, suspend or revoke license plates or driver's license for an unpaid parking citation.

Based on the information provided, Walker made the following findings:

- The code was unclear regarding the fine schedule, the payment process, and late fees
- Parking enforcement in this area of South Beloit is a prioritized during Snow Emergencies.
- When combined with parking occupancy observations from May 2016, there is currently little need for strict enforcement to ensure access for area user groups. This may not always be the case, and recommendations for Beloit may be necessary for South Beloit if the Future Land Development Plan goals are attained.

Table 13: Parking Violation Fine Schedule – S. Beloit

Fine Amounts	Code Section	Violation Description
\$25.00	102-41 (13)	Parking restricted by Posted Sign
\$25.00	102-44	Parking (More than 12" from curb)
\$25.00	102-41(1-12), 102-42 through 102-47, 102-50, 102-51, 102-57, 102-58	Parking (Other)
\$75.00	102-49	Snow Removal Emergency Parking Violation

Source: City of South Beloit

The recent and current staffing for parking enforcement was not known for the City of Beloit, as that information was not made available during the course of study.

Typically, Walker presents information related to the number of full-time and part-time staff allocated to parking enforcement, and whether community service officers, or other patrol officers provide additional enforcement from time to time. Typical schedule of that staff would be discussed, as well as the equipment used to perform their duties. We would also provide information related to citation processing, payments and collections.

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Although this information was not available at the time of this writing, we will provide industry best practice recommendations related to enforcement.

ORGANIZATIONAL STRUCTURE – SOUTH BELOIT

Based on the limited information received from South Beloit, we understand the City owns off-street parking supply throughout the city – only one surface lot was located within the study area. On-street parking is allowed on most neighborhood streets within the South Beloit portion of the study area.

Information gathered from the municipal code suggests that enforcement is performed by the South Beloit Police Department; parking signage, curb markings, striping and infrastructure was the responsibility of the Department of Public Works. There is no information related to responsible parties for the planning or management of the parking system. There appeared to be no single role within the City of South Beloit structure that was responsible for managing parking as a “program” or “system”.

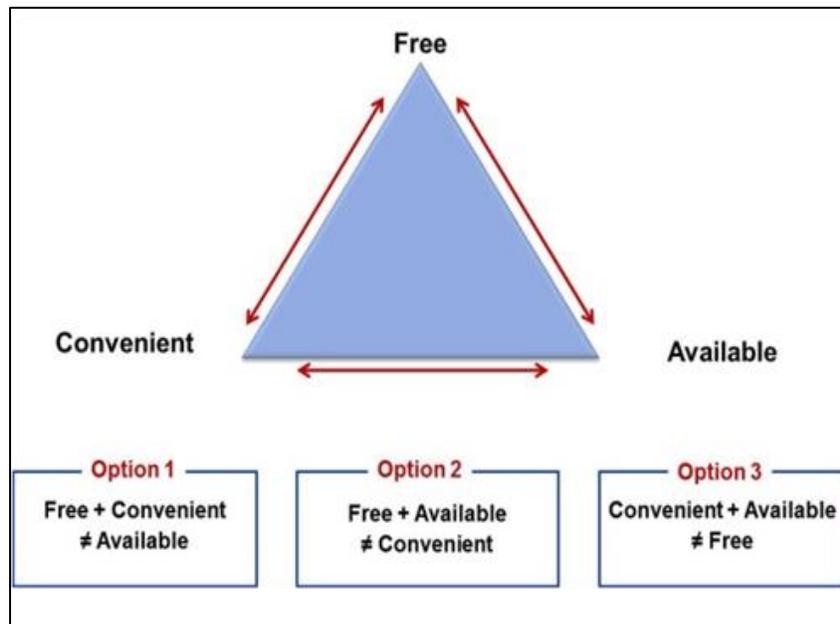
Although parking within South Beloit seems not to be a pressing issue under current conditions, this may not always be the case. As a parking system develops to match (re)development, it becomes more important to assign the holistic management responsibility of the system to a single role. In that way, the system is understood on the whole – solutions integrate various system assets and their impact on the system is considered. Coordination of parking system needs is facilitated as the single role makes decision with input from others, as opposed to having the need to meet as a committee for many decisions. The role would likely not require full-time attention by the City staff member assigned the responsibility.

PARKING MANAGEMENT BEST PRACTICE

For areas where access is challenged by the disparity (or shortfall) of parking supply compared to the parking need, parking management is needed. Parking management is largely an exercise in ensuring access for the various user groups driving to an area. In these areas, each person parking would like to have free, convenient and available parking. We typically present this idea through the use of the “Parking Access Triangle”, found in Figure 19. Although parkers desire all three (free, convenient and available), only two of the three can typically be met in busy commercial areas served largely by on-street parking. As shown in Figure 19: free and convenient spaces are typically already full; free and available spaces may be a few blocks away; and convenient and available spaces typically are not free. In this study area there is no paid parking, but some lots are user restricted, so instead of being constrained by price, parkers in the study area are impacted by user restrictions (i.e. Free = Unrestricted).

Although some blocks and lots exhibit high localized occupancy levels because they are free and convenient, paid parking is not recommended at this time. Paid parking in general is discussed later in this section and specific recommendations for City Center will be discussed in greater detail later in the report under **RECOMMENDATIONS FOR CONSIDERATION** beginning on page 67 (specific recommendation found on page 69).

Figure 19: Parking Access Triangle



Source: Walker Parking Consultants

Walker has experience in numerous types of parking markets (urban, suburban, small downtown, major city, airports, hospitals, universities, event venues, private developments) and in every type of applications (on-street, public/private surface lots, public/private parking structures). This experience has been aggregated over the years to develop best practices for managing parking supply through policy, education, and enforcement. These best practices will help guide recommendation development for the parking improvement plan.

We identified four main categories of parking management best practice, which include; policies, equipment, education and enforcement. These categories have numerous topics; we have included a brief discussion of those pertinent to this parking needs assessment and improvement plan.

POLICIES

Policy setting is used to help define how the supply should be used, or should operate in order to provide the best possible solution for all parties involved. Parking policies typically are aimed at ensuring access to land uses (parking management) – or ensuring that those policies are followed (parking policy enforcement).

Some of the basic considerations when setting policies include:

- Safety implications for drivers, bicyclists and pedestrians
- Improve access for those who reside, work or are visiting land uses
- Improve utilization of parking spaces, using the following occupancy guidelines:
 - 85% on-street; 90% - 95% for off-street; 95% - 100% for off-street reserved

Minimum Parking Requirements & Parking Management Plans

As a part of the planning process for new development and redevelopment, these are generally required for city approval. Cities allow for additional flexibility by granting variances, or approving special districts where a specific plan is developed for the site to ensure limited impact on nearby land uses. Joint Parking or Shared Parking is often one form of variance for mixed used developments, or for new uses with an identified partner land use with different operating hours. Another form of variance is a Parking Credit or Parking In Lieu Fee, which allows land owners to pay a fee in lieu of providing on-site parking (or some fraction of the total required spaces), with the agreement that the city would use those funds for capital or operating costs to support the public parking supply.

Parking management plans are typically required for a land use to be approved if a variance or specific plan is used to deviate from minimum parking requirements. This type of planning aims to correct critical issues before they arise and impact nearby land uses and are cast in concrete.

Reasonable Walking Distances

When Walker designs new parking supply, they utilize a Level of Service (LOS) approach to ensure design standards meet the needs of the intended parkers. One of the considerations for an LOS approach is maximum (or reasonable) walking distance. The following standards are typically applied when designing parking supply:

- 600' maximum walking distance for patrons (4ft/second = 2-3 minute walk)
- 1,200' – 1,600' walking distance for employees (4ft/second = 5-10 minute walk)
- Standards for resident parking vary based on the setting; for Beloit residents would expect the same 600' maximum walking distance for patrons.

Table 14: Walking Distance Design Standards

Maximum Walking Distance	Level of Service Design Rating			
	D	C	B	A
Within parking facilities:				
Surface lot	1400'	1050'	700'	350'
Structure	1200'	900'	600'	300'
From parking to destination:				
Climate controlled	5200'	3800'	2400'	1000'
Outdoors, covered	2000'	1500'	1000'	500'
Outdoors, uncovered	1600'	1200'	800'	400'

Source: Walker Parking Consultants

Walker prepared a walking distance and times map to provide context for our analysis and discussions with the Project Steering Committee and the community. Using a Level-of-Service approach in design and planning, we recommended visitors walk no more than 2-3 minutes (600'), while (depending on the setting) employees may be asked to walk 5-10 minutes (1,200' – 1,600' which assumes wait time for traffic and traffic signals); event staff and visitors typically walk similar distances as employees, or greater.

Figure 20 provides a comparison of various settings all with the same 600' radius as an overlay to show a reasonable walking distance for visitors on a typical day. Figure 21 provides a similar comparison with 1,200' and 1,600' radii as an overlay to show a reasonable walking distance for employees and events.

Figure 20: Walking Distance Comparisons - Visitor

Reasonable Visitor Walking Distance

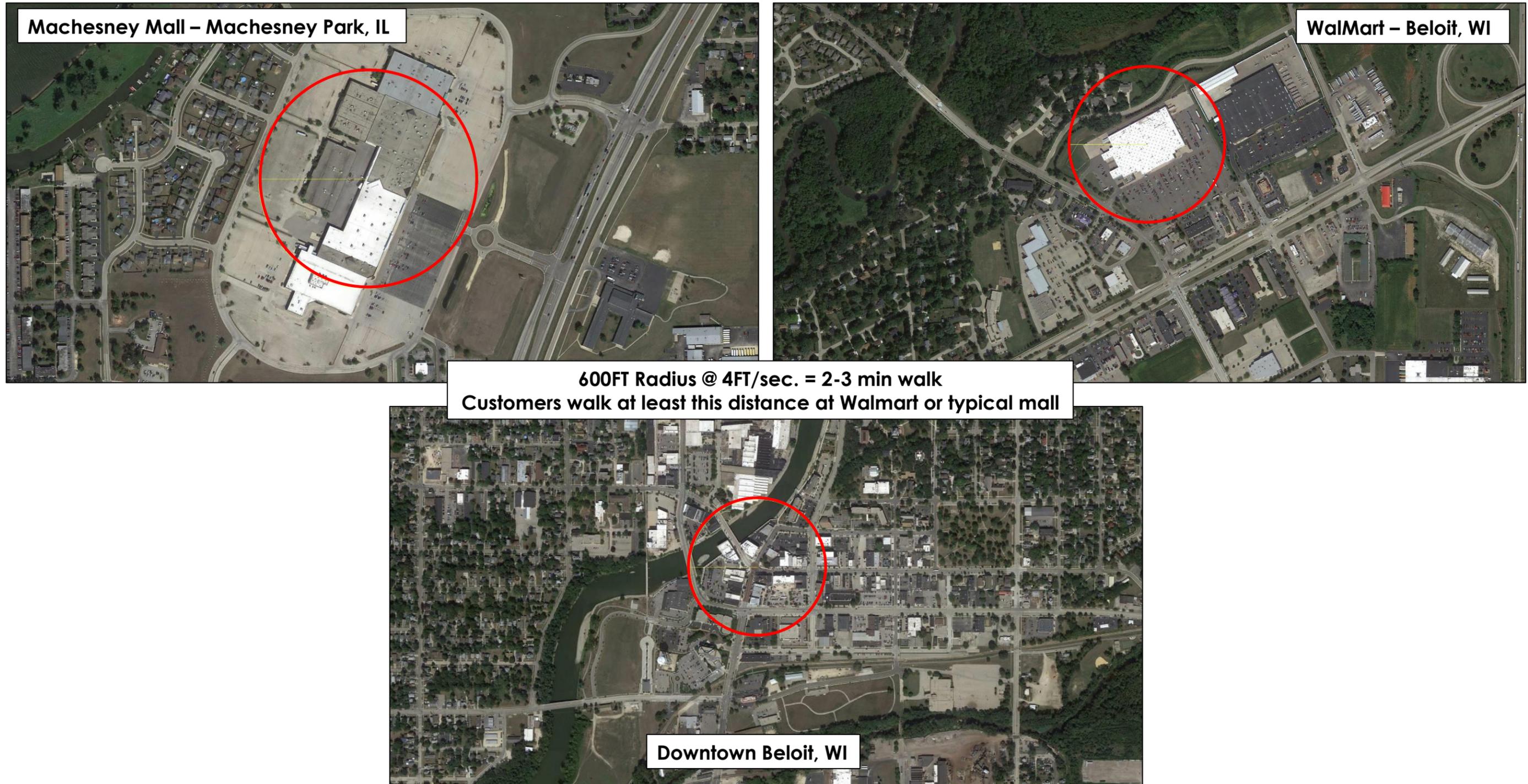
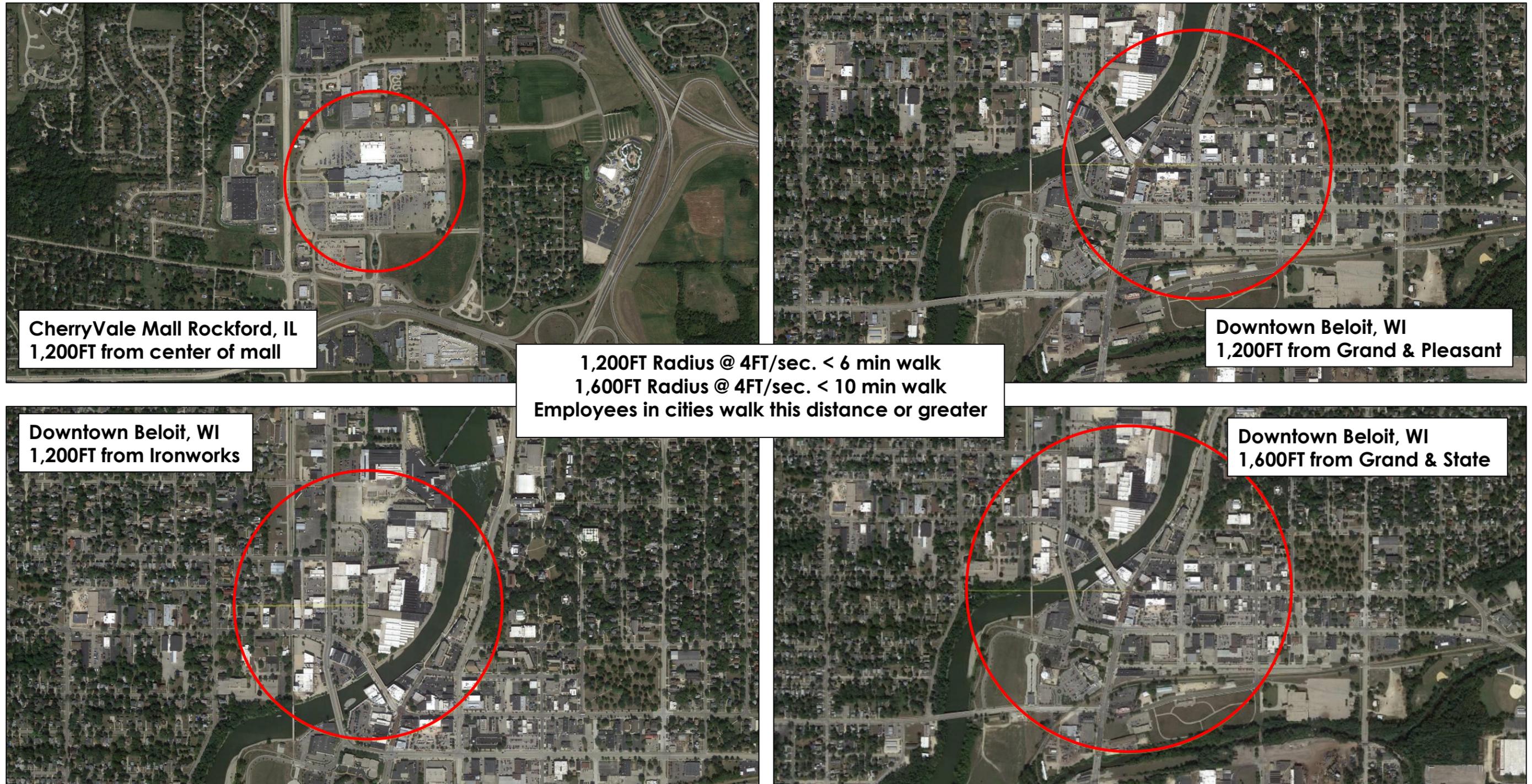


Figure 21: Walking Distance Comparisons – Employees / Events

Reasonable Employee/Event Walking Distance



Walking Distances for Event User Groups (Visitor and Staff) May Be Beyond 1,600 FT

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Shared Parking Districts

Shared parking is an effective management strategy for maximizing the use of existing resources and improving access to thriving mixed-use environments. Often land uses in mixed-use environments have varying levels of parking demand throughout the day, which can benefit from sharing parking supply. When land uses can easily share a common parking supply, this reduces the need to build new parking supply. Shared parking policies foster a publicly available parking supply that serves a collective area of land uses. When a Shared Parking District is implemented a fragmented parking system with multiple restricted lots can be transformed into a cohesive, user-friendly parking system that improves access for customers and employees.

There are several reasons why this is such a beneficial approach:

- From an environmental perspective, it is always preferable to make good use of existing parking resources before building additional ones.
- From an aesthetic perspective, adding to the existing checkerboard of surface lots is not desirable and a garage, which would consolidate parking and reduce the surface area devoted to parking, is usually an expensive option, may not truly have a viable location, and may not be warranted.
- From a customer service perspective, the current arrangement is unwelcoming. Where user restrictions are posted prominently, a newcomer passes lot after lot that they cannot use. And if they are going to a store with a lot, they may feel compelled to move their car somewhere else when they want to walk to another store/land use. Signage directing a newcomer to a public parking area, or noting public parking available in private lots after a specified time would be an improvement for newcomers.
- From a financial perspective, owners may be relieved of some insurance and other operating costs while the municipality gets parking without spending the large amount of money needed for a garage.

Several municipalities across the country utilize shared parking, including Cary, NC; Del Ray, FL; San Diego, CA; and the City of San Clemente, CA.

Typically, in a setting with mixed land uses some official and unofficial versions of shared parking occur naturally. Sometimes the lots are shared with the public, and other times they are shared with only a specific second business. Formal and informal agreements may include business-to-business, business-to-municipality, or business-to-person. We suggest that a formal agreement be developed so both parties have a clear understanding of rights and responsibilities.

Another consideration is how these lots or spaces are signed. Sometimes these lots are secured by the municipality and signed as public parking during specific hours. More often signage to protect the lot during business hours are the only signs to be seen, which suggests that the parking supply is expressly for a specific building, business, etc. If these spaces are intended for public use, the municipality should purchase and install signage that suggests they are available for public use during specific periods. If lots are not signed as public or only have signs suggesting private parking, most drivers will avoid using them.



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We recommend an approach to make formal agreements to allow public parking on private lots, and direct cars to these areas. Spaces can be reserved as needed within the lot for the on-site uses, essentially limiting the public parking and guaranteeing that businesses don't lose their valuable resource. This sends a clearer message to the public that they can use the lot, but it does so without jeopardizing on-site tenants.

In addition to the concern about ensuring that tenants still have spaces, there is a concern about the liability associated with having the general public parking on private lots. Some cities lease the lots from the private owners, which makes the leaseholder liable.; The leaseholder, in this case the City, carries the insurance for public parking in the lot, as well as paying other expenses such as lighting, cleaning, etc.

Some sample agreements from other municipalities are found in the appendices of this report. These agreements could be adjusted for Beloit for both business-to-business agreements (for employee parking; registered with the City) and business-to-municipality agreements (for public patron parking).

Residential Parking Permit Programs

Residential parking permit zones are used to restrict parking in residential areas to those residents who live nearby. These are typically found in locations where parking demand from a nearby intensive land use spills over from the on-site supply and into residential neighborhoods. Walker recommends this policy sparingly, as on-street parking is a public resource and not a right of ownership of adjacent parcels. In some cases, generally where historical land use development has created hardship on residents, we do support its application to improve safety and/or access for residents and their guests.

Residential parking permit programs are primarily intended to address the following issues.

- On-street parking spaces in neighborhood commercial districts may be highly occupied and not available to residents during periods of peak demand.
- Residential parking is generally not controlled. Installing parking meters could tend to incentivize parkers to use uncontrolled on-street curbside spaces in adjoining residential neighborhoods to avoid payment or time restrictions.

For many residential neighborhoods, a residential parking permit program is among the more common strategies for controlling the problem. Where the spillover is almost entirely employee or student parking, the on-street spaces may be restricted to one- or two-hour parking or a residential permit holder. The restrictions may only apply during certain hours of likely conflict, such as 8:00 a.m. to 6:00 p.m. Area residents pay a modest fee for a residential permit that allows a vehicle to be parked on the street. A time limit allows short visits by service vehicles and guests of the residents. Longer stays require the parker to obtain a residential parking permit program visitor pass (or similar) from the resident and return to place it in the vehicle. In other cases, the time limit does not work well.

To manage spillover by a particular class of parkers (such as students, tourists, employees, or visitors to a destination lacking adequate parking), all users may be required to display a permit. The environment of the residential neighborhood is not only enhanced by the reduction of



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nonresident parking, but also by the reduction of vehicular traffic resulting from hunting for a parking space.

A valid approach may be for a city to take the initiative with respect to residential parking management. The increasing spillover of public parking into residential areas may have already generated some resistance and ultimately will drive residents to demand solutions.

The following assumptions are made with regard to managing neighborhood parking issues:

1. Residential parking control may be inevitable.
2. Residential parking control may be desirable in order to support public parking goals.
3. Neighborhood permitting is becoming better known and supported.
4. Many models of neighborhood parking permit systems are available.
5. A city has the choice or opportunity to be proactive or reactive.

Time & User Restrictions

Time and user restrictions are used to manage parking supply and improve access. Signage is typically posted notifying drivers of the applicable restrictions.

Time limits are generally used in public parking supply, while user restrictions are typically used for private parking supply; but these are not hard and fast rules. Time limits are used as a way to generate turnover within the parking supply; parkers who arrive know that they have a specified time before they must leave the space, which then opens that space up for another user. These time limits are enforced and violators are issued a citation with an attached fine to encourage compliance. Enforcement is the shortcoming of this system of management because enforcement is not always consistent or diligently performed by the agency in charge.

New technology, license plate recognition ("LPR"), is available which uses the vehicle's license plate to "tag" the vehicle, GPS to locate it, and a time stamp to detail when it was observed. This technology can be mounted to a vehicle and increases the speed of enforcement for these restrictions. Still, receiving a citation, although being at fault, may also be a cause for frustration for parkers.

User restriction are typically signed as such and often involve a permit to identify whether a vehicle has the right to park where it has. Historically these permits were window decals, stickers, or hangtags. More recently, new technology, LPR, has enabled enforcement officers to use a license plate to verify whether or not they are on the permit list. This technology is also mounted to a moving vehicle which allows for increased coverage, and no need to perform a physical inspection of a vehicle unless it has been identified as not on the permit holder list and therefore should receive a citation.

Paid Parking

In locations that would support it, paid parking may be used to induce turnover. Typically paid parking is synonymous with parking meters in an on-street parking application. Paid parking can be very effective, in that it is a user fee, versus a penalty (time restrictions). And if a commercial patron would like to stay longer, they simply pay more for the right to do so. There are inherent



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costs related to collecting fees for parking, which include equipment costs, consumable costs, staffing (or contract) for maintenance, collecting and processing cash, processing credit card or other forms of payment, etc. Similar to time limits and user restrictions, enforcement is the shortcoming of this system of management because enforcement is not always consistent or diligently performed by the agency in charge. Investment in payment equipment may be made, but effectiveness of the system as a management tool, and its ability to collect revenue is a function of enforcement.

Paid Parking Rate and Fine Schedules

In recent years many large cities have engaged in a process to develop demand-based pricing in their busiest areas. In this scenario, fee increases if utilization is high (similar to many other businesses, cost is based on the scarcity and demand for a resource). Some cities have also developed rate strategies to collect a small fee for those parking for under two hours, but rates escalate after the first two hours to increase turnover and/or parking revenue. Fee setting can be based on the need to off-set costs, the desire to manage demand, or both.

Fine setting is a very important part of policy. Because the end goal is compliance, fines should be set in a way to shift people into compliance. A fine that is too low, encourages non-compliance. A fine that is too high could be dismissed by judiciary officials in some jurisdictions, if they believe it to be excessive. In recent years, many cities have shifted to a graduated fine schedule. These fines schedules may begin with a warning for the first violation, but subsequent violations would receive increasingly costly/harsh penalties to avoid creating a situation where parkers are attempting to game the system – hedging on the chance that they may not be caught complying with posted policies.

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EQUIPMENT

Equipment is used to help make parking policies manageable from an operations and enforcement standpoint. New technology provides ever-improving efficiency, which allows for a reduction in staff or an increase in coverage per staff member. In turn, compliance with parking management policies improves and observed/experienced conditions come closer to the envisioned condition – a high level of accessibility for all users.

Parking Meters

Parking meters have become the most common un-gated parking control since their inception in 1935; however, by today's standards, conventional parking meters are severely lacking. They only accept coins, have small coin vaults, frequently jam, and are easily vandalized. They are 'stand-alone' machines with no form of communication. If a traditional coin-fed meter is full, malfunctions, is vandalized or stolen, it will go undiscovered until a staff person physically inspects it. During that time compliance with policy cannot be enforced, resulting in a loss of revenue and non-compliance with policy.

Meter collections for traditional coin-fed meters are costly and cumbersome. Large quantities of coins are heavy and time consuming to collect, transport, count and deposit into the bank. There is also limited audit control, as there is no record of payments to reconcile to the coins. Management has no real way of knowing if all the coins actually made it to the bank.

Over the past fifteen years, parking meters have been reconsidered in form and function, and a technological overhaul has taken place to make them less cumbersome to end users and smarter for those administering paid parking. Meters covering more than a single space – known as multi-space meters – are the most cost-effective new meter deployment.

Multi-space parking meters introduced three key technologies to on-street parking: computers, solar power, and wireless communication. This allows customers to pay by credit card, cities to set complex rate structures, and the meters to communicate wirelessly via a central management system, providing remarkable audit control and maintenance capability. Multi-space meters can also accept bills.

This new technology does not come cheaply, which is why the multi-space concept is commonly used versus a single-space meter. Until recently, it was not cost effective to put all this technology into every parking space, so the customer would be required to walk to the multi-space meter to pay for parking.

Multi-space meters come in a variety of payment modes: pay and display, pay by space, and pay by plate.

- **Pay and display** requires the customer to return to their vehicle to display a receipt. Enforcement is done by visually inspecting the receipts.
- **Pay by space** requires the customer to enter a space number into the meter. Enforcement is performed by viewing a web-based report of paid and/or unpaid spaces on a hand-held enforcement device or from any web-enabled computer. Some manufacturers have incorporated enforcement via a smart phone.



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- **Pay by plate** requires the customer to enter the license plate number into the meter. Enforcement is done with a License Plate Recognition (LPR) system. Enforcement can be done with a vehicle mounted CCTV system that scans the license plates of all parked vehicles, or with a hand held unit, either scanning or manually entering the license plate.

The current cost for most multi-space meters is \pm \$10,000 per meter, which includes installation. In addition to the equipment cost, these smart meters are typically completely hosted for a monthly fee of \$50 to \$60 per meter per month. The monthly fee is part management fee and also pays for communication charges.

Maintenance of the machines is also required, and this could be performed through a service contract or in-house. If handled in-house, maintenance staff must be available every day (including weekends). The machines do self-monitor and send alerts if there are issues. Typically, a public works department would allocate 2-3 hours per day for potential maintenance.

Meters also require collections of any coins (or possibly bills) that are deposited to pay for parking. Because the meters are smart, each transaction is recorded, so there is a record of the amount that should be found in each vault. Similar to maintenance needs, the meter alerts staff that the vault needs to be emptied. Typically, a public works department would allocate 2 hours per week for collections. The vaults could be opened by the City, but best practice suggests dropping full vaults with a City's bank and picking up empty vaults to avoid the need for a secure cash counting room, etc.

LEP Systems

Currently the most efficient administration and enforcement of both time limit parking and permit parking utilize license plate enabled parking (LEP) systems. This technology makes use of mobile license plate recognition (Mobile LPR) in the field. LEP systems allow for reduced staffing costs while improving coverage areas for enforcement, which in turn increases compliance.

Mobile LPR enables parking enforcement officers to drive continuously, until a violation is identified by the system and a citation written. This is in contrast to walking or driving and stopping with handhelds to record vehicle stem locations (current operation). Enforcement officers must stop at every vehicle in these situations. Assuming the enforcement vehicle travels at an average speed of twenty miles per hour, and assuming the average enforcement officer covers two miles per hour on foot, Mobile LPR will enable enforcement to be conducted ten times faster than on foot – and much more efficiently. Alternatively, for vehicle enforcement using only handhelds officers must stop at each vehicle for an image capture – for the Mobile LPR system the vehicle only stops to issue a citation. This increases coverage and efficiency.

Figure 22: AutoVu LPR Cameras Mounted to Vehicle



Source: Walker Parking Consultants

Figure 23: Toughbook In-Vehicle Computer



Source: Walker Parking Consultants

Vehicle-mounted cameras record the license plate data and interface with the permit database to identify valid/invalid vehicles. In a permit application, if an unidentified license plate is read by the camera, the software ‘pings’, signaling the enforcement officer that the license plate is not found in the permit list. In a “time restriction” setting, various time restrictions may be “geo-fenced” on a map within the system, and those vehicles recorded within that

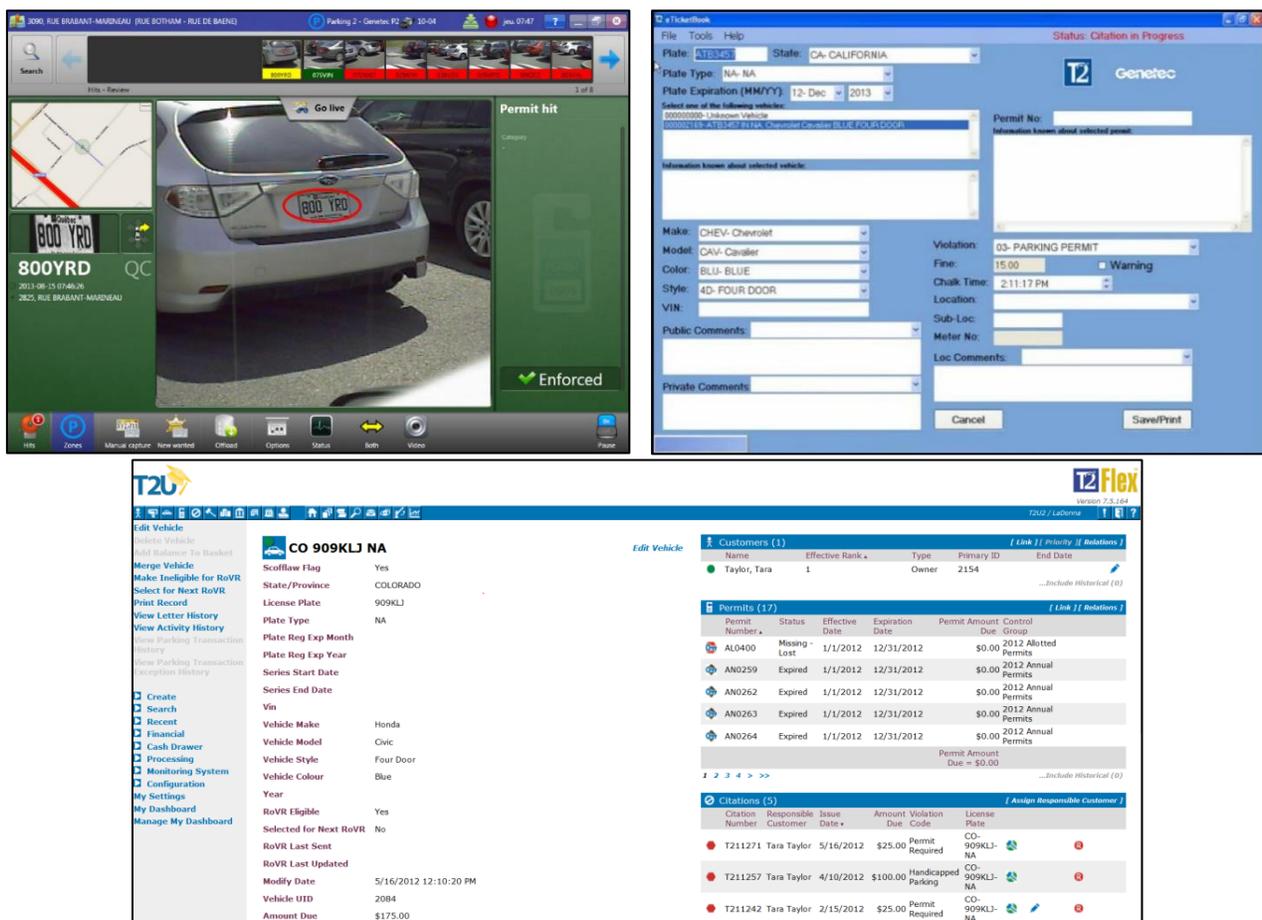
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area are then subject to the identified restriction. The system records license plate number, GPS location, and as an upgrade can also perform digital wheel imaging (high tech tire chalking).

Mobile LPR can also be used to identify unregistered vehicles, stolen vehicles – virtually any vehicle whose license plate has been previously identified. Scofflaw lists can also be preloaded before a shift to ensure those drivers/vehicles with outstanding fines or with excessive citations are identified and handled accordingly. Mobile LPR can also integrate with Pay-by-Plate multi-space meter paid parking systems and Pay-by-Cell phone systems in paid parking applications.

Figure 24: Software interfaces



Source: Walker Parking Consultants

The vehicle-mounted camera systems have a proven track record of increased policy compliance due to faster identification of permit, time limit, and non-payment infractions due to an increase in enforcement productivity over traditional methods. In part this is due to travel speeds of up to 20mph (recommended limit) versus walking, automatic detection and alert of infractions, and automatic form fill using LPR capture data. Another benefit is that either through real-time data or data updated at the start of each shift scofflaws (multiple offenders) requiring additional actions such as higher fines, wheel clamping or towing are identified in real-time during citation issuance.

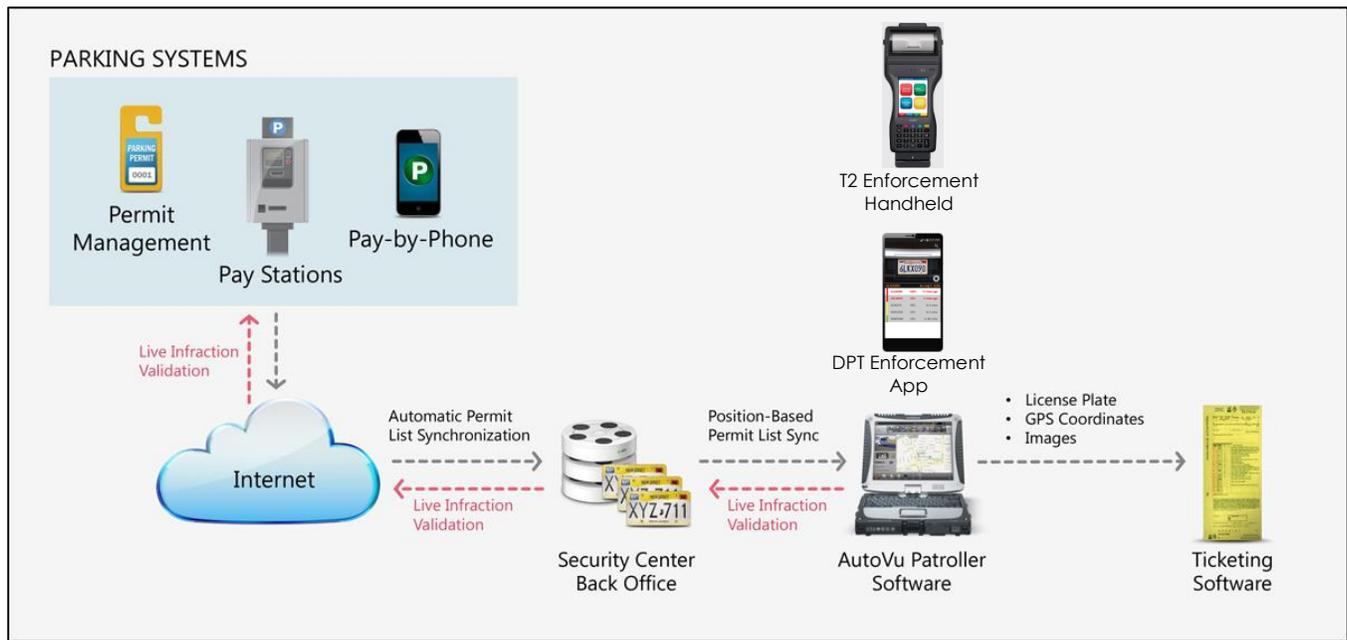
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Many people reason that enforcement cannot be everywhere, so they often challenge (and beat) the system by risking a citation with the hope of returning to their vehicle before enforcement arrives. Mobile LPR will force people to rethink the efficiency of enforcement. Compliance will likely improve; and if it doesn't; citations will. With improved compliance, parking demand for user groups is balanced as intended and access is improved across the parking system.

A typical city application utilizes the framework depicted in Figure 25.

Figure 25: LEP System Framework



Source: Walker Parking Consultants

EDUCATION

Educating the public about the parking system is vitally important to reaching compliance with policies and improving perceptions of the system itself. Information conveyed could include location and detail related to parking supply, parking restrictions (especially those with local emphasis), recent changes in policy, permit programs, citation payment options, and any associated maps – static or dynamic. Education comes in various forms; information made available online, on-site signage, local newspapers, and public notices.

Online Information

Most large cities have a parking department or parking authority, which facilitates the ability to provide information to the public regarding their parking system. Still, with advances in online resources and reductions in cost for creating and hosting an Internet and/or mobile site, many mid-size cities are also able to provide this service to visitors and residents. The basics that are shared online include information and maps relating locations of off-street public parking facilities, restrictions and locations of on-street parking, ways to pay citations, and information

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and hosting of any permit programs. As opposed to providing a full website, some cities provide this in a static PDF format with a link from the city website. Examples of a static PDF format were collected and added to the report appendices.

Signage

Signage is the most obvious form of education provided to those who intend to park. Signage must be clear and simple - designed to be read by those driving. An easy to identify symbol and color should be selected to provide drivers with simple visual cues to aid in locating legal parking. Signage includes parking restrictions and also directional signage to additional nearby parking supply.

Signage also includes roadway markings which designate location and orientation of legal parking. The markings also indicate where not to park in some settings. Curb painting is found in many major cities to identify no parking zones, or to indicate when parking is not allowed between the marking and the intersection, or a fire hydrant. In some settings roadway and curb markings are impacted by weather conditions, when snow and ice may obstruct them from view. In these cases, to the extent possible, additional signage on posts should be provided to aid in conveying rules.

Local Newspaper

Some cities have a good relationship with the local newspaper. In these cases, the local newspaper will help inform those impacted by shifts in policy, new equipment, etc. These relationships can be very valuable in presenting information to the public and should not be overlooked at a resource.

Public Notices

Public notices are also used within areas where new policies are being implemented, or temporary changes to the parking supply will occur. Although costly to produce and deliver, they are often required by law. If not required by law these may be helpful if distributed to users who would be impacted by the change in policy.

ENFORCEMENT

Enforcement is the lynchpin for effective parking policies. Policies which cannot be or are not enforced have no value. When formulating policy, it is important to understand the limitations of enforcement. Staffing levels, enforcement times and possible coverage areas should be evaluated as well as the desired result from policy compliance. These factors can be increased, if merited, but there is an associated cost related to increased enforcement.

Staffing Evaluation

Evaluating how enforcement resources are allocated is best practice in the industry. This is not an evaluation of the staff, but an evaluation of where and when they are asked to patrol. Identifying problem areas, and patrolling those areas as priority is key. The goal is to have maximum impact (increased compliance with posted policy) with the staff allocated to parking enforcement.



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Enforcement Blitz

An enforcement blitz is a tool used in enforcement to shift behavior to policy compliance through an increase in enforcement within a defined area – typically more staff or higher frequency of route are used to increase the impact. These blitzes can be especially effective for communities with small parking enforcement staffing. The area may be “blitzed” a few times a week so regular offenders change their behavior. After an initial blitz, these can be carried out intermittently if problems are believed to persist.

We suggest an enforcement blitz in the area shortly after the new parking regulations are implemented. Instead of citations, parkers would be issued a warning for any violations observed and also be provided a half-sheet description of the policy changes to help them figure out where and how to park legally moving forward.

Graduated Fines

Another key to compliance, which is related to enforcement is developing an effective parking fine strategy. Many cities have recently made changes to their fine strategy to utilize a graduated fine and penalty system. Graduated fine schedules typically provide a warning for first-time offenders, but then escalates with every additional infraction over the course of a year.

When fines are too low, or enforcement is infrequent some parkers will attempt to “game the system”. They will risk getting caught because they believe that it is either unlikely, or the penalty is small enough to justify the risk. Enforcement and fine strategy must work in tandem to reduce the number of people who do not comply with posted policies.

Occasional increases in enforcement tend to reduce the number of repeat offenders. Graduated fines do as well. Reducing the number of scofflaws tends to have a disproportionate impact on overall compliance, and improvement in parking conditions. Based on these recommendations there would not be an increase in staffing, but possibly a re-allocation of hours from time to time.

RECOMMENDATIONS FOR CONSIDERATION



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The following sections provide insight into the factors considered, and process utilized to develop Walker's recommendations. We began by providing background into recent thinking regarding parking planning, and a few of the tools which we didn't believe would be appropriate or effective in the current or near future contexts. Next we addressed specific challenges found during the course of the quantitative analysis and community engagement by providing findings and solutions. Lastly, a cohesive plan was developed which included programmatic specifics.

Many of the recommendations to improve a parking system are synergistic in that alone there may be limited impact, but in aggregate they would reach the intended results - improved parking in reality and perception. These recommendations work best in concert, building on one another to better balance parking demand and supply.

BEST PRACTICE AND LOCAL CONDITION CONSIDERATIONS

Walker documented parking conditions for a weekday and a Saturday when the Farmer's Market was in operation to gain an understanding of typical peak periods that were experienced in the City Center study area. There were areas of the study area that temporarily experienced high levels of demand that strained local parking supply, while nearby areas experienced a parking surplus. Even though available supply existed within one or two blocks, these localized challenges may have formed perceptions for users that parking was inadequate, especially when on-street parking was full or near full.

The community can either address the localized and intermittent parking challenges by building more supply or better manage the existing parking resources. Many suburban communities are rethinking how best to address the challenges of downtown parking and pursuing management solutions before committing to a long-term capital investment. This course of action may improve perceptions and increase access to available supply with minimal capital investment. Table 15 provides an overview of the recent shift in how communities are thinking about parking planning.

Table 15: Parking Planning Paradigms

Old Parking Paradigm	New Parking Paradigm
<ul style="list-style-type: none"> • "Parking Problem" means inadequate parking supply. 	<ul style="list-style-type: none"> » There are many types of parking problems (management, pricing, enforcement, etc.)
<ul style="list-style-type: none"> • Abundant parking supply is always desirable. 	<ul style="list-style-type: none"> » Too much supply is as harmful as too little. Public resources should be maximized and sized appropriately.
<ul style="list-style-type: none"> • Parking should be provided free, funded indirectly, through rents and taxes. 	<ul style="list-style-type: none"> » Users should pay directly for parking facilities. A coordinated pricing system should value price parking with on-street the highest.
<ul style="list-style-type: none"> • Innovation faces a high burden of proof and should only be applied if proven and widely accepted. 	<ul style="list-style-type: none"> » Innovations should be encouraged. Even unsuccessful experiments often provide useful information
<ul style="list-style-type: none"> • Parking management is a last resort, to be applied only if increasing supply is infeasible. 	<ul style="list-style-type: none"> » Parking management programs should be applied to prevent parking problems.

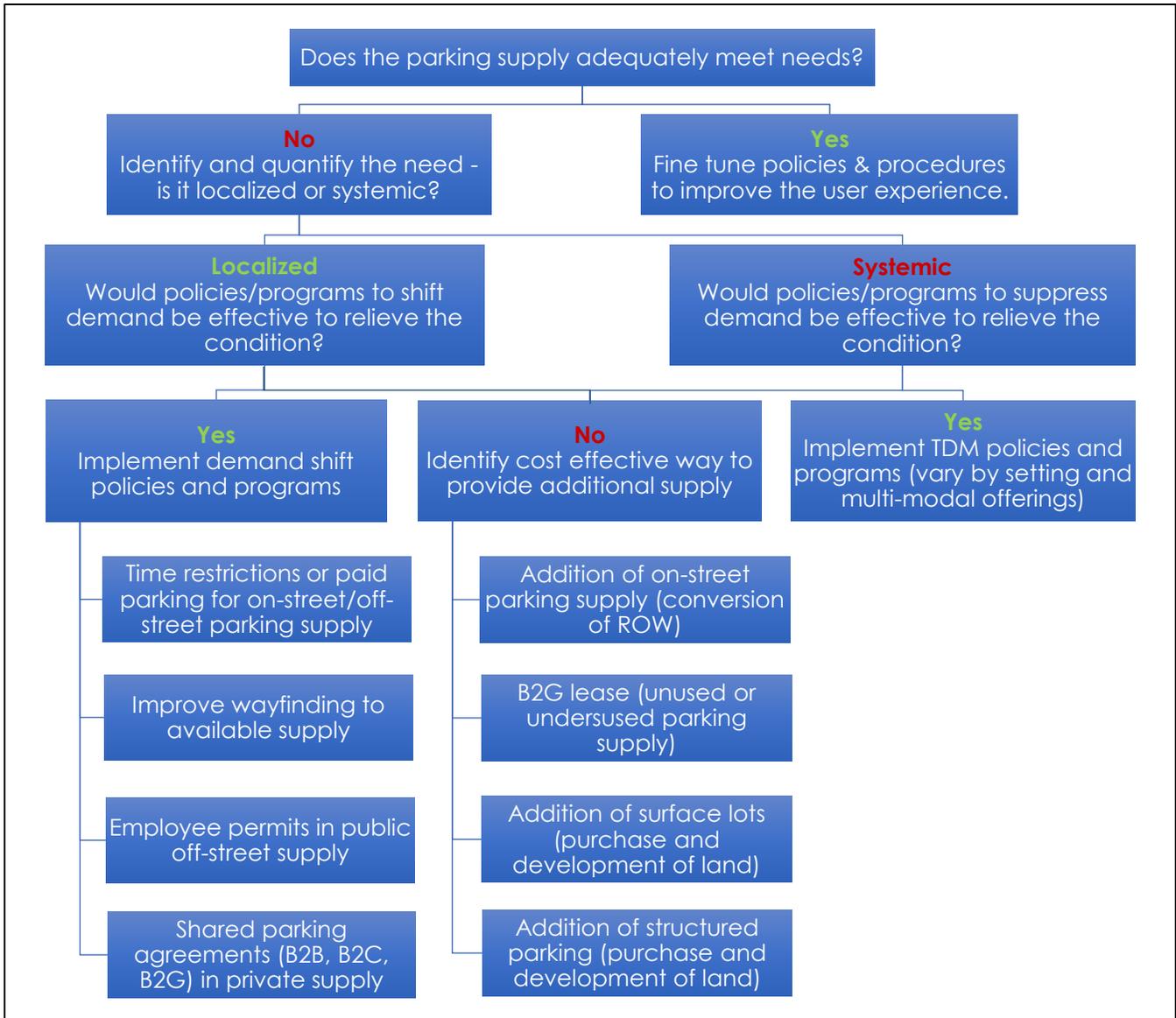
Source: Walker Parking Consultants

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Walker's recommendations are aimed at being fiscally responsible by providing cost-effective, and sustainable solutions. As such, Walker prefers to recommend solutions utilizing the following decision tree to improve real and perceived parking conditions when working with municipalities.

Figure 26: Parking Planning Decision Tree



Source: Walker Parking Consultants

Within the Discovery and Analysis section of the report we provided findings of occupancy and turnover. We also noted the role of on-street and off-street parking in relation to one another. Here, we reiterate that the most convenient (typically meaning proximate) parking be made available for short-term parkers. In most settings this means preferential access for short-term parkers is the goal for on-street parking supply. Off-street parking is therefore used to serve the



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most proximate land uses, or as overflow from nearby on-street, and for long-term parkers whose destination is up to 1,600 feet away. Parking management policy related to on-street and off-street supply should reflect this intended relationship.

Walker's recommendations consider the recent shift in thinking from cities related to parking solutions, Walker's parking planning decision tree and policy statement related to on-street versus off-street parking priority. Within that context, as requested, we explore two of the most mentioned tools to manage parking needs – Parking Structures and Paid Parking – and discuss whether they would be appropriate in the study area under current or future conditions.

IS A PARKING STRUCTURE APPROPRIATE?

A common theme heard from community members who participated in the online survey was the belief that a parking structure would alleviate parking problems in the study area. The following information details what construction and operation of a parking structure would entail, and when it is most appropriately utilized to meet parking needs.

This section provides a general overview of basic parking economics that an owner must consider when planning for a new parking structure. A brief discussion is provided on capital costs, operating expenses, breakeven pricing, and structural repair budget.

Capital Costs

Parking structures may be constructed as stand-alone parking or incorporated in the design of a future building (various uses). A parking facility that is incorporated in another building requires short-span construction to meet load (weight support) requirements. The efficiencies of short-span construction are less than long-span because the column grid (30' on center) interferes with the parking layout. A typical short-span parking structure only has an efficiency range of 400-450 square feet per space. A typical long-span parking structure has an efficiency range of 315-350 square feet per space, meaning generally more parking spaces can fit within the same overall footprint since each space takes less area.

A general guideline for gauging the conceptual estimate of probable cost for a parking structure is to apply a cost per space figure to the target capacity. The cost for parking structures vary significantly based on location, architectural features, sustainability features, and whether the facility is above or below-grade. A reasonable range for an above-grade, 200-300 space parking facility is \$15,000 to \$18,000 per space, assuming long-span construction. The cost per space can increase significantly when built below ground.

Operating Expenses

Operating expenses can also vary widely based on numerous independent factors that make up an operating concept. Traditional expenses can include labor, utilities, daily maintenance, supplies, management and accounting, and insurance. Most expenses are variable and depend on either the size of the facility or hours of operation. More recently, labor from cashing has been reduced or removed as owners are moving to automated cashing options. Some facilities do not collect revenue, and therefore have no need for access and revenue control equipment or cashiers.

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Operating expenses for a parking facility are typically presented on a cost per space basis. Walker's recent research indicates a cost per space range from \$150 to \$1,000 annually. The lower end of that range is for facilities with limited hours of operation which do not collect revenue; the higher end is for facilities that operate 24/7 with staffed cashiering and access and revenue control equipment. All facilities need some sort of daily janitorial service that includes trash removal, sweeping, and minor repairs and maintenance such as lighting replacement. These responsibilities are often assigned to a city's public works department, if a parking department does not exist.

Walker developed a breakeven table which indexes monthly income required to break even for various combinations of cost per space and annual operating expense per space. Table 16 presents this information. The high required monthly income to break even demonstrates why most municipal parking structures are financed and operated as part of a larger system. The insolvent parking facilities are often subsidized by more profitable on-street parking within a system. This allows for a municipality to charge fees that are below breakeven if lower market rates indicate.

Table 16: Monthly Income Required to Break Even

Cost per Space	Annual Operating Expense Per Space									
	\$25	\$50	\$75	\$100	\$125	\$150	\$175	\$200	\$225	\$250
\$ 1,000	\$9	11	13	15	17	19	22	24	26	28
\$ 3,000	23	25	27	29	31	33	36	38	40	42
\$ 5,000	37	39	41	43	45	47	49	52	54	56
\$ 8,000	58	60	62	64	66	68	70	72	75	77
\$ 9,000	65	67	69	71	73	75	77	79	82	84
\$ 10,000	72	74	76	78	80	82	84	86	88	91
\$ 11,000	79	81	83	85	87	89	91	93	95	98
\$ 12,000	86	88	90	92	94	96	98	100	102	105
\$ 13,000	93	95	97	99	101	103	105	107	109	111
\$ 14,000	100	102	104	106	108	110	112	114	116	118
\$ 15,000	107	109	111	113	115	117	119	121	123	125
\$ 16,000	114	116	118	120	122	124	126	128	130	132
\$ 17,000	121	123	125	127	129	131	133	135	137	139
\$ 18,000	128	130	132	134	136	138	140	142	144	146
\$ 19,000	135	137	139	141	143	145	147	149	151	153
\$ 19,500	138	140	142	144	146	148	151	153	155	157
\$ 20,000	142	144	146	148	150	152	154	156	158	160
\$ 21,000	149	151	153	155	157	159	161	163	165	167

Assume 100% Financed, 20-Year Term, 5.5%

Source: Walker Parking Consultants



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Sinking Fund

In addition to operating expenses, Walker highly recommends that funds be set-aside on a regular basis to cover structural maintenance costs at a minimum of \$75 per structured space annually, to be placed in a sinking fund. These funds accumulate over time and are then available when needed for structural maintenance and repair. Owners tend to grossly underestimate these costs and do not budget adequately for timely corrective actions that must be performed to cost effectively extend the service life of the structure. Even the best designed and constructed parking facility requires structural maintenance; expansion joints need replacing and concrete deteriorates with time and exposure to the elements. Periodic structural maintenance includes items such as patching concrete spalls and delamination in floor slabs, beams, columns, walls, etc. Many of these maintenance items deteriorate exponentially if not corrected early.

When Structured Parking is Appropriate

Based on the quantitative analysis performed by Walker, we do not believe there to be significant localized or systemic shortfalls that would trigger the need for new parking supply in general. There were some small projected shortfalls and some blocks do experience and will experience parking occupancy above 85%, but all of this can be accommodated within a reasonable walking distance.

For studies where we identify that additional parking supply is needed, we typically proceed through a series of considerations in an alternatives analysis to determine the need for structured parking. Parking structures are an appropriate solution when density of the built environment is high and when significant localized or systemic parking shortfalls are observed or projected. The density of the built environment is needed because a structured facility must be within a reasonable walking distance to their parking demand generators. The number of spaces needed within a 600-foot radius for visitors and a 1,200-foot radius for employees should be a starting point for sizing a parking facility (more proximate, competing supply would reduce this number).

There is also the question of who should be responsible for providing the parking supply and whether it should be constructed using public funds, private funds, or some mix. If minimum parking requirements are not being met on-site and are creating a shortfall in the community, at least partial payment for the parking facility should be borne by the owner of that site. Otherwise, the costs related to the structure are borne by the taxes collected by the municipality, and are going to serve a specific owner. Some cities allow for a reduction in the on-site parking requirement if owners provide a payment based on either a “payment in lieu” or a “parking credit” system. In this way the financial burdens of a public parking facility are offset somewhat by private funds based on their anticipated impact on the public parking system.

Another consideration is the number of spaces between the parking structure and the destination that exist on-street or within private, but publicly available, parking supply. Because many of these spaces would be more attractive to users, the restrictions and utilization of those spaces should be considered. Policy and enforcement to ensure availability of on-street parking for short-term users is required to shift long-term parkers into off-street supply and gauge public parking need.



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IS PAID PARKING APPROPRIATE?

As anticipated, a common theme heard from community members who participated in the online survey and focus groups was the desire to keep public parking free. Although paid parking is an effective tool, which utilizes economic forces to help manage parking demand,, not all settings are appropriate for paid parking. This is Walker's current finding for City Center. Implementation of paid parking should be considered carefully due to the costs related to equipment, installation, operation and enforcement, and the potential impact on the community. The following information details what implementation of paid parking would entail, and when it is most appropriately utilized as a parking management tool. Walker analyzed whether paid parking would be appropriate to help manage the parking supply in City Center. Our recommendation is not at this time. This is discussed in greater detail later in this section.

This section provides a general overview of basic economics that a city must consider when planning for a paid parking system. A brief discussion is provided on capital costs and operating expenses.

Multi-space Meters

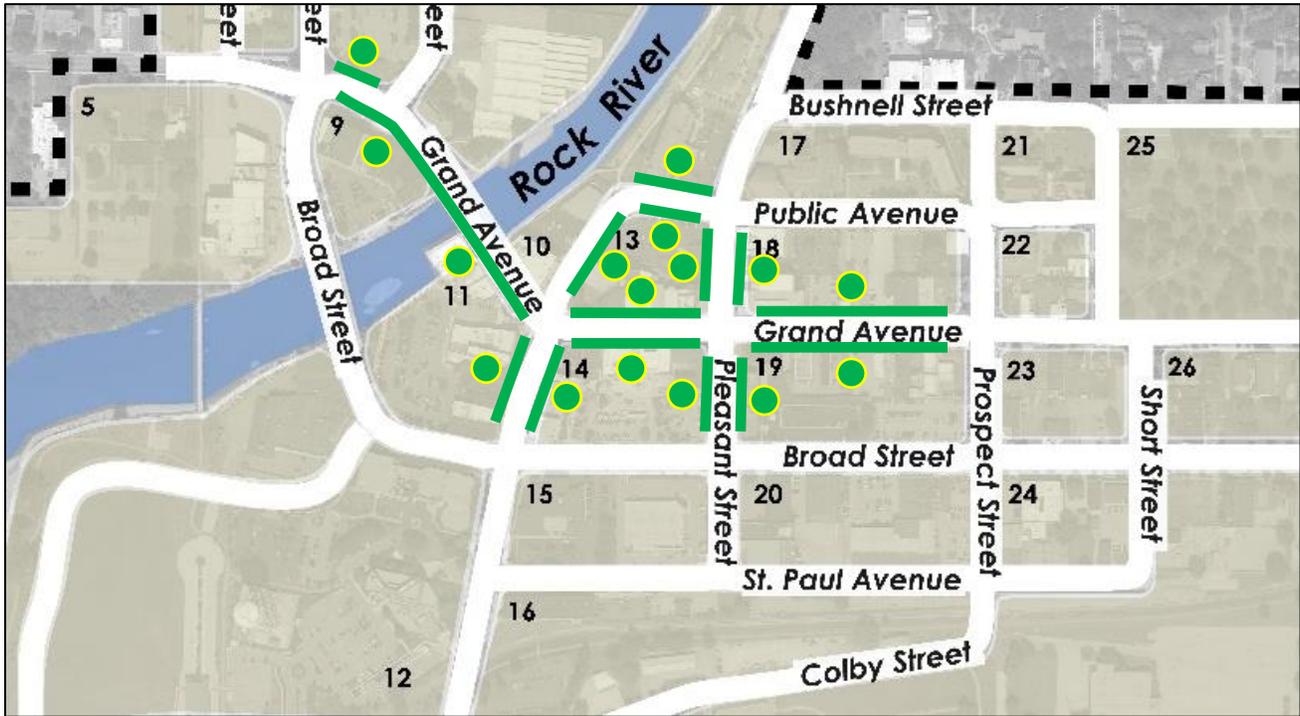
Multi-space meters operate in one of three payment modes – pay-by-plate, pay-by space, or pay-and-display. Equipment from some vendors can be used in more than one of these modes by making small changes to the interface. The pros and cons of these payment modes were discussed in the Best Practices section. Based on the City Center setting, we believe that the most appropriate payment mode would be pay-by-plate. This requires that parkers enter their license plate information into the meter prior to payment. Pay-by-plate allows for simplified enforcement (LPR/LEP as described in Best Practice section), and a reduction in consumables – both of which require labor hours to perform those functions. Labor is typically the most significant non-capital cost of any parking system, therefore the form of operation should be efficient from a labor standpoint as a cost reduction goal.

Multi-space parking meters typically serve up to 24 on-street parking spaces. The intent is to provide these meters along a single block face so they are easily seen by parkers – therefore, the actual number of machines required may be higher than 1 per 24 spaces. These meters may also be deployed in an off-street setting, and serve more vehicles although we typically suggest redundancy for off-street settings to ensure a high level of service is still possible if one machine fails.

Capital Costs

Most multi-space meters on the market have an average cost of roughly \$10,000 per machine, which includes installation and nearby signage directing parkers to the meter for payment. Given the parking utilization observed in the study area and known concentration of area businesses, there are potentially 14 machines that would be required. Considerations was also given to ensure parkers who intend to park in nearby unmetered spaces do not create a potential traffic hazard while waiting for a space to become available (versus parking in available metered spaces).

Figure 27: Hypothetical Multi-space Meter Deployment



Source: Walker Parking Consultants

Operating Expenses and Labor Requirements

Most of the vendors who sell multi-space meters provide a completely hosted system for a monthly fee. The fee is typically \$50-\$60 per meter each month. The fee includes a management fee, pays for the wireless communication needs of the meters, data storage and retrieval, a portal and dashboard for back of house review of performance and administrative changes, and regular software updates. There are typically additional fees for transactions involving credit cards due to processing fees.

For a paid parking system, expedient maintenance is a requirement because the area where any meter is malfunctioning may not be enforced due to an inability to make payment. As such, someone (city staff or contract service) needs to be available every day (including weekends). Typical repairs may take up to an hour per machine. Most multi-space meters self-monitor and send alerts for errors or damage, but the equipment should also be inspected and cleaned on a regular schedule. Typically, a public works department would allocate 2-3 hours per day to potential maintenance.

Meters also require collections of any coins (or possibly bills) that are deposited to pay for parking. Because the meters are smart, each transaction is recorded, so there is a record of the amount that should be found in each vault. Similar to maintenance needs, the meter alerts staff that the vault needs to be emptied. Typically, a public works department would allocate 2 hours per week for collections. The vaults could be opened by the City, but best practice suggests dropping full vaults with a City's bank and picking up empty vaults to avoid the need for a secure cash counting room, etc.



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When Paid Parking is Appropriate

Based on the quantitative analysis performed by Walker and qualitative considerations provided by the community, we do not believe paid parking would be appropriate at this time in the City Center study area. Although an effective parking management tool, implementation of paid parking should be weighed carefully; considerations for implementation of paid parking are described below.

Similar to most parking management policies, paid parking requires active enforcement to improve compliance and generate economic choice⁴ – shifting long-term parkers to off-street lots. Enforcement in the study area was noted to be reactive. Without active enforcement, compliance with paid parking would likely mirror current compliance with time limit parking; those parking on-street would not comply by providing payment and therefore no economic choice is generated. The revenue generated by a paid on-street parking system without support from enforcement typically does not offset capital and operating costs due to low compliance.

Parking demand in the area must also be high enough to support paid parking. Parking demand within the City Center study area, for nearly all blocks, could be accommodated within off-street parking lots if those drivers currently parking on-street opted instead to utilize available off-street parking lots. If the enforcement effort was increased and policy compliance improved, parkers may very well opt to park in the off-street lots, leaving the on-street parking vacant. An unintended side effect of that could be less pedestrian activity along main streets, which reduces the perception of a vibrant business district.

Paid parking can be an effective parking management tool and a parking revenue generator in settings where competitive areas also have paid parking, or where the local setting has a distinct competitive advantage over others nearby. Other nearby business districts currently do not utilize paid parking to manage on-street parking. Based on input from the community, Beloit does not have a distinct competitive advantage as a business district over other nearby business districts. Walker believes that Beloit needs higher typical off-street and on-street parking occupancy before paid parking could be implemented successfully.

As density increases and overall daytime and evening activity picks up, we believe that Beloit will be well-positioned for this transition. Parking enforcement should lead the way, as this will begin to remove long-term parkers from on-street parking and provide a better understanding of short-term parking and the desire for convenience. Paid parking could be added as a pilot program along particularly busy block faces to test the impact over time. At times, a knee-jerk reaction occurs from the public and demand is reduced when paid parking is implemented; this reaction is typically resolved within a few months if the system is implemented well, and information is provided to the public in advance and as a follow-up.

⁴ Economic choice means creating a decision for users based on pricing. For on-street parking meters, this means paying a fee for proximity and convenience.

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ADDRESSING CHALLENGES

As a part of the process Walker utilized to develop recommendations, we explored challenges that were expressed by the community, observed while performing field surveys, or generated through parking projections for future conditions. We documented recurring themes within the following section and presented findings and preliminary recommendations for each. Some recommendations address a reality, while others are intended to correct a misperception by parking system users.

In the next section, we aggregated these solutions to develop recommendations for the City's consideration.

BELOIT

The following challenges, findings and solutions were documented for the Beloit portion of the City Center study area.

Challenge: Based on community input drivers have difficulty locating available public parking.

Findings / Solutions:

- On-street parking time limits must be easily understood to create help turnover and availability for visitors. Signage should be easy to understand/read while driving.
- On-street time limits must be actively enforced to ensure availability for short-term parkers. This is especially true during key periods for downtown Beloit businesses (lunch and dinner periods for restaurants, and Saturdays for the Farmer's Market).
- Implement parking wayfinding signage on the street, which directs drivers to nearby public off-street parking.
- Improve monument signage to blend in less and make public parking locations easily identifiable for drivers – a specific color and symbol is needed to avoid blending in. Signage should communicate to drivers which lots are available to the public all day versus during specific times (shared private lots). We recommend a blue "P" for public lots always available for public use.
- If needed, consider adding next best off-street parking option signage at exit of typically busy downtown Beloit lots to put drivers on course for wayfinding signage on the street.
- Improve visibility of Ironworks South Lot from Grand Avenue. The pocket park and full trees / high bushes reduce visibility for those looking for public parking and also cause safety and security concerns for those who park within the lot.
- Implement a shared parking district within downtown Beloit to expand the publicly available parking supply for visitors. Utilize private lots during hours when their business requires fewer or no spaces. This would require agreements between private lot owners and the City of Beloit, and a code adjustment related to allowable distance between a land use and off-site parking used to meet the minimum parking requirement (up to 800ft for visitors and 1,600ft for employees).
- Implement signage in downtown Beloit to communicate to drivers which lots are available to the public during specific times under a shared parking agreement. We recommend signage that reflects the following for shared private lots: a yellow "P" and

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"Free to the Public X:00 – X:00 M-F and X:00 – X:00 Weekends". Online information should also note the distinction between blue and yellow lots.

- Provide online resources to communicate parking information (PDF, or possibly Google Maps based). These resources should include location of on-street and off-street supply and time/user restrictions also noting the distinction between blue and yellow lots. (See Appendices). The location of nearby parking options for recurring events should also be noted.

Challenge: Based on community input additional parking was needed for employees of some downtown businesses.

Findings / Solutions:

- Walker observed no significant localized shortfalls⁵ west of the Rock River, but projections suggest future supply adjacent to the Ironworks campus would be highly utilized and may seem constrained.
- Implement employee permit parking west of the Rock River to shift long-term parkers into low utilization surface lots (i.e. West Grand Avenue Lot). This would remove long-term parkers from some of the more highly utilized surface lots and ensure some spaces remain available for short-term parkers, where needed. Permits would be lot-specific as well to ensure a mix of long-term and short-term parkers, and allow the City to create that balance.
 - Costs to implement the program would be minimal and include staff time needed to manage spaces and permits, costs for permits and costs for signage. These costs may be recouped through a nominal fee, if desired. If the City begins charging for employee parking permits, private lot owners may also see the financial benefit of providing parking for neighboring businesses, as the City would be collecting a fee, and join in (B2B shared parking agreements).
 - An employee parking permit program allows for management of supply and shifting employees to appropriate low utilization spaces instead of expecting those drivers to find long-term parking on their own, or take closer short-term spaces illegally.
- In the future, the City may also want to consider purchase of (or shared agreement for) the lot adjacent to the old courthouse as overflow employee parking for Ironworks, if needed.
- Walker observed no significant localized shortfalls, but projections suggest small shortfalls in the future for some blocks east of the Rock River on weekdays. Still, a significant overall surplus was observed and is projected in the future (3,075 spaces available in the study area during the weekday peak period).
- We recommend that east of the Rock River the City implement / encourage a shared parking district / shared parking agreements between private parking lot owners and the City or other businesses.
 - The City should develop a typical agreement between the City and private owners for the use of their lots by the public during non-business hours.

⁵ A significant localized shortfall is one that cannot be accommodated within available parking supply 1-2 blocks. A significant systemic shortfall would be the majority of the study area with parking occupancy higher than 85% of available parking supply.

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- The City should also make available to private lot owners, a typical agreement for B2B use of private lots for employee parking.
- Often these agreements suggest the City assume liability for the site while part of the pool of publicly available parking, and in addition maintain the lot.
- Private lot owners may require payment for the use of their property.

Challenge: Based on community input additional parking was needed for events.

Findings / Solutions:

- An event parking plan (and map) is needed for large events to ensure vendors and workers park remotely after assembling and stocking their stand (North Ironworks Lot or City Hall Lot). The plan should be developed for the Farmer's Market and altered as needed for other events.
- Implement wayfinding signage and online information to help shift visitors to nearby downtown public parking. For example, wayfinding signage can indicate the City Hall Lot and Ironworks South Lot are within a 4-5 minute walk from the Farmer's Market for most visitors.
- If the event would require parking beyond a five-minute walk, determine where available remote parking is located, whether it is within the public supply downtown or a nearby land use with a large surface lot that has space availability when the event would need parking (mall, hotel, school, etc.).
- Shuttle services may be needed for a few events each year to make use of existing public supply, while not building for conditions that occur only a few times per year.
- Plan for additional ADA parking near the event to avoid the need to provide an ADA compliant shuttle. Plan for pick-up and drop-off for elderly and children, and if large goods are purchased.
- For the Farmer's Market consider turning the Broad Street Lot into ADA parking and pick-up / drop-off only, as appropriate to shift users into large and more available supply while providing convenience for those who need it.

Challenge: Based on community input there was a need to improve walkability and bikeability.

Findings / Solutions:

- Walkability in downtown Beloit is fairly good. Sidewalks are found throughout most of the study area. Lighting may need to be improved in some areas for consistency.
- Walking as a mode of transportation around downtown Beloit could be better encouraged through media such as "Walking Maps" of downtown. (Northville Example)
- Bikeability should be improved and link downtown Beloit to area trails and bike routes.
- Various studies were undertaken to link Beloit and surrounding communities with a safe bicycle route and significant work has been undertaken to create the routes.
- Enhance the connection between the various trails throughout downtown Beloit to create a more robust network that provides a safe place for recreation and a non-motorized route to nearby communities as primary transportation or occasional errands.



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Challenge: Based on community input better uniformity and enforceability of time limits for on-street parking is needed to improve the parking experience.

Findings / Solutions:

- We support simplifying time limits in cities to help drivers keep focus on the task of driving.
- On-street parking restrictions in downtown Beloit must be clearly displayed on signage to communicate the message at a glance. Typically, this means presenting prominently the number associated with the hourly restriction along with hours/days of enforcement. Specifics on time limits and appropriate signage will be provided in subsequent sections.
- A single consistent restriction is recommended along a single block face. Changing restrictions along the same block face can be confusing and frustrating to drivers.
- If possible, the same, single time restriction should be utilized within the core area of downtown Beloit. A second restriction can be set for areas outside the core if needed to keep employees from parking on-street.
- Short time limits should be avoided if they cannot be enforced. Typically, this means restrictions less than 1 hour should be avoided.

Challenge: Based on community input better uniformity of time limits in off-street parking lots would improve the parking experience.

Findings / Solutions:

- Per public input, time restrictions within public lots near the Farmer's Market potentially limit a visit to the event as the lot fills.
- Time limits within public lots are reasonable, but should be provided only when needed to encourage turnover in areas where time-limited on-street parking supply is inadequate. As utilization increases in off-street lots, more lots should change to 3-hour parking, most allowing for a limited number of vehicles employee permits to park. Public lots with no time restrictions should be provided further from the core of downtown.
- Based on Walker's counts, only a few lots experienced high occupancy – triggering this policy. This excludes special event periods when lots are anticipated to fill. When and where the policy is needed, only a few spaces nearest the businesses that generate short visits should be set aside as time-limited unless other nearby lots are highly underutilized. (e.g. Chester Square under current and future conditions; Ironworks South once the YMCA is in operation)
- Post signage for the Chester Square Lot that limits a stay to three (3) hours to encourage turnover in this small and highly utilized lot and to shift long-term parkers (namely employees) to the West Grand Lot via Employee Parking Permits. Enforcement of this policy would be needed particularly for the Chester Square lot.
- The row of spaces nearest Grand Avenue in the South Ironworks Lot should be signed as 3-hour parking to allow nearby short-term users access. Those long-term users displaced should be accommodated in the West Grand Lot, Employee Parking Permits should be issued ensure these long-term parkers utilize the intended (currently underutilized) supply.



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Challenge: Based on community input employees park on streets.

Findings / Solutions:

- Recommendations presented earlier would expand the off-street parking supply through shared parking agreements and permit parking in some public lots to ensure alternative spaces are available for employee use.
- Walker performed turnover and duration studies for much of the busiest on-street parking within the study area and found that very few vehicles were parked longer than four hours. Although employees parking on-street may be a perception, the impact of the problem is minimal. There were more vehicles parked for over four hours on the west side of the Rock River compared to the east side, likely due to no time restrictions being posted on 3rd Street or 4th Street.
- More proactive enforcement of the on-street time limits is needed to shift employees to off-street parking supply, made available through policies discussed above. Enforcement could be more effective through the use of improved technology (LPR), enforcement blitzes, and a revised violation fine schedule that forgives a first-time offense, but increases with each occurrence.
- First National Bank and Trust noted specifically that employees are occasionally displaced by those visitors who do not honor the “Employee Lot” signage, which inadvertently shifts employees to nearby streets and public lot spaces. Easily understood shared parking signage would mitigate this problem.

Challenge: Based on community input long or oversized vehicles parked in angled spaces on Grand Avenue create a traffic hazard.

Findings / Solutions:

- Within the municipal code (Traffic) there is a restriction on the length of vehicles that may park within these on-street spaces.
- Some comments pertained to drivers attempting to reverse out of the space while next to a long vehicle, and other comments were related to driving along Grand Avenue past long vehicles extending into the roadway.
- The municipal code exists, but the vehicle length restriction has not been communicated effectively to the public.
- Provide additional signage near these spaces to note the requirement.
- Pavement markings at the rear limit of length will help drivers make a decision to either park illegally, or find another more appropriate place to park.
- Enforcement of this code section should be a priority because non-compliance is a safety hazard versus simply a parking management violation.

Challenge: Based on community input enforcement is lacking with regard to posted time limits and “No Parking” zones.

Findings / Solutions:

- The number of parking related citations issued in 2014 and 2015 were over double those from prior years. Citation records from 2016 suggest a much slower pace than the two prior years as well.
- From historical records it seems that in 2014 and 2015 staff was allocated to monitor time limit parking and illegal parking, this includes; parking prohibited by signs, vehicles not



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parked within marked stalls, and vehicles parked too near crosswalks, hydrants and driveways/alleys.

- Enforcement could be more effective through the use of improved technology (LPR), enforcement blitzes, and a revised violation fine schedule that forgives a first-time offense, but increases with each occurrence thereafter.
- Parking systems work best when policies intended to manage them efficiently and effectively are followed. Enforcement is mandatory to discourage non-compliance. Those in violation of laws should not benefit to the detriment of those in compliance – enforcement is required to ensure the system works.

Challenge: Some in the business community believed there is a parking shortfall in downtown Beloit

Findings / Solutions:

- We do not recommend providing more parking supply at this time because there are several thousand parking spaces available within the study area during typical day peaks (3,868 available spaces) and event peaks (4,328 available spaces). Future projections show a similar conditions with 3,134 available spaces on typical weekdays and 4,562 available spaces during Farmer's Market Saturdays.
- Walker found that some very localized shortfalls exist currently and may also exist in the future, but these shortfalls may be corrected with existing parking resources if better allocated.
- We recommend implementing an employee parking permit program to provide spaces for employees in underutilized public lots, and strict enforcement to shift those users to designated locations.
- We recommend implementing a shared parking district on the east side of the Rock River to encourage private parking lot owners to allow employees of other businesses to utilize their lots, and allow the public to park in their lot during non-business hours.
- Once employees are removed from the on-street supply and highly utilized lots in downtown Beloit, and private lots are made available to the public, the perception of a parking shortfall should be quelled.
- In addition, the signage and online information previously recommended will aid in educating the public regarding location and restrictions of all parking within downtown Beloit.

Challenge: Based on community input the alternate side parking policy signage is confusing and questioned the value of the policy.

Findings / Solutions:

- Additional information is required to provide a full recommendation on this topic. It is unclear why the policy is in place (street cleaning, trash pick-up, snow removal, etc.); therefore, making suggestions to remove this policy would be uninformed.
- If the alternate side parking policy is in place to allow for street cleaning, trash pick-up, or snow removal, our experience in other communities suggests restricting parking on a single day per week and a different day for each side of the same street so not to create a localized shortfall.
- The typical restrictions in other communities are easily understood by day of week versus the current restriction in place in Beloit which is based on odd and even dates.



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- The intent of the policy should be weighed against the impact on nearby residents and businesses.

Challenge: The current land use mix and parking supply/demand in downtown Beloit is undergoing changes as (re)development occurs.

Findings / Solutions:

- The current zoning code allows for a shared parking analysis, but does not suggest it as a priority. In a downtown setting, each building and tenant should not have separate stand-alone parking requirements. Disregarding the downtown context creates inefficiencies and impacts density of development. Efficiencies can be gained through shared parking with other nearby sites. It is important to note that much of the study area is zoned Central Business District (CBD), which has no off-street parking requirements. Having no parking requirements can also be problematic, which will be discussed in the following sections.
- As built space in downtown turns over, land uses that are complimentary from a shared parking standpoint should be encouraged. These land uses would have a different peak period from those existing nearby and make use of currently underutilized parking.
- Zoning requirements for new developments within downtown Beloit should be adjusted to require a shared parking study to ensure adequate, but not excessive parking is built. The study would also highlight whether the proposed land use(s) create parking efficiencies or deficiencies in the existing context.

Challenge: The current policy of providing public parking in downtown Beloit should be part of a strategic policy for economic development.

Findings / Solutions:

- A decision is needed, with community input, to determine the strategic direction for parking policies and its goal as an economic development tool.
 - A trend in similar sized communities has been for the municipality to purchase properties in and near downtown for use as parking for those who need it (as a supplement to private development). Owners of new developments may choose to try and provide as much parking as possible on-site, but any additional needs (per code) must be offset through a parking credit or payment-in-lieu of providing on-site parking. These funds support development and maintenance of public parking resources.
 - Other communities have low or no parking requirements with their downtown, like with Beloit's CBD, which allows owners to build parking to their need or share with neighbors to ensure the community is served adequately. This removes the burden from the municipality but also shifts the responsibility of providing adequate parking without a negative impact on neighbors. The policy also does not allow for City to foster a mix of land uses that creates a balanced community within the downtown.

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SOUTH BELOIT

The following challenges, findings and solutions were documented for the South Beloit portion of the City Center study area.

Challenge: The South Beloit portion of the study area currently contains segmented development, which includes a broad range of land use types.

Solutions:

- The historic zoning requirements for South Beloit have resulted in a unique mix of land uses which typically stand alone from a parking standpoint. Several plots in the study area were undeveloped, underdeveloped or vacant. We observed no parking shortfalls under current conditions.
- The nuances related to some of the land uses being located adjacent of one another were discussed within the South Beloit Comprehensive Plan. Recommendations to mitigate impacts on neighboring uses and generally improve the perception of the area are summarized below.
 - Low Density Residential – enforce code requirements for maintenance of homes; improve infrastructure such as sidewalks, trees and open space
 - Mixed-use City Center – improve pedestrian access and comfort; provide public parking areas; foster an appropriate land use mix.
 - Local Commercial – provide landscaping for parking bounding other uses; provide buffers for noise, light, and trash storage; consolidate curb cuts.
 - Light Industrial / Heavy Industrial – reinforce buffers and screening for noise and light; increase pervious area where possible to mitigate storm water runoff.

Challenge: The South Beloit portion of the study area contains several lots that will likely be (re)developed over the next several years per the Future Land Use Plan.

Solutions:

- As redevelopment occurs in South Beloit, we recommend the following for the various land use areas. These recommendations fall in line with the Future Land Use Plan.
 - Low Density Residential – provide improvements for walkability and bikeability (e.g. continuous sidewalks, trees, lighting) that connect these residential areas with the larger community and into downtown Beloit and South Beloit; low-density residential typically provides adequate on-site parking for residents in garages, carports, and/or in driveways; street parking should be allowed for guests and may require management/restrictions if services require access at the curb (e.g. trash removal, street cleaning, leaf collection, snow plowing).
 - Mixed-use City Center – foster an appropriate land use mix that would benefit from shared parking (office/government/residential/service retail/restaurant); adjust the parking requirements in this area to benefit from shared parking efficiencies; adjusted setback requirements along Blackhawk Boulevard (State Street) from the state border to Clark Street to mirror those in downtown Beloit; improve walkability and bikeability to connect the area to downtown Beloit and the remainder of South Beloit; provide public parking areas; use pervious materials in public parking areas where feasible to help address storm water runoff.
 - Local Commercial – encourage shared parking agreements and reciprocal easement agreements between owners to reduce curb cuts and improve

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- utilization of parking supply; prepare a general business to business standard agreement and make available online to further encourage the policy; provide improvements for walkability and bikeability to connect this area with nearby land uses (residential/office/ governmental/industrial) who may visit and make purchases, as well as the larger community into downtown Beloit and South Beloit.
- Light Industrial / Heavy Industrial – reinforce buffers and screening for noise and light; increase pervious area where possible to mitigate storm water runoff; if reasonable given safety concerns, foster shared parking agreements for use of large employee lots when not needed on a daily basis and as remote parking for events.

Challenge: The portion of South Beloit within the study area is proposed to become more densely developed in the future.

Solutions:

- Many of the concepts found within the recommendations for the Beloit portion of the study area would be applicable in South Beloit in the future as density increases.
- South Beloit must also make a decision, with community input, to determine the strategic direction for parking policies and its goal as an economic development tool.
 - A trend in small to mid-size communities has been for the municipality to purchase properties in and near downtown for use as parking for those who need it (as a supplement to private development). Owners of new developments may choose to try and provide as much parking as possible on-site, but any additional needs (per code) must be offset through a parking credit or payment-in-lieu of providing on-site parking. These funds support development and maintenance of public parking resources.
 - Other communities have low or no parking requirements with their downtown, which allows owners to build parking to their need or share with neighbors to ensure the community is served adequately. This removes the burden from the municipality but also shifts the responsibility of providing adequate parking without a negative impact on neighbors.

RECOMMENDED CHANGES TO PARKING MANAGEMENT POLICIES & PRACTICES

As previously noted, in the next section, we aggregated these solutions to develop recommendations for the City's consideration. Walker formulated the following set of recommendations aimed at improving access for all user groups. These recommendations utilize the quantitative findings, and filter them through both qualitative concerns raised by the community and industry best practice. Although there is no perfect solution, Walker's goal was to improve access for all user groups while considering effects on the various communities impacted by parking in the study area (residents, business owners, employees, and visitors).

Recommendations for parking improvements generally require three pieces for effective implementation, which are: **ENGINEER** (the solution), **EDUCATE** (those impacted), and **ENFORCE** (for compliance). The implementation plan developed for City Center is presented within that framework in the following sections.

RECOMMENDATIONS FOR CONSIDERATION
ENGINEER THE SOLUTION



WALKER
PARKING CONSULTANTS



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The following section details Walker's efforts to *ENGINEER* a set of policy and practice recommendations to improve the parking condition for the study area now and into the foreseeable future. Because parking shortfalls were limited and localized, our recommendations consist of policies and practices to shift users to the most appropriate parking supply within the study area. These recommendations are intended to be implemented in concert to realize improvement in user experience and perception.

SHARED PARKING

Shared Parking is defined as parking spaces that are shared by more than one user (or user group), which in turn allows parking facilities to be used more efficiently. *Shared Parking* is a form of parking management that takes advantage of the fact that most spaces within a facility are only used part time by a particular vehicle. Moreover, many parking facilities often have a significant number of unused spaces with utilization patterns that follow predictable daily, weekly and/or monthly cycles.

Parking supply can often be shared among different buildings and facilities to take advantage of different peak periods (e.g. an office complex can efficiently share parking facilities with a restaurant or theater, since offices require maximum parking during weekdays, while restaurants and theaters require maximum parking primarily during evenings and weekends). As a result, the total amount of parking provided can be reduced 40-60% compared with standard off-street parking requirements for each destination.⁶

There are several ways to implement the concept of shared parking in the City Center context. We recommend that all of the following possibilities be considered to increase density and make better use of parking resources:

1. Adjust the zoning code pertaining to shared parking:
 - a. Require a shared parking study for new developments and change in use within downtown Beloit
 - b. Allow for parking supply location to be up to 800 feet for visitors/patrons and 1,600 feet for employees within downtown Beloit.
2. Allow for existing businesses to benefit from shared parking. (frees up some parking lots for higher and better use)
3. Implement a Shared Parking District in which the City actively and strategically seeks agreements with private parking supply owners for use of their property during non-business hours.

Zoning Code Adjustments

Each municipality may choose how it develops, and those rules are defined within the municipal code. Planning and zoning codes provide rules related to minimum parking requirements for new buildings, or changes in use for existing buildings. As mentioned, under the current zoning code, per section 8-102a, there is no parking requirement in in the CBD. The zoning code states:

- 8-102a. Central Business District. Off-street parking and loading spaces shall not be required for uses in the CBD, Central Business District.

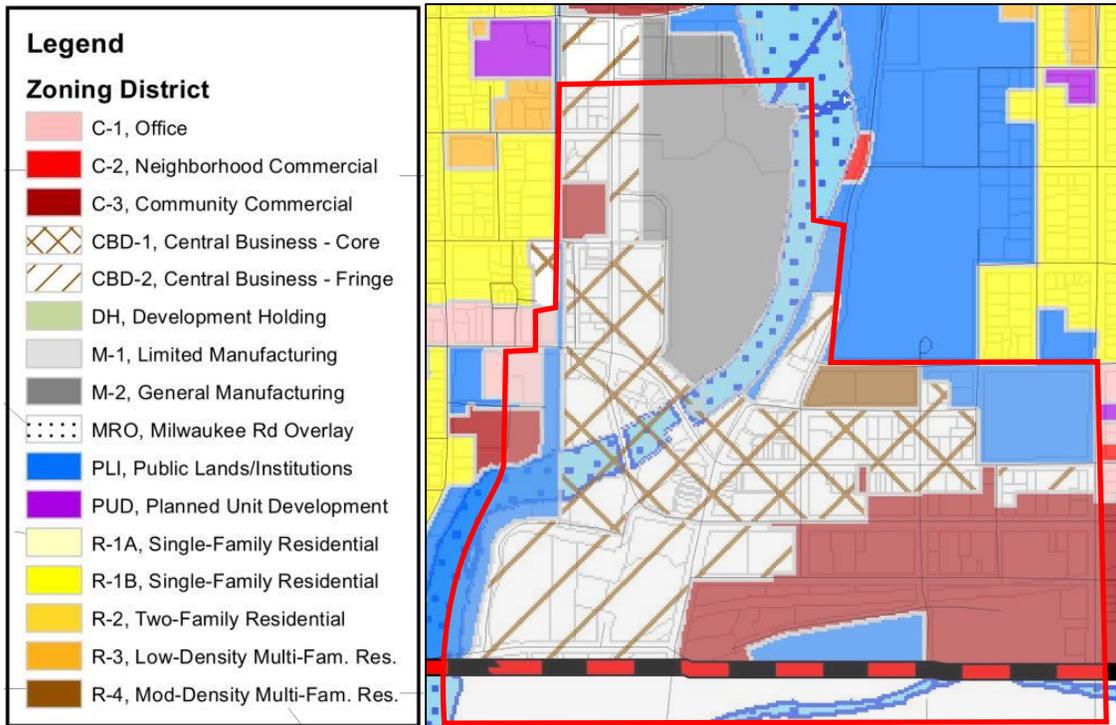
⁶ TDM Encyclopedia, Victoria Transport Policy Institute <http://www.vtppi.org/tdm/tdm89.htm>

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The CBD includes CBD-1 and CBD-2 areas shown in Figure 28. These zoning districts are dominant within the study and therefore the abandonment of minimum parking requirements is significant for a few reasons.

Figure 28: Current City Center Zoning



Source: City of Beloit

By removing all parking requirements for land uses within the CBD, the City has less influence on the land uses that exist and are planned within the area to create a mix of land uses that generate balanced activity night and day, weekday and weekend. There is also no funding mechanism to support increased capital and operational costs related to provision of public parking within the CBD. Based on review of the municipal code there is a special assessment, but that does not necessarily account for funds needed for capital improvements or additions to the public supply generated by new/expanded/intensified land use.

Within the City of Beloit Comprehensive Plan, Chapter IV: Land Use, Section J. Land Use Goals, Objectives and Policies, the specific goal of “a sustainable mix of land uses” is noted. Shared parking benefits from a mix of land uses with varying peak activity levels. Shared parking supports increased density of development making projects more financially feasible for (re)development due to the pooling of this required resource. Implementation of shared parking policies within downtown Beloit should be prioritized to meet community planning and development goals.

We recommend that the City reinstate minimum parking requirements, but require a shared parking study for (re)development, enlargement of an existing building, or change in land use

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from a category with a lower parking requirement to a higher requirement. The study would aim at right-sizing the needs of the site within the context of existing downtown parking needs and multi-modal options. The shared parking study would allow for on-site parking to meet the requirement. In addition, parking for visitors/patrons could be provided within 600 feet and employee parking could be provided within 1,200 feet. Similar to the existing code, an agreement would need to be provided to the City detailing the quantity and location of the off-site spaces. If spaces cannot be found within those catchment areas, the owner would have the option to offset the balance of the requirement by paying the City through a Parking Credits fee or Payment in Lieu fee.

Implementation of shared parking policies allow for an increase in land use density and encourage a mix of land uses that result in balanced activity throughout the day. These results are in line with future land use goals for the Central Business District (CBD-1 and CBD-2). With these recommendations, creating a balance of land use within downtown is encouraged, and a funding mechanism is implemented to offset incremental capital costs, while not overburdening owners.

Regardless, of whether the CBD recommendation above is implemented, we recommend that the current zoning code requirement 8-109a be amended. The zoning code states:

8-109a. Location. Shared off-street parking spaces shall be located within 500 feet of the main entrance of all uses served by the shared parking facility.

We recommend that parking for visitors/patrons/residents could be provided within 600 feet and employee parking could be provided within 1,200 feet.

Within the appendices, Walker provided text related to "Shared Parking for Code". This section should be considered, along with review of Recommended Zoning Ordinance Provisions as described within the Policy Review section of this report.

Encouraging Higher Utilization of Existing Parking Supply

A significant overall parking surplus was observed and is projected in the future for the overall study area. Walker observed no significant localized shortfalls within the City Center study area. Projections of future conditions suggest shortfalls for some blocks east of the Rock River on weekdays. Figure 29 provides the weekend and weekday heat maps for current and future conditions.

Small localized shortfalls⁷ could be accommodated within public parking supply – supply perceived as distant per input from community engagement. Many underutilized privately owned lots exist between those available public spaces and areas with small localized shortfalls. As such, there would be benefit to the public derived from encouraging shared parking policies within the business community, and possibly implementation of a Shared Parking District.

⁷ Shortfalls within a single lot or block that are small in number and can be accommodated within 1-2 blocks.

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We recommend that east of the Rock River the City implement / encourage a Shared Parking District / shared parking agreements between private parking lot owners and the City or other businesses. For small or obscure lots, these could be utilized by off-site employees. For the large lots, these could have specific signage indicating their availability for public parking according to an agreement with the owner.

Figure 29: Current & Future Parking Needs



Source: Walker Parking Consultants

As documented within the quantitative analysis, there is a significant parking surplus within much of the private off-street parking supply throughout the day, including the peak periods. Our

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observations showed that overall the private parking supply was never over 30% occupied during weekdays and over 20% occupied during the weekend.

To implement a Shared Parking District, the City should actively and strategically seek agreements with private parking supply owners for use of their property during non-business hours. In Shared Parking Districts individual owners of private parking supply are encouraged to include as many spaces as possible in a common pool of shared spaces. In some settings these spaces are intended for use by the public; typically, larger or more open and obvious parking supply. In other settings the space may be set aside for employees; typically, due to lack of visibility, remote location or limited number of spaces. These smaller lots could be part of the Shared Parking District, or simply shared through a business to business, or business to consumer agreement.

There are several private lots located in Block 18 that are underutilized based on our observations, and projections of future need. The BMO Harris Lot in Block 19 had only a few parked cars during the evening and weekend observations. These lots could be added to a pool of spaces signed as available to the public between certain times. Figure 30 shows some of the locations that could be made available to the public for visitor parking.

Figure 30: Private Lot with Low Utilization – Large and Open



Source: Walker Parking Consultants

The City should be the clearinghouse for all shared parking within the Shared Parking District, including B2B agreements. This is typically done for any off-site parking used to meet code requirements regardless of whether a Shared Parking District is in place or not. For those lots that are part of the Shared Parking District, the City would provide program administration and

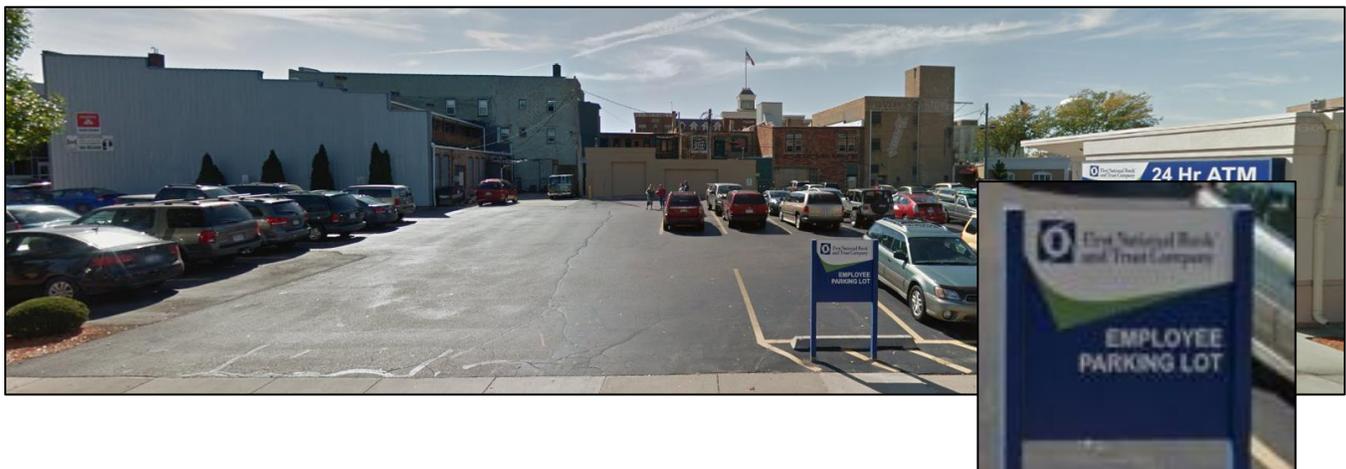
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signage, as well as maintain and insure the supply during times it is in the shared pool. The City should work to develop mutually-agreeable operating and liability arrangements for use of the private lots; this agreement would be standard, with only hours of availability varying. Private lot owners may require payment for the use of their property in some cases, but in others maintenance and insurance are the only offset requested.

Some lots are available to the public during non-business hours, but signage with these lots is not inviting to the public. We believe that a clarification is needed for the public related to which lots are available to the public, and during what times. Figure 31 is one example of signage for parking supply, which according to First National Bank, is available for public use outside of their business hours. We believe that these large lots, in key locations, should be signed more officially to make it clear to drivers that the lot is available to the public between set times.

Figure 31: Typical Private Parking Supply Signage



Source: Walker Parking Consultants

If these spaces are intended for public use, the municipality should purchase and install signage that suggests they are available for public use during specific periods. If lots are not signed as public or only have signs suggesting private parking, most drivers will avoid using them.

Some of the spaces we observed to be underutilized were located in small lots behind buildings, which were difficult to identify as available to visitors. These small and concealed lots would not be used by patrons even if signage were posted notifying them when it would be permissible to park there. Still, these lots are an important parking resource that should not be overlooked. Although they would not be ideal for visitor use, they could be utilized for off-site employee parking. Upon agreement to terms between business/land owners, employees could make use of these spaces.

We recommend development of a program to coordinate between business owners for the use of private parking supply for employees of off-site businesses during hours when the on-site business is not active. Shifting employees into off-street supply would eliminate their impact on on-street parking.

Figure 32 shows examples of private parking supply that would suit employee parking, but likely not visitor parking within a shared pool.

Figure 32: Private Lot with Low Utilization – Small or Concealed



Source: Walker Parking Consultants

Employee parking within these small lots could be encouraged to be a B2B agreement, or the City could work as a clearinghouse for these agreements. Both systems have been proven to work well. For B2B agreements some of the typical concerns are maintenance and liability – payment at times is taken in trade versus monetary. If the City is the intermediary, there is typically a fee, which helps cover costs related to insurance, maintenance and administration of the program.



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To encourage the policy, the City should make available to private lot owners, a typical agreement for business to business use of private lots for employee parking.

For even these small and concealed lots there are secondary benefits to the City related to an expanded tax base. There could be expansion or redevelopment of a site because on-site parking needs no longer limit them. Employee parking may be provided within a small nearby lot while visitor parking (if needed) would be provided within on-street spaces, public lots, or shared lots.

As administrator of the Shared Parking District, the City should maintain records of these agreements, and administer the program by providing listings of the location of space availability, quantity and timing. The system could be managed online, or directly by City staff.

The appendices provide a few sample agreements where the City has been the intermediary between the private owners, which helps to shift liability and possibly ensures basic maintenance of the private lots.

Other Items for Consideration

As a way to impact the future, policies should be developed to require as a condition of approval that all newly constructed private parking or adaptive reuse project be included in the Shared Parking District during non-business hours.

Contingencies for Failure of Shared Parking

Walker was asked to provide alternatives for the City in case the business community does not buy in to the concept of Shared Parking as it is proposed to be applied in Beloit. First, it is important to understand that no significant localized shortfall exists. And only small shortfalls are projected on a few blocks in the future. These shortfalls could be easily accommodated within public supply, but the public supply would be farther than a typical user in Beloit would hope to park based on community input.

Shared Parking is industry best practice from a parking perspective and a smart growth planning perspective. Whether or not the business community buys in to the Shared Parking District or sharing their private lots with other businesses, the changes to planning code should occur to enable its implementation.

If the City wishes to expand the available parking supply within the study area, there are several options that could be implemented. These include:

- Create angled on-street parking by reducing travel lanes where possible.
- Purchase plots/lots to create public pool of parking
 - Consider purchase of the lot adjacent to the old courthouse as overflow employee parking for Ironworks, if needed.
 - Consider purchase of the lot(s) that front on Public Avenue between Pleasant Street and Prospect Street to create a large pool of parking for visitors and employees and supplement the downtown parking system.



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- Operate a shuttle circulator in downtown Beloit to move people to available public supply – there is significant supply available throughout the day, but it may not be proximate for all users.

EMPLOYEE PARKING PERMIT PROGRAM

Typically, parking management policies relate to creating access and availability for patrons – time limits and paid parking to generate turnover in commercial areas. Employees are then often left to fend for themselves and find other legal parking, or another mode of transportation. Our aim is to provide access for all those who require access to the area, and as such explore solutions that provide access for employees as well.

We recommend using shared parking as a tool for the areas east of the Rock River, especially where public parking lots are somewhat distant (1,000' to 1,200', and beyond). But for areas near public lots (within 1,200'), we believe that implementation of an employee parking permit program is appropriate both east and west of the Rock River.

The benefits of implementing an employee parking permit program are three-fold:

- Manages off-street parking supply to improve overall access
- Improves understanding of a significant user group
- Develops and fosters an economic parking market

The public parking supply in Beloit, including off-street lots, is signed with time limits to encourage turnover and availability for short-term users. Still, some lots fill while others remain largely vacant. Some of these vacant lots are within a reasonable walking distance for employees, but somewhat distant for visitors/patrons. Without shifting employees to the more distant supply, an imbalance occurs, and there is a perceived parking shortfall for visitors and patrons. Employee parking permits are needed to begin managing long-term users in public supply. The program would be used to shift long-term parkers to underutilized supply and help balance availability on the City's terms.

The number of long-term parkers who utilize the City's public parking supply is unknown. Walker's fieldwork captured a snapshot in time, but administration of an employee permit program allows for the City to better understand where these employees are coming from, and the most appropriate parking supply for them. Issuance of permits allows for an understanding of the quantity of long-term parking needed in the area (aside that accommodated in private supply). As the parking system develops this information allows for better planning and policy decisions.

There would be additional costs for the program related to administration, signage, equipment and enforcement. These costs would need to be offset, at least in part. Therefore, a nominal fee should be established that aims at defraying these cost; the web portal should also allow for payment of this fee. We believe that a monthly rate of \$10 would be adequate to offset the City's costs.

Although these long-term parking permit rates are low, they begin to shift the mindset that parking does not have an economic value. Owners of private parking lots will begin to realize that the empty parking spaces in their lots are lost economic opportunity. Private lot owners may also see the financial benefit of providing parking for neighboring businesses and offer

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available parking via shared parking agreements for employees. This will also allow for an easier transition to paid parking on-street in the future, if deemed appropriate.

For the system to work, there must be a reason to need a permit. Currently most public off-street lots have a few spaces which are time restricted. For some lots, we recommend a restriction of three hours with permit holders exempt from the restriction. Some lots will still have a number of spaces set aside solely for 3-hour parking. The permits would also be assigned to specific lots to encourage improved utilization. The number of permits in each lot could be adjusted month to month as needed to balance short-term and long-term parking with a goal of overall improved access.

The City would provide administration and enforcement of the program. We recommended that the program make use of the license plate enabled (LEP) system for the efficiency it provides with little staffing. The use of an LEP system would reduce administration and enforcement costs for the program. We suggest the use of a web portal from the City's website. The portal would allow residents to register for the program using their name, address, vehicle make, model, color and license plate number. These applications would be verified and approved by the City. A virtual permit would be issued and a confirmation sent to the employee that they are now registered users.

Prior to introducing the program to the public, we recommend that the City develop a program write-up that sufficiently describes the program costs and restrictions to ensure employees (and employers) understand how the program would be administered. The write-up should include the following items, at a minimum:

- Overview of how the program works, which includes administration, equipment, user interface, and enforcement;
- Limits on the number of vehicles registered per permit;
- Cost of the program to employee (per vehicle or per person);
- Hours of enforcement of the 3-hour time limit or employee permit parking;
- Program application process for residents;
- Required documents to register as a resident;
- How to register guests and any limit on the number of guest permits, if any;
- How to dispute any citations believed to be given in error.

The application of the program to the City's off-street supply is detailed within the Off-street Parking Policies section.

ON-STREET PARKING POLICIES

On-street parking may be managed through the use of time limits, user restrictions (ADA, Expectant Mothers, Residents, etc.) and paid parking. Time limits have pros and cons, but are the most commonly used form of on-street parking management. Although helpful in some settings, Walker rarely recommends user restrictions on-street. Paid parking is also very common in downtown settings and commercial zones where demand for convenient parking is high, and density creates competition with other users – both short-term and long-term

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Time limits are used as a way to generate turnover within the parking supply; parkers who arrive know that they have a specified time before they must leave the space, which then opens that space up for another user. These time limits are enforced and violators are issued a citation with an attached fine to encourage compliance. Enforcement is the shortcoming of this system of management because enforcement is not always consistent or diligently performed by the agency in charge.

New technology, such as license plate recognition (“LPR”), is available which uses the vehicle’s license plate to “tag” the vehicle, GPS to locate it, and a time stamp to detail when it was observed. This technology can be mounted to a vehicle and increases the speed of enforcement for these restrictions. Still, receiving a citation, although being at fault, may also be a cause for frustration for parkers. This is the key difference between paid parking and time limit parking. Payment for paid parking is a user fee, while payment for time limit infractions is punitive. Studies show that actively engaging the user to set a time limit by feeding a parking meter is more likely to result in compliance versus an arbitrary posted time limit. That said, we do not recommend parking meters at this time.

The goals for using time restrictions for on-street parking management in most settings are as follows:

- A single consistent restriction is recommended along a single block face. Changing restrictions along the same block face can be confusing and frustrating to drivers.
- The same, single time restriction should be utilized within the core area, if possible.
- A second time restriction can be set for areas outside the core if needed to keep long-term parkers from parking on-street where short-term parking is still needed, but outside of the commercial core.
- Short time limits should be avoided if they cannot be enforced; typically, this means restrictions less than 1 hour should be avoided (signed loading spaces are appropriate).

We recommend the following time restriction policy for the City Center study area, as detailed herein.

- 2-hour limit in downtown core commercial area (Enforced 8AM-8PM Mon-Sat)
- 4-hour limit along non-core main streets in the periphery (Enforced 8AM-8PM Mon-Fri)
- Unrestricted along non-core secondary streets

A time limit of **2** hours would be enforced for parking along the following block faces. The aim of this policy is to create a user-friendly experience for commercial patrons – while keeping downtown employees parked at the periphery of the commercial core.

- East – west block faces:
 - South side of Grand Avenue from 4th Street east to Prospect Street
 - North side of Grand Avenue from 4th Street east to 3rd Street and from State Street east to Prospect Street
 - South side of Public Avenue from State Street east to Pleasant Street
 - North side of Public Avenue from State Street east to Pleasant Street
- North – south block faces:
 - West side of State Street from Grand Avenue south to Broad Street

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- East side of State Street from Public Avenue south to Broad Street
- West side of Pleasant Street from Public Avenue south to Broad Street
- East side of Pleasant Street from Public Avenue south to Broad Street

A time limit of **4** hours would be enforced for parking along the following block faces. These areas would be designated 4-hour parking to provide spillover commercial patron parking, while still compelling employee parkers to utilize spaces further out, away from the commercial core.

- East – west block faces:
 - South side of Grand Avenue from Cross Street to 4th Street and from Prospect Street to Short Street
 - North side of Grand Avenue from Prospect Street to College Street
- North – south block faces:
 - West side of 4th Street from La Casa Grande south to Grand Avenue
 - West side of 3rd Street from Ironworks Drive south to Grand Avenue
 - East side of 3rd Street from Ironworks Drive south to Grand Avenue

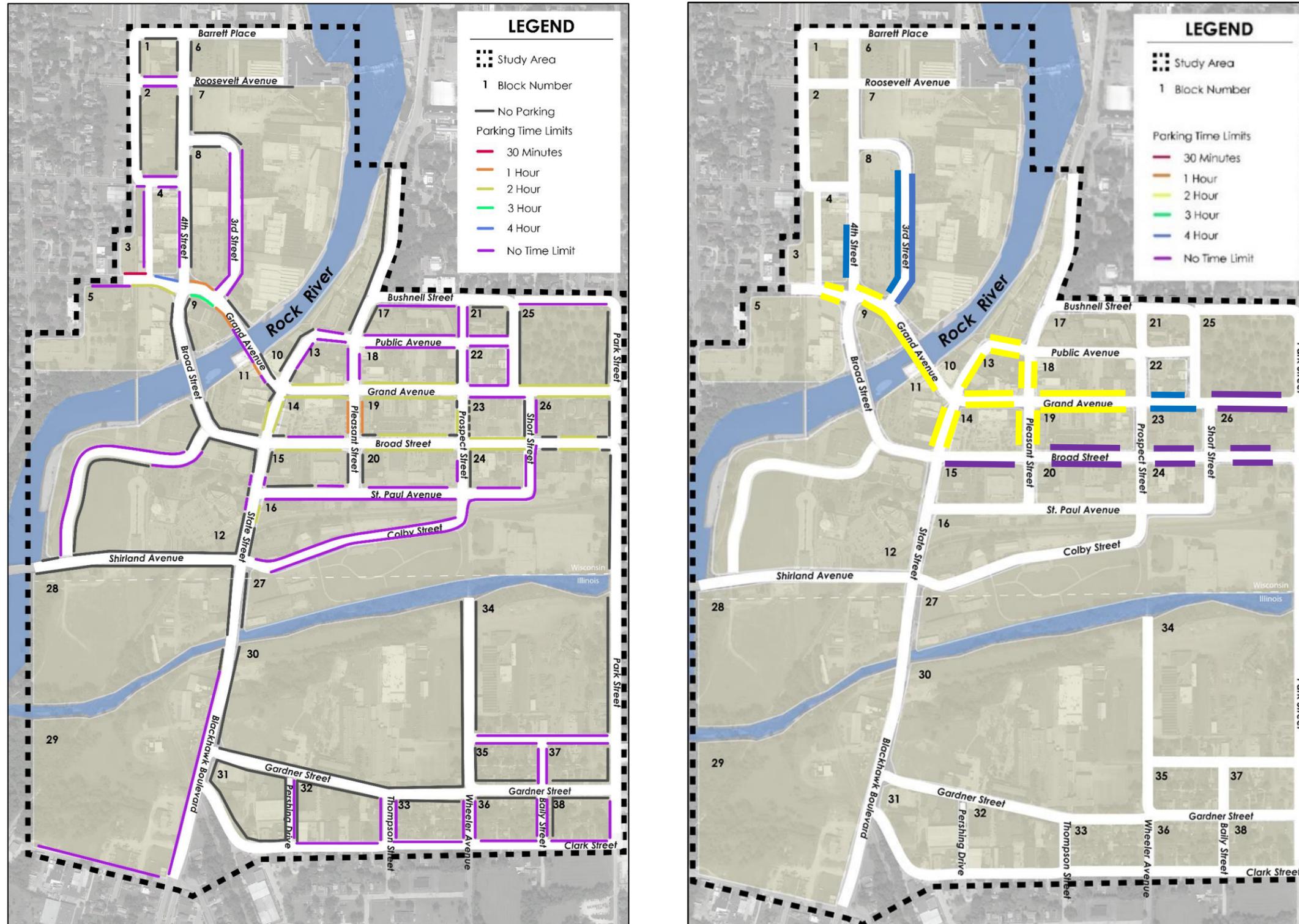
After further development and commercial in-fill in downtown Beloit, we suggest implementing multi-space parking meters along the block faces currently recommended to be 2-hour parking. As a policy to encourage turnover, the meters would be adequate to encourage turnover with the increased parking demand. In the future demand scenario, block faces currently recommended for 4-hour parking could be adjusted in one of two ways:

- 4-hour parking becomes 2-hour parking – This would provide an area for parkers who do not want to pay at the meters to park, while also promoting turnover with the time restriction.
- 4-hour parking becomes metered parking, but at a lower hourly rate – This would provide an area for parkers who are price sensitive to still park within a reasonable walking distance from their destination, but likely not adjacent to the commercial areas of downtown.

Periphery block faces in edge areas outside of the commercial core would remain unrestricted. These areas currently see less demand and are not located in commercial areas or in front of retail and restaurant storefronts, so parked vehicle turnover is not as much a priority along these block faces. As mentioned earlier, we recommend keeping the same, single time restriction per block face to minimize confusion. This way it would be clear to parkers where the 2-hour parking zone ends and the 4-hour parking zone begins, and where the 4-hour parking zone ends and the unrestricted parking zone begins. Consistency in signage and parking zone identification is key to a successful parking system that is user friendly and easy to navigate for residents and visitors to the downtown.

Figure 33 provides a graphic representation of the recommendations presented above, as they would change current policy. Blocks with no color do not currently exhibit the need for a time limit.

Figure 33: Existing and Proposed On-street Parking Restrictions





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One challenge that was highlighted by the community is the policy for alternate side parking regulations and signage. Some members of the community have questioned the value of this policy, its intent, and how it is communicated.

Walker requested additional background related to the history and impetus of the policy to provide a recommendation on this topic. The policy may be required to provide vital City services such as street cleaning, trash removal, snow removal, or leaf pick-up, although given the 12:01 to 7:00 a.m. enforcement hours year-round, this is unlikely. Occasional street cleaning and weekly trash removal generally occur after 7 a.m. when parking is allowed. Snow removal is during winter months, and not always dependent on having vehicles moved off the street (i.e. streets are plowed during daytime hours when no snow emergency is declared and on-street parking is allowed). The policy may also be a way to discourage on-street parking for extended periods. Regardless of the intent, this policy is atypical at least in implementation. For cities that restrict on-street parking for city services, which again does not appear to be the intent in Beloit, those days and times are limited and specific. For cities who wish to reduce or remove overnight parking, there is a ban on parking from 3:00 AM until 5:00 AM, which would be problematic in residential areas, especially traditional neighborhoods where limited private space and driveways often necessitate on-street parking. Still others restrict parking on one side of the street one day a week, and the other side of the street on a different day to discourage vehicle storage, which can also be problematic in some areas where on-street parking is desired on both sides everyday to accommodate parking needs .

The current policy states:

- On all streets within the City between 12:01 a.m. and 7:00 a.m., vehicles shall be parked only on the even-numbered sides of the street on those days bearing an even-numbered calendar date and on the odd side of the street on those days bearing an odd-numbered calendar date. Exceptions to this section shall be:
 - Where parking is permitted only on one side of the street as indicated by official traffic signs to that effect, all vehicles shall obey such traffic signs and only park on the side of the street permitted by such traffic signs.
 - In the Central Business District, where there shall be no parking from 3:00 a.m. to 6:00 a.m. on either side of the street. For purposes of this section, "Central Business District" means St. Lawrence Ave., Fifth to Fourth; W. Grand Ave., Cross to Second; Public Ave., State to 299 feet east of the east curb line of Pleasant St., E. Grand Ave., State to Prospect; Broad St., State to Prospect; St. Paul Ave., Mill to Prospect; Colby St., State to Prospect; Cross St., Back St. to St. Lawrence; Fourth St., W. Grand to St. Lawrence; Third St., Second to St. Lawrence; Mill St., Shirland to Broad; State St., Shirland to Public; Pleasant St., St. Paul to Public. (Am. #2367; #3073)
- The Police Department may tow away any motor vehicle found in violation of this section. The owner or operator of a vehicle removed under this subsection shall be liable for the costs of such removal and the person having removed the vehicle may retain possession of the vehicle until the cost of towing has been paid. (Am. #2179)

Based on review of the policy, signage and community input, we believe that the way the policy is communicated should be adjusted at a minimum. The intent of the policy should be weighed against the impact on nearby residents and businesses.

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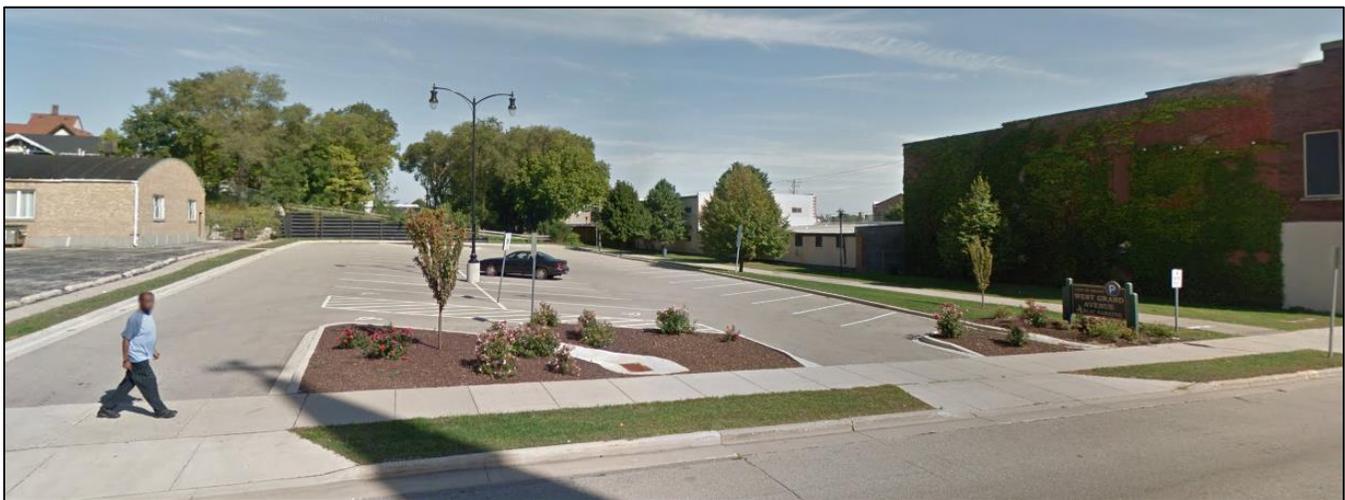
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OFF-STREET PARKING POLICIES

Similar to on-street parking management, off-street supply can also be managed through time and user restrictions, or paid parking. Within the off-street setting there is typically a more balanced mix of management techniques overall. Time limits are used in many public lots where the setting is not appropriate for paid parking. Many parking lots are restricted to specific users who are patrons, tenants or employees of an adjacent building. Paid parking for off-street parking, similar to on-street parking must be in an appropriate setting to be successful. All three techniques are effective, but how effective is a function of the setting.

Walker observed no significant localized shortfalls west of the Rock River, but projections suggest future supply adjacent to the Ironworks campus would be highly utilized and may be constrained. Similar to the study area east of the Rock River, there was an imbalance problem. The Chester Square lot was either near full, full, or over-full (with illegal parking in unmarked areas) during observations. In contrast, the West Grand lot, which was only two blocks away, was nearly vacant.

Figure 34: West Grand Lot



Source: Walker Parking Consultants

To create better balance within the public off-street parking supply parking management policies are required. We believe that user restrictions and time limits would be effective to manage the public off-street supply in the study area.

As detailed within this section, we recommend implementation of an employee permit parking program (described within the Employee Permit Parking Program section). The permit program would be supplemented by 3-hour time restrictions for several public off-street lots. This would remove long-term parkers from some of the more highly utilized surface lots and ensure some spaces remain available for short-term parkers, where needed.

Time limits within public lots are reasonable and should be implemented to encourage turnover in areas where time-limited on-street parking supply is inadequate, or to shift long-term parkers to underutilized nearby supply. Based on Walker's parking occupancy counts, only a few lots



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experienced high occupancies triggering this policy⁸. Yet, there are specific locations where this policy should be implemented to better balance parking supply and demand now or in the future. These locations include Chester Square under current and future conditions, and Ironworks South once the YMCA is in operation. Public lots with no time restrictions should be provided further from the core of downtown.

Time limits can also be used to supplement a permit program. Policies may be introduced that exempt permit holders for time restrictions. The exemption from the time limit would serve to push long-term parkers into the program if they hope to park for an extended period of time within the lot. For this plan, time limits were utilized to ensure turnover and to supplement the proposed permit program

We recommend the following policies for the City Center study area, as detailed herein.

- 3-Hour – within small lots serving commercial areas where parking shortfalls occur (Enforced 8AM-8PM Mon-Fri)
- 3-Hour, Monthly Permits Exempted – within larger lots which would serve employees and commercial areas (Enforced 8AM-8PM Mon-Fri)
- Monthly Permits (and Long-Term Parkers) – within underutilized lots within a reasonable walk from lots restricted as 3-Hour and 3-Hour, Monthly Permits Exempted. These serve as employee overflow and long-term parking (Enforced 8AM-8PM Mon-Fri)
- Unrestricted – within lots that are typically not highly utilized under current conditions

The off-street parking policies within this section were initially conceived to manage the public off-street parking supply west of the Rock River due to the number of spaces available for the proposed employee permit program. Upon further consideration, we believe that the policies developed should also apply to the Mill Street and Broad Street lots for consistency of the parking system in areas where long-term parking is needed within surface lots.

The mix of permits versus 3-hour stalls varies by lot. The breakdown below demonstrates Walker's recommendation of permit parking and 3-hour time limit mix by lot. The recommendation was derived from the weekday turnover analysis; any vehicle parked over four (4) hours is assumed to be an employee. The numbers provided below should be used to gauge the user needs, but will likely require adjustment as parker behaviors change under new policies. The 3-Hour Time Limit spaces that do not allow for employee permits should be located nearest the land uses with short-term parkers (customers/visitors).

- Iron Works North – 3-Hour Parking; Monthly Permits Exempt
 - Employee Permit Parking
 - 56 observed vehicles ≥ 4 hours in the lot.
 - 22 observed vehicles ≥ 4 hours on 3rd Street.
 - ± 80 employee permits should be issued to accommodate observed demand.
 - 3-Hour Time Limit
 - The remaining portion of the lot (26 spaces) should be enforced via 3-hour time limit. These stalls are intended to be utilized by visitors.

⁸ This excludes special event periods when lots are anticipated to fill.



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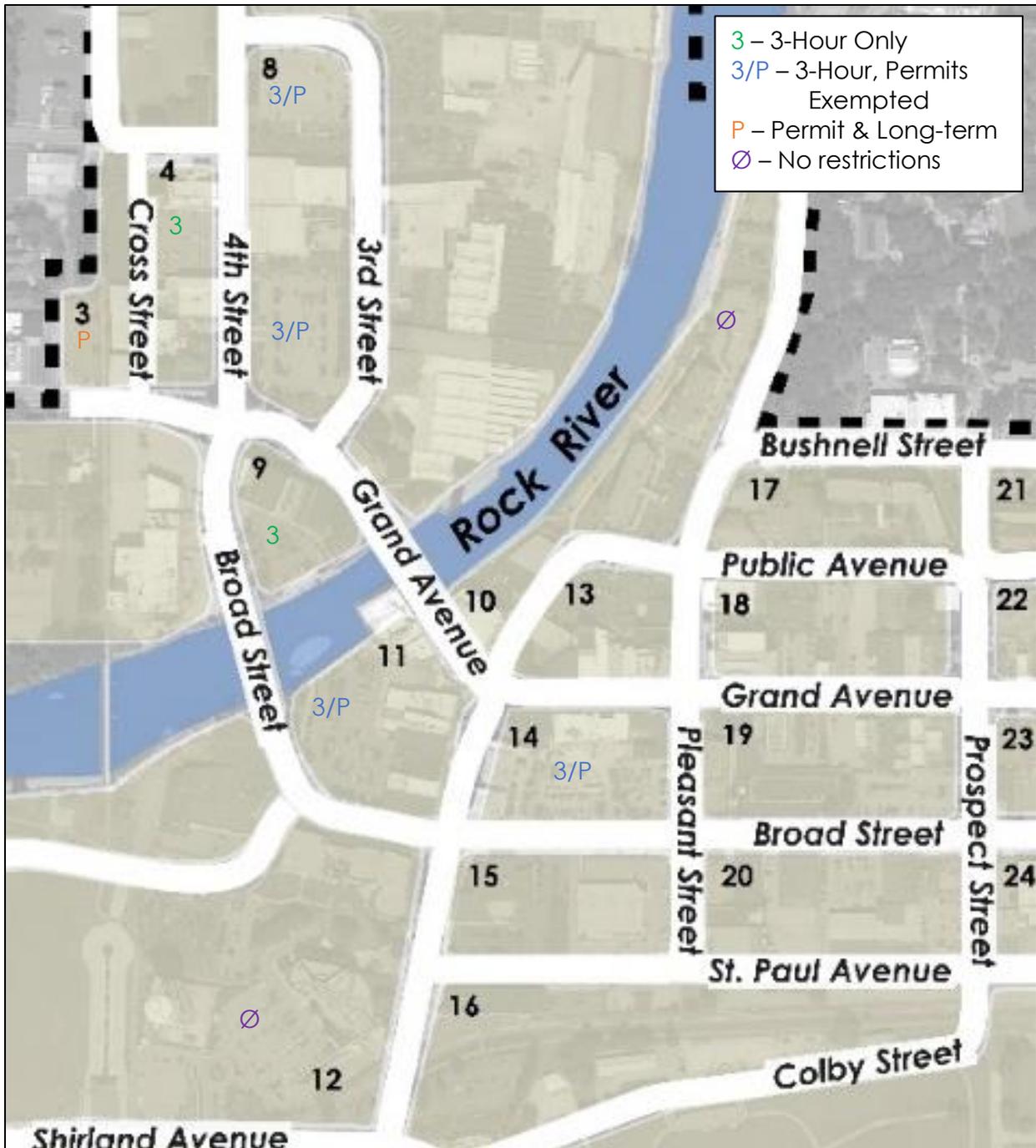
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- Iron Works South – 3-Hour Parking; Monthly Permits Exempt
 - Employee Permit Parking
 - ±114 observed vehicles ≥ 4 hours in the lot.
 - ±11 observed vehicles ≥ 4 hours on 4th Street.
 - ±125 employee permits should be issued to accommodate observed demand.
 - 3-Hour Time Limit
 - The remaining portion of the lot (45 spaces) should be enforced via 3-hour time limit. These stalls are intended to be utilized by customers.
- Fourth Street – 3-Hour Parking
 - 3-Hour Time Limit
 - The proximity of this surface lot to bars, restaurants and the liquor store make this lot ideal for customer utilization. Employee parking is accommodated in West Grand lot.
- West Grand – Employee Permit Lot
 - Employee Permit Parking
 - ±27 observed vehicles ≥ 4 hours in the Chester Square lot.
 - ±27 employee permits should be issued to accommodate the demand of employees from the Chester Square lot. Reference “Chester Square Lot” bullet for further detail.
- Chester Square – 3-Hour Parking
 - 3-Hour Time Limit
 - In this 40 space lot, Walker observed ±27 vehicles parked for over ≥ 4 hours. Accompanied by the high demand of this centrally located lot, users are parking illegally – not within stall markings.
- Mill Street – 3-Hour Parking; Monthly Permits Exempt
 - Employee Permit Parking
 - ±49 observed vehicles ≥ 4 hours in the lot.
 - ±3 observed vehicles ≥ 4 hours on State Street.
 - ±52 employee permits should be issued to accommodate observed demand.
 - 3-Hour Time Limit
 - The remaining portion of the lot (109 spaces) should be enforced via 3-hour time limit. These stalls are intended to be utilized by customers.
- Broad Street – 3-Hour Parking; Monthly Permits Exempt
 - Employee Permit Parking
 - ±61 observed vehicles ≥ 4 hours in the lot.
 - ±61 employee permits should be issued to accommodate observed demand.
 - 3-Hour Time Limit
 - The remaining portion of the lot (37 spaces) should be enforced via 3-hour time limit. These stalls are intended to be utilized by customers.
- City Hall & Heritage View – No Changes to Existing Restrictions
 - No Changes

- Until Beloit reaches a level of high occupancy, Walker recommends these lots remain unrestricted with no permit parking.

Figure 35 provides a basic overview of the information detailed above.

Figure 35: Proposed Off-street Parking Restrictions



Source: Walker Parking Consultants

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EVENT PARKING PLANS

An event parking plan (and map) is needed for large events to better manage parking and traffic related to people who require access to the area for events. Although other events do take place in downtown Beloit, the Farmer's Market is a regularly recurring event, which should have a plan as a priority. The plan should consist of a few implementable steps to aid in shifting users to the most appropriate parking supply, and informing those users where their parking is located or direct them as to how to get there. The plan should be developed for the Farmer's Market and altered as needed for other events.

Vendors and workers may need access to the area initially to drop off, assemble and stock their stand. These users not parking within the Farmer's Market itself should park remotely (North Ironworks Lot or City Hall Lot) to allow the maximum number of visitors to park nearby.

Visitors should be provided the most proximate parking, but as past events have shown, not all visitors will fit within the one-block radius in which they would prefer to park. Plan for additional ADA parking near the event to avoid the need to provide an ADA compliant shuttle, if shuttles are needed (blue below). Plan for pick-up and drop-off for elderly and children, and if large goods are purchased (yellow below).

For the Farmer's Market consider turning the Broad Street Lot into ADA parking and pick-up / drop-off only, as appropriate, to shift users into large and more available supply while providing convenience for those who need it. Figure 36 shows a hypothetical operation for the Broad Street Lot during the Farmer's Market. The spaces nearest the Market would be set aside for ADA users. A portion of the lot would be used for the operation of a "Parcel Pick-Up" area, and the remainder of the lot would be limited to 15-minute loading for those who parked remotely and need to pick up their purchases from the Parcel Pick-Up. Some communities staff the Parcel Pick-up with local Boy/Girl Scout troops, high school sports or arts programs, etc. The operation is overseen by either City staff and/or DBA staff.

Figure 36: Proposed Farmer's Market Broad Street Lot Operation



Source: Walker Parking Consultants

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Implement temporary event wayfinding signage and online information to help shift visitors to nearby downtown public parking. For example, wayfinding signage can indicate the City Hall Lot and Ironworks South Lot are within a 4- to 5-minute walk from the Farmer's Market for most visitors.

If the event would require parking beyond a five-minute walk, determine where available remote parking is located, whether it is within the public supply downtown or a nearby land use with a large surface lot that has space availability when the event would need parking (mall, hotel, school, etc.). Shuttle services may be needed for a few events each year to make use of existing public supply, while not building for conditions that occur only a few times per year.

NON-PARKING INFRASTRUCTURE IMPROVEMENTS

The *City of Beloit Comprehensive Plan* describes downtown Beloit as the civic, social, and commercial hub of the community. Recent revitalization efforts in the downtown area have enhanced this distinction. Policies and programs in place to encourage commercial developments that are most appropriate for the historic downtown to locate or remain there, rather than in other commercial districts in the city (specifically those found along I-90 interchanges), could be enhanced by improved walkability and bikeability. Initiatives in place to preserve the architectural and historic character of core downtown buildings, especially in regard to any new developments, would be benefited as well by keeping the downtown scalable to pedestrians and cyclists.

These policies would correlate with the Wisconsin Comprehensive Planning law requiring communities to identify "Smart Growth Areas" in their comprehensive plans. The *Beloit Downtown Redevelopment Plan* calls for continued revitalization, redevelopment and infill in the downtown area, as well as "infill" areas in areas of the city already served by utilities and services. Walkability in downtown Beloit is appropriate for a city its size with pleasant street fronts, quality sidewalks throughout the study area, and well-marked public parking areas.

Walker's review of the 2008 City of Beloit Comprehensive Plan revealed that significant infrastructure improvements were considered, and many were completed prior to the commencement of our study. Figure 37 on the following page depicts the proposed public improvements from the 2008 Comprehensive Plan.

In support of the pedestrian-oriented environment and to help the downtown remain a vibrant civic, social, and commercial hub, Walker recommends the following improvements:

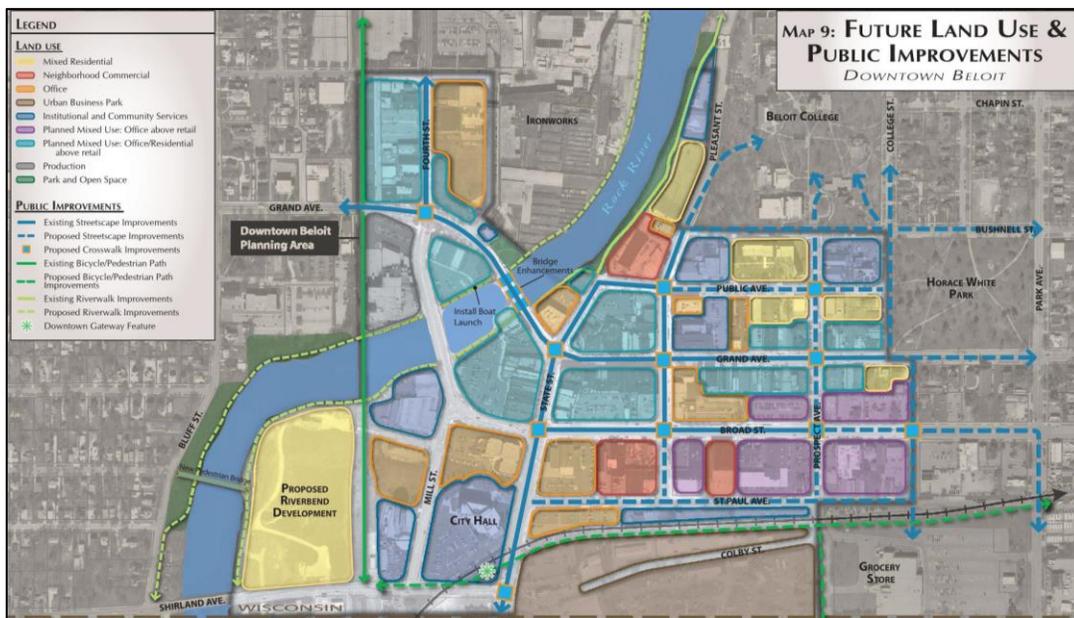
- Walking as a mode of transportation around downtown Beloit could be better encouraged through media such as "Walking Maps" of downtown. (See Northville, MI example in appendices)
- Bikeability should be improved to link downtown Beloit to area trails and bike routes. With major streets within the study area listed as "Moderately Low/IDOT "Caution Advised" for experienced cyclists, according to *Visit Beloit's Bicycle Compatibility of Existing Roadways*, adding protected bike lanes or expanding the bike route along the Rock River could make biking safer and more attractive for commuters and residents. Only Bushnell Street, on the northern border of the study area, is marked as a Moderately High bicycle compatibility level (for experienced cyclists).

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- Continue improvements to the bicycle links between downtown Beloit and surrounding communities.
- Additional bike lanes are needed in the study area to connect bike routes and trails that end in or near downtown Beloit.
- Enhance the connection between the various trails throughout downtown Beloit to create a more robust network that provides a safe place for recreation and a non-motorized route to nearby communities as primary transportation or for occasional errands.

Figure 37: Future Land Use & Public Improvements – 2008 Comprehensive Plan



Source: City of Beloit Comprehensive Plans

Key to a successful downtown public parking system are parking lots that have adequate lighting, especially at pedestrian paths and points of entry and egress. Surface parking lots that are open to view from the outside, are well lit, and easy to enter and exit, are all ways to increase the sense of safety and security for parkers when arriving at or leaving their vehicles. In keeping with the pedestrian-oriented environment to help the downtown remain a vibrant civic, social, and commercial hub, Walker recommends a few minor improvements to downtown pedestrian safety and security.

- Lighting improvements are needed in some areas of downtown Beloit and in most of South Beloit. Specifically, improving lighting along routes between public parking lots and commercial and other frequently visited land uses.
- Continuous sidewalks are needed in South Beloit.
- Improvements could be made to provide better visibility to the Ironworks South Lot from Grand Avenue. The pocket park and full trees / high bushes reduce visibility for those looking for public parking. This also causes safety and security concerns for those who park within the lot. Trimming trees and bushes would create a better sense of security for parkers utilizing this lot.



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FRAMEWORK FOR DEALING WITH SPECIAL REQUESTS

Special requests are not uncommon, especially as they relate to public parking. Many community members believe that based on adjacency, this public resource should be made to suit specific needs and not the public good. This section provides insight into considerations and processes for handling special requests, and whether there is merit and benefit to the public or detriment.

On occasion, there are conditions that could be found to be hazardous in the future and, if changed, would improve public safety. Most of these conditions were identified and considered within the State of Wisconsin Traffic Law where “No Parking” areas are detailed at length. Further the City identified some areas and conditions believed to improve public safety or traffic conditions (e.g. “No Parking” along specific roadway segments). Although a significant effort from the State and City was made to identify potential hazards generated from parking, not every hazardous condition may be foreseen and accounted for. These requests deemed to be potential safety hazards should be considered, with follow-up by City staff. A staff recommendation should be a reasonable basis for approval. If staff does not believe the condition is hazardous, the request would be put through the process detailed within code sections 11.35 through 11.40.

Special requests are also typically evaluated as to whether they conflict with the City’s transportation master plan and policy statement regarding parking and access to the community. If these documents do not exist, a policy statement should be developed to provide guidance for future requests. When there is conflict with policies and practices adopted within a transportation master plan or policy statement there is little chance of approval of the special request. Generally, best practice for parking planning includes the following:

- Public parking supply should be used to improve access to the community
- Policies should be consistent for the entire block face, where possible
- The fewer special conditions, the better from an enforcement perspective

This list is not exhaustive, but provides a basis to develop an official response. The transportation master plan, when created or updated, should include a “Parking and Curbside Management” element to help guide staff in making these kind of micro administrative decisions. If no conflict is identified, it should be considered from an enforcement standpoint. If a conflict is identified, the request would be put through the process detailed within code sections 11.35 through 11.40.

Special requests should also be evaluated with regard to whether enforcement is practical. A principal of parking enforcement is patrols have to occur in accord with the posted restrictions. Therefore, a one-hour posted duration requires twice as much enforcement effort (and staff) as two-hour parking. Similarly, while there might be some logic behind 5, 15, and 30-minute on-street parking durations, these spaces will generally function like long-term, unrestricted parking spaces simply because the enforcement officer only patrols the area every two hours (or more).

The details in 11.35 through 11.40 are thorough and were at or above what is typically found in municipal code language on the subject of policy change. The process is well-defined, and approvals require input both from the property owners and City Council.

RECOMMENDATIONS FOR CONSIDERATION
EDUCATE THOSE IMPACTED



WALKER
PARKING CONSULTANTS



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In the following section the recommendations are directed to **EDUCATE** those impacted by parking policy and practice. Educating those who are impacted by parking policies is very important to policy compliance and acceptance. The education process must come from the City and would include information made available online, found on on-site signage or street/curb markings, and notices within the impacted areas.

WEB PRESENCE

We recommend to many cities that a parking webpage be added to the city website. That page would allow for passive communication regarding where parking is legal and illegal (e.g. vehicles longer than 20' in diagonal parking), location of public off-street parking supply, on-street parking restrictions, and event parking specifics. The webpage would also provide links to the portals for the Shared Parking District and Employee Permit Parking Program (database linked to enforcement), and to an external page for violation payment. The webpage could also offer parking advice in specific areas such as, "Where is available parking likely, but not easily found?" and "Where should I park for the Farmer's Market?"

A parking map for various "hot spots" is also recommended for the webpage. The map would depict locations of off-street public lots, and note time/user restrictions. The map would also show locations and restrictions of on-street parking supply (also noting "No Parking" on the sides of the street where this is applicable). The map would be accompanied by limited text. This information and map could be made available to area businesses (and events) for their own websites, or via link to the City site.

Some cities provide an interactive map, which details restrictions. We do not believe that is needed in Beloit. Many similar sized cities provide online resources via one or more PDF documents. PDF documents can be viewed on a computer and on a mobile device, and can be downloaded prior to coming to Beloit, so there would be no requirement to use wireless data to find parking.

We believe that a PDF "Walking Map" of Beloit, depicting locations of public parking (and shared parking) would be beneficial to visitors and business owners. The map should include location of on-street and off-street supply and time/user restrictions also noting the distinction between blue (public) and yellow (shared) lots. A second PDF could be provided for the community to gain a basic understanding of the parking programs – more detailed information would be provided within the website.

Examples of effective PDFs from Northville, MI are provided within the appendices.

SIGNAGE

Signage allows for passive communication with drivers. Parking signage relates rules and policies in a simplified form that is concise and easily understood. Aside from relating the policy changes we recommend, there are other signs that we recommend be added to the study area based on input from community engagement. These signs convey typical rules for location of legal parking versus illegal parking in Beloit.

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Diagonal Parking – Vehicle Length Limit

Input received from community engagement mentioned that reversing out of a diagonal space while next to a long vehicle is difficult because it limits vision. Other comments were related to driving along Grand Avenue past long vehicles extending into the roadway. In both cases, a traffic hazard is evident.

Signage is needed to adequately communicate to drivers the code restriction on parking within any diagonal spaces within the City. The restriction reads:

13.11 Size Limitation in Diagonal Parking. No vehicle with overall length, including load, of more than 20 feet shall be parked in any diagonal parking stall in the City.

We recommend that the City provide signs near the end of each block face that provides diagonal parking spaces. We recommend adding this signage as a first step in reducing the incidence of vehicles parking in a way that blocks or encroaches upon the roadway.

Once signage is in place, enforcement of the policy is required to gain traction with policy compliance.

Pavement markings may be needed to provide a visual understanding of the restriction.

On-street Wayfinding to Off-street Supply

Through observation while in the study area, and from comments made during community engagement, we believe that visitors may have a difficult time locating public off-street parking. There are two reasons for this finding. First, some monument signs are obscured by landscaping and are also not lit. Second, when approaching and circulating within downtown Beloit there are no wayfinding signs directing drivers to public parking – instead they direct drivers to specific destinations such as City Hall and the Post Office.

We recommend implementation of parking wayfinding signage on the street, which directs drivers to nearby public off-street parking, similar to that found in Figure 38. The signs could be installed along with other recent wayfinding signage as shown in Figure 39.

Figure 38: Sample Signage – Additional Parking



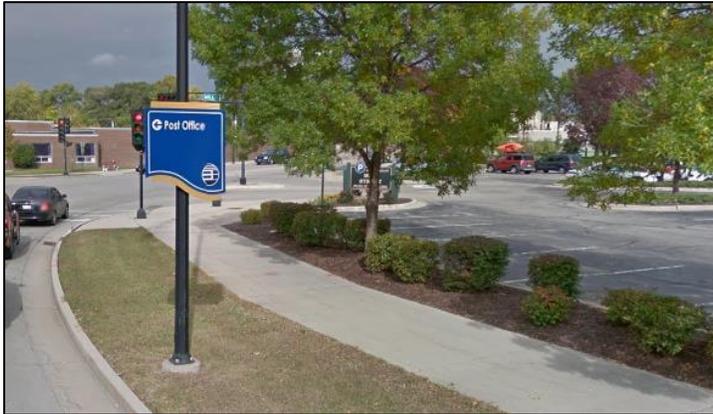
Source: Walker Parking Consultants



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Figure 39: Current Destination Wayfinding



Source: Walker Parking Consultants

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Some cities have an integrated signage package which provide wayfinding for destinations and noting the location of public parking, as shown in

Figure 40: Sample Signage – Integrated Destination/Parking Wayfinding

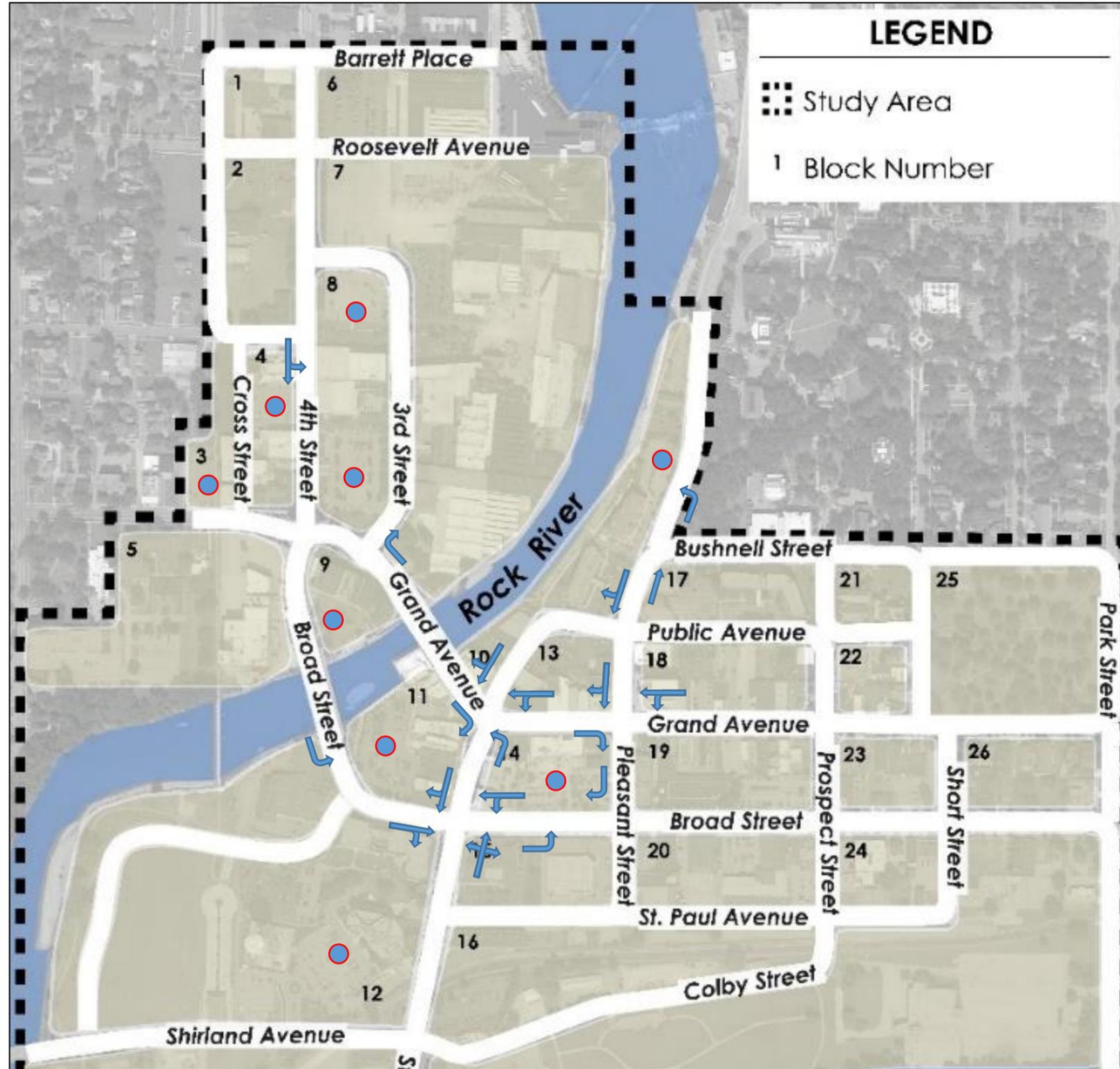


Source: Walker Parking Consultants

Figure 41 provides recommended location and arrow directions for parking wayfinding signage. The name of specific lots could be added to the signs closest to that supply to aid visitors in locating a specific supply. If the visitor is using a printed map, or one on their smartphone, having parking lot names as a point of reference may be helpful.

We also recommend that the City consider adding wayfinding signage at the exit of typically busy downtown Beloit lots. These signs would direct drivers to the on-street wayfinding that would guide them to the next best public off-street parking option. This may avoid some frustration if these busy lots are found to be full – a condition expressed by the community to occur during the Farmer’s Market.

Figure 41: Proposed On-street Wayfinding to Off-street Supply



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Entry to Off-street Supply

As noted within the On-street Wayfinding section, we believe that people have a difficult time locating public off-street parking. We believe that one reason that people have a difficult time locating public off-street parking is because some monument signs are obscured by landscaping and are also not lit. These signs at the entry of public off-street lots tends to blend in easily, making it difficult for drivers to identify the entry of the lot, and the lot as public parking.

We recommend that the City adjust monument signage to make public parking locations easily identifiable for drivers. The surrounding landscaping should be evaluated regarding shadows or visual obstruction.

Signage should communicate to drivers which lots are available all day to the public versus during specific times (shared private lots). We recommend a blue “P” for public lots always available for public use (as already provided). Signage in downtown Beloit should communicate to drivers which lots are available to the public during specific times under a shared parking agreement. We recommend signage that reflects the following for shared private lots: a yellow “P” and “Free to the Public X:00 – X:00 M-F and X:00 – X:00 Weekends”. Online information should also note the distinction between blue and yellow lots.

Figure 42: Existing Ironworks South Lot Monument Sign



Source: Google Earth

Figure 43: Existing Broad Street Lot Monument Sign



Source: Google Earth

Figure 44: Existing 4th Street Lot Monument Sign



Source: Google Earth

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Figure 45: Existing Monument Signs – Easily Identified



Source: Google Earth

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Some of the monument signs within the downtown Beloit parking system are easy to see, as depicted in Figure 45. The Mill Street Lot, Ironworks South Lot and Chester Square Lot have good placement for monument signage. Figure 46 shows how simple the signage can be at the entry of a public lot, while conveying targeted messages – free parking, and walking from this location is reasonable.

Figure 46: Sample Signage – Simple Lot Entry Sign



Source: Walker Parking Consultants

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On-street Parking Restrictions

On-street parking restrictions in downtown Beloit must be clearly displayed on signage to communicate the message at a glance. Signage should be easy to understand/read while driving. Typically, this means presenting prominently the number associated with the hourly restriction along with hours/days of enforcement. On-street parking time limits must be easily understood to help create turnover and availability for visitors. A sample of similar signage is provided in Figure 47.

We recommend that the signage note enforcement as follows:

- 2-Hour Parking – Enforced 8AM-8PM Mon-Sat
- 4-Hour Parking – Enforced 8AM-8PM Mon-Fri

Figure 47: Sample Signage – 2-Hour Time Limit



Source: Walker Parking Consultants

Off-street parking Restrictions

The off-street supply will be more actively managed under the recommended changes to the system. Signage communicating the 3-hour time limit within the public off-street lots where the policy applies will need to be installed. The signs would provide information regarding the 3-hour time limit, when it is enforced and the resident exemption. A sample of similar signage is provided in Figure 48.

We recommend that the sign note enforcement as follows:

- 3-Hour – Enforced 8AM-8PM Mon-Fri
- 3-Hour, Monthly Permits Exempted – Enforced 8AM-8PM Mon-Fri
- Monthly Permits (and Long-Term Parkers) – Enforced 8AM-8PM Mon-Fri

The sign should note “Monthly Permits” instead of “Employee Permits” to allow for potential resident permit parking, if needed.

Figure 48: Sample Signage – 2-Hour Time Limit, Permit Exempted



Source: Walker Parking Consultants

STREET & CURB MARKINGS

Although these may not be fully visible during winter months, we believe that curb and street markings may improve compliance with current code restrictions on location of legal parking. We believe that signage, as presented above, could help reduce the instances of vehicles reducing safety by parking too near intersections. Many communities also provide a yellow line painted on the curb to note the end of legal parking near an intersection.

Potentially a more significant issue that persists in the study area is vehicles over 20' long parking within diagonal spaces. We believe that adding pavement markings at the rear limit of length will help drivers make a decision to either park illegally, or find another more appropriate place to park. It may be best to implement in spring and enforce heavily during that period so the policy is well understood by the following winter.

PUBLIC NOTICES

Finally, notices should be prepared to reflect policy changes. These notices should be provided to those in the impacted area, and also posted on the parking website (once developed). Notices are especially important for those who do not have internet access, or an email account registered with the City.

Printable/reproducible versions of some of this information should be made available to business owners so they may post the information in their establishments if desired. These notices should also be provided to local news outlets (print, radio, television, web).

RECOMMENDATIONS FOR CONSIDERATION
ENFORCE FOR COMPLIANCE



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In the following section the recommendations are directed to **ENFORCE** policies for compliance. Parking systems work best when policies intended to manage them efficiently and effectively are followed. Enforcement is essential to discourage non-compliance. Those in violation of laws should not benefit to the detriment of those in compliance. Enforcement is required to ensure the system works.

More proactive enforcement of the on-street time limits is needed to shift employees to off-street parking supply, made available through policies discussed above. Enforcement could be more effective through the use of improved technology license plate recognition (LPR), enforcement blitzes, and a revised violation fine schedule that forgives a first-time offense, but increases with each occurrence.

Enforcement of the diagonal parking code section should be a priority because non-compliance is a safety hazard versus simply a parking management violation. With signage and possible street markings, the engineering and educating will have been performed. It will be up to enforcement to ensure the policy gains traction and improves safety in this very core area of downtown Beloit.

The biggest impact to improving enforcement at the lowest cost would be to upgrade technology/equipment. We recommend use of an LEP⁹ system, which will help improve enforcement coverage in Beloit in general, and specifically within the study area. Because full-time and part-time staffing for parking enforcement is limited, and other police officers fill-in when possible, some areas and/or time periods are missed. LEP will improve compliance of posted time-limit parking and could be expanded to include any permit areas, if/when needed.

We recommend revising the fine setting strategy. The fines have not been increased in several years, and the cost of paying a citation is similar to the cost of parking for the day in most larger cities. We recommend consideration of a graduated fines/penalties schedule, which may begin with a warning, but escalates with recurring citations over the course of a year (from the initial infraction).

ENFORCEMENT EQUIPMENT

As mentioned, we recommend shifting to an LEP system which would increase coverage of enforcement staff in Beloit. The equipment used to enforce the LEP system utilizes LPR cameras and software. Currently an integrated solution exists which brings together some of the leading edge technologies to provide the LEP system and enforcement of that system. This integrated solution utilizes Genetec AutoVu LPR cameras and software for in-vehicle enforcement.

Handheld devices are used to supplement the system and could be rugged (but heavier) Casio or Motorola options from T2 Systems, or simple Android or Apple Smartphones running Digital Payment Technologies' Digital Patrol Payment Verification App or the T2 Flex Mobile Enforcement App. For the handheld devices, the actual physical infraction tickets are printed using a belt-mounted thermal printer which is connected to the handheld units via Bluetooth.

⁹ LEP is the larger system that utilizes LPR technology to evaluate a vehicle's compliance with posted policies. This includes enforcement handhelds, mobile printers for tickets, back of house computers and software, etc.



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Walker researched the technology and providers in the Wisconsin market. We found that Genetec provides a solution for roughly \$45,000 which includes two (2) cameras, required cables, a Toughbook, and software (installed). For an additional \$3,000 the system could be enhanced with wheel imaging (virtual chalking).

Genetec typically provides these services on a hosted basis, but the PD could manage the system internally if desired. This would require the PD to purchase a server, manage the server themselves, and handle any related IT costs, and pay an annual licensing fee (software updates are ±\$200/vehicle/year if not hosted).

Genetec would “geofence” the zones where different parking policies apply using input from the Beloit PD and department of public works. Any changes to policy/zone after that point can be performed through a call or staff could be trained to edit after the initial set-up.

Because we are recommending an escalating fine schedule, a scofflaw database would be required. Although this could be updated using a cellular network, that would not be required for a time-limit enforcement only application. Instead the scofflaw list could be uploaded via Wi-Fi at the beginning of any shift. If the equipment is used for virtual permits, employee permits would need to be updated via the cellular network – or could be called in to the parking enforcement officer and added manually to the database.

Genetec sells a 5-year warranty with the equipment, which based on technology improvements and desire to replace, seems to be market driven. The City of Chicago currently has 25 systems which it has used for over 7 years. The City of Milwaukee utilizes 48 units for their parking enforcement and may be a good contact regarding the impact of these systems, required training, maintenance, costs, etc.

PARKING ENFORCEMENT STAFFING

Based on Walker’s quantitative analysis and input from the community, enforcement is not occurring regularly. On-street time limits must be actively enforced to ensure availability for short-term parkers. This is especially true during key periods for downtown Beloit businesses (lunch and dinner periods for restaurants, and Saturdays for the Farmer’s Market).

Although an LEP system could allow for a staffing reduction, we believe that Beloit would be better served by increasing the frequency of enforcement, and potentially expanding enforcement to also cover the proposed employee permit parking program lots.

There are two ways to approach enforcement; proactive and reactive. Proactive enforcement works to enforce posted parking regulations and those within the municipal code. Reactive enforcement responds to complaints from the public. Based on current technology and staffing levels the majority of enforcement occurs as reactive. The overnight parking policy seems to be performed proactively, which is likely due to the ease in identifying the violation of policy. To increase the amount of proactive enforcement additional staffing, improved equipment, or both are required.



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We understand that parking enforcement requires staffing. Enforcement of time limit parking is more time consuming than enforcing paid parking. Enforcing paid parking requires only a single pass of a vehicle to identify whether it is complying with payment. Enforcing for time limit parking requires multiple passes of the enforcement officer to identify whether vehicles have overstayed the posted limit.

We recommend performing enforcement blitzes. The area may be “blitzed” a few times a week so regular offenders change their behavior. After an initial blitz, these can be carried out intermittently if problems are believed to persist. We also suggest an enforcement blitz in the area shortly after the new parking regulations are implemented. Instead of citations, parkers would be issued a warning for any newly adopted violations observed and also be provided a half-sheet description of the policy changes to help them figure out where and how to park legally moving forward.

If staffing is severely limited, consider staffing only when needed, but on an irregular schedule to discourage parkers from “gaming the system”.

PARKING ENFORCEMENT FINES

We recommend an adjustment to the fine schedule used to parking violations in Beloit. The current best practice includes warnings for some citations and an escalating fine schedule for repeat offenders. We recommend that warnings be issued for any new policies or policy changes for the first six (6) months. After that period the City may decide whether or not to continue to offer a warning for a first-time offender. The warning would provide information related to the escalating nature of the fine schedule as a way to encourage compliance. The fine for a second offense would be double the current fine (second tier). The fine for a third offense would be triple the current fine (third tier). If a fourth offense is cited within the same year (beginning on the date of the first offense), the vehicle would be fined quadruple the current fine and towed (fourth tier). Any offense after the fourth would result in the same (fourth tier) penalties. The escalating fines would reset each year, but once a warning has been issued, a second warning for the same offense would not be given – any citation received in the years after the original offense would result in a second tier fine. We recommend this fine schedule to allow for accidental infractions to be forgiven, but habitual offenders to be punished in a way that encourages a change in behavior and compliance with parking policies.

We identified two violations that should be exempt from the 1st offense warning, and skip directly to a fine – Handicapped Parking Violation and Snow Emergency Violation¹⁰. The proposed fine schedule for Beloit is found in Table 17.

¹⁰ As refined to only cover major corridors needed to ensure emergency services can be provided effectively and efficiently.



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Table 17: Proposed Fine Schedule - Beloit

Fine Amounts				Code Section	Violation Description
1st Offense	2nd Offense	3rd Offense	4th Offense		
Warning	\$30.00	\$60.00	\$90.00	346.52(1d)	Sidewalk/Sidewalk Area
Warning	\$30.00	\$60.00	\$90.00	346.52(1f)	Double Parked
Warning	\$30.00	\$60.00	\$90.00	346.52(1h)	Prohibited by Signs
Warning	\$30.00	\$60.00	\$90.00	346.53(3)	Within 10 feet of Hydrant
Warning	\$30.00	\$60.00	\$90.00	346.53(4)	Within 4 feet of Alley/Driveway
Warning	\$30.00	\$60.00	\$90.00	346.53(5)	Under 15 feet to Crosswalk
Warning	\$30.00	\$60.00	\$90.00	346.54(1a)	Parallel Incorrect
Warning	\$30.00	\$60.00	\$90.00	346.54(1d)	Improper Parked 12" from Curb
Warning	\$30.00	\$60.00	\$90.00	346.55(3)	No Parking Private Property
Warning	\$30.00	\$60.00	\$90.00	346.55(4)	No Parking Public/Private
\$50.00	\$100.00	\$150.00	\$200.00	346.505	Handicapped Parking Violation
Warning	\$20.00	\$40.00	\$60.00	13.02	Time Limits (Overtime)
Warning	\$30.00	\$60.00	\$90.00	13.03	Alternate Overnight
Warning	\$20.00	\$40.00	\$60.00	13.03(1b)	Parking Prohibited in Business District
\$50.00	\$100.00	\$100.00	\$100.00	13.04	Snow Emergency
Warning	\$30.00	\$60.00	\$90.00	13.07	Not in Designated Stall
Warning	\$30.00	\$60.00	\$90.00	13.07(3)	Not in Marked Stall
Warning	\$15.00	\$30.00	\$45.00	13.10	Terrace
Warning	\$15.00	\$30.00	\$45.00	13.14	36 Continuous Hours Streets, Alleys, Etc...
Warning	\$15.00	\$30.00	\$45.00	13.14(2)	Unlicensed/Unregistered Vehicle on City Street
Warning	\$15.00	\$30.00	\$45.00	13.19	Parking Prohibited in Driveway
Warning	\$25.00	\$50.00	\$75.00	14.19	Boat Launch

All "346" violations fall under municipal code 13.01 as Wisconsin Statutes.

Source: Walker Parking Consultants

IMPLEMENTATION MATRIX

Walker prepared the following implementation matrix to provide basic guidance to implement the recommendations presented above. The matrix includes the various recommended actions, estimated timeframe for the action to take place, an estimate of probable cost, and the parties responsible for taking the action.

The recommended actions are presented in detail within prior sections, but here we provide a summary to guide implementation. The City(s) may wish to utilize the implementation matrix as a high-level checklist as they refine policies and practices as they should be applied in Beloit and South Beloit.

Walker provided estimated timelines within the matrix which are assumed to commence upon review by City staff and officials. There are no existing parking conditions that require urgent action to correct shortfalls. Still, we do recommend installation of signage and enforcement of the vehicle length restrictions for diagonal parking as soon as possible. Implementation of code changes related to planning policy should also be considered in the near-term due to their potential long-term impacts. We also highlight any quick fixes that would be easily implemented.

Walker utilized recent costs from similar work to provide the high-level (order of magnitude) estimate of probable costs. These estimates of probable cost represent typical costs for capital items, equipment, and maintenance; staffing costs are presented in typical hours per week, as labor costs are specific by market. The recent streetscape improvements within Beloit should provide the City with a good gauge for any infrastructure changes they elect to undertake.

Within the final piece of the matrix Walker outlines the responsible parties for each action item. Identifying the responsible parties creates forward momentum as those identified are accountable to perform the required action, and ensure the implementation does not stall out on items for which they are responsible. Due to the decentralized nature of the parking responsibilities in Beloit and South Beloit this section may require adjustment by the City(s) upon review.

The implementation matrix developed for City Center is found in Figure 49.

Figure 49: Implementation Matrix

Recommended Action	Estimated Timeframe		Related Costs (order of magnitude)				Responsible Parties	
	Start	Time Required	Capital	Equipment	Staffing	Maintenance & Repair	Primary	Secondary
Create a "Parking" page on the City's website to provide information to the public on the topic of parking - policies, practices, programs, violations, payments, etc. Develop content as described within report.	Immediate	6 months	\$0	\$0	Under 400 hours to develop webpage and content (includes reviews by several staff)	\$0	Public Works	Technology
Improve compliance of diagonal parking restriction through signage and enforcement, and possibly curb/street markings (not included in costs).	Immediate	3 months	\$2,680	\$0	Enforcement: 2hrs / day (lunch and dinner)	10-Year Replacement Cycle	Transportation / Planning / Public Works	Police
Introduce wayfinding signage to direct drivers to nearby off-street public parking supply.	Immediate	3 Months	\$6,365	\$0	None, cost includes installation	10-Year Replacement Cycle	Transportation / Planning / Public Works	Public Works
Improve visibility of off-street public parking supply monument signage by removing visual obstructions, or placing signage in a location where it is more easily seen on approach.	Immediate	1 Month	\$0	\$0	Initial removal of obstructions + regular landscaping maintenance	\$0	Public Works	
Ensure lighting is adequate and sidewalks are well-maintained for pedestrian paths to public parking supply in Beloit. Safety and security are needed within, and to and from, the public supply.	Immediate	6 Months	Unknown	\$0	No Ongoing Increase	\$0	Public Works	
Implement simplified on-street time restrictions; 2-hour core commercial area; 4-hour periphery.	Immediate	3 months	Minimal, signage already in Beloit can be reallocated	\$0	Enforcement: 8hrs / day (weekdays); 8hrs / day (Saturday)	\$0	Transportation / Planning / Public Works	Police
Eliminate or revise Overnight Alternate Side Parking restriction.	Immediate	3 months	\$0	\$0	Sign and post removal	\$0	Transportation / Planning / Public Works	
Reinstate minimum parking requirements in the CBD, supported by a program for reductions and payments to the City for spaces not provided on-site or through an off-site agreement.	Immediate	3 months	\$0	\$0	Will require additional staff and/or consultant review	\$0	Planning	
Require (re)development, expansion, or change to more intensive land use within CBD to perform a shared parking study to right-size needs, and potentially share off-site parking supply.	Immediate	3 Months	\$0	\$0	Will require additional staff and/or consultant review	\$0	Planning	
Adjust code to allow for shared parking with off-site parking supply within 600 feet for visitors/patrons and 1,200 feet for employees.	Immediate	3 Months	\$0	\$0	No Ongoing Increase	\$0	Planning	
Develop a Shared Parking District in which the City strategically identifies surface parking to utilize for the public during non-business hours. Replace signage on these lots as documented in the report.	6 Months	6 Months	\$0	\$0	Will require limited program administration + light routine maintenance	Assume \$10 per space per month to lease for otherwise vacant spaces	Transportation / Planning / Public Works / Finance	
Develop sample or template agreements to support B2B, B2C and B2G shared parking.	Immediate	3 Months	\$0	\$0	No Ongoing Increase	\$0	Planning / Finance	
Develop a fee-based system for property owners who opt not to provide required parking on-site or find off-site supply. (e.g. Parking Credit or Payment in Lieu of Parking)	Immediate	9 Months	\$0	\$0	Will require additional research to develop program and determine community-appropriate fees	\$0	Planning / Finance	
Develop an employee parking permit program for City-owned lots to better manage long-term users, understand long-term parking demand needs, and foster an economic parking market. Permits should be lot-specific to better balance utilization and create availability.	6 Months	3 Months	\$0	\$0	Once set up online, limited administration	\$0	Transportation / Planning / Public Works / Finance	

Figure 49: Implementation Matrix (cont'd)

Recommended Action	Estimated Timeframe		Related Costs (order of magnitude)				Responsible Parties	
	Start	Time Required	Capital	Equipment	Staffing	Maintenance & Repair	Primary	Secondary
Introduce and enforce a 3-hour time limit in the Chester Square Lot and 4th Street Lot.	Immediate	3 Months	\$0	\$0	Enforcement: 8hrs / day (weekdays); 8hrs / day (Saturday)	\$0	Transportation / Planning / Public Works	Police
Introduce employee parking permit program in the West Grand Lot for long-term parkers who had used Chester Square Lot and 4th Street Lot.	6 Months	3 Months	\$0	\$0	Once set up online, limited administration	\$0	Transportation / Planning / Public Works	Police
Introduce and enforce a 3-hour time limit, monthly permits exempt within Ironworks Lots, Mill Street Lot, and Broad Street Lot. Shift as many monthly parkers to West Grand Lot as possible after Chester Square and 4th Street Lot long-term parkers are accommodated.	6 Months	3 Months	\$0	\$0	Enforcement: 8hrs / day (weekdays)	\$0	Transportation / Planning / Public Works	Police
Develop an event parking plan for the Farmer's Market and use as a template for other downtown Beloit events. Purchase temporary, removable signage to notify visitors where nearby off-street parking is available.	Immediate	1 Month	\$2,010	\$0	No Ongoing Increase - staff currently provided to block roads	5-Year Replacement Cycle	Transportation / Planning / Public Works	Public Works / Police
Purchase LPR equipment to improve parking enforcement. Equipment could be used to enforce parking restrictions across multiple municipalities in the area, if desired. Equipment can be used for on-street time restrictions and virtual monthly/annual permits.	Immediate	3 Months	\$0	\$45,000	Staffing reduction for same area coverage	5- to 7-Year Replacement Cycle	Police / Finance	Transportation / Planning / Public Works
Adjust enforcement schedules to match peak parking periods. Add staff for occasional blitzes to improve compliance.	Immediate	3 Months	\$0	\$0	No Ongoing Increase	\$0	Police	
Revise the current fine structure as described within the report.	Immediate	3 Months	\$0	\$0	No Ongoing Increase	\$0	Planning / Finance	Police

APPENDIX A: COMMUNITY ENGAGEMENT

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APPENDIX B: FIELD DATA COLLECTION

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APPENDIX C: FUTURE PARKING NEEDS

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APPENDIX D: POLICY REVIEW

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APPENDIX E: EXAMPLE PARKING AND WALKING MAP

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