10-YEAR PARKING OPERATIONS AND DEVELOPMENT PLAN

LAWRENCE, KANSAS

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2. INTRODUCTION

At the request of the City of Lawrence ("City"), DESMAN Inc. ("DESMAN") was retained to assist the City with the development of a 10-year operational and development plan for the City's parking system in the Downtown District ("Downtown") and residential areas around the Downtown and the University of Kansas ("University" or "KU") campus. According to the City, the motivation behind this project was the fact that a thorough review and assessment of the City's entire parking operation had never been conducted, only a limited number of studies related to specific projects or smaller sub-areas of the city. The goal was to develop a plan for improving parking operations in order to address current challenges and to prepare for the impact of potential future development in Downtown.

As is common in many municipalities, management of various parking tasks in Lawrence has been assigned to various departments within the municipal government according to the perceived similarity of tasks within those departments. Parking planning and the development of new parking assets has been placed under Planning and Development Services, as this task is seen as an extension of that department's natural mission and powers. The Public Works Department, which provides infrastructure, maintenance and engineering services for projects in the City, is responsible for maintenance of the parking facilities, as well as installation and maintenance of parking-related signage. Parks and Recreation maintains landscaping around the parking facilities, as well as sweeping, clearing snow and emptying trash. The Police Department is tasked with enforcement of parking regulations and parking meters repairs, while the Municipal Court, under the supervision of the City Attorney's Office, handles adjudication of parking violations. While this distribution of workload may seem logical, it can lead to a lack of coordination among the different departments and the lack of an overall vision and long-term strategy for the City's parking operation. In a similar fashion this distribution limits the potential to implement travel demand management measures.

Downtown Lawrence is developing rapidly, with hundreds of residential units being permitted and constructed over the last 10 years, in addition to infill development of formerly-vacant buildings and the prospects of a grocery store and a conference center on the horizon, among other projects. At this point, it is necessary for the City to prepare its parking system to handle this growth, in addition to becoming more efficient and technologically advanced. Finally, the growth of Downtown and the University has made it necessary to address the impact that these two parking demand generators are having on the surrounding neighborhoods, in order to maintain the quality of life of residents of the City.

To those ends, DESMAN worked in coordination with the City to understand the current parking system and operations, define the challenges facing the City, identify opportunities for improving the operations, and formulate implementable recommendations. In addition to reviewing historical performance data for the parking system and conducting observations of current parking activity, DESMAN held extensive discussions with City personnel affiliated with parking operations, as well as the Project Steering Committee, representatives of the University, and stakeholders from across the City. Stakeholder discussions were conducted over multiple days and included participants from the following groups:

- Downtown business owners and operators;
- Downtown residents;
- Owners and operators of event venues within the study area;
- Property developers, and;

- Residents and business owners from the neighborhoods within and immediately bordering the study area.

The following report presents the results of this work effort, which draws on existing data and City and community input, as well as best practices from the parking industry.

3. Public Input to the Process

As is typical of our approach to this type of project, the first step toward developing a long-term plan for parking in Lawrence was to become intimately acquainted with the project study area through firsthand exploration of the area, review of prior and associated efforts, and in-depth discussions with City personnel and constituents. Once a basic understanding of market conditions was established, a series of discussions were had with concerned constituents and stakeholders, following a "listen-confirm-respond' format.

Throughout the public process, DESMAN engaged in a program of constant analysis and assessment, developing potential solutions to issues as they were identified and quantified, testing those in internal meetings with the city staff and steering committee members and then with stakeholders through the public engagement process. Those solutions which appeared to have viable support were then further refined, including preliminary cost/benefit assessments to quantify fiscal impact.

During the process of formulating the Parking Operations and Development Plan for the City of Lawrence, public input on parking in the city was gathered by a variety of means, including: sit-down discussions with various stakeholder groups, telephone calls with institutional stakeholders, public discussion at a meeting of the Lawrence City Commission, and an online survey accessible by residents of and visitors to Lawrence. Based on the input received, the following issues were identified for further study/consideration:

- A lack of long-term parking in certain areas of Downtown may be inhibiting employment growth
- New residential development in Downtown has led to parking issues in bordering neighborhoods, as a result of zoning code which does not require developments in the Downtown District to provide on-site parking
- Available parking spaces are frequently difficult to locate on/near Massachusetts Street, with meter feeding by owners/employees of businesses contributing to the lack of available parking
- Metered and timed parking is difficult/labor-intensive to enforce, given the City's use of outdated technology
- Significant numbers of parkers frequently violate parking rules, resulting in nearly 100,000 parking citations issued annually
- KU students living near campus, as well as students, faculty, staff, and construction workers commuting to campus on a daily basis, often completely fill the available on-street parking spaces in the neighborhoods surrounding campus, making parking extremely difficult for other area residents
- Oread business owners are skeptical of the benefits of residential permit parking and worried about the potential downside for their businesses
- Lighting levels in some of the parking lots and the New Hampshire Garage make the facilities feel unsafe at times

- There is a desire among some citizens for a circulator bus in Downtown to make it easier for visitors and residents of the city to visit multiple destinations, without having to drive or to move their cars if they do drive
- Increasing residential density in the vicinity of Lot 8 has led to increasing conflicts with the Lawrence Farmers' Market, leading to calls to find a permanent home for the Market in a different Downtown location
- The City does not have a reserve fund established to fund future parking facility and equipment repair and replacement needs

The analysis and Plan which follow attempt to address the above issues, while factoring in observed levels of parking utilization and anticipated new development in Downtown.

Two issues for which recommendations have not been developed as part of this Plan are: 1) creation of a Downtown circulator bus and 2) establishment of a permanent location for the Lawrence Farmers' Market. In terms of improving the operation of the City's public parking assets, the lack of a clear geographical parking deficiency in Downtown, along with the potential cost of operating a circulator bus, led DESMAN to focus our efforts on developing other, more-effective and less-costly methods for improving public parking in Downtown Lawrence. Additionally, with the upcoming Downtown Master Plan set to tackle the issue of ideally locating the Lawrence Farmers' Market, it was determined that the focus of this effort should be on accommodating existing and future parking demand and not on selecting a specific location for the Market.

4. Existing Conditions – Downtown

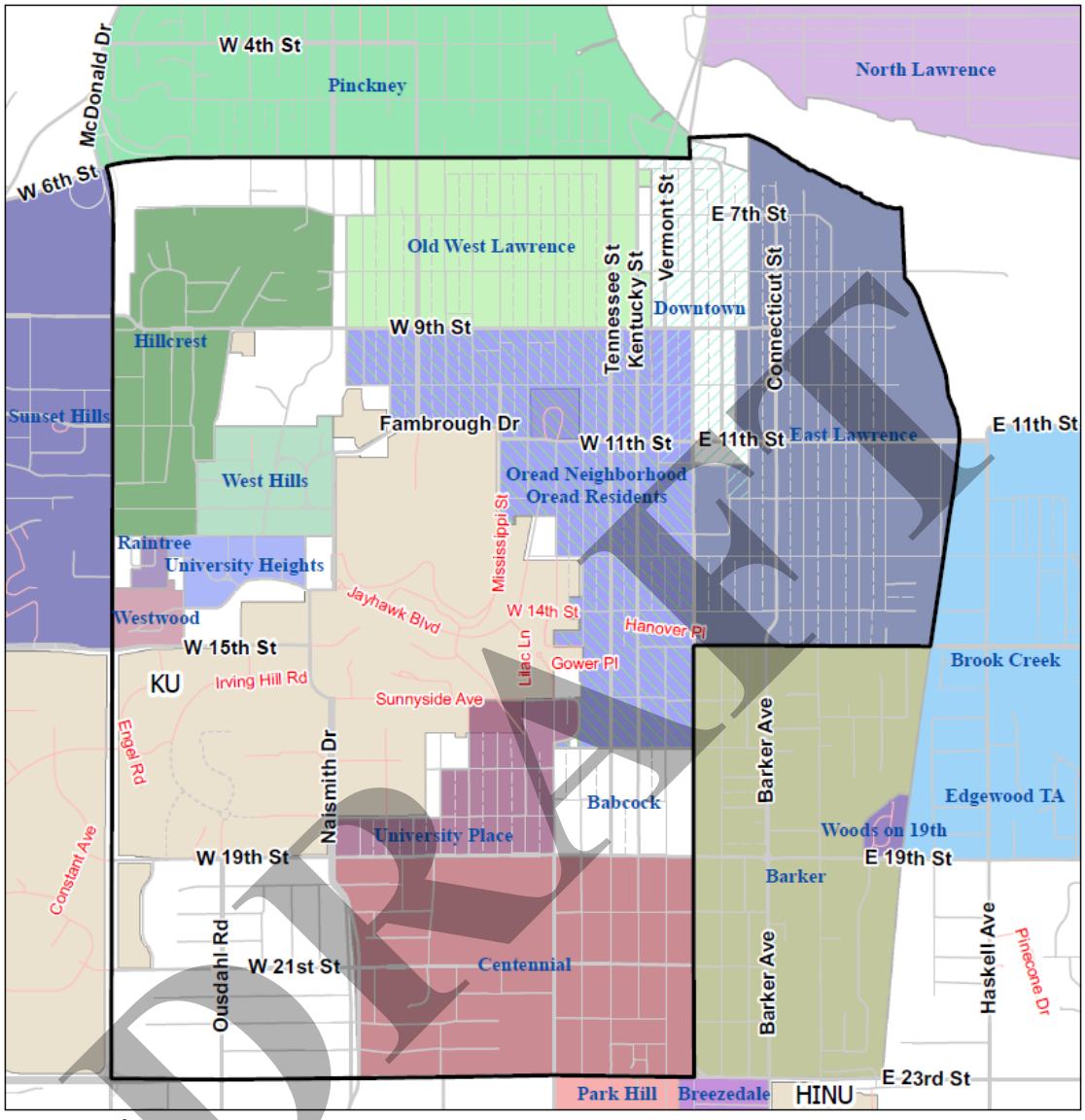
4.1 Study Area

The study area for this project was chosen based on the desire to evaluate and improve parking in both Downtown and the neighborhoods bordering Downtown and the KU campus. Downtown Lawrence has begun to experience the parking-related issues of a modern urban center, due to increasing density and development. As a result of this growth, as well as the ongoing growth of the University, the mostly-residential neighborhoods bordering these two areas have experienced increased parking demand on their residential streets. Given the impact that these high-growth areas have on the surrounding residential neighborhoods, it was necessary that the study area encompass these independent, but interconnected parts of the City.

In general, the study area is bounded by 6th Street on the north, Oregon Street on the east, 23rd Street on the south, and Iowa Street on the west, excluding both the University of Kansas campus and the Barker neighborhood. While these streets form the basic boundaries of the study area, there are deviations from this boundary which allow specific blocks to be included or excluded from this study.

Figure 1 shows the boundaries of the study area, as provided in the City's Request for Proposals for this project. In addition, this figure identifies the neighborhood associations located within the study area, the portions of the study area not organized into neighborhood associations and the boundaries of the KU campus.

Figure 1 – Parking Operations and Development Plan Study Area



Source: City of Lawrence

4.2 Downtown Public Parking Supply

The supply of parking in Downtown Lawrence that is the focus of this study consists of on-street (curbside) spaces, public surface lots and City-owned parking garages. While there are a small number of private surface lots and two private garages in Downtown, these are dedicated for exclusive use by certain groups, such as customers of a certain business or employees working or tenants living in a particular building and, as such, were not included in the inventory of public parking.

For the purposes of this study, on-street spaces are a combination of metered and handicapped spaces; unrestricted spaces on Rhode Island Street and Kentucky Street were not considered in the downtown public parking supply. The City's surface parking lots and parking garages contain a combination of metered, time-restricted and handicapped spaces, as well as numbered spaces controlled by pay-by-space

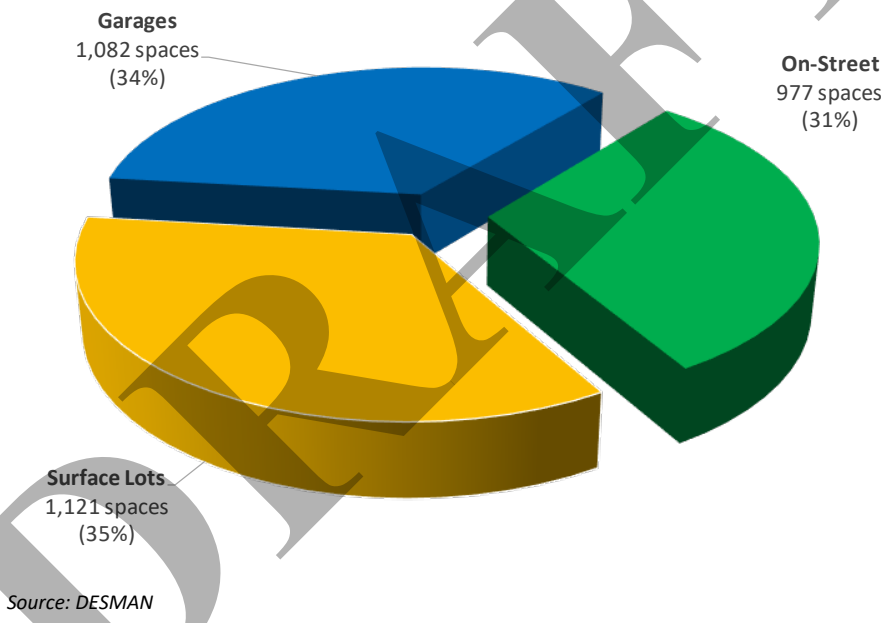
payment kiosks. Additionally, a number of these off-street parking facilities contain spaces that are dedicated for use only by certain groups, such as hotel guests and employees, private businesses, City vehicles, and County vehicles. When discussing the utilization of the public parking inventory, these dedicated spaces were excluded from the analysis.

In total, the existing supply of parking within the Downtown portion of the study area is 3,378 spaces, of which 3,180 spaces are available for public parking (977 on-street and 2,203 off-street). The breakdown of spaces is as follows:

- 982 On-Street Spaces (977 public)
- 1,127 Spaces in 16 Surface Lots (1,121 public)
- 1,269 Spaces in 3 Garages (1,082 public)

Figure 2 presents the breakdown of the public parking supply by type.

Figure 2 – Existing Public Parking Supply by Type



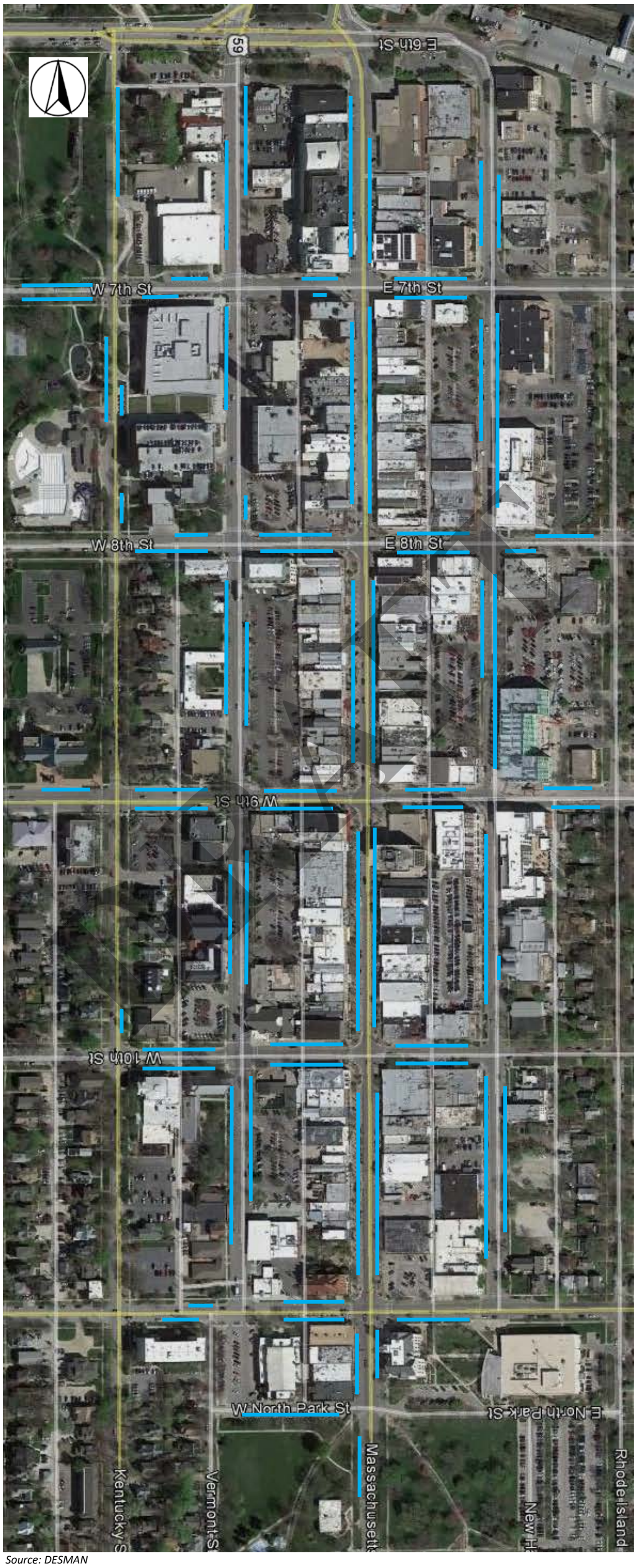
Source: DESMAN

4.2.1 On-Street Parking

On-street public parking in Downtown Lawrence is a combination of metered spaces, spaces signed for handicapped parking only, spaces reserved for City vehicles, one taxi parking space, and unmetered spaces. Each on-street parking meter controls one space and parking time can only be paid for with coins. Additionally, there are five different parking meter time limits: 15-minutes, 30-minutes, 2-hours, 5-hours, or 10-hours.

For ease of readability, **Figure 3** was created to show, generally, the locations of the on-street parking spaces in Downtown. The City produces a more detailed map which shows the locations of every parking space in Downtown Lawrence, including the associated parking restriction, which can be found in the Appendix to this document. Additionally, the full inventory of on-street parking spaces, by block and restriction, can also be found in the Appendix.

Figure 3 – On-Street Parking Supply



Source: DESMAN

As shown in the figure, on-street parking occupies nearly every block face in Downtown. Additional detail regarding the number of each type of on-street space is provided in **Table 1**.

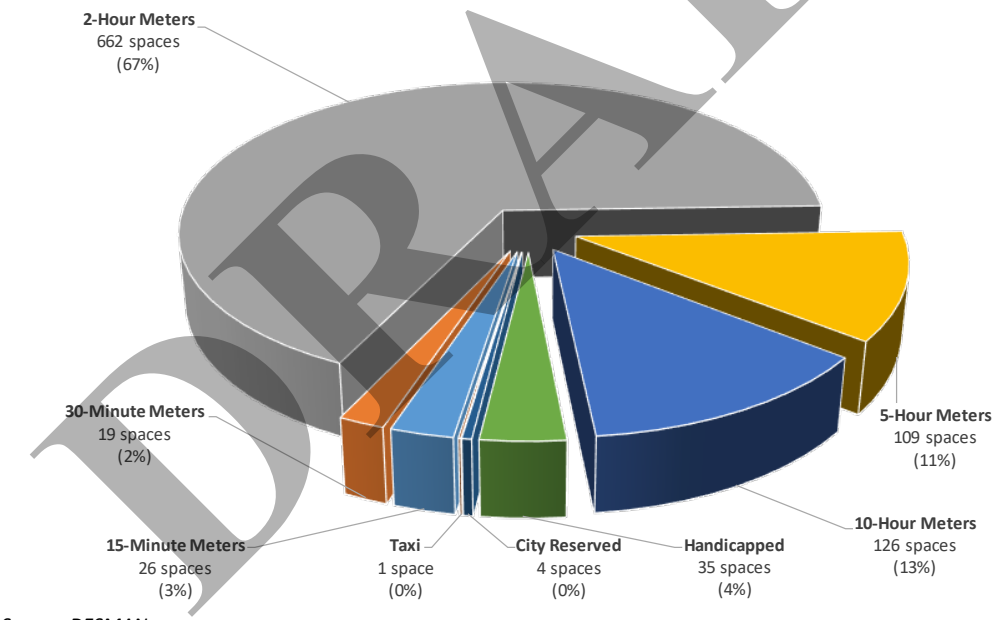
Table 1 – On-Street Parking Supply

Type of Space	Inventory
15-Minute Meters	26
30-Minute Meters	19
2-Hour Meters	662
5-Hour Meters	109
10-Hour Meters	126
Handicapped	35
Total Public Parking	**977**
City Reserved	4
Taxi	1
Total On-Street Parking	**982**

Source: DESMAN

Figure 4 shows the breakdown of on-street spaces by type and the percentage of each type of space.

Figure 4 – On-Street Spaces by Type



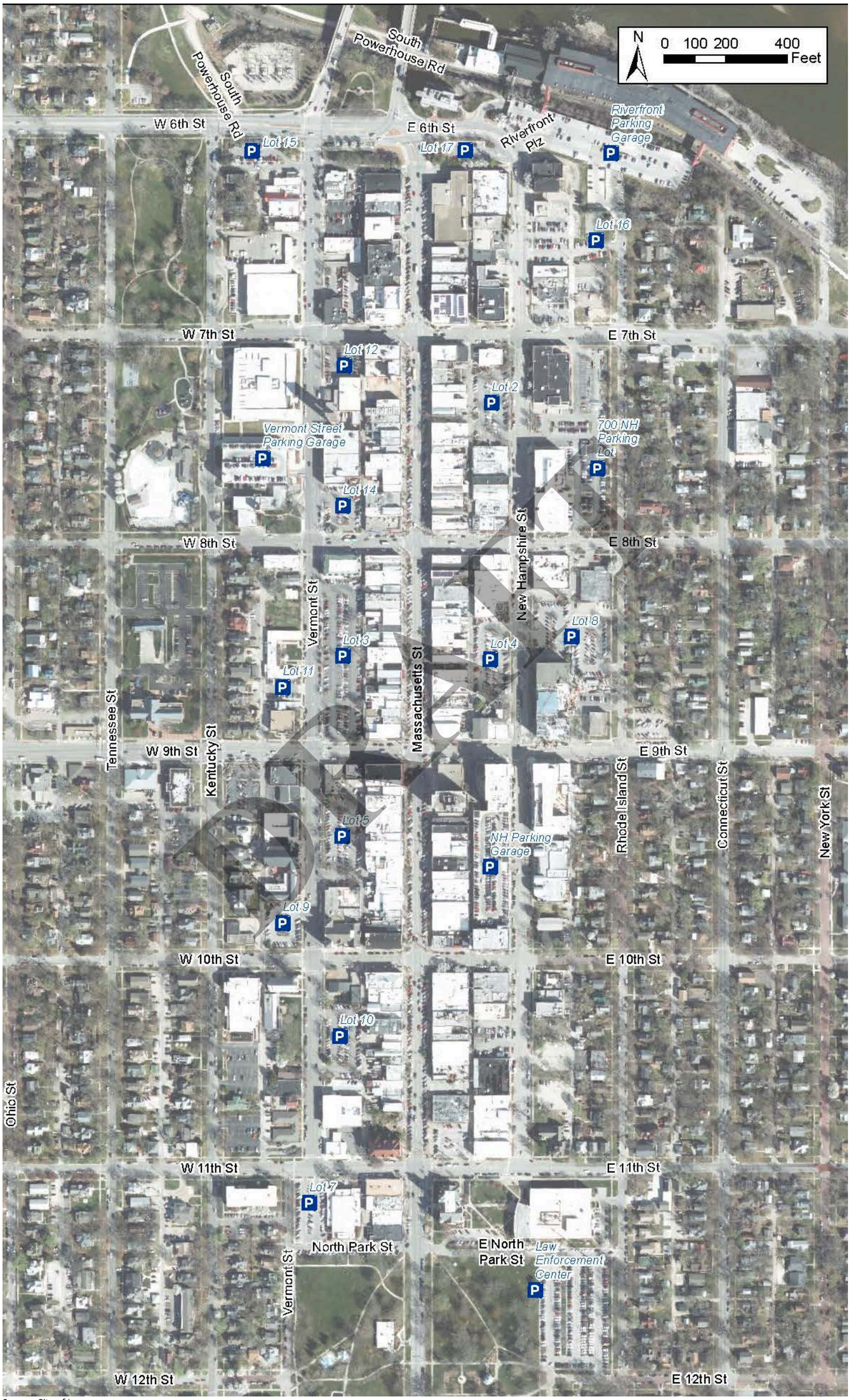
Source: DESMAN

Of the 982 on-street spaces examined in Downtown Lawrence, 897 spaces are controlled with a 2-, 5- or 10-hour meter, or about 91% of the total on-street spaces.

4.2.2 Off-Street Parking

Public off-street parking spaces are located in a combination of surface parking lots and garages, all of which are owned by the City, with the exception of the Law Enforcement Center Lot which is owned by Douglas County. In total, there are 2,199 off-street spaces available for public parking. **Figure 5** shows the locations of the off-street public parking supply in Downtown Lawrence.

Figure 5 – Off-Street Public Parking Supply



Source: City of Lawrence

Table 2 shows the total parking spaces in each facility, as well as detailed breakdowns of the public versus private spaces and the different types of spaces within each facility. The facility names in the table correspond to the map in Figure 5.

Table 2 – Off-Street Parking Supply

		Private Parking Spaces					Public Parking Spaces						
Facility Name	**Total Parking Inventory**	Reserved Hotel	Hotel ADA	Reserved Private	City or County Reserved	**Total Public Parking Supply**	2-Hour Meters	10-Hour Meters	ADA Spaces	2-Hour Free	10-Hour Free	2Hr/10Hr Free	10-Hour Paid[1]
Lot #2	71					71			2	69			
Lot #3	166					166			6	160			
Lot #4	85					85		16	3	66			
Lot #5	81					81			4	77			
Lot #7	46				1	45	8	34	3				
Lot #8	101					101		96	5				
Lot #9	38					38		36	2				
Lot #10	65					65		29	3	33			
Lot #11	21				2	19		17	2				
Lot #12	27					27			1	26			
Lot #14	36					36			2	34			
Lot #15	36					36		35	1				
Lot #16	43					43		43					
Lot #17	25					25	23		2				
700 New Hampshire Lot	61					61	10	25	4				22
Law Enforcement Center Lot	225				3	222	14		3		205		
New Hampshire Garage	489			13	11	465			16	90	132	102	125
Riverfront Garage	468	109	4		42	313			11	68		47	187
Vermont Street Garage	312			6	2	304			9	92	73		130
TOTALS	**2,396**	109	4	19	61	**2,203**	55	331	79	715	410	149	464

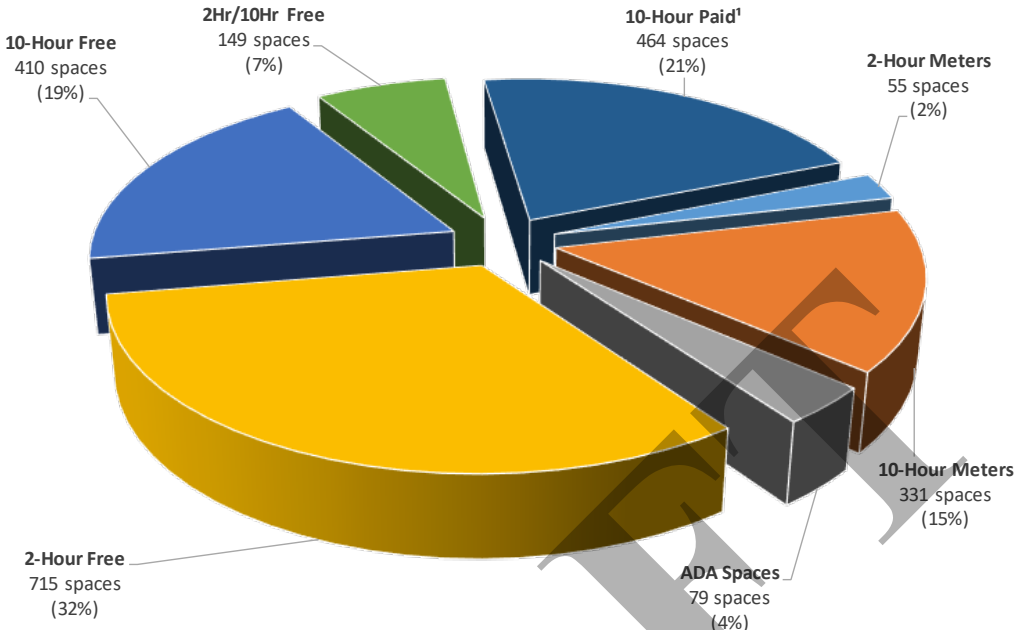
1) These spaces are for monthly permit holders or daily parkers using pay-by-space kiosks, depending on the facility.

Source: DESMAN

While there is a total of 2,396 parking spaces in the off-street facilities, 2,203 of those spaces are available for public use. The remaining 193 spaces are reserved for specific user groups, including the City and Douglas County, as well as private entities that have negotiated agreements with the City.

As shown in **Figure 6**, approximately 61% (1,353 of 2,203 spaces) of the public off-street spaces can be used for free, while the remaining 39% are paid spaces controlled by single-space meters or, in the case of 10-hour paid spaces in the parking garages, controlled by electronic pay-by-space payment kiosks or hangtag parking passes. In addition, not counting the Handicapped spaces, approximately 40% of the public off-street spaces are 2-hour spaces and 60% are 10-hour spaces.

Figure 6 – Public Off-Street Spaces by Type



Source: DESMAN

4.2.3 Private Parking

In addition to the 132 private parking spaces located in public parking facilities (shown in Table 2), the balance of the private parking spaces in Downtown are located in a number of small surface lots, as well as two small garages. In all cases, these private parking facilities are dedicated to specific user groups, typically employees and patrons of a particular business or religious institution or, in the case of the two parking garages, residents of a particular apartment building or hotel guests. In total, there are approximately 1,260 private surface lot spaces and 100 spaces in each of the two private garages.

Aside from these parking facilities that are dedicated to private uses, there is one surface parking lot in Downtown that was identified as being privately-owned, but allowing public parking. Located at the corner of Massachusetts Street and E. 11th Street, this 33-space surface lot allows monthly parking by permit only, at a cost of $7.00 per month.

The City's detailed map of public parking (included in the Appendix) also shows the locations of the private parking spaces in Downtown.

4.3 Current Utilization of Parking

Parking utilization or occupancy is a common measure for determining the adequacy of a City's parking supply. By documenting the utilization of spaces during various periods of time, it is possible to determine the peak demand period and the extent to which different types of parking spaces are used. Ultimately, the analysis of existing parking demand can be used as the basis for evaluating the current adequacy of the parking supply, as well as the anticipated adequacy of the parking supply in the future, based on projected growth and development in Downtown Lawrence.

In order to develop an understanding of the parking demand conditions in Downtown Lawrence, occupancy surveys of public parking spaces, both on- and off-street, were conducted in December 2016 and January 2017. The December surveys were conducted by the City's Parking Control Officers on Wednesday the 14th, with the aim of documenting typical parking demand during the holiday season for a sampling of spaces; December parking demand tends to be significantly higher than typical peak demand periods in vibrant downtowns. January's occupancy surveys were conducted through a joint effort of the City and the Consultant on Wednesday the 25th. This day was identified by the City as characteristic of a typical day in Downtown Lawrence when KU is in session, not during the holidays or an exam week.

At the outset of this project, the City identified weekdays during normal business as the time when parking demand is at its peak and localized parking shortages occur in Downtown. As a result, in consultation with the City, it was determined that evening and weekend occupancy surveys were not necessary in order to gain an understanding of typical peak demand conditions. However, observations of evening parking activity were made throughout the course of this project, the results of which were factored into the recommendations for improving the City's parking operation.

4.3.1 January (Typical) Parking Utilization

The pattern of parking utilization on a weekday in most downtowns consists of increasing utilization in the morning toward a peak, typically between 10AM and 2PM, with a steady decline in utilization as the daytime moves to evening. Additionally, the peak day of the week is typically a Tuesday, Wednesday or Thursday, as more employees tend not to work on Mondays and Fridays than the other days of the week. In the case of Lawrence, per the City, the impact of the KU population on Downtown causes parking demand to peak when classes are in session. These factors guided the selection of the date and day of the week chosen for the Downtown Lawrence parking surveys.

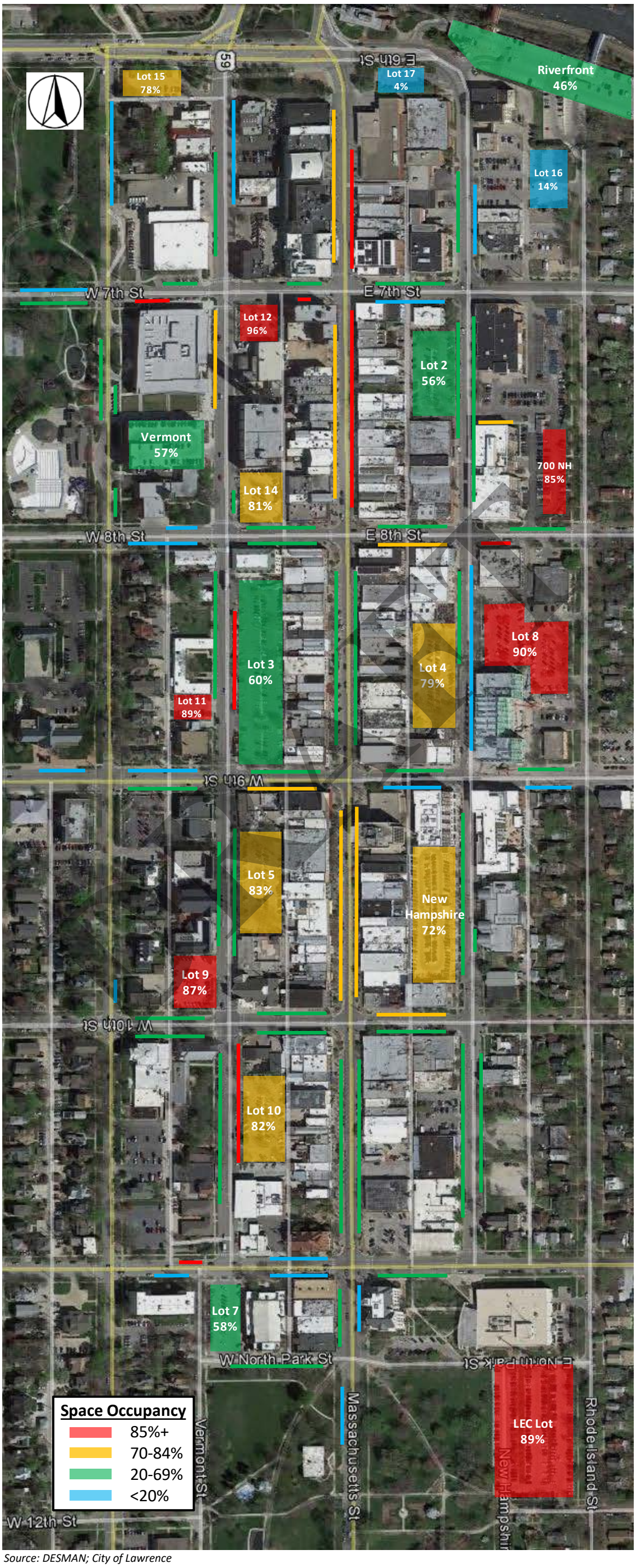
On Wednesday, January 25th, 2017, occupancy surveys of the public parking spaces within the Downtown study area were conducted from 10AM to 11AM and 1PM to 2PM. These survey periods were chosen in consultation with the City, based on the typical patterns of utilization which occur on weekdays, in order to capture the peak demand periods.

The survey data of utilization by parking facility and on-street block face for both the morning and afternoon peak periods is presented in **Figures 7** and **8**, respectively.

Figure 7 – Downtown Parking Utilization (AM Peak), Wednesday, January 25th, 2017

Source: DESMAN; City of Lawrence

Figure 8 – Downtown Parking Utilization (PM Peak), Wednesday, January 25th, 2017



Source: DESMAN; City of Lawrence

The off-street parking facilities and metered, on-street block faces were highlighted in the figures to indicate the percentage of spaces in each that were occupied at the time of the surveys: **RED** for 85% or more, **ORANGE** for 70-84%, **GREEN** for 20-69%, and **BLUE** for less than 20%. In the parking industry, parking facilities and systems are typically designed so that, even during peak demand periods, some percentage of the parking spaces remain empty. Ideally, during a typical peak demand period, 15% of the spaces in a facility or on-street remain available to accommodate new parkers. Maintaining an inventory of available spaces, even during the peak demand period, makes it easier for parkers to find a space, reduces the amount of time drivers spend searching for empty spaces and generally results in a more positive parking experience. This concept, referred to as "practical capacity", refers to that point at which a parking facility or system has reached its functional limit and is unable to efficiently or safely accommodate additional parking demand.

As seen in Figure 7 above, during the morning survey period, lots 11, 12, and 15, as well as the Law Enforcement Center Lot and 700 New Hampshire Lot, experienced utilization of 85% or more of their parking spaces. Additionally, a number of block faces along Vermont Street, W. 7th Street and E. 8th Street were also highly utilized. While five additional off-street facilities were more than 70% occupied, the remaining surface lots, along with two of the three garages and nearly all of the remaining on-street, metered spaces were less than 60% occupied during the morning survey. Overall, the public parking supply within the Downtown study area was 52% occupied.

During the afternoon survey period (see Figure 8 above), lots 8, 9, 11, and 12, as well as the Law Enforcement Center Lot and 700 New Hampshire Lot, experienced utilization of 85% or more of their parking spaces. In addition to the Vermont Street, W. 7th Street and E. 8th Street block faces that were also highly utilized in the morning, the meters on two large block faces of Massachusetts Street were more than 85% occupied during the afternoon survey period. Also during this survey period, six off-street facilities were more than 70% occupied, as well as additional segments of Massachusetts, Vermont, 8th, 9th, and 10th streets. Overall occupancy of public parking reached 62% during the afternoon survey period. Both the morning and afternoon peak period survey data indicate that there is likely a perceived lack of parking in Downtown, as opposed to an actual lack of available spaces.

Table 3 presents the January survey data summarized by type of parking space.

Table 3 – Parking Space Occupancy by Space Type

Type of Space	Inventory	AM Occupancy	AM % Occ.	PM Occupancy	PM % Occ.
15-Minute Meters	26	1	4%	8	31%
30-Minute Meters	19	8	42%	6	32%
2-Hour Meters	717	225	31%	361	50%
5-Hour Meters	109	64	59%	65	60%
10-Hour Meters	457	315	69%	318	70%
Handicapped	114	22	19%	27	24%
2-Hour Free	715	385	54%	520	73%
10-Hour Free	410	339	83%	370	90%
2-/10-Hour Free	149	78	52%	86	58%
10-Hour Paid	464	229	49%	217	47%
TOTAL	**3,180**	**1,666**	**52%**	**1,978**	**62%**

Source: DESMAN

As shown in the table, the most highly occupied type of public parking space during both the morning and afternoon survey periods were the free 10-hour spaces, followed by the 10-hour metered spaces. These results suggest that, during the daytime on weekdays, the demand for long-term parking may warrant adjustments in the supply of parking spaces to provide more long-term spaces.

4.3.2 December (Holiday) Parking Utilization

In order to present a fair comparison between the January and December utilization data, **Table 4** shows the sample data from the afternoon of Wednesday, December 14th, side-by-side with the utilization data that same group of spaces gathered on the afternoon of Wednesday, January 25th.

Table 4 – Sample Peak Parking Utilization, December 14th, 2016 vs. January 25th, 2017

Location/Facility	Public Parking Inventory	DEC. 14 PM PEAK	DEC. 14 PM PEAK %	JAN. 25 PM PEAK	JAN. 25 PM PEAK %
700 Massachusetts (east)	37	32	**86%**	34	**92%**
700 Massachusetts (west)	36	35	**97%**	27	**75%**
800 Massachusetts (east)	36	21	**58%**	19	**53%**
800 Massachusetts (west)	36	20	**56%**	21	**58%**
900 Massachusetts (east)	37	25	**68%**	27	**73%**
900 Massachusetts (west)	36	26	**72%**	26	**72%**
Lot #2	71	64	**90%**	40	**56%**
Lot #3	166	135	**81%**	100	**60%**
Lot #4	85	69	**81%**	67	**79%**
Lot #5	81	44	**54%**	67	**83%**
Lot #8	101	70	**69%**	91	**90%**
New Hampshire Garage	465	318	**68%**	337	**72%**
Vermont Garage	304	201	**66%**	173	**57%**
	1,491	**1,060**	**71%**	**1,029**	**69%**

Source: DESMAN

When comparing the December and January utilization data, there is not a significant difference in the overall peak demand for this sample group of public parking spaces. In December, 71% (1,060 spaces) of the 1,491 spaces surveyed were occupied, while 69% (1,029 spaces) of the sample group of spaces were occupied in January.

Despite the fact that the December survey occurred during KU's Fall Semester final exams, the numbers indicate that there was not a decrease in the demand for parking in Downtown. This phenomenon could be attributable to increased demand from holiday shoppers counteracting the decrease in demand for parking from KU students, faculty and staff. Alternatively, these numbers could indicate that Downtown does not experience increased demand for parking during the holiday season and that the demand generated by the KU population remained steady during finals week. Given the fact that less than half of the public parking spaces in Downtown were surveyed in December 2016 and considering that this table compares only two days-worth of parking data, it is impossible to know why there was not the expected variation in the utilization of parking between the time periods.

4.4 Length of Stay and Turnover Observations

Utilization, the measure of the number of cars parked at a given time against the capacity of a facility or area, is one measure of activity within a parking system and provides insight into which facilities may be over- or underused. However, counting cars at a few fixed points in time provides no insight into the volume of vehicles coming in and out of a facility or area. With this type of survey, it is impossible to know if the utilization levels recorded in the field reflect hundreds of cars coming in and out of a facility or a smaller number of cars remaining parked for the entire day. Length of stay and turnover surveys provide this additional level of detail.

Length of stay and turnover of spaces is of particular concern in downtowns when analyzing curbside parking. On-street spaces are the most coveted, especially by first-time or infrequent visitors, as it allows parkers to locate a destination first, then park within sight of the establishment or institution which drew them downtown. Ensuring that on-street spaces are used by shorter-duration parkers (i.e. non-employees) will encourage turnover of these spaces, so that Downtown patrons and visitors can more easily find a parking space near their destination, be accommodated, and conduct commerce within the central business district.

In order to address concerns voiced by a number of stakeholders in Downtown Lawrence about employees of Downtown businesses parking all day in the most-convenient on-street spaces, sample length of stay and turnover surveys were conducted on Massachusetts Street. Each hour from 10AM to 2PM on the January survey day, the license plates of every vehicle parked along Massachusetts Street from E. 6th Street to South Park Street were recorded. This time period was chosen based on the rationale that, if vehicles were parking in the same space all day, they would be parked for the entire length of the survey period. This methodology made it possible to identify the specific vehicle parking in every space throughout the course of the day. The data was then analyzed to determine how many cars parked in each space during the survey day and how long each vehicle was parked in the space.

During the surveyed time period, a total of 690 vehicles parked in the 366 parking spaces on Massachusetts Street. The average duration of stay and turnover characteristics documented are presented in **Table 5**.

Table 5 – Duration of Stay and Turnover Observations (January 25th, 2017)

		Hours Parked per Car						
Street Segment (Side)	Inventory	1 Hour	2 Hours	3 Hours	4 Hours	Total Parked Cars	Average Duration (Hours)	Average Turnover
6th - 7th	57	100	13	3	1	117	0.84	2.05
7th - 8th	73	137	25	3	1	166	0.83	2.27
8th - 9th	72	114	10	1	1	126	0.89	1.75
9th - 10th	73	145	22	1	1	169	0.86	2.32
10th - 11th	70	85	10	2	1	98	0.85	1.40
11th - North Park	13	14	0	0	0	14	1.00	1.08
North Park - South Park	8	0	0	0	0	0	-	-
TOTALS	366	595	80	10	5	690	0.86	1.89

Source: DESMAN

The average vehicle remained parked for less than one hour (0.86 hours) and each space turned over an average of slightly less than two times (1.89 times). Additionally, of the 690 total parked cars, only 15

(~2%) remained parked beyond the 2-hour time limit imposed by the meters; only 5 cars (<1%) were parked in the same space for the entire survey period.

This data suggests that, despite assertions that employees of Downtown businesses park all day on Massachusetts Street, occupying the most-convenient parking spaces that should be serving customers, that may not actually be the case. However, it is important to keep in mind that this data represents only one day of parking activity and that all-day parking by employees may be an issue during other times of the year or on other days of the week.

5. Existing Conditions – Neighborhoods

5.1 Areas of Focus

Aside from Downtown Lawrence, as shown previously in Figure 1, the study area for this project encompasses a number of neighborhoods surrounding Downtown and the University of Kansas campus. Specifically, the areas governed by the following neighborhood associations were examined during the course of this project:

- Centennial
- East Lawrence
- Hillcrest
- Old West Lawrence
- Oread Neighborhood
- Oread Residents
- Raintree
- University Heights
- University Place
- West Hills
- Westwood

There were also a number of areas within the larger study area that are not part of a neighborhood association, but were also examined during this project.

In speaking with City officials, as well as residents and other stakeholders of the various neighborhoods, in general, there appear to be two distinct groups within the study area: 1) the neighborhoods most impacted by activity in Downtown and 2) the neighborhoods most impacted by the activities of the University. Based on discussions, the parking issues experienced in the East Lawrence neighborhood have occurred as a result of increased Downtown development and revitalization, while the rest of the neighborhoods within the study area experience parking issues primarily related to University-generated parking demand.

Given the unique challenges facing both of these groups, the discussion and analysis presented below focuses separately on the East Lawrence neighborhood and the neighborhoods surrounding the KU campus.

5.2 East Lawrence

The East Lawrence neighborhood encompasses the area bounded generally by Rhode Island Street on the west, E. 15th Street on the south, Oregon Street on the east, and the Kansas River to the north; the southern end of the neighborhood extends farther west to Massachusetts Street, just south of the Downtown neighborhood. Directly bordering Downtown on the east and the south, East Lawrence is, for the most part, a residential area consisting primarily of single-family residences. Spread throughout the neighborhood are a number of places of worship, as well as New York Elementary School and Liberty Memorial Central Middle School. A limited number of businesses also operate in the neighborhood, with most of the activity concentrated north of E. 10th Street and east of Connecticut Street.

A significant proportion of the residential properties in the East Lawrence neighborhood do not have driveways leading to their garages or other parking spaces on their property. Access to off-street parking spaces is typically achieved using alleys that run parallel to the north-south streets, located behind the houses. In some instances, however, properties do not have any on-site parking spaces. For these residences, the only parking option within close proximity is the curb front area of the neighborhood's streets.

Historically, according to residents who attended the stakeholder interview sessions held at the beginning of this project, finding an available parking space on-street in front of or very near to a particular residence was typically not an issue. There were exceptions to this, such as during large events Downtown or KU sporting events, but, for the most part, open parking spaces could always be found. However, with increased development in Downtown over the past several years, many residents of the East Lawrence neighborhood have seen significant and consistent parking issues develop in their neighborhood.

The most significant issue identified by East Lawrence residents was a lack of available parking on several blocks of Rhode Island Street. According to the residents, Downtown workers and residents, along with construction crews working on projects on New Hampshire Street, park all day on Rhode Island, occupying all of the parking spaces from E. 6th Street to E. 9th Street; this area also experiences issues on weekend nights when restaurant and bar patrons park in the neighborhood and walk to their destinations. Additionally, parkers that cannot be accommodated in the Law Enforcement Center Lot, due to the lot's consistently high utilization, are forced onto the surrounding streets, often completely filling the spaces on Rhode Island between E. 11th and E. 12th streets.

Exhibits 1, 2 and **3** are photographs taken of several block faces of Rhode Island at 2:30PM on Wednesday, January 25th, 2017. These photographs show that nearly all of the parking spaces in these blocks are occupied, at a time of day when one would expect to see low levels of parking activity on this mostly-residential street.

Exhibit 1 – Rhode Island Street, Looking North from E. 8th Street

Source: DESMAN

Exhibit 2 – Rhode Island Street, Looking South from E. 8th Street

Source: DESMAN

Exhibit 3 – Rhode Island Street, Looking North from E. 12th Street

Source: DESMAN

It is worth noting that parking is only permitted on the east side of Rhode Island Street from E. 6th to E. 9th streets.

In addition to the above photographs, observations made over the course of this study confirmed that the on-street parking spaces on Rhode Island from E. 6th to E. 9th streets and E. 11th to E. 12th streets remain nearly 100% utilized throughout the day on weekdays. It was also indicated by several residents of the E. 6th to E. 9th section of Rhode Island that this level of utilization also occurs regularly on weekend evenings, likely the result of parking by Downtown residents and patrons of the Downtown's bars and restaurants.

Despite the localized parking problems on Rhode Island Street, both the residents of the East Lawrence neighborhood and independent observations of the area confirm that, at the present time, no other significant or widespread parking problems occur in this neighborhood on a regular basis. However, as development continues in Downtown, including several new projects currently under construction or in the planning phases immediately adjacent to East Lawrence, the parking problems currently experienced on Rhode Island Street are likely to push further into the East Lawrence neighborhood.

5.3 Neighborhoods Surrounding KU

The size and location of the KU campus means that several different neighborhoods border or are in close proximity to campus and are significantly impacted by the demand generated by the campus. The following neighborhoods are located within the study area and either directly border the KU campus and/or are impacted by the parking demand generated by KU:

- Westwood
- University Heights
- Raintree

- West Hills
- Hillcrest
- Oread
- Babcock
- University Place
- Centennial
- Schwegler

Each day during the school year, thousands of students, faculty, staff, and visitors come to the KU campus. While the campus itself contains over 13,500 parking spaces, parkers must purchase a permit or pay by the hour in order to park anywhere on campus. Alternatively, parking on the streets surrounding the campus is free. As a result, every school day, the residential streets in the neighborhoods surrounding KU, especially to the south and east of campus, fill with vehicles of people going to KU. This daily parking demand is in addition to residential parking demand from the neighborhoods themselves, with many residents forced to park on-street due to a lack of driveways in many of the neighborhoods. On the south side of campus, ongoing construction has not only eliminated on-campus parking spaces, but has also brought additional demand to campus in the form of construction workers, further exacerbating the problem.

Several of the neighborhoods surrounding campus, including University Heights, Westwood, Raintree, and West Hills, currently have on-street parking restrictions in place which prevent parking during the daytime on weekdays. These restrictions successfully prevent the weekday, daytime parking issues experienced by the neighborhoods to the south, east and north of campus. Making the on-street restrictions workable for the residents of these neighborhoods is the fact that all or nearly all of the houses in these areas have dedicated driveways. This is not the case in other neighborhoods.

All of the neighborhoods in this area of the City are impacted by the unusually high volumes of vehicles generated by KU basketball and football games. These events bring enormous volumes of vehicles to the City, creating widespread parking issues.

In addition to the above parking issues, the stakeholder discussion revealed the following concerns related to parking in the neighborhoods surrounding the KU campus:

- In the Oread, the large number of people living in each residence means that there is not enough space on-street to physically accommodate the number of resident cars
- Businesses that operate in these primarily-residential neighborhoods have different parking needs than the residents
- On weekends, various types of vehicles, including boats and recreational vehicles, are parked on-street, especially in the neighborhoods to the northwest of campus
- As the number of residences that switch from owner-occupied to rental properties increases, it is likely that the parking problems will become worse as the number of people per residence increases
- There is concern that the new construction occurring on campus near Ousdahl Road and W. 19th Street does not include enough parking to accommodate the new demand that will be generated

- The cost of parking at the HERE Kansas project, immediately bordering campus to the north, results in parking demand generated by the project encroaching on free parking spaces on the surrounding streets
- Many properties in the Oread neighborhood have vehicles parked in the yard at various times of the day

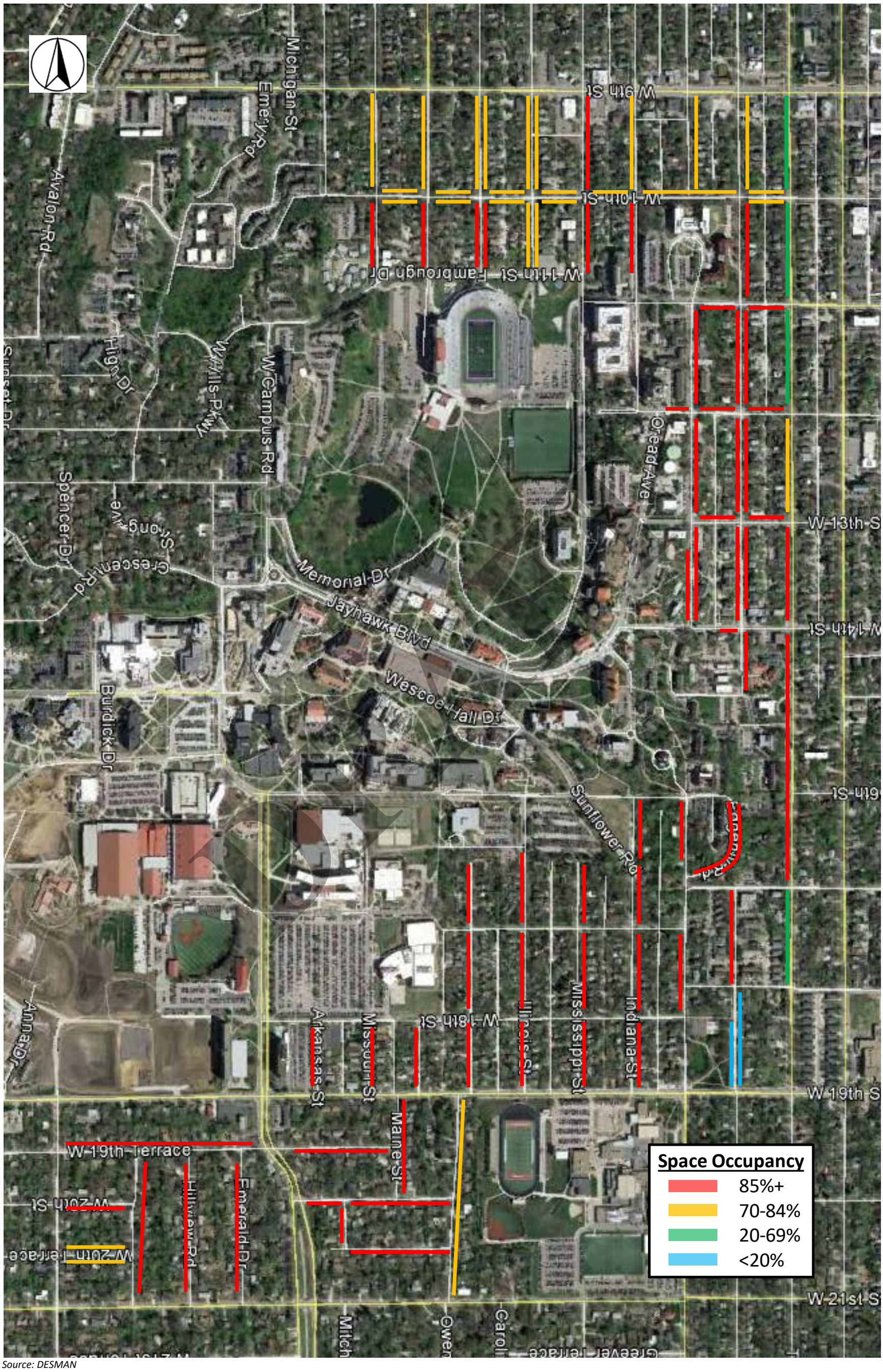
As part of the field work effort for this project, observations were conducted of the neighborhoods surrounding the KU campus during various times of the day. The goal of these observations was to document the parking conditions in the neighborhoods for comparison to the concerns voiced by the stakeholders and a previous study of the Oread neighborhood conducted in 2013 using a U.S. Environmental Protection Agency ("EPA") grant. **Figure 9** presents the occupancy levels observed on the streets surrounding the KU campus in the Oread, Babcock, University Place, Centennial, and Schwegler neighborhoods, between 9AM and 10AM on Thursday, January 26th, 2017.

As shown in the figure, the streets most proximate to the KU campus where on-street parking is permitted were all highly occupied at the time of survey. Nearly every street segment directly adjacent to campus was greater than 85% occupied, with many of the street segments 100% occupied. As you move north, east or south, away from the campus, the on-street occupancy drops off. According to the neighborhood residents who attended the stakeholder discussion sessions, during KU's academic year, this level of parking demand occurs nearly every weekday.

In general, demand for on-street parking around KU's campus appears to have increased when comparing the January 2017 observations to the observations performed as part of the EPA study of the Oread neighborhood in March 2013. This increase in demand for on-street parking is likely due to several factors, including increased residential density in the neighborhoods, growth in the campus's student and employee populations, large increases in the prices of KU parking permits, and the loss of on-campus parking spaces to new development, among others.

For the residents of the neighborhoods surrounding KU whose homes do not have driveways or alley parking spaces, the daily influx of university parkers often makes finding an available parking space difficult, especially after 8 or 9AM. Given the continued development of the south side of the KU campus, the increasing prevalence of rental housing in the neighborhoods immediately bordering the north, east and south sides of campus, and the fact that on-street parking in the neighborhoods is free, it is anticipated that parking issues will continue to plague the residents of these neighborhoods as long as the status quo is maintained.

Figure 9 – KU Neighborhood Parking Utilization (AM Peak), Thursday, January 26th, 2017



Source: DESMAN

6. Existing Parking Operation

Historically, the management and operation of Lawrence's parking system has been assigned to various departments within the municipal government. The current division of labor is based on the idea that different departments within the City are responsible for tasks which are similar to the tasks necessary to operate public parking. Therefore, instead of creating a separate Parking Department, many different departments each take responsibility for a small piece of the parking operation, with no central oversight, aside from the City Manager's Office and City Commission.

6.1 Oversight

The City of Lawrence operates under a "council-manager" government form, where the "council" (in Lawrence, the City Commission) is the elected governing body responsible for the legislative functions of the municipality, such as establishing policy, passing ordinances, voting appropriations, and developing an overall vision, while the "manager" is appointed by and provides advice to the "council", oversees the administrative operations of the city and implements city ordinances.

In terms of parking in Lawrence, the City Commission adopts parking-related ordinances and changes to existing ordinances, while the City Manager ensures that any new ordinances or changes to existing ordinances are implemented. Policy decisions are considered by the City Commission, based on input from the City Manager's Office, assigned City staff and outside experts. While the decisions made by the Commission have a direct effect on how public parking is operated, there is typically no involvement by the Commission in the day-to-day operation or management of parking.

6.2 Management

As the City's chief administrator, the City Manager is responsible for, among other things, management oversight of the City's public parking assets. In Lawrence, while the City Manager is ultimately responsible for carrying-out parking-related decisions made by the City Commission, many of the day-to-day operational responsibilities are delegated to other departments in the City. All of the various departments which handle some aspect of the parking operation then report back to the City Manager.

Parking planning and the development of new parking assets is primarily a function of Planning and Development Services. The Public Works Department is responsible for maintenance of the parking facilities, as well as installation and maintenance of parking-related signage. Parks and Recreation maintains landscaping around the parking facilities. The Police Department is tasked with enforcement of parking regulations and parking meter repairs, while the Municipal Court, under the supervision of the City Attorney's Office, handles adjudication of parking violations. Finally, the Finance Department is responsible for all financial aspects of the parking operation.

While this distribution of tasks may be logical and adequately serve the needs of the community, there is no single point of contact in the City for long-term parking planning and operational oversight, outside of the City Manager's Office. As Downtown Lawrence continues to evolve and the parking supply becomes more constrained both downtown and in the City's other neighborhoods, the fragmentation in the parking operation could lead to a lack of coordination among the different departments, making it difficult to effectively and quickly address parking issues which may arise.

6.3 Enforcement

Enforcement of metered and timed public parking spaces both on-street and in the surface lots and garages is performed by five (5) full-time Parking Control Officers ("PCOs" or "Officers"), housed under the Technical Services Division of the Administrative Bureau of the Police Department. The Manager of these Officers is also responsible for 1 Parking Control Technician who repairs and maintains the parking meters, 3 Animal Control Officers, and 12 School Crossing Guards at 21 crossing locations. In addition to enforcing parking regulations at the City's parking spaces, these Officers also enforce the use of 108 metered parking spaces adjacent to and serving the privately-owned HERE Kansas mixed use development located at 1111 Indiana Street.

At present, the PCOs walk designated routes throughout Downtown and visually verify that occupied single-space meters are paid between the hours of 9:30AM and 6:00PM, Monday – Saturday, or that vehicles display valid City parking passes. Officers also ensure that designated spaces in the City's garages are paid, by comparing data from the multi-space payment kiosks to parked vehicles. For timed parking spaces, the PCOs use chalk to mark the tires of parked vehicles, in order to ensure that they do not park in excess of the posted time limits. Finally, each day, one PCO in a vehicle enforces the spaces on the periphery of Downtown and also the single-space parking meters surrounding HERE Kansas. After enforcement ceases at 6:00PM, the PCO's return to the Law Enforcement Center where they are based, to complete their end of day reports.

If a vehicle is found to be parked in violation of the City's overtime parking ordinance, PCOs use a handheld computer to create and issue a citation in the amount of $5.00 that is placed under the front windshield wiper of the vehicle. If the same vehicle continues to remain parked without payment, additional citations can be issued on the same vehicle. Vehicles that have 5 or more citations outstanding within 30 consecutive days will be issued a Habitual Violator citation in the amount of $75.00.

Based on conversations with the PCOs, their Manager and other City staff, as well as observations of the PCOs performing their duties, in general, there is diligent enforcement of parking violations in Lawrence. At the same time, PCOs were also seen to be helpful to people unfamiliar with metered parking in Downtown and were not overzealous in their desire to write as many parking citations as possible.

6.4 Parking Violation Processing

Parkers who receive a parking citation currently have 10 days to pay the fine, prior to the assessment of an additional $15.00 penalty. At present, there are 26 payment drop boxes located throughout Downtown where cash or check payments of parking citations can be made. If someone fails to pay within the 10 days, additional notification and billing processes are done by the Municipal Court in order to attempt to compel payment of the fine by the violator.

Municipal Court Clerks, in addition to their other duties, are responsible for processing parking citation payments, billing violators who have not paid their citations, and managing the official processes necessary to issue warrants for habitual parking violators. Based on conversations with the Municipal Court, much of the work of the Court Clerks is done manually and the sheer volume of parking violations makes it difficult to resolve issues with the most frequent parking violators. Additionally, it was indicated that the lack of significant penalties for habitual parking violators (e.g. vehicle booting and towing, registrations holds, etc.) means that these people often go largely unpunished.

6.5 Parking Fees and Fines for Violations

Fees are collected for parking on-street and in certain surface lots using single-space parking meters; handicapped spaces do not require payment. As noted previously, there are five different parking meter time limits in Downtown, each generally associated with a different color pole on which the meter is mounted or different color hood on the top of the parking meter. **Table 6** breaks down the total number of metered parking spaces in Downtown by time limit, as well as indicating the color of each pole/meter, the rate charged for each time limit, and the corresponding hourly parking rate.

The 10-hour rate of $1.00 shown in the table also applies to the 442 paid parking spaces in the City's parking garages.

Table 6 – Current Metered Parking Rates

Meter Time-Limit	Meter Color	# of Meters	Parking Cost for Time-Limit	Hourly Parking Cost
15 Minutes	Yellow	26	$0.25	$1.00
30 Minutes	Red	19	$0.25	$0.50
2 Hours	Bronze/Brown	717	$1.00	$0.50
5 Hours	Dark Green	109	$0.50	$0.10
10 Hours	Black	457	$1.00	$0.10
Total Single-Space Meters		1,328		

Source: DESMAN

As shown in the table, the City of Lawrence currently charges from $0.10 to $1.00 per hour for metered parking, with all parking meters enforced from 9:30AM to 6:00PM, Monday – Saturday, excluding City holidays. In general, the rates charged at the City's parking facilities and for metered on-street parking have not increased since at least 2009; the rates for 5- and 10-hour parking have not increased since 2001. Based on research from cities identified as similar to Lawrence, on-street metered parking rates in the benchmarked communities average around $1.00 per hour.

In addition to using coins to pay for parking at the City's parking meters, vehicles displaying a valid parking pass are also permitted to park at 10-hour meters without inserting coins. These passes, which cost $192 per year ($16 per month) or $50 per quarter, can be used for parking at any 10-hour meter in Downtown (on- or off-street), as well as in all of the City's parking garages.

The parking fine history is summarized in **Table 7**. Although there has been a gradual increase from $1.00 to $5.00 for overtime violations and corresponding increases in habitual violator fines, the $5.00 overtime fine provides very little incentive to pay the meter. It is clear from the number of tickets issued that, despite the effective enforcement operation, many people are willing to take a chance on not getting ticketed because the penalty is relatively low.

Table 7 – Parking Fine History

Parking Fine History			
Effective Date	Overtime	Habitual Violator	Failure to pay within 10 days
Prior to 1996	$1.00	N/A	$10.00 (up to $100)
1997	$2.00	$15.00	$10.00 (up to $100)
2004	$2.00	$50.00	$10.00 (up to $100)
2009	$3.00	$50.00	$15.00 (up to $100)
2016	$5.00	$75.00	$20.00 (up to $100)

Source: DESMAN

6.6 Historical Parking Violation Issuance

The number of tickets issued at the City's parking meters and timed parking spaces each year between 2013 and 2016 are summarized in **Table 8**. As shown in the table, the number of tickets has remained relatively constant over the last four years, despite the fact the fine for an overtime parking violation increased by more than 65% in 2016.

Table 8 – Historical Volume of Overtime Parking Violations Issued

Year	# of Tickets Issued
2013	100,869
2014	94,390
2015	102,141
2016	96,672
Average	**98,518**

Source: City of Lawrence

If the City enforces paid and timed parking regulations an average of 304 days per year (no Sundays and no City holidays), based on the ticket volumes presented in the above table, an average of 324 tickets are written per day or about 65 tickets by each full-time Parking Control Officer.

Given the size of the City's parking system, the annual volume of parking citations issued is extraordinarily high. In other municipalities, it is typical for the average enforcement officer to issue perhaps 30 – 40 violations per day. These ticket volumes indicate that either the $5.00 fine for parking violations is too low or that drivers do not have an adequate disincentive against parking illegally, such as a program of vehicle booting or towing.

6.7 Historical Financial Performance of the Parking System

The revenue generated by the parking system and expenses associated with operating and maintaining the system for the calendar years 2014 – 2017 is shown in **Table 9**. The 2016 revenue reflects only 11 months of actual data, with the twelfth month projected, while all of 2017 has been projected.

As shown in the table, revenue has grown slightly over the last four years, with most of the growth coming from Overtime Parking. This growth makes sense, due to the fact that the cost of an overtime parking violation increased from $3.00 to $5.00 in the second half of 2016.

On the expense side, from 2014 through 2016, operating expenses fell each year. However, the 2017 budget assumes that the cost of parking meter maintenance will increase and that the parking system will contribute $150,000 toward the repayment of the debt associated with the construction of the New Hampshire and Vermont Street garages.

It should be noted that, despite the fact that revenues from the parking system are expected to be used for debt repayment in 2017, the amount reflected in the table does not account for the entire debt service payment. According to information provided by the City, over the next several years, debt service payments will average about $1.1MM annually.

Table 9 – Financial Performance of the Parking System, 2014 - 2017

Revenue Source	Actual 2014	Actual 2015	Projected 2016	Projected 2017
Meters	$ 610,048	$ 617,730	$ 620,000	$ 626,000
Overtime Parking	$ 497,275	$ 582,057	$ 590,000	$ 702,000
Riverfront Garage	$ 44,990	$ 37,357	$ 30,000	$ 30,000
New Hampshire Garage	$ 11,468	$ 11,009	$ 12,000	$ 12,000
Vermont Street Garage	$ 7,025	$ 12,380	$ 10,000	$ 10,000
Parking Permits	$ 116,498	$ 79,995	$ 116,000	$ 116,000
Interest on Investments	$ -	$ 230	$ 1,000	$ 1,000
Miscellaneous	$ -	$ 221	$ -	$ -
Total Revenue	**$ 1,287,304**	**$ 1,340,979**	**$ 1,379,000**	**$ 1,497,000**
Expense Source				
Municipal Court - Operations	$ 167,292	$ 161,903	$ 209,736	$ 216,302
Police - Enforcement	$ 398,918	$ 381,582	$ 456,732	$ 420,676
Capital Outlay - Meters	$ -	$ -	$ 64,000	$ 99,000
Police - Security Patrol	$ 316,982	$ 294,927	$ 304,692	$ 331,496
Public Works - Maintenance	$ 226,270	$ 212,451	$ 199,755	$ 365,503
Parks and Rec. - Maintenance	$ 210,844	$ 223,264	$ -	$ -
Capital Outlay - Maintenance	$ 23,370	$ -	$ 15,000	$ -
Parking Debt[1]	$ -	$ -	$ -	$ 150,000
Total Expenses	**$ 1,343,675**	**$ 1,274,127**	**$ 1,249,915**	**$ 1,582,977**
Revenue - Expenditures	**$ (56,372)**	**$ 66,852**	**$ 129,085**	**$ (85,977)**

1) This amount is not the total debt service payment for the parking garages. The total parking-related debt service payment in 2017 is approximately $1.1MM.

Source: City of Lawrence

Based on the historical financial information provided by the City, the parking system currently generates either a small operating profit or small operating loss, depending on the year. If you were to factor in the entire debt service obligation associated with the parking system, the City's loss from the parking operation is projected to be slightly over $1MM in 2017.

7. Future Downtown Parking Demand

7.1 Anticipated Future Development

Discussions with stakeholders and City staff revealed a number of potential developments which might influence parking demand in Downtown Lawrence. The list of projects, provided in **Table 10**, shows that the first development, construction of a grocery store and residential units in the 700 block of New Hampshire, could be completed as early as 2019.

The projects that could be identified vary dramatically in size and type, with plans for a large conference center and hotel, as well as several hundred units of residential development.

Table 10 – Anticipated Future Development in Downtown Lawrence

Anticipated Year of Completion	Type of Development	Location	Size	Units	Existing Parkers Displaced	Parking Added	Net Parking	Anticipated Demand[1]	Anticipated Surplus/ (Shortfall)	Anticipated Parking Location(s)
2019	Former Border's Book Store - Grocery Store	700 Blk of N.H.	50000	Sq. Ft.	0	255	255	230	25	N/A
	Former Border's Book Store - Residential	700 Blk of N.H.	80	Rental						
2020-2021	Journal Mixed-Use	600 Blk of Mass.	Unknown		0	?	?	?	?	?
2020-2023	Conference Center	600 Blk of Mass.	30000	Sq. Ft.	0	Plans Include Garage to Satisfy Project Demand		N/A	0	N/A
	Conference Center - Hotel	600 Blk of Mass.	150	Rooms	0					
Unknown	Allen Press Residential/Mixed-Use	1100 Blk of Mass.	400	Beds	20	200	180	200	(20)	N.H. Garage
2027	Vermont Place - Residential	800 Blk of Vermont	12	Condos	0	22	22	55	(33)	Vermont Garage/ Lot 3
	Vermont Place - Commercial/Retail	800 Blk of Vermont	7788	Sq. Ft.						
	Vermont Place - Office	800 Blk of Vermont	6504	Sq. Ft.						

1) Based on the Urban Land Institute parking demand factors, adjusted for local conditions.

Source: City of Lawrence; Various Development Entities

7.2 Near – Term Impact of Development on Future Parking Supply and Demand

In addition to the potential locations and types of developments, Table 10 also shows the number of parking spaces to be added as part of each project, the number of existing parkers displaced and the anticipated parking surplus or deficit resulting from each project. As you can see from the table, it is anticipated that the conference center/hotel project will include a parking garage component that will satisfy the demand generated by the development itself. As that project is not expected to displace existing parkers, there should be no effect on the supply and demand conditions in Downtown. Additionally, current plans for the former Border's Book Store site in the 700 block of New Hampshire Street indicate that there will be a net gain of 25 parking spaces when that project is completed.

The two projects with the potential to create additional parking demand that cannot be accommodated by the planned new parking supply are the mixed-use project at the former Allen Press site and the Vermont Place project. Both of these projects, despite building parking, are expected to generate more parking demand than the projects themselves can accommodate. Based on the location of the Allen Press project and the fact that the demand is anticipated to come from residents, it is anticipated that the 20 surplus parkers generated by this project can be accommodated in the New Hampshire Garage. The 33 surplus parkers generated by the Vermont Place project have several parking options in close proximity, including Lot 3 and the Vermont Street Garage.

Despite the fact that additional development is planned for Downtown Lawrence over the next 10 years, given the current availability of public parking spaces and the proposed sizes and locations of the

developments, it is anticipated that the City's existing supply of public parking should be more than adequate to satisfy the potential future demand for parking.

7.3 Long – Term Impact of Development on Future Parking Supply and Demand

As Downtown Lawrence continues to develop, the City should have a definitive policy regarding the provision of downtown parking. Historically, the City has provided parking for downtown developments. With the advent of more residential parking, the use of City lots for residential parking has created a conflict with parking for existing office employees. The policy should articulate how to handle future projects. We suggest a thorough discussion of the issue by the City Commission, including the following:

- Should the City continue to provide parking for new developments, particularly residential? If so, how does the City manage the conflict between residential and office parkers?
- The City could provide a monthly permit for residential parkers, but only in one of the available garages. This would eliminate the conflict with employees for surface parking spaces.
- The City could continue to provide for non-residential parking, but require residential parking on-site.
- The City could require any development on current public parking lots to replace those spaces and provide parking for new uses.
- The City could require any development not providing on-site parking to pay a "fee-in-lieu" which would go to the parking fund to support the development of additional parking facilities. However, to be effective the fee has to be equivalent to the cost to build structured parking spaces.
- If the City is going to continue to provide parking for non-residential uses downtown, occupancy levels will need to be monitored and coordination with the Planning Department will be necessary in order to anticipate the need for additional parking in time to develop new facilities.

8. Conclusions and Summary of Issues

Based on the data collected, the stakeholder discussions and the analysis performed, the following is a list of the key issues to be addressed in the Operations and Development Plan. As best as possible, the issues are grouped by category and correspond to the recommendations presented later in the Plan.

1. Parking Demand
    a. Parking demand generated by downtown and the University of Kansas are overwhelming certain residential neighborhoods immediately bordering each area.
    b. There is not a shortage of parking when looking at the Downtown as a whole, but localized shortages do exist.
    c. Demand for parking in several areas of Downtown and for particular types of parking spaces is very high, while other areas and types of spaces are not in high demand; in particular, there is demand for more long-term spaces and fewer short-term spaces.
    d. Based on currently-available development plans, the impact of future Downtown development on parking appears to be minimal over the next 10 years.
    e. Over the long-term, if the City continues the policy of providing most of the parking downtown, there will be a need for additional facilities, unless demand for parking is reduced. There are a

number of transportation demand management techniques which may be used to reduce parking demand in Downtown Lawrence.

2. Rates
    a. The current parking rates do not place a high enough premium on parking at the best/most desirable spaces.
    b. There are too many parking meter time limit categories, making enforcement more cumbersome.
    c. The existing parking rates and violation fines do not generate sufficient revenue to fully-fund the operations and maintenance of the parking system.
    d. The current cost of a right-of-way permit (meter bag) of $1.00 is not sufficient to cover the cost of the manpower required to bag the meter, nor does it take into account the potential lost meter revenue during the time the meter is bagged.

3. Operations
    a. The enforcement of parking violations is diligently executed, but highly labor intensive.
    b. The two-headed meter arrangement on Massachusetts Street is confusing to motorists.
    c. Paid and timed parking is only enforced until 6:00PM, despite extensive nighttime activity in Downtown.
    d. Operational and maintenance functions related to the parking system are scattered in several City departments with no one person in charge/overseeing the system.
    e. The labor-intensive nature of violation processing makes it difficult/impossible for the Municipal Court to effectively handle the volume of violations currently issued.

4. Policy
    a. There are no provisions for overnight parking permits for Downtown residents; overnight parking is technically illegal.
    b. Fines for parking violations are too low to deter a significant number of violators.
    c. The punishment for repeat violators of the City's parking regulations is minimal, with no boot and tow program in place.
    d. Wayfinding to parking lots and garages off of Massachusetts Street and on the approaches to Downtown is weak, leading to many parking facilities being underutilized.
    e. Payments for fines cannot be made online or with credit cards until 10 days after issuance.
    f. Parking violation payment drop boxes have been the target of theft in the past.
    g. Employers and employees are frustrated by the lack of long-term parking options and spaces being occupied by Downtown residents by the time employees arrive in the morning.
    h. Historically, the City has provided all parking in Downtown, but that policy is being questioned by some residents.
    i. Some of the parking requirements in the City's zoning ordinance are higher than typical in other municipalities.
    j. Charter buses are parking on Rhode Island and other streets in and around Downtown after dropping off passengers, occupying a significant number of parking spaces for long periods of time.

5. Functional
    a. Existing parking lot layouts can be improved to increase the number of available parking spaces in certain facilities.
    b. Lighting levels are low in many parking lots and at least one garage (New Hampshire Garage), raising safety concerns for some users.

6. Technology
    a. All of the City's parking meters currently accept only coins; no other payment options exist for daily parkers.
    b. Credit cards are only accepted for payment of parking time in the Vermont Street Garage, the other two garages are cash-only.
    c. Handhelds currently used by the Parking Control Officers have ongoing operational issues and make the process of enforcing more difficult/time-consuming.
    d. All enforcement is currently performed manually, including chalking of tires in time-limited parking spaces.

7. Future Capital Repair/Replacement
    a. Capital repair and equipment replacement costs are currently paid out of the parking fund or General Fund, as needed; there is no plan in place to cover long-term costs.

9. Operations, Management, Policy, and Physical Improvement Recommendations

9.1 Purpose of Recommendations

The recommendations which follow were developed by DESMAN, in consultation with the City, in order to address each of the issues identified throughout the course of this study. The recommended changes to the operations, management, policies, and physical assets which makeup the City's public parking system are intended to address the current needs of Downtown Lawrence and the examined neighborhoods, as well as the anticipated needs of these areas over the next 10 plus years. While none of the recommended changes will, by themselves, remedy all of the existing or future parking-related issues within the study area, the goal is to make incremental improvements in order to delay or eliminate the need for additional structured parking facilities, to improve the experience of parking users and to address the concerns raised by the city's stakeholders.

9.2 Timing of Recommendations

While the impacts of the recommended changes can be predicted to a certain extent, a number of the changes that are being proposed have the potential to impact the public parking system in unknown ways. For instance, increasing the supply of long-term parking spaces by replacing 2-hour meters with 10-hour meters may satisfy the existing demand for employee parking, reducing the need to reconfigure existing surface parking lots to add capacity. However, it is possible that changing parking meter durations may only satisfy a portion of the long-term parking demand, making parking lot reconfigurations or other changes necessary to address the remaining long-term demand.

Due to the uncertainty around the impact that these recommendations will have on the current and future parking dynamics within the study area, the proposed implementation timetable has been designed to allow time for the impacts of the changes to be felt, before additional changes are made to the system. In our experience, this approach is more successful than attempting to implement all of the recommended changes at one time and dealing with any unintended consequences in a piecemeal way. Hopefully, this will allow changes to the parking system to be made in a methodical way, avoiding a situation where the City spends resources on recommendations that do not result in an improved parking operation or must walk back a change that had an unintended, negative consequence.

In addition to factoring in how one recommendation will affect others, the implementation schedule also takes into account the complexity and cost of implementing each recommendation. The simpler and less costly recommendations are proposed to be implemented immediately or in the short-term, while the more complex and expensive recommendations are assumed to be implemented over the course of the next several years. This was done so that time and money are not spent unnecessarily on expensive and complex solutions, when simpler and less costly solutions could successfully address existing and future public parking issues in Lawrence.

9.3 Anticipated Cost of Implementation

For each of the recommended changes or improvements, an anticipated cost has been provided for use in the City's budgeting process. While the actual costs of implementing the recommendations will likely vary somewhat from these figures, these planning level cost estimates are intended to provide the City with an idea of the financial commitment associated with each recommendation. That cost, along with the potential benefits of each recommendation, will allow for an objective comparison of the merits of each proposed recommendation. Similarly, some of the recommendations such as rate increases, will generate revenue. We have also attempted to identify the magnitude of that revenue increase.

9.4 Recommendations

As mentioned above, once implemented, certain of the recommendations have the potential to reduce or eliminate the need for other, potentially costlier and more complicated changes to the parking operation. For this reason, the recommendations have been broken-down into two phases. The Phase I recommendations are seen as the least costly and most easily implementable, while the Phase II recommendations will require more significant capital outlays and/or more planning in order for implementation to be successful. Presented at the end of the detailed recommendations, **Table 11** provides a brief summary of each recommendation, along with its anticipated cost and anticipated implementation timeframe.

In addition to the two phases of implementation, there is one recommendation which, in our opinion, needs to be addressed prior to any changes being made to the current parking operation: the selection of an existing staff member or the hiring of an outside person to be in charge of all aspects of the parking operation. *However, the Phase I recommendations have been designed to be implementable by existing City staff while a head of the parking operation is identified, if the City desires to begin making operational changes immediately*.

9.4.1 Designate a Head of the Parking Operation

As noted previously, various departments within the City are responsible for overseeing the operation, management and maintenance of public parking in Lawrence. As a result, prior to this study, there has not been a focus on long-range strategic planning as it relates to parking. In order for the public parking system to transition from where it is today, to a modern and well-run system which satisfies the needs of all of the various parking user groups, both now and in the future, there must be a person at the City whose main focus is parking and related demand management strategies. Having one person as the head of the parking operation will also help ensure that the subsequent recommendations presented in this plan are successfully implemented. While many of the functions that will be performed by the head of the parking operation could be performed by existing City staff, based on our interactions with existing City personnel, no one currently handling any aspect of the parking operation has the time to devote solely to this undertaking or has all of the required skills necessary.

The head of the parking operation should be made accountable for the overall performance and operations of the on- and off-street parking assets and programs including:

- Coordinating and trouble-shooting enforcement unit staffing and deployment and meter collections;
- Coordinating the execution of in-house equipment service and facility maintenance needs;
- Managing outside contractor services;
- Supervising and auditing permit issuance and sales;
- Planning and implementing parking system programs;
- Analyzing and reporting system revenue and expenditures with and under the direction of the Finance Department;
- Serving as a key advisor to the City Commission and Parking Committee concerning operations and management of the parking system and programs;
- Coordinating parking system support with sponsors of special events;
- Coordinating parking and transportation demand management strategies with other agencies in the area;
- Acquiring and implementing new technology;
- Identifying new meter locations;
- Reviewing parking rates and recommending adjustments;
- Training, deploying, supervising, and evaluating parking staff;
- Tracking, auditing and forecasting system revenues and expenditures;
- Ensuring that enforcement is conducted consistently and fairly;
- Ensuring facilities are kept clean, safe and well maintained;
- Facilitating proactive and responsive marketing, sales and public information initiatives;
- Troubleshooting day-to-day problems quickly and effectively;
- Researching and promoting the implementation of “Best Industry Practices” for the program;
- Serving as the “parking expert” as local planning and economic development strategies and plans are being studied;
- Monitoring significant variances in the availability of parking supply and customer demand to ensure that assets are optimally serving the community;
- Developing the process and format for producing an annual report for the program;
- Developing standards for good customer service and accommodations, and;
- Improving, updating and maintaining the City’s parking website.

The person in charge of public parking in the City should be someone who, ideally, has experience running a small- to medium-sized municipal parking operation or a large, private parking operation, is familiar with best parking management and enforcement practices and is willing to act as the driving force behind the proposed system enhancements. It is recommended that this person be dedicated solely to parking, focused on improving the City's existing parking system and planning for and implementing improvements to the system as the Downtown and the City's other neighborhoods continue to evolve in the future. If an existing City staff person is moved into this role or if someone is hired who does not have the required experience in parking, that person should be required to obtain the Certified Administrator of Public Parking (CAPP) credential within six (6) months of being hired. However, given the magnitude of the task, it will take some period of time to integrate all of the existing responsibilities under one umbrella.

In addition to hiring/designating a head of the parking operation, consideration should be given to how parking operations could be coordinated between the City and KU. From a user's perspective, parking in Lawrence should be seamless between University- and City-owned spaces. This might involve joint purchasing and co-branding metered spaces ("Park Lawrence"), and could evolve into joint enforcement and other operations.

Estimated Cost to Implement: $55,000 – $65,000, annual salary (not including benefits)
Estimated Timeframe: 3 – 6 Months

9.4.2 Phase I Recommendations

(1) ***Eliminate the designation of on-street parking spaces for use only by the residents of one particular property***. At present, two property owners in the city have on-street parking spaces directly in front of their houses assigned by ordinance and signed for the use of their property only (1109 Ohio and 1647-1649 Edgehill). These carveouts were done to satisfy the demands of these two particular property owners. However, reserving the public right-of-way for use by a single residence is not only bad policy, it also sets a precedent that other property owners can look to when demanding their own reserved on-street space. Often times, these spaces sit empty, while every other on-street space in the vicinity is occupied, given the locations of these two spaces near the KU campus.

It is recommended that, as soon as possible or at the latest when the current owners of these properties no longer reside in their houses, the restrictions on these spaces be removed from the City Code and this policy not be repeated in the future.

Estimated Cost to Implement: Nominal (minimal staff and City Attorney time)
Estimated Timeframe: 3 Months

(2) ***Forbid charter bus and other large vehicle parking within designated neighborhoods***. According to residents of East Lawrence and the neighborhoods surrounding KU, charter buses used by music groups performing in Lawrence and other large vehicles such as boats, trailers, etc., are often parked on city streets that do not have parking restrictions, occupying significant numbers of parking spaces. This is particularly problematic in the neighborhoods where on-street parking is in high demand and used by residents who do not have driveways or other off-street spaces at their disposal. In most instances, this type of long-term storage of vehicles could be done outside of these high demand areas, ideally in underutilized City parking lots or on vacant parcels, with a specific location or locations designated by the City.

Estimated Cost to Implement: Nominal (minimal staff and City Attorney time)
Estimated Timeframe: 3 Months

(3) ***Remove the 2-hour meters from the 300 block of W. 9th Street***. The five (5) meters on the north side of this street segment serve little purpose and are very poorly utilized; at no time during the occupancy surveys were any of these spaces occupied. The businesses in the area provide an ample supply of parking for customer use. Removing the meters will reduce the time and effort it takes to enforce and collect coins deposited in these meters, while also reducing maintenance costs associated with keeping the meters functioning.

Estimate Cost to Implement: Nominal (minimal staff time)
Estimated Timeframe: 1 Week

(4) ***Replace existing 5-hour meters with 10-hour meters***. While the 5-hour meters were well utilized during the occupancy surveys (~60% peak occupancy), there is no additional benefit to this length of stay versus a 10-hour meter. Both types of meters charge the same $0.10/hour rate and 10-hour parking is currently the most highly-desirable duration of parking in Downtown (~70% peak occupancy for 10-hour meters and ~90% peak occupancy for 10-hour free spaces). Replacing the 5-hour meters with 10-hour meters will both increase the supply of the most desirable duration parking space and simplify on-street enforcement.

Estimated Cost to Implement: Nominal (minimal staff time and materials)
Estimated Timeframe: 1 Month

(5) ***Change a number of 2-hour meters to 10-hour meters***. As stated previously, occupancy surveys revealed that, in the Downtown as a whole, there is greater demand for long-term parking than short-term parking. In discussions with the City and downtown business owners, it was stated that long-term parking is lacking in certain areas during normal business hours. Changing the 2-hour on-street meters in the 600, 700 and 800 blocks of New Hampshire Street, the 200 blocks of E. 8th and E. 9th streets and the east side of the 600 block of Vermont Street to 10-hour meters will help alleviate or will eliminate any actual or perceived shortages of long-term parking in these areas of Downtown. In all, this change would result in the creation of 98 additional 10-hour parking spaces.

The blocks of New Hampshire Street where this change is proposed are also served by Lot 2 and Lot 4, both of which provide 2-hour free parking, both of which were observed to have significant excess capacity. Conversely, the 10-hour and unrestricted spaces on and near these blocks are typically very highly utilized.

The 600 block of Vermont Street is served by 2-hour meters on both the east and west sides of the street, with the east side only 7% occupied and the west side less than 50% occupied during the survey periods. Additionally, Lot 15, which is located adjacent to this street segment and contains 10-hour meters, was 86% and 78% utilized during the morning and afternoon survey periods, respectively. These findings suggest a shortage of long-term spaces and an excess of short-term spaces in this area.

Estimated Cost to Implement: Nominal (minimal staff time and materials)
Estimated Timeframe: 1 Month

(6) ***Change 15- and 30-minute meters to 2-hour meters***. Enforcing very short duration parking is extremely challenging. It is difficult for enforcement personnel to consistently monitor 15- and 30-minute metered parking spaces, while also maintaining a regular schedule of enforcement for 2-, 5- and 10-hour spaces. Fewer time restrictions should result in increased efficiency of the City's PCOs, without sacrificing parking availability; utilization of the 15- and 30-minute meters was observed to peak at 31% and 42%, respectively. This change would also yield 21 additional 2-hour spaces on Massachusetts Street (an increase of more than 6%), where the existing 2-hour meters are very well utilized throughout the course of the day.

Estimated Cost to Implement: Nominal (minimal staff time and materials)
Estimate Timeframe: 1 Month

(7) ***Increase the cost of right-of-way (meter bagging) permits***. Providing a right-of-way (meter bagging) permit removes a public parking space from the available parking inventory, while also eliminating the potential for that space to generate revenue. Charging $1.00 per space for this type of permit, regardless of the number of days the space remains unavailable, drastically undervalues this public asset. The cost of this type of permit should factor in not only the cost of the labor necessary to install and remove meter bags, as well as the initial cost of purchasing the meter bags themselves, but also the potential lost revenue from the meter. In many municipalities, the cost of temporarily taking a meter out of service can be many times the actual revenue-generating potential of that space, in order to discourage the practice.

It is recommended that the cost of a right-of-way permit be increased to at least $5 per space, per day, in order to make the City whole for spaces that are temporarily taken out of service. Additionally, should the City choose to increase on-street parking rates as recommended, the cost of these permits should be increased proportionately.

Estimated Cost to Implement: Nominal (minimal staff time and materials)
Estimate Timeframe: 1 Month

(8) ***Investigate the potential of adding parallel parking on the west side of Rhode Island Street***. Based on input from community stakeholders and verified by first-person observation, the 10-hour and unrestricted parking spaces on- and off-street in the 700 and 800 blocks of New Hampshire Street (between New Hampshire and Rhode Island) are consistently some of the most highly utilized parking spaces in all of Downtown Lawrence. Occupancy of the parking spaces in Lot 8 and the 700 New Hampshire Lot reached 90% and 97% of capacity, respectively, on the day of the surveys. Additionally, the 10-hour on-street meters on these blocks, as well as the unrestricted on-street spaces along the east side of Rhode Island, were 100% occupied at various points throughout the survey day. Finally, with new development set to come online in both blocks in the near future, there is the potential for even greater parking demand in the area.

If the width of Rhode Island Street permits, factoring in the need for fire trucks to have access, there is the potential to add approximately 23 on-street parking spaces on the west side of the street in the 700 block. Based on the 30-foot width of the street, assuming 8-feet of width on each side of the street for parking, would yield 14-feet for the drive lane. Based on traffic planning and design best practices, this width should be sufficient to accommodate any fire department vehicle, while also calming the speed at which normal traffic travels down the street.

It should be noted that this change may have a negative impact on bicycle traffic, as the space available to accommodate both bikes and cars would be reduced.

Estimated Cost to Implement: Nominal (minimal staff time)
Estimated Timeframe: 1 Month

(9) ***Establish a boot and tow policy to deal with habitual parking violators***. Per conversations with the City's PCOs and Municipal Court staff, the existing fines for parking violations and other mechanisms currently in place do not adequately serve to deter habitual parking violators. A recent increase in the fine amount for a parking violation (from $3 to $5) has done nothing to curb the number of people parking illegally; the PCOs still issue and the Municipal Court clerks must still process nearly 100,000 parking citations annually. There is no policy in place, other than additional fines, to encourage habitual violators to either stop breaking the rules or to pay off their existing citations more quickly.

Implementing a policy of booting and towing vehicles that accumulate more than a certain number of parking citations within a certain time frame will encourage greater compliance with parking regulations and reduce the number of habitual violators. This is not intended to be punitive for the average citizen or visitor coming to Downtown. It is merely a method for ensuring that those people who do park at a meter pay for the time they are parked and those people who park in a time-restricted space to do not abuse their free parking privilege.

In order to reduce some of the potential backlash from those individuals with a large number of outstanding citations, an amnesty program could be established in the months before the boot and tow policy is implemented. Programs of this type typically offer to forgive outstanding citations in exchange for payment of a portion of the balance owed – perhaps 50% of the total. With tens of thousands of parking citations currently outstanding, this type of program could result in a one-time windfall for the City.

A sample boot and tow policy is included in the Appendix of this report, to be used by the City as a template for developing a policy specific to the needs of Lawrence and the laws of Kansas. We would further recommend that the definition of a *habitual violator* be changed from the current 5 offenses in a 30-day period to 3 offenses in a 30-day period (City Code 17-417).

Estimated Cost to Implement: Nominal (minimal staff and City Attorney time)
~$100 per wheel lock; contract out towing services to a private company
Estimated Timeframe: 6 Months

(10) ***Establish a residential permit parking policy for the city's neighborhoods***. Input from the residents of various neighborhoods throughout Lawrence indicate a strong desire by many to implement areas of parking for residents only. In particular, the neighborhoods surrounding the University of Kansas and the East Lawrence neighborhood experience significant spikes in parking demand at various times, particularly on weekdays during the daytime and some evenings, as well as during large events. This influx of demand, coupled with a lack of driveways at a large majority of houses in some neighborhoods, means the streets are completely full of vehicles for many hours of the day. In addition, any spaces that do become vacant are quickly filled, making it very difficult for residents to run errands, drop children off at school, etc., and find an available space once they return home.

Around KU, the on-street parking problem is exacerbated by the fact that many houses which were originally built as single-family homes are now multi-unit buildings, housing many more driving-aged residents than originally intended; more cars are now vying for the same amount of space.

While a resident permit parking policy is not intended to assign individual on-street parking spaces to each residence or deal with the issues associated with large events, the goal is to accommodate resident parking within a reasonable walking distance of each residence (1-2 blocks) and to push KU students/faculty/staff into KU's on-campus parking areas and Downtown parking demand into the City's public parking spaces. Members of the KU population driving to work or class on a daily basis should be parking in spaces on-campus, but currently refuse to do so because on-street parking in many neighborhoods is free and unrestricted. Similarly, residents and employees in Downtown choose to park in the East Lawrence neighborhood (particularly along Rhode Island Street), in order to avoid paying for parking or having to conform to the City's parking time limits.

Implementing a residential permit parking program will have a positive impact on the volume of outside parkers using parking spaces on residential streets. However, it is unlikely that this type of program will be a silver bullet for solving the parking problems in some of the City's neighborhoods. Particularly in the neighborhoods bordering the KU campus, the sheer number of car owners residing in each property means that there is likely not enough curb-side space to accommodate all of the vehicles on each street. Instead, a residential permit parking program will establish zones within which residents of that zone may park – this does not mean that residents will always be able to find a parking space on the street where they live. In order to accomplish this, a hard cap on the number of vehicles each residence is permitted to park would be necessary and even that is no guarantee that all of the vehicles could be accommodated.

DESMAN is not recommending that the City establish resident permit parking on any particular streets or in any particular neighborhoods. Instead, the policy framework presented in the Appendix details the process by which a neighborhood can request that resident permit parking be implemented in a particular area. The adoption of the policy is the responsibility of the City, but the implementation of resident permit parking should be based on the will of the residents of the various neighborhoods. The permit costs outlined in this policy are designed to be revenue neutral.

Estimated Cost to Implement: Nominal (minimal staff and City Attorney time)
Estimated Timeframe: 3 Months

(11) ***Review zoning ordinance requirements regarding downtown residential parking.*** Parking for land uses in the Downtown District is not required in the zoning ordinance. Historically, parking has been provided by the City. With the increase in residential units Downtown, a conflict is developing between residential and office parking needs.

Resident parking is most appropriate in off-street facilities where vehicles can be conveniently parked when not in use. If this concept is not going to be acceptable to residential developers, the alternative would be to require developers to provide residential parking as part of their projects or contribute to a parking fund to assist the City in building structured parking. Consideration should be given to establishing a provision for Downtown residential parking, either an absolute standard, fee in lieu or contracting for existing available parking. If a parking requirement is not imposed, provisions need to be made for overnight parking for residential users in City facilities.

Estimated Cost to Implement: Nominal (minimal staff time)
Estimated Timeframe: 6 Months

(12) ***Establish a reserve fund for parking***. Parking garages, surface parking lots, parking meters, signage, and all of the various other physical assets that form a parking system and enable a parking operation to work have a cost associated with them and will require replacement at some point in the future. Building new parking spaces, maintaining existing spaces and replacing equipment can all require significant capital outlays which, at present, come from the City's General Fund or through debt financing. Due to the significant burden that these large and irregular expenses can place on a city's finances, it is good practice to set aside money in a reserve fund to help offset these future costs.

As the parking system does not currently generate profits on a consistent basis, perhaps the City can divert a portion of the annual payment from the developer of the HERE Kansas project to the reserve fund. Ideally, the City should be setting aside at least $75/space per year for the parking garage spaces and $25/space per year for the surface lot and on-street spaces.

Estimated Cost to Implement: $150,000/year, based on existing parking inventory
Estimated Timeframe: 6 Months

(13) ***Work with Douglas County to solve the parking issues at the Law Enforcement Center***. The high demand for parking created by the Law Enforcement Center means that the Law Enforcement Center Lot is consistently well utilized (over 92% occupied on the survey day), with additional vehicles spilling onto the surrounding residential streets. In addition, on court days when a large number of jurors come to the Center, County employees whose shifts start after 8:30AM have difficulty finding a space. Despite the fact that the City controls only the 14 metered spaces in the Law Enforcement Center Lot, the City would benefit from working with the County on ways to add parking capacity, particularly as new development begins to occur on the south end of Massachusetts Street.

It is recommended that the City collaborate with Douglas County on a plan to use the County's former Public Works Building at 13th Street and Massachusetts Street for overflow parking on jury days. Additionally, in coordination with the County, an attempt should be made to negotiate an agreement with Trinity Lutheran Church to allow City/County parking in their parking lot on weekdays, when church demand is typically low. Jurors can be notified of these two alternate parking locations prior to arriving at the Law Enforcement Center, in order to reduce the congestion that occurs in the LEC Lot and the confusion related to where to find available parking. Additionally, these locations have the potential to accommodate public parking during large events in Downtown.

Estimated Cost to Implement: Nominal; however, the Church may require some form of payment or donation for use of their spaces
Estimated Timeframe: 6 Months

(14) ***Improve wayfinding signage from Massachusetts Street and major approaches to Downtown to surface parking lots and garages***. Additional signage is needed to direct drivers from Massachusetts Street to available spaces in City facilities both east and west of Massachusetts. Drivers cruise Massachusetts looking for on-street parking, while garage and surface lot spaces are typically readily available. Five well located signs on Massachusetts in each direction between 6th and 11th streets would direct motorists to City parking facilities. The signs could be as simple as a "P" with an arrow

or could include the name of the facility with an arrow. In most cases the signs could be placed on existing light poles to minimize costs.

Estimated Cost to Implement: Nominal ($5,000 - $10,000)
Estimated Timeframe: 6 Months

9.4.3 Phase II Recommendations

(15) ***Add multi-space, pay-by-plate kiosks on-street, which would permit license plate enforcement, use of credit cards and cell phone payments***. The replacement of on-street meters with pay-by-plate, multi-space meters, should be a priority. A pay-by-plate system associates a parker's license plate number with the amount of parking time paid for, as opposed to a single-space meter system where an enforcement person must visually verify that payment has been made by looking at the parking meter itself. A consumer-friendly parking system provides several means of payment, including cash, credit card and cell phone. Although there is a substantial cost to implement, pay-by plate systems reduce coin collection costs, improve enforcement, potentially reduce violations and tickets, and can increase meter revenue by up to 25%. Payment by cell phone enables drivers to add time to their meter, rather than risk a violation. Additionally, eliminating single-space meter poles would improve the streetscape in Downtown. One or two meter poles in each block could be retained and repurposed for bicycle parking.

It is estimated that 100 kiosks would be needed to replace the existing 946 single-space, on-street parking meters in Downtown. Consideration should also be given to coordination with KU on developing a seamless "Park Lawrence" system.

Estimated Cost to Implement: $800,000 to $900,000
Estimated Timeframe: 12 Months

(16) ***Add multi-space, pay-by-plate kiosks in the off-street parking facilities***. The replacement of existing meters in surface lots and multi-space kiosks in the garages would improve customer service and improve enforcement. It is estimated that 20 kiosks would be required to replace the existing equipment in all of the facilities.

Estimated Cost to Implement: $160,000 to $180,000
Estimated Timeframe: 12 Months

(17) ***Acquire license plate recognition software and vehicles to enforce on- and off-street parking***. The implementation of pay-by-plate metered parking will enable enforcement using license plate recognition (LPR) software. We recommend that two vehicles be acquired and outfitted with LPR hardware and software for use by the City's PCOs. The LPR equipment can also be used to enforce time limits in the surface lots and garage and may eventually be used to enforce neighborhood parking restrictions.

Estimated Cost to Implement: $60,000
Estimated Timeframe: 6 Months

(18) ***Acquire software or develop a web portal allowing for online payment of parking violations and purchasing of monthly/annual parking permits***. The ability to use credit cards for the payment of fines and purchasing permits is an essential convenience for customers. While citation recipients can currently use a credit card to pay once a late fee has been assessed, they are not permitted to pay for a basic $5.00 citation online. It is time to eliminate the 20+ pay boxes on the street and replace them with an on-line system, in conjunction with the existing payment window at the Municipal Court office. Although there are costs associated with implementing and running an on-line system, there are labor savings in processing checks which help to offset these costs. The parking payment portal should be coordinated with the City's existing on-line payment portal to minimize costs.

Estimated Cost to Implement: $15,000 - $25,000
Estimated Timeframe: 12 Months

(19) ***Increase the rate charged on Massachusetts Street from $0.50/hr. to $1.00/hr***. It is recommended that meter rates be increased for the spaces on Massachusetts Street from $0.50 to $1.00 per hour. This should be done in conjunction with the introduction of credit card enabled meters. The spaces on Massachusetts Street are the City's most productive and most highly utilized and, as such, should be more expensive than less convenient spaces. The increased parking rate is intended to encourage longer-term and more price-sensitive parkers to use spaces along Vermont and New Hampshire streets, as well as to encourage turnover of the most desirable spaces in Downtown. Additionally, compared to the on-street parking rates charged in comparable municipalities (presented in the Appendix), the rates charged at the City's meters are on the very low end of the spectrum.

Given the popularity of the destinations on Massachusetts Street and the proposed cost to park of $1.00/hour, it is anticipated that a majority of parkers will still choose spaces on Massachusetts if they are available, as opposed to parking farther away at a lower cost. Based on the current annual revenue generated by the parking meters on Massachusetts Street, it is anticipated that this parking rate increase could yield at least $300,000 in additional revenue annually.

Estimated Cost to Implement: Nominal (minimal staff time)
Estimated Timeframe: 1 Month

(20) ***Increase the rate charged at 10-hour meters and 10-hour garage spaces to $0.20/hr***. The current fee for 10-hour paid parking of $1.00 equates to a cost of $0.10 per hour. A fee this low neither covers the City's cost to provide parking, nor any incentive for Downtown patrons to consider alternative transportation modes. The proposed rate of $0.20 per hour ($2.00 per day) is intended to continue to provide a low-cost option for Downtown employees and visitors, while also allowing the City to fund future parking improvements. Again, this rate increase is recommended to be done conjunction with the introduction of credit card enabled meters.

Based on existing revenue generated by the paid 10-hour spaces in Downtown (non-permit revenue), it is anticipated that the proposed parking rate increase could generate an additional $100,000 annually.

Estimated Cost to Implement: Nominal (minimal staff time)
Estimated Timeframe: 1 Month

(21) ***Increase permit rates from $192/yr. to $240/yr***. Current Downtown parking permit rates are the equivalent of less than $1.00 per day. It is recommended that the rate be increased to $240 per year, or approximately $1.00 per day. While a slight increase over the current rate, this permit will continue to provide Downtown employees a low-cost parking option.

Based on existing revenue generated through the sale of parking permits, this change is projected to generate an additional $25,000 annually.

Estimated Cost to Implement: Nominal (minimal staff time)
Estimated Timeframe: 1 Month

(22) ***Increase initial fines for metered/timed parking violations to $10.00 and on repeat offenders to $100, with booting/towing automatically after 3 unpaid tickets.*** In the parking industry, it is a best practice to price overtime/non-payment parking violations at 10 to 15 times the hourly cost of parking. This pricing structure is intended to encourage payment of the meters and compliance with time limit regulations. If the fine for a violation is too low, parkers are more likely to take their chances on receiving a violation, as opposed to paying for the time they are parked or moving their vehicles within the posted time limit. If the parking rate on Massachusetts Street is increased to $1.00 per hour, as recommended, then the fine amount for overtime/non-payment violations should be increased in order to maintain the proper cost ratio.

Estimated Cost to Implement: Nominal (minimal staff and City Attorney time)
Estimated Timeframe: 1 Month

(23) ***Establish a monthly (overnight) permit for downtown residents in one of the garages***. With the recent growth in residential units in the Downtown District and no requirement for downtown land uses to provide parking, the need for overnight parking for downtown residents has become evident. Technically, parkers are currently not permitted to park for more than 48-hours consecutively in free City spaces, although this is not generally enforced. Additionally, parking is permitted in metered spaces without payment after 6PM and prior to 9:30AM. Because of these two circumstances, as employees arrive to Downtown, it is often the case that long-term parking spaces throughout the city are still occupied by Downtown residents.

In an attempt to alleviate this situation, it is recommended that a residential permit be created to allow for overnight vehicle storage in the lower level of the Riverfront Garage for a nominal fee (perhaps $25/year). The intent of this type of permit is to minimize the conflict between residential and office parking users, which is evident in several of the downtown lots.

In order to provide further incentive for residents to use this program, it may also be necessary to institute “No Parking” regulations in several long-term lots between the hours of 5AM and 9:30AM, except for parkers who have a regular Downtown parking permit. This policy would still allow employees to park in long-term spaces more proximate to the activity centers in Downtown, while preventing non-permit holding residents from using the spaces until the parking meters are active.

Estimated Cost to Implement: Nominal (minimal staff and City Attorney time)
Estimated Timeframe: 1 Month

(24) ***Change existing parking ordinance relative to meter feeding***. At present, it is illegal to extend a parking session at a metered space beyond the posted time limit. The goal of this policy is to prevent people from remaining parked in the same space all day, reducing availability for other potential parkers. However, based on observations of parking activity in Downtown Lawrence, the practice of meter feeding does not appear to be a widespread issue. As noted previously, even for the most desirable spaces on Massachusetts Street, only about 2% of the 690 vehicles observed parking remained parked at a space for longer than the posted 2-hour limit.

As new technology is implemented which will allow parkers to more easily pay for their parking time, parkers should be given the option to extend their parking stay one additional period beyond the posted time limit. For instance, a person parking at a 2-hour meter would be permitted to remain parked in the same space for up to a total of 4 hours, assuming they pay for their full parking time. This change in policy will help prevent parkers from feeling rushed to complete their business in Downtown for fear of receiving a parking citation, if they must stay longer than originally planned. Conversely, the proposed increased parking rates should limit any potential abuse of this policy.

Estimated Cost to Implement: Nominal (minimal staff and City Attorney time)
Estimated Timeframe: 2 Months

(25) ***Restripe parking lots to increase the number of spaces***. One of the easiest ways to increase the parking supply in a downtown is to improve the efficiency of the layouts of existing parking lots. This can be accomplished by restriping existing lots to increase the number of spaces. Without compromising safety or functional geometry, we analyzed the layouts of four (4) of the most heavily utilized surface parking lots in Downtown: lots 3, 8, 14, and the Law Enforcement Lot). Based on these analyses, increases in efficiency ranging from 8% to 25% were identified. In total, reconfiguring and restriping could increase the number of spaces in these four lots by 87 total spaces. This is equivalent to an increase of about 4% in the supply of off-street public parking in Downtown.

In some cases, if these parking lots were reconfigured as proposed in the layouts presented in the Appendix, there would be a reduction in the total amount of landscaping, in violation of current City Code. We do recognize that providing sufficient landscaping and tree cover is both required by Code and desired by the citizens of Lawrence, in order to provide residents and visitors a more pleasant experience when coming to Downtown. The proposed reconfigurations of these surface parking lots are intended to stave off the need to build more structured parking in the future and can be adjusted to include the landscaping and tree cover required by the current City Code. However, if the density of Downtown and the associated parking demand increases to a point where additional parking capacity is an absolute necessity, consideration should be given to modifying the existing Code in reference to parking lot design on a case-by-case basis.

If this recommendation is implemented, the reconfiguration/restriping could be phased to coincide with regular maintenance of the lots and the installation of pay-by-plate kiosks, in order to reduce costs.

Estimated Cost to Implement: ~$100,000
Estimated Timeframe: 6 Months

(26) ***Review lighting in all parking facilities and replace where appropriate with energy-efficient fixtures***. Energy-efficient lighting fixture prices have decreased significantly in recent years. Coupled with incentives from electric utilities, there is little reason to delay upgrading lighting in parking facilities, where those upgrades have not already been completed or are not already planned. Additionally, customer service and patron safety can be improved through lighting enhancements. For these reasons, it is recommended that all facilities be survey to determine the need for and cost to upgrade lighting.

Estimated Cost to Implement: TBD
Estimated Timeframe: TBD

(27) ***Extend meter hours in active areas to 9PM on weekdays and Saturdays***. Given the high activity levels in downtown Lawrence in the evenings on both weekdays and Saturdays, it is recommended that meter enforcement be extended until 9PM. The extended enforcement hours will enable the system to capture revenue from patrons of the City's many bars and restaurants. The primary cost associated with extending the hours of enforcement will be for additional PCOs or extended hours by the current PCOs. However, with the implementation of pay-by-plate technology, the number of PCOs required to enforce the City's current parking regulations and hours of enforcement should be reduced significantly. Enforcement personnel shifts could then be adjusted to cover the additional three (3) hours of enforcement each day, at little to no additional cost.

From a revenue perspective, if only 25% of the existing 707 on-street metered parking spaces that cost at least $0.50/hour are occupied an additional 2 hours a day, 3 days a week, that would represent an additional $26,000 in revenue annually, not including citation revenue.

Estimated Cost to Implement: Nominal
Estimated Timeframe: 6 Months

(28) ***Institute regular rate increases***. One of the most difficult parts of managing a parking system is convincing the public and governing entities of the value of regularly increasing parking rates. Because it is difficult politically, the decision to increase rates is generally deferred until financial need dictates. For this reason, it is recommended that regular rate increases be part of the City's plan of operation in the future. These increases should at least keep pace with cost of living increases. A ten percent increase in rates and fine amounts every 3 – 4 years would provide a relatively painless way to keep the parking system solvent, as salaries and other costs increase.

Estimated Cost to Implement: Nominal
Estimated Timeframe: 3 – 4 years

(29) ***Implement demand management strategies.*** Before investing in additional structured parking in the downtown, consideration should be given to implementing efforts to reduce parking demand for employees and residents. There are a number of techniques readily available to reduce parking demand. A few of the more popular are:

- No longer provide free parking for City/County employees and/or begin providing transit benefits
- Implement an employee transit pass program for downtown and/or City/County employees

- Provide bicycle parking and other Infrastructure and amenities such as showers and lockers
- Encourage carpooling by reserving the best, most convenient parking for carpoolers
- Offer tax advantaged (pre-tax) incentives for City/County workers who use transit
- Develop a bike share program citywide and/or at certain locations Downtown
- Encourage “Walk There or Bike There” campaigns

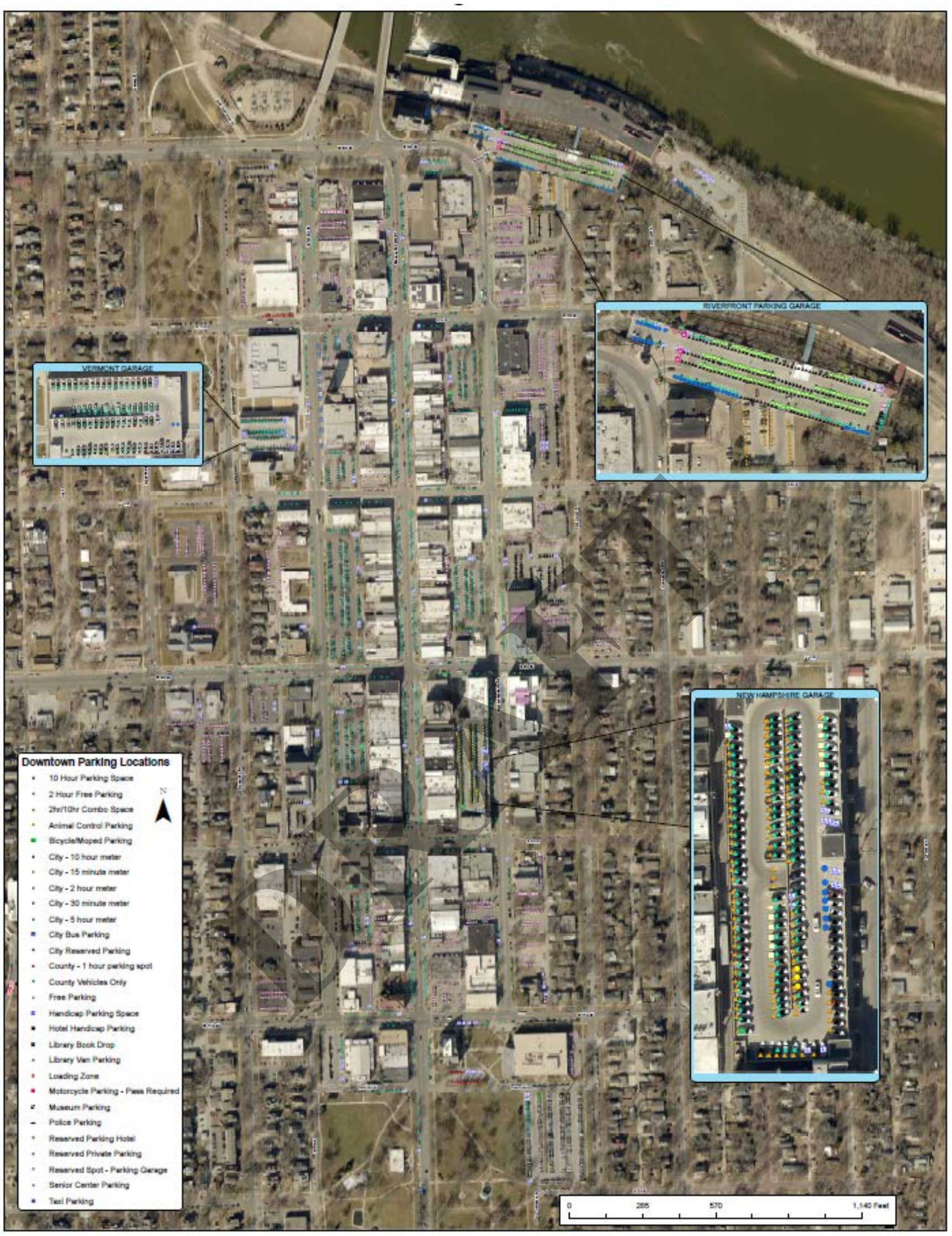
Estimated Cost to Implement: TBD
Estimated Timeframe: 3 – 4 years

Table 11 – Parking Operations and Development Plan Recommendations

Recommendation	Anticipated Cost	Anticipated Timeline for Implementation
Establish a head of the parking operation	$55,000 - $65,000	3 - 6 Months
PHASE I		
1. Eliminate the designation of on-street parking spaces for use only by the residents of one particular property	Nominal	3 Months
2. Forbid charter bus and other large vehicle parking within designated neighborhoods	Nominal	3 Months
3. Remove the 2-hour meters from the 300 block of W. 9th Street	Nominal	1 Week
4. Replace existing 5-hour meters with 10-hour meters	Nominal	1 Month
5. Change a number of 2-hour meters to 10-hour meters	Nominal	1 Month
6. Change 15- and 30-minute meters to 2-hour meters	Nominal	1 Month
7. Increase the cost of right-of-way (meter bagging) permits	Nominal	1 Month
8. Investigate the potential of adding parallel parking on the west side of Rhode Island Street	Nominal	1 Month
9. Establish a boot and tow policy to deal with habitual parking violators	Nominal	6 Months
10. Establish a residential permit parking policy for the city's neighborhoods	Nominal	3 Months
11. Review zoning ordinance requirements regarding downtown residential parking	Nominal	6 Months
12. Establish a reserve fund for parking	$150,000	6 Months
13. Work with Douglas County to solve the parking issues at the Law Enforcement Center	Nominal	6 Months
14. Improve wayfinding signage from Massachusetts Street and major approaches to Downtown to surface parking lots and garages	$5,000 - $10,000	6 Months
PHASE II		
15. Add multi-space, pay-by-plate kiosks on-street, which would permit license plate enforcement, use of credit cards and cell phone payments	$800,000 - $900,000	12 Months
16. Add multi-space, pay-by-plate kiosks in the off-street parking facilities	$160,000 - $180,000	12 Months
17. Acquire license plate recognition software and vehicles to enforce on- and off-street parking	$60,000	6 Months
18. Acquire software or develop a web portal allowing for online payment of parking violations and purchasing of monthly/annual parking permits	$15,000 - $25,000	12 Months
19. Increase the rate charged on Massachusetts Street from $0.50/hr. to $1.00/hr.	Nominal	1 Month
20. Increase the rate charged at 10-hour meters and 10-hour garage spaces to $0.20/hr.	Nominal	1 Month
21. Increase permit rates from $192/yr. to $240/yr.	Nominal	1 Month
22. Increase initial fines for metered/timed parking violations to $10.00 and on repeat offenders to $100, with booting/towing automatically after 3 unpaid tickets	Nominal	1 Month
23. Establish a monthly (overnight) permit for downtown residents in one of the garages	Nominal	1 Month
24. Change existing parking ordinance relative to meter feeding	Nominal	2 Months
25. Restripe parking lots to increase the number of spaces	$100,000	6 Months
26. Review lighting in all parking facilities and replace where appropriate with energy-efficient fixtures	TBD	TBD
27. Extend meter hours in active areas to 9PM on weekdays and Saturdays	Nominal	6 Months
28. Institute regular rate increases	Nominal	Every 3 - 4 Years
29. Implement demand management strategies	TBD	3 - 4 Years

Source: DESMAN

APPENDIX 1: DOWNTOWN LAWRENCE PARKING MAP



http://lawrenceks.maps.arcgis.com/apps/Legend/main/index.html?appid=2f6028a0f5e64ed4b8a3fc0f0210b2e3

APPENDIX 2: DOWNTOWN PARKING SPACE INVENTORY BY BLOCK AND TYPE

Location	15 min meters	30 min meters	2 hour meters	5 hour meters	10 hour meters	Handi spaces	2 hour free	10 hr spaces	2hr/10hr combo	10 hour Free	Reserve Hotel	Hotel Handi	Reserved Private	City Reserved	Taxi	Totals
600 Kentucky (east)					10											10
700 Kentucky (east)					12											12
700 Kentucky (west)					8											8
900 Kentucky (east)			3													3
600 Vermont (east)			14			1										15
600 Vermont (west)		6	11													17
700 Vermont (east)				2												2
700 Vermont (west)			10			2										12
800 Vermont (east)				18												18
800 Vermont (west)			16	5												21
900 Vermont (east)			6	13		1										20
900 Vermont (west)			2	12		2										16
1000 Vermont (east)					15											15
1000 Vermont (west)			2	20												22
600 New Hampshire (east)			7		1											8
600 New Hampshire (west)			8													8
700 New Hampshire (east)			28			1										29
700 New Hampshire (west)			6	10												16
800 New Hampshire (east)			18	3		2										23
800 New Hampshire (west)	1		8	4		1										14
900 New Hampshire (east)			3													3
900 New Hampshire (west)			4	12												16
1000 New Hampshire (east)			5	6	9	1										21
1000 New Hampshire (west)			4	4	6	1										15
600 Massachusetts (east)	2		27			1										30
600 Massachusetts (west)	2		24			1										27
700 Massachusetts (east)	2		34			1										37
700 Massachusetts (west)	2		33			1										36
800 Massachusetts (east)	2		33			1										36
800 Massachusetts (west)	2		33			1										36
900 Massachusetts (east)	2		34			1										37
900 Massachusetts (west)	2		33			1										36
1000 Massachusetts (east)	2		31			1										34
1000 Massachusetts (west)	2		33			1										36
1100 Massachusetts (east)			6													6
1100 Massachusetts (west)	1		6													7
1200 Massachusetts (west)			7			1										8
7th E 100 blk (north)	2		6													8
7th E 100 blk (south)			7			1										8
7th W 100 blk (north)			7													7
7th W 100 blk (south)			1													1
7th W 200 blk (north)		13														13
7th W 200 blk (south)					4											4
7th W 300 blk (north)					9											9
7th W 300 blk (south)					9											9
8th E 100 blk (north)			8													8
8th E 100 blk (south)			7			1										8
8th E 200 blk (north)			3		3											6
8th E 200 blk (south)					2											2
8th W 100 blk (north)			8													8
8th W 100 blk (south)			9													9
8th W 200 blk (north)			4													4
8th W 200 blk (south)			8													8
9th E 100 blk (north)			5			1									1	7
9th E 100 blk (south)			5													5
9th E 200 blk (north)			4											4		8
9th E 200 blk (south)	2		2													4
9th W 100 blk (north)			8			1										9
9th W 100 blk (south)			8													8
9th W 200 blk (north)			7													7
9th W 200 blk (south)			8													8
9th W 300 blk (north)			5													5
10th E 100 blk (north)			8													8
10th E 100 blk (south)			7			1										8
10th W 100 blk (north)			7			1										8
10th W 100 blk (south)			6													6
10th W 200 blk (north)					7											7
10th W 200 blk (south)					5											5
11th E 100 blk (south)			5			4										9
11th W 100 blk (north)			5			1										6
11th W 100 blk (south)			7													7
11th W 200 blk (north)					2											2
11th W 200 blk (south)					4											4
North Park W 100 (south)			8		20	1										29
LEC Lot			14			3				205				3		225
Lot #2						2	69									71
Lot #3						6	160									166
Lot #4					16	3	66									85
Lot #5						4	77									81
Lot #7			8		34	3								1		46
Lot #8 WEST					48	3										51
Lot #8 EAST					48	2										50
Lot #9					36	2										38
Lot #10					29	3	33									65
Lot #11					17	2								2		21
Lot #12						1	26									27
Lot #14						2	34									36
Lot #15					35	1										36
Lot #16					43											43
Lot #17			23			2										25
700 New Hampshire Lot			10		25	4		22								61
NH Garage-Basement						3			102				13	8		126
NH Garage-1st floor (main)						7	90							3		100
NH Garage-2nd floor						3		125								128
NH Garage-3rd floor (top)						3				132						135
Riverfront Garage (top)						11	68				109	4				192
Riverfront Garage (Ramp)									47							47
Riverfront Garage (bottom)								187						42		229
Vermont Garage -4th floor										73						73
Vermont Garage -3rd floor						1		71								72
Vermont Garage-2nd floor						1	34	37								72
Vermont Garage-1st floor						7	58									65
Vermont Garage-basement								22					6	2		30
	26	19	717	109	457	114	715	464	149	410	109	4	19	65	1	3,378
															hotel/res/moped/taxi/bus/emergency/loading	(198)
															Total Usable Spaces	**3,180**

APPENDIX 3: SAMPLE BOOT AND TOW ORDINANCE

Moving, impoundment of vehicles; sale of impounded vehicles, and immobilization of vehicles

(1) *Unlawful standing.* Any police officer who finds a vehicle standing upon a street or highway in violation of this chapter may move the vehicle or require the driver or other person in charge of the vehicle to move it to a position off the roadway.

(2) *Unattended vehicle on street, highway, bridge or tunnel.* Any police officer may remove or cause to be removed to the nearest vehicle pound or other place of safety any unattended vehicle unlawfully left standing upon any street, highway, bridge, causeway or in any tunnel.

(3) *Impoundment and immobilization.* Any police officer, parking enforcement officer, or parking management service, as defined in _____ may remove or cause to be removed to the nearest vehicle pound or other place of safety any vehicle found upon a highway when:

a. Report has been made that the vehicle has been stolen or taken without the consent of its owner;
b. The person in charge of the vehicle is unable to provide for its custody or removal;
c. The person driving or in control of the vehicle is arrested for an alleged offense for which the officer is required by law to take the person arrested before a proper magistrate without unnecessary delay;
d. The vehicle is stopped, except when traffic congestion makes movement impossible, on a controlled access highway which is a part of the national system of interstate and defense highways, for more than eight hours, unless the vehicle constitutes a traffic hazard, in which case it may be removed immediately; or
e. The vehicle is without a current license tag, current registration or the proper inspection sticker.
f. The vehicle is immobilized through the use of a vehicle immobilization device as defined at section _____ of the City of Lawrence Code of Ordinances, and all associated tickets, fees and fines have not been paid in full to the City of Lawrence within 24 hours of immobilization.

(4) *Authority to sell; notice.* When any vehicle is left on the streets and it becomes necessary for the department of police to take charge of the vehicle in order to preserve the safety of travel on the streets and the department of police does take charge of the vehicle and removes the vehicle and places the vehicle in storage, the vehicle shall be safely kept for 60 days. If after 60 days the vehicle shall be unclaimed by a person making the necessary proof of title, the police chief shall, for two days, put an advertisement in the newspaper in which the city's advertisements are published, describing the vehicle to be sold and giving such information about the vehicle as will put the owner or other persons having knowledge thereof in possession of the facts, stating that the property is in the police chief's possession or control and that, at the expiration of 20 days, it will be exposed for sale. The advertisement shall also state the time and place the vehicle shall be sold and that the proceeds shall be turned in to the city treasury. However, the advertisement shall also state that, within 20 days of the last advertisement provided for in this subsection, any person making satisfactory proof of title or any person who shall claim title to the vehicle shall have the right to request a hearing before the police chief or the police chief's designee to establish, by evidence,

proof of title to the vehicle claimed. Upon request for a hearing, the police chief or the police chief's designee shall, within ten days, set a time and place for the hearing and shall notify the person claiming title to the vehicle of the hearing.

(5) *Conduct, record of sale.* At the time named in the notice pursuant to subsection (d) of this section, the police chief or some officer authorized by the police chief, shall proceed to the place where the vehicle is stored and expose the vehicle for sale and sell the vehicle to the highest bidder for cash. A record shall be kept of such sale showing each vehicle sold, with a description corresponding to the advertisement, the name of the purchaser and the amount received therefor.

(6) *Disposition of proceeds.* The police chief shall turn the proceeds of the sale into the parking fund of the city, keeping such a record thereof as may serve to identify the vehicle with the proceedings required in this section. The city manager is authorized to pay to a wrecker or storage garage which has an agreement or contract with the city the towing and storage fees on impounded vehicles or the sales price of the impounded vehicle, if such should be less than the towing and storage fees.

(7) *Police use of vehicles.* The vehicles which have been processed for sale at public auction, as provided by this section, may, in the discretion of the police chief, be utilized by the department of police for a period not to exceed 90 days before being subjected to sale, as otherwise provided by this section.

(8) *Immobilization of vehicles.* Any sworn police officer or parking enforcement officer may cause a vehicle to be immobilized if the vehicle has been issued a minimum of three (3) unsatisfied delinquent parking tickets. The charge for the immobilization of vehicles under this section shall not exceed $50.00 per day for the removal of the vehicle immobilization device or devices. Neither the city nor its parking management service shall have liability for any damage, vandalism or theft of any immobilized vehicles.

APPENDIX 4: SAMPLE RESIDENTIAL PERMIT PARKING ORDINANCE

Legislative Purpose.
It is the legislative purpose of the Commission of the City of Lawrence to assist, when feasible, residents of areas of the City who suffer adverse effects from vehicular congestion resulting from the existence of limited numbers of curbside parking spaces and large numbers of non-residents competing with residents for curbside parking spaces and/or from parking regulations designed to control the flow of vehicles which ultimately work a hardship on residents of such areas. The adverse conditions include, but are not limited to, hazardous traffic conditions, air pollution, excessive noise and refuse, unreasonable burdens in gaining access to residences, reduced traffic safety, reduced pedestrian safety, particularly for children and senior citizens, blocked fire lanes and fire hydrants, reduced efficiency in the movement of emergency vehicles, and general reduction in the quality of life. It is the further intent of the Commission to encourage the use of mass transportation and other alternate modes of transportation.

Definitions.
For the purpose of this Chapter:

(a) *Residential permit parking zone* means a contiguous area no less than three (3) blocks in size where curbside parking on public streets is limited to vehicles properly displaying a parking permit authorized by this Chapter between the hours of 6:00 A.M. and midnight from Monday through Saturday, except on legal holidays.

(b) *Block* means one or both sides of any street between street intersections, dependent upon whether or not parking is legally permitted on one or both sides of the street.

(c) *Parking permit* means either a resident parking permit or a guest parking permit authorized by this Chapter.

(d) *Vehicle* means an automobile, motorcycle, motor-driven cycle, or van or passenger utility vehicle intended primarily for personal use and not exceeding twenty-two (22) feet in length.

(e) *Leased vehicle* means a vehicle owned by a leasing business which is being provided to an individual through a leasing contract. A vehicle leased from one individual to another individual is not a leased vehicle for purposes of this Chapter.

(f) *Company car* means a car, the vehicle registration of which reflects that it is owned by a corporation. A privately-owned car used by an individual for company business is not a company car for purposes of this Chapter.

(g) *Temporary student resident* means a person enrolled full time in a college, university, trade or business school, residing in a permit parking zone for an academic term, whose vehicle is registered to his/her permanent address.

Designation of Permit Parking Zones.
(1) The Commission may by Ordinance designate residential permit parking zones when it determines that residents of the proposed permit parking zone are adversely affected by entry into the area and curbside parking by non-residents in motor vehicles and/or by parking regulations in effect which are designed to control use of curbside parking but work a hardship on area residents, only if all of the following conditions are met:

(a) At least one resident of each of at least sixty percent (60%) of the dwelling units has completed a formal petition for designation of the block as a residential permit parking block.

(b) A parking study determines that at least twenty-five percent (25%) of the vehicles parked in the proposed residential permit zone during the time periods requested for the permit are not owned by residents of the proposed zone.

(c) A parking study determines that at least eighty-five percent (85%) of available on-street parking in the proposed residential permit zone is occupied at any time during the time periods requested for the permit.

(d) At least eighty percent (80%) of the occupied frontage, at ground level, of each block in the proposed residential permit parking zone is in use for residence purposes.

(2) Where permit parking zones abut, an overlapping zone shall be created, to extend one block into each of the abutting zones, in which permits from either of the abutting zones shall be valid.

(3) Subject to the approval of the City Commission, residential permit parking zones created pursuant to this Chapter shall be revoked upon occurrence of both of the following conditions:

(a) A petition requesting revocation of part or all of the residential permit parking zone, signed and date by one resident of each of at least fifty-one percent (51%) of the dwelling units in the zone, is submitted to the City Clerk. If the petition requests revocation of only part of a residential permit parking zone, the size of the remaining zone must still meet the three-block minimum size requirement for a residential permit parking zone, and;

(b) A parking study determine that less than seventy-five percent (75%) of available on-street parking in the residential permit parking zone, or part thereof sought to be revoked, is occupied during the time periods that parking is restricted.

(4) When a residential permit parking zone is created pursuant to this Chapter, the zone must remain in force for a minimum of twenty-four (24) consecutive months before it becomes eligible to be revoked under the provisions of subsection (3) of this Section

Posting of Signs.

(1) Upon designation of Commission of a permit parking zone, the Public Works Department shall erect signs which shall be of such a character as to inform an ordinarily observant person of the restrictions.

(2) Upon erection of the necessary signs, parking in the residential permit parking zone shall be restricted to only vehicles displaying valid resident or visitor parking permits or to a vehicle parked legally for up to fifteen (15) minutes in a twenty-four (24) hour period if its hazard indicator lights are flashing.

(3) Upon creation, revocation or modification of a residential permit parking zone pursuant to this Chapter, the Public Works Department shall install, remove or modify the pertinent parking zone signage, as appropriate.

Issuance of Resident Parking Permits.

(1) Subject to the provisions of this Section, the City Clerk's Office shall issue one (1) resident parking permit for the vehicle described in the application to an applicant who has submitted a completed permit application and an annual permit fee of fifteen dollars ($15.00) for the first vehicle in a household; thirty dollars ($30.00) for the second vehicle in a household; seventy-five dollars ($75.00) for the third vehicle in a household; and one hundred dollars ($100.00) for the fourth or more vehicles in a household; provided, however, that in determining the number of vehicles in a household, the Clerk's Office shall not count motorcycles or motor-driven cycles; and provided, further, that the annual fee for each motorcycle or motor-driven cycle shall be fifteen dollars ($15.00).

(2) Resident parking permits shall remain valid for a period of one calendar year, at the end of which time the applicant must pay the prescribed annual fee in order to renew the permit.

(3) Except as provided in subsection (4) of this Section, no resident parking permit shall be issued for a vehicle when its owner and principal operator does not reside within the permit parking zone for which the resident parking permit is sought.

(4) Except as provided in subsection (4) of this Section, no resident parking permit shall be issued for a vehicle when the applicant is not the owner and/or principal operator of that vehicle.

(5) The provisions of subsections (1), (2) and (3) of this Section may be waived when an applicant establishes to the satisfaction of the City Clerk's Office that he or she is a resident of the permit parking zone for which a permit is sought, that he or she is the principal operator of the motor vehicle for which a permit is sought, and that the vehicle is either a leased vehicle or a company car supplied to the applicant by his or her employer for general use.

(6) Notwithstanding the previous subsections (1), (2), (3), and (4) of this Section, the City Clerk's Office shall not issue a Resident Parking Permit to any applicant when that applicant has three (3) or more unpaid parking violation fines, until such fines are paid or until the applicant has entered into a payment agreement satisfactory in its terms to and with the Municipal Court for the payment of the unpaid fines.

Transfer of Resident Parking Permits.

(1) Upon submission by the holder of a resident parking permit of a transfer fee of five ($5.00) dollars and a permit transfer application, the City Clerk's Office shall issue a new resident parking permit to the applicant for transfer to a qualifying vehicle.

(2) The transfer of a resident parking permit shall not affect its expiration date.

Issuance of Guest Parking Permits.

(1) Upon request of a resident parking permit holder and submission of the appropriate fee, the City Clerk's Office shall issue to the applicant guest parking permits valid for one calendar day for use by a bona fide guest of the applicant or by a person doing business with the applicant.

(2) Guest parking permits will be priced as follows:

(a) Five dollars ($5.00) for fifteen (15)

(b) Ten dollars ($10.00) for thirty (30)

(c) Fifteen dollars ($15.00) for forty-five (45)

(3) Guest parking permits not used during the calendar year shall not be valid during the next calendar year and the fee paid for such unused permits shall not be refundable.

(4) The City Clerk's Office shall have the right to limit the number of guest parking permits issued to a household at any single purchase, or in any period of time during the calendar year, or in total during any calendar year.

Use of Resident Parking Permits and Guest Parking Permits.

(1) All resident parking permits and guest parking permits shall be displayed in or on vehicles in the manner prescribed by the Police Department.

(2) A parking permit shall not guarantee or reserve a space within a permit parking zone. A parking permit shall not authorize the stopping, standing, or parking of any vehicle in such places and during such times as the stopping, standing, or parking is prohibited or set aside for specific types of vehicles. A parking permit shall not excuse the observance of any traffic regulation.

(3) Whenever the holder of a parking permit, or the vehicle for which the permit was issued no longer fulfills one or more of the applicable provisions of this Ordinance, the holder shall surrender the parking permit in the manner prescribed by the City Clerk's Office.

(4) Until its expiration, surrender, or revocation, a parking permit shall remain valid for such time as the holder continues to reside within the same permit parking zone.

(5) A parking permit shall be valid only in the permit parking zone for which it is issued except in the case of overlapping zones as set forth in subsection (2) of Section "Designation of Permit Parking Zones" of this Chapter.

(6) For the purposes of this Chapter the person to whom a resident parking permit is issued shall be deemed its holder and shall be responsible for the use or misuse of any parking permit issued to him or her.

(7) No vehicle shall display any ticket, tag, handbill, or other writing simulating or in imitation of a residential parking permit or temporary parking permit.

Rules and Regulations.

(1) The City Clerk's Office, Public Works Department and Police Department shall promulgate rules and regulations relating to their respective obligations to implement and enforce the provisions of this Chapter.

(2) When promulgating rules and regulations, the City Clerk shall make every reasonable effort to devise methods to preserve the integrity of the permit parking system.

Penalty.

(1) Any person violating any provision of this Chapter shall be subject to revocation of his or her permit and, upon summary conviction, be fined one hundred dollars ($100.00) for each violation together with the costs of prosecution.

APPENDIX 5: CHARACTERISTICS OF PUBLIC PARKING IN COMPARABLE MUNICIPALITIES

City	State	Population	Number of Metered Spaces	Number of Lots	Number of Garages	Off-Street (Hourly)	Off-Street (Daily Max)	Garage (Monthly)	Surface Lot (Monthly)	On-Street (Hourly)	On Street Hours of Operation	Overtime Meter Fee	Late Payment Fee	Duration Before Late Fee
Austin	Texas	885,400	>3,000	36	27	$5.00+$2.50/hour	$21	$180	N/A	$1.00-$1.20	Mon-Wed 8AM-6PM, Thurs-Fri 8AM-12AM, Sat 11AM-12AM	Varies	30% of original	Varies
Bloomington	Indiana	82,575	-	4	3	$0.50-$1.00 1st 3 hrs free certain facilities	$4.50-$10.00	$40-$76	N/A	$1.00	Mon-Sat 9AM-9PM	$20	$40	14 Days
Missoula	Montana	69,122	135	2	2	$1.00	$9.00	$65-$75	$35-$55	$1-$2 plus $0.50 each hour	Mon-Fri 9AM-5PM	$5-$20	$5-$20	30 Days
Manhattan	Kansas	56,143	0	0	0	time limits only	time limits only	N/A	N/A	N/A	Mon-Fri 8AM-5PM	$15	$10-$25	3 Days
Kansas City	Missouri	467,007	1,500	3	9	$3.00-$4.00	$12.00-$15.00	$55-$120	$40	$1.00	Varies by Meter	Varies	Varies	15 Days
Evanston	Illinois	75,570	1,769	25	3	$1.00-$3.00 1st hr free	$13.00	$85	$50-$85	$1.00	Mon-Sat 8AM-9PM	$40	$35	10 Days
Iowa City	Iowa	71,591	1,142	3	5	$0.75-$1.00 1st hr free certain facilities	$18.00-$24.00	$85	$85	$0.75-$1.50	Mon-Sat 8AM-6PM	$7-$25	$5	30 Days
Boulder	Colorado	103,166	-	5	5	$1.25-$2.50	$55.00	$137	$70-$80	$1.25	Mon-Sat 9AM-7PM	$15	$15	14 Days
Morgantown	West Virginia	30,666	2,202	9	4	$0.75-$1.25	$7.50	$50-$70	None	$0.75-$1.00	Mon-Sun 12AM-12PM	$5	$5	10 Days
Corvallis	Oregon	55,298	>600	7	0	Permit Only	Permit Only	N/A	$20-$25	$0.25-$1.50	Mon-Sat 9AM-5PM	$10	$5	10 Days

APPENDIX 6: SAMPLE PARKING LOT RECONFIGURATIONS/RESTRIPING

March 2017

Law Enforcement Parking Lot
263 Spaces (+42 Spaces)
Lawrence, KS

DESMAN
Design Management

February 2017

Parking Lot 3
182 Spaces (+15 Spaces)
Lawrence, KS

DESMAN
Design Management

February 2017

Parking Lot 8
119 Spaces (+18 Spaces)
Lawrence, KS

DESMAN
Design Management

Februrary 2017

Parking Lot 14
48 Spaces (+12 Spaces)
Lawrence, KS

DESMAN
Design Management