Downtown Portland Parking and Accessibility Study

Michigan State University

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Planning Program

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Prologue

Michigan State University's Urban and Regional Planning Program requires all students, both graduate and undergraduate, to participate in a course focused on applied planning. Students are given a list of projects and clients to choose from and are then asked to develop a product in-line with the needs of their client(s). This project is the result of the spring 2009 practicum course.

The client for this project was Portland Main Street, Michigan State University Extension, and Ionia County Economic Alliance (ICEA); for which the primary contacts were Julie Clement of Portland Main Street and Diane Smith of ICEA and MSU Extension. Thanks must be extended to Rush Clement, the Interim Direct of the Downtown Development Authority and Thomas Dempsey, City Manager of the City of Portland, for their cooperation and valuable contributions of information and insight.

Executive Summary

This report submitted by the City of Portland Michigan State University Urban Planning Practicum Group provides findings from a two-phase parking and accessibility study. The first phase of the project assessed the availability of parking in Downtown Portland while assessing the perceptions of Downtown stakeholders regarding the issue. The second phase of the project generated recommendations for addressing the challenges identified in the first phase.

An inventory of the study area was the first-step. The inventory process included an assessment of the physical infrastructure, traffic flow, and signage as well as a point-in-time parking study. In addition, a basic socio-economic analysis was conducted in order to inform recommendations The inventory process identified a few key areas in need of improvement, but overall, the physical infrastructure in the study area is in good condition. A few minor changes, like the addition of wayfinding systems and improved pedestrian systems were identified as potentially improving the circulation and availability of parking in the study area.

Based on the inventory and discussions with the client, it was determined that interviews with local business owners were a necessary component of the study, as they were the primary group unhappy with the current situation. Business owners and employees were asked three short questions to gauge their perception of the parking system. From the responses it was concluded that there is a perceived parking problem among respondents, that nearly half of the respondents parked on-street or in public lots, and there are a variety of opinions on methods to address the problem. The results of our survey were compared to the results of a 2003 survey that also concluded that respondents perceived the availability of parking as a problem in Downtown Portland.

During the point-in-time parking study, 290 total public parking spaces in Downtown were accounted for in one of the five designated zones (on-street parking) or four lots (off-street parking) within the study area. At no time during the study did the parking usage approach maximum capacity in any zone or lot. However, the lots and zones closest to Kent Street were heavily used while those on the periphery were largely vacant. This may contribute to the perception of a parking problem in Portland among Downtown business owners.

The parking demand and current zoning requirements were calculated using equations provided by the Institute of Transportation Engineers Parking Generation (2nd Ed.) manual (model 1) and the City of Portland zoning ordinance (model 2). An estimated 150 private parking spaces were added to the publicly provided 290, bringing the total parking spaces to 440 spaces. Model 1 found that the zoning ordinance required 591 spaces based on land uses in the study area. Model 2 estimated typical weekday parking demand in Downtown Portland at 301 spaces. Together, these models suggest while Downtown Portland is short of the recommended number of spaces required by the zoning ordinance, it has enough spaces to handle demand on an average weekday.

Based on the interviews, inventories, and analyses conducted recommendations for Portland were created addressing seven subject areas (Parking Education, Parking Promotion, Signage and Wayfinding, Regulatory Policies, Physical Improvements, Alternative Modes of Transportation, and Special Event Parking Management). While all recommendations have the potential to improve the parking and accessibility in downtown, the Portland Practicum group does not expect the City of Portland to adopt each recommendation listed. Moreover, adoption of a single recommendation will not eliminate Portland's and accessibility challenges. Any strategy adopted must be part of the city's comprehensive planning goals and consider education in addition to physical improvements. Seven of the eighteen recommendations made for the City of Portland follow. A complete list of recommendations, with relevant best practices from other cities in the United States, can be found in Chapter 6.

- Advertise the availability of parking with Newspaper inserts, with the city website, or a parking "hotline". The most updated parking information can be introduced to residents in this manner, including updated parking maps and regulations. Local events can also be announced in conjunction with parking information.
- Development of a comprehensive signage plan to provide uniform signage that directs visitors and employees to appropriate short and/or long term parking areas is necessary. A system is needed to direct overflow parking to the River and Maple Lots as well improved signage for businesses.
- A volunteer-based group charged with development and implementation of new downtown parking policies should be created. The Portland Parking Advisors (PPA)

could consist of 7 to 9 people that would meet monthly to discuss parking policy. This group would make recommendations to the city council and/or planning commission to solve problems, request resources, and manage parking as a whole.

- A flexible method of enforcing shared parking regulations is advisable for Portland because it allows the city more latitude to consider the unique characteristics of many land uses and parcels in Downtown Portland. Such a policy can replace the current off-street parking requirements in the zoning ordinance.
- Add more lighting to the River Lot, consistent with the lighting provided across the river in the study area.
- Portland has documented bike trails in the map in Appendix B, but the trails avoid the downtown area. Expansion of these trails, through downtown and residential neighborhoods in Portland, will help Portland become a more bike-able community.
- The City of Portland should adopt a strategy for remote parking for special events like funerals and Bingo Fridays. A shared parking arrangement with one of the nearby churches could be very successful.

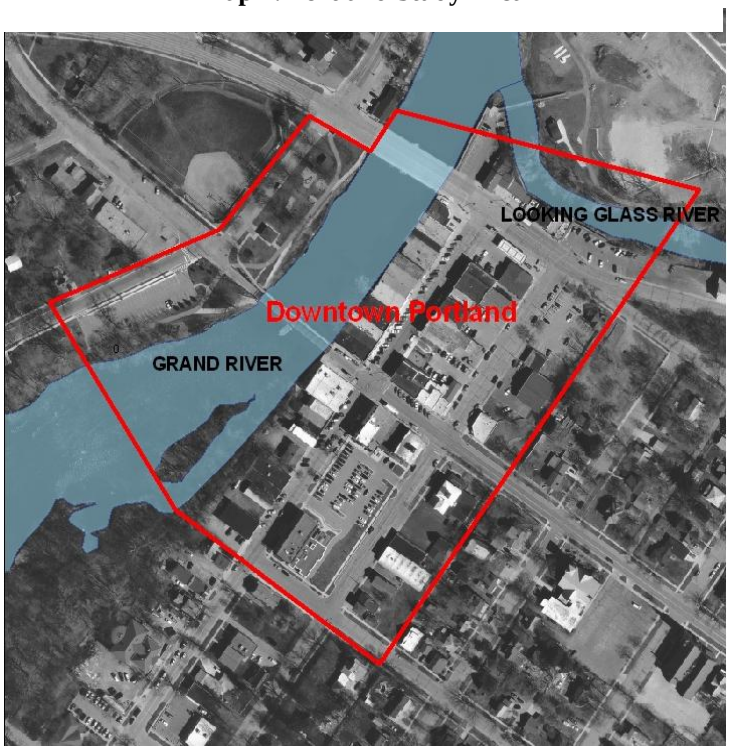
Introduction

Portland is most well known as the "City of Two Rivers." The Looking Glass River converges with the Grand River just north of the central business district. (Map 2) Although the rivers are a great asset, the Grand River borders the west side of Kent Street, eliminating the ability of property owners to build private parking Lots behind businesses. This, in addition to an array of other factors, has created a perception in Portland that downtown does not have adequate parking.

Map 1: Portland's Location

Portland is a small town whose physical characteristics and make-up resemble traditional small towns of the past. Its population has remained extremely stable (the 2000 population is 28 people less than 1970), and Kent Street, the main street, remains the heart of the city. Downtown Portland has remained relatively prosperous; vacancy rates are low, and a healthy mix of uses, including a Theater and Art Gallery, remains downtown. The result of its natural amenities and traditional main street development is a "…unique and valuable community image." (Portland Planning Commission 72) Furthermore, the City of Portland has identified its downtown as vital to the city's success. The 2008 Master Plan identifies the area as one of four subareas in need of special focus, and two of the eleven Master Plan goals relate directly to the Downtown.

Map 2: Portland Study Area



Project Scope

The project has two primary phases. Phase One evaluates the parking and circulation issues in Portland, and Phase Two creates recommendations for providing better access to downtown.

Phase One

The goal of Phase One is to understand the current state of accessibility in downtown Portland, with a particular focus on parking. In order to accomplish this goal, the following activities will be completed:

- A parking study of the study area.
- Obtain traffic count data, or do manual traffic counts for the study area.
- Inventory and analyze the current circulation system.
- Study the feasibility of alternative modes of transportation (bike, pedestrian, boat, mass transit).
- Conduct very basic interviews with business owners in the subject area to understand their perception of the problem.
- Meet with local leaders (City Manager, DDA, Parks and Recreation).
- Conduct an analysis of relevant demographic and economic information.

Phase Two

The second phase of the project will use the insights and data gathered during Phase One to create a list of strategies to produce a more accessible and user-friendly downtown Portland. Recommendations will include short—and long-term programs, as well as preliminary cost estimates. Throughout the process, the group's focus will be on feasibility, innovation, and providing a "fresh perspective".

Methodology

Based on a review of parking studies in larger cities with parking issues the practicum team developed a methodology similar to that employed in much more extensive studies, but

easily tailored to our small, four-block study area. [1] In order to provide the valued perspective Downtown Portland sought, research previously conducted in Downtown Portland was reviewed and considered, but wherever possible primary research and inventories have been conducted. The process used involved six steps.

1. **Inventory of Infrastructure/Circulation**: Several site visits were made at different times of day and of the year to assess circulation patterns and physical attributes of the study area. This step identified additional factors (signage, walkability, etc.) that may affect how parking is perceived downtown.
2. **Inventory of Parking Space Usage:** On three separate days, use of parking spaces in Downtown was recorded and analyzed.
3. **Assess Parking Demand**: Once a basic understanding of Downtown Portland was reached, we created two parking demand models. The first model estimates demand using the City of Portland zoning ordinance parking requirements, and the second uses standards developed by the Institute of Transportation Engineers.
4. **Develop an understanding of the conditions and factors affecting Downtown Portland.** A thorough socio-economic analysis was conducted to understand the socio-economic factors unique to Portland that should be considered when making recommendations and identifying best practices in steps 5 and 6.
5. **Study Innovative Parking Management Techniques**: An increase in surface parking in Downtown Portland would be in direct contrast to the Master Plan goals of *Beautify community spaces*, *Encourage and facilitate traditional neighborhood development patterns and enhance the walkability of the City*, and *Encourage the preservation of historic sites and structures*. Therefore it was necessary to consider innovative parking management strategies from the United States and abroad.
6. **Make Recommendations**: Steps 1-4 define the issues faced by Portland regarding parking and accessibility. Step 5 reviews strategies that can be used as an alternative. This final step identifies those strategies from step 5 that best fit the unique character of Portland defined in steps 1-4.

[1] Parking studies from Austin, Texas; Lincoln, Nebraska; Seattle, Washington; and East Lansing, Michigan, were reviewed prior to selecting a methodology. Additionally, publications of the Institute of Transportation Engineers and Urban Land Institute were also considered. See the Works Cited page for full references.

Chapter 1: Circulation and Accessibility Inventory

Businesses

The four-block study area is a historic downtown that is zoned almost entirely as commercial property, with the exception of mixed-use commercial property utilizing the upper stories of their respective business for residential loft space. Appendix A contains a list of businesses in the Downtown Study area obtained from the building inventory available from the Portland Downtown Development Authority (DDA) (see Appendix A). Table 1 contains a count of the types of businesses located in Downtown Portland based on the DDA building inventory.

Table 1: Land Uses in Downtown Portland

Use	Number in
Art Studio	1
Auto Repair	2
Day Care	1
Funeral Home	1
Government	1
Office	12
Loft Apartment	8
Restaurant/Bar	4
Retail	19
Social Club	1
Storage	1
Theater	1
Total:	**52***

***This is not a count of buildings downtown, because many buildings house multiple uses.**

Vacancy

Downtown Portland has a fairly low vacancy rate. Of the 46 buildings downtown only four are listed as completely vacant according to the Portland DDA, while 6 more are listed as "partially vacant." This data was verified during our downtown visits. The vast majority of store fronts appear in use, and Kent Street is fairly busy at all times of day. However, the same cannot be said of Maple Street. It is characterized by larger Lots, and has a higher vacancy rate than Kent (as noted by the parcels with no parking requirements in Map 4). Two single-family homes are near the corner of Academy and Maple, and appear vacant, although they are listed as occupied in the building inventory. Furthermore, many of the businesses oriented toward Kent Street have only a bare wall facing Maple, which makes the street uninviting on the whole.

Infrastructure

The following is an inventory of the physical infrastructure that exists in the study area of Downtown Portland.

Traffic Lights-Located at the three-way intersection of Grand River and Kent Street, this controlled intersection serves as the only traffic light in the portion of downtown that was selected as the site for our area of study.

Bridges-The site doesn't have bridges located directly in the four block radius, but it does have two bridges feeding the four-block study site.

- The first is located on Grand River running perpendicular to Kent Street.
- The second bridge is Bridge Street; this bridge is pedestrian friendly with a wide sidewalk on the North side and the boardwalk in sight to the immediate East. It also serves as the footpath connecting downtown to additional parking across the river.

Public Parking Lots

- Scout Park – located of Maple Street's 100 Block
- City Lot A – Located at the corner of Grand River & Maple Street
- City Lot B – Located in between Maple and Kent, North of City Hall
- River Parking – Located across the river from downtown at the base of the bridge on Bridge Street

Intersections

- Kent & Bridge – A four-way stop with proper street signage
- Maple & Bridge – A four-way stop with proper street signage
- Kent & Grand River – A stop light with 3 crosswalks and pedestrian lights
- Maple & Grand River – One stop sign, one cross walk

Buildings

- The total count for buildings in our study site is 46.

M-DOT Traffic Data

In 2006, the ADT (Average Daily Traffic) for Grand River Avenue at Kent Street in Portland was 10,334. (Michigan Department of Transportation) Below is the most recent MDOT data for turning patterns from Grand River on to Kent St. (12/13/2007). The data can be used to help understand the circulation patterns of people traveling to and from downtown Portland.

Table 2: MDOT Turning Data

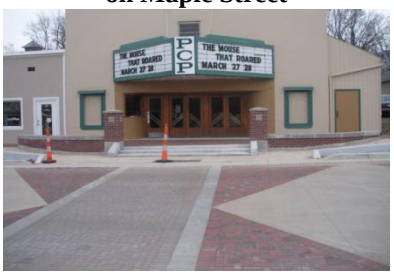
Time	Right Hand Turns onto Kent	Left Hand Turns onto Kent
7:00 – 7:15 A.M	20	6
7:15 – 7:30 A.M	16	7
7:30 – 7:45 A.M.	12	6
7:45 – 8:00 A.M	7	5
8:00 – 8:15 A.M	8	6
8:15 – 8:30 A.M	6	7
AM Totals	**69**	**37**
4:30 - 4:45 P.M.	18	3
4:45 – 5:00 P.M.	7	2
5:00 – 5:15 P.M.	7	2
5:15 – 5:30 P.M.	5	7
PM Totals	**37**	**14**
Overall Totals	**106**	**51**

The sum of this traffic data is that the majority of traffic entering Downtown Portland at Kent Street and Grand River Avenue comes from the West, not the East from the highway. Unfortunately, more traffic counts for the study area do not exist, basic traffic counts should be conducted to understand the vehicle circulation patterns in downtown.

Sidewalks and Pedestrian Accessibility

The sidewalks in Downtown Portland are generally in good condition. The system effectively connects Downtown to surrounding residential areas. Notable improvements have been made to curb-cuts around the city that are visually appealing, along with designed crosswalks utilizing brick layouts. Picture 1 shows an improved crosswalk in front of the theater.

Picture 1: Improved crosswalks on Maple Street



Picture 2: Narrow Sidewalks

The primary deficiency of sidewalks in Downtown Portland is they are quite narrow in some areas. The presence of tree wells tightens the sidewalk in some areas making the sidewalk wide enough for only two people (Picture 2). This restriction of space has led to a ban of bicycle riding on sidewalks downtown. The only obvious bicycle rack is located next to city hall.

Despite significant improvements some crosswalks have become faded and hard to distinguish, as have some of the parallel parking spaces on Kent and Maple Streets. Finally, the bridge walkway from the downtown to the River Lot is open, causing people who walk between the Lot and downtown to be exposed to the elements. On a summer day this walk is probably most pleasant, but in the winter, or when it is raining, the walk can be long and cold.

Lighting appears to be sufficient. There are approximately 50 light poles in the area, which light both the street and sidewalk. However it should be noted there are only 2 light poles in the River Lot, at either end. However, the path along the bridge leading away from the River Lot is lit adequately.

Signage

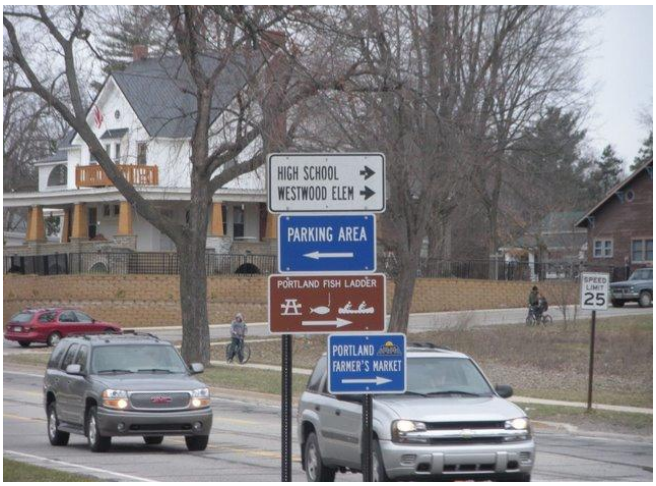
Signage in Downtown Portland indicating available parking spots is not always obvious. The "public parking sign" at the city hall Lot is blocked by a tree when coming from the downtown and the Maple Lot is not marked as public parking. A sign exists for the river Lot at Grand River and Water street, but there is no indication of the Lot's presence from downtown. The confusion over parking has apparently led some businesses to create their own reserved parking spaces (Picture 3).

Picture 3: "Store Parking Only" in front of a downtown business

In addition to signage for public facilities, the amount of signage on businesses was also considered. Most store fronts on the north side of Kent Street have overhanging signs, while the South side of the street does not. In comparison, Maple Street is almost completely void of business signage.

Finally, a sign exists at the main entrance to Portland indicating the distance to downtown Portland on Kent Street to the West and Grand River to the North, but there is no sign in the highway-commercial area on Grand River Avenue South of town. The status of signage and wayfinding systems in downtown Portland is discussed further in Chapter 6.

Picture 4: Signs indicating surrounding Land Uses at the intersection of Water Street and Grand River Avenue

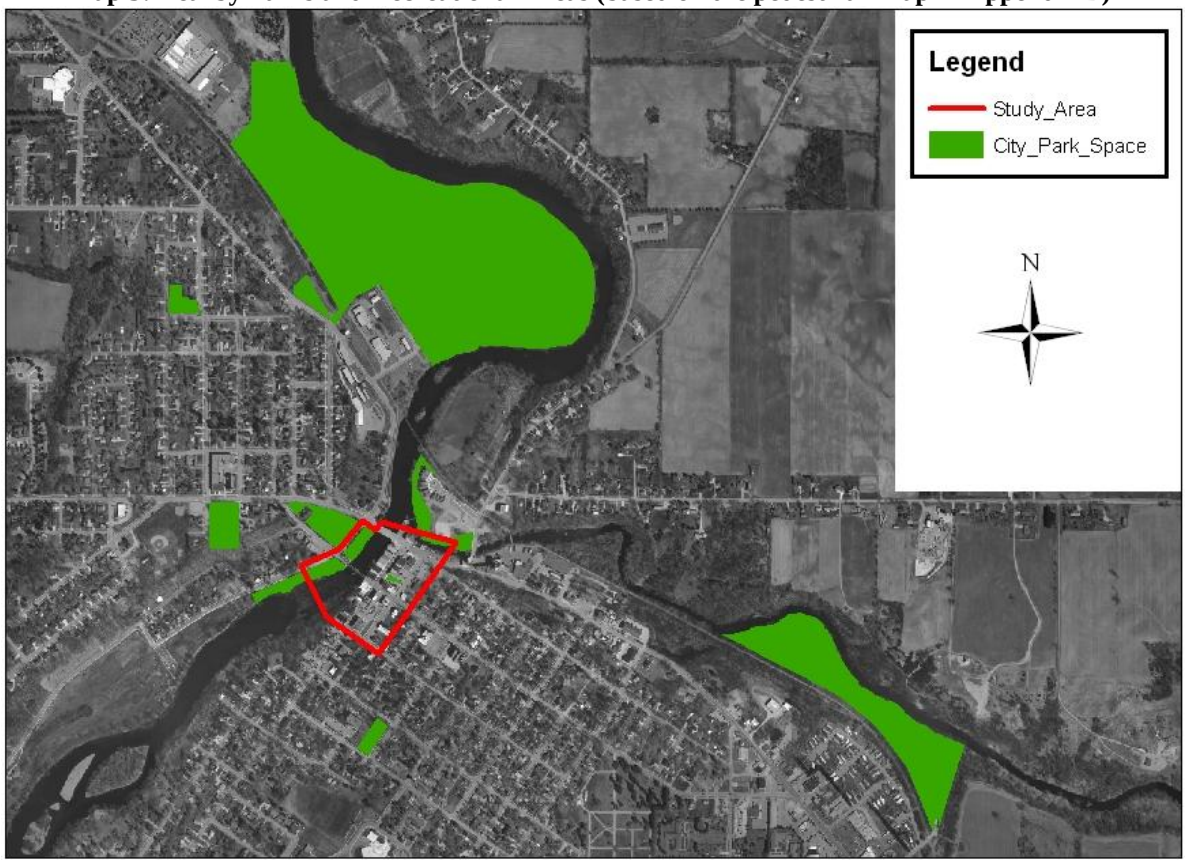


Surrounding Land Uses

The land use to the north, south, and west of the study area is primarily residential with several churches, an elementary school and many small parks. To the north and west of downtown the land use quickly transitions to agriculture. The land to the east is partially

industrial (grain elevator, lumber yard, etc.) and includes the Bogue flats recreation area. Many parks and recreational areas are located in reasonable proximity to downtown Portland. (See Map 3)

Map 3: Nearby Parks and Recreational Areas (based on the pedestrian map in Appendix B)



Chapter 2: Interviews with Business Owners

As part of the analysis of Downtown Portland's accessibility and parking, we conducted short; three-question interviews, with business owners and employees. The purpose of the interviews was to understand the way employees of downtown businesses use public parking, and how strong the perception of a lack of parking is in Downtown Portland. Based on our results, further recommendations will be made and solutions to solve perceived parking deficiencies in Downtown Portland will be identified. Three questions were asked:

Question 1: Do you think there is a parking problem in downtown Portland?

Question 2: Where do the people that work at this business park (on-street/off-street, etc.)?

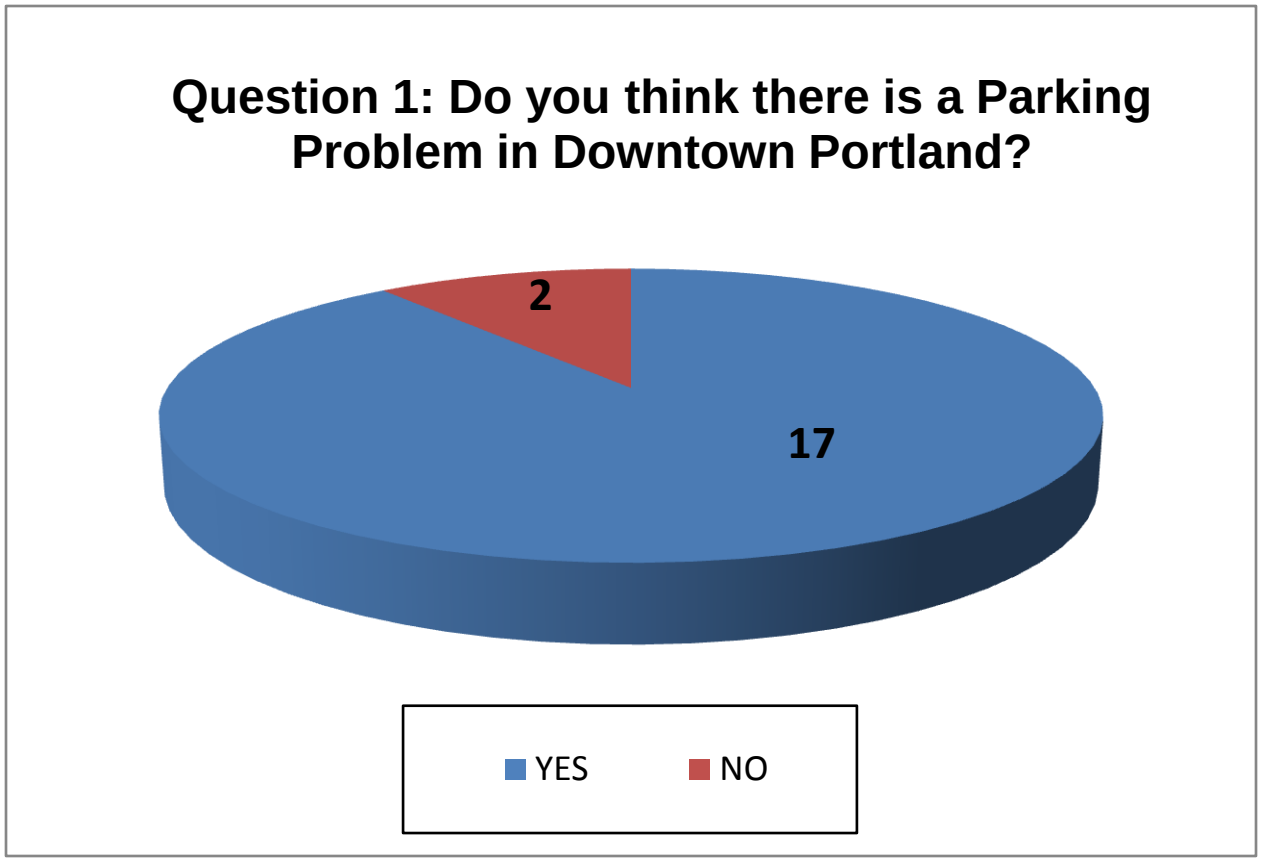
Question 3: What steps would you like to see taken to improve parking in Downtown Portland?

The responses to each question are discussed in detail below and compared to the 2003 Economic Enhancement Strategy Report, which asked similar questions. This allows us to compare and contrast past data to present data and see if there has been a change in opinions and beliefs over this six-year span. Out of the approximately 43 businesses in the study area, we were able to interview 19, or 44% of all businesses.

Question 1: Do you think there is a Parking Problem in Downtown Portland?

This question asked whether the respondent felt that there was a parking problem and asked for a simple YES or NO response. Of the 19 businesses interviewed, 17 (or 89.5%) felt that YES, there is a parking problem in Downtown Portland. Only 2 respondents felt there was NO problem with parking. Furthermore, 6 of the 17 people (or 35%) who answered "yes" elaborated in their response, and told the interviewer that parking was a problem only during the weekends or when there was an event like bingo or a funeral happening in Downtown. Figure 1 is a breakdown of the responses:

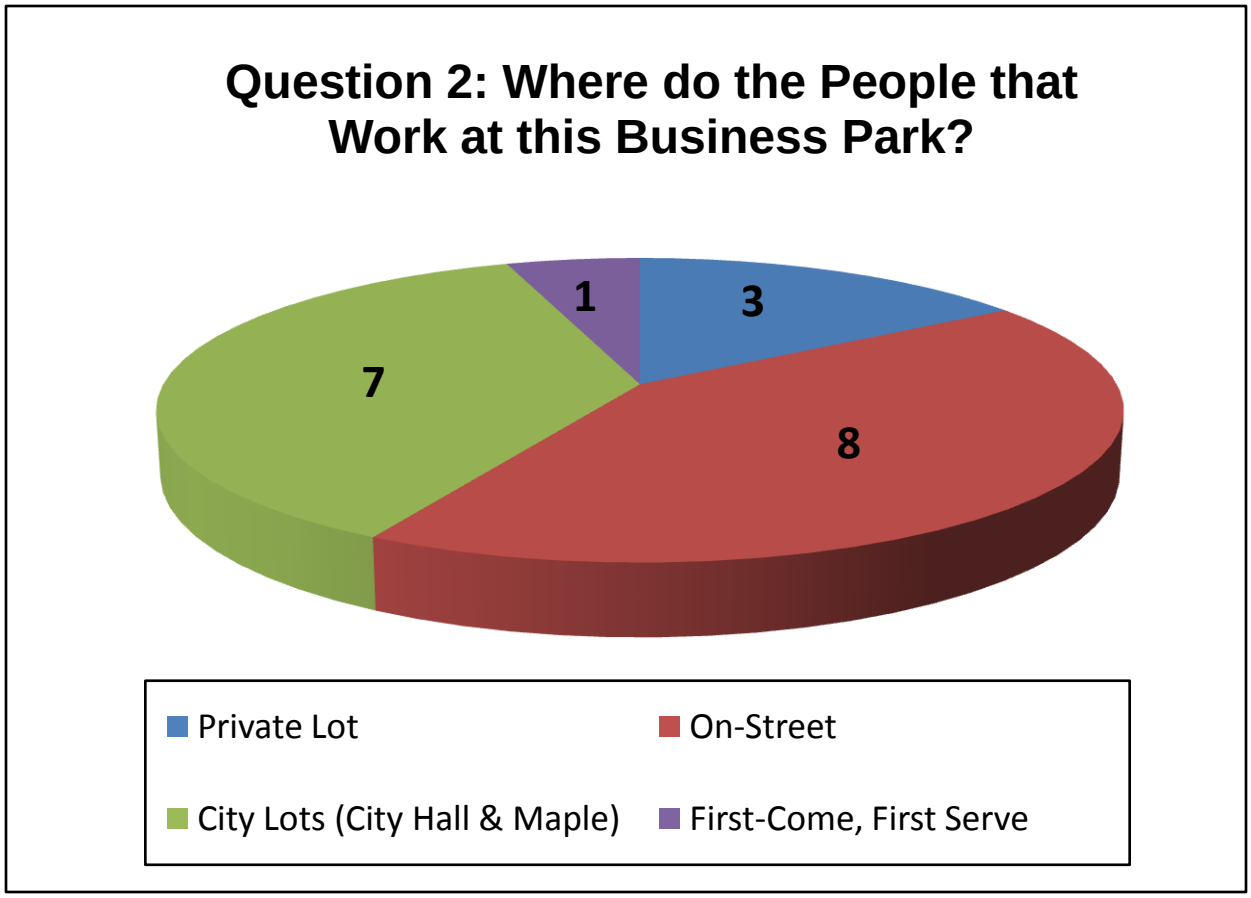
Figure 1: Question 1 Responses



Question 2: Where do the People that Work at this Business Park?

In this question we asked the respondents where they and their employees parked on a day-to-day basis. A majority of our responses were "off-street" or "in one of the public Lots provided by the city." We received mixed results, indicating that business owners and employees use a variety of parking options. Of the 19 responses that we received, 8 respondents (or 42%) answered the question by stating that they park on-street. This indicates that a large percentage of people who work Downtown park on the main streets, which takes away spaces that may be available to customers. 7 of the 19 (or 37%) respondents park in the city-owned Lots, such as the Maple Lot and City Hall Lot which are available free to the public. The chart below shows the breakdown of our sample population and the other responses.

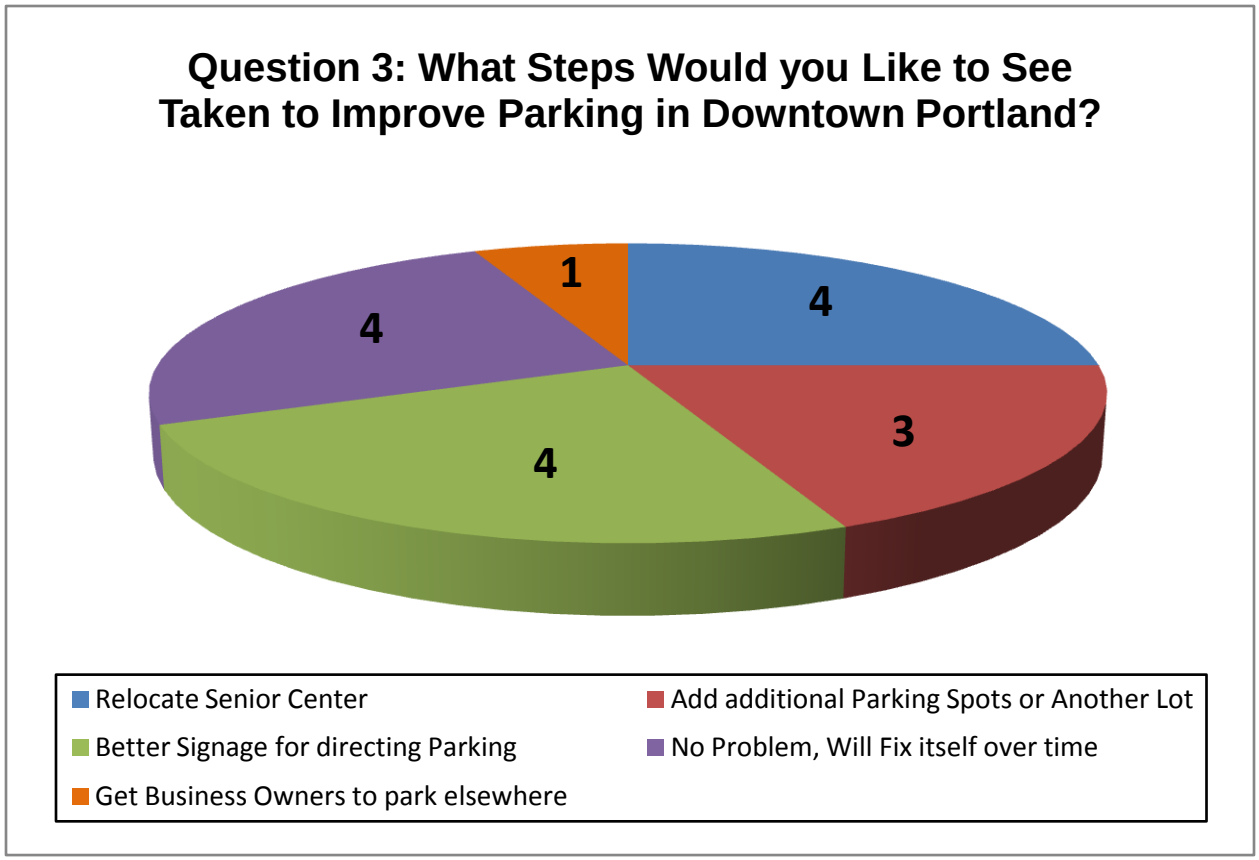
Figure 2: Question 2 Responses



Question 3: What steps would you like to see taken to improve parking in Downtown Portland?

Finally, we posed an open-ended question to our respondents. From the 19 respondents responses were grouped into four categories, which were descriptive of the responses. Figure 3 shows the breakdown of the responses.

Figure 3: Question 3 Responses



Four of the nineteen respondents (or 21%) felt that the best way to improve parking in downtown was to have the senior center relocate, four felt better signage was needed, and lastly four people felt there was not a problem or that it will fix itself over time. Three of the nineteen respondents (or 16%) felt that adding more spots or another parking Lot would help increase the availability to the employees and customers.

Based on opinions in this chapter, a parking problem is perceived by the business owners to occur, especially during the weekends or when there is an event going on downtown. This includes the Bingo that takes place at the Portland Area Service Group (PASG) facility on Fridays and also anytime there is a funeral going on. The PASG is aware of this situation and is attempting to relocate their establishment to somewhere else in Portland that has private surface parking available. So far, they have been unsuccessful in finding a suitable location. If the PASG is able to move out of the downtown, on-street parking would be freed up on the main streets for customers to use on Fridays.

Comparison to the 2003 Study

After gathering and analyzing the data we are able to compare it to the economic study done in 2003. In the 2003 study, business owners were asked to rate how "good" the convenience of parking and availability of parking were in Downtown Portland. Only 18% of business owners felt that the convenience of parking was "good" enough. Likewise, only 22% of business owners felt that the availability of parking was "good" in downtown. Comparing that to our survey results, we can conclude that there is still a perceived parking issue, based on the number of business owners and employees that felt there is a problem, although less than 20% of the respondents to the 2009 survey felt adding more parking would solve the problem. Also, the 2003 study asked business owners what they felt was "very important" in terms of making improvements in downtown. 62% of businesses felt that the convenience of parking was a key issue that needed to be improved and 58% of those business owners felt that Portland needed to improve the availability of parking in downtown. Figures 4 and 5 summarize the 2003 study.

In conclusion, from the 2003 study and the 2009 interviews, it can generally be said that business owners and customers feel Downtown Portland has a parking problem. Chapter 3 investigates this perception with a point in time parking occupancy study.

Figure 4: 2003 Survey Results

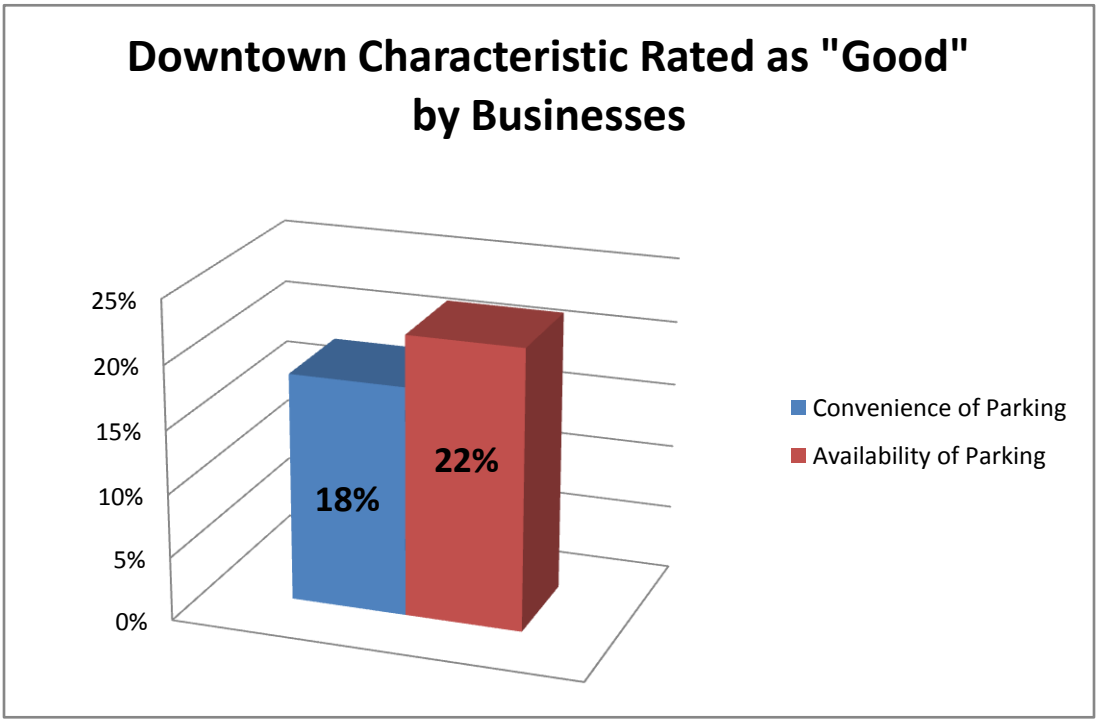
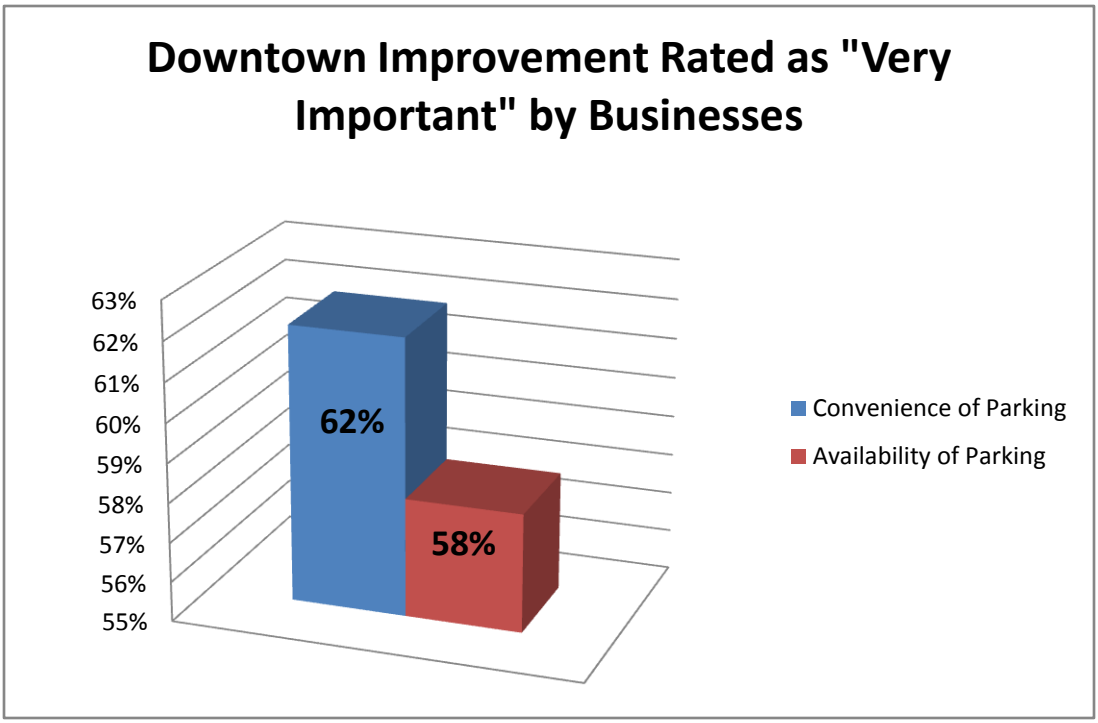


Figure 5: 2003 Survey Results



Chapter 3: Parking Analysis

The purpose of this chapter is to provide an analysis of the current status of parking in Downtown Portland. This analysis focuses on parking that is available for use by the public, specifically public on-street parking and city-owned parking Lots.

STUDY AREAS

The area of study is the downtown area of Portland, Michigan, outlined in red below. This downtown area is a four block area bordered by the Looking Glass River, Maple Street, Academy Street, and Canal and Water Street.

Map 4: Study Area with Streets

All parking spaces were counted and analyzed on three separate days, at three different times. Curbside parking zones were:

- Zone 1 - Kent St. between W. Grand River Ave. and Bridge St. (44 spaces)
- Zone 2 - Kent St. between Bridge St. and Academy St. (41 spaces)
- Zone 3 - Bridge St. between Kent St. and Maple St. (21 spaces)
- Zone 4 - Maple St. between Bridge St. and Academy St (20 spaces)
- Zone 5 - Maple St. between W. Grand River Ave. and Bridge St. (19 spaces)

Map 5: Parking Zones

Off-street parking Lots, which are for public use as well, were:

- Grand River and Maple Lot (Maple Lot) (33 spaces)
- River Lot (50 spaces)
- City Hall Lot (50 spaces)
- Scout Park (10 spaces)

Map 6: Public Parking Lots

METHODOLOGY

This study is a point in time study counting the number of cars parked in available spaces at specific times of day. To coincide with the opening of most businesses in the downtown area, the first count time was 9am during business days, and 10am on Saturday. The number of occupied spaces was then counted again at 12pm, which demonstrates usage as people come downtown for lunch. The final daytime count was 4pm for weekends and weekdays. With the

exception of a few bars and restaurants, most of downtown Portland is closed by 6pm, and as such, the 4pm count inventories parking before the conclusion of the business day.

The days of study were Wednesday (Feb 4th, 2009), Friday (Feb 6th, 2009), and Saturday (Feb 7th, 2009). These three days were chosen to represent two nonconsecutive weekdays, and a weekend day. Friday is a unique day for downtown Portland because of the bingo games held at the Portland Area Service Group facility, which is located in the heart of Zone 1 on Kent Street.

DATA COLLECTION (February 2009)

The tables below summarize the data collected during the point-in-time study. The first number in each cell is the number of cars parked in a zone or Lot at a time of day. The number in parenthesis is the percent of spaces in the zone or Lot occupied at that time. For example the first number in the cell with the white background in the upper left of Table 3 says that 29 spaces (which is 66% of the total spaces available in Zone 1) were occupied in Zone 1 at 9am on February 4.

Table 3: On-Street Parking Usage

Day	Zone 1			Zone 2			Zone 3		
	9am	12pm	4pm	9am	12pm	4pm	9am	12pm	4pm
2/4 Wed.	29(66%)	27(62%)	31(71%)	18(44%)	25(61%)	33(81%)	4(19%)	7(34%)	10(48%)
2/6 Fri.	35(80%)	33(75%)	28(64%)	30(73%)	25(61%)	20(49%)	13(62%)	10(48%)	12(57%)
	10am	12pm	3pm	10am	12pm	3pm	10am	12pm	3pm
2/7 Sat.	25(57%)	11(25%)	12(28%)	12(30%)	7(17%)	8(20%)	9(43%)	11(52%)	5(24%)

Table 4: On-Street Parking Usage continued

Date	Zone 4			Zone 5		
	9am	12pm	4pm	9am	12pm	4pm
2/4 Wed.	1(5%)	6(30%)	9(45%)	10(53%)	8(42%)	11(58%)
2/6 Fri.	6(30%)	5(25%)	5(25%)	11(58%)	13(69%)	8(42%)
	10am	12pm	3pm	10am	12pm	3pm
2/7 Sat.	1(5%)	1(5%)	2(10%)	11(58%)	12(63%)	4(21%)

Table 5: Off-Street Parking Usage

Date	Grand River and Maple			River Lot		
	9am	12pm	4pm	9am	12pm	4pm
2/4 Wed.	4(12%)	9(27%)	11(33%)	3(6%)	2(4%)	2(4%)
2/6 Fri.	17(52%)	12(36%)	9(27%)	4(8%)	2(4%)	1(2%)
	10am	12pm	3pm	10am	12pm	3pm
2/7 Sat.	17(52%)	15(46%)	10(30%)	0	0	1(2%)

Table 6: Off-Street Parking Usage cont.

Date	City Hall Lot			Scout Park		
	9am	12pm	4pm	9am	12pm	4pm
2/4 Wed.	37(74%)	40(80%)	42(84%)	7(70%)	10(100%)	5(50%)
2/6 Fri.	41(82%)	43(83%)	37(74%)	2(20%)	6(60%)	4(40%)
	10am	12pm	3pm	10am	12pm	3pm
2/7 Sat.	29(59%)	25(50%)	19(38%)	10(100%)	10(100%)	8(80%)

On-Street Parking

Figure 6: On-Street Parking Occupancy by Count Times

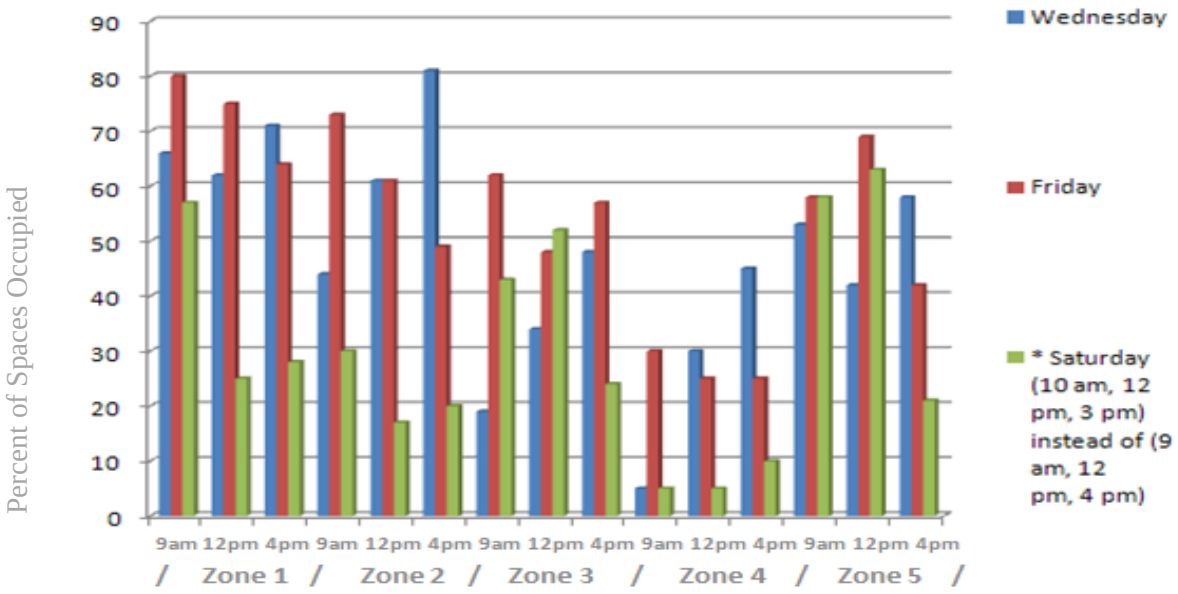
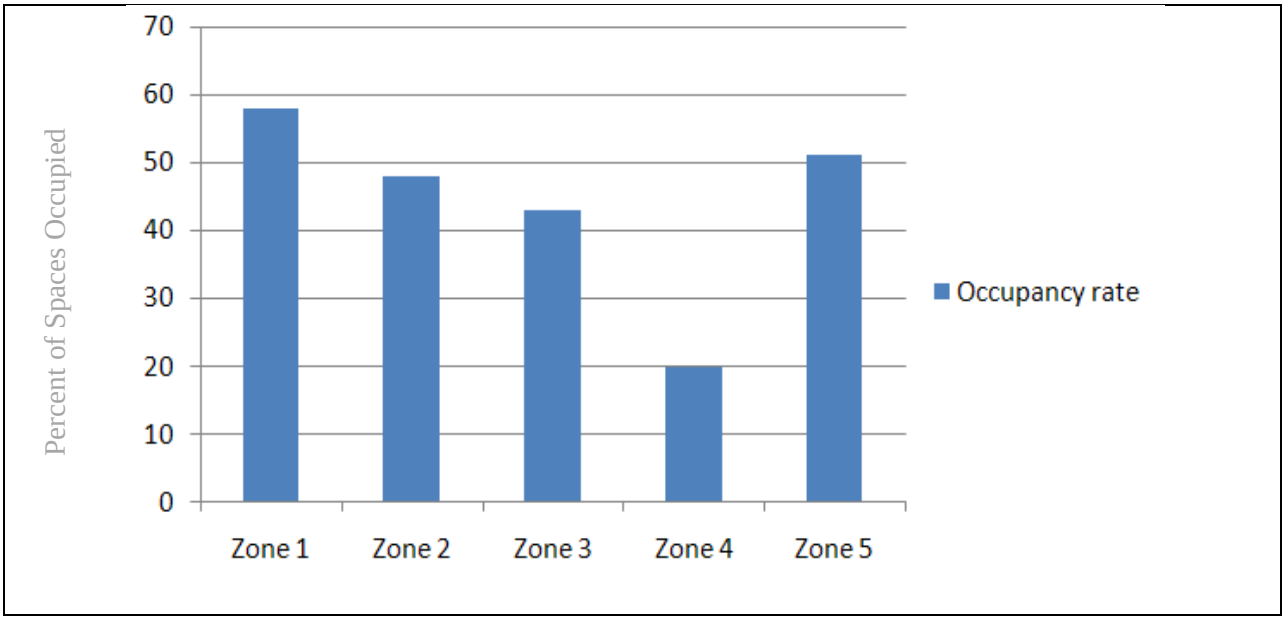


Figure 7: Average On-Street Parking Occupancy by Zone



The data indicates that the average usage in Zone 1 (Kent St. between W. Grand River Ave. and Bridge St.), which is where the majority of restaurants, cafés and shops are located, is higher than other zones. During the weekdays, its average usage is about 70%, which, according to the Austin, TX (Wilber Smith Associates; Urban Design Group; Jose E. Martinez Associates), and Lincoln, NE (Kirkman Michael Consulting Engineers) parking studies reviewed, is slightly below optimal use. Zone 4, Maple St. between Bridge St. and Academy St, has the lowest occupancy rate of all zones.

During the weekdays, Zone 1 and Zone 2 (Kent St. between Bridge St. and Academy St.) has the highest occupancy rates. However, the overall occupancy of all zones in all zones is less than 80 percent, the optimal usage rate identified by other parking studies. Zone 2 eclipsed the 80% occupancy threshold on Wednesday at 4pm, making it the only zone to do so.

On Saturday, parking patterns are different from the weekdays, the zone with the highest rate of usage was Zone 5 (Maple St. between W. Grand River Ave. and Bridge St.), which was third in usage during the week. The weekend occupancy rates of Zone 5 at 9am and 12pm are near the rates recorded during the week; Zone 3 exhibits a similar weekend occupancy pattern. All other zones had significantly lower occupancy rates on Saturday.

Off Street Parking

Figure 8: Off-Street Parking Occupancy at Count Times

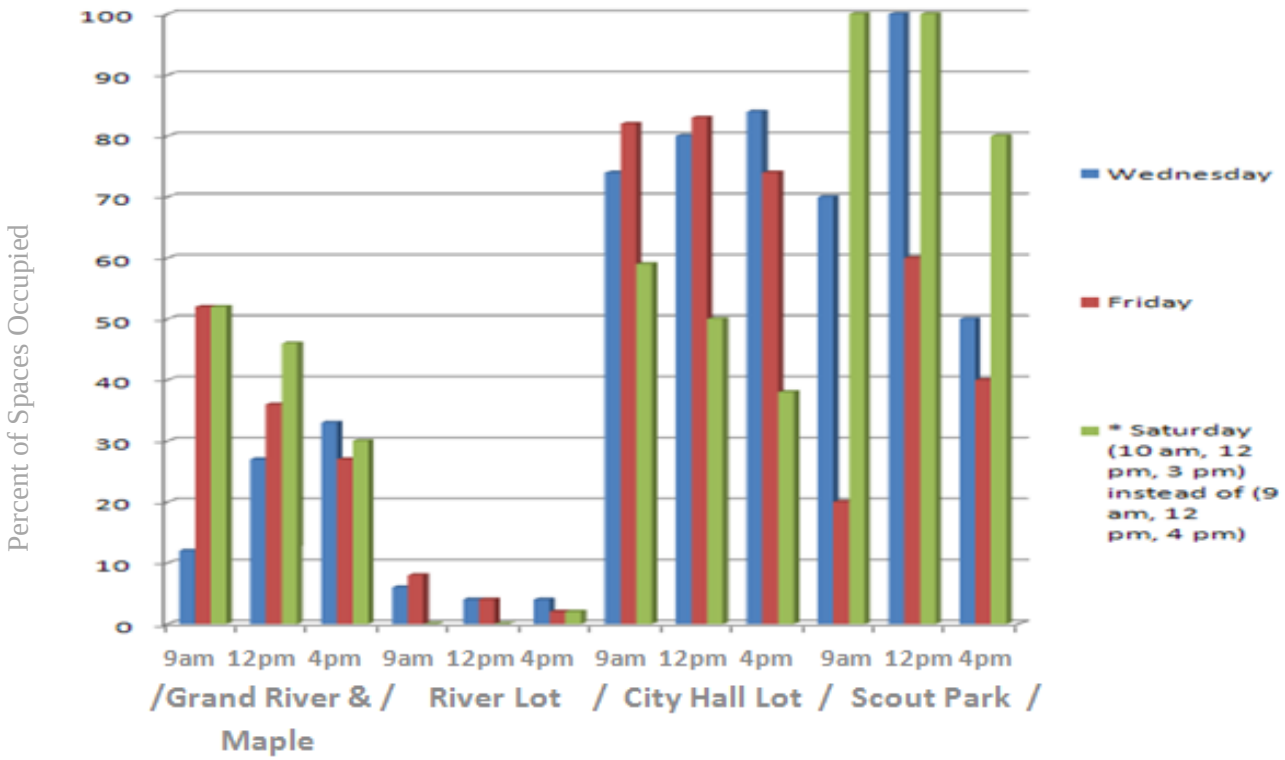
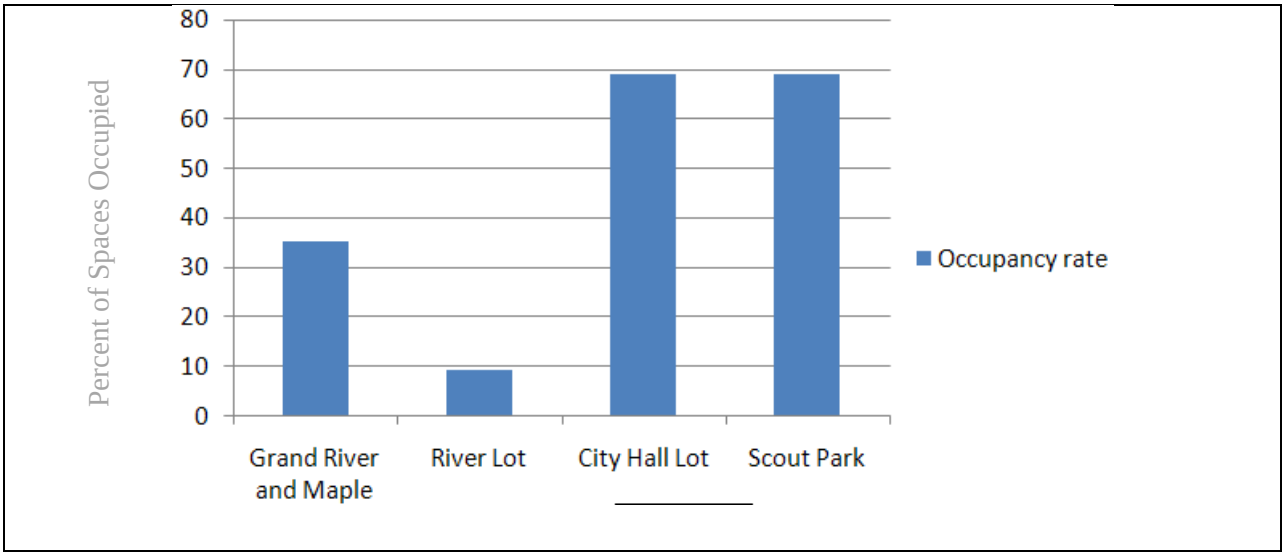


Figure 9: Average Off-Street Parking Occupancy Rate



The City Hall and Scout Park Lots had the highest rate of occupancy during Wednesday, Friday, and Saturday; the average percentage of occupancy in both was 70%. Whereas the average parking occupancy rate of the Grand River and Maple Lot was less than 50%, and the River Lot had an average occupancy rate of less than 5%.

The high occupancy rates in the Scout Park Lot are to be expected due to its small size (only 10 spaces) compared to other off-street parking areas (33 spaces in Grand River & Maple Lot and 50 spaces each in the River and City Hall Lots). However, it must be noted that the two Lots experiencing the highest rates of usage, Scout Park and City Hall, are either located on or near to Kent Street. This phenomenon indicates that any parking issue that exists in Downtown Portland may be a "one-street" problem, as all areas other than Kent Street have more than adequate parking at all times of day.

Summary

The total number of on-street and off-street parking spaces is 290; no count during this analysis of parking occupancy in Downtown Portland approached the maximum occupancy. The highest rate of total use was on Wednesday morning, when 159 spaces were occupied, a rate of 54%.

Table 7: Total Usage of Parking Spaces

Total Usage									
Parking Area	**2/4/2009**			**2/6/2009**			**2/7/2009**		
	9AM	**12PM**	**4PM**	**9AM**	**12PM**	**4PM**	**10AM**	**12PM**	**3PM**
Zone 1	29	27	31	35	33	28	25	11	12
Zone 2	18	25	33	30	25	20	12	7	8
Zone 3	4	7	10	13	10	12	9	11	5
Zone 4	1	6	9	6	5	5	1	1	2
Zone 5	10	8	11	11	13	8	11	12	4
Grand River and Maple	4	9	11	17	12	9	17	15	10
River Lot	3	2	2	4	2	1	0	0	1
City Hall Lot	37	40	42	41	43	37	29	25	19
Scout Park Lot	7	10	5	2	6	4	10	10	8
Total:	**113**	**134**	**154**	**159**	**149**	**124**	**114**	**92**	**69**
% of Available Public Parking Occupied	**39%**	**46%**	**53%**	**55%**	**51%**	**43%**	**39%**	**32%**	**24%**

Based on the data gathered from this point-in-time parking study, one can conclude that adequate parking is available in Downtown Portland. The only parking area exceeding 90% occupancy at any point in time was Scout Park, but its average occupancy rate was less than 80%. Most importantly, as displayed by Table 7, over 100 parking spaces were available at all times studied.

Chapter 4: Parking Demand Models

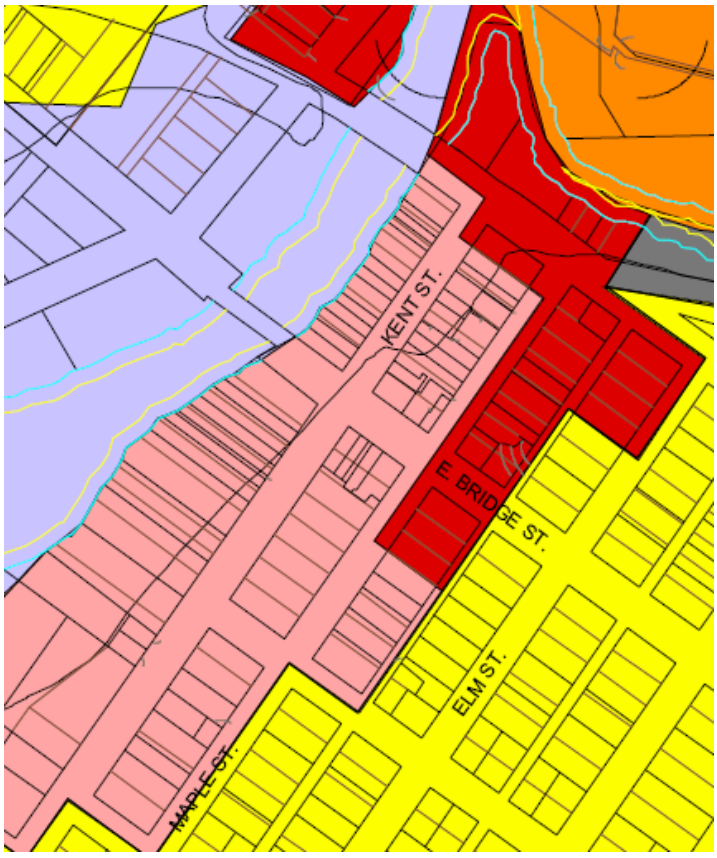
Consistent with accepted methodologies from other parking studies, the demand generated by users of Downtown Portland was estimated. Two models were developed to evaluate parking demand. The first model is based on the zoning ordinance requirements in section 7.03 of the 2004 City of Portland Zoning ordinance. The second model uses equations from the second edition of Parking Generation, a publication of the Institute of Transportation Engineers (ITE).

Other parking studies reviewed used the ITE Parking Generation equations, or similar methodologies, to estimate the amount of parking required for individual land uses. However, the use of the zoning ordinance as a predictor of parking demand was not present in the studies reviewed for this report. The rationale for Model 1 is explained below.

Parking Demand Model 1: Zoning Ordinance Requirements

The first model is dual-purpose. In addition to calculating the demand for parking spaces created by land uses in Downtown, it also evaluates the degree to which land uses adhere to the parking requirements in the zoning ordinance. This is necessary because the effectiveness of current land use regulations and parking management strategies affects the recommendations made in later sections of this report.

Map 7: Study Area Zoning (Portland Zoning Map)



Methodology

The City of Portland Zoning Ordinance requires businesses to provide at least a portion of the required parking in private off-street parking Lots in the C1 and C2 districts (pink and red, respectively, in Map 6), in which the entire study area falls (Portland Zoning Ordinance §7.03C). Importantly, there is a differentiation between the off-street parking requirements in the C1 and C2 zoning districts. The C1 district is the core of downtown Portland; as such, the zoning ordinance allows for 75% of the required parking to be accounted for by public on-street

Table 8: Zoning District Parking Demand Multipliers[2]

City of Portland Minimum Parking Requirements for Commercial Uses in Commercial Districts	
Use	**Equation**
Accessory Apartments	1/dwelling unit
Art Studio/Craft Shop	1/800 square feet of Gross Floor Area*
Automotive Repair	1/service bay and employee
Day Care	1/3 clients
Social Club	1/4 persons permitted by fire code
Indoor Theater	1/3 seats
Laundromat	1/2 machines
Medical Office	1/400 square feet of Gross Floor Area*
Funeral Home	1/50 square feet of Usable Floor Area**
Municipal Service	1/300 square feet of Gross Floor Area*
Office	1/400 square feet of Gross Floor Area*
Recreation	1/3 persons permitted by fire code
Restaurant	1/100 square feet of floor space not used for seating + 1/employee + 1/3 people allowed by fire code
Retail	1/300 square feet of Gross Floor Area*
Tavern***	1/3 persons permitted by fire code
Video Rental	1/800 square feet of Gross Floor Area* + 1/2 employees

* "The sum of the gross horizontal areas of the several floors of a building measured from the exterior walls or from the centerline of walls separating two (2) buildings." (Portland Zoning Ordinance §2.07)
**"The gross floor area of the building minus the areas of the building not being used in a manner that contributes to the principal use of the property, such as floor area which is being used or designed to be used as restrooms, closets, corridors and mechanical rooms." (Portland Zoning Ordinance §2.07)
*** This is not defined in the zoning ordinance, nor is restaurant, so restaurants/bars were calculated based on restaurant requirements because they all serve food.

[2] During the production of this report the City of Portland Zoning Ordinance was re-codified. The provisions remain unchanged, but section numbers have changed. The newly codified ordinance can be found at http://www.portland-michigan.org/forms/ordinance/code/CH042%20-%20Chapter%2042%20%20ZONING.pdf.

parking, whereas the C2 district requires all businesses to provide 100% of parking required by the zoning ordinance in a private off-street Lot. The on-street parking is primarily focused on Kent Street, where the majority of C1 businesses are located.

As a means of gauging the parking demand in downtown, we have applied the formula outlined in §7.03 of the zoning ordinance to the Downtown Building Inventory (Appendix A). The result of the application can be seen in Table 8. Table 8 lists the parking demand by parcel in the study area. Starting with the left-most column, the information in the first five columns is taken from the DDA Building Inventory. The five columns contain the address, square footage, five unique digits from the tax parcel identification number, and the occupancy status of the building on the parcel. The use column relates the land use to the zoning ordinance, the use of each parcel was based on the definitions contained in the zoning ordinance. The business name column was also taken from the DDA Building Inventory, with some additional updates. Finally, the Zoning Parking Requirement column contains the number of required parking spaces for each parcel according to §7.03 of the Portland zoning ordinance. The only difference between Table 9 and Table 11 is the final column.

Figure 10: Table 8 Header Row

ADDRESS	Square Footage	Parcel ID	Status	Use	Business Name	Zoning Parking Requirement

In order to calculate the number of parking spaces required for each land use in Downtown Portland, the square footage of each was obtained from the Downtown Building Inventory (Appendix A), and occupancy rates were obtained from site visits. The parking requirements in the zoning ordinance were then considered (see Table 9). For example, the Portland Area Service Group has a maximum occupancy of 80 people, and the zoning ordinance requires one parking space per four persons admitted by the fire code. Therefore, the use requires 20 parking spaces, 5 of which (25%) must be private off-street parking.

Data Considerations

Although specific demand numbers were calculated for most uses downtown, there are some deficiencies in the model due to missing information. The zoning ordinance does not use the same unit to calculate parking spot demand for all uses; restaurant parking requirements are calculated based on occupancy, employees, and square footage, while the parking requirement for retail is calculated based solely on square footage. As a consequence, the data required to

calculate parking requirements was not always available. In these cases the missing data was estimated. For example, parcel 50590, the Scharuben-Lehman Funeral Home, is 5,657 square feet, but the zoning ordinance calculation is based on "usable floor area," which was estimated at 4/5 of the total square footage. Similarly, the "floor space not used for seating" in restaurants is not known, so it was assumed to be 1/5 of total square footage. Generally, estimates were conservative, for example, the restaurant parking requirement did not consider the space required for each employee. The final zoning requirement is more likely to under-estimate than over-estimate the total parking spaces required by the zoning ordinance.

The Portland Civic Players Theater was estimated with an ITE equation because the total number of seats is not currently available. Finally, some parcels contain multiple uses; several parcels with a primary retail or office use also have a second-story loft apartment as an accessory use. The parking requirement for these parcels was calculated separately, but the final requirement was combined to display the result appropriately on a map (Map 7). For example, parcel 50280 is an art gallery and contains a second-story loft apartment on the second floor. The zoning ordinance required 7 parking spaces based on the square footage of the art gallery and one parking space for the loft apartment, so the total requirement for the parcel is 8 spaces.

Model 1 Results

The total parking spaces required by the City of Portland Zoning Ordinance in Downtown Portland is 591. Downtown Portland has 290 public parking spaces (on-street and off-street); therefore, the city supplies almost 50% (290/591=.4924) of the parking required by the zoning ordinance. In addition to public parking, several businesses in the study area provide private-off street parking.

Based on aerial photographs, there are 139 private parking spaces in the study area (see Map 9). Due to the nature of some uses, like gas stations, it is difficult to estimate the use of paved space. The total number of private parking spaces was conservatively rounded to 150 to address the lack of certainty in the count. The extra spaces account for pavement that is not marked as parking, but may be used as such by customers or employees on a temporary basis. Thus, private parking, as a whole, meets the zoning ordinance requirement by supplying just over 25% of the parking required (150/591=.2546).

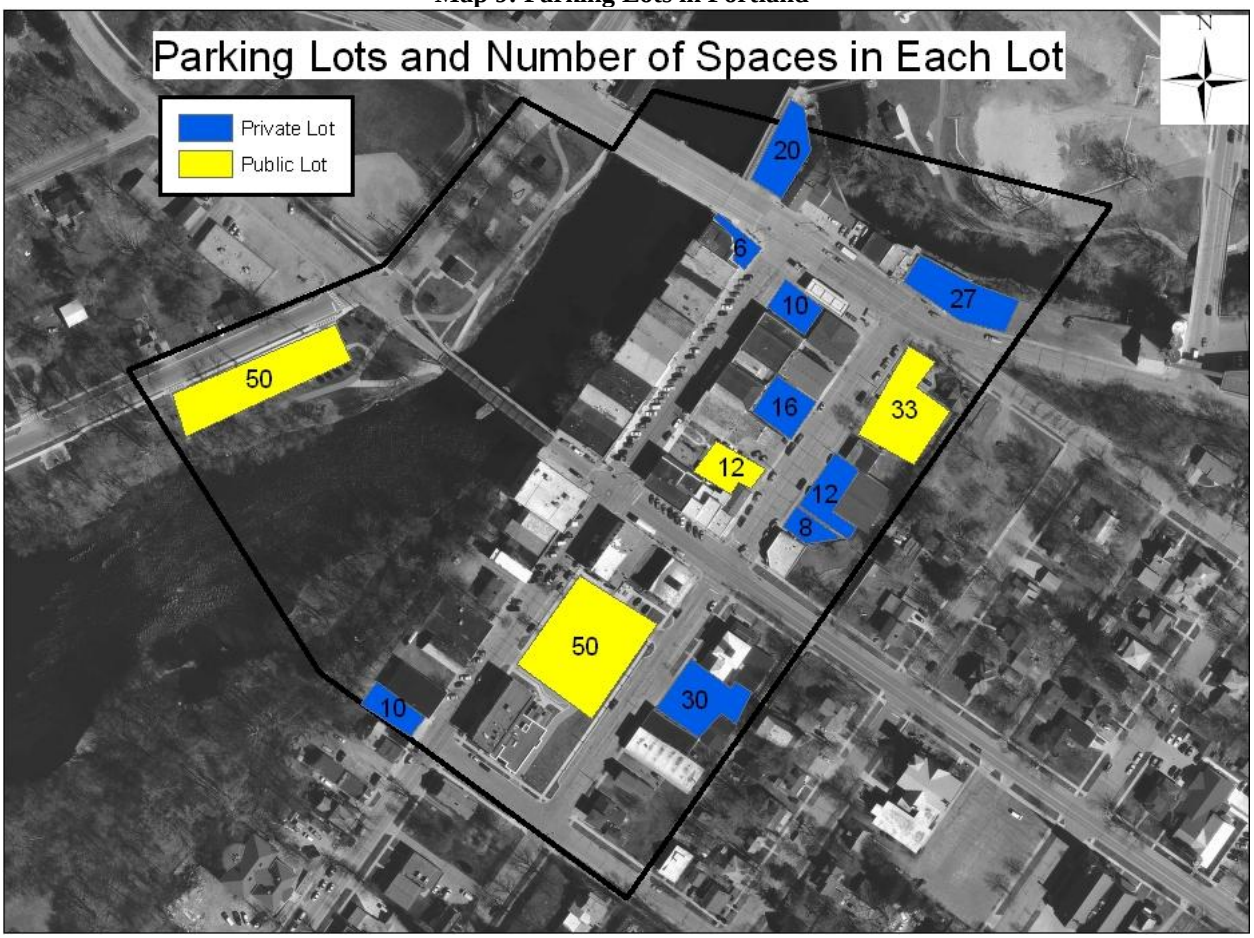
Table 9: Zoning Parking Requirement Model

ADDRESS	Square Footage	Parcel ID	Status	Use	Business Name	Zoning Parking Requirement
268 Kent	3856	2605	Occupied	Retail	Country Cupboard	13
120 W Grand River	1547	50030	Occupied	Retail	Ice cream Shop	5
200 W Bridge	5600	50070	Partial Vacancy	Office	McNamara & O'Keefe & Duff	19
104 E Grand River Av	2382	50170	Occupied	Restaurant/Bar	Duke's Canoe Club	45
103 E Grand River A	2325	50175	Occupied	Storage	Unknown	2
100 Kent	1340	50190	Occupied	Office	Sandborn Realty	3
112 Kent	1181	50200	Occupied	Office	Perennial Financial	3
118 Kent	1200	50205	Occupied	Retail	Smith Music	4
128 Kent	5200	50210	Occupied	Restaurant/Bar	Jerry's Place/Pub	43
136 Kent	1775	50225	Partial Vacancy	Retail	West Michigan Medical	6
144 Kent	2810	50230	Occupied	Social Club	Portland Area Service Center	20
140 Kent	1640	50235	Occupied	Office	PCMI-West	4
160 Kent	2075	50245	Occupied	Retail	Distinctive Occasions	7
170 Kent	2080	50250	Occupied	Art Studio/Loft	Glass Box	8
176 Kent	1992	50255	Occupied	Restaurant	Cheeky Monkey	17
180 Kent	2490	50260	Partial Vacancy	Office/Loft	Allstate Insurance	7
118 E Grand River Av	3097	50265	Occupied	Retail	Keusch Super Service	10
123 Kent	6145	50280	Occupied	Office/Loft	Grand River Communications, The	21
131 Kent	1156	50285	Partial Vacancy	Retail	Ted's Barber Shop	7
137 Kent	3259	50290	Occupied	Restaurant/Bar	Walt's On Inn	28
143 Kent	3383	50300	Occupied	Retail/Office	Raffales Place	11
147 Kent	2212	50305	Occupied	Office	Keyser Insurance	6
119 Bridge	2159	50325	Occupied	Office	119 Bridge Dental	5

ADDRESS	Square Footage	Parcel ID	Status	Use	Business Name	Zoning Parking Requirement
129 Bridge	1794	50330	Occupied	Retail/Loft	Electric Sunshine	7
175 Kent	3515	50335	Occupied	Day Care	Child Care Center	12
123 Maple	1406	50365	Occupied	Auto Repair	Shine-on Automotive Detailing	5
127 Maple	4200	50370	Occupied	Auto Repair	Ward's Garage	10
207 Bridge	2144	50385	Occupied	Office	Randall Reimer Optometrist	5
212 Kent	6210	50510	Occupied	Office	Many Businesses	16
216 Kent	1200	50520	Occupied	Retail	G2 Building & Remodeling	4
220 Kent	1636	50525	Occupied	Retail	Portland Black Belt	5
126 Bridge	3296	50530	Partial Vacancy	Retail	Rivertown Bookstore	11
205 Kent	2308	50535	Partial Vacancy	Retail/Loft	Fluff N Stuff	9
116 Bridge	1654	50540	Occupied	Retail	Chocolate Moose	6
110 Bridge	1892	50550	Occupied	Retail/Loft	Perfect Balance	7
259 Kent	13000	50585	Occupied	Government	City Hall	43
210 Bridge	5657	50590	Occupied	Funeral Home	Scharuben-Lehman Funeral Home	91
231 Maple		50595	Occupied	Theatre	Portland Theater	22
227 Maple	2320	50600	Occupied	Retail	Clippers/Lite's Plus	8
226 Kent	1051	50925	Occupied	Retail	Family Groom Room	4
230 Kent	1023	50930	Occupied	Office/Loft	Law Office	4
242 Kent	672	50935	Occupied	Office	Automated Business Equipment	5
244 Kent	768	50940	Occupied	Retail	Town & Country Title	3
250 Kent	5954	50945	Partial Vacancy	Retail	The Pizza Shop, Styles on the Grand, Mind-Matters Hypnosis	20
					Estimated Total	**591**

Map 8: Model 1 Zoning Ordinance Parking Requirements

Map 9: Parking Lots in Portland



As a whole, there are 440 parking spaces in Downtown Portland. This falls 151 spaces, or approximately 25% short of the estimated zoning ordinance requirement. It can therefore be reasoned that the Portland zoning ordinance requires more parking for the land uses downtown than is currently present.

Parking Demand Model 2: Institute of Transportation Engineers Parking Generation (2nd Ed.) Rates

The second parking demand model utilizes the Parking Generation manual published by the Institute of Transportation Engineers. This manual was used to provide parking demand figures through the use of a regression equation or by the application of a parking generation rate when an equation was not available. These rates and equations were derived from data gathered from transportation engineering professionals (Institute of Transportation Engineers iii). A

characterization of each use is provided for in Parking Generation and was used to select the most relevant land use possible.

A regression equation is a mathematical relationship between two variables that typically takes the form of P = a + bX where P is the dependent variable and X is the independent variable (Institute of Transportation Engineers viii). In this application, the dependent variable (P) represents the number of occupied parking spaces that is derived from the independent variable (X), which is typically square footage. The parking generation rate is an average rate applied to the independent variable X (square footage) to calculate the dependent variable P (occupied parking spaces). An example of the application of these two methods is as follows:

Regression Equation	**Parking Generation Rate**
For a 5,000 sq. ft. retail use	For a 5,000 sq. ft. warehousing use
P = 1.173*(X/1000) + 0.064	P = 0.5*(X/1000)
P = 1.173*(5000/1000) + 0.064	P = 0.5*(5000/1000)
Occupied Parking Spaces = 5.93	Occupied Parking Spaces = 2.5

Data Considerations

The theatre did not have the necessary data available at the time of this report to provide the needed independent variable (X) and a funeral home use was not provided in Parking Generation to accurately calculate the demand for the Scharuben-Lehman funeral home. The Practicum Group contacted the funeral home director to gather information on maximum occupancy and frequency of use. As a consequence, the funeral home parking demand is estimated at 50 vehicles. The theatre was classified as a city recreation center. The funeral home was classified as an office use to estimate parking demand for the employees that work there, this does not provide an estimated demand when the building is conducting a funeral. This does not affect the overall validity of the model because its purpose is to estimate peak demand for a typical business day and funerals are generally considered special events. Table 10 contains a list of formulas used for each property use classification, the formula type (regression

equation or application of a parking generation rate), the independent variable, and the page the formula is

Table 10: ITE Parking Demand Equations

Use	Equation Type	Formula	X Equals	Location in 2nd Ed. ITE Manual (Page #)
Office	Regression	0.93*(X/1000)+1.253	Sq. Footage	104
Retail	Regression	1.173*(X/1000)+0.064	Sq. Footage	126
Residential	Regression	1.03*X-0.18	Dwelling Units	26
Restaurant/Bar	Regression	15.35*(X/1000)-23	Sq. Footage	130
Storage	Parking Generation Rate	0.5*(X/1000)	Sq. Footage	22
City Recreation Center	Parking Generation Rate	4*(X/1000)	Sq. Footage	76
Government Office	Regression	0.79(X)-5	Number of Employees	109

located on in the Parking Generation manual. Table 11 contains the results of the formula applied to each property located in the study area as well as the use attributed to the property.

Model 2 Results

Parking Demand Model 2 was used to estimate the number of parking spaces that would be utilized during a typical business day in downtown Portland. The results of this model can be used to evaluate the reasonableness of zoning requirements and if the current number of parking spaces is sufficient to handle demand. Model 2 estimates parking demand at 301 spaces to accommodate regular peak use (see Table 11). The estimated demand is 104% of the 290 available public parking spaces (301/290=1.0346), over capacity. This number drops to 68% (301/440=.6840) with the inclusion of private parking spaces, which increases the total to an estimated 440 spaces available to downtown users. The figure of 68% usage would suggest that there is not a parking problem on a typical day in Portland. Therefore, if a lack of parking exists it must arise during special events (bingo, festivals, funerals, etc.) that push the parking system to its limit.

Table11: ITE Demand

Address	Square Footage	Status	Parcel ID	Use	Business Name	Parking Demand
123 Maple	1406	Occupied	50365	Retail	Shine on Automotive Detailing	2
143 Kent	3383	Occupied	50300	Retail	Raffales Place	4
144 Kent	2810	Occupied	50230	Recreation Center	Area Service Center	11
259 Kent	13187	Occupied	50585	Government Office	City Hall	2
210 Bridge	5657	Occupied	50590	Office	Scharuben-Lehman Funeral Home	50
136 Kent	1775	Vacant	50225	Office	West Michigan Medical	3
212 Kent	6210	Occupied	50510	Office	Many Businesses	21
100 Kent	1340	Occupied	50190	Office	Sandborn Realty	2
112 Kent	1181	Occupied	50200	Office	Perennial Financial	2
119 Bridge	2159	Occupied	50325	Office	119 Bridge Dental	3
147 Kent	2212	Occupied	50305	Office	Keyser Insurance	3
180 Kent	2490	Partial Vacancy	50260	Office/Loft	Allstate Insurance	5
207 Bridge	2144	Occupied	50385	Office	Randall Reimer Optometrist	3
230 Kent	1023	Occupied	50930	Office/Loft	Law Office	3
242 Kent	672	Occupied	50935	Office	Automated Business Equipment	2
200 W Bridge	5600	Partial Vacancy	5070	Office	McNamara & Okeefe & Duff	6
140 Kent	1640	Occupied	50235	Office	PCMI-West	3
104 E Grand River Ave	2382	Occupied	50170	Restaurant/Bar	Duke's Canoe Club	14
128 Kent	5200	Occupied	50210	Restaurant/Bar	Jerry's Place/Pub	57
176 Kent	1992	Occupied	50255	Restaurant/Bar	Cheeky Monkey	8
110 Bridge	1892	Occupied	50550	Retail/Loft	Perfect Balance	3
116 Bridge	1654	Occupied	50540	Retail	Chocolate Moose	4
118 E Grand River Ave	3097	Occupied	50265	Retail	Keusch Super Service	4
118 Kent	1200	Occupied	50205	Retail	Smith Music	1

120 W Grand River	1547	Occupied	5030	Retail	Ice cream Shop	2
123 Kent	6145	Occupied	50280	Retail/Loft	Grand River Communications, The Quilt Shop & Dance Studio	8
126 Bridge	3296	Partial Vacancy	50530	Retail	Rivertown Bookstore	4
127 Maple	4200	Occupied	50370	Retail	Ward's Garage	5
129 Bridge	1794	Occupied	50330	Retail/Loft	Electric Sunshine	3
131 Kent	1156	Partial Vacancy	50285	Retail	Ted's Barber Shop	1
137 Kent	3259	Occupied	50290	Retail	Walt's On Inn	4
160 Kent	2075	Occupied	50245	Retail	Distinctive Occasions	2
170 Kent	2080	Occupied	50250	Retail/Loft	Glass Box	4
175 Kent	3515	Occupied	50335	Retail	Child Care Center	4
205 Kent	2308	Partial Vacancy	50535	Retail/Loft	Fluff N Stuff	4
216 Kent	1200	Occupied	50520	Retail	G2 Building & Remodeling	1
220 Kent	1636	Occupied	50525	Retail	Portland Black Belt	2
226 Kent	1051	Occupied	50925	Retail	Family Groom Room	1
227 Maple	2320	Occupied	50600	Retail	Clippers/Lite's Plus	3
244 Kent	768	Occupied	50940	Retail	Town & Country Title	1
250 Kent	5954	Partial Vacancy	50945	Retail	The Pizza Shop, Styles on the Grand, Mind-Matters Hypnosis	7
268 Kent	3856	Occupied	2605	Retail	Country Cupboard	5
318 Kent	864	Occupied	26025	Retail	Rick's Barber Shop	1
103 E Grand River Ave	2325	Occupied	50175	Storage	Unknown	1
231 Maple	5376	Occupied	50595	City Recreation	Theatre	22
					Total	**258**

Map 10: ITE Parking Generation Map

Discussion of Models

Model 1 (zoning requirements) estimates the total number of spaces required in Downtown Portland to be 591. Model 2 estimates the average parking demand generated by land use in Downtown on a daily basis to be 301. Whereas, the actual amount of parking available is approximately 440 spaces. This relationship reflects the sentiment of business owners that there is a lack of parking downtown, while simultaneously reflecting the conclusion of the parking counts in Chapter 3, that parking is adequate. A lack of parking can be assumed on days when a funeral, public meeting, or special event is taking place because there is more capacity for people downtown than for the necessary cars. However, on a day-to-day basis, the parking available downtown is more than adequate to supply the needs of property owners and users.

There are some limitations that apply to the manner in which the parking requirement/demand for some of the land uses in the models was calculated. The ITE model used did not have a listing for "funeral home" or some equivalent term, so the funeral home demand was estimated. The total number of seats in the theater was not known, so substitutions were made in both models. In all cases, the requirement/demand was calculated conservatively, meaning the actual requirement/demand is more likely to be more than the models contained herein. However, the need to adjust data applied only to the funeral home and theater, so the model results are not significantly affected.

Chapter 5: Socio-Economic Analysis of Portland, Michigan

People

Between 1980 and 2000, Portland's population dropped from 3,963 to 3,789, a loss of 4.4%. (Census 1980, SF 1 and Census 2000, SF 1) Meanwhile, Ionia County has shown a steady increase in population and a higher growth rate, 7.88%, than Michigan from 1990-2000. (Census 1990, SF 1 and Census 2000, SF 1) This regional population change suggests that Portland is subject to influences different from Ionia County and the State of Michigan as a whole, and focuses attention on Portland's unique characteristics.

Table 12: Historical population change

Population						
	Portland City		Ionia County		Michigan	
Year	Population	% Change	Population	% Change	Population	% Change
1970	3,817		45,848		8,875,083	
1980	3,963	3.82%	51,815	13.01%	9,262,078	4.36%
1990	3,889	-1.87%	57,024	10.05%	9,295,297	0.36%
2000	3,789	-2.57%	61,518	7.88%	9,938,444	6.92%

Source: Census 2000 SF 1, Census 1990, 1990 Census of Population and Housing

Figure 10: Comparison of percentage of population change from 1980 to 2000

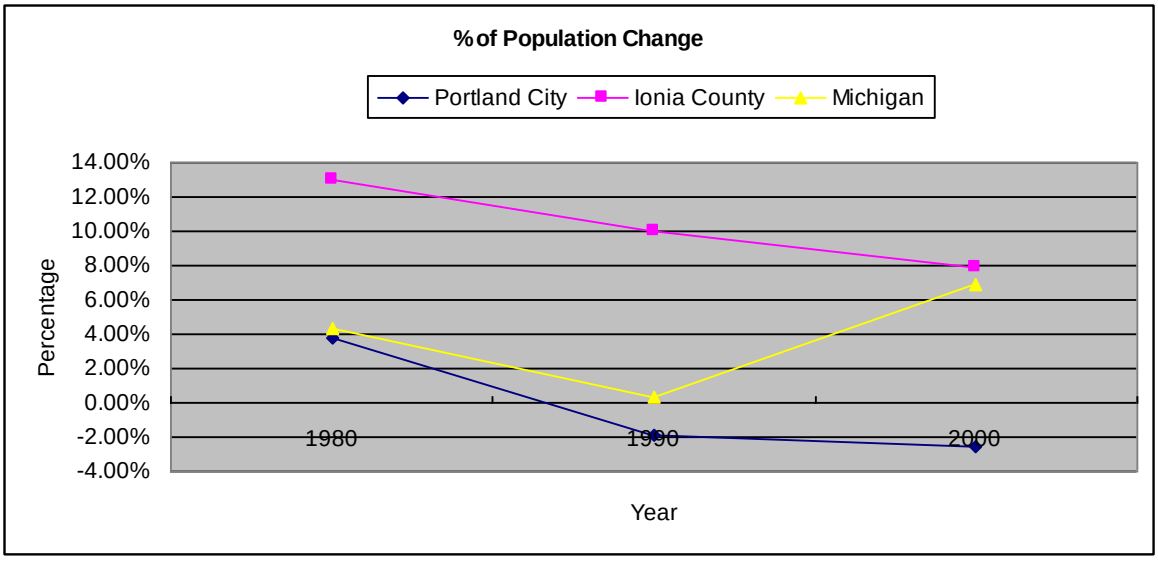
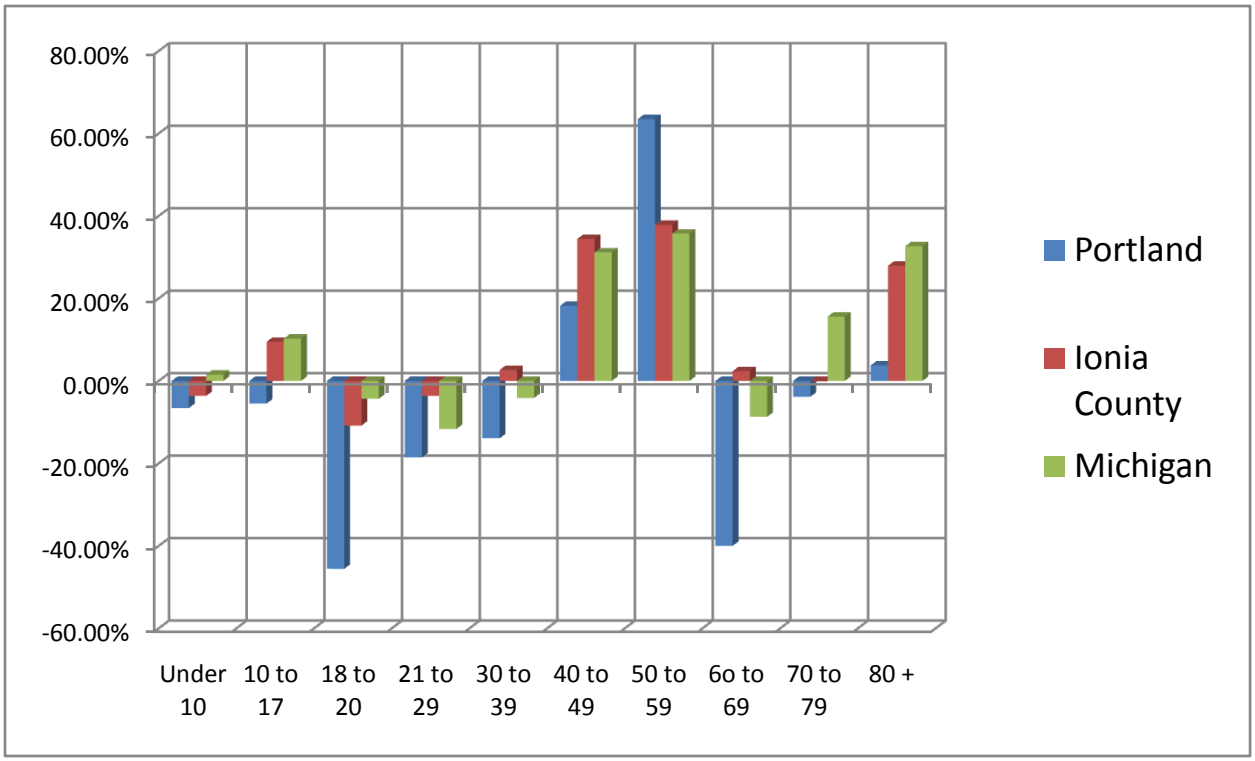


Figure 11: % Change of Age Cohort



In 2000 the age cohorts of Portland were 28.42% under the age of 18, 15.16% from 18 to 29, 29.21% from 30 to 49, 18.11% from 50 to 69, and 8.41% age 70 or older. The data in Table 12 shows that the population of people from 18 to 39 has declined significantly. Between 1990 and 2000, people between the ages of 18 and 20 decreased 46%, making it the age group that decreased the most, while people between 50 and 59 increased the most, 63%. Generally, this shows a gradual aging in population, which is consistent with the aging of the baby boomers. However, Changes in age cohort were more pronounced in Portland than in Michigan and Ionia County (Figure 11). The change in percent of 18-20 year olds is difficult to explain, but, it can be said that people of retirement age were likely to move away from Portland in the decade between 1990 and 2000. The group of people that were 50-59 in 1990 decreased from 293 to 189 people 60-69 in 2000 (note the significant decline in the 60-69 cohort in Portland in Figure 11 that was not present in Michigan or Ionia County).

Table 13: Population Age Distribution from 1990 to 2000

Age Distribution									
	Portland City			Ionia County			Michigan		
	2000	1990	% change	2000	1990	% change	2000	1990	% change
Total	**3,688**	**3,889**	**-5.17%**	**61,518**	**57,024**	**7.88%**	**9,938,444**	**9,295,297**	**6.92%**
Under 10	583	624	-6.57%	8,774	9,105	-3.64%	1,415,684	1,394,376	1.53%
10 to 17 years	465	492	-5.49%	7,796	7,120	9.49%	1,176,911	1,067,347	10.27%
18 to 20 years	98	180	-45.56%	2,968	3,328	-10.82%	424,275	443,514	-4.34%
21 to 29 years	461	566	-18.55%	8,781	9,111	-3.62%	1,158,158	1,310,898	-11.65%
30 to 39 years	545	633	-13.90%	9,330	9,089	2.65%	1,503,138	1,567,673	-4.12%
40 to 49 years	558	472	18.22%	9,523	7,084	34.43%	1,551,688	1,182,979	31.17%
50 to 59 years	479	293	63.48%	6,169	4,475	37.85%	1,112,306	819,546	35.72%
60 to 69 years	189	315	-40.00%	3,798	3,710	2.37%	707,836	775,209	-8.69%
70 to 79 years	200	208	-3.85%	2,638	2,641	-0.11%	574,926	497,396	15.59%
80 years +	110	106	3.77%	1,741	1,361	27.92%	313,522	236,359	32.65%

Source: U.S. Census Bureau, Census 2000 SF 3 and Census 1990 SF3

The Portland community is not particularly diverse. This is evidenced by the majority of whites (99% in 2000, Table 14), compared with the white citizens in other cities in Michigan (65% in Lansing, 71% in Kalamazoo, 47% in Saginaw and 67% in Grand Rapids. (Census 2000, SF 3) Ionia County as a whole is more diverse than Portland. However, when compared with other similarly sized cities like Grand Ledge (96% white) and Mason (96% white) Portland's homogeneity is not surprising. (Census 2000, SF 3)

Table 14: Population Breakdown by Ethnicity

Race						
	Portland City		Ionia County		Michigan	
White alone	3,645	98.83%	56,657	92.10%	7,960,342	80.10%
Black or African American alone	12	0.33%	2,754	4.48%	1,401,723	14.10%
American Indian and Alaska Native alone	0	0.00%	272	0.44%	60,842	0.61%
Asian alone	4	0.11%	219	0.36%	174,824	1.76%
Two or more races	27	0.73%	966	1.57%	207,041	2.08%

Source: Census 2000 SF 3

Economy/ Business Environment

The economy of Portland is diverse, as there are many industries and types of goods and services provided to the citizens of Portland as well as the surrounding region. Access to the Grand River and Looking Glass River gives the community plenty of opportunity to hold festivals and offer recreational activities that use the river as a focal point. Also, thanks to the State of Michigan's Cool Cities program, and the Michigan State Housing Development Authority, Portland received grant money that provided capital investment for a new boardwalk that sits directly behind the businesses in downtown Portland. This gives people the option of sitting and walking on the boardwalk in the spring and summer time and allows for the development of loft apartments.

Despite these assets, we are in the midst of a recession. Unfortunately, there is no data on small cities and their unemployment rates released by the Bureau of Labor and Statistics; however, data is available for the metropolitan areas of Grand Rapids and Lansing, which have an average unemployment rate of 8.7%. (Bureau of Labor Statistics) Furthermore, Ionia County itself is given a selective range for its rate, so it can be assumed that Portland currently experiences a similar rate of unemployment. Table 15 demonstrates current unemployment rates for areas surrounding Portland. Michigan currently has the highest rate of unemployment in the Nation at 10.6%. (Bureau of Labor Statistics)

Table 15: January, 2009 Unemployment Rates

Unemployment Rates			
Grand Rapids-Lansing/East Lansing	Ionia County	Michigan	United States
8.7%	7% - 9.9%	10.6%	7.6%

Source: Bureau of Labor and Statistics

In 1999, the overall the median household income for a Portland family was $45,656, which is higher than in the United States ($41,994) and Michigan ($44,667). (Census 2000, SF 3) Table 16 below shows this distribution broken down by age groups and amount of income.

Table 16: Age of Portland Householder by Household Income in 1999

Percentage of People							
Income Distribution	**under 25 years**	**25 to 34 years**	**35 to 44 years**	**45 to 54 years**	**55 to 64 years**	**65 to 74 years**	**75 years and over**
Less than $25,000	7.8%	14.3%	13.7%	9.4%	11.1%	17.8%	25.9%
$25,001-$50,000	3.3%	18.3%	20.7%	14.7%	13.7%	15.6%	13.7%
$50,001-$100,000	2.9%	25.5%	24.2%	28.5%	13.9%	1.1%	3.9%
$100,001-$150,000	0%	5%	29.3%	49.5%	16.2%	0%	0%
$150,001 or more	0%	43.8%	0%	0%	56.3%	0%	0%
Median income per household	$33,333	$53,750	$54,583	$68,304	$50,000	$25,764	$19,144

Source: Census 2000 SF-3

The U.S. Census Bureau does economic studies every five years to evaluate the strength of the local economies. According to the numbers listed in Table 17, it shows that there was a decrease in the number of business establishments and the number of employees in each industry. The number of employees should not be looked at in great detail because not all industries disclosed how many people were employed, as there was not enough data provided by the census; therefore only an estimated range of employees was provided. The totals reflect the amount of data the Economic Census provides.

Table 17: Economic Industry Rates

Statistics by Economic Sector		
	Portland 2002	**Portland 1997**
Total Population	**3,785**	**4,056**
Total Number of Establishments	96	117
Number of Employees	558	809

Source: Economic Census 1997 and 2002

According to the above data, more than 20 businesses closed in Portland in the 5-year span between 1997 and 2002, and the population dropped nearly 300 people. Table 18, provides a more in-depth look at which industries provide jobs in Portland and the number of businesses in each respective sector (note that NOT all industries in Portland are listed below).

The data below is taken from four of the largest industries in Portland from the 2002 and 1997 Economic Census. There is a decrease in two of the industries, wholesale trade and retail trade, and an increase in the other two, health care and food and drink services. Overall, there were fewer jobs in 2002 than in 1997. However, there are many more options for food and service. Also, gas stations are considered a "retail trade" which likely contributes a great deal of the dollars generated, because Downtown Portland has relatively few retail businesses.

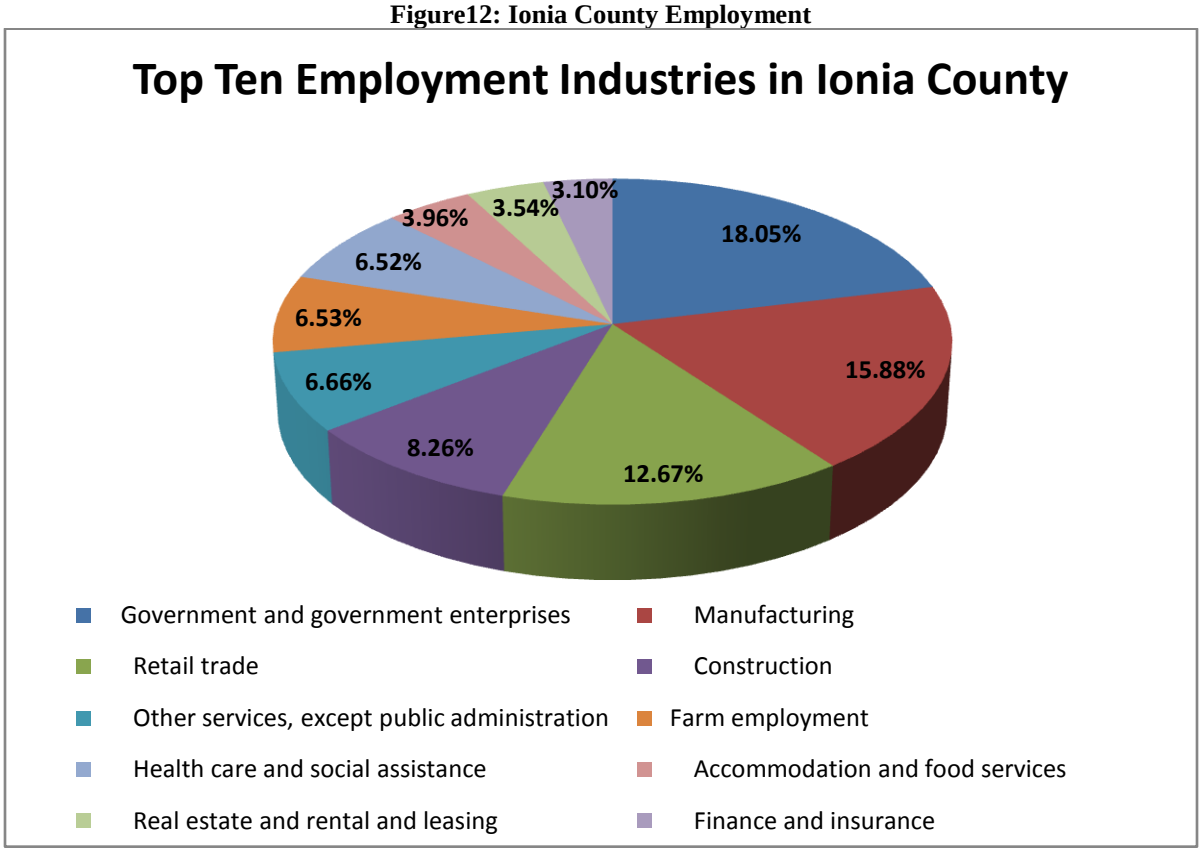
Table 18: Economic Industry Rates

Statistics by Economic Sector				
Type of Industry (NAICS code)	**Portland 2002**		**Portland 1997**	
	Number of Establishments	**Number of Employees**	**Number of Establishments**	**Number of Employees**
Whole Sale Trade (Auto Sales, Furniture, Wholesale Goods, Machinery & Equipment)	4	14	7	*between 20 and 99
Health Care & Social Assistance (Outpatient Services, Retirement Homes, Doctor offices)	12	*between 20 and 99	11	50
Food Services & Drinking Services (Restaurants, Bars, etc.)	11	152	6	* between 100-249
Retail Trade (electronics, appliances, office supplies, gas stations)	20	277	22	279

Source: Economic Census 1997 and 2002

In 2006, the sector employing the most people in Ionia County was Government and Government Services, which accounted for 18% of all employment. Manufacturing and Retail Trade ranked second and third, respectively, accounting for 15% and 12%. (Bureau of Economic Analysis)

Figure12: Ionia County Employment



Transportation

In Portland, Michigan, as of the year of 2000, 77% people work outside the town, an 11% increase since 1990. This is also higher than the percentage of people working outside their home city or town in Michigan and the United States, which is 69% and 58%, respectively.

Table 18: Place of Work for Portland residents from 1990 to 2000

Place Of Work						
	Portland 2000		**Portland 1990**		**Michigan 2000**	**United States 2000**
Worked in place of residence	420	22.65%	543	30.52%	31%	42%
Worked outside place of residence	1,434	77.35%	1236	69.48%	69%	58%
Total:	1,854	100%	1779	100%		

Source: U.S. Census Bureau, Census 2000 and Census 1990

In 2000, people living in Portland were becoming more likely to drive their own car to work. 94% of people used automobiles as their daily transportation to work and 2% of people

walked to work. The nonexistence of public transportation, the lasting winter season, and the ban on riding bicycles on Downtown sidewalks all potentially contribute to the limited transportation modes to work. Modes of transportation to work in Ionia County were similar, although carpool rates dropped between 1990 and 2000. These numbers may be very different now as a result of changes in the economy and increased gasoline prices.

Throughout the past two decades, the travel time to work in Portland has remained unchanged for each category (see Table 19). As shown below, people who drive less than 30 minutes to work are the majority, accounting for about 56%, but people who drive over half an hour is also account for about 41% of the sample. For those who carpooled to work, 2-person carpool is the most popular mode and 3-person carpool second to it. (United States Census Bureau SF 3) Also worth noting is that 54% of Portland residents left home for work between 6 and 8AM (United States Census Bureau SF 3), a time that most Downtown businesses are closed.

Table 18: Mode of Transportation for Ionia County and Portland residents from 1990 to 2000

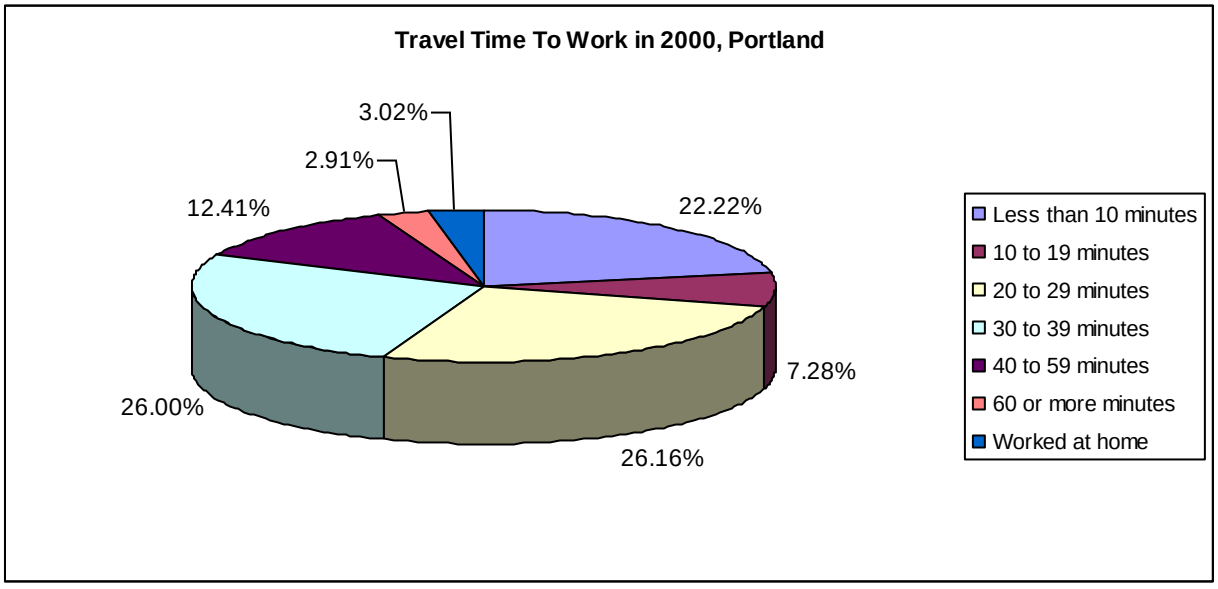
Modes Of Transportation To Work								
	Portland 2000		**Portland 1990**		**Ionia County 2000**		**Ionia County 1990**	
Car, truck, or van:	1,742	93.96%	1,641	92.24%	24,837	93.13%	20,825	91.30%
Drove alone	(1,617)	(92.82%)	(1,335)	(81.35%)	(21,772)	(87.66%)	(16,877)	(81.04%)
Carpooled	(125)	(7.18%)	(306)	(18.65%)	(3,065)	(12.34%)	(3,948)	(18.96%)
Public transportation	0	0.00%	0	0.00%	53	0.20%	37	0.16%
Motorcycle	0	0.00%	0	0.00%	14	0.05%	26	0.11%
Bicycle	3	0.16%	0	0.00%	68	0.25%	30	0.13%
Walked	46	2.48%	67	3.77%	528	1.98%	717	3.14%
Other means	7	0.38%	30	1.69%	140	0.52%	173	0.76%
Worked at home	56	3.02%	41	2.30%	1,029	3.86%	1,002	4.39%
Total:	**1,854**		**1,779**		**26,669**		**22,810**	

Source: 2000 Census SF 3 and 1990 Census SF 3

Table 19: Travel Time to Work for residents in Ionia County and Portland from 1990 to 2000

Travel Time To Work								
	Portland 2000		Portland 1990		Ionia County 2000		Ionia County 1990	
Less than 10 minutes	412	22.22%	443	24.90%	4,465	16.74%	4,515	19.79%
10 to 19 minutes	135	7.28%	174	9.78%	5,860	21.97%	5,220	22.88%
20 to 29 minutes	485	26.16%	397	22.32%	4,613	17.30%	3,596	15.77%
30 to 39 minutes	482	26.00%	449	25.24%	4,428	16.60%	3,662	16.05%
40 to 59 minutes	230	12.41%	211	11.86%	4,309	16.16%	3,600	15.78%
60 or more minutes	54	2.91%	64	3.60%	1,965	7.37%	1,215	5.33%
Worked at home	56	3.02%	41	2.30%	1,029	3.86%	1,002	4.39%
Total:	**1,854**		**1,779**		**26,669**		**22,810**	

Figure 13: Travel Time to Work



To summarize, the majority of people in Portland, 67%, drove more than 20 minutes to work in 2000, and 77% of Portland residents worked outside of Portland. They tended to leave for work between the hours of 6 and 8 AM (54%) and 92% of people drove alone to work. No one in Portland used public transportation, because none is available to them, and very few, less than 3%, walked or biked to work.

Housing, Poverty and Recreation

As of 2000, only 6% of housing in Portland was built in the last ten years (1990-2000), compared with 16% in Michigan. Most housing stock in Portland is substantially older with an age between 40-50 years. As shown in Table 20, 40% of houses in Portland were built in 1939 or earlier, compared with only 17% in Michigan. Housing is also generally affordable in Portland; 60% of residents spent less than 30% of their income on rent, which is comparable with the state of Michigan as a whole.

Portland has a relatively low poverty rate. In 1999, 7% of the city was reported to be below the poverty level, which was 4% less than the State, and substantially less than in Grand Rapids and Lansing, 15.7% and 16.9%, respectively. (Census 2000, SF 3 P87) Again, this number is deceptive because of its age, but it does illustrate the economic situation of Portland's residents in relation to other communities.

Tables 20 and 21: Age of Housing and Rent as a Percentage of Income

Age Of Housing		
	Portland	**Michigan**
Built 1999 to March 2000	0.19%	2%
Built 1995 to 1998	3.53%	7%
Built 1990 to 1994	2.50%	7%
Built 1980 to 1989	8.54%	10%
Built 1970 to 1979	19.14%	16%
Built 1960 to 1969	8.73%	14%
Built 1950 to 1959	10.92%	18%
Built 1940 to 1949	6.87%	10%
Built 1939 or earlier	39.56%	17%

Source: U.S. Census Bureau, Census 2000

Rent As A Percentage of Income		
	Portland	**Michigan**
Less than 10 percent	7.27%	8%
10 to 14 percent	14.81%	14%
15 to 19 percent	11.95%	16%
20 to 24 percent	11.43%	13%
25 to 29 percent	14.29%	11%
30 to 34 percent	5.97%	7%
35 to 39 percent	10.39%	5%
40 to 49 percent	7.53%	7%
50 percent or more	10.91%	19%

Source: U.S. Census Bureau, Census 2000

Table 22: Poverty Status

Poverty Status				
	Portland 2000		Michigan 2000	
Population	3,670		9,700,622	
Income in 1999 below poverty level:	244	6.65%	1,021,605	10.53%
Income in 1999 at or above poverty level:	3,426	93.35%	8,679,017	89.47%

Source: U.S. Census Bureau, Census 2000

Portland has a Parks and Recreation Board that meets regularly to advise the Parks and Recreation Department on recreational activities and encourage use of the city's natural amenities. A variety of recreational programs are offered seasonally for both youth and adults. This public benefit is spread through the whole Portland community including, Portland Township and the Portland Community School District. Currently, Portland has 15 recreational places, see Table 23.

Conclusion

Portland faces challenges to keep existing businesses and residents within the city limits and continue economic development. However, the City of Portland has potential for economic growth and stability if its assets are leveraged properly. The city has the potential to attract businesses and people alike given its rich history, natural resources, and location between Lansing and Grand Rapids. Also, the relatively high median income of residents could attract businesses considering relocating to the area. The most attractive feature Portland has to offer is the quality of life provided by the convergence of two rivers, the trail system throughout the city, and the existence of a "small town feel."

Table 23: Parks and Recreation Areas

Recreation Opportunities in Portland, Michigan		
	Park	**Area**
1	Rivertrail Linear Park	8 miles of linear park which bisects the city
2	Two Rivers Park	1/2 mile of linear trail along the two rivers
3	Community Lake	23 acres

4	Bogue Flats Recreation Area	58.87 acres
5	Joe Tichvon Park	1.27 acres
6	Alton Park	2.2 acres
7	Powers Park	2.5 acres
8	Thompson Field	6.2 acres
9	Roadside Park	0.25 acres
10	Boy Scout Park	1.91 acres
11	William Toan Park	0.78 acres
12	Brush Street School Park	0.9 acres
13	Riverfront Park	1.0 acres
14	Portland Fish Ladder	River frontage
15	Holloway Property	30.0 acres

Source: http://www.portland-michigan.org/parksrec/parksindex.htm

Chapter 6: Recommendations and Best Practices

Following are seven recommendation and best practice subject areas that were chosen based on the previous chapters. Each heading contains a brief summary of the subject area, best practices relating to the subject area from other cities in the United States, and recommendations for applying the strategy or practice to Downtown Portland. The purpose of all recommendations is to improve the parking and accessibility of Downtown Portland.

It must be noted that all cities used as examples in this chapter are significantly larger than Portland. The planning and engineering literature addressing parking management and accessibility is focused on much larger cities. However, this does not limit its applicability. This concern is addressed according to the individual subject area.

1. **Parking Education**

Educating the public so people use the parking system to its fullest potential is nearly as important as improving the parking system itself. According to the parking study in Chapter 3, and Model 2 in Chapter 4, there are enough parking spaces available in Downtown. However, the interviews conducted identified a perception among business owners that a lack of parking exists in Downtown Portland. This perception, if repeated among shoppers is a concern because a lack of parking may push people away from Downtown Portland and toward suburban shopping malls (Barr).

Educating users of Downtown Portland on the availability of parking in areas other than on-street parking spaces, and educating business owners and employees about the negative impacts of parking on the street could significantly decrease the perception of a lack of parking Downtown.

The Cost of Parking Loss

Multiple methods to calculate the economic impact of a single parking space exist, below is a brief description of one such model that could be used to inform business owners and

employees in Downtown Portland of the impact parking on the street for extended periods of time has.

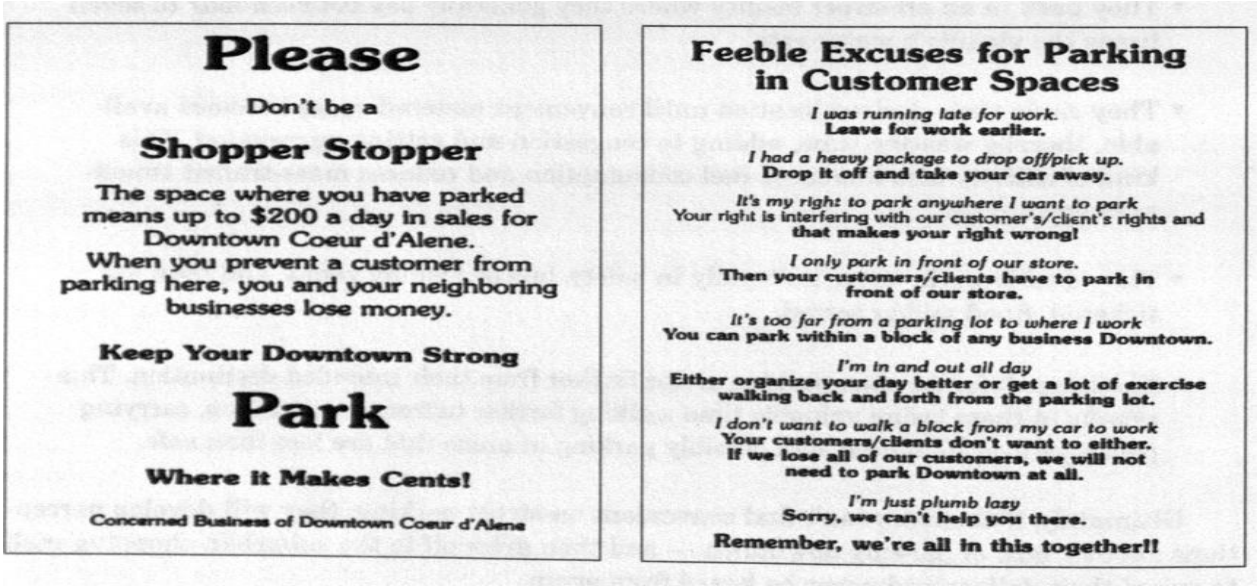
According to HyettPalma, Inc. of Alexandria, VA, while the amount varies from downtown to downtown, a common rule-of-thumb for the value of a prime parking space is approximately $150-$300 in retail sales per day. (Barr) This is a weighty number for small business owners to consider. In Chapter 2 it was found that more than 40% of respondents to the business owner and employee survey parked on-street. If just one person per business in the study area used a parking space meant for a customer, Downtown businesses would lose a combined $6,300 ($150*42 businesses), or $2,299,500 per year. Although this number is strictly an estimate, it serves as a wake-up call to business owners that may be choosing convenience over profitability by parking on-street instead of in the River or Maple and Grand River Lots.

Parking Education Best Practices

To discourage downtown business people from parking in customer spaces, the Coeur d'Alene Downtown Association placed this bright orange 3-5/8"x 4-1/4" windshield card (front and back shown below) on the cars of downtown business people "who habitually park on the street." (Barr)

Figure 14: windshield card

Source, 1997



Coeur d'Alene Downtown Association encouraged the passage of legislation that prevents downtown business owners, employees, and residents from parking in on-street spaces during normal business hours. Rather, the spaces in the business district are legal only for customers. Any violators must pay a $52 fine. (Barr)

Figure 15: "Know the Numbers" campaign (Carl Walker, Inc.)

The City of Boulder (Colorado) Parking program illustrated the wealth of parking available, and advertised little-known parking programs by conducting a "Know the Numbers" campaign. (See Figure 15) (Carl Walker, Inc.) Additionally, Boulder has pursued a variety of parking promotion and education strategies to combat the perception that a lack of parking exists.

The internet provides an excellent medium for informing shoppers and visitors about the convenience and flexibility of parking Downtown. Figure 16 is an example of such a campaign from Lansing, MI. It explains the parking facilities in the City of Lansing, where to park, how to purchase parking tickets, how discounted parking rates work, and other options. Although Portland does not have the same number of parking programs and methods to address, a simpler version displaying the location of parking Lots and two-hour parking could be helpful.

Parking Education Recommendations

Based on the above information the following recommendations have been identified:

- Flyers and windshield cards should be distributed to Downtown workers to encourage them to park in nearby off-street parking lots.
- Meetings of the Downtown Development Association and face-to-face contact with owners to inform them of the important relationship between potential customers and parking may be advantageous.
- Community parking facts promotion.
- Ultimately, an ordinance that results in more costly tickets being issued to violators should be considered if the above actions are unsuccessful.

Figure 16: Parking webpage

http://www.cityoflansingmi.com/pnd/parking/index.jsp

Home Live Work City Hall Play Visit Invest News GO

Plan & Dev Home
Transportation Home
Home
Contact Us
Online Ticket Payment
Parking Rates
VIP Prox Card
Cashkey
Resident Programs
Business, Employee & Customer Programs
Event Parking
Downtown Parking Map
Parking Voucher

Contact Info

Transportation and Parking Office
219 N. Grand Avenue
Lansing ,MI 48933
517.483.4240
517.483.4395 fax
Email

Hours
Hours of Operation:
Monday thru Friday
08:00 a.m. to 05:00 p.m.

Parking Services

Affordable, Convenient and Flexible:

There is a City of Lansing parking facility that fits every parking need.

Why waste your money on parking tickets? City of Lansing parking lots and parking structures are EVERYWHERE!

Our many downtown parking lots and parking structures are incredibly convenient. They're close to all major destinations, including Lansing Community College, Cooley Law School, the Capital Area District Library and the State Capitol. And don't forget our affordable rates!

PLEASE NOTE if there is a technical difficulty with the epayment of your ticket due to server downtime, you are still responsible for paying your ticket. In order to receive the discounted rate for paying your ticket, you need to make the actual payment, regardless of technical difficulties with the web site.

Affordable
- Discounted parking rates included in a variety of programs
- Lansing's best parking value

Convenient
- Parking lots and structure are within walking distance of all downtown Lansing landmarks
- Always plenty of available parking

Flexible
- Programs to fit every Lansing parker with any parking need
- Options for short-term and long-term parkers

2. Parking Promotion

Parking tends to be a two-tier issue for local leaders – how to create adequate well-designed parking spaces, and how to formulate proper regulations to manage parking. In some cases, parking is beyond managing physical structures, and becomes a marketing strategy when cities make parking a "brand". (Carl Walker, Inc.) Parking can be not only effective, but also an attraction by employing such a strategy.

Currently, parking in Downtown Portland is completely free; the only regulation for use of spaces is two-hour parking on Kent Street, the hub of activity in Downtown Portland, and a few reserved spaces in the City Hall and River Lots. However, it is hard to supervise and enforce the two-hour limit because it requires enforcement officers to record license plate numbers, and then revisit the area two–hours later to ensure all previously recorded automobiles have moved.

Based on the assumption that all on-street parking will be regulated based on hours of use and a fine will be applied after that, parking promotion programs in different cities were reviewed, and recommendations generated on how to promote parking in Downtown Portland according to its unique situation.

Courtesy Cards & Parking Angels

Customers parking in on-street spots over the time limit will receive a courtesy card in eye-catching colors in Hutchinson, KS. Instead of giving tickets, the parking authority in Hutchinson leaves notice on the windshields of cars that overstayed and thanks them for visiting the city. (Barr)

In the Boulder, CO 15-minute complimentary on-street parking extensions for cars that overstayed are given. Even if the car is eventually ticketed, a courtesy card is left with vehicle owners to express that their business is highly appreciated, and downtown Boulder is a friendly place to revisit. (Carl Walker, Inc.)

Downtown Kalamazoo, MI, has taken the courtesy idea a step farther. It offers extensive service programs at Lots and on-street parking, including escort services, lock-out and battery jump start services, and free ice-scrapers in the winter, funded by the downtown's tax increment financing district. (Barr)

Figure 17: City of Hutchinson, KS Courtesy Card (Barr)

Figure 18: City of Boulder, CO Courtesy Card (Barr)

Parking Permits

Salina, Kansas has created a special program to extend customers' parking time beyond the two-hour limit in special circumstances. By applying this program, qualified businesses that offer services requiring more than two hours are able to give permit cards to their customers who display them in their cars to avoiding ticketing. (Barr)

However, the issuance of such permits is based on the qualification of businesses. Such qualified businesses may include training centers, account/legal/investment consultation, hair-styling etc. The right of issuance is held by the Salina Downtown office, and a business can appeal the denial of issuance to the Salina Downtown executive committee. (Barr)

Figure 19: Salina, KS Temporary Parking Permit (Barr)

Businesses can purchase a 30-day supply of permits cards at a cost of 25 cents each. Each permit card is good for one use and cannot be transferred between businesses. To avoid business owners or employees using this permit, a rule that any business that violates this privilege will have their temporary permit privileges revoked indefinitely has been made and effective since the program's inception. (Barr)

Similarly, the City of Alexandria, VA, sells on-street parking permits. Parking is free with such a permit and there is no daily time limit while the limit is 2 or 3 hours without a parking permit. However, this special parking permit does not mean indefinite free parking. If any vehicle is left in the same spot for more than 72 continuous hours, it is ticketed or towed regardless whether an on-street parking permit is displayed. (Watergate of Alexandria Condominium Owners Association)

Free Parking Promotion Best Practice

An active advertising campaign informing potential visitors of the presence of free parking provides additional information to current users and attracts others that may be less interested in using downtown areas because of a perceived lack of parking. Regarding the delivery of free parking advertisement, Louisville, KY, could be viewed as a creative example. The Downtown Management District and two private parking companies joined forces to provide totally free Saturday parking in nearly 2300 downtown parking spaces in ten different facilities. They combined this free parking with other free

Figure 20: Louisville, KY Free Parking Promotion (Barr)

events/attractions to get some of downtown's 70,000 weekday office workers to come back on the weekend. In this promotion, Louisville printed brochures and flyers with all necessary information (figure 20). (Barr)

Parking Promotion Recommendations

The following parking promotion recommendations are based on the information contained above and the data gathered in previous sections of this report about the character of Downtown Portland and the manner in which it is used.

- A courtesy program should be introduced to show visitors and frequent users that Portland has a friendly parking environment, but enforcement is present. The violation fine for first-time offenders would be waived and a card issued thanking them for visiting Downtown Portland.
- Parking service can be extended in view of the Kalamazoo example. Portland has a relatively long winter, introduction one or more "parking angels", designated by local merchants to distribute free ice-scrapers, an innovative and relatively inexpensive way to make people feel welcome. This activity can be funded by DDA funds or through donations from businesses.
- Advertise the availability of parking with Newspaper inserts or a parking "hotline". The most updated parking information can be introduced to residents in this manner, including updated parking maps and regulations. Local events can also be announced in conjunction with parking information.

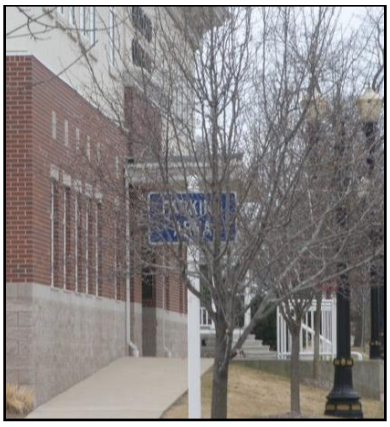
Parking promotion programs are extremely diverse; however, they are rarely used as a solution by themselves. Promotion programs must be employed in conjunction with other parking management techniques in order to be effective.

3. Signage Best Practices and Recommendations

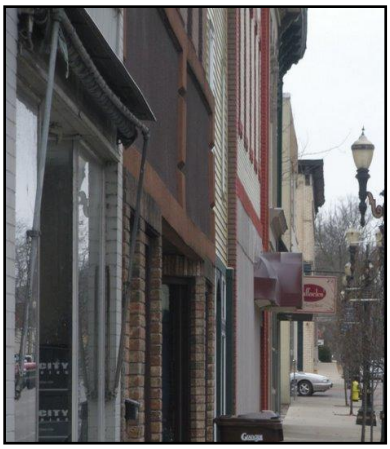
Adequate signage and wayfinding systems reduce the amount of confusion experienced by users in a downtown area. This is especially important for small downtowns that are competing with large shopping areas with a wealth of signs and empty space. During the inventory phase of this project special attention was paid to signage and wayfinding systems. The most relevant observations from that activity are listed below:

- There is relatively little signage along Maple Street
- A sign directing motorists to downtown Portland exists at the west entrance to Portland, on Kent Street, and on Grand River to the North, but there is no sign in the highway-commercial area on Grand River to the South.
- The "public parking sign" at the city hall Lot is blocked by a tree when approaching from the East (Grand River Ave)
- The Maple Lot is not marked as "public parking".
- A sign exists for the River Lot at Grand River and Water Street, but there is no indication of the Lot from downtown.
- Most store fronts on the North side of Kent Street have overhanging signs, while the South side of the street does not.
- The sign indicating the presence of the River Lot from Grand River shares a stand with three other signs, and is easily missed.
- Maple Street is almost completely void of signage for businesses.
- Many on-street painted lines are in poor condition.

Picture 5: City Hall Lot Parking Sign



Picture 6: South Side of Kent Street



Picture 7: North Side of Kent Street

Signage Best Practices

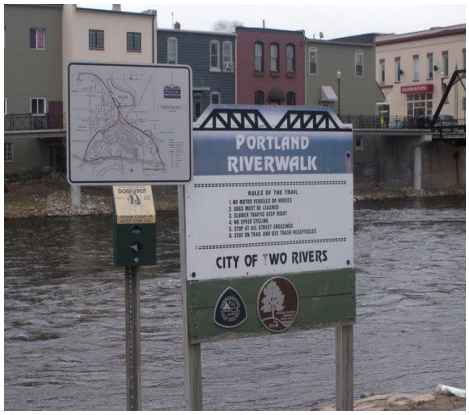
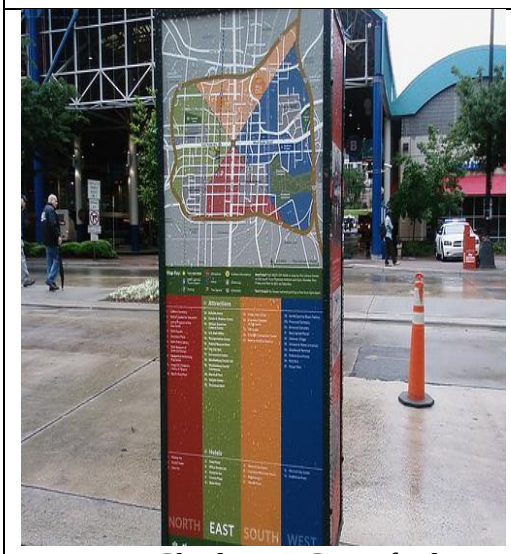
The two tables below display areas in downtown Portland in need of improvement and best practices from communities throughout the United States that could be employed. Unfortunately, little is published about communities of Portland's size, so examples from much larger cities are used. However, this does not detract from the validity of the practice or eliminate Portland's ability to implement similar ideas.

Table 24: Improvements to signage and wayfinding on-street

 Crosswalk on Kent Street↑	 "No Bikes" sign on downtown street. ↑	 On-street parking lines on Kent Street ↑
 Crosswalk at the corner of 14th and R streets NW. [3]↑	 "No Bikes" sign in London[4]↑	 Reserved on-street car share parking[5]↑

[3] Amanda. Crosswalk. Creative DC website. Oct 20, 2006 http://www.creativedc.org/blog/2006/10/crosswalk.html
[4] istockphoto website: http://www.istockphoto.com/file_closeup/object/5403942-no-bicycle-lane.php?id=5403942
[5] the Victoria car share co-op website: http://victoriacarshare.ca/drupal-6.2/node/24

Table 25: Improvements to signage

 Wayfinding map on the sidewalk next to the Grand River. ↑	 The map is not oriented to Downtown. ↑	 Varied colors and formats is confusing to drivers.↑
 Uptown Charlotte NC wayfinding signage & map. [6]↑	 Kansas City Pedestrian Map Signage[7]↑	 An example of simple, consistent wayfinding signage.[8]↑

In order to implement some of the strategies pictured here Portland should consider development of a parking signage program to guide citizens and visitors. Such a program will improve circulation, and potentially increase available public and private parking spaces. It is

[6] http://www.drewheffron.com/index.php?/project/uptown-charLotte-nc-wayfinding/
[7] Yulan studio website: http://www.yulanstudio.com/print/projects/signage_KCWayfinding.htm
[8] http://triplettdesign.com/index.php?directory=.&currentPic=12

important to place readable wayfinding signage for parking, pedestrians, bicyclists, and vehicle traffic. Color, shape, message form, and location should be consistent and clear.

Multiple strategies exist to pay for such a program, Kirkland, Washington has dedicated revenue derived from parking meters and parking enforcement to fund its downtown-parking manager, capital improvements to surface parking areas (i.e. lighting, striping, landscaping) and signage and wayfinding systems for the downtown area. However, using such a funding source would require an increase in enforcement efforts in Portland.

Signage Recommendations

- Development of a comprehensive signage plan to provide uniform signage that directs visitors and employees to appropriate short and/or long term parking areas is necessary. A system is needed to direct overflow parking to the River and Maple Lots as well improved signage for businesses. In the City of Boulder example, using a consistent "P" to indicate public parking areas was successful, in Portland a similar very simple strategy could be employed to indicate the location of infrequently used lots for visitors, especially during peak times of use.

4. Regulatory Policy Recommendations and Best Practices

Parking Enforcement

Two hour parking zones are located along Kent Street, in downtown Portland. According to the 2004 parking management study, 10 out of 53 cars on Kent Street were parked in parking spots for at least four to six hours. While the study does not indicate whether or not cars were parked in the specific two hour areas, four to six hours is too long for a car to be parked on-street in downtown.

Picture 8: Portland 2 Hour Parking Sign

Enforcement of the two-hour time limit has been relatively light, which is understandable due to the size of Portland's downtown area. It is financially difficult to create a parking division or hire parking enforcements officers to police so few parking spaces; however it is important that the city enforce posted regulations.

Creation of a group or governing body with the single purpose of managing parking and its enforcement would therefore be beneficial.

Parking Enforcement Best Practice

Portland's problem with parking is one shared by cities across the U.S., but Portland's size is a unique barrier to parking enforcement. Few cities with a population under 10,000 have sufficient city staff to assign employees to monitor parking full-time. As a consequence, a shared responsibility between the DDA and the city's planning, and engineering staffs in the form of a parking advisory committee that reports to the mayor or the city council may be beneficial. In Parking: The Parking Handbook for Small Communities (Edwards, 1994), Edwards asserts that the head of the DDA or Main Street program is a good candidate to lead the parking advisory committee.

The main advantage of a parking advisory committee is the representation of the diverse stakeholders in a downtown. Business owners, city government, the DDA, and residents identify common goals and work together to form independent and balanced reviews of parking policies. This advisory group requires a formal organizational structure to initiate action on parking concerns.

Picture 9: Portland City Hall

A parking advisory committee has legal responsibilities delegated to it by the local municipality, but it does not generally have financial or taxing abilities. Any issue with city funds must be handled by the city through its normal processes. The advisory committee is responsible for the planning, marketing, and undertaking of parking studies and making recommendations for changes.

A variation of the parking advisory group format is to make parking management a subcommittee function of the municipal government. The advantage of this arrangement is that it can be used to make parking a politically important element of the city's program. The

disadvantage to this approach, however, is that it reduces opportunity for representation of private sector interests.

With the high percentage of business owners in downtown Portland perceiving a parking problem, finding participants for the committee should be relatively simple. Collaboration between the private and public sector is vital for this small advisory group to effectively identify and implement solutions for both perceived and actual parking challenges.

Parking Enforcement Recommendation

- A volunteer-based group charged with development and implementation of new downtown parking policies should be created. The Portland Parking Advisors (PPA) could consist of 7 to 9 people that would meet monthly to discuss parking policy. This group would make recommendations to the city council and/or planning commission to solve problems, request resources, and manage parking as a whole. This would allow residents and business owners to have a specific group to address their concerns. The PPA would be a cost-effective means to involve downtown stakeholders and address the parking concerns of the city simultaneously.

Color-Coded Parking Permits

The manner in which parking spaces are used by employees and business owners is very different from the way patrons of the business seek to use them. Convenience of parking is an attractive feature, and many businesses rely on customers being able to quickly and easily access their services (banks, coffee shops, day-care facilities, etc.). In addition to the perceived lack of parking, both the 2009 and 2004 parking occupancy counts concluded that additional parking is almost always available in the Downtown area, especially in the River Lot. Therefore, if business owners are encouraged to use parking spaces that are in less demand from patrons (the River Lot), the perceived lack of parking among customers will diminish

Picture 9: "Store Parking Only" on Kent Street

because parking spaces currently used for long periods of time by business owners and employees will be available.

Color Coded Parking Permit Best Practice

The use of color-coded parking permits is common on college and university campuses across the United States. The primary function of such a system is to allow enforcement officers to easily identify violations by simply matching the color of permit with the type of permit allowed in a particular area. Such a system could be employed in Portland to reserve specific parking spaces for employees and business owners away from on-street parking.

The City of Palo Alto, California has instituted a color-coded parking strategy to regulate parking in its downtown but continues to provide free parking for visitors and customers. "Parking is provided for visitors and customers in the downtown area and California Avenue business district on the street, in off-street parking lots and in parking garages." (City of Palo Alto) The free parking is restricted to two-hour parking; long-term visitors may obtain a single-day permit good for off-street parking areas for $6-15 from the Palo Alto Civic Center. Employees and business owners working in the downtown are required to purchase a quarter or annual pass, which allows them to park in off-street parking garages and surface Lots. A reduced rate is provided for employees and business owners that park in a more remote Lot.

The primary difficulty resulting from the Palo Alto's efforts has been spill-over into surrounding residential neighborhoods. "…employees from downtown businesses, parking in the neighborhood, have so congested their blocks in the last year-and-a-half that residents hunt for parking spaces blocks from their homes." (Dremann) The employees are parking in residential areas where parking is free to avoid paying the $420 annual fee required by the city for employee parking spaces.

Figure 11: City of Palo Alto Color-Coded Parking Zones

The City of Portland can adopt a modified version of this approach to encourage business owners and employees to park in off-street parking areas, thereby freeing up on-street parking, especially on Kent Street, for customers and visitors. Reducing the cost of the parking permits, or making them free will limit the spill-over effects experienced in Palo Alto.

The cost of this system is minimal, and enforcement is simple. Expenditures would include the cost of small wind shield permits (total cost for 1000 permits ranges from $200-250 (My Parking Permit.com)) and new signs indicating reserved parking spaces for employees. Enforcement of the color-coded permits can be done in the same manner parking enforcement is currently being conducted, and identifying violations will be relatively simple.

Color Coded Parking Permit Recommendation

- Business owners and employees can be provided with color-coded permits that correspond to one of several public parking areas. Each parking area must contain a number of reserved spaces for employees, but vehicles displaying an employee permit should be allowed to park in any public off-street Lot.

Shared Parking

Model 1 in Chapter 4 demonstrated that Portland's zoning ordinance requires significantly more (approximately 149) parking spaces in the study area than are currently provided. This is contrasted with the results of Chapter 3, which indicate that Downtown Portland generally has adequate parking.

Figure 22: Shared Parking Sign from the United Kingdom (United Kingdom Department for Transport)

Shared Parking presents a possible solution to this problem. The concept of shared parking is fairly simple, it recognizes that different uses have different peak operating hours and therefore demand parking spaces at different times. According to the Victoria Transport Policy Institute, shared parking is most appropriate where "a specific parking problem exists, land values and parking costs are high, clustered development is desired, traffic congestion or vehicle pollution are significant problems, and adding pavement is undesirable." (Davidson and Dolnick) Downtown Portland is much smaller than most cities instituting shared parking strategies, but it

does exhibit at least three of the above five characteristics of communities where shared parking is appropriate.

Shared Parking Best Practices

As previously stated, most communities utilizing shared parking policies are significantly larger than Portland, but Downtown Portland faces parking challenges comparable to larger cities because the Grand River prevents half of Kent Street businesses from providing private parking and vacant land in downtown to build new surface parking areas does not exist.

Minneapolis, Minnesota institutes shared parking requirements in its zoning code; the table below demonstrates how the requirements are enforced.

Table 26: Shared Parking Requirements from Minneapolis Code

	Weekday			Weekend		
Use	1:00am - 7:00am	7:00am - 6:00pm	6:00pm - 1:00 am	1:00am - 7:00am	7:00am - 6:00pm	6:00pm - 1:00 am
Office	5%	100%	5%	0%	15%	0%
Retail sales and services	0%	100%	80%	0%	100%	60%
Restaurant (not 24 hour)	20%	70%	100%	30%	75%	100%
Residential	100%	60%	100%	100%	75%	95%

Source: Davidson and Dolnick page 11

When the shared parking requirements from the Minneapolis code are applied to the current City of Portland Zoning Ordinance parking requirements (see Table 8 on page 25) a significant decrease in total parking required occurs. The table below demonstrates the results from applying shared parking standards to common adjacent land uses in Downtown Portland. The peak demand decreases by 10 parking spaces, or 16%. Shared parking would allow these four uses, which now require a 61-space parking Lot, to operate a parking Lot with only 51 spaces. If applied to the entire study area, Shared Parking Standards would significantly decrease the zoning ordinance parking requirements.

Table 37: Minneapolis Shared Parking Standards Applied to Four Portland Businesses

	Current Zoning Requirement	Weekday			Weekend		
Use		1:00am - 7:00am	7:00am - 6:00pm	6:00pm - 1:00 am	1:00am - 7:00am	7:00am - 6:00pm	6:00pm - 1:00 am
Office (6000 square feet)	15.00	0.75	15.00	0.75		2.25	-
Retail (3000 square feet)	10	-	10.00	8.00		10.00	6.00
Restaurant (60 people allowed by fire code, 500 square feet not used for seating, 10 employees)	35	7.00	24.50	35.00	10.50	26.25	35.00
Residential	1	1.00	0.60	1.00	1.00	0.75	0.95
Total spaces required	61.00	8.75	50.10	44.75	11.50	39.25	41.95

Adoption of Shared Parking standards is relatively simple; it requires a zoning text amendment to change the respective parking sections in the zoning ordinance. The problems presented by such a strategy are logistical. If a land use changes and the shared parking requirement increases, there is rarely vacant land to construct additional required parking, causing insufficient parking. Additionally, it is the responsibility of the zoning administrator to keep records of shared parking agreements, and the individual parking requirements, which can be difficult.

The example above from Minneapolis uses specific formulas to calculate the parking requirements. Although this provides clarity for land owners, more flexible approaches are applied in other communities that allow a government official to approve shared parking arrangements, and decrease the parking requirement by up to 10%. While this method is less exact, it provides the government with necessary flexibility in applying the ordinance. (Davidson and Dolnick)

Shared Parking Recommendations

- A flexible method of enforcing shared parking regulations is advisable for Portland because it allows the city more latitude to consider the unique characteristics of many land uses and parcels in Downtown Portland. Such a policy can replace the current off-street parking requirements in the zoning ordinance.

5. Physical Improvements

Based on the Socio-Economic Analysis in Chapter 5, almost 94% of Portland residents use a car to travel to work and less than 3% use a bicycle or walk to work. The percentage of people using alternative modes of travel decreased slightly between 1990 and 2000. Therefore, the potential exists to increase use of alternative modes of transportation to work, and also for recreational visits to downtown Portland.

Picture 10: Newly Improved Sidewalks along Bridge Street

However it can often be difficult for people to use something other than a car to get around downtown Portland because of its physical infrastructure. Other means of travel would increase available parking in the downtown area while taking advantage of the almost extensive trail system in Portland. The physical structure of the streetscape in Portland can be improved to increase the number of people walking or riding a bike in downtown Portland.

Streetscape Best Practices

The streetscape is being significantly improved along Maple Street due to the new curb cuts being constructed, new sidewalks, and brick pavers. Even though there are improvements being made there is still room to make more.

In the late 1980s and 1990s, there was a need to decrease traffic and on-street parking due to speeding and lack of walkability on Greenwood Avenue in Seattle. Seattle reconfigured this avenue by repainting the roadway to include 5 foot bike lanes, and increased sidewalk widths, while reducing the four-lane road to two lanes. This forces drivers to be aware of bicyclists in the bike lanes as well as people crossing the street.

Picture 11: Worn Crosswalk Paint

Based on the inventory of Portland, the paint on the streets is worn, especially at the crosswalks. If the City of Portland can repaint Kent Street make all parking parallel, or eliminate parallel parking on the south side of the street, bike lanes could be included. Additionally, crosswalks can be repainted to make them more apparent to pedestrians and motorists.

Streetscape Recommendations

- Repaint crosswalks on Kent street and/or construct new crosswalks that empower the pedestrian.
- Make provisions for bicycles downtown, by adding bicycle racks, and/or creating bike lanes.

River Lot Best Practices

During the 2009 parking count, there were never more than 4 cars in the River Lot at one time, which has a capacity of 50 spaces. There are a variety of possible reasons for the infrequent use of the Lot. Bridge Street is one-way across the river, allowing cars to enter the downtown, but not allowing cars to travel directly from downtown to the River Lot. Additionally, there are no signs in downtown Portland directing cars to the River Lot; therefore visitors may not be aware of its presence. The most obvious and probably most significant reason for the lack of usage is the Grand River. The river serves as a physical barrier to downtown, and crossing it may seem like a much longer walk than it is.

Picture 12: The River Lot on a Saturday Afternoon in March

Bridge Street traffic data needs to be collected and analyzed because changing direction of traffic on Bridge Street, where it crosses the Grand River may increase use of the River Lot. If people are driving through downtown and cannot find parking easily on-street or any of the lots in downtown, it would be more accessible to these motorists to travel over the bridge and into the River Lot. Additionally, the addition of a traffic light at either end of the bridge may also connect the downtown with the River Lot more

effectively. However, more research regarding traffic patterns on bridge street needs to be conducted before any changes to traffic flow are considered.

Based on our inventory of downtown Portland, there are over 50 light poles in the study area, but only two poles exist in the River Lot. Although the bridge to the lot is well lit, the lack of lighting in the Lot may discourage use after dusk. Lighting provides choice to people and can dictate whether or not they feel safe when using open public areas (Atlas). Therefore, an increase in lights in the Lot itself can attract people to park there and make it more pedestrian-friendly.

Also the design of the bridge may contribute to the infrequent use of the River Lot. Ideally, the bridge should include 5-10 foot-wide walkways and potentially incorporate bike lanes. This will allow the downtown to be connected to the trail system that runs on the opposite side of the river, where the River Lot is located. The new Danville-Riverside Bridge in Pennsylvania provides an example. The bridge is decorated in antique-style street lamps to provide a safe and well-lit walking path (Parsons Brinckerhoff). The bridge used similar principles of promoting walkability and pedestrian-friendly use, through improved sidewalks, crosswalks, and landscaping features. The overall cost for the bridge was $11.6 million, less than a tenth of which was used to improve accessibility. (Parsons Brinckerhoff)

River Lot Recommendations

- Add more lighting to the River Lot, consistent with the lighting provided across the river in the study area.
- Widen and improve the pedestrian path on the bridge to be more pedestrian and bicycle friendly.

6. Alternative Modes of Transportation to Downtown Portland

Different techniques and modes of transportation can relive parking congestion by providing an alternative to the automobile. The following are two possible techniques to strengthen the use of alternative transportation to downtown Portland, Michigan.

Bicycle

The city of Greenville, SC had a parking problem in their downtown. So in 2006, the Bicycle Friendly Community Initiative developed. As part of the initiative Community leaders

participated in a "Bicycle Friendly Community Workshop." The Association of Pedestrian and Bicycle Professionals for the National Highway of Traffic and Safety Administration hosts four-hour workshops on becoming a bicycle-friendly community. The workshop includes methods to get you going, setting short term goals, and setting long term goals. (http://www.bicyclefriendly community.org/howto.htm)

The initiative was to help alleviate some of the stress created from the amount of automobile traffic downtown, the city considered alternative modes of transportation and determined that it is important to have people downtown, it is not important to have cars downtown. (City of Greenville, South Carolina) Biking downtown and using your bicycle as a primary mode of transportation was one of the alternative modes of transportation that the city decided to move forward with.

A bike plan was adopted in collaboration with the city's Master Plan, and a network of bicycle friendly streets was developed. The Master Plan also includes the Bicycle Parking Ordinance, which outlines the necessary amount of bicycle parking that is required for new development (10% of total parking requirement). (City of Greenville, South Carolina) The effort to educate the public on the bicycle as a primary mode of transportations continues in coalition with the development of the Bicycle Plan contained in the Master Plan. Three years after its adoption the city has seen an increase in bicycle use citywide and more people are choosing a bicycle as their primary mode of transportation.

Efforts to improve on the current system are being continually made. Improvements include educational efforts for the community to create awareness for bicycle riders, improved bike paths and bikeways, and better signage. (City of Greenville, South Carolina) Additionally, holding events to inform citizens of changes to city ordinances or infrastructure intended to encourage bicycle use is helpful. A majority of trips that are made to downtown by bicycle will keep a vehicle from coming to downtown and using a parking space.

Recommendations for Increased Bicycle Use in Downtown Portland:

- City ordinances should be revised to allow bicyclists to use downtown sidewalks, or provisions need to be made to provide a safe environment for bicyclists on Kent Street.

- Consider adding a Bicycle Plan to the Master Plan, which includes a mapped network of the bike paths currently in place, as well as possible locations for the expansions of these networks.
- Portland has documented bike trails in the map in Appendix B, but the trails avoid the downtown area. Expansion of these trails, through downtown and residential neighborhoods in Portland, will help Portland become a more bike-able community.

Carpooling to Downtown Portland

The Campus of Monash University in Melbourne Australia had a problem with the over congestion of their parking Lots, typically reaching 100 percent capacity between the times of 10:30 and 11:00 am. A Carpool program was adopted in an attempt to help alleviate some of the over-utilized parking spots on campus. By promoting two key components, premium parkings spaces, and a financial incentive, carpooling took hold.

All parking on Campus requires a permit, the premium permits, or the Red Permit costs an approximated 150 dollars, while the entry permit, or blue permit, costs 37.50, and by contrast carpoolers park for free. But the early stages of the carpool program found that the financial incentive was not enough. (Rose)

The study of the program showed several interesting findings. First, people register for the carpool but don't always use the car pool. Second, a select few carpools operated daily. Third, carpoolers retain other options. The study found that capacity and location are an issue. Originally the parking for the carpoolers was in a garage on the fringe of campus, a time in which participation in the program was low. Once the parking was moved to premium spots within the campus participation in the program increased. (Rose)

Recommendations for Carpooling and Downtown Portland

- On street parking may be dedicated to employees that choose to carpool, while other employees of business who do not car pool would be required to park in one of the parking lots off street.
- The parking in front of the senior center might be designated to patrons using the facility who choose to car pool, requiring individual motorists to park elsewhere.

- Financial incentives can be offered to companies with employees that carpool. A bar key code system could be used to monitor the carpool activity and cars parking in premium spots.

7. Special Event Parking Management

Based on conversations with residents and stakeholders, and Chapter 3, it was found that the downtown parking system becomes strained during events that increase the number of downtown users above normal day-to-day levels. Funerals and Friday bingo at the senior center are two such events that are cited regularly in straining the downtown parking system.

Remote Parking and Shuttle Service

Remote parking is a common method used when parking systems become overwhelmed due to unmanageable increases in usage that arise in situations that see users arriving in large groups in a short span of time. Remote parking is the practice of encouraging motorists to use off-site parking that is typically located several blocks away from the intended destination. Although more often seen in use at airports, convention centers and stadiums, remote parking can be used by Portland if properly scaled.

Remote Parking and Shuttle Service Best Practice

The Victoria Transport Policy Institute recommends that for any remote parking system to be successful three associated services be implemented in support of it. These services are:

1. Information (signs, maps and brochures) on remote parking availability
2. Regulations that encourage long-term parkers to use remote parking facilities
3. Shuttle services and pedestrian facilities to improve access to remote parking facilities (Victoria Transport Policy Institute)

There is typically no cost associated with parking at an off-site location, in part to provide an incentive to alleviate the inconvenience of parking several blocks from your destination. Specific groups of motorists (such as long term parkers and users of a specific facility) can further be encouraged to use remote parking facilities by instituting regulations that increase the cost of parking near the land uses and facilities in highest demand by those individuals. Implementing the associated shuttle service is typically the most expensive portion of a remote parking system. Shuttle services are rarely capable of self-financing and need to be subsidized.

Purchasing a shuttle or large van, maintaining it, providing insurance, and hiring drivers accounts for the bulk of the costs associated with remote parking. New and used shuttle buses and vans can range anywhere from a few thousand dollars up to tens of thousands, depending on the size, passenger capacity and features included. Drivers can usually be hired near minimum wage, particularly on a part time basis.

Figure 23: An Example of a Shuttle-Bus (http://www.levinlimousine.com/shuttle-bus.jpeg)

The City of Portland could adopt a remote parking system on a limited scale. The City may be able to work with downtown businesses whenever a business holds a special event that generates higher demands on the downtown parking system than normal. A shuttle bus could then run a circulation route to and from the off-site parking Lot continuously, ensuring that wait times would be minimal. Due to the limited number of times (perhaps once or twice a week) that this service would be needed, it is reasonable to believe that a driver could be hired at an hourly or daily rate (or perhaps even volunteer) to keep the associated costs down. Optimistically, if the City does not have an appropriate off-site parking facility available, a shared parking agreement may be brokered with the owner of any nearby surface lots (such as a church or school) to provide the needed off-site spaces. The businesses could then provide the necessary information to the patrons of their special events of the arrangement.

Remote Parking and Shuttle Service Recommendation

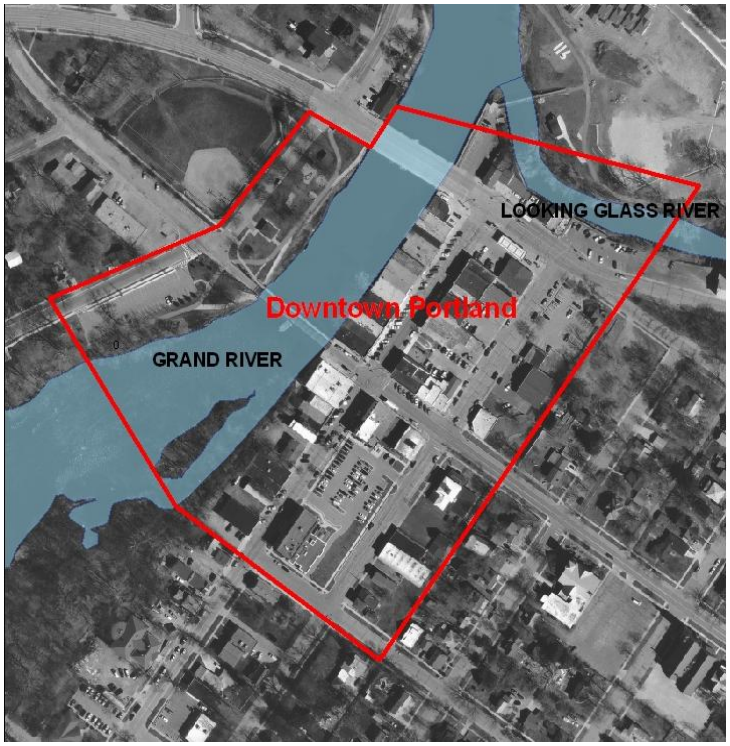
- The City of Portland should adopt a strategy for remote parking for special events like funerals and Bingo Fridays. A shared parking arrangement with one of the nearby churches could be very successful.

Chapter 7: Summary

This project was conducted in two phases: first, information was collected on the condition, as well as perception, of Downtown Portland parking and accessibility. Then recommendations and examples of management systems and strategies that can alleviate the difficulties identified were provided based on the information gathered during the first phase. This course of action was modeled after other parking assessment studies while being adjusted to fit the unique circumstances of Portland. The steps taken to achieve these goals were: 1) inventory the infrastructure and circulation systems, 2) inventory parking usage, 3) assess parking demand, 4) develop an understanding of factors unique to Portland, 5) study parking management techniques, and 6) ultimately make recommendations on appropriateness and feasibility of implementation.

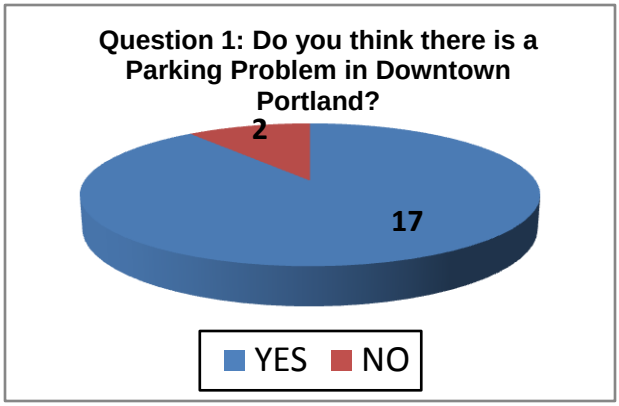
The inventory of the study area featured entries in a number of categories. We counted downtown businesses, their uses and vacancy rate. Infrastructure cataloged the direction and volume of traffic, location of parking lots, amount and suitability of signage, the condition of sidewalks and other factors. This was done to identify the base upon which the study would build, of what the parking situation exists and how it is perceived. It was found that while some deficiencies are present, Downtown Portland has a infrastructure base to support the parking and circulation system.

Study Area



Individual business owners and employees were asked three short questions to gauge their perception on the situation of the parking system. From the responses it was concluded

Results from Question 1



that there is a perceived parking problem among downtown business owners and employees, that nearly half of the respondents parked on-street or in public lots, and there are a variety of opinions on addressing the problem. While the first response was straightforward in telling us if the parking situation was considered a problem, the second two responses showed us where the conceptual origin of the problem was located. The results of our survey were compared to the results of a 2003 survey that also concluded that respondents perceived the availability of parking as a problem in Downtown Portland.

Determining the availability and usage of the public surface lots and on-street parking is the most important factor concerning the current state of the downtown parking system. The 290 total public parking spaces in Downtown were accounted for in one of the five designated zones (on-street parking) or four lots (off-street parking) within the study area. This aided us in making our three daily counts on three different days efficiently and effectively. At no time during these counts did the parking usage approach maximum capacity or even become

Total Usage of Parking Spaces

Total Usage									
Parking Area	**2/4/2009**			**2/6/2009**			**2/7/2009**		
	9AM	**12PM**	**4PM**	**9AM**	**12PM**	**4PM**	**9AM**	**12PM**	**4PM**
Zone 1	29	27	31	35	33	28	25	11	12
Zone 2	18	25	33	30	25	20	12	7	8
Zone 3	4	7	10	13	10	12	9	11	5
Zone 4	1	6	9	6	5	5	1	1	2
Zone 5	10	8	11	11	13	8	11	12	4
Grand River and Maple	4	9	11	17	12	9	17	15	10
River Lot	3	2	2	4	2	1	0	0	1
City Hall Lot	37	40	42	41	43	37	29	25	19
Scout Park Lot	7	10	5	2	6	4	10	10	8
Total:	**113**	**134**	**154**	**159**	**149**	**124**	**114**	**92**	**69**
% of Available Public Parking Occupied	**39%**	**46%**	**53%**	**55%**	**51%**	**43%**	**39%**	**32%**	**24%**

unmanageable. There were, however, instances where the lots or zones closest to Kent Street were heavily used while those on the periphery were largely vacant. This conclusion lends itself to the perception of a parking problem in Portland by downtown business owners.

For use as a reference and comparison point, the parking demand was calculated using equations provided by the Institute of Transportation Engineers Parking Generation (2nd Ed.) manual and current parking requirements were estimated using the City of Portland zoning ordinance. For this chapter an estimated 150 private parking spaces were added to the publicly provided 290, bringing the total parking spaces to 440 spaces. It was found that the zoning ordinance required 591 spaces based on land uses in the study area. The second parking demand model based on parking generation rates painted a different picture. The results of the second model placed the typical parking demand for a weekday in Downtown Portland at 301 spaces. This is only 68% of the total 440 spaces located in the study area. Taken together these models suggest that while Downtown Portland is short of the recommended number of spaces required by the zoning ordinance, it does have enough spaces to handle the amount needed on an average day.

The River Lot on a Saturday Afternoon in March

A final consideration to be made while collecting and analyzing our data was to recognize the trends that characterized and affected Portland's population. This is important in determining which recommendations are practical and correct. Portland has seen a population decrease, a decline in the number of young to middle aged people, and an unemployment rate somewhere between 7.0% and 9.9% (Portland specific rates are unavailable). These are all circumstances that will affect how the Downtown is used presently and in the near future.

"Store Parking Only" in Front of a Downtown Business

Transportation choices also factor into how people will get to the downtown area, which is overwhelmingly by personal vehicle. Despite these challenges, Portland has many strengths and opportunities, from natural features such as the rivers to programs like the Cool Cities initiative, which can be capitalized on to ensure a viable downtown. An effective parking system is undoubtedly important to this.

Based on the interviews, inventories, and analyses conducted recommendations for Portland were created addressing seven subject areas (Parking Education, Parking Promotion, Signage and Wayfinding, Regulatory Policies, Physical Improvements, Alternative Modes of Transportation, and Special Event Parking Management). While all recommendations have the potential to improve the parking and accessibility in downtown, the Portland Practicum group does not expect the City of Portland to adopt each recommendation listed herein. Moreover, adoption of a single recommendation will not eliminate Portland's difficulty with parking and accessibility. Any strategy adopted must be part of the city's comprehensive planning goals and consider education in addition to physical improvements.

The final recommendations of the Portland Practicum group for improving parking and accessibility in the four-block study area are:

- Flyers and windshield cards should be distributed to Downtown workers to encourage them to park in nearby off-street parking lots.
- Meetings of the Downtown Development Association and face-to-face contact with owners to inform them of the important relationship between potential customers and parking may be advantageous.
- A courtesy program should be introduced to show visitors and frequent users that Portland has a friendly parking environment, but enforcement is present. The violation fine for first-time offenders would be waived and a card issued thanking them for visiting Downtown Portland.
- Parking service can be extended in view of the

"Know the Numbers" campaign (Carl Walker, Inc.)

Kalamazoo example. Portland has a relatively long winter, introduction one or more "parking angels", designated by local merchants to distribute free ice-scrapers, an innovative and relatively inexpensive way to make people feel welcome. This activity can be funded by DDA funds or through donations from businesses.

Shared Parking Sign from the United Kingdom (United Kingdom Department for Transport)

- Advertise the availability of parking with Newspaper inserts or a parking "hotline". The most updated parking information can be introduced to residents in this manner, including updated parking maps and regulations. Local events can also be announced in conjunction with parking information.
- Development of a comprehensive signage plan to provide uniform signage that directs visitors and employees to appropriate short and/or long term parking areas is necessary. A system is needed to direct overflow parking to the River and Maple Lots as well improved signage for businesses. In the City of Boulder example, using a consistent "P" to indicate public parking areas was successful, in Portland a similar very simple strategy could be employed to indicate the location of infrequently used lots for visitors, especially during peak times of use.
- A volunteer-based group charged with development and implementation of new downtown parking policies should be created. The Portland Parking Advisors (PPA) could consist of 7 to 9 people that would meet monthly to discuss parking policy. This group would make recommendations to the city council and/or planning commission to solve problems, request resources, and manage parking as a whole. This would allow residents and business owners to have a specific group to address their concerns. The PPA would be a cost-effective means to involve downtown stakeholders and address the parking concerns of the city simultaneously.
- Business owners and employees can be provided with color-coded permits that correspond to one of several public parking areas. Each parking area must contain a number of reserved spaces for employees, but vehicles displaying an employee permit should be allowed to park in any public off-street Lot.

- A flexible method of enforcing shared parking regulations is advisable for Portland because it allows the city more latitude to consider the unique characteristics of many land uses and parcels in Downtown Portland. Such a policy can replace the current off-street parking requirements in the zoning ordinance.
- Add more lighting to the River Lot, consistent with the lighting provided across the river in the study area.
- Widen and improve the pedestrian path on the bridge to be more pedestrian and bicycle friendly.
- City ordinances should be revised to allow bicyclists to use downtown sidewalks, or provisions need to be made to provide a safe environment for bicyclists on Kent Street.
- Consider adding a Bicycle Plan to the Master Plan, which includes a mapped network of the bike paths currently in place, as well as possible locations for the expansions of these networks.
- Portland has documented bike trails in the map in Appendix B, but the trails avoid the downtown area. Expansion of these trails, through downtown and residential neighborhoods in Portland, will help Portland become a more bike-able community.
- On street parking may be dedicated to employees that choose to carpool, while other employees of business who do not car pool would be required to park in one of the parking lots off street.
- The parking in front of the senior center might be designated to patrons using the facility who choose to car pool, requiring individual motorists to park elsewhere.
- Financial incentives can be offered to companies with employees that carpool. A bar key code system could be used to monitor the carpool activity and cars parking in premium spots.

Figure 23: An Example of a Shuttle-Bus (http://www.levinlimousine.com/shuttle-bus.jpeg)

The City of Portland should adopt a strategy for remote parking for special events like funerals and Bingo Fridays. A shared parking arrangement with one of the nearby churches could be very successful.

Appendix A: Downtown Businesses (from Portland DDA Downtown Building Inventory)

1) Business - Sandborn Realty
   Address – 100 Kent Street
   Size – 1 Story, 1340 sq. feet
   Owner - Randy Sandborn

2) Business - Perennial Financial
   Address – 112 Kent Street
   Size – 2 Story, 1648 sq. feet on the 1st floor, 1724 sq. feet on the 2nd
   Owner – Ed & Geradine Bishopp

3) Business - Smith Music
   Address – 118 Kent Street
   Size – 2-Story, 1200 sq. feet each
   Owner – Milton Smith

4) Business - Jerry's Place and Pub
   Address 128 Kent Street
   Size – 2-Story, 5200 sq. feet each
   Owner – Portland Real Estate Holdings

5) Business - West Michigan Medical Supply
   Address - 136 Kent Street
   Size - 2-Story, 1775 sq. feet each
   Owner – Jerrold & Judith Brown

6) Business - PCMI – West

Address - 140 Kent Street

Size - 2-Story, 1640 sq. feet each

Owner – Jerrold & Judith Brown

7) Business - Area Service Center

Address – 144 Kent Street

Size – 2-Story, 2810 sq. feet each

Owner – Portland Area Service Group

8) Business – Distinctive Occasions

Address – 160 Kent Street

Size – 2-Story, 2075 sq. feet on the 1st floor, 2051 sq. feet on the 2nd

Owner – Aaron & Wanda Urie

9) Business – Glass Box

Address – 170 Kent Street

Size – 2-Story, 2080 sq. feet apiece

Owner – Lewmar Land LLC

10) Business –Cheeky Monkey

Address – 176 Kent Street

Size – 2-Story, 1992 sq. feet apiece

Owner – Art of Giving, LLC

11) Business – Allstate Insurance

Address – 180 Kent Street

Size – 2-Story, 2490 sq. feet apiece

Owner – Kevin & Lori Rademacher

12) Business – Several

Address – 212 Kent Street

Size – 2-Story, plus basement, all 6210 sq. feet

Owner – Kramer Enterprises, LLC

13) Business – G2 Building & Remodeling

Address – 216 Kent Street

Size – 1-Story, 1200 sq. feet

Owner – Thomas Fryover

14) Business – Portland Black Belt

Address 220 Kent Street

Size – 1-Story, 1636 sq. feet

Owner – Two Rivers Holdings LLC

15) Business – Family Groom Room

Address – 226 Kent Street

Size – 1-Story, 1051 sq. feet

Owner – Terrence Piggott

16) Business – Law Office

Address – 230 Kent Street

Size – 2-Story, 1023 sq. feet apiece

Owner – Catherine Hoort

17) Business –Automated Business Equipment

Address – 242 Kent Street

Size – 1-Story, 672 sq. feet

Owner – Robert & Stacey Gross

18) Business – Town and Country Tile

Address – 244 Kent Street

Size – 1-Story, 768 sq. feet

Owner – Robert & Stacey Gross

19) Business – The Pizza Shop, Styles on the Grand, Mind-Matters Hypnosis
Address – 250 Kent Street
Size – 1-Story, 5954 sq. feet
Owner – Hodge, T, Lehman, M & Miller, N

20) Business – City Hall
Address – 259 Kent Street
Size – 2-Story
Owner – The City of Portland

21) Business – Country Cupboard
Address – 268 Kent Street
Size – 1-Story, 3856 sq. feet
Owner – Philip Leik

22) Business – Grand River Communications, The Quilt Shop & Dance Studio
Address – 123 Kent Street
Size – 2-Story, 6146 sq. feet on 1st floor and 4181 sq. feet on the 2nd floor
Owner - John & Delores Wooden

23) Business – Ted's Barber Shop
Address – 131 Kent Street
Size - 2-Story, 1156 sq. feet apiece
Owner – Kevin & Lori Rademacher

24) Business – Walt's on Inn
Address – 137 Kent Street
Size – 2 Story, 3259 sq. feet apiece
Owner – Walter Cross

25) Business – Raffales Place

Address – 143 Kent Street

Size – 2-Story, 3383 sq. feet with a 700 sq. ft story attatched

Owner – Rush & Julie Clement

26) Business – Keyser Insurance

Address – 147 Kent Street

Size – 2-Story, 2212 sq. ft. on 1st story, 1708 sq. feet on the 2nd

Owner – Keyser Properties LLC

27) Business – Child Care Center

Address – 175 Kent Street

Size – 2-Story, 3135 sq. ft on the 1st floor, 2615 sq. ft. on the 2nd

Owner – Kenneth & Marilyn Walsh

28) Business – Fluff N Stuff

Address – 205 Kent Street

Size – 2-Story, 2308 sq. ft. on 1st floor, 2402 sq. ft on the 2nd

Owner – Kevin & Lori Rademacher

29) Business – Ward's Garage

Address – 127 Maple Street

Size – 1-Story, 4200 sq. ft.

Owner – Steven & Rebecca Ward

30) Business – Randall Riemer Optometrist

Address – 207 Bridge Street

Size – 1-Story, 2144 sq. ft.

Owner – Randall Riemer

31) Business – Schrauben-Lehman Funeral Home
Address – 210 Bridge Street
Size – 2-Story, 5657 sq. ft. first floor
Owner – M & MI Management LLC

32) Business – Clippers/Lite's Plus
Address – 227 Maple Street
Size – 1-Story, 2230 sq. ft.
Owner – Timothy & Marsha Cunningham

33) Business – Theatre
Address – 231 Maple Street
Size – 1-Story
Owner – Portland Civic Players

34) Business – Electric Sunshine
Address – 129 Bridge Street
Size – 2-Story, 1794 sq. ft. on the 1st and 828 sq. ft on the 2nd
Owner – Karen Hoppes & Maureen Pung

35) Business – 119 Bridge Dental
Address – 119 Bridge
Size – 2-Story, 2159 sq. ft. on the 1st and 1534 sq. ft on the 2nd
Owner – 119 Bridge Dental Care PC

36) Business – Chocolate Moose
Address – 116 Bridge Street
Size – 1-Story, 1654 sq. ft.
Owner – Sondra Jeffrey

37) Business – Perfect Balance

Address – 110 Bridge Street

Size – 2-Story, 1892 sq. ft. apiece

Owner – Lee & Tiffany Klein

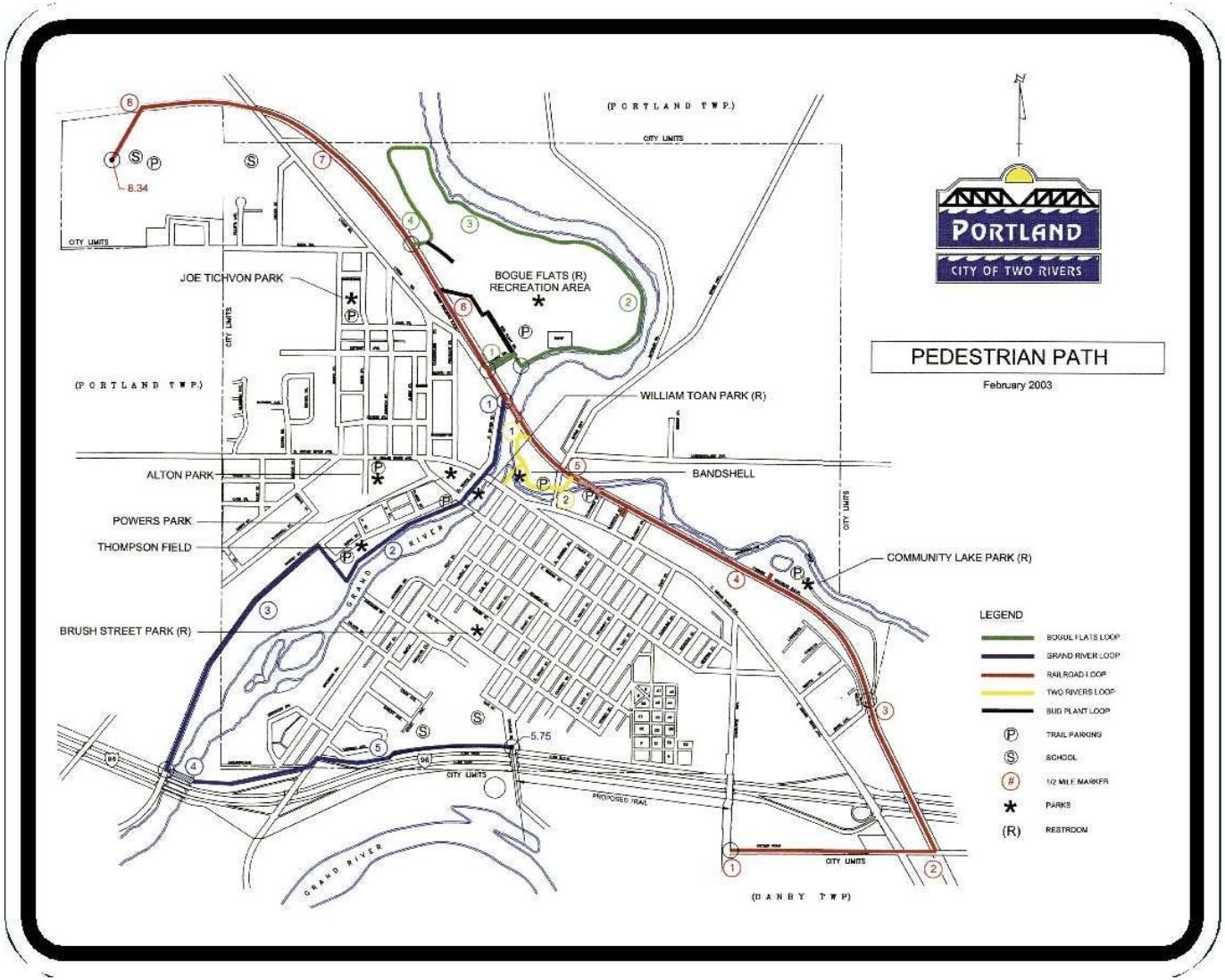
38) Business – Rivertown Bookstore

Address – 126 Bridge Street

Size – 2-Story, 3296 sq. ft. on the 1st floor and 3355 sq. ft on the 2nd

Owner – Keven & Lori Rademacher

Appendix B:


PORTLAND
CITY OF TWO RIVERS
PEDESTRIAN PATH
February 2003
JOE TICHVON PARK
BOGUE FLATS (R)
RECREATION AREA
WILLIAM TOAN PARK (R)
BANDSHELL
ALTON PARK
POWERS PARK
THOMPSON FIELD
COMMUNITY LAKE PARK (R)
BRUSH STREET PARK (R)
(PORTLAND TWP.)
CITY LIMITS
GRAND RIVER
PROPOSED TRAIL
(DANBY TWP)
8.34
5.75
LEGEND
BOGUE FLATS LOOP
GRAND RIVER LOOP
RAILROAD LOOP
TWO RIVERS LOOP
BUD PLANT LOOP
TRAIL PARKING
SCHOOL
1/2 MILE MARKER
PARKS
RESTROOM

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