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Grand Forks - East Grand Forks
Metropolitan Planning Organization



ENGINEERING, REIMAGINED

DOWNTOWN PARKING STUDY

Grand Forks, ND

June 2019

NOTICE

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EXISTING CONDITIONS

For more than a decade, parking in downtown Grand Forks has been polarizing. While there are nearly 4,000 parking stalls across downtown, there are areas of high demand, like around Central High School and City Hall. As downtown becomes more active and redevelopment continues, the balance between demand and supply will change. Alternatively, changes in traffic patterns and technology (Uber and Lyft, bike share, etc.), increased mixed-use development (promoting more walking, biking, and transit), and changes in travel behavior (reduced car ownership) are changing the parking landscape expected into the future. The purpose of this parking study is to find harmony between existing needs and future possibilities.

In 2011, the Downtown Grand Forks Parking Study catalogued and analyzed parking conditions across downtown and developed parking strategies and policies to help manage parking and improve the experience for those who live, work, and visit downtown. This study will update that plan and incorporate the exciting new changes happening in downtown. This Downtown Parking Study will:

- » Review existing parking supply and demand to develop occupancy and turnover rates.
- » Analyze future parking conditions based on four scenarios that incorporate increased density as well as consider the impacts from ride-hailing (Uber, Lyft, etc.); increased bicycle, pedestrian, and transit trips; and the introduction of autonomous vehicles.
- » Develop parking alternatives.
- » Evaluate ride hailing policy, smart parking applications, and event management.
- » Create an implementation plan for preferred alternatives.

This study will not evaluate the existing parking assessment district but will consider the cost of any alternatives and recommendations developed.

STUDY AREA

The study area includes 21 blocks from University Avenue to Gertrude Avenue, north and south, from the Red River to 5th Street and 8th Street, east and west. The study area is shown in Figure 1.

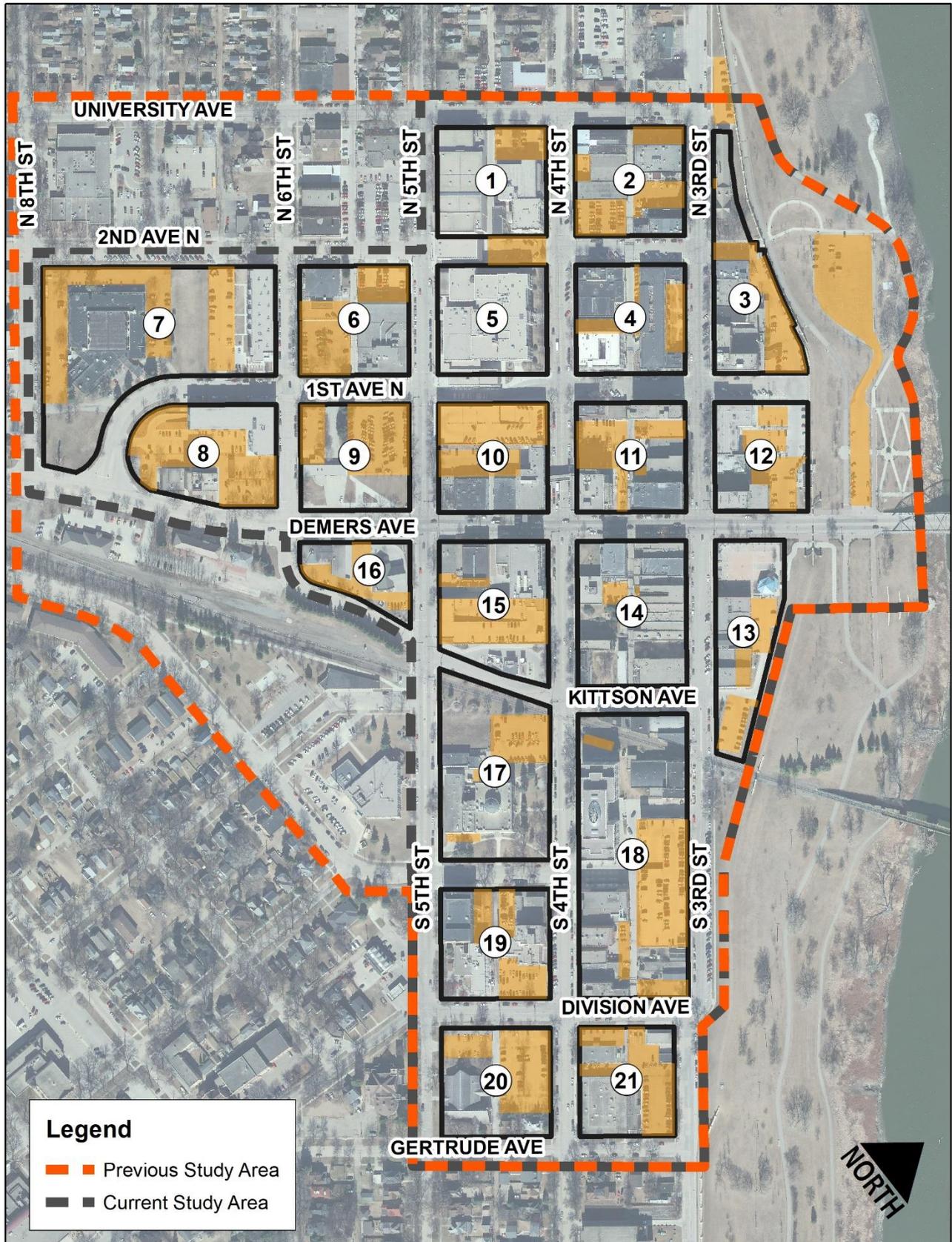
This study area is slightly different than the 2011 parking study. That study included the three blocks between University Avenue and 2nd Avenue N and 5th Street and 8th Street, as well as three blocks south of DeMers Avenue, including the Depot block south of DeMers Avenue and west of 5th Street, the Grand Forks Police Department/Sheriffs Department block at 5th Street and Bruce Avenue, and the LaGrave on First Supportive Housing block at Walnut Street and 1st Avenue. Due to the study area changes, no direct comparisons should be made to actual numbers included in the 2011 study. However, overall trends and patterns are still applicable.

PREVIOUS PLANNING EFFORTS

DOWNTOWN GRAND FORKS PARKING STUDY (2011)

In 2011, the Grand Forks – East Grand Forks Metropolitan Planning Organization (MPO) contracted Rich and Associates to complete a parking study in downtown Grand Forks. This study included a turnover and occupancy study, demand analysis, and the development of 17 recommendations. In 2011, the peak occupancy occurred between 10 AM and 12 PM, and was just 56 percent occupied (1,989 stalls), leaving more than 1,500 stalls available. The demand analysis showed there was a more than 700 parking stall surplus under 2011 conditions.

Figure 1: Study Area



The 2011 study completed a demand analysis based on the square footage and land use of each building. This demand analysis was combined with expected redevelopment in the study area. Future parking demand assumed vacant space was reoccupied at a rate of 40 percent in five years and 80 percent in 10 years. Even with this activity, the parking surplus remained at 470 stalls through 2020. Many of these recommendations focused on improving bicycle and transit ridership, signing, lighting, and pedestrian amenities. In 2015, the City of Grand Forks' Planning and Community Development Department reviewed the recommendations to reaffirm the validity and provide progress updates. The City has made progress in multiple recommendation areas, including improved lighting in ramps, new signage, and parking ordinances.

DOWNTOWN ACTION PLAN (2018)

In 2018, the City of Grand Forks initiated the Downtown Action Plan study to develop a vision for the future of downtown Grand Forks and provide recommendations for public investment. The plan is scheduled to conclude in 2019 and will include parks, open spaces, branding, wayfinding, and development strategies. This plan's development strategies will have significant impacts to parking demand and supply in downtown.

EXISTING CONDITIONS

Parking management is a balance between not providing enough parking, which deters people from patronizing existing and future businesses, and providing too much parking, which has negative environmental impacts through increased impervious surface, financial impacts by using space for parking instead of taxable developments, and perceptions that correlate empty parking lots with low activity centers.

PARKING SUPPLY

The parking supply in Downtown Grand Forks is a mix between on-street, off-street public, and off-street private parking. Between on-street and public off-street parking, the City of Grand Forks controls 63.8 percent of all parking in downtown. This provides the City with flexibility in the maintenance and regulation of a significant portion of the downtown parking. Table 1 summarizes the parking supply in Downtown Grand Forks. Table 2 and Figure 3 provide a more detailed look at parking supply in Downtown.

Table 1: Parking Supply Summary

Parking Type	Number of Stalls	Percent of Total Stalls
On-Street	960	26.8%
Public Off-Street	1,325	37.0%
Private Off-Street	1,296	36.2%
Total Parking	3,581	100%

PUBLIC PARKING

On-Street Parking

Public on-street parking in Downtown Grand Forks is often time-limited including 15-minute, 30-minute, 1-hour, 2-hour restrictions. These restrictions are shown in Figure 3.

Off-Street Parking

City of Grand Forks Structures

The City of Grand Forks owns and operates two parking ramps: the Central Ramp and the Corporate Ramp.

The Central Ramp, at 415 1st Avenue North, is a four-story parking ramp with 352 parking stalls, including seven ADA accessible stalls. Its operations are primarily based on permitting:

- » Central High School (CHS) permits apply to levels 1 and 4 from 7 AM to 4 PM. There are 162 spaces available for CHS.

- » Standard permits apply to levels 2 and 3, from 6 AM to 6 PM, Monday through Friday. There are 147 standard permits available. As of November 14, 2018, there were 73 standard parking permits available (50 percent available).
- » Reserved permits apply to 38 numbered stalls on Levels 1 and 4, 24 hours a day, 7 days a week. As of November 14, 2018, there were just three reserved parking permits available (eight percent available).

The Central Ramp is only open to the public after 4 PM on levels 1 and 4, and after 6 PM on levels 2 and 3. This ramp is signed as public parking, but there is only a small sign on the entrance regarding the restrictions of general public parking before 4 PM and 6 PM. Once you enter the ramp, there is no additional information on what the restrictions are, which leads to confusion. Additionally, according to Grand Forks City Code, an off-street parking area with 301 to 400 parking stalls requires eight ADA accessible parking spaces. The Central Ramp must provide one additional ADA accessible parking space to come into compliance.

Figure 2: Sign at Central Ramp Entrance



The Corporate Ramp, at 55 South 5th Street, is a four-story parking ramp with 373 parking stalls, including seven ADA accessible stalls. Its operations are primarily based on permitting between 6 AM and 6 PM:

- » The Corporate Center reserves 60 stalls across all levels for customer use only. These stalls are signed for Corporate Center customers only.
- » There are 257 standard permits that guarantee a parking stall from 6 AM to 6 PM. As of November 14, 2018, there were 101 standard parking permits available (39 percent available).
- » There are 40 reserve permits that reserve parking stalls 24 hours a day, 7 days a week. As of November 14, 2018, there were just two reserved parking permits available (five percent available).

Parking is free and open to the public after 6 PM and all day on weekends in any space not marked as reserved. Additionally, according to Grand Forks City Code, an off-street parking area with 301 to 400 parking stalls requires eight ADA accessible parking spaces. The Corporate Ramp must provide one additional ADA accessible parking space to come into compliance.

The 2011 Parking Study identified multiple maintenance issues for both the Central and Corporate parking ramps that have since been addressed.

City of Grand Forks Surface Lots

The City of Grand Forks also owns and operates five surface lots. City Hall Lots A, B, and C are permitted from 6 AM to 6 PM for City Hall Employee Use only. These lots are available to the public for free on nights and weekends.

The Division Avenue lot located at Division Avenue and 4th Street and the Riverboat Road lot located within the Greenway, along DeMers Avenue are free and open to the public daily, with no time restrictions.

Grand Forks County

Grand Forks County owns and operates the three-story, 338-stall County Parking Ramp, including 11 ADA accessible stalls. The county provides reserved parking stalls for private residents and businesses, county departments, and county employees, however most stalls are open to the public with 2-hour time limits between 7 AM and 5 PM, Monday through Friday. The County is currently evaluating its parking management strategies.

For an off-street parking area with 301 to 400 parking stalls, just eight ADA accessible parking spaces are required. The County Ramp over-provides accessible stalls.

In the 2011 Parking Study, drainage and joint issues were identified. Currently, the County Ramp has 18 stalls blocked off due to leakage issues. These structural issues are currently being evaluated.

PRIVATE PARKING

There are nearly 1,300 private parking stalls in downtown Grand Forks. These lots are primarily managed through permitting or restricted signage. Private underground parking occupancy was not collected as part of this study due to access restrictions but is noted in the parking supply map.

Figure 3: Parking Supply

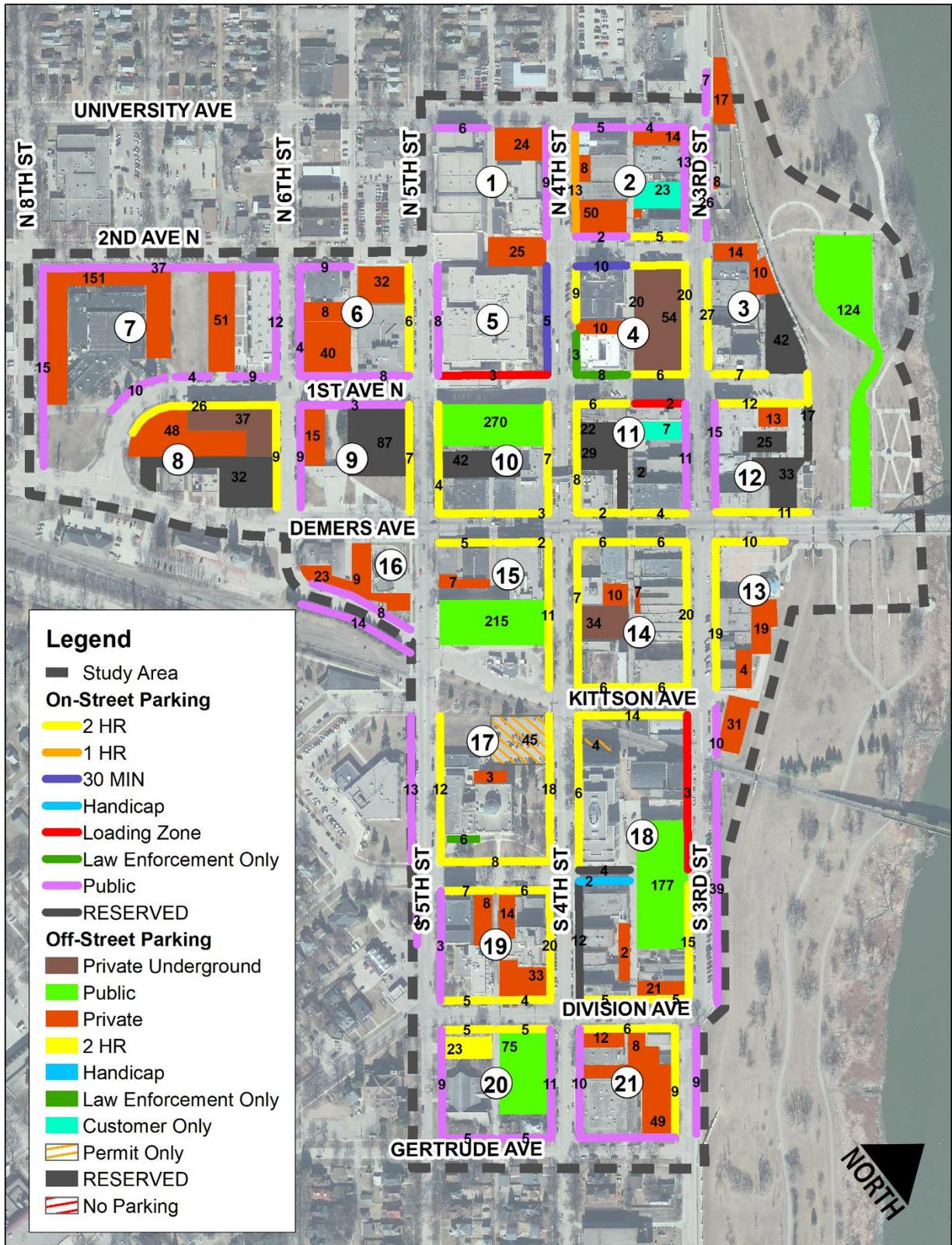


Table 2: Parking Supply Matrix

Block	On-Street									Public Off-Street						Private Off-Street					Totals		
	Loading Zone	15 Minutes	30 Minutes	1 Hour	2 Hour	Reserved	Handicap	Law Enforcement Only	Open	2 Hour	Reserved	Compact	Customer Only	Handicap	Open	2 Hour	Reserved	Customer Only	Handicap	Law Enforcement Only		Open	
1							2		15					2	49							68	
2				13	5		2		24									23				72	139
3					51		1		33								52		1			49	187
4			10		55		2	11									35		1				114
5	3		5						8														16
6					6		3	2	25										3			80	119
7							1		87										10			202	300
8					35		3										32		4			81	155
9					7		8		12								87		3			15	132
10					18		2				75			6	270		42		1				414
11	2				20				11								53	7	2				95
12					23	17			15								58		2			13	128
13					29				10													54	93
14					51																	17	68
15					11		2		5		48	7	95	8	215							7	398
16									24										2			32	58
17					38											5	45		3	9	5	105	
18	3	2	9		45	16	8		39	42	177			11	111		4		2		28	497	
19					42				6										1			55	104
20					10				30					4	75	23			2				144
21					15				28										5			69	117
22														6	124								130
Total	8	2	24	13	461	33	34	13	372	42	300	7	95	37	844	28	408	30	42	9	779	3,581	
On-Street Total: 960									Public Off-Street Total: 1,325						Private Off-Street Total: 1,296								

TURNOVER AND OCCUPANCY

A turnover and occupancy study was completed on Tuesday, October 9th from 8 AM to 8 PM and Saturday, October 13th from 11 AM to 8 PM. The turnover and occupancy study was an observation of on-street and off-street parking that included both the public and private off-street parking within the study area. The study included six circuits on Tuesday and four circuits on Saturday. Each circuit took approximately two hours to complete.

TOTAL OCCUPANCY

Parking occupancy is reflective of the activity in an area and how that activity changes throughout the course of the day. Throughout the day, shifts occur from school and office to lunch to residents. Industry standard has identified 85 percent utilization as full capacity.

Weekday Occupancy

Downtown Grand Forks experiences much higher parking occupancy on weekdays than weekends due to school and office parking activity. The highest occupancy occurs in the 10 AM circuit with 50.5 percent of spaces occupied; this means there are more than 1,600 spaces available, even during the peak. Throughout a typical weekday, parking occupancy averages just 44.4 percent.

There are many locations that experience capacity at or above 85 percent, particularly on-street locations in front of major activity centers (City Hall, Central High School, County buildings, 3rd Street). There were 30 parking locations with occupancy rates at 85 percent or higher. These constraints may reinforce perceptions that downtown parking is challenging.

The distribution between public on-street, public off-street, and private off-street is much more consistent than on weekend days. This is likely due to permitted parking for office workers.

Weekday occupancy is shown in Figure 4 through Figure 9.

Table 3: Weekday Parking Occupancy

	<i>Public On-Street</i>	<i>Public Off-Street</i>	<i>Private Off-Street</i>	<i>Total</i>
8 AM to 10 AM	42.1%	23.2%	45.4%	36.6%
10 AM to 12 PM	54.9%	48.1%	49.4%	50.5%
12 PM to 2 PM	47.7%	39.3%	36.0%	40.5%
2 PM to 4 PM	45.6%	34.4%	48.1%	42.3%
4 PM to 6 PM	50.2%	33.1%	40.7%	41.5%
6 PM to 8 PM	35.0%	16.%	26.6%	25.7%

Weekend Occupancy

Downtown Grand Forks is very different on the weekends than the weekdays. Office and school parking activity changes to shopping, dining, and entertainment activity. During the Saturday this parking data was collected, the peak occupancy was 18.3 percent during the 8 PM circuit. This means there are more than 2,900 parking stalls available throughout Downtown on weekends.

The areas of high demand shift from the Central High School/City Hall area on the weekday to the shopping and restaurant area south of DeMers Avenue. During the 5 PM and 8 PM circuits, there were 19 and 15 parking locations with occupancy rates at 85 percent or higher, respectively.

Most people visiting Downtown on weekends prefer on-street parking. On-street parking occupancy ranges for 22.6 to 34.6 percent on weekends, compared to 0.8 percent to 6.6 percent for public off-street parking and 8.9 percent to 20.5 percent for private off-street parking.

Weekend occupancy is shown in Figure 10 through Figure 13.

Table 4: Weekend Parking Occupancy

	<i>Public On-Street</i>	<i>Public Off-Street</i>	<i>Private Off-Street</i>	<i>Total</i>
11 AM to 1 PM	22.6%	6.6%	8.9%	12.1%
2 PM to 4 PM	24.2%	0.8%	13.3%	12.3%
5 PM to 7 PM	34.6%	5.7%	12.8%	16.8%
8 PM to 10 PM	32.8%	3.0%	20.5%	18.3%

PARKING AVAILABILITY INDEX

The ease of parking is highly location specific. While most people prefer to park directly in front of their destination, most will walk a short distance. For outdoor and uncovered conditions, as typical throughout Downtown Grand Forks, research has found 800 to 1,200 feet is considered acceptable, depending on the purpose of the trip, time available for the trip, the specific individual, and the environment in which the trip takes place. Given the typical small block sizes in Downtown Grand Forks, most businesses can be reached within one block in any direction. For example, the city-owned Division Avenue parking lot could reasonably be expected to serve the County buildings but could not reasonably be expected to serve City Hall or Central High School.

The parking availability index was developed for four different scenarios: weekday availability for all parking, weekday availability for public parking, weekend availability for all parking, and weekend availability for public parking. Under all scenarios there are ample parking spaces available throughout downtown. For most blocks, parking availability is at 50 percent or higher.

Figure 4: Weekday Parking Occupancy: 8 AM

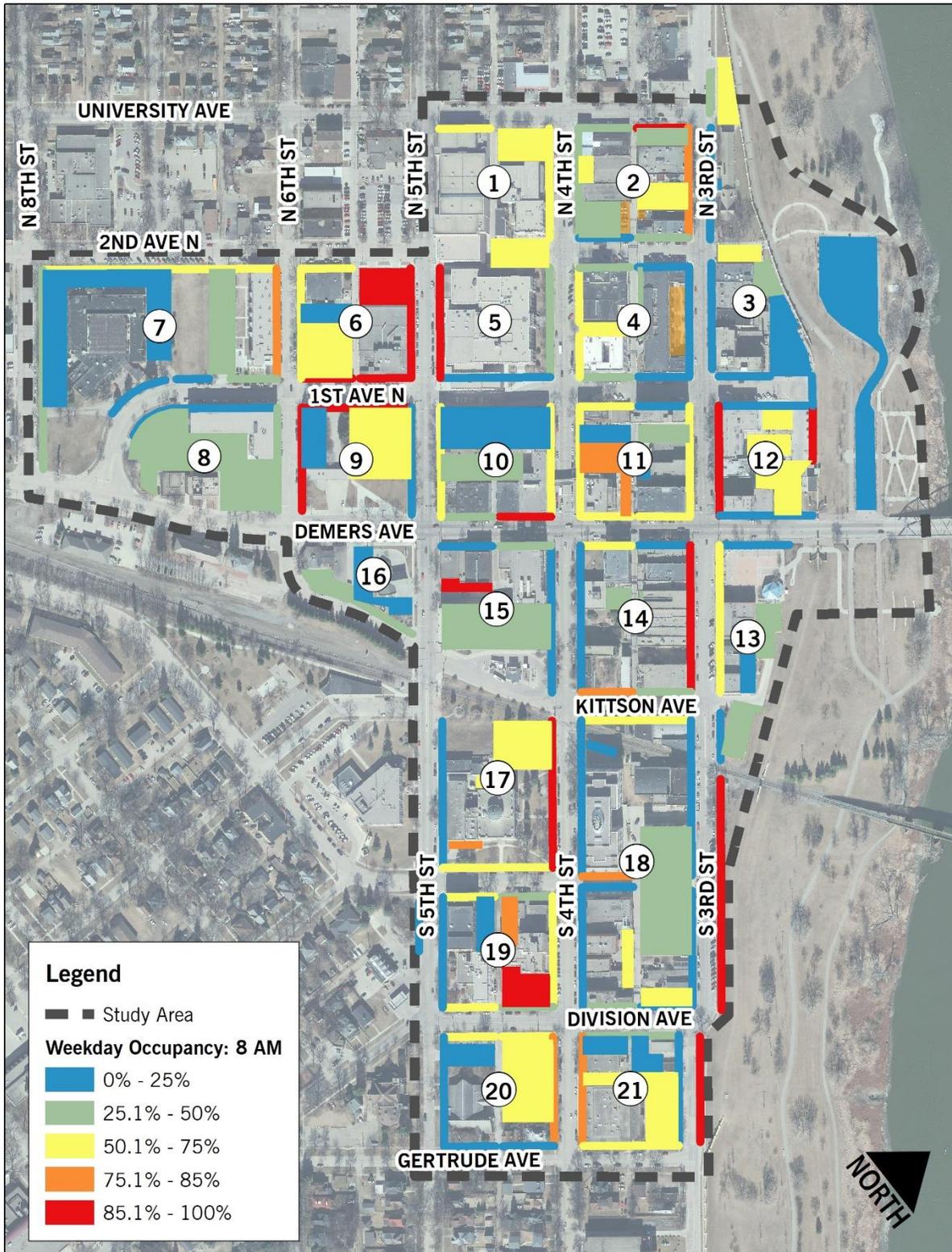


Figure 5: Weekday Parking Occupancy: 10 AM

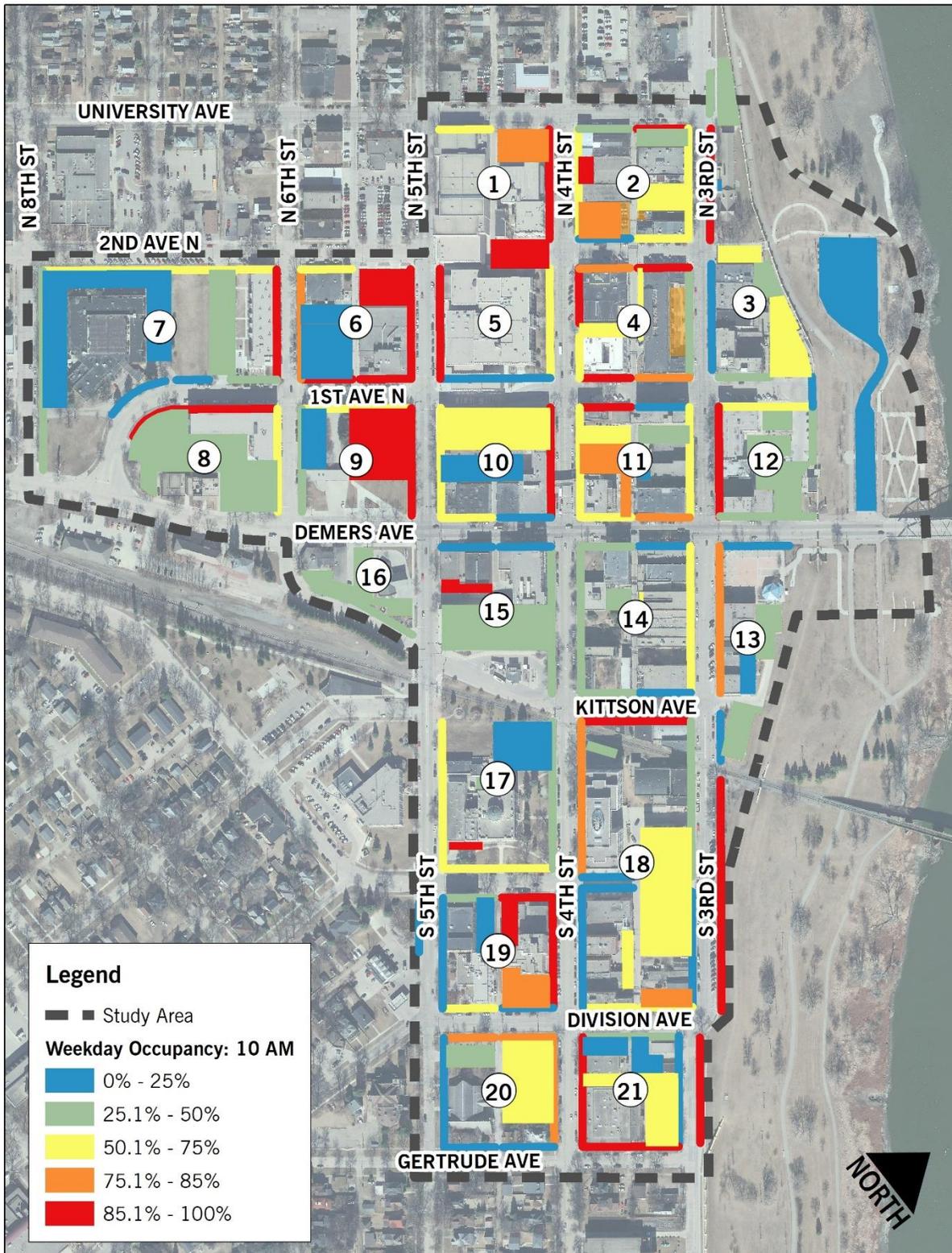


Figure 6: Weekday Parking Occupancy: 12 PM

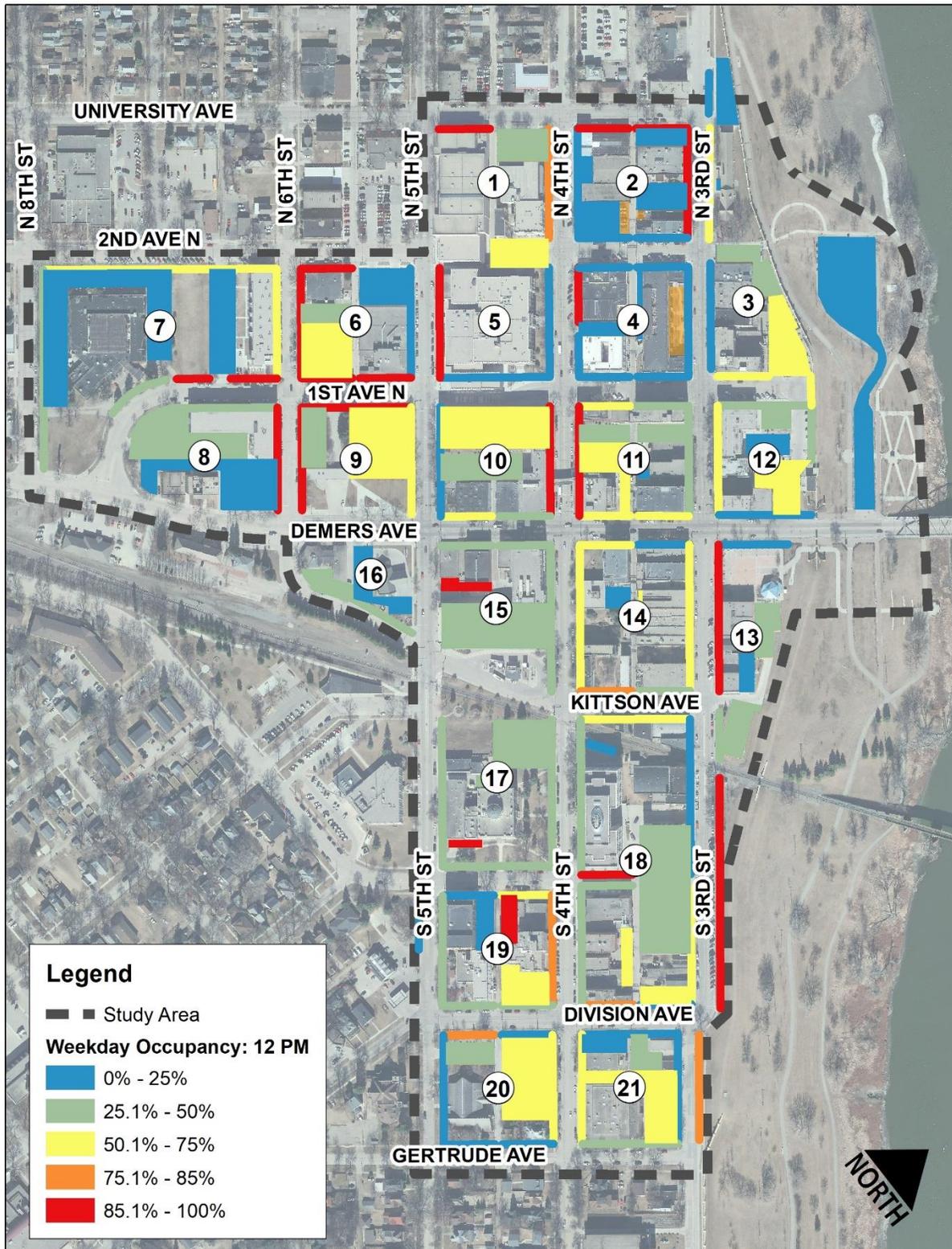


Figure 7: Weekday Parking Occupancy: 2 PM

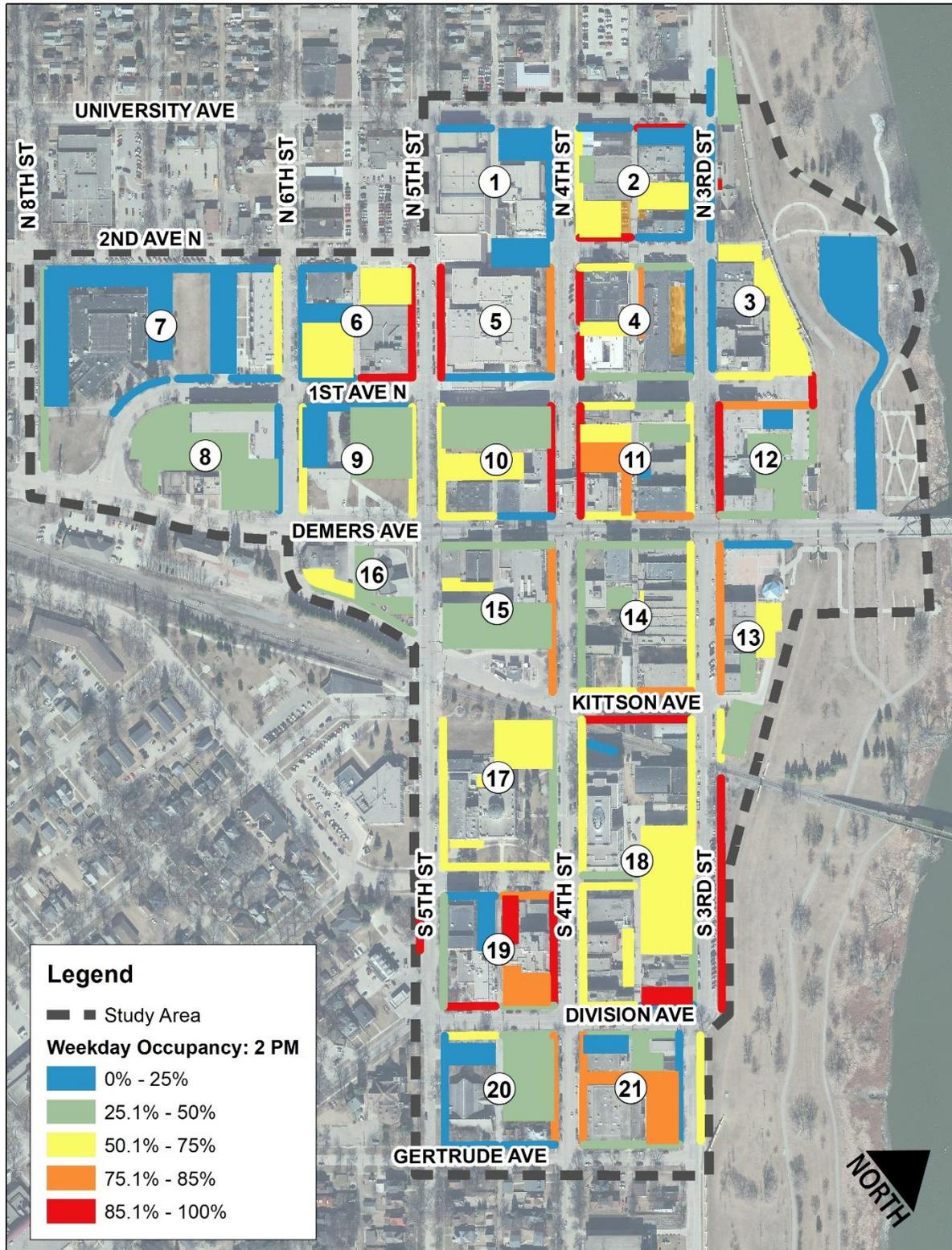


Figure 8: Weekday Parking Occupancy: 4 PM

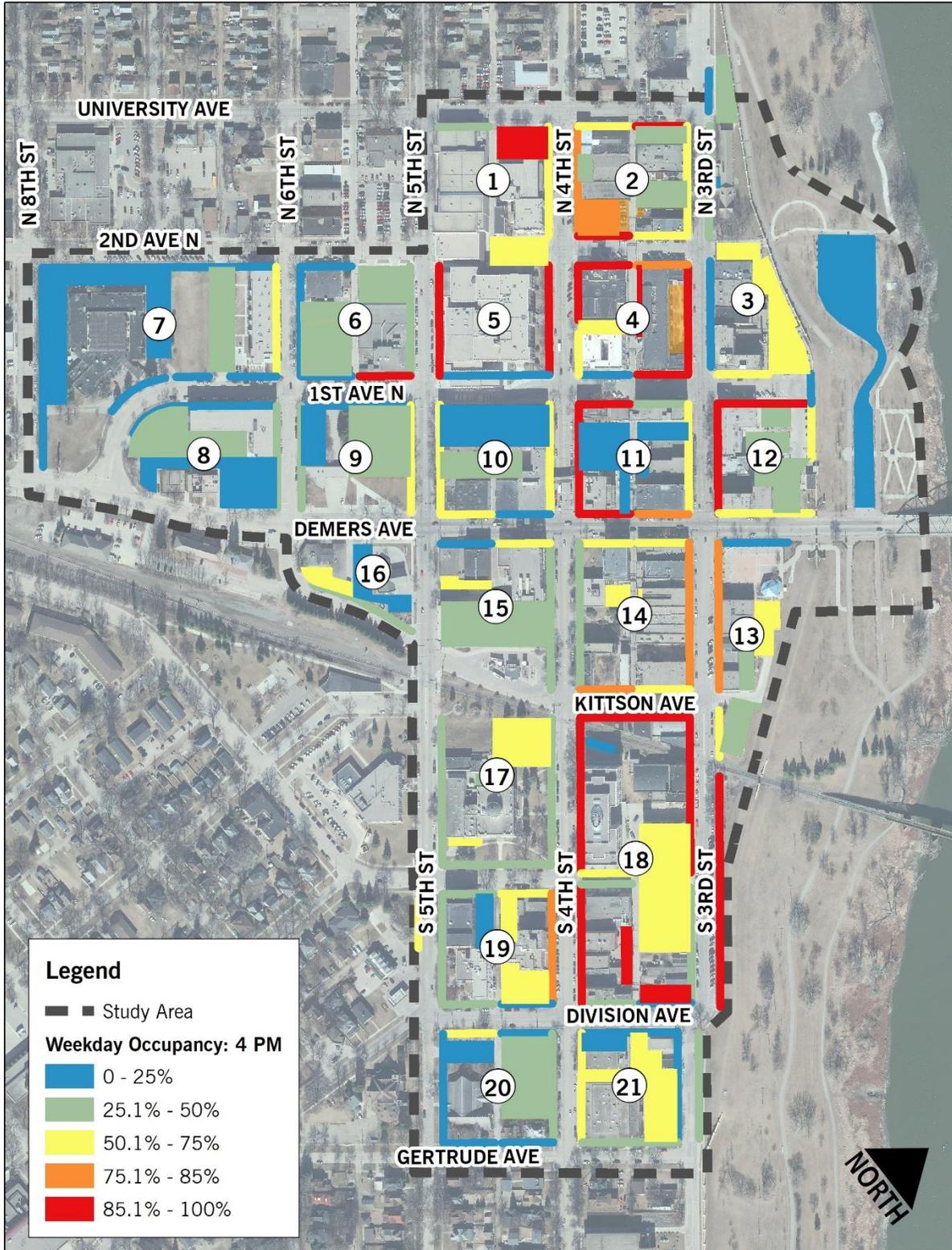


Figure 9: Weekday Parking Occupancy: 6 PM

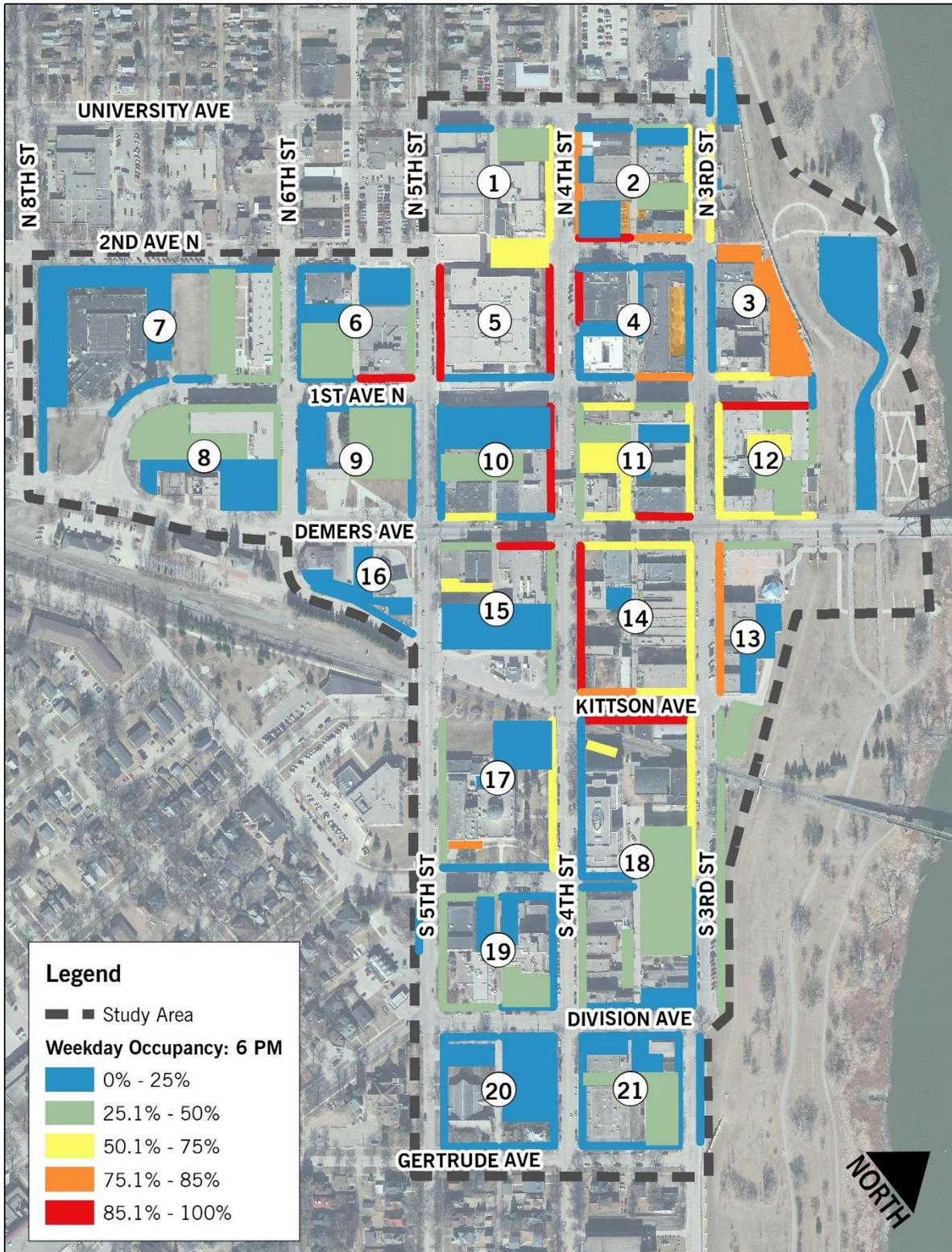


Figure 10: Weekend Parking Occupancy: 11 AM

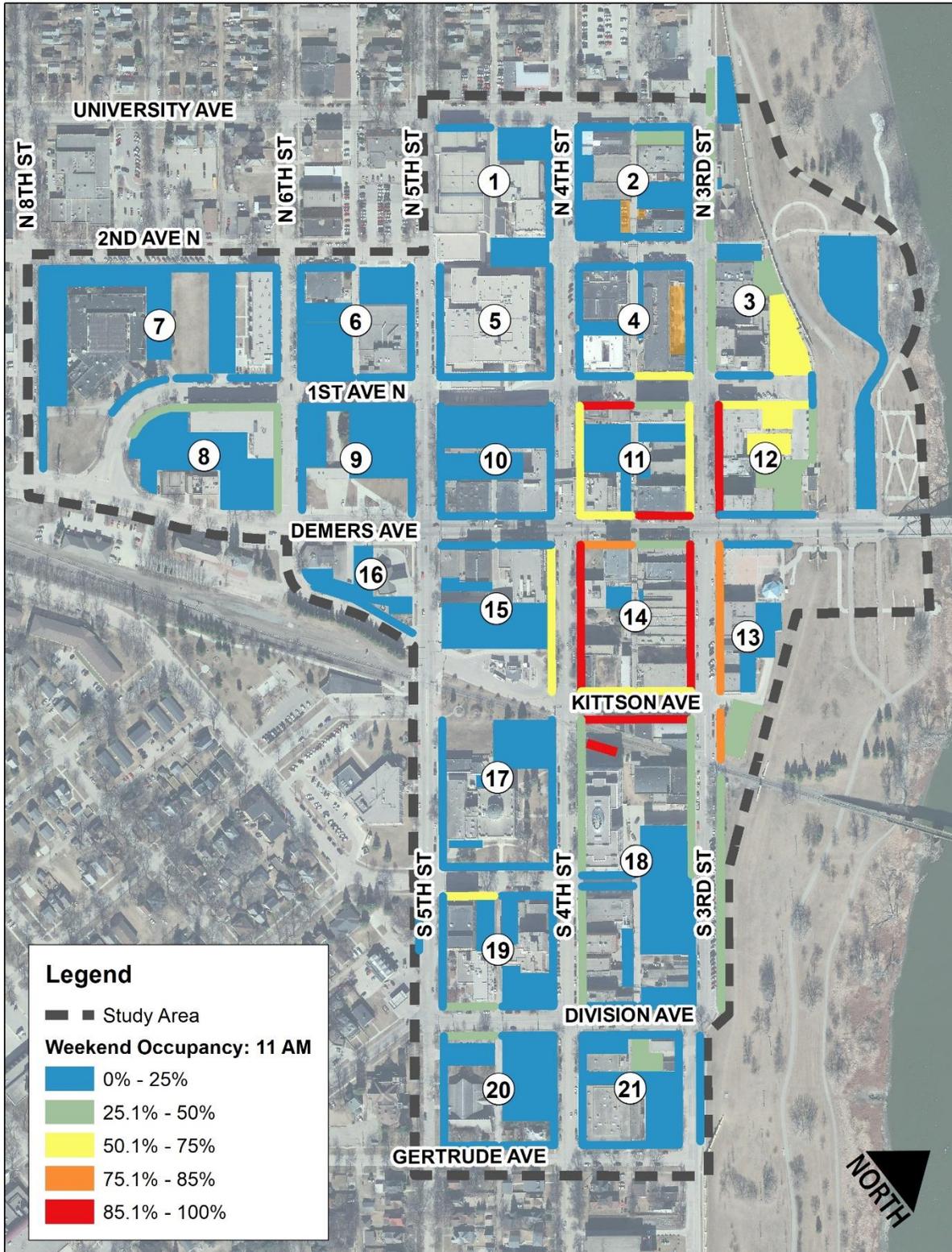


Figure 11: Weekend Parking Occupancy: 2 PM

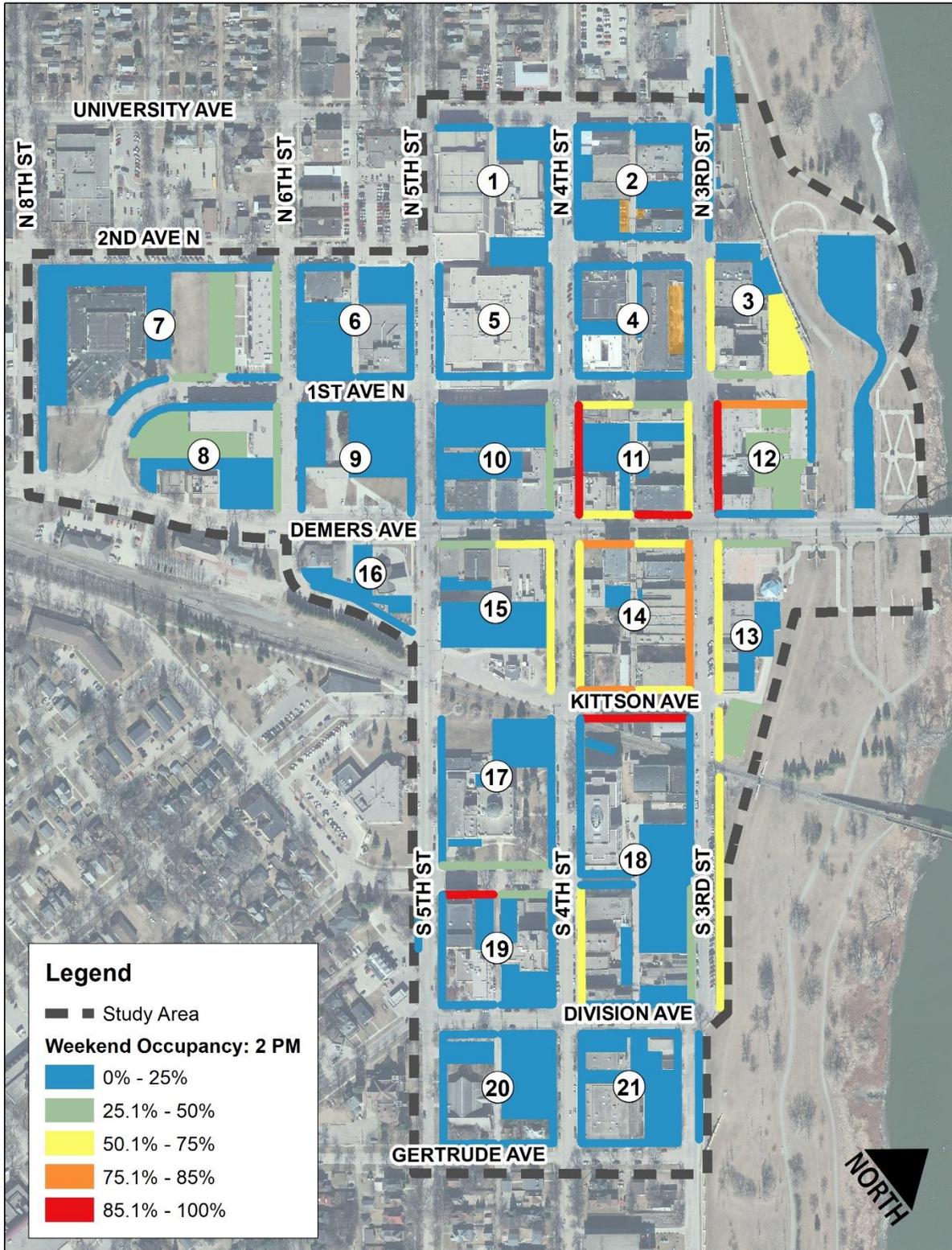


Figure 12: Weekend Parking Occupancy: 5 PM

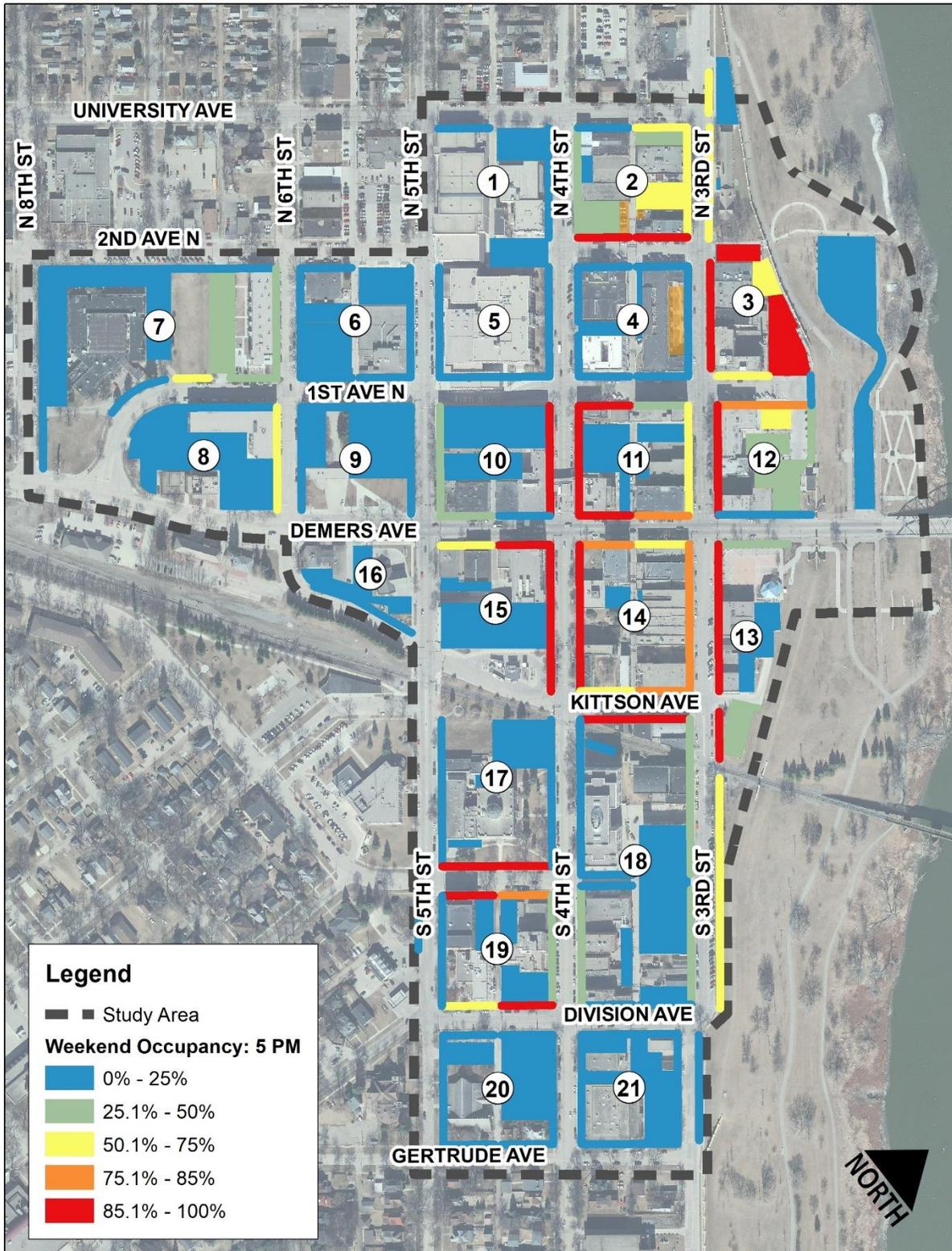


Figure 13: Weekend Parking Occupancy: 8 PM

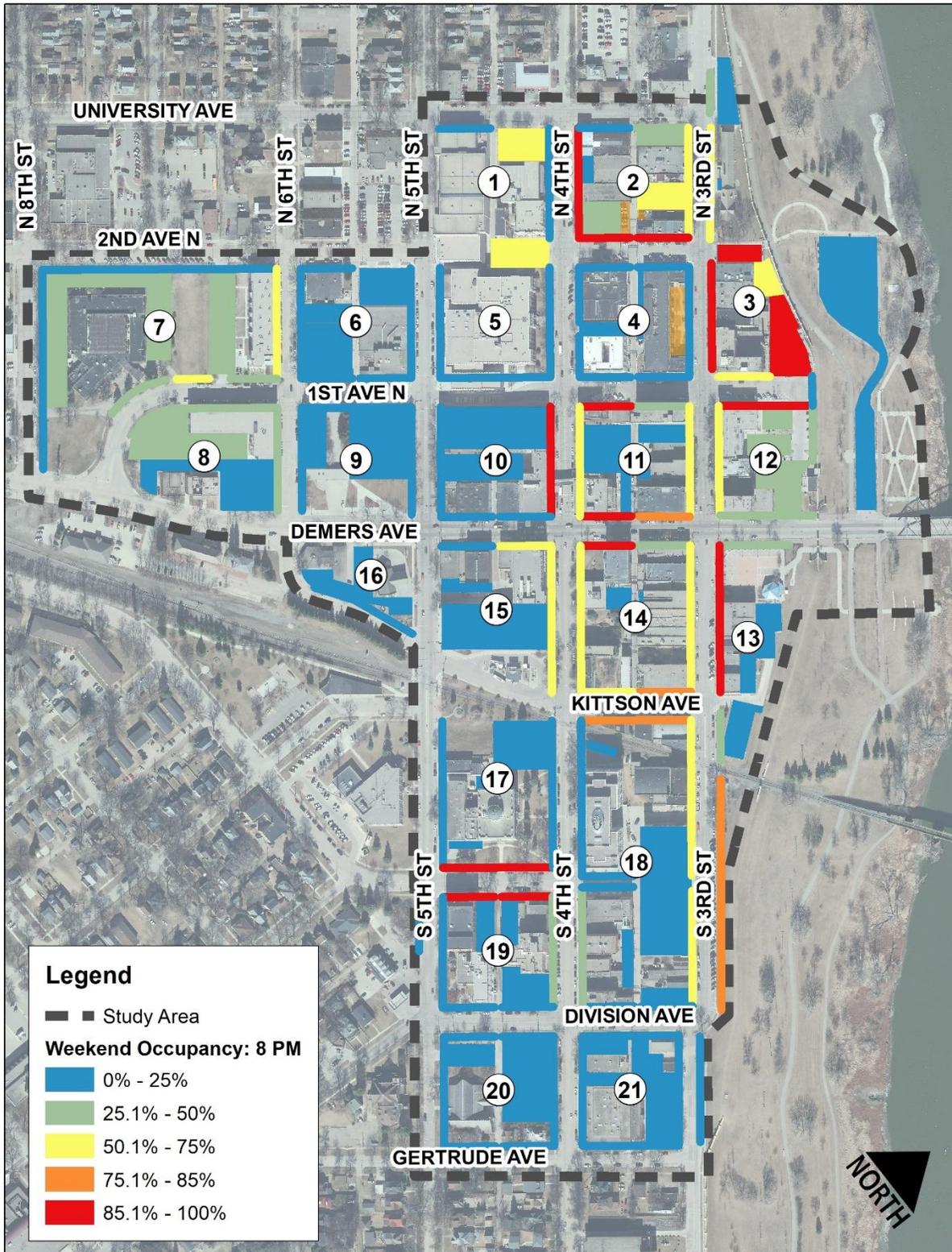


Figure 14: Weekday Total Parking Availability



Figure 15: Weekday Public Parking Availability



Figure 16: Weekend Total Parking Availability



Figure 17: Weekend Public Parking Availability



TURNOVER

Parking turnover is an indicator of how a specific parking space or lot is utilized throughout the day. Parking locations that experience high turnover often see a significant influx of vehicles throughout the day, like a restaurant or shopping center, whereas parking locations that experience low turnover often see generally lower parking activity, like apartments.

Turnover and time limitations are important to manage parking utilization and turnover. No time limits, and employees and residents will use valuable commercial spaces with negative impacts to businesses. Too short a time limit and patrons do not have enough time to visit multiple businesses, which may put additional stress on the transportation network as they drive from place to place or avoid visiting secondary businesses all together.

Weekday Turnover

The weekday parking turnover study was conducted by utilizing a license plate survey, which records each individual license plate in a timed parking location during each circuit. A time comparison analysis is then conducted to determine the proportion of new and existing vehicles between each circuit. A weekend parking turnover study was not completed because there are not short duration parking restrictions applicable on Saturdays.

During the weekday turnover study, 601 parking violations were observed in the timed parking zones, as shown in Table 5. The following parking violation trends were observed.

- » On average, there are more than 120 parking violations occurring in downtown Grand Forks at any given time. The turnover study found between 21.7 percent and 27.3 percent of vehicles parking in on-street locations with time restrictions were staying longer than the posted time limit.
- » The target for over time violations should be five to six percent based on best practices. This data may indicate the time limits are perceived to be unenforced.

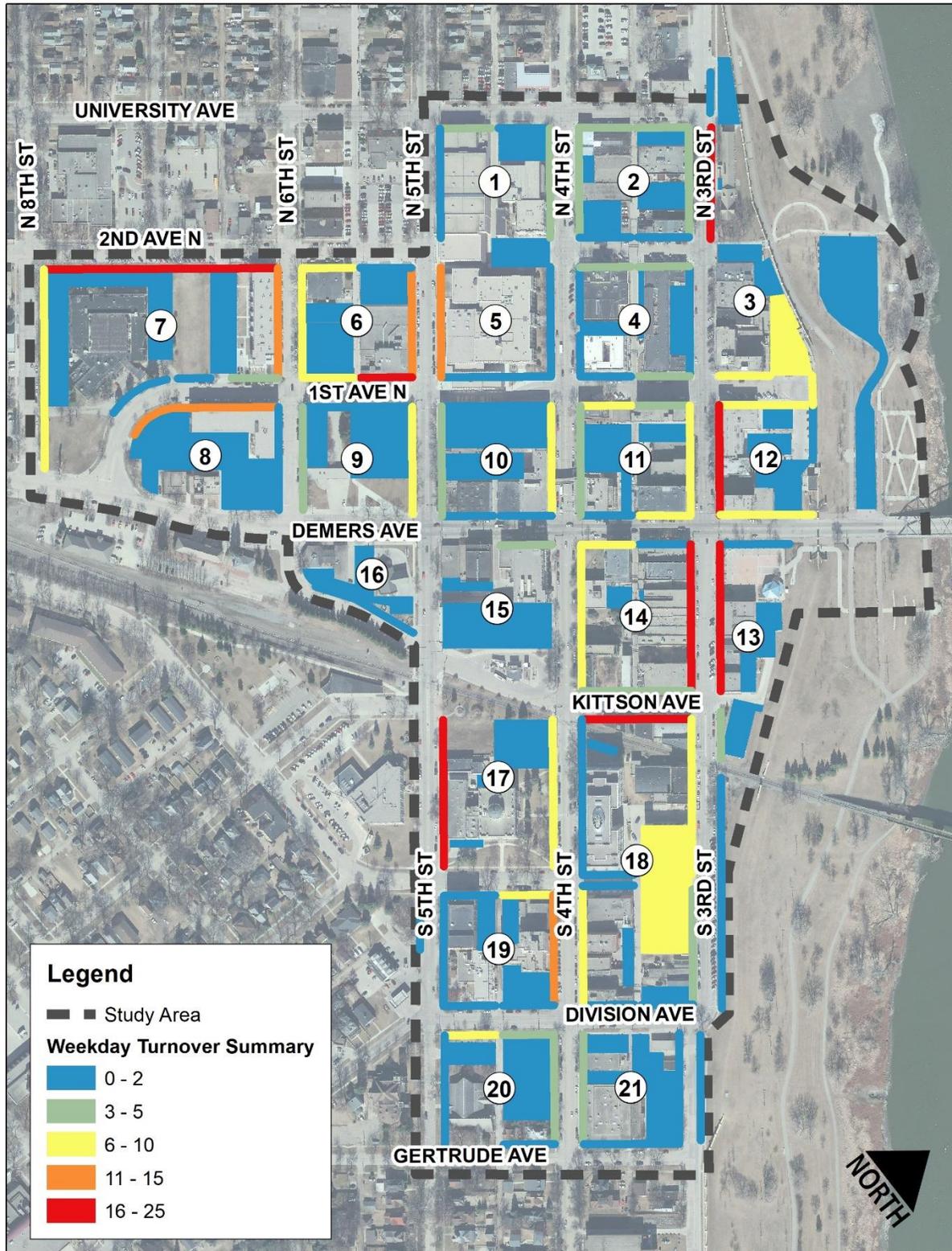
Table 5: Weekday Parking Turnover

	Number of Vehicles Counted	Number of Violations	% Violations
10 AM to 12 PM*	513	118	23.0%
12 PM to 2 PM	491	134	27.3%
2 PM to 4 PM	453	108	23.8%
4 PM to 6 PM	637	138	21.7%
6 PM to 8 PM	401	103	25.7%
Total	2,495	601	24.1%

**10 AM to 12 PM is the first circuit to have turnover data.*

The 2011 Parking Study analyzed parking turnover and violations for just on-street parking. They found a total of 243 violations, or 17 percent of total vehicles in 2-hour stalls.

Figure 18: Over Time Violation Locations



Grand Forks Police Department Enforcement Efforts

The Grand Forks Police Department (GFPD) provides parking enforcement for the City of Grand Forks. Monday through Friday, Community Service Officers patrol downtown, but they have other duties that are prioritized over parking enforcement. Additional enforcement occurs during down time, as available, which is typically during the overnight period. The GFPD does not have technology, like license plate readers that would accelerate and track enforcement but does use handheld ticketing. The GFPD supplied parking enforcement data for 2017 and 2018. This information was combined with a previous analysis completed in 2010 to support the 2011 Parking Study.

In 2010, GFPD issued 3,021 parking tickets, most of those were issued from 8AM to Noon. In 2017, GFPD issued 4,304 parking tickets, mostly between Noon and 5 PM. In 2018, GFPD has issued around the same number of tickets at 4,214 through November, almost entirely between 8AM and 5 PM. The day of the week tickets are written is consistent across the week and months.

Figure 19: Parking Enforcement by Time of Day (2010)

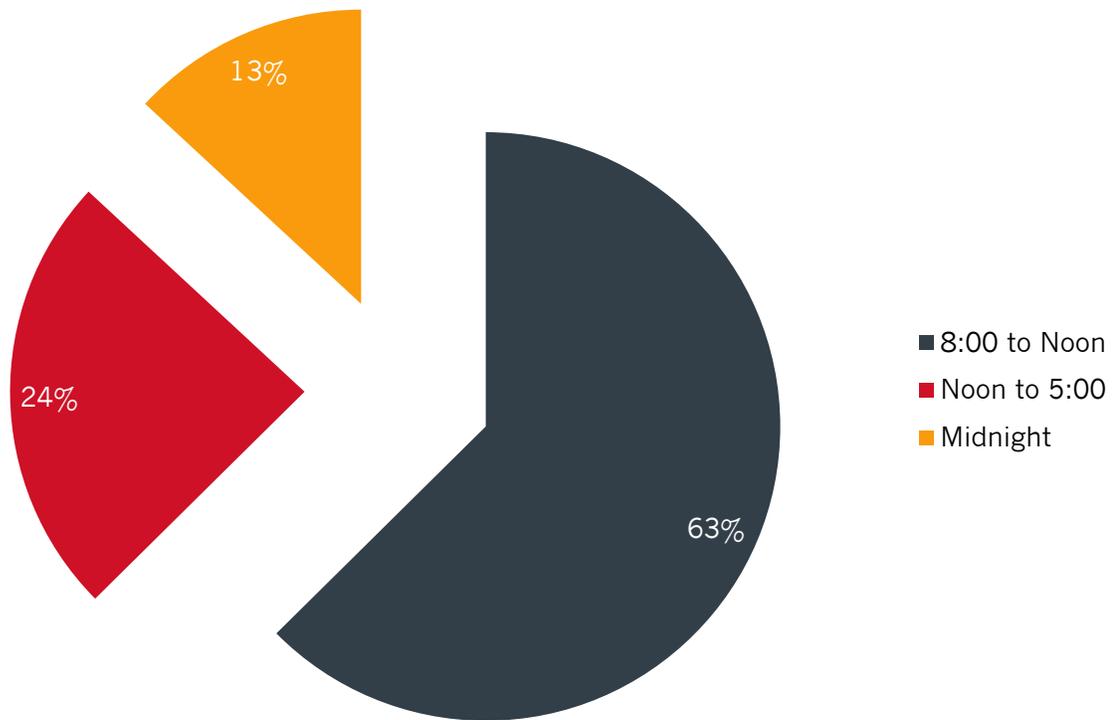


Figure 20: Parking Enforcement by Time of Day (2017)

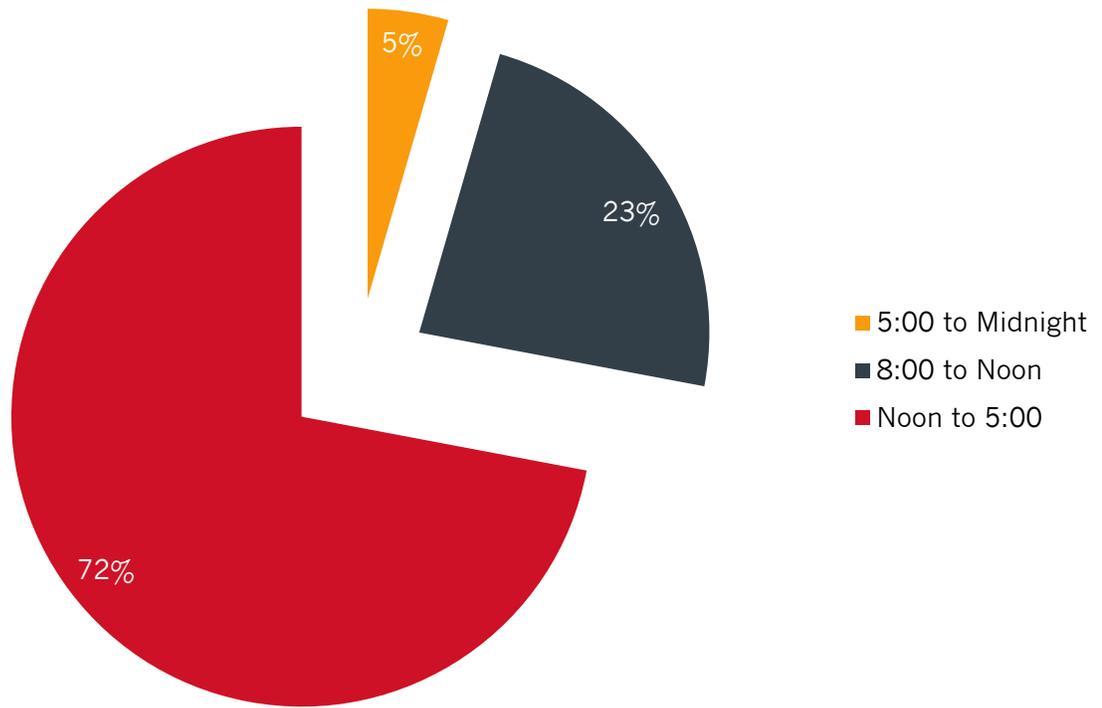


Figure 21: Parking Enforcement by Time of Day (2018)

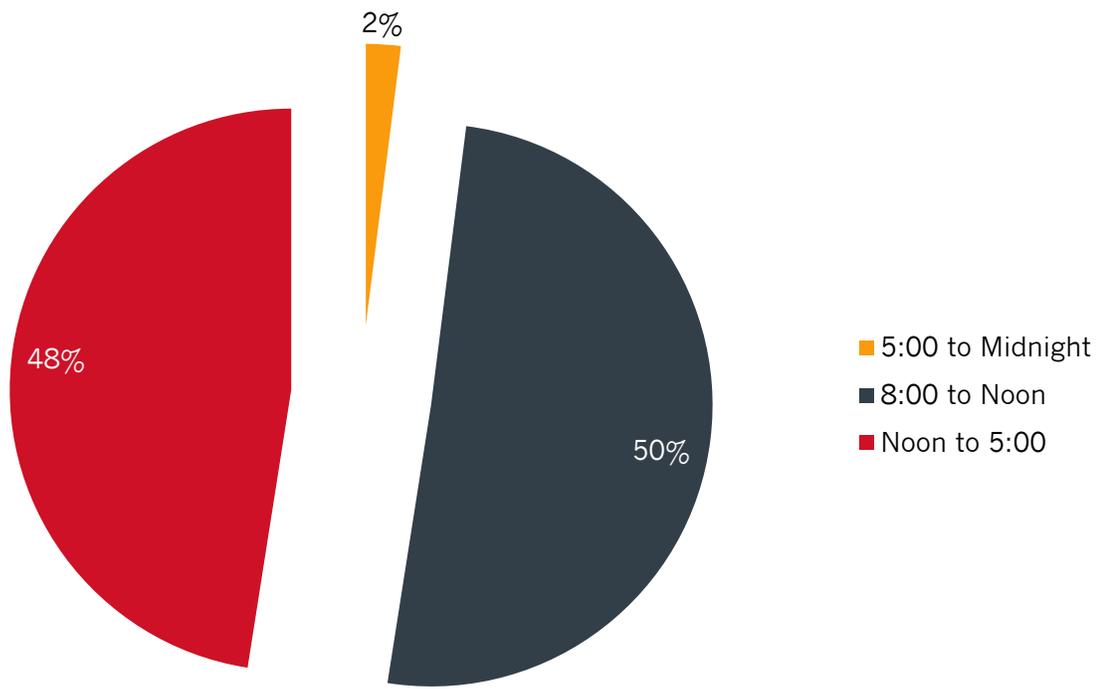


Figure 22: Parking Enforcement by Day of the Week

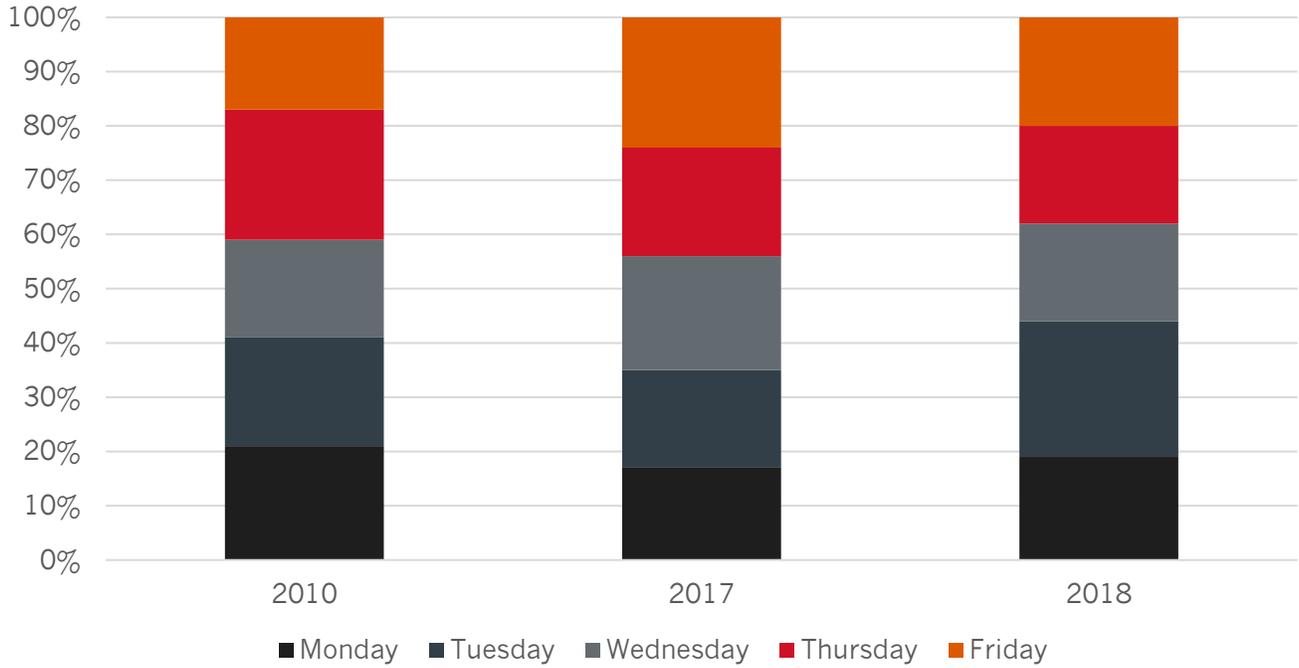
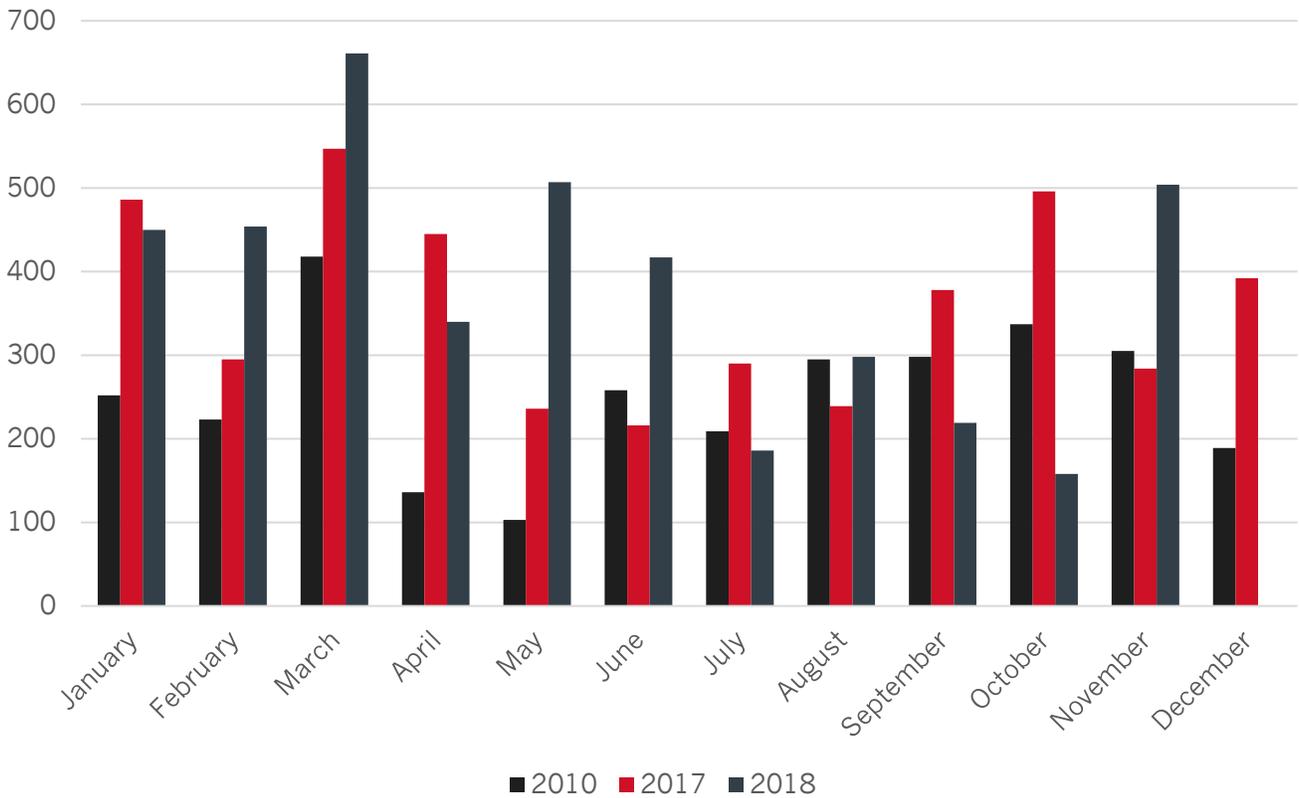


Figure 23: Parking Enforcement by Month of the Year



2011 TO 2018 COMPARISON

The study area for this 2018 parking study is slightly different than the study area for the 2011 parking study. However, there are some high-level comparisons that can still be made.

- » The 10 AM weekday circuit is still the highest occupancy period for Downtown Grand Forks, however occupancy rates have declined overall. In 2011, the occupancy rates ranged from 32 percent during the 7PM circuit to 57 percent during the 10 AM circuit. In 2018, the occupancy rates ranged from 26 percent during the 6 PM circuit to 51 percent during the 10 AM circuit.
- » The ownership of parking remains relatively unchanged: the City of Grand Forks still owns and manages 64 percent of total parking in Downtown.
- » The number of over time parking violations has increased. In 2011, 17 percent of vehicles stayed beyond the posted time limits. In 2018, more than 24 percent of vehicles stayed beyond the posted time limits.

PARKING ORDINANCES AND POLICY

PARKING PROVISION

The City of Grand Forks' ordinance requires all buildings and land uses to provide parking following Chapter 18 Section 302. However, Chapter 14 Section 204 exempts properties within the Parking Assessment District, instead allowing for *“each business operating in a facility within the district shall provide off-street parking as required by the code or pay a parking fee calculated by multiplying the basic parking charge times the number of off-street parking spaces required of that business.”* In simplest terms, a land use can provide stalls on-site, rely on the municipally provided parking and pay an assessment, or some combination. City staff feels this allows the market to determine how many stalls developers will provide onsite for their development projects. Staff does not review or advise on on-site parking stalls but does track the number of stalls provided, which is used to establish the assessment fee.

Since the last parking study in 2011, there have been three major redevelopments: Selkirk Lofts at 15 S. 4th Street; Aurora at Griggs Square at 600 1st Avenue N, and Northern Heights at Griggs Square at 615 1st Avenue N. The Aurora and Northern Heights developments were required to provide 99 stalls total or be assessed for them; they provided 142 stalls on-site and were not assessed.

PARKING REQUIREMENTS

Chapter 14 provides the parking required by land use type for the assessment in downtown. The 2011 Parking Study recommended updating the parking generation ratios used for the assessment either using a rate of 3.15 per 1,000 gross square feet for all land uses with a few exceptions (High School, Hotels, Residential, Church, Theater, Warehouse, Events Center) or a generation rate developed for the City of Grand Forks based on the parking demand established for that study.

Table 6 shows the current parking ratios for the assessment as found in Chapter 14 and the 2011 Parking Study recommended ratios. Where a direct comparison can be made, the higher generation is bolded. Generally, the current parking ratios are higher than the 2011 recommended ratios, apart from residential, community/fraternal and lodge buildings, and theater uses. Most notably, the residential parking requirements are currently one parking space per each two units. The mismatch between current code ratios and the demand-based ratios may indicate opportunities to update the ratios to better reflect current parking trends.

Table 6: Current and 2011 Recommended Parking Ratios

Land Use	Current Parking Ratios for Assessments	2011 Recommended Parking Ratios*
Office/Banks	10 + 1 for each 500 square feet	2.85
Professional Offices	3.33	2.85
Medical Office	5.00	4.00
Retail	7.00	2.00
Retail/Secondhand, Used and Thrift	3.50	2.00
Retail/Furniture, Appliance and Floor covering stores	2.00	2.00
Mixed Used	NA	3.15
Automobile Service Stations	4 + 2/each service stall	2.75
Service/Beauty and Barber shops	5.00	2.75
Service/Travel agencies, Floral shops and Photography studios	5.00	2.75
Grocery (Specialty Retail)	NA	3.76
High School	1/each teacher and employee and 1/each 5 students	0.31
Restaurant/Bar	6.66 for Bars 1/175 square feet for the first 3,150 square feet with additional requirements for larger establishments	5.00
Hotel – per unit	1.00/room	1.00/room
Residential – per unit	1.00/each 2 units	1.00/unit
Residential for elderly – per unit	1.00/each 3 units	0.50/unit
Boarding and lodging/Dormitory	1/each 2 persons (boarding/ lodging) 1/each 4 persons (Dormitory)	1/each 2 persons
Community/ Fraternal and Lodge buildings	0.50	0.63
Mortuary and Funeral parlors	2.00	2.00
Fitness Center	2.00	1.80
Church Synagogues and Temples	2.00	0.20
Theater – per seat	1/12 seats	0.15/seat
Bowling Alley – per lane	2/lane	2/lane
Government	10 + 1 for each 500 square feet	2.50
Manufacturing/Printers and Newspapers	1.33	0.75
Warehouse	0.50	0.20

**Parking Stalls per 1,000 gross square feet unless otherwise noted*

PERMITTING

The Grand Forks Community Development Department issues parking permits at a rate of \$120 per quarter for standard permits and \$180 per quarter for reserved permits. Someone requiring a permit must go, in-person to the department Monday through Friday from 8 AM to 5 PM. Permits are billed quarterly, and a permit holder must return, in person, to cancel future payments. The City accepts cash or check for payment and existing permit holders can pay online through the City of Grand Forks online services.

MARKETING/WAYFINDING

The City maintains a webpage that describes available public parking in ramps, surface lots, and the County ramp. It includes information on permit options, including Standard and Reserved permitting practices, and how to obtain permits. The website does not identify the Central Ramp restrictions (i.e. CHS parking spaces reserved until 4 PM but other parking spaces reserved until 6 PM) or availability in the Corporate Ramp (i.e. Corporate Center parking spaces).

There is no on-street parking information available online.

Figure 24: Map on City's Webpage for Managed Parking



FUTURE PARKING DEMAND

Several redevelopment projects have been announced in Downtown Grand Forks recently, including the Selkirk Lofts at the former Arbor Park location, and the Pure Development project including Alerus Bank and Hugo’s Family Marketplace at the corner of DeMers Avenue and North 5th Street. Other underutilized sites across the Downtown study area have the potential to redevelop, including the city’s Water Treatment Plant. Each of these projects are likely to impact parking demand in the study area. This chapter of the report includes projections to determine the future parking demands and supply with proposed redevelopment and redevelopment concepts and future travel behavior scenarios.

LEVEL OF SERVICE CALCULATIONS

The first three future parking demand scenarios, including the 10-year redevelopment, redevelopment plus increased walking, bicycling, and transit, and redevelopment plus autonomous vehicles include a block level analysis of future parking supply and demand to calculate parking occupancy and level of service. Parking level of service was adapted from the metrics developed by the National Parking Association, and the thresholds are shown in Table 7. Typically parking level of service does include levels D and F, however, based on discussions with this study’s Steering Committee, these levels were considered deficient for downtown Grand Forks under current conditions. As downtown becomes more of an attraction, people may begin to accept lower parking levels of service.

Table 7: Parking Level of Service

<i>Distance</i>	<i>General Level of Service</i>	<i>Grand Forks Level of Service</i>	<i>Generally</i>
Less than 400'	A	A	All Parking Supplied On Block
400' – 800'	B	B	One Block Away
800' – 1,200'	C	C	2 Blocks Away
1,200' – 1,600'	D	Deficient	More than 2 Blocks Away
>1,600'	F		

The level of service was calculated by developing the block level parking demand and then distributing any parking demand shortage to adjacent blocks. For example, if Block A had a parking demand of 100 and supply of 80 and Block B had a parking demand of 30 and supply of 60, Block A’s 20 space parking deficiency would be absorbed by Block B’s 30 space surplus. Block A would then have a LOS B, and Block B would have LOS A.

FUTURE PARKING SCENARIOS

10-YEAR REDEVELOPMENT SCENARIO

The Downtown Action Plan (DAP) is a concurrent study that is defining a new vision for Downtown Grand Forks to provide recommendations for public and private investment; through this plan they have worked with the community to identify sites currently in transition, likely to change, and other concept sites that are currently underutilized. Parking supply and demand estimates for the redevelopment projects were provided by the DAP project team. These concepts were used to project future parking demand.

FUTURE DEMAND PROJECTIONS METHODOLOGY

To complete the 10-year future parking conditions in Downtown Grand Forks, the following methodology was used:

- » Project parking demand based on expected redevelopment concepts as discussed below. Generalized parking demand was developed based on previous project experience and the Grand Forks Land Development Code. Generalized parking demand was used to create a more realistic expectation of parking demand and account for variations that could occur during the project development phase due to the uncertainty of most redevelopment projects and concepts. Variations might include the number of one, two, and three-bedroom units, different retail uses, or the conversion of retail or office space to residential units, or vice versa.
- » Time-of-day profiles using the Institute of Traffic Engineers' *Parking Generation Manual* 4th Edition were used to estimate hourly demand profiles for each redevelopment project and concept.
- » Assign parking demand and change in supply to each study area block.
 - For a conservative future parking demand estimate, new parking demand developed for each block was added to the existing average and peak parking demand. This was done because future uses are uncertain and parking demand by block varies based on adjacent land uses and time of day.
 - For a conservative future parking supply estimate, changes to parking supply assumed no additional parking supply unless provided by a concept plan or other information from the Downtown Action Plan or the Grand Forks Planning Department.

DOWNTOWN ACTION PLAN REDEVELOPMENT PROJECTS AND CONCEPTS

The DAP Identified the following redevelopment projects and concepts, which were used to consider future parking demand:

- 1) **Lyon's Project (Block 2)** is a redevelopment concept that includes 131 residential units and an unknown amount of commercial/office space on the first floor. This would include approximately 104 parking stalls underground and at-grade covered parking.
- 2) **Edgewood Parking Lot Redevelopment (Block 11)** would build on the parking lot to the northwest of the Edgewood Corporate Plaza. Redevelopment at this site is strictly conceptual; parking demand was assumed based on information developed for the Downtown Action. This project assumed no on-site parking.
- 3) **Century Link Building and Adjacent Parking Lots (Block 6)** would redevelop the Century Link building and two adjacent parking lots. Redevelopment at this site is strictly conceptual; parking demand was assumed based on concepts developed for the DAP project. This project assumed no on-site parking.
- 4) **County Government Center (Block 17)** redevelopment would build on the vacant lot and parking lot adjacent to the railroad tracks south of Kittson Avenue. Redevelopment at this site is strictly conceptual; parking demand was assumed based on information provided by the DAP. This project assumed no on-site parking.
- 5) **Pure Development (Block 9)** is a redevelopment project that will include the Hugo's Family Marketplace and Alerus Financial, located along DeMers Avenue between 5th Street and 6th Street. This redevelopment project will also include three levels of residential space for approximately 50 new units. This project is expected to provide around 200 parking stalls.
- 6) **GFK 4th Street Development (Block 14)**
 - Selkirk Lofts is a development project on the former Arbor Park site and the first phase of GFK 4th Street Development. It includes 1,800 feet of commercial space on the first floor with up to 20

residential units above. This development provided 34 stalls on site through underground and at-grade covered parking.

- Eskers Development is a proposed mixed-use office and commercial space at the corner DeMers Avenue and 4th Street, in the currently vacant lot next to Norby’s Work Perks. This building would include more than 32,000 square feet of usable space. This project assumed no on-site parking.

The redevelopment locations can be seen in Figure 26. It is important to note the Downtown Action Plan does include other redevelopment, reuse, and reinvestment concept, but were excluded; the Guest House Townhouse Hotel was excluded because its reinvestment is unlikely to dramatically change parking demand and the Water Treatment Plant because it was outside the study area and parking demand was likely to be provided for within the site.

Generalized Parking Demand and Time of Day Profiles

Table 8 shows the generalized parking demand ratios which were applied to expected redevelopment projects and concepts.

Table 8: Generalized Parking Demand

Land Use	Spaces	Per Unit	Land Use	Spaces	Per Unit
Retail	2.5	1,000 SF*	Office	2.5	1,000 SF
Restaurant	4.0	1,000 SF	Civic	2.5	1,000 SF
Service	2.5	1,000 SF	Residential	1.5	Unit

*SF = Square Feet of Leasable Space

Time of day profiles from ITE’s *Parking Generation Manual* were applied to each expected redevelopment project and concepts. The time-of-day profiles more accurately reflect parking utilization associated with specific land uses. Figure 25 shows four different land uses common in downtown areas. Apartment uses typically need their parking spaces before 8 AM and after 5 PM, while office uses typically need their spaces between 8 AM and 5 PM. Restaurant uses have two peaks and retail uses tend to peak later in the day.

Based on the parking demand ratios and the time-of-day profiles, the areas likely to redevelop in the next 10 years will increase downtown parking demand around 925 spaces each day. The current average weekday demand for public parking is 1,440 spaces and the current peak weekday demand for total downtown parking is 1,845 spaces.

Figure 25: Parking Time-of-Day Profiles for Selected Land Uses

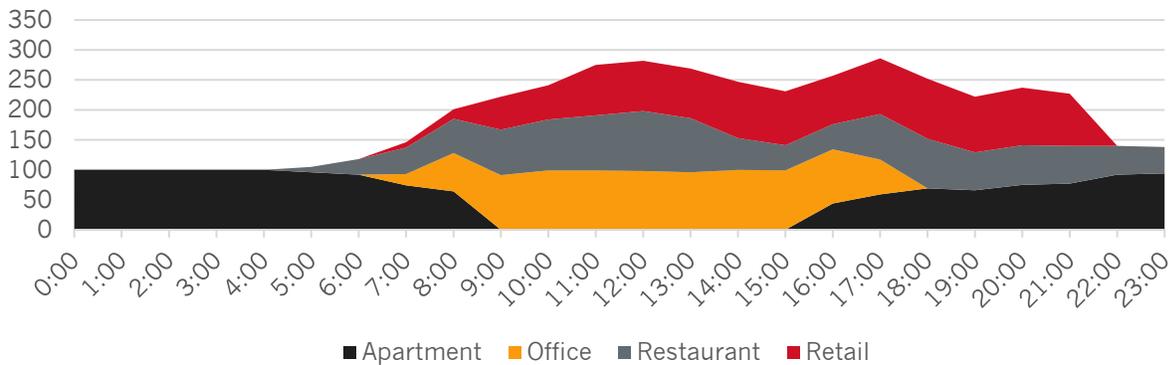
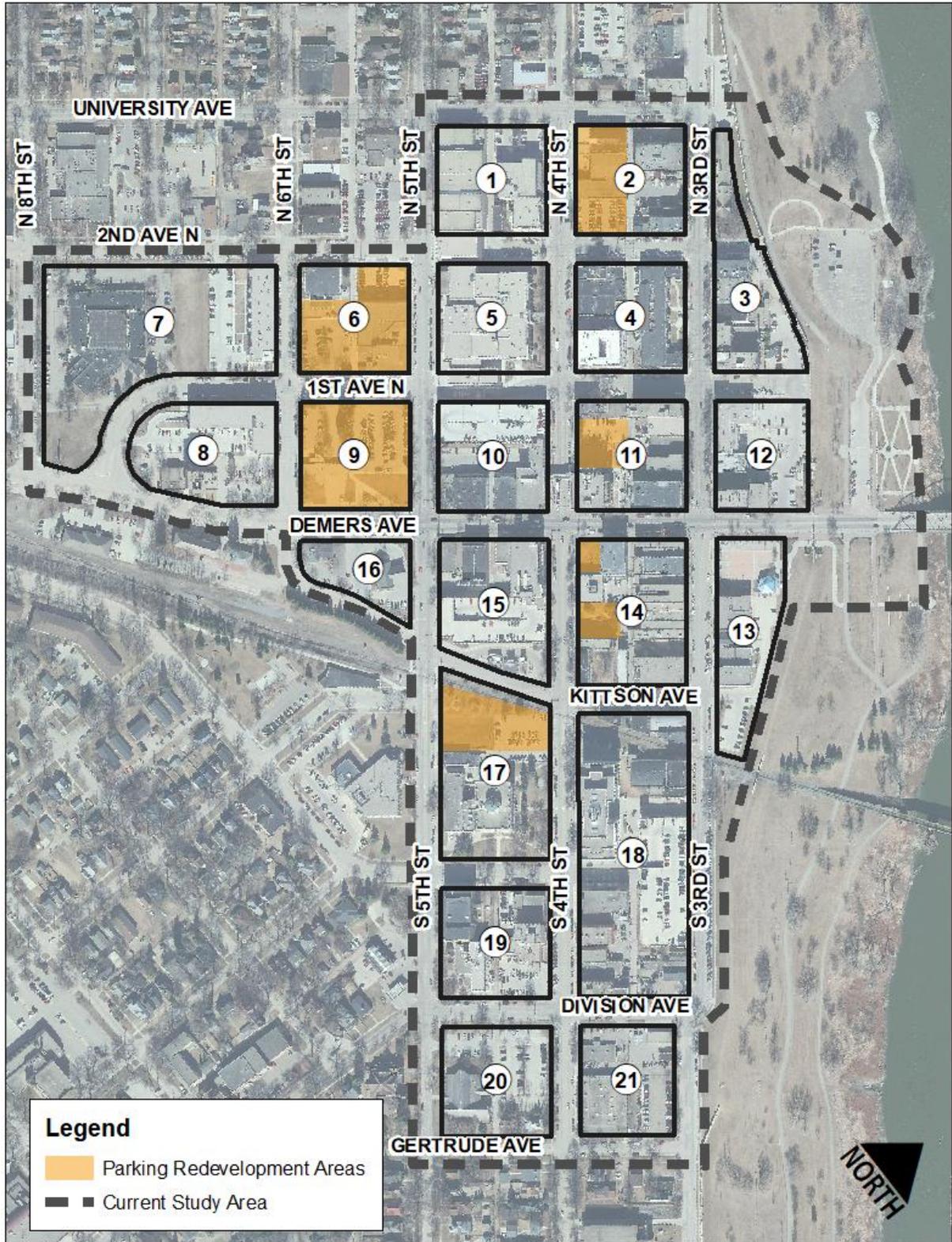


Figure 26: 10-Year Redevelopment Locations



10-YEAR REDEVELOPMENT PARKING DEMAND SCENARIO IMPACTS

The significant increase in parking demand over the next 10-years will have a variety of impacts to the parking environment in Downtown Grand Forks, depending on the time of day, location, and supply type.

- » On average, existing public on- and off-street parking would be able to accommodate the existing demand, with nearly 400 extra parking spaces. Only Block 6 is deficient. The remaining blocks have parking accessible within one block.
 - Block 6 had no one concept identified by the DAP, so the parking demand assumed a zoning build out to understand the maximum impact development at this site could include. This included 78,000 square feet of first floor retail/service/office and 330 residential units on the upper floors. The deficiency at this block is most likely due to lack of information about project concepts, and not an actual parking deficiency.
- » When including private off-street parking, Downtown Grand Forks can expect to see a 65 percent occupancy rate on an average day, with nearly 1,300 parking spaces still available across the downtown area. All blocks have parking within one or two blocks.
- » Under the peak parking demand, public on- and off-street parking could accommodate all parking demand with more than 600 spaces available. Block 6 remains deficient under the peak period with only public parking available.
- » When public and private parking is considered, there are more than 1,400 available parking spaces during the peak parking period, and all blocks provide a parking level of service B or better.

Table 9 and Table 10 show the current average and peak weekday parking statistics and the expected 10-year redevelopment parking demand for an average weekday and peak hour. Parking utilization and level of service by block is shown in Figure 27, Figure 28, Figure 29, and Figure 30.

Table 9: Current and 10-Year Redevelopment Average Parking Demand

Scenario	Parking Type	Supply	Demand	Occupancy	Surplus/Deficiency
Current Average Weekday	Public	2,325	910	39%	+1,415
Current Average Weekday	Total	3,665	1,440	39%	+2,220
10-Year Redevelopment Average Weekday	Public	2,225	1,833	82%	+395
10-Year Redevelopment Average Weekday	Total	3,645	2,370	65%	+1,280

Table 10: Current and 10-Year Redevelopment Peak Parking Demand

Scenario	Parking Type	Supply	Demand	Occupancy	Surplus/Deficiency
Current Peak Weekday	Public	2,325	1,205	52%	+1,120
Current Peak Weekday	Total	3,665	1,845	50%	+1,820
10-Year Redevelopment Peak Weekday	Public	2,225	1,596	72%	+630
10-Year Redevelopment Peak Weekday	Total	3,645	2,240	61%	+1,405

Figure 27: 10-Year Redevelopment Average Weekday Occupancy and Parking Level of Service for Public Spaces



Figure 28: 10-Year Redevelopment Average Weekday Occupancy and Parking Level of Service for All Spaces



Figure 29: 10-Year Redevelopment Peak Weekday Occupancy and Parking Level of Service for Public Spaces

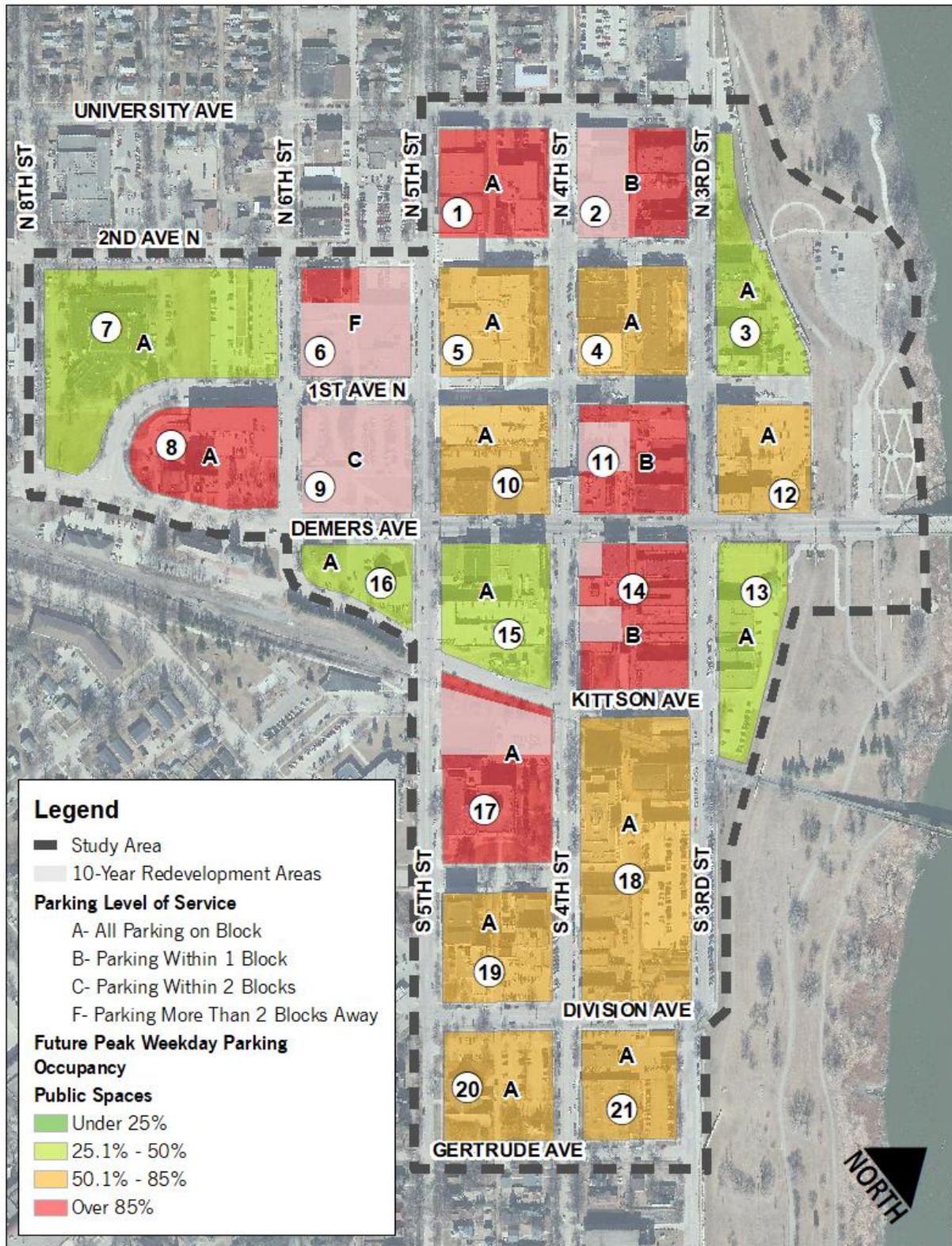


Figure 30: 10-Year Redevelopment Peak Weekday Occupancy and Parking Level of Service for Total Spaces



REDEVELOPMENT PLUS INCREASED WALKING, BIKING, AND TRANSIT

In the downtown area, around 11 percent of people commute to work by walking, biking, or using transit according to American Community Survey data. With continued investments in residential development downtown and walking, biking, and transit infrastructure, it is likely that more people will continue to choose walking and biking. Improving the walkability and bikeability to and through downtown will encourage people to “park once” and walk to multiple destinations for those that commute downtown and potentially encourage reduced car ownership for those who live downtown. These changes will have direct impacts to parking demand across downtown at all time periods.

REDEVELOPMENT PLUS INCREASED WALKING, BIKING, AND TRANSIT METHODOLOGY

To estimate the changes increased walking, biking, and transit, the following assumptions were made:

- » Full redevelopment, as assumed in the 10-year redevelopment parking demand discussed above.
- » Walking, biking, and transit trips increase, on average, two percent per year, from 11.4 percent of trips currently, to 13.9 percent by 2030. This increase was selected by the Steering Committee after reviewing historic information and a variety of scenarios.
- » Reduced future parking demand on every block by 2.5 percent (13.9 percent minus 11.4 percent).

10-YEAR REDEVELOPMENT PLUS INCREASED WALKING, BIKING, AND TRANSIT SCENARIO IMPACTS

Encouraging walking, biking, and transit use would reduce the overall parking demand in downtown, but not to a level that would alleviate all parking deficiencies.

- » On average, existing public on- and off-street parking would be able to accommodate the existing demand with 440 remaining available parking spaces. Block 6 remains deficient.
- » When including private off-street parking, Downtown Grand Forks can expect a 63 percent occupancy rate on an average day, with nearly 1,340 parking spaces still available across downtown. All parking can be accommodated in two blocks or less.
- » Under peak parking conditions, public on- and off-street parking can accommodate all new parking demand within two blocks. There are 670 parking spaces available. All parking can be accommodated in two blocks or less.
- » When including private off-street parking, Downtown Grand Forks can expect a 60 percent occupancy rate, even during peak conditions, with 1,460 available parking spaces across downtown. All parking can be accommodated in two blocks or less.

Table 11 and Table 12 shows the current average and peak weekday parking statistics and the expected 10-year redevelopment parking demand for an average weekday and peak hour. Parking utilization and level of service by block is shown in Figure 31, Figure 32, Figure 33, and Figure 34.

This analysis did not incorporate behavioral changes that might occur as people start to accept walking, biking, and transit trips over the desire to park directly adjacent to their primary destination (i.e. willing to walk further). The only location this would impact is Block 6, which is currently deficient under the average weekday scenario with public parking only. The Corporate Ramp would provide adequate parking for their demands but would be more than 1,200 feet away or LOS D, which is currently considered deficient.

Table 11: Current and 10-Year Redevelopment with Increased Walking, Biking, and Transit Average Parking Demand

Scenario	Parking Type	Supply	Demand	Occupancy	Surplus/Deficiency
Current Average Weekday	Public	2,325	910	39%	+1,415
Current Average Weekday	Total	3,665	1,440	39%	+2,220
10-Year Redevelopment with Walking, Biking, and Transit Average Weekday	Public	2,225	1,790	80%	+440
10-Year Redevelopment with Walking, Biking, and Transit Average Weekday	Total	3,645	2,305	63%	+1,340

Table 12: Current and 10-Year Redevelopment with Increased Walking, Biking, and Transit Peak Parking Demand

Scenario	Parking Type	Supply	Demand	Occupancy	Surplus/Deficiency
Current Peak Weekday	Public	2,325	1,205	52%	+1,120
Current Peak Weekday	Total	3,665	1,845	50%	+1,820
10-Year Redevelopment with Walking, Biking, and Transit Peak Weekday	Public	2,225	1,555	70%	+670
10-Year Redevelopment with Walking, Biking, and Transit Peak Weekday	Total	3,645	2,185	60%	+1,460

Figure 31: 10-Year Redevelopment with Increased Walking, Biking, and Transit Average Weekday Occupancy and Parking Level of Service for Public Spaces

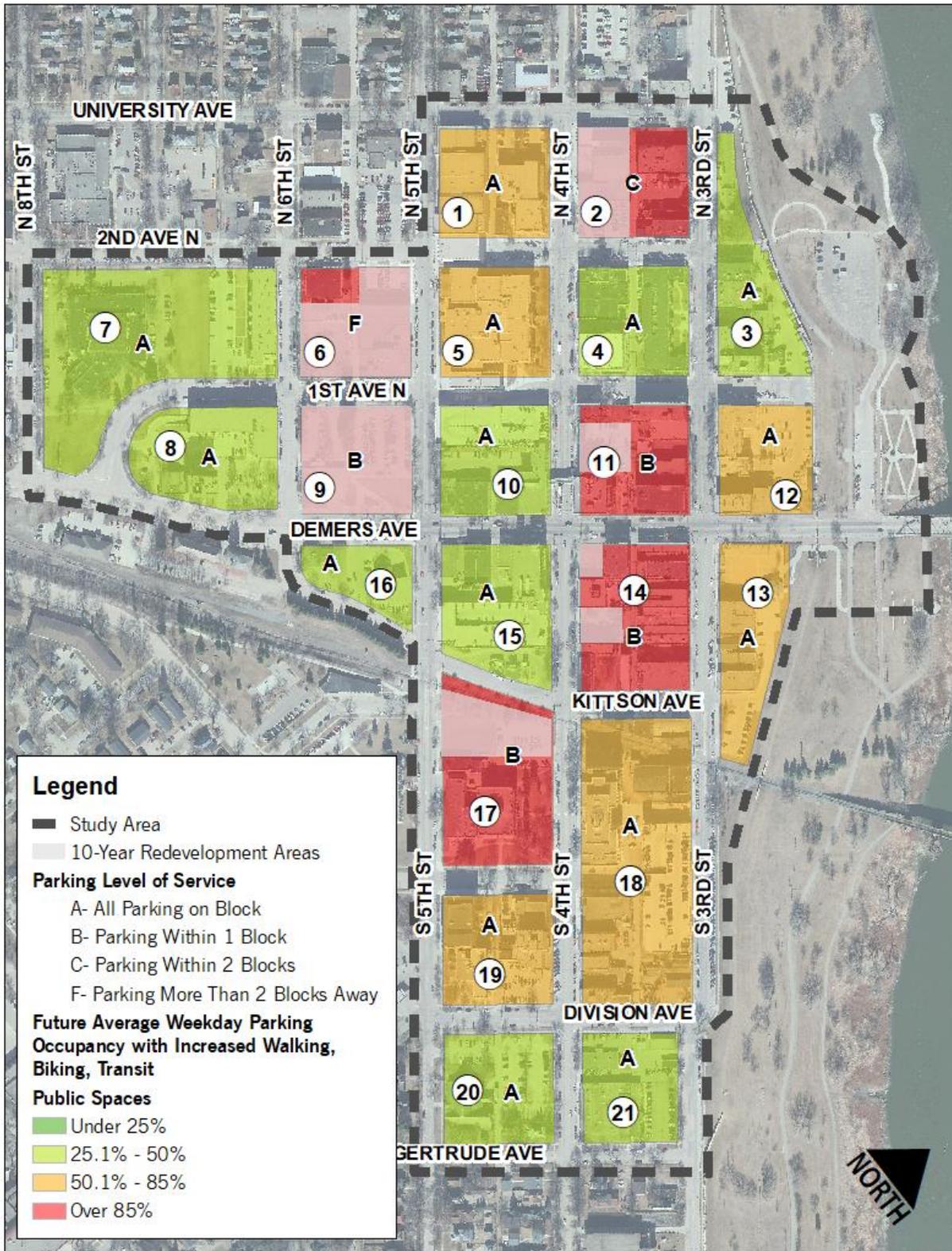


Figure 32: 10-Year Redevelopment with Increased Walking, Biking, and Transit Average Weekday Occupancy and Parking Level of Service for Total Spaces



Figure 33: 10-Year Redevelopment with Increased Walking, Biking, and Transit Peak Weekday Occupancy and Parking Level of Service for Public Spaces



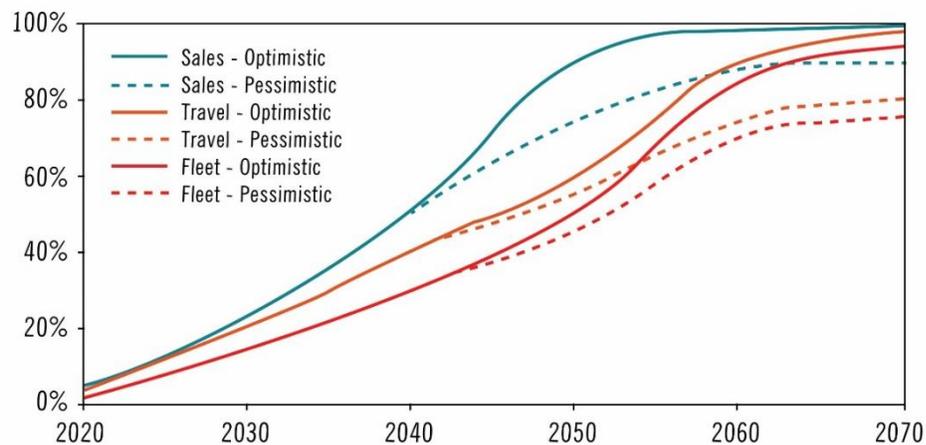
Figure 34: 10-Year Redevelopment with Increased Walking, Biking, and Transit Peak Weekday Occupancy and Parking Level of Service for Total Spaces



REDEVELOPMENT PLUS AUTONOMOUS VEHICLES

Transportation as we know it is going through the greatest evolution since the advent of the automobile. Autonomous vehicle sales are optimistically expected to begin in the early to middle part of the next decade (2020). Autonomous vehicles have the potential to completely change how people travel and park. The highest levels of automation will be able to drop riders off at their locations and find parking on their own, outside of high demand parking areas. Fully autonomous vehicles will also not require space to open doors, so they can be parked more compactly. Ultimately, autonomous vehicles are likely to significantly reduce parking demand where constrained and properly managed. By 2030, it is expected that autonomous vehicles will make up 20 percent of vehicle sales and 10 to 30 percent of vehicle travel¹.

Figure 35: Autonomous Vehicle Market Penetration Estimates



REDEVELOPMENT PLUS AUTONOMOUS VEHICLES METHODOLOGY

To estimate the changes autonomous vehicles will have on parking demand, the following assumptions were made:

- » Full redevelopment, as assumed in the 10-year redevelopment parking demand discussed above.
- » Autonomous vehicles will make up 10 percent of vehicle travel by 2030.
- » Reduced parking demand on every block by 10 percent.
- » CAV is expected to have uncertain impacts to walking, bicycling, and transit. Some studies suggest CAV will reduce walking, biking, and transit because it will be very easy to drive, whereas other studies suggest CAV will increase walking, biking, transit, and ride-hailing as people move away from owning their own personal vehicles. Due to this uncertainty impacts to walking, bicycling, and transit were not adjusted.

10-YEAR REDEVELOPMENT PLUS AUTONOMOUS VEHICLES SCENARIO IMPACTS

The adoption of autonomous vehicles and the resulting reduction in parking demand in the downtown core, would have measurable impacts to future parking demand.

- » On average, existing public on- and off-street parking would be able to accommodate the future demand with 575 available parking spaces. Only Block 6 is deficient.
- » When considering public and private parking, there are more than 1,500 available parking spaces on an average weekday. All parking can be accommodated within two blocks.

¹ <https://www.vtpi.org/avip.pdf>

- » Under peak weekday parking demand, public on- and off-street parking can accommodate all future parking demand with almost 800 available parking spaces. All parking can be accommodated within two blocks.
- » Including private parking, and there are more than 1,600 available parking spaces. All parking can be accommodated within two blocks.

Table 13 and Table 14 show the current average and peak weekday parking statistics and the expected 10-year redevelopment parking demand for an average weekday and peak hour. Parking utilization and level of service by block is shown in Figure 36, Figure 37, Figure 38, and Figure 39.

Table 13: Current and 10-Year Redevelopment with Autonomous Vehicles Average Parking Demand

Scenario	Parking Type	Supply	Demand	Occupancy	Surplus/Deficiency
Current Average Weekday	Public	2,325	910	39%	+1,415
Current Average Weekday	Total	3,665	1,440	39%	+2,220
10-Year Redevelopment with Autonomous Vehicles Average Weekday	Public	2,225	1,650	74%	+575
10-Year Redevelopment with Autonomous Vehicles Average Weekday	Total	3,645	2,130	58%	+1,515

Table 14: Current and 10-Year Redevelopment with Autonomous Vehicles Peak Parking Demand

Scenario	Parking Type	Supply	Demand	Occupancy	Surplus/Deficiency
Current Peak Weekday	Public	2,325	1,205	52%	+1,120
Current Peak Weekday	Total	3,665	1,845	50%	+1,820
10-Year Redevelopment with Autonomous Vehicles Peak Weekday	Public	2,225	1,435	65%	+790
10-Year Redevelopment with Autonomous Vehicles Peak Weekday	Total	3,645	2,015	55%	+1,630

Figure 36: 10-Year Redevelopment with Autonomous Vehicles Average Weekday Occupancy and Parking Level of Service for Public Spaces

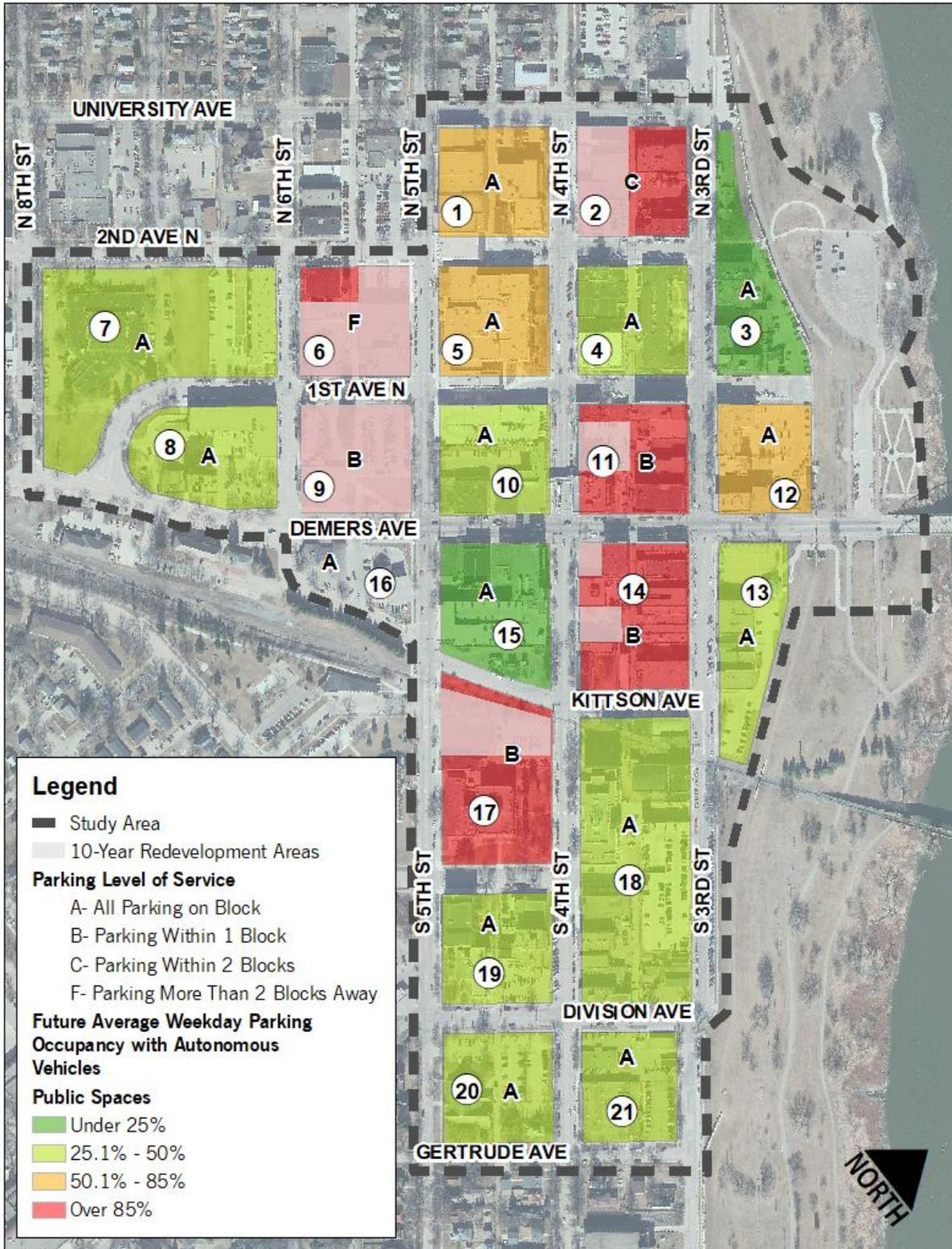


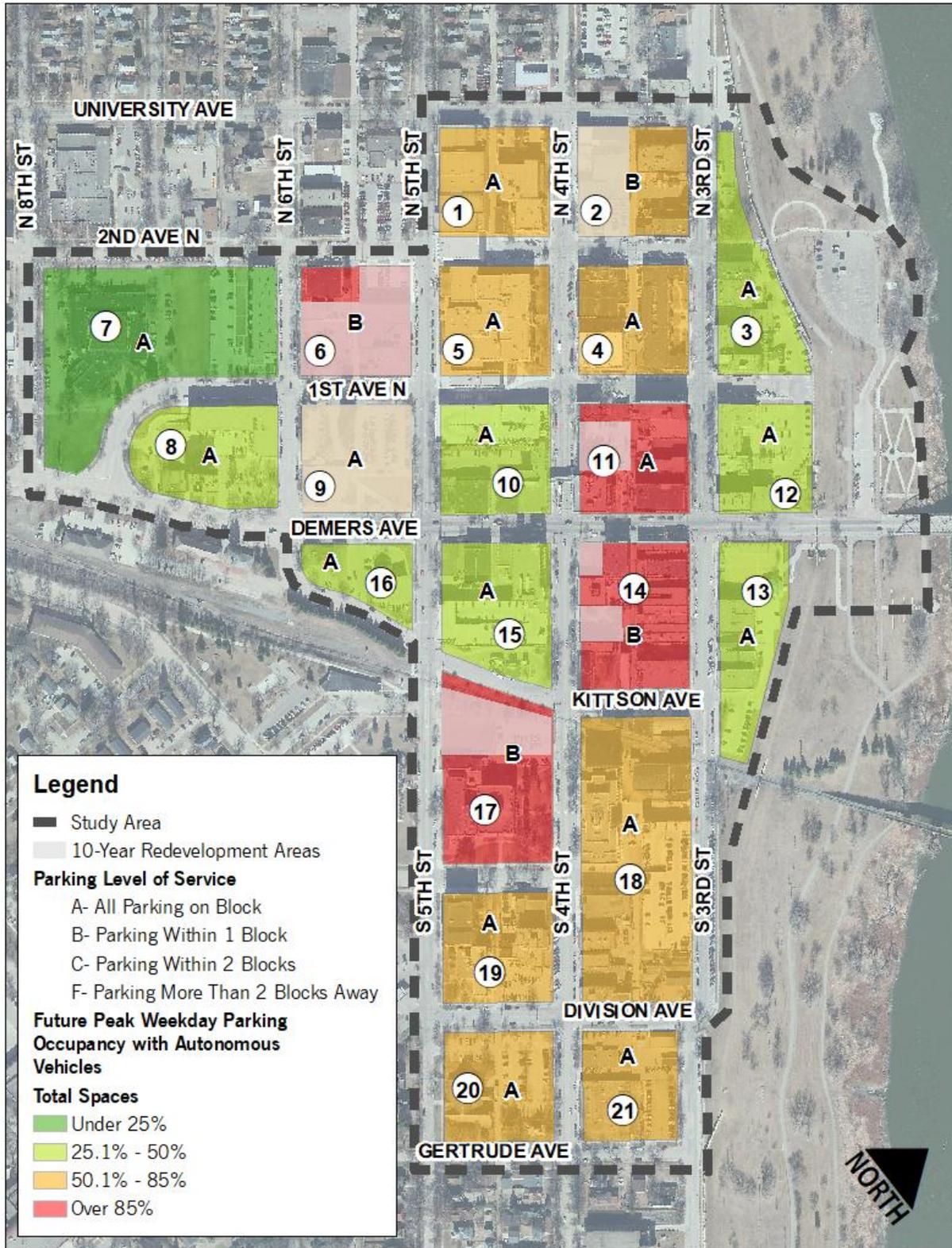
Figure 37: 10-Year Redevelopment with Autonomous Vehicles Average Weekday Occupancy and Parking Level of Service for Total Spaces



Figure 38: 10-Year Redevelopment with Autonomous Vehicles Peak Weekday Occupancy and Parking Level of Service for Public Spaces



Figure 39: 10-Year Redevelopment with Autonomous Vehicles Peak Weekday Occupancy and Parking Level of Service for Total Spaces



SUMMARY OF SCENARIO IMPACTS

In the next 10 years, redevelopment and travel trends will undoubtedly change how people travel to and through Downtown Grand Forks, with different impacts to the parking environment.

- » Redevelopment will increase parking demand in downtown up to 925 parking spaces. This increased demand creates localized parking level of service deficiencies, but most blocks can accommodate necessary parking within one or two blocks of their destination. Public on- and off-street parking approaches capacity, but when private parking is considered, there are nearly 1,300 parking spaces available on a typical weekday. This would require shared parking rules which will be discussed in the alternatives analysis section of this report.
- » Expected reductions in parking demand of 2.5 percent associated with increased walking, bicycling, and transit does not significantly change expected parking level of service. Block 6 public parking remains deficient, but overall, there are around 440 available public parking spaces and 1,340 total parking spaces downtown in a typical weekday.
- » Expected reductions in parking demand of 10 percent associated with autonomous vehicle trips further opens up available parking in downtown. Public on- and off-street parking is only 74 percent utilized during a typical weekday, with overall parking just 58 percent utilized during a typical weekday.

Ultimately, the existing parking supply, with effective management, will likely be able to accommodate all new parking demand over the next 10 years.

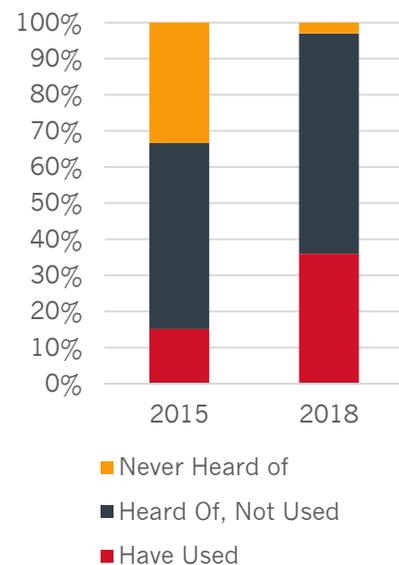
INCREASED RIDE-HAILING AND CAR SERVICES

Ride-hailing services like Uber and Lyft use smart phone apps to provide door-to-door transport and these services have exploded across the US in the past three years. In 2015, the Pew Research Center completed a survey of American adults and found just 15 percent of American adults had used ride-hailing services like Uber and Lyft previously and 33 percent of American adults have never heard of ride-hailing services². By the end of 2018, 36 percent of American adults had used ride-hailing services and just three percent of adults had never heard of ride-hailing services. Nearly a quarter (22 percent) of ride-hail users, use the service at least monthly, and eight percent use the service weekly.

The City of Grand Forks has already experienced some of the impacts increased ride-hailing and car services (party busses, particularly) have on curb space management like double parking and blocking travel lanes. In Summer 2018, the City instituted new policies for ride-hailing drop off spaces, including marking three locations for drop off and pick up only between 10 PM and 3 AM, as shown in Figure 42:

- » The first block of 3rd Street North
- » 300 block of 2nd Avenue North
- » 200 block of 1st Avenue North (bus parking only to accommodate party bus type vehicles).

Figure 40: People Who Have Used Ride-Hailing



² <http://www.pewresearch.org/fact-tank/2019/01/04/more-americans-are-using-ride-hailing-apps/>

While ride-hailing is not yet a full replacement for car ownership – AAA has found its currently more than twice as expensive as private vehicle ownership³ – it can change the dynamic of travel to downtown and parking, especially during large events and nightlife hours.

Figure 41: Drop Off/Pick Up Location on First Block of 3rd Street North of DeMers Avenue



Source: Google Earth

IMPACTS ON PARKING

In the next 10 years, ride share is likely to continue to grow in downtown Grand Forks but is unlikely to have widespread impacts to daily parking demand and is instead more likely to impact evening and weekend parking demand at specific locations. Ride-hailing likely impacts the following trip making behaviors:

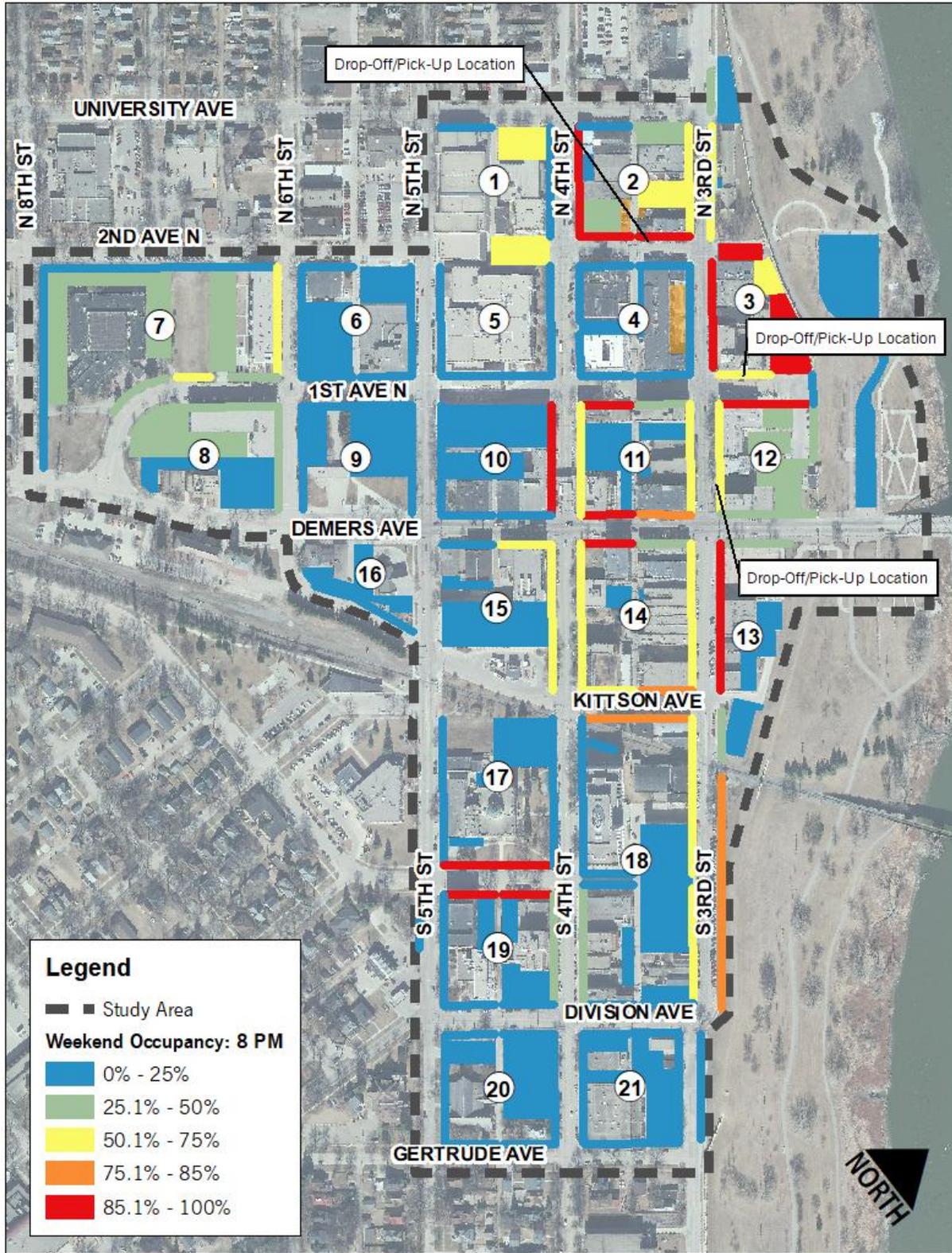
- » Single occupant vehicle driving downtown and taking a cab and/or ride-hailing home. This results in more overnight parking. While current overnight parking demand is very low, increasing new residential units downtown will increase overnight parking demand.
- » Ride-hailing replaces cab services. Cabs typically circulate downtown waiting to pick up passengers, but ride-hailing companies have already been restricted to specific drop-off/pick-up locations throughout downtown. This reduces traffic circulation in the most congested parts of downtown.
- » Ride-hailing replaces certain single occupant vehicle trips downtown. University of California Davis research found that parking is the top reason urban ride-hailing users substitute ride-hailing services instead of driving themselves⁴. This indicates that strictly managed parking supply can be an effective transportation demand management tool. However, given current parking surplus now, and high parking levels of service expected in the future, it is unlikely a dramatic shift to ride-hailing for normal commuting trips would occur, especially if parking remains free and/or low cost.
- » More people use ride-hailing services instead of walking, biking, transit. The same UC Davis research found that almost 40 percent of trips current ride-hailing users took would have otherwise been made by walking, biking, or transit. The replacement of these trips with ride-hailing services does not impact parking demand.

Because of the uncertainty of ride-share impacts on parking, no further reductions to parking were analyzed.

³ <https://newsroom.aaa.com/2018/08/ride-hailing-double-cost-car-ownership/>

⁴ <https://steps.ucdavis.edu/new-research-ride-hailing-impacts-travel-behavior/>

Figure 42: Weekend Evening Parking Demand and Current Pick-Up/Drop-Off Locations



SPECIAL EVENTS CONDITIONS ANALYSIS

Downtown Grand Forks is home to many special events throughout the year. From the weekly farmers market to the Potato Bowl and Street Fair, getting people to downtown and parked easily supports the positive experience so many people work hard to provide.

EXISTING EVENT CONDITIONS

Parking demand was collected during the Holly Dazzle event held on November 25, 2018. Unfortunately, extremely cold weather resulted in limited attendance during the hours collected. While this event is not one of the more significant events downtown, the turn out experienced in 2018 was deemed too low to provide reliable information on how events operate. Parking demand before the event was actually higher before the event than during the event, attributed to the Sunday church services. Event demand before and during Holly Dazzle is shown in Figure 43 and in Table 15.

Figure 43: Before and During Holly Dazzle Event Parking Demand

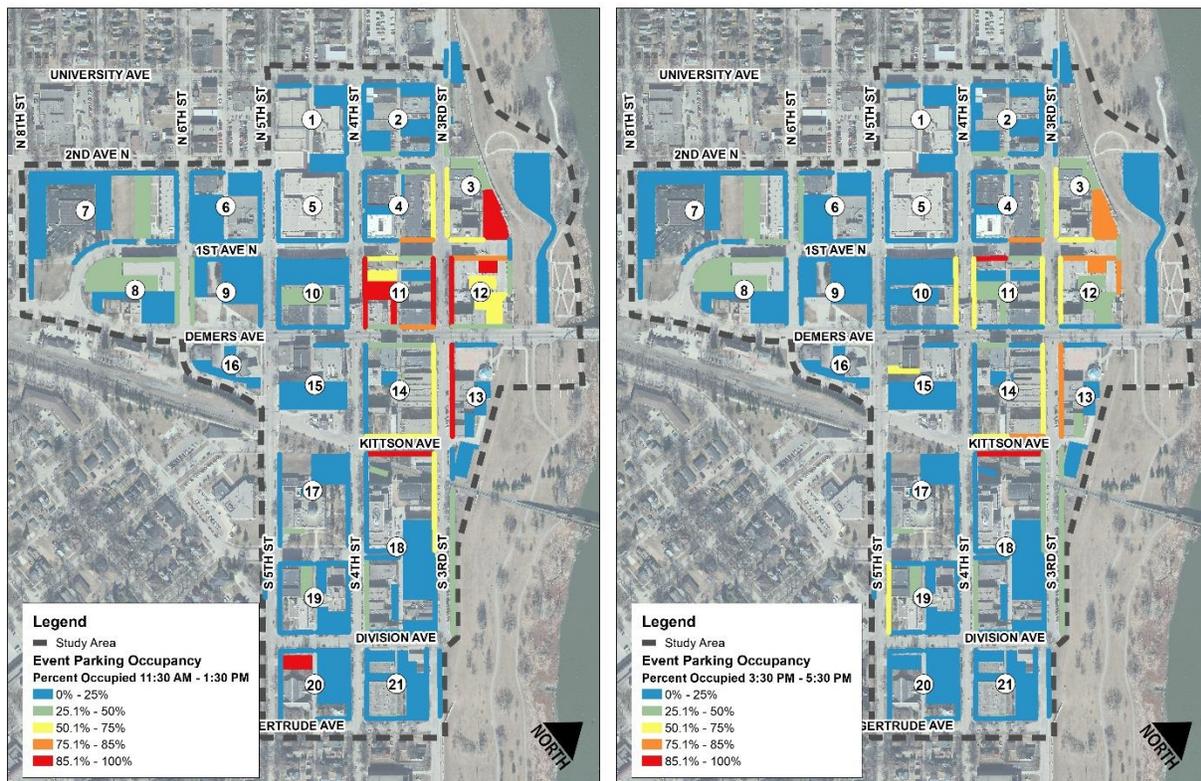


Table 15: Before and During Holly Dazzle Event Parking Demand

Parking Type	Before Event Parking Demand	Before Event Occupancy	During Event Parking Demand	During Event Occupancy
Public On-Street	239	24.9%	233	24.3%
Public Off-Street	146	11.0%	174	13.1%
Private Off-Street	319	24.6%	235	18.1%
Total	704	19.7%	642	17.9%

ESTIMATING EVENT PARKING DEMAND

To estimate event parking demand, traffic data was extracted from the Advanced Traffic Analysis Center’s Traffic Analysis Tool for Grand Forks at the DeMers Avenue and 5th Street intersection and the University Avenue and 5th Street intersection for two regular Fridays and Saturdays in the fall (August 31 and September 1, and September 28 and 29) and compared against September 7 and 8, during the Grand Forks Street Fair. These intersections were selected because they are on the fringe of downtown and were least likely to be impacted by event operations.

- » Traffic on DeMers Avenue at 5th Street decreases 14 percent for an event on Friday and 7 percent for an event on Saturday, for about 2,600 and 1,090 fewer vehicles, respectively. Traffic on 5th Street at this location increases 55 percent for an event on Friday and 89 percent for an event on Saturday, for about 3,500 and 4,125 additional vehicles, respectively. This suggests that drivers are avoiding DeMers Avenue during events.
- » Traffic on University Avenue at 5th Street increases 31 percent for an event on Friday and 41 percent for an event on Saturday, for around 1,200 and 1,100 additional vehicles, respectively. Traffic on 5th Street at this location increases 27 percent on Fridays and 50 percent on Saturdays during events, for 1,400 and 1,800 additional vehicles, respectively.

Traffic volumes for event and non-event days at four locations are shown in Figure 44. The volume profiles for DeMers Avenue on Fridays and Saturdays are shown in Figure 45 and Figure 46. Events reduce traffic demand on DeMers Avenue, but do not dramatically change the typical distribution trends.

Figure 44: Event Traffic at Two Intersections in Downtown Grand Forks

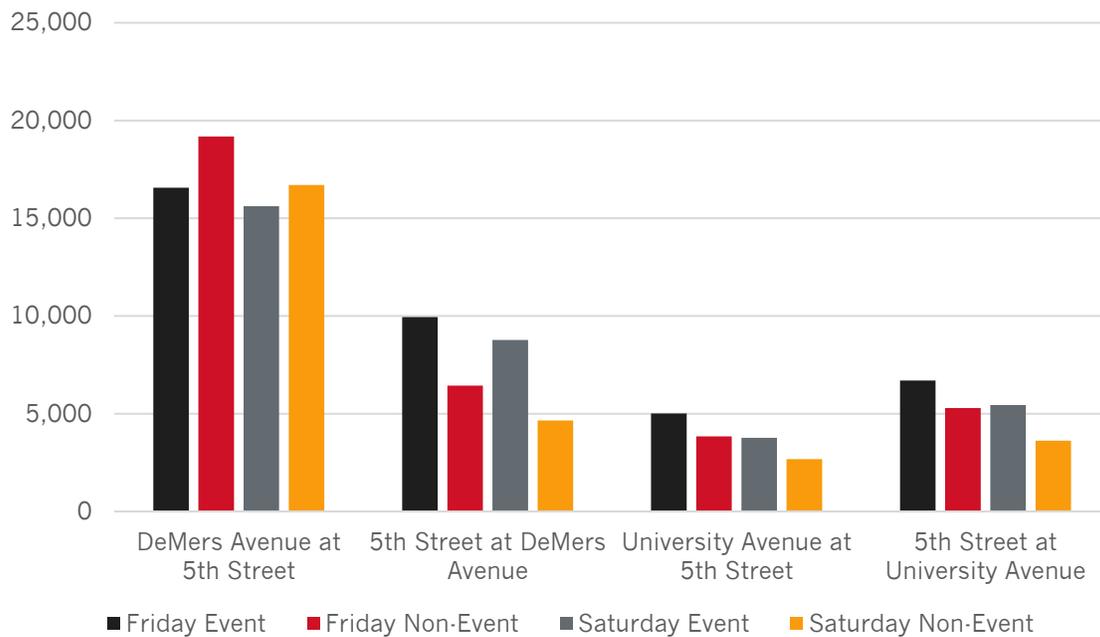


Figure 45: Friday Directional Distributions at DeMers Avenue and 5th Street

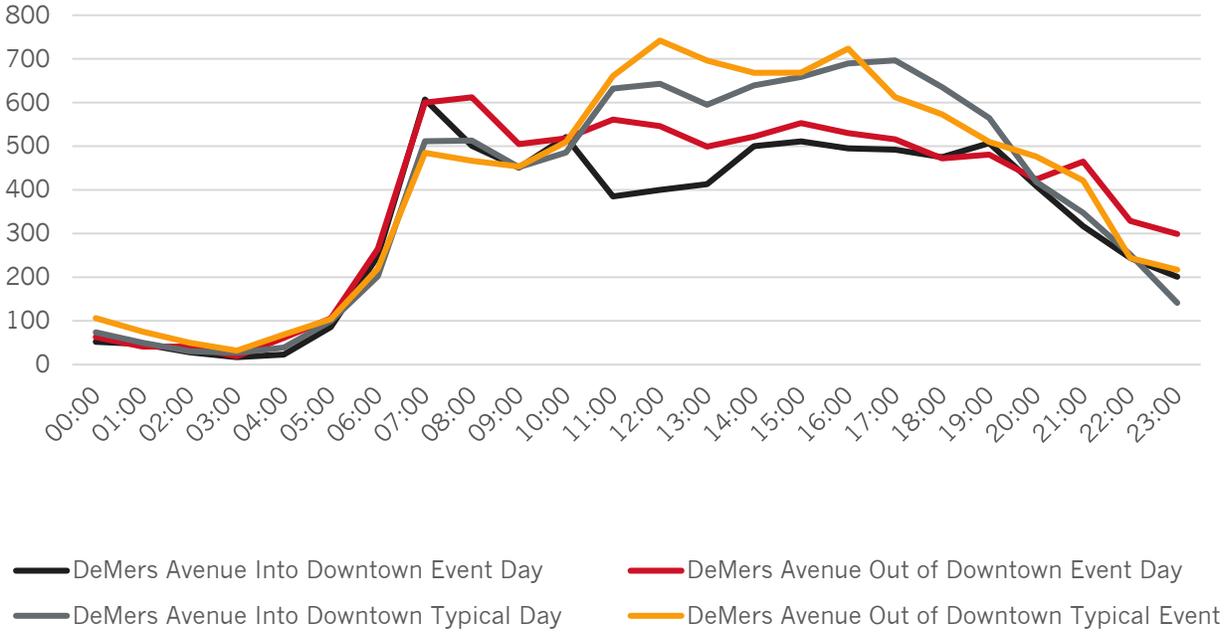
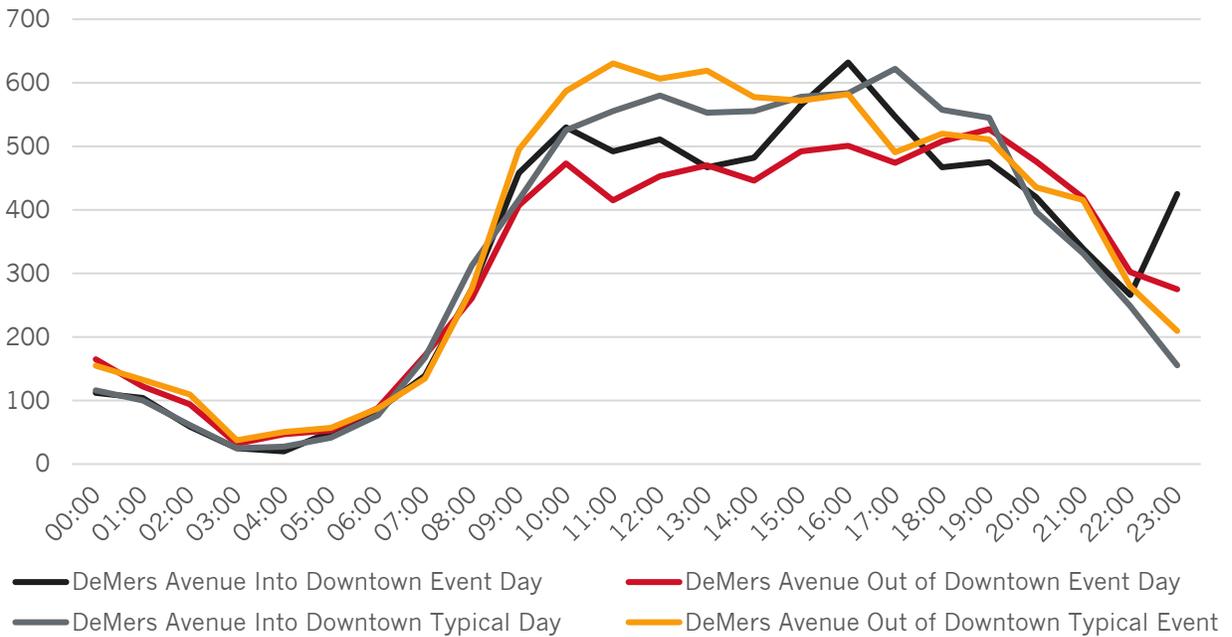


Figure 46: Saturday Directional Distributions at DeMers Avenue and 5th Street



FUTURE EVENT CONDITIONS

The success of the current events in Downtown Grand Forks is likely to continue to build, especially as redevelopment and reinvestment in Downtown Grand Forks continues. Since most events occur during the off-peak hours (afternoon, evenings, and weekends), the average weekday occupancy was used to calculate future event condition expectations at three different locations around downtown:

- » **Central High School or City Hall.** An event at Central High School or City Hall could expect to find more than 1,200 total available parking spaces within 800 feet, or about one block and more than 1,500 total available parking spaces within 1,200 feet, or about two blocks
- » **DeMers Avenue.** An event on DeMers Avenue could expect to find more than 1,480 total available parking spaces within 800 feet, and more than 1,555 total available parking spaces within 1,200 feet.
- » **Town Square.** An event at Town Square could expect to find around 1,100 total available parking spaces within 800 feet, and more than 1,300 total available parking spaces within 1,200 feet.

The 2017 National Household Travel Survey found the average vehicle occupancy for social and recreation trips is 2.10 people per car. Using this vehicle occupancy, each event can be expected to provide between 2,700 and 3,300 people a parking level of service C or better. This is likely adequate for all but the biggest events, including the Street Fair and the Potato Bowl parade, among others. These expected operations are likely acceptable, given most people are more open to walking a bit further during special events.

Figure 47: Event Analysis at Central High School



Figure 48: Event Analysis at DeMers Avenue

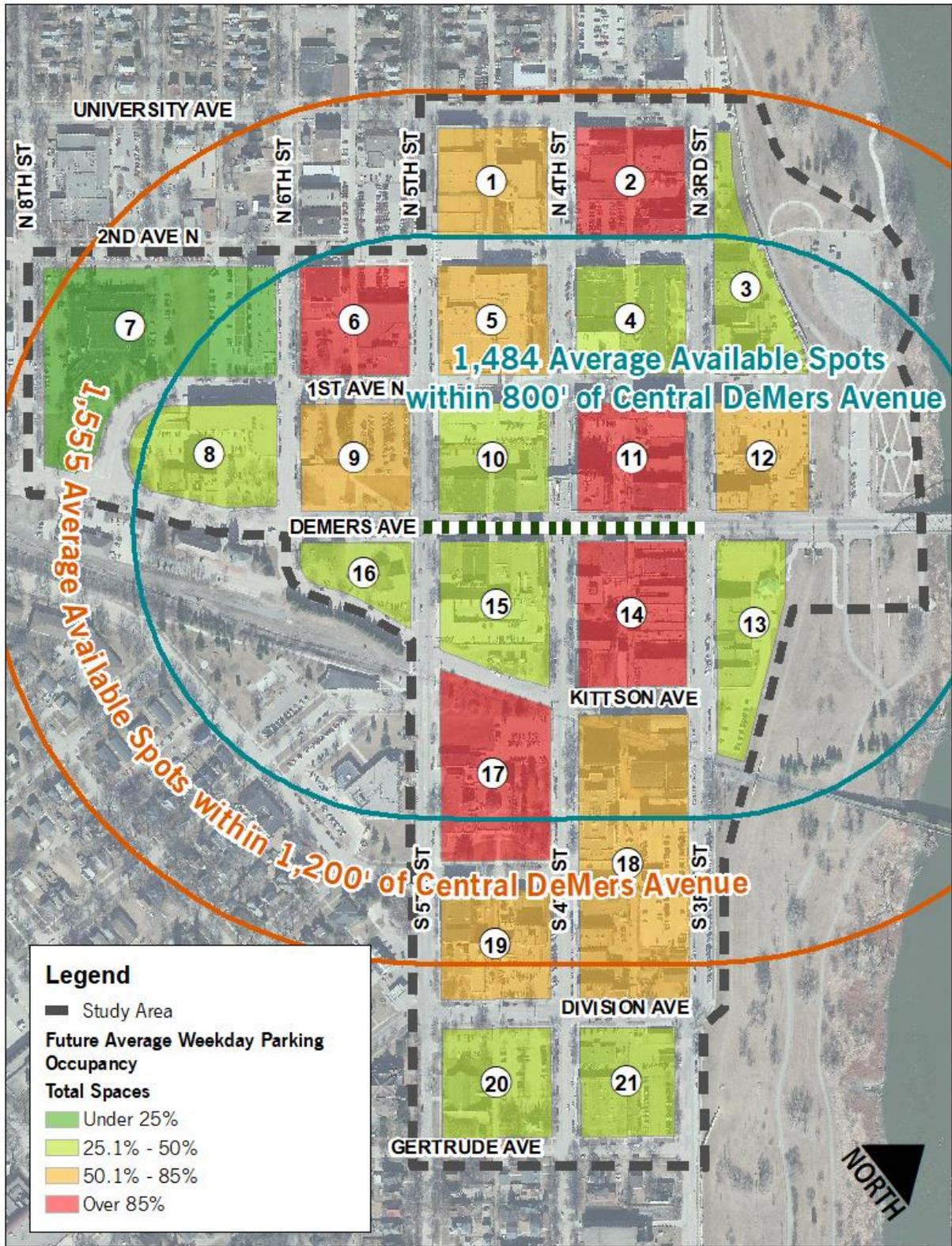


Figure 49: Event Analysis at Town Square



PARKING OPPORTUNITIES AND ALTERNATIVES

Based on the existing and future projected parking conditions, the following is a set of opportunities and alternatives that can help improve the management of the parking environment in downtown Grand Forks. The opportunities and alternatives are organized around key issues identified through the analysis with input from the study's Steering Committee.

KEY ISSUE #1: PARKING PERCEPTION V. REALITY

There are more than 3,500 parking spaces in Downtown Grand Forks, under current conditions. Even under the highest parking demand, about half of those spaces are available, including 45 percent of public on-street (430 spaces) and 52 percent of public off-street parking (690 spaces). Future redevelopment and reinvestment will certainly increase parking demand and create localized parking challenges, yet the future conditions analysis found there would be more than 600 public parking spaces available under peak future demand and over 1,400 total available spaces. The perception that there is not enough parking in downtown can be better managed with more information.

COORDINATED MARKETING CAMPAIGN

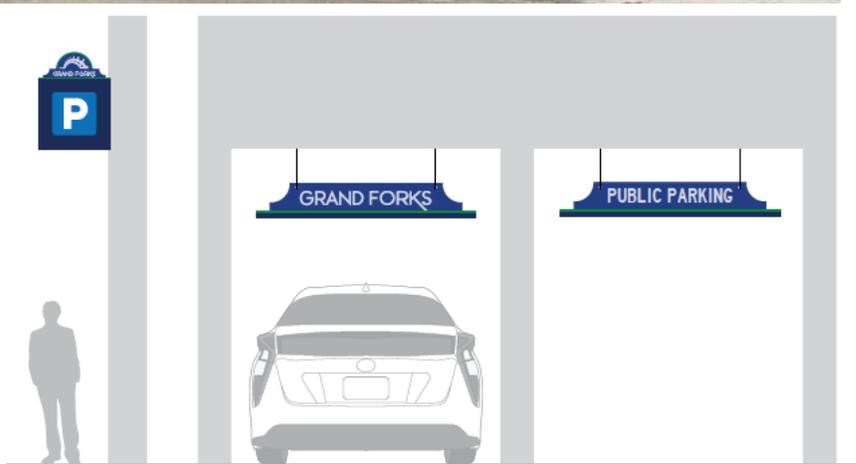
Currently, the extent of parking information for Downtown Grand Forks is one image and one webpage under the Community Development Department. There are very few details available on this page outside of the location of public parking lots and ramps and permit restrictions. This makes it challenging to find information in advance to plan a trip downtown.

A coordinated marketing campaign should include:

- » **Information and marketing campaign.** A new information and marketing campaign could help message the actual parking conditions. For example, most blocks, even under the future conditions, can satisfy their parking demand in less than 800 feet (level of service B). Compare this distance to direct things people understand like other major destinations in town like the Alerus Center or Super Target or other distances people walk regularly, like a lap on the Main Concourse at the Ralph Engelstad Arena, or items associated with Grand forks identity like a hockey stick, a sugar beet, or a Red Pepper grinder. Coordination with the Downtown Development Association's marketing efforts can help create a cohesive flow of information and reach more people.
- » **A downtown parking brand.** Create a distinctive parking brand that can be placed on all communications and information materials. City-owned and county-owned parking facilities should be identified with one uniform brand with high visibility signs that are perpendicular to the facility, like the signs the city recently installed on the Central and Corporate ramps. The County Ramp is not currently signed.
- » **Easy to read parking locations and restrictions map.** Expand the current parking location map to include on-street parking, color coded to applicable restrictions.

The marketing campaign and rebrand of downtown parking will bring awareness to available parking and help inform perception of parking in Downtown Grand Forks. Parking branding concepts from the Downtown Action Plan are shown in Figure 50.

Figure 50: Parking Branding Concepts from Downtown Action Plan



The marketing campaign should also consider a relaunch of digital parking information.

- » **A dedicated parking website** that incorporates the brand and all relevant information for city and county owned parking lots.
- » **An interactive parking map** that includes parking information (number of stalls, restrictions) and major destinations. Seek opportunities to link to Google Maps or other mapping tools to allow people to plan their trip in advance and send directions to their smart phone.

The ability to integrate the digital parking into a mobile application may increase usability and further expand information, making parking easier to find. There are many third-party applications that can compile this information to improve parking management and operations. The University of North Dakota currently uses the Passport Parking application, which allows people to pay for parking from their mobile device.

Figure 51: Parking Information Map Example from Downtown Chico, CA

PARKING LOCATIONS IN DOWNTOWN CHICO

Download PDF of Downtown Parking Map



IMPROVED DATA COLLECTION

The data collected for this study represents one point in time. The previous study was completed in 2011. As redevelopment occurs and transportation trends change, regularly collecting parking supply and demand can help inform policy changes and marketing efforts.

- » **Establish a regular parking counting program** to occur at least annually, if not more frequently. These results can be used in marketing to identify underutilized parking locations and direct visitors to those locations.
- » **Develop and implement a business and customer survey program** to occur at least annually, if not more frequently.

For customers, the surveys could include questions on:

- » How they got downtown?
- » If they drove, where did they park? Did they repark?
- » How many and which establishments they visited?
- » How satisfied they were with parking?
- » General demographics (age, general location of where they live)

For businesses, the surveys could include questions on:

- » How many employees they have and how they traveled to work that day?
- » Where do they park? Do they currently hold a parking permit?
- » Have you received complaints about parking?

KEY ISSUE #2: SINGLE USE AND PRIVATE PARKING

Single use and private parking are some of the primary sources of overbuilding parking in most urban areas. Private parking is often built for a single use that excludes other compatible uses; one example may be apartments or office space. Most apartment residents are away at work from the hours of 8 AM to 5 PM, which is typically when most office workers are at work and need parking downtown. Parking exclusivity can also come in the form of overregulation of public parking. For example, the Central Ramp, with more than 350 parking stalls, is completely reserved until 4 PM or 6 PM, depending on the level. However, during its highest occupancy (10 AM), there were more than 150 parking spaces unoccupied, yet unavailable to the general public. Finding more flexible parking management practices and policies can help provide more efficiencies.

CALCULATE PARKING DEMAND BY TIME OF DAY

The current method the City of Grand Forks uses applies a flat rate to parking generation, which is used in the assessment calculations. These calculations may show a much higher parking need for a development than is utilized, because it assumes parking demand is constant throughout the day. Based on the existing conditions data collected for Downtown Grand Forks and national parking data, that is simply not the case.

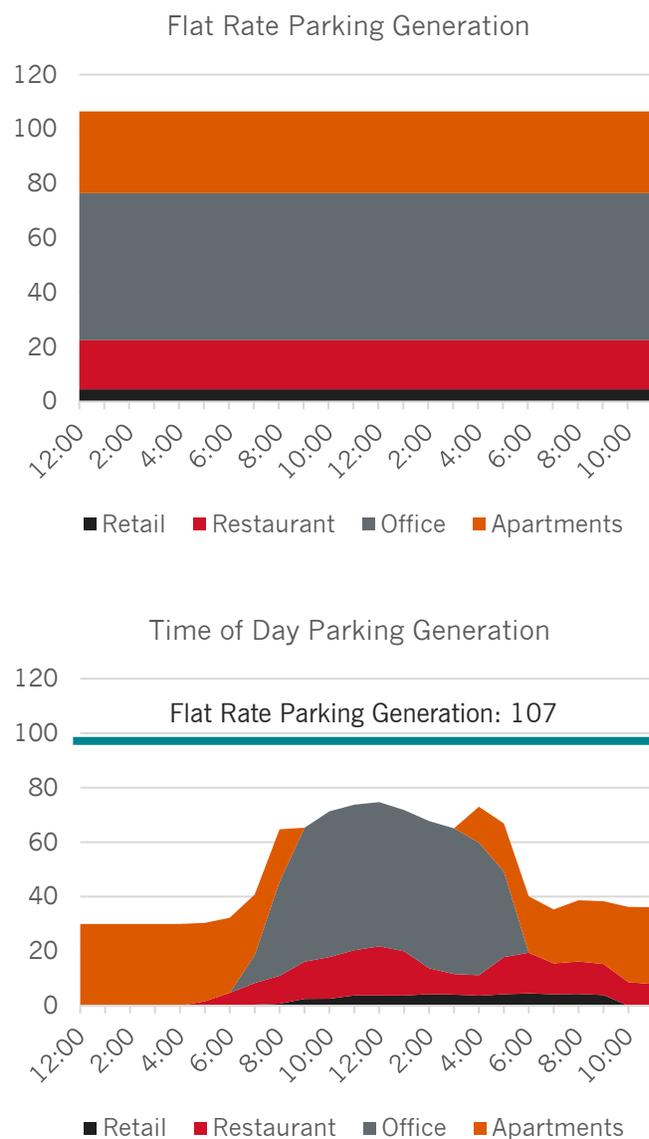
Utilizing a time of day approach, included in the Institute for Traffic Engineers' *Parking Generation Manual*, can help fine tune actual parking demand based on generalized land use categories.

An example demand profile was created based on high level assumptions for the GFK 4th Street Development. These two buildings assumed some amount of retail, office, restaurant, and residential uses. Using a flat rate parking generation, this site would require 107 parking spaces. However, considering time of day profiles, this site only requires 75 parking spaces, with an average expected utilization around 49 parking spaces. Using the flat rate generation would overbuild parking for this development 43 percent (32 parking spaces) at its peak; the flat rate generation would overbuild parking 118 percent (58 parking spaces) on average.

SHARED PARKING ARRANGEMENTS

Shared parking benefits everyone in downtowns. Reducing dedicated on-site parking reduces development costs, which means more affordable rent for tenants. It increases the development capacity and viability for even the smallest parcels, resulting in a higher profit margin for developers. Finally, it means higher quality developments resulting in a higher

Figure 52: Flat Rate v. Time of Day Parking Generation



taxable value for the city. The city can recognize the value of shared parking and facilitate the private market in engaging in these types of arrangements.

One example of where shared parking works is the Dacotah Lot, east of 3rd Street between 1st Avenue and 2nd Avenue, has 73 parking spaces. This parking is private, reserved parking, including 69 stickers for apartment residents, which permits parking 24 hours a day on a first come basis, and 33 business parking passes that are valid between 8 AM and 7 PM. This means there are 40 percent more parking permits issued than available spaces. The average occupancy between 8 AM and 6 PM is 53 percent, and after 6 PM is 80 percent. These types of shared parking arrangements often work well in downtowns where multiple land uses are in close proximity, because they have different demand profiles.

To further support shared parking, the following should be considered:

- » Create a shared parking toolkit, that includes model agreements.
- » Seek private sector partners to conduct a pilot program and document issues and successes that can be shared with businesses and property owners.
- » Incentivize shared parking by accepting private off-site shared parking in the current parking assessment calculations.

REFINE PERMIT PARKING PROCESSES

The three parking ramps in Downtown Grand Forks (Central, Corporate, and County) all include permit parking restrictions:

- » The Central Ramp is entirely restricted between the hours of 6 AM and 6 PM or 7 AM to 4 PM, depending on the parking level.
- » The Corporate Ramp has 297 of 373 parking spaces (80 percent) reserved between 6 AM and 6 PM.
- » The County Ramp has 184 of 338 parking spaces (55 percent) reserved between 7 AM and 5 PM.

These restrictions appear to be limiting the utilization of these ramps; the peak utilization of these parking ramps range from 35 percent in the Corporate Ramp to 61 percent in the County Ramp. Management changes to these parking ramps might consider:

- » **Streamlining restricted times.** Currently the Central Ramp has two different time restrictions and the city and county ramps use different time restrictions. This can be confusing to people trying to find places to park downtown. Consideration for reducing the time restrictions to 8 AM to 5 PM or 7 AM to 5 PM and apply a uniform time restriction for both city-owned and county-owned ramps would allow more flexibility for overnight parking or those coming downtown for dinner and/or entertainment.
- » **Simplify the permitting process.** The current permitting process must be initiated and terminated in person at the Community Development Department between the hours of 8 AM to 5 PM. This limits the accessibility of parking permits and may contribute to parking violations. People increasingly expect to be able to complete tasks online, so developing a permit process that can be done in a way that is most convenient to people may expand permit holders and parking revenue.
- » **Monitor permit utilization rates.** The data collected for this study indicate the current permit restrictions are ineffective and reduce the available parking supply, especially in high demand locations. Consider reducing the amount of standard (6 AM to 6 PM reserved) and reserved (24 hour reserved) permits and expand 2-hour parking availability to more closely match the current utilization. It is likely that permits can be oversold and still maintain acceptable parking availability. Make sure any changes in policy are properly signed and advertised.

KEY ISSUE #3: PARKING INFLUENCES URBAN FORM AND FUNCTION

Parking policies that require, encourage, or otherwise allow unlimited parking in downtown and dense urban areas have a direct impact on walkability. Easy parking encourages vehicular trips, because it is convenient and faster than walking, biking, or taking transit, contributing to congestion, noise, and pollution in downtown. Parking lots located between the sidewalk and the front door also prioritize vehicle access to businesses over direct pedestrian access. Alternatives discussed here are focused on parking policies and design to improve urban form and function.

URBAN FORM GUIDANCE AND ORDINANCES

The Downtown Design Review Board was established to preserve the historic buildings and character of downtown and they review and approve all new downtown development. Within their current guidelines, new off-street parking facilities to be provided shall be screened from view from the street and located behind, within, underneath or between structures. These guidelines help support good urban form and improve walkability. These guidelines can be enforced within the historic district, as shown in Figure 54.

This district does not align with the Parking Operations and Maintenance District (Figure 54), nor the B-4 Central Business District, which allows some redevelopments more flexibility in how they develop parking lots and in ways that do not support the overall character of downtown.

The parking lot guidance included in the Downtown Design Review Board should be adopted for the B-4 Central Business District and applied to all new developments. This would ensure a uniform look and feel for all of downtown, one that prioritizes design and walkability.

Figure 53: Different Parking Lot Placements Across Downtown Grand Forks

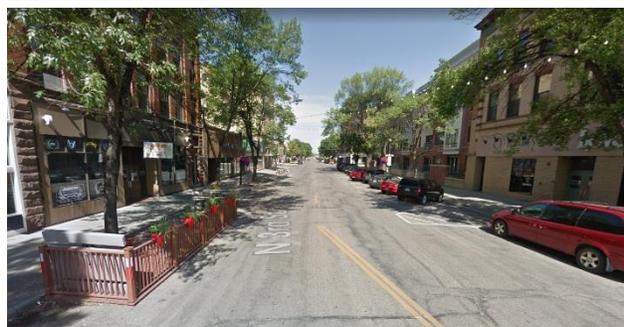
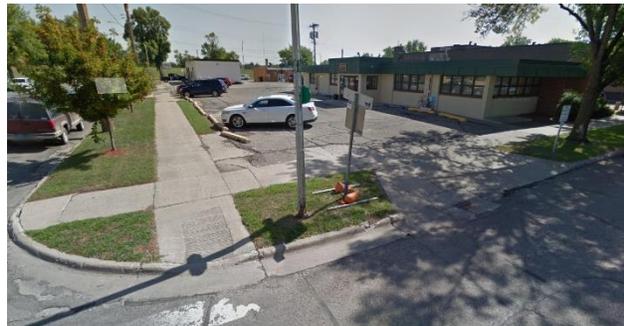
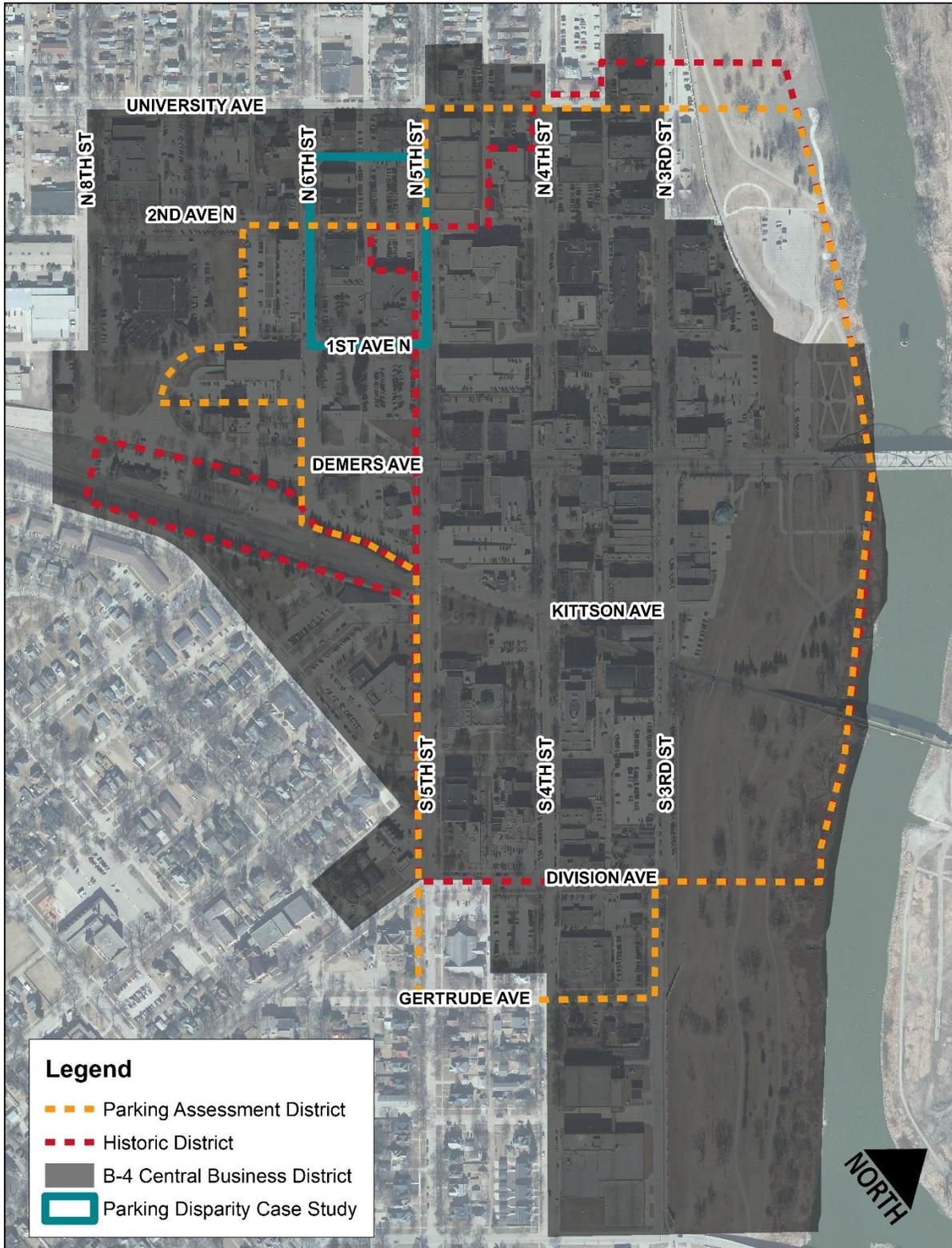


Figure 54: Parking Operations and Maintenance District and the Downtown Grand Forks Historic District

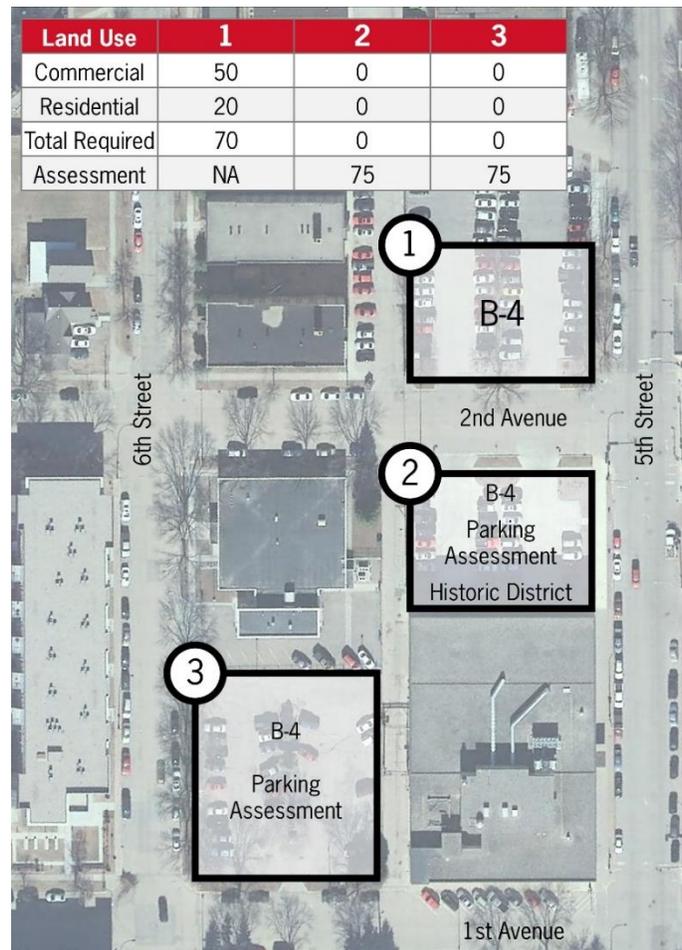


UNIFORMITY ACROSS THE DOWNTOWN DISTRICT

The parcels within the parking assessment district are exempt from the current parking requirements included in Chapter 18. Similar to the urban form guidelines applied to only the historic district, these exemptions create disparities in how parking is provided in the B-4 central business district (CBD). Three examples were identified.

- 1) Current parking lot outside the Parking Assessment District and the Historic District. Development must comply with the B-4 zoning requirements and must follow parking minimums. They would not be eligible to pay into the Parking Assessment District in lieu of providing on-site parking. Street frontage and other landscaping requirements would still apply to any parking provided.
- 2) Current parking lot within the Parking Assessment District and Historic District. There are no parking minimums but development on this site must follow current design guidelines, including parking lot siting, access, and landscaping/fencing. Would be assessed for parking spaces not provided onsite.
- 3) Current parking lot within the Parking Assessment District only. Development on this site would not be required to provide on-site parking, nor would they be required to follow design guidelines, but would be assessed for parking spaces not provided onsite. Street frontage and other landscaping requirements would still apply to any parking provided.

Figure 55: Parking Disparities Across Parcels in Downtown



Assuming a mixed-use development including 10,000 square feet of commercial and 10 1-bedroom apartments, Site #1 would be required to provide 70 parking spaces, while sites #2 and #3 would not be required to provide any parking. Site #1 would not be able to feasibly provide the amount of parking and accommodate the example development. Sites #2 and #3 would be assessed for 75 parking spaces. The varying requirements within one single zoning district create an inconsistent development style.

These parking ratio calculations also result in a significantly higher parking space requirement/assessment than the parking ratios developed in the 2011 Parking Study. Using those ratios all three sites, assuming 10,000 square feet of mixed use commercial and 10 apartments would be required to provide or pay for 42 parking spaces.

PARKING MAXIMUM ORDINANCES

Typically, parking requirements come in the form of parking minimums; a development must have a certain number of parking spaces based on the number of square feet, residential units, or some other measurement. Parking minimums are the basis of the current assessment.

Alternatively, parking maximum ordinances provide an upper limit on the amount of on-site parking allowed. These types of ordinances are typically found in larger cities' downtown districts with good access to alternative modes of transportation. The following are examples of how parking maximums have been applied across the country:

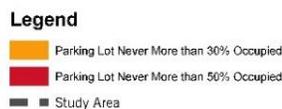
- » Pittsburgh, Pennsylvania does not require any parking for the first 2,400 square feet of retail and service uses and then requires one off-street parking space per 175 feet at a maximum and one per 500 feet at a minimum. With this approach, a 5,000 square foot retail building could provide between six and 29 vehicle parking spaces.
- » Boise, Idaho does not require parking in the downtown core, but does on the downtown fringe. The downtown fringe parking ordinances include language that prevents the number of parking spaces from exceeding 1.75 times the required number.
- » Cambridge, Massachusetts limits the number of parking spaces based on geographic areas as part of a travel demand management plan.

While the intent of parking maximums is to bring parking supply closer to parking demand, there are exceptions that could be granted to allow developers to provide parking supply beyond typical maximum amounts. Parking maximum exceptions can be permitted to promote a certain type of behavior to meet environmental, aesthetic, shared parking, or multimodal goals. To not pay any parking operations and maintenance assessment, the Aurora and Northern Heights developments were required to provide 99 parking stalls, but instead provided 142 stalls on-site, 43 percent more parking than required. During the data collection, the surface lots at these two sites were never more than 50 percent occupied. Parking maximum ordinances may be appropriate for Downtown Grand Forks to prevent the overbuilding of private parking lots that do not serve the larger parking demands.

HIGHEST AND BEST USE OF DOWNTOWN

With more effective management, there may be future opportunities to convert current parking lots into more productive developments. Under current conditions, there are six surface lots that are never more than 30 percent occupied, and an additional eight that are never more than 50 percent occupied. While the 10-year redevelopment will increase demand for parking throughout downtown, many of these are private lots and would not necessarily share parking demand with new developments. Working with property owners and developers can help find opportunities to convert parking to higher and better uses.

Figure 56: Parking Lots with Low Occupancy



KEY ISSUE #4: INCREASED MULTIMODAL MOBILITY

Easy parking encourages visitors to downtown to park and repark to get closer to their destinations, increasing parking demand and congestion. Creating opportunities and encouraging multimodal transportation options support a “park once” philosophy, where visitors to downtown park once for multiple destinations. This allows one parking space to serve multiple uses, limiting the parking spaces needed for each individual destination. Promoting a culture of walking and biking downtown can further reduce parking demand. The following options and alternatives can help support more people parking once or choosing another mode entirely to get to and through downtown.

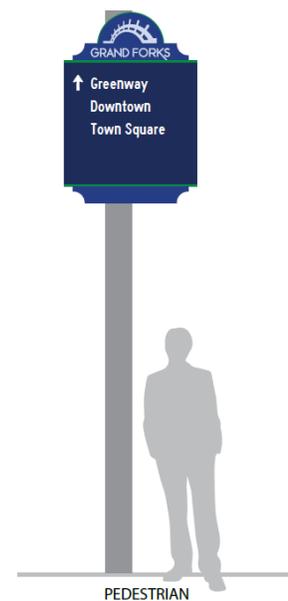
The downtown parking study area is about a half-mile long from north to south, and most pedestrians could walk that distance in about 15 minutes. Improving the pedestrian environment would support a park-once philosophy.

ENHANCED PEDESTRIAN ENVIRONMENT

A high-quality pedestrian environment can help support the park once philosophy, where pedestrians can walk between destinations. Most areas of the core downtown have the elements of a good walking environment – sidewalks, lighting, street trees, active store fronts, etc. However, continuing to invest in the pedestrian environment can help expand mobility for all users:

- » **Complete a full ADA evaluation** for downtown and identify investment priorities and timing to ensure pedestrians of all abilities can move through downtown safely and easily.
- » **Improve lighting and perceived safety to the Riverboat Road Parking Lot** that connects to 2nd Avenue. The path connecting the parking lot to 2nd Avenue is perceived as unsafe due to poor lighting. It also comes through an alley adjacent to a dumpster, which is not an appealing walk.
- » **Alleyways** can be part of a comprehensive pedestrian network with the right investments. Typical alleys are utilitarian in nature, but they can provide a pedestrian centered experience.
- » **Wayfinding with major destinations and walking time** can help inform trip making behavior and encourage more people to walk.

Figure 57: Pedestrian-Scale Wayfinding Concept from DAP



The Downtown Action Plan will identify additional policies, concepts, and actions to improve walkability through downtown that should be considered.

IMPROVED BICYCLE INFRASTRUCTURE

Creating more opportunities for bicycle trips requires investments in high quality bicycle infrastructure to get to downtown and secure bicycle storage locations once downtown.

- » **Prioritize investments in high quality bicycle infrastructure** within one mile of Downtown Grand Forks. High quality bicycle infrastructure can be an extremely effective parking management solution: US Department of Transportation sponsored research found an estimated ridership increase from 21 percent to 171 percent within one year of building protected bicycle lanes.

Figure 58: Kittson Avenue Cycle Track Concept Identified by the DAP



-
- » **Provide secure bicycle storage** throughout Downtown Grand Forks. Throughout downtown, there are bicycle parking locations within the public right-of-way, including permanent ones at the edge of the sidewalk, and seasonal ones placed in parking spaces throughout downtown. Ensure any new bike racks allow the bike frame to make contact at two points, similar to the on-street bike racks. Consider adding bike lockers to high bike activity locations or within the parking ramps. Bike lockers provide extra security and can be rented and/or reserved by regular bike riders.

EVALUATE OPPORTUNITIES FOR SHARED MOBILITY

New mobility options like bikeshare, e-scooters, and microtransit can improve mobility through downtown.

- » **Support bikeshare and e-scooters** to expand options for short trips. The City has recently adopted regulatory policies for private bikeshare companies. The city should proactively identify locations for bikeshare and e-scooters near large public parking lots (ramps and surface lots), transit stops, and near ride-share drop-off/pick-up locations.
- » **Consider a pilot study of a high-frequency downtown circulator route** that would connect downtown East Grand Forks to downtown Grand Forks or run along 3rd Street or 4th Street.

EXPAND RIDE-SHARE OPTIONS

The current drop-off/pick-up spaces were selected based upon current need in relation to the downtown nightlife. With redevelopment potential, and the potential growth in rideshare, additional opportunities to expand drop-off/pick-up locations and policies may exist.

- » Currently, all three drop-off/pick-up locations are north of DeMers Avenue. However, the current parking demand shows some high parking demand locations south of DeMers Avenue, including in front Town Square on 3rd Street, Kittson Avenue between 3rd Street and 4th Street, and DeMers Avenue between 3rd Street and 4th Street. Adding drop-off/pick-up spaces at these locations can help encourage ride sharing while limiting potential impacts, like congestion and double parking.
- » To encourage ridesharing and discourage single-occupant vehicles, rideshare drop-off/pick-up locations should be designated at premium locations (those locations with high on-street parking demand) indicative of major destinations in downtown.
- » The current drop-off/pick-up locations are restricted to 10 PM to 3 AM. Expanding those hours to begin earlier, to coordinate with the dinner hours could improve localized on-street parking deficiencies.

GROW TRANSIT ATTRACTIVENESS

Cities Area Transit is the transit provider for Grand Forks and East Grand Forks. They recently realigned their routes to provide higher frequency service through downtown East Grand Forks and other major destinations on the Grand Forks side, including the University of North Dakota Campus, Columbia Mall, and Grand Cities Mall, with most of their routes still running through the Metro Transit Center in downtown (450 Kittson Avenue). The current transit routing is well positioned to provide accessible and convenient transit options for downtown employees.

- » Continue encouraging transit ridership and seek additional ways to expand transit's attraction to choice riders.
- » Seek partnerships (Columbia Mall or Grand Cities Mall for example) to establish park-and-rides on high frequency routes.
- » Evaluate incentives for businesses and property owners to encourage employees to use transit (or other modes) to decrease weekday parking demand. Potential incentive opportunities could be a reduction in the parking assessment.

-
- » Explore partnerships between Cities Area Transit and major downtown event owners (Downtown Development Association) to provide reduced price or free transit rides before, during, and after major events.

KEY ISSUE #5: ENFORCEMENT

Nearly one in four vehicles parking in downtown Grand Forks stay beyond the posted time limits.

Nearly one in four vehicles parking in downtown Grand Forks stay beyond the posted time limits. These overtime violation rates reduce the effectiveness of parking management and limit availability of parking for patrons of local businesses and city and county services. Overtime violations may contribute to the negative perception of parking if the best parking spaces are occupied for a long time. Keeping high demand parking spaces constantly turning over can improve the perception of limited parking in Downtown.

While no one wants a parking ticket, maintaining consistently applied enforcement is key to efficient parking supply management. There are a variety of barriers that currently prohibit a consistent enforcement effort that the opportunities and alternatives discussed here are designed to address.

EXPAND ENFORCEMENT AND EDUCATION

The Grand Forks Policy Department (GFPD) provides parking enforcement for the City of Grand Forks. Monday through Friday, Community Service Officers patrol downtown, but they have other duties that are prioritized over parking enforcement. Additional enforcement occurs during down time, as available, which is typically during the overnight period. In addition to the low priority of parking enforcement, GFPD does not have the proper equipment that would accelerate and track enforcement.

- » **Implement a digital tracking and ticketing system.** GFPD currently chalks tires and uses a hand-held device to issue tickets. This makes enforcement difficult, especially when other obligations arise. Additionally, new case law found chalking tires is an unreasonable search and is unconstitutional. Implementing a digital issuance and tracking system can help simplify this process. UND uses a license plate recognition system from Genetec that can determine if parked vehicles are eligible for parking in their space, eliminating the need for physical permits. License plate readers come with high price tags but efficiently and accurately can track overtime violations; UND reported the license plate recognition system cost over \$200,000 to install and implement. They also recently purchased a ticketing software from T2 systems that uses a smart phone and Bluetooth enabled printer, at a cost of \$168,000. Other systems are available and would need to be considered for competitive bids.
- » **Adopt a graduated parking fine.** GFPD has indicated, and the data shows, that the current \$20 fee is ineffective at discouraging overtime parking violations. A graduated fine structure reinforces parking regulations without punishing the infrequent offender. The fine structure might look like this:
 - 1st Offense: \$0 fine with a warning. Include parking map and education materials.
 - 2nd Offense: \$25 fine with education materials.
 - 3rd Offense: \$50 fine.
 - 4th Offense: \$75 fine.
 - 5th + Offense: \$100 fine.

If an offender remained citation free for a set period (typically six months to one year), the offense count would reset. This policy would likely necessitate the use of a digital tracking and ticketing system for ease and efficiency of writing the correct citation level.

The City of Fort Collins, Colorado includes a graduated fine schedule that includes warnings for the first overtime violation, up to \$50 for the fourth or more violation, if paid within 15 days. After 15 days, the fines increase to \$20 for the second, \$50 for the third, or \$75 for the fourth or more. Other cities that use graduated fines include:

- » Fargo, ND: \$20 for the first violation within the prior six-month period, \$20 for the second, \$25 for the third, and \$30 for the fourth or more. The ticket issuer can waive the first violation and issue a warning ticket.
- » Iowa City, IA: warning for a first ticket up to \$25 for the sixth or more ticket.
- » Portland, Oregon: \$44 for first ticket up to \$70 for third ticket
- » Aurora, Illinois: \$5 for first ticket up to \$100 for the twentieth or more ticket

- » **Identify additional resources for parking enforcement.** The previous parking study recommended dedicated parking enforcement officers, at a rate of one to 600 to 800 parking spaces, completing an enforcement circuit up to three times Monday through Friday. With 960 on-street and 1,325 public off-street parking spaces, this would require up to three dedicated parking officers. Increasing certainty with which parking tickets are administered would further serve to deter parking overtime offenses.
 - While it is unlikely GFPD is interested in reallocating their existing resources to full-time parking enforcement, additional partnerships and cost-sharing agreements between different city departments, special assessment districts, or private organizations may allow for enhanced parking enforcement as part of a larger parking management program.
 - If additional resources for parking enforcement are unavailable, prioritize enforcement at high demand and high violation locations including 3rd Street and around CHS. High violation locations are shown in Figure 18.

KEY ISSUE #6: INVESTMENTS IN PARKING INFRASTRUCTURE

Parking infrastructure is very costly. In 2017, the median parking structure construction cost was \$19,700 per parking space, with a range between \$16,500 and \$25,300⁵. The Roberts Common's Parking Garage in Downtown Fargo, constructed in 2017, cost \$19,752 per stall. Proactively identifying maintenance issues and efficiently utilizing the parking ramps are imperative to ensure the investments last and are worthwhile.

COUNTY RAMP INFRASTRUCTURE MAINTENANCE

In the 2011 Parking Study, drainage and joint issues were identified in the County Ramp and they currently have 18 stalls blocked off due to leakage issues. The County is in the process of addressing the drainage and structural issues to prolong the life of the structure.

Despite these structural issues, the County Ramp is an important component of the overall parking environment in downtown. Its 353 parking spaces are accessible to the heart of downtown and the location of many of the largest events in downtown. Removing this ramp structure permanently would likely have significant impacts to weekday parking level of service. The county should establish a regular maintenance program to extend the useful life of the structure.

CENTRAL AND CORPORATE RAMP INFRASTRUCTURE MAINTENANCE

Previously identified infrastructure needs have been addressed at the Central and Corporate Ramp. As the structures age, a regular maintenance program should be established to ensure state of good repair is preserved.

⁵ <http://denver.streetsblog.org/wp-content/uploads/sites/14/2017/10/2017-Cost-Article.pdf>

MONETIZING THE PARKING RAMPS

The City of Grand Forks has found “the availability of free parking in the downtown area of the city would have a beneficial effect on businesses in the downtown area” and “to provide free parking in the downtown area, it is necessary that the costs of operation and maintenance of the municipal parking system in the downtown parking area be apportioned to the businesses within the downtown district on an equitable basis.” This is the foundation of the current parking assessment.

However, as part of an updated parking management system, retrofitting the three parking garages to include a ticketing and gate arm system would provide additional revenue to invest back into downtown. Operations of a ticketing and gate arm system should consider:

- » **First two hours free.** The current ramps permit 2-hour free parking, with enforcement necessary to ensure compliance. However, a gate and ticketing system would enforce an automatic fee for those that elect to stay longer. This would reduce the enforcement burden for GFPD.
- » **Raise gate arms during evenings and weekends.** These times would likely remain free, so gate arms would not be necessary. This also reduces unnecessary delays and paper tickets.
- » **Impacts to traffic.** Ticketing upon entrance could result in small queues on the street. The only location this may cause issues is the County Ramp, with the entrance/exit on 3rd Street. The other entrances are on wider roads with turn lanes. No parking areas should be marked to permit additional stacking distance at the entrances and visibility at the exits.
- » **Reserved parking signage would be unnecessary.** Permitted parking is currently reserved using signs and enforcement is necessary to ensure compliance. However, a ticketing system would allow reserved parking holders access through RFID cards or other passes with no additional fee while also allowing others to use the ramp. This would also simplify the process for non-permit parkers. Reserved parking could be maintained and signed but should be removed from the first level.

Roberts Commons Parking Garage is the newest parking garage in Downtown Fargo, North Dakota. This garage includes a variety of retail spaces ranging from 558 to 5,684 square feet and includes bike parking and public restrooms. Parking is free for the first two hours, after 5 PM, and on Saturdays and Sundays. The facility primarily tickets upon entrance with payment at the exit gates, however some evenings and weekends, the gate arms are lifted, permitting free entrance and exit.



KEY ISSUE #7: LEVERAGING TECHNOLOGY TO BENEFIT SYSTEM

Many of the alternatives discussed in this report would benefit from existing technology applications to aid in the implementation and/or streamlining of parking management and operations. Preparing for and identifying opportunities to identify and plan for new and emerging technologies should also be considered as part of a comprehensive approach to parking management. As parking becomes more constrained and downtown becomes more active, these technology applications will become more important.

CHANGEABLE MESSAGE SIGNS

Changeable message signs (CMS) display specific messages for a variety of purposes, including incident management, special event applications, travel times (congestion), and destination guidance. CMSs can be used for specific vehicular wayfinding to help find available parking or divert traffic in the event of a bridge or road closure. The flexibility these messages provide can increase their utilization for a variety of downtown transportation management needs. CMSs are used in Downtown Minneapolis to direct drivers to parking during events, prohibit turning movements during peak hours, and safety messages. Specific guidance on these signs can be found in Section 2L in the 2009 *Manual on Uniform Traffic Control Devices*.

Figure 59: Changeable Message Signs in Downtown Minneapolis



DYNAMIC PARKING COUNTS

A system of sensors can be retrofitted in the existing parking ramps to allow for a dynamic parking count to improve parking operations. This is also called Automatic Parking Guidance Systems. Colorado State University's South College Garage uses sensors with overhead lights to indicate open spaces. This information links to the digital entrance signs, to provide information on the number of spaces on each level, reducing vehicle circulation searching for a parking space. These applications are shown in Figure 61.

This information can also be linked to wayfinding signs located on the edges of downtown to direct drivers to the most available parking lots. Como Park in St. Paul, Minnesota uses dynamic parking wayfinding signage to direct visitors to one of their many surface lots across the large regional park, shown in Figure 60.

Figure 60: Dynamic Parking Wayfinding Signage in Como Park, St. Paul, Minnesota



Figure 61: Colorado State University's South College Avenue Garage



PREPARE FOR LEGALIZATION OF PARKING METERS

For seventy years, on-street parking meters have been banned in the State of North Dakota. In the 2017 legislative session, efforts to repeal that ban were unsuccessful. Parking meters are often controversial, and they are not necessarily right for Downtown Grand Forks under current parking conditions. However, if legalized, and as parking becomes more constrained, the opportunity to discourage single occupant vehicles through parking management may become an important policy tool. Dynamic parking pricing can respond to peak demands across all downtown or be specific to a certain block face, depending on needs, or the prices dropped to \$0 during nights and weekends. Installation of parking meters should accept credit cards and include a mobile application that reminds people of their space and time limits to proactively manage parking in the least punitive way possible. Opportunities to integrate parking meters with the technology in ramps, the permitting system, and mobile applications can totally streamline how parking is delivered in Downtown Grand Forks.

Smart parking meters would also permit an option to reserve parking spaces and display parking availability to allow people to proactively plan their trip downtown. These types of operations procedures will be important as parking utilization exceeds the 85 percent threshold.

UNDERSTAND AND PLAN FOR FUTURE TECHNOLOGY IMPACTS

The future of transportation is more uncertain and exciting than any time since the advent of the automobile. Changes to mobility with connected and autonomous vehicles could increase travel by six times overburdening the transportation network or it could revolutionize car ownership and move to a managed fleet increasing ride-hailing and transit services. There are too many scenarios to plan for just one future, so the City of Grand Forks should consider how they manage transportation and parking demand in Downtown Grand Forks.

- » **Prioritize a flexible curb space.** As connected and autonomous vehicles emerge, shared mobility technologies enter the Grand Forks market, and activity downtown redevelops increasing delivery needs, curb space will be at a premium. The City should consider developing a comprehensive and dynamic inventory of curb space by time of day. This will allow the city the best information possible to create policy when the need arises.
- » **Prioritize the needs of bicyclists, pedestrians, and high-occupancy vehicles.** As new technologies emerge, their needs may seem urgent or important, but downtowns will always need to support biking, walking, and transit trips. Develop policies that require investments in downtown that prioritize the needs of bicyclists, pedestrians, transit, and high-occupancy vehicles.
- » **Continue to monitor transportation trends and their expected impacts to parking demand.** Staying ahead of these trends will allow the City to consider policy needs before they become urgent.

KEY ISSUE #8: EVENT MANAGEMENT

For many people, parking in downtown is associated with a special event, which often brings big crowds downtown, creating parking challenges and congestion. An effective parking event management plan can help create a positive experience for everyone who comes to enjoy the great things Downtown Grand Forks has to offer.

- » **Fully invest in and implement comprehensive signage and wayfinding systems.** Discussed in previous sections, comprehensive signage and wayfinding systems are imperative to directing drivers to available parking and reduce circulation that contributes to congestion.
- » **Develop protocols for downtown events.** Just like the Alerus Center has a traffic management plan for events, so too should the largest and most disruptive Downtown Grand Forks events. Collecting additional data during the event permitting and working with stakeholders like Grand Forks Central and the Empire Arts Theater can help define what level of effort is necessary for the plan. For example, a single show at the Empire Arts Theater or a basketball game at Grand Forks Central on their own, likely does not warrant a parking management plan, but the closure of DeMers Avenue for the Potato Bowl Parade would. The parking management plan would need to include information sharing and press releases, event signal timing, digital wayfinding and dynamic message signs, shuttles from areas outside of Downtown, and other traffic control measures as necessary.
- » **Coordinate parking information with event owners to ensure a consistent set of information is shared for every event.** Depending on the event location, the most accessible parking will vary. Advanced information should be listed on the city's website and social media pages to allow visitors to plan their trip in advance. The use of hashtags that correspond with events and Grand Forks parking could make the information easier to access.
- » **Connect Cities Area Transit with events** to offer free or reduced rides for large events.

PUBLIC INPUT

The Grand Forks – East Grand Forks Metropolitan Planning Organization, City of Grand Forks, Downtown Development Association, and KLJ presented the Downtown Grand Forks Parking Study existing conditions and alternatives at the public input meeting held March 21st at the Empire Arts Center in Downtown Grand Forks. This meeting included an open house and two presentations.

MARKETING EFFORTS

A variety of techniques were used to inform the public about their opportunity to provide input on the parking alternatives.

- » A press release and box ad were published in the Grand Forks Herald newspaper.
- » Social media posts on the MPO and DDA Facebook pages.
- » Emails sent to interested parties.

PUBLIC INPUT MEETING #1

More than 30 people came to the public meeting, where they were given multiple opportunities to provide comments and feedback.

- » A written comment form that included a mailing address and e-mail address. People could elect to leave the forms with the tea that evening or send them in later. No written comments were left at the meeting with two additional comments emailed after the meeting.
- » Stickers and post it notes to indicate support for the alternatives. These are summarized below.

Figure 62: Photos from Public Meeting



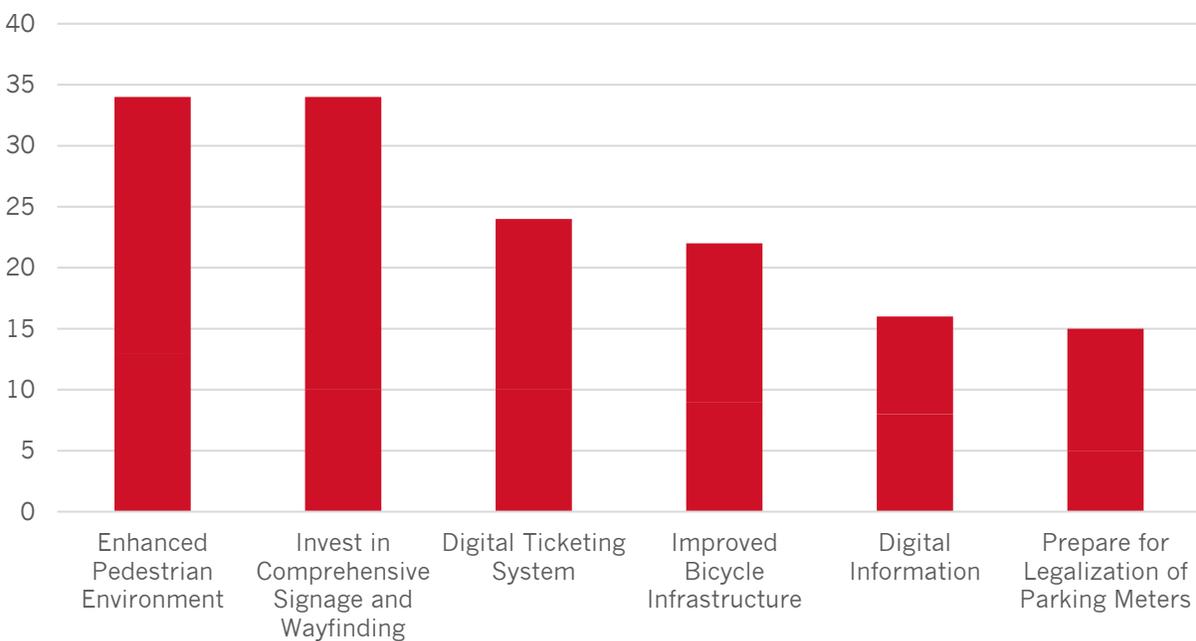
ADDITIONAL FEEDBACK

The Downtown Action Plan held an open house on May 1st. This open house included the same informational boards and opportunities to provide comments on parking as the public input meeting on March 21st. This feedback has also been incorporated.

ALTERNATIVES FEEDBACK

The public was asked to place dots on the key issues and potential alternatives at the public meeting and the Downtown Action Plan's open house. There were 294 dots placed, with the top six alternatives receiving 49 percent of the total dots. Multimodal mobility (enhanced pedestrian environment, improve bicycle infrastructure, opportunities for shared mobility, signage and wayfinding) were the most popular and indicate strong support for these types of improvements among meeting participants.

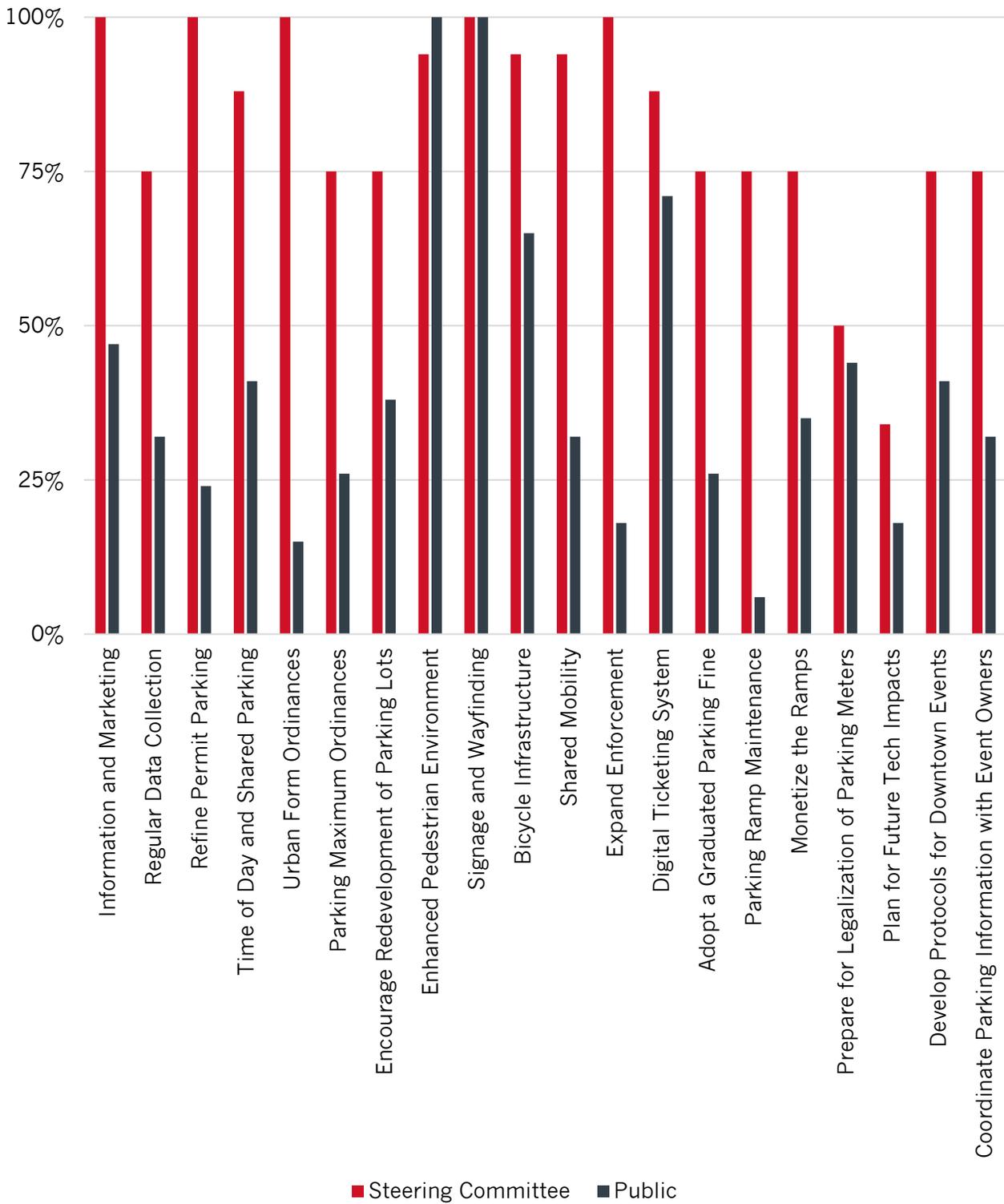
Figure 63: Highest Rated Alternatives



STEERING COMMITTEE SUPPORT

The project's Steering Committee completed a similar exercise to indicate support for the parking alternatives. Their results are combined with the public's alternatives feedback and shown in Figure 64. Improving the pedestrian environment and wayfinding were both strongly supported by the project's Steering Committee and the public.

Figure 64: Steering Committee and Public Support for All Alternative Areas



IMPLEMENTATION

The implementation plan for the Downtown Parking Study is intended to guide in the adoption of parking management and operations alternatives that will help ensure effective parking operations over the next 10 years. The implementation plan was heavily influenced by the Steering Committee and public input received throughout the project. This plan is broken into three timeframes: short-term (zero to three years), mid-term (three to seven years), long-term (seven to 10 years).

SHORT-TERM IMPLEMENTATION

The short-term implementation plan represents alternatives with significant public and Steering Committee support.

INFORMATION AND MARKETING

One of the most significant opportunities to change people's perception of parking downtown is to expand the availability, visibility, and accessibility of parking information.

- » Undertake a comprehensive marketing campaign. The Downtown Development Association has developed a marketing strategy for the upcoming construction season, which could be leveraged and expanded beyond the DeMers Avenue reconstruction.
- » Implement the branding and wayfinding identified by the DAP, including the changes to the exterior signage on all three parking ramps (Central, County, and Corporate).
- » Expand branded information, including a color-coded parking restriction map.
- » Create a dedicated parking website that includes parking information for both the City and County owned ramps.

SIGNAGE AND WAYFINDING

Most of Downtown Grand Forks is walkable in 15 minutes or less and there is plenty of parking around every destination downtown. Implementing the signage and wayfinding standards identified in the DAP can help people make decisions about where to park and let them know how easy it is to walk between destinations. This may help encourage a “park once” attitude downtown.

EVALUATE PARKING AUTHORITY FEASIBILITY OR MANAGEMENT MODELS

A Parking Authority would establish a working body to manage regular operational issues and implement downtown parking strategies. A Parking Authority should include the City of Grand Forks and Grand Forks County, and work to include the business community in decision making. The Parking Authority would ensure that management strategies, including marketing and information are uniformly and consistently applied, and may provide opportunities for cost-sharing, especially if private parking management is pursued.

EXPLORE PRIVATE PARKING MANAGEMENT

Currently, the City of Grand Forks and Grand Forks County manage their parking independently, utilizing valuable staff time and resources. Contracting with a private parking management firm may expand opportunities for more efficient operations of parking in downtown Grand Forks and integrate many of the management and information items identified in the alternatives analysis. These firms comprehensively manage all aspects of parking, including maintenance, permitting, information, technology, and enforcement.

- » The City of Fargo contracts with Interstate Parking for parking management and operations within Downtown. In 2018, the City paid Interstate Parking \$550,000 in management fees to manage 1,640 parking spaces in multiple ramps and surface lots across Downtown Fargo, at a rate of \$335 per parking space. However, Interstate Parking took in \$1.43 million in revenue, for a net operating income of \$900,000.
- » The City of Bismarck contracts with Rocky Gordon & Company to manage 1,754 parking spaces in three ramps and one surface lot in Downtown Bismarck. The 2019 budgeted amount for these services includes \$521,000, plus \$1.16 million in capital expenses. They expect \$1.575 million in revenue to 2019. Ultimately, private parking management cost the City of Bismarck \$297 per parking space. The net operating revenue was not available.

Based on these costs, the City of Grand Forks and Grand Forks County could expect to spend around \$425,000 for private parking management.

PARKING RAMP OPERATIONS AND PERMITTING

Parking ramp operations and permitting are often seen as confusing and inconvenient, both for permit and non-permit holders. Refining parking ramp operations and permitting process can help expand access to the ramps for visitors.

- » Streamline the restricted times to be consistent across all three ramps and on-street parking. The Central Ramp is restricted from 7 AM to 4 PM or 6 AM to 6 PM, the Corporate Ramp is restricted from 6 AM to 6 PM, the County Ramp is restricted from 7 AM to 5 PM, and on-street parking is restricted from 8 AM to 5 PM. Consider a restriction of 7 AM to 5 PM which would allow residents to park overnight without worrying about violations and provide certainty to permit holders than a spot is available before 8 AM.
- » Remove 24-hour restricted parking from the first level.
- » Simplify the permitting process to allow for online permit purchase and cancellation.
- » Clearly sign each parking space that is intended to be used by a permitted parker. Signage should include when the space is reserved (24-hours v. 7 AM to 5 PM, Monday through Friday). See Figure 65 as an example of clear parking signage.

Figure 65: Example Reserved Parking Sign



With Central High School expected to reduce their need in the Central Ramp, there are opportunities to open parking spaces up to the public for 2-hour parking. This would provide additional parking for some of the highest demand areas in all downtown, but would increase the amount of parking enforcement necessary, since there is not currently any mechanism to enforce a 2-hour limit (i.e. paid parking). Given currently parking permit availability, it is unlikely that maintaining the unused CHS parking spaces as permit parking will provide any additional revenue for parking operations.

The Corporate Ramp may also benefit from opening a small portion of currently permitted parking for public 2-hour parking.

Any changes to operations and permitting should be signed properly and heavily marketed.

PRIORITIZE WALKING AND BIKING INVESTMENTS IN DOWNTOWN

Improving the pedestrian and bicycle environment through Downtown was highly supported by the public and was a focus of multiple alternatives in this study and the Downtown Action Plan. In the short-term, the City should evaluate opportunities to implement the following walking and biking investments in Downtown Grand Forks:

-
- » Implement the wayfinding strategy of the Downtown Action Plan.
 - » Complete an ADA evaluation of downtown and develop strategies to implement necessary improvements.
 - » Support multimodal investments identified in the Downtown Action Plan and the forthcoming Downtown Transportation Plan.
 - » Expand bicycle parking locations at high activity locations.

EXPAND PARKING ENFORCEMENT

Enforcement is an important part of a successful parking management program. The City of Grand Forks should adopt new parking enforcement strategies to ensure parking utilization turns over reliably and consistently.

- » Evaluate the adoption of a digital tracking and ticketing system. This can help make enforcement more efficient and would be necessary to adopting a graduated fine system.
- » Consider adopting license plate readers to assist with on-street and ramp parking enforcement.
- » Prioritize enforcement around high violation and high activity areas, including 3rd Street.
- » With changes to enforcement, additional data should be collected to see if behavior change occurs. Completing a turnover survey six months after implementation should indicate whether this is effective.

LAND DEVELOPMENT CODE CHANGES

The Downtown Action Plan and this study identified opportunities to improve the ordinances and development process in downtown, including

- » Incorporating the Downtown Review Board guidelines into ordinance and follow other DAP recommendations for downtown land development code items.
- » Establishing parking maximum ordinances. This will likely require changes to other elements of the downtown parking ordinances to ensure clarity for developers.

Implementing these changes could occur later but should occur concurrently with any other land development code changes recommended in the DAP.

CODE RECOMMENDATIONS

Grand Forks' Code of Ordinances regulates off-street parking. Chapter 18 Article 3 specifically provides the rules and regulations for parking in the Land Development Code. However, within 18-0302 (11) (A), "establishments in any district which have paid an assessment for the provision of off-street city parking lots shall be exempt from the provisions of this subsection". This effectively eliminates parking minimums for the downtown area established in Chapter 14-0203.

Parking maximums and urban form guidelines will need to be written into the code in a way that cannot be exempted in the parking assessment district and should be incorporated into Chapter 18 to ensure they apply to the parking assessment district and the B-4 central business district. This will create a uniform application of parking standards for the entire B-4 central business district zone. Consider adjusting the parking assessment district to include the entire B-4 central business district.

MID-TERM IMPLEMENTATION

The mid-term implementation alternatives are designed to validate decisions and policy changes made in the short term and address parking issues that may arise as more development is completed downtown.

EXPANDED DATA COLLECTION

To verify and validate that parking management strategies are achieving the intended results and redevelopment activity does not have localized impacts, the City should develop a framework to regularly collect parking data, including utilization, turnover (violation), and business and visitor parking sentiment.

MAINTENANCE AND IMPROVEMENTS TO PUBLIC FACILITIES

A series of maintenance and improvement items were identified for the ramps and city-owned parking lots that should be addressed and planned for.

- » As parking demand grows with reinvestment in downtown, the Riverboat Road parking lot will become more important to managing parking operations. Improvements in lighting and security should be considered to make that parking lot location more attractive.
- » Consider monetizing the parking ramps, installing gate arms at entrances and exits, instead of/or in addition to the current permit system. This would reduce enforcement requirements and provide more publicly available parking.
- » Establish a regular maintenance program for the three ramps to ensure state of good repair is preserved.

ADOPT A GRADUATED PARKING FINE

If increased parking enforcement does not address the overtime violation rates, consider adopting a graduated parking fine to encourage compliance through higher fines. The graduated parking fine is designed to be harshest on chronic offenders, while providing leniency to those unfamiliar with downtown parking regulations.

DOWNTOWN EVENT MANAGEMENT

The city may have an expanded role to play in downtown event management, especially when it comes to traffic circulation, routing, and information. The city should work with event owners to ensure uniformity in event operations and information dissemination to create a reliable and consistent experience for downtown visitors.

LONG-TERM IMPLEMENTATION

The long-term implementation alternatives are designed to be prepared for future expected changes to parking demands and trends.

PLAN FOR FUTURE TECHNOLOGY IMPACTS

As transportation changes and evolves, whether it is connected and autonomous vehicles or more biking and walking, the consensus around the country is that parking demand will change. The City should monitor travel trends within the City of Grand Forks and at a national level to ensure they stay at the cutting edge of parking management strategies.

ESTABLISH A PARKING METER POLICY

While the State of North Dakota currently prohibits parking meters, the first repeal efforts have already occurred. The City should proactively identify their parking meter policy and revisit it periodically to ensure they are prepared with any statewide changes to legislature.

Overcoming Barriers Strengthening Connections

M.P.O.
M.P.O.
M.P.O.

Grand Forks - East Grand Forks
Metropolitan Planning Organization

Ensuring Opportunities Planning One Community



ENGINEERING, REIMAGINED