First Street at Huron Street
Fifth Avenue at William Street
Liberty Street at Division

It also included the following intersections within the downtown UM campus.

- Hill Street at State Street
- Church Street at South University Avenue
- State Street at South University Avenue
- State Street at Huron Street

While the vulnerability of pedestrians to impacts from autos makes any level of crash activity unacceptable, it’s important to note that less than 2 percent of all crashes in Ann Arbor involved pedestrians, placing it in similar territory of peer cities like Portland, OR, Madison, WI, and Boulder, CO. And, for data collected 2008 – 2012, compared to other cities in southeast Michigan, Ann Arbor has roughly one-third fewer pedestrian crashes per percent increase in pedestrian mode share.

**Intersections and Crosswalks**

65% of pedestrian/motor-vehicle crashes in Ann Arbor occur at intersections. Addressing this safety issue was a particular focus of the newly released Downtown Street Design Manual. Specific improvements identified in the manual include creating more-logical crossings (direct, short, aligned with sidewalks, etc.), ensuring completeness of pedestrian crossings at intersections, providing crossing islands where feasible and appropriate, and continuing to implement leading-pedestrian intervals and restrict right-turn-on-red movements.

**Midblock Crossings**

Pedestrians will generally seek the shortest path to their destinations regardless of formal crossing infrastructure, which is typically restricted to intersections. This often means cutting through blocks and/or crossing streets where there is no crosswalk striped. Shoppers often cross Liberty Street when there is a gap in traffic, or students can be seen waiting on a median of North University as traffic goes by. Ann Arbor has shown a commitment to supporting safety in this regard by installing 33 major mid-block pedestrian crossings between 2007 and 2014, about 31 percent of the total recommended in the Non-Motorized Transportation Plan. These crossings, like the one on Main Street between William Street and Liberty Street, increase visibility and allow pedestrians more direct routes to their destinations without having to travel to the next intersection.

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6 Craig Hupy, City of Ann Arbor, Pedestrian Crash Data Comparison, 2014, 2.
7 Ibid, 4.
8 Ibid.
9 Ibid, 148.
Access to Housing

Downtown’s high level of walkability creates a distinct opportunity for high rates of walking to work. The density and diversity of land uses within downtown makes it viable to live within walking distance of a major job center, as well as daily goods and services. This unique opportunity for car-independent living and commuting has been a critical factor in the increasing demand for downtown and downtown-adjacent housing, as reflected in both the growth of households and the cost of housing in these areas.

These new residents present a growth opportunity for in downtown jobs and businesses that comes with little new parking demand beyond what is provided at home. Taking full advantage of this opportunity is a priority for continuing downtown’s history of thriving on less-than-typical levels of parking supply. This opportunity, however, faces two key challenges.

The first is the cost of providing parking at or near new downtown residences. The cost of recent DDA supply expansions has gone well-above $45K per space, and private developers face similar, if not higher, costs. This both reduces how many new housing units can be provided on each new development site, and increases the cost of occupying these new homes.

Parking costs and high demand relative to supply present the other significant challenge to expanding walk-to-work housing opportunities. The resulting cost of downtown and near-downtown housing is rapidly reducing walkable-commute opportunities low- to moderate-wage downtown employees. The benefit of new Downtown residents, in terms of creating more growth with less parking, is thus offset by retail and service workers who increasingly find their housing options limited to areas lacking walking, or even transit-based, commuting options.\(^\text{11}\)

BICYCLE

According to the getDowntown 2013 Commuter Survey, 7% of downtown commuters bike to work. Additionally, the study reports that 24% of commuters either regularly commute by bike or have commuted by bike ten or more times in the past year. By contrast, just 3.5% of citywide commuters primarily bike to work. This is high relative to regional, state, and national norms, but low if compared to comparable cities such as Berkeley, CA (6%), Boulder, CO (7.4%), Cambridge, MA (4.1%), and Eugene, OR (8.8%).

The capacity of the existing network, including recent and pending improvements, to attract future trips away from driving options will largely depend on continuing efforts to complete and expand the existing bike network. Improving safety along high-risk segments will be particularly important beyond the Downtown. Safe and effective (relatively direct) connections to Downtown’s robust network of bike routes, parking options, shared bikes, and bike-friendly transit options is key to expanding Downtown’s biking culture outward into viable commuter sheds.

Research has shown that protecting bicycle facilities increases their use. For example, Boulder, CO saw a 54% increase in bike use on Folsom Street after the street, originally having an unprotected bike lane, was redesigned with a protected bike lane. Rio Grande Street in Austin, TX saw a 126% increase in bicycle volume after the conversion of an unprotected bike lane to protected. Designing facilities for the most vulnerable users can increase their accessibility for more users.

Network Completeness

Figure 18 presents an overview of the robust bike network throughout downtown, including bike lanes and sharrows, as well as stations for the recently-launched bike-share program, ArborBike.

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This network supports a distinctly high level of service for local bike travel. This is critical to supporting reduced auto-dependence and ownership rates among downtown and downtown-area households. However, to maximize the benefit of this network in increasing cycling-commute rates, the Downtown network needs to connect to safe and effective cycling routes within the surrounding areas of the city and its suburbs. Instead, in most cases, the Downtown network of in-road facilities ends abruptly at the edge of the district. Some employees interviewed in focus groups mentioned the regular practice of driving to a distant lot, neighborhood, or Park and Ride lot and biking the rest of the distance into work, again highlighting the importance of connections between the downtown and the larger city.

Unfortunately, the quality of the regional network has been declining rather than increasing toward the level provided in downtown. According to the 2014 Non-Motorized Progress Report, the pavement, marking and striping scores of citywide in-road bike facilities decreased by 1.81%, 3.69%, and 7.27%, respectively, between 2011 and 2013.17

There are also some issues specific to the UM campus areas in downtown, mostly related to shared-use paths creating conflicts between cyclists and pedestrians. While there is no formal survey on the subject, students and faculty have reported concerns with the way bicyclists and pedestrians share pathways across campus. The only on-street bike lanes within the university are located on North University Avenue and part of South University Avenue (see Figure 18). The lack of bicycle lanes and sharrows on the main roads through campus creates congestion within the campus paths, where cyclists ride on paths intended for pedestrian use.

**Bike Parking**

From May to August 2011, the DDA completed 12 surveys of parked bikes within the DDA boundary. Figure 19 shows the blocks with the highest amount of bike parking. The report also shows that the blocks with the lowest concentration of parked bikes were on blocks on Huron Street, North and South University Avenues, and parts of Main Street and Miller Avenue. The lack of bikes parked on these blocks is consistent with their lack of bike parking infrastructure. Additionally, it is not surprising the Huron Street often has no bikes parked on it, as it is a busy road with no lanes or sharrows.

**High-Risk Locations**

There is an average of ~200 crashes per year in Ann Arbor involving pedestrians or bicycles, split evenly between these. Of the crashes involving bicycles, 75% caused injuries and zero were fatal. Of the crashes involving pedestrians, 91% resulted in injuries and three were fatal. A majority of crashes (63%) involving cyclists occurred on road segments without any non-motorized facilities available. Meanwhile, just 17% of pedestrian crashes occurred on roadways without pedestrian infrastructure. This brings attention to the need of more facilities that allow for cyclists to make

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18 Non-Motorized Plan Update, 2013, 137.
20 Ibid.
21 Washtenaw Area Transportation Study, 2013 Traffic Crash Report for Washtenaw County, 16.
22 Ibid.
safe turns throughout the city. The map below shows that many crashes took place in and around Downtown.

Figure 20  Pedestrian and Bicycle Crashes in Ann Arbor (2013)

Data Sources: 2013 Traffic Crash Report for Washtenaw County

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BIKE-SHARE (ARBORBIKE)

Figure 21  Ann Arbor Bike Share Locations and Utilization to Date

ArborBike is a B-Cycle-supported, bike-share program, begun as a pilot in 2014, and most recently expanded in May of 2015. ArborBike is a partnership between the Clean Energy Coalition, University of Michigan, AAATA, and the City of Ann Arbor. The Clean Energy Coalition (CEC), a nonprofit, nonpartisan organization dedicated to promoting clean energy technologies as a way to create healthier, energy-independent communities. The CEC is exploring options for starting similar programs in other cities, starting with Detroit.

The program currently has approval for three-season operation. Program administrators must arrange the removal of bikes and stations for winter. The timing of this is determined at the discretion of the City, based on its sidewalk clearance needs.

B-Cycle’s Role

B-Cycle provides the program with bikes, and the materials for the stations. It also provides the administrative and outward-facing websites, as well as customer service support. ArborBike staff

Data Sources: DDA, State of Michigan Open Data

24 bcycle.com
also have access to resources for repairs and maintenance, and staff attend B-Cycle World, an annual information/strategy sharing conference.

**Funding**

The program has three revenue streams. UM covers its operating costs. The rest is covered by a combination of fees (memberships and use fees) and sponsorships/advertisements. Fee revenue has been in line with expectations, if not a bit higher. Sponsorships, by contrast, have brought in far less revenue than expected. There is a sense, however, that this will change, as the program is expanded and better known.

**Goals and Objectives**

Aside from financial sustainability, the primary objective of the program is providing mobility options to reduce CO2 emissions within Downtown.

**Growth**

To date, the biggest catalyst for increased participation and ridership has been station expansion and exposure. The visible presence of stations has noticeably increased awareness, evident from increased inquiries from those who have seen the stations and want to try the system. The program recently added a marketing intern to its staff to help expand program awareness.

GIS transceivers, located on each bike, track the travel patterns during each use, which are being used to plan new locations and stations for the next expansion phase. Requests for station locations will also inform these decisions. Administrators are also reaching out to private property owners, particularly of residential properties, to develop stations on-site. Many of these property owners already advertise proximity to stations to potential tenants.

Administrators are also partnering with Ypsilanti-based advocacy organization to ensure that the program continues to incorporate important innovations, including the potential use of “trikes” (three-wheeled bikes) and payment options to accommodate use by those lacking credit cards.

**TDM Achievement & Potential**

Program administrators recently adjusted the daily hours of the stations, at the request of UM hospital workers, to allow this group to use ArborBike to connect to their jobs after alighting from buses at the Blake Transit Center. This represents an important indication that these bikes will be used to support non-driving commutes, providing an attractive “first/last mile” resource that can make options like transit and carpooling more viable. Focus group attendees were largely happy about the ArborBike stations in the downtown but many mentioned the lack of stations as a barrier to its use as a legitimate commuting or connection option.

**TRANSIT**

The quality of downtown’s walking and cycling networks deserve and receive a lot of attention and praise, particularly given Ann Arbor’s position within a highly auto-dependent region. Most of the decline in driving and commute mode shares over the years, however, has been linked to an increased embrace of transit. This embrace is a direct result of the quality and diversity of transit options available to downtown travelers.
While it will be important to continue to build upon cycling’s recent mode share gains, and to seek more “live near your work” opportunities for Downtown employees, increased transit reliance remains the most substantial opportunity to reduce aggregate parking demand. Fortunately all indications point toward a strong potential to continue past achievements in this area; including the increased transit utilization measures, expanded service levels, and the potential for new forms of rapid transit service that are summarized below.

Ridership

Transit use is rising with TheRide’s ridership hitting a record high for the second year in a row in 2013. Transit trips using the DDA’s go!pass, the unlimited-use transit pass available to downtown employees, increased by 7% from 2013 to 2014 with 457 employers and 4,000+ individuals participating. AirRide alone averages 4,000+ monthly riders to and from Detroit Metro Airport.

According to the AAATA’s Ridership by Route statistics,\(^{25}\) Route 4 – Washtenaw had the highest average weekday ridership of 5,139 rides and an average weekend ridership in 2014 of 1,298 rides. Other high-ridership routes include Route 2 – Plymouth at 3,350 weekday rides and 653 weekend rides, Route 6 – Ellsworth with 2,310 weekday rides and 875 weekend rides, and Route 5 – Packard with 2,168 rides and 422 weekday rides.

\[\text{Figure 22 Weekday Transit Ridership by Route}\]

\[\text{Data source: DDA}\]

The Washtenaw Route, which connects downtown Ypsilanti to downtown Ann Arbor, has had the highest increase in ridership over the last few years, increasing 27% in one year, from 2011 to 2012. Following this increase, in January 2012, TheRide doubled this route’s frequency, running

\(^{25}\) AAATA, Ridership by Route - October 2014.
buses every 5-10 minutes during peak hours and 15-20 minutes during non-peak hours.26 The DDA provided a grant in 2012 to increase service frequency on Washtenaw in 2012 and both Washtenaw and Packard in 2013. These grants continue.

Focus group attendees interviewed lamented the infrequent buses and lack of a user-friendly mobile app as barriers to using transit for their commute. Park-and-ride was often mentioned as something that employees had tried. However, some found it added too much time to their commute due to the bus stopping along the way from the park-and-ride lot to the downtown. Attendees proposed an express route from the park-and-ride lot to the downtown as a way to make the option more attractive.

Recent and Pending Service Improvements

Improvements identified in the Five-Year Transit Improvement Plan (2014) details proposed service improvements to the greater Ann Arbor area including fixed-route buses, on-demand services, and services for seniors and people with disabilities. Overall, the plan calls for a 44% increase in fixed-route services over the next 5 years. Key improvements to downtown service include the following.

- Improvements to almost every route that serves the City of Ann Arbor
- All routes except one will run later on evening weekdays, typically an hour later but sometimes more.
- Selected Ann Arbor routes will also start earlier on weekdays.
- Many routes will run more frequently, reducing crowding and wait times for riders.
- An express route from Ypsilanti to Ann Arbor will be added.
- The entire west side of Ann Arbor will see a restructured route system, with several routes split into 2 or 3 new route, making the resulting new routes more direct and convenient.
- In some cases, the redesigned routes expand into neighborhoods not previously served.
- Weekend services will be greatly expanded, with buses running 3-5 hours later into the evenings, on Saturdays and an hour on Sundays.
- Service hours for A-Ride (for people with disabilities) and Good as Gold (for seniors) will be expanded until 11:30 p.m. on weekdays and 10:30 p.m. on Saturday and 7:30 p.m. on Sunday.

The plan also outlines its benefits to non-riders including the following.

- Promoting economic activity by providing more access to job and educational opportunities
- Providing a lifeline for seniors, people on low incomes, and people with disabilities
- Reducing parking demand and congestion
- Creating a welcome mat for visitors who come to the area and would otherwise have to rent a car to get around
- Creating a community that is attractive to new college graduates and young families who increasingly prefer not to own a car

Plans for Rapid Transit Service

Opportunities to develop high-capacity, rapid transit along several corridors have been the focus of several studies. According to the City’s Transportation Master Plan Update (2009), the highest priority corridors are Plymouth/Fuller, Washtenaw, State, and Jackson/W. Huron.\(^{27}\)

The **Connector Feasibility Study**, completed in 2011, examined a series of alternatives – Bus Rapid Transit (BRT), Light Rail Transit (LRT) and monorail – for rapid mass transit service along the city’s north/south axis. The study estimated potential ridership for the service in the tens of thousands, and recommended BRT or LRT with a dedicated right-of-way through the downtown core. Implementation is currently pending funding commitments from UM.

The **North-South Commuter Rail Line** (also known as WALLY), is a proposed 27-mile commuter rail service that would connect downtown Ann Arbor and Howell, along with five intermediate stops. WALLY is intended to alleviate congestion along the US-23 corridor as well as provide sustainable transportation alternatives between these communities. This project would upgrade an existing freight line to commuter rail service and would attract an estimated average weekday ridership of 1,300.\(^{28}\)

Core rider demographics include discretionary travelers and UM faculty residing in Livingston County. WALLY would be administered by an inter-county rail transit authority, yet to be established, between Washtenaw and Livingston Counties. The corridor would be served by four morning and four evening train trips. While rolling stock has been acquired from Metra in Chicago, and preliminary railway designs have been produced, implementation is on hold due to lack of construction funding. In 2014, AAATA officials announced that WALLY would undergo a second 18-month, federally-funded feasibility study.\(^{29}\)

Enhanced transit service connecting Ann Arbor to Ypsilanti, Dearborn and Detroit, along the Michigan Avenue Corridor, was recently explored under a project called “Building Equitable, Sustainable Transit” (BEST). The focus of the study was to investigate how to reduce commute times and expand access to downtown services and employment in all four cities. Implementation is on hold as planners seek to secure federal New Starts funding.

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\(^{27}\) Transportation Master Plan Update, 2009, 49.


TDM PARTICIPATION & IMPACTS

Transportation Demand Management (TDM) represents strategic efforts to use the multimodal networks outlined above, as well as other drive-alone mobility alternatives, to reduce traffic and parking demand. For decades, TDM has been a critical complement to effective parking management in downtown, and a critical element in its economic success and growth. Not only does TDM help reduce necessary investments in parking supply, it directly identifies more-economical investment opportunities for better walking, cycling, and transit, all of which bring multiple, co-benefits beyond improved downtown access.

Following is an overview of the achievements and popular embrace of prominent TDM programs serving downtown.

GO!PASS

Participation

One of the most remarkable achievements of the getDowntown program is the steadily rising levels of participation it has attracted to its signature offering, the go!pass. Collectively, employers acquire an average of 6,500 go!passes per year, which accounts for about 60% of downtown employees.30 In the 2014 program year, go!pass users logged 662,692 trips, a 7% increase over the previous year.31 The go!Pass Monthly Usage Report from November 2014 to July 2015 shows nearly 500 employers participating in the program, with about 4,400 members using their cards during this period.32

Figure 23 Top 10 go!pass Organizations – Total Uses per Year

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<td>Google</td>
<td>Zingermans Deli</td>
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<td>4</td>
<td>Ann Arbor District Library</td>
<td>Ann Arbor District Library</td>
<td>The Dahlmann Campus Inn</td>
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<tr>
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<tr>
<td>6</td>
<td>Ann Arbor YMCA</td>
<td>Douglas J Aveda Institute</td>
<td>Gratzi / Chop House</td>
<td>The Dahlmann Campus Inn</td>
</tr>
</tbody>
</table>

Impact on Travel and Parking Demand

Figure 24  Commute Modes Among Downtown Employees

According to the 2013 getDowntown Commuter Survey, of those who responded, only 35% of downtown employees drive alone to work. This is particularly remarkable, given that 96% of survey respondents indicate that they have a driver’s license, and 88% have access to a vehicle that they could use for commuting. Of those who do not drive to work, 18% regularly commute using AAATA, and 25% occasionally commute using AAATA. 11.8% of 2013 respondents indicated that had reduced their rate of drive-alone commuting during the previous year. About 4% are now full-time transit commuters. By far, the most commonly cited factor in making these changes was access to the go!pass benefit.

Source: getDowntown 2013 Commuter Surveys

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33 getDowntown, getDowntown Decision-Maker and Commuter Surveys, 2013, 6.
34 Ibid, 8.
36 Ibid, 11.
Current levels of go!pass utilization and influence are estimated to reduce traffic into downtown by over 820 vehicles, with a commensurate reduction in parking demand associated with that.

**Impact on Employee Attraction & Retention**

An increasingly important benefit of the getDowntown program is helping downtown businesses attract and retain employees. The cost of parking, and the fact that most jobs lacked on-site parking, were previously considered significant competitive liabilities for downtown businesses. The walkability and distinctive Main Street qualities that were key to attracting visitors, were widely viewed as insufficient compensation for a lack of suburban-level parking benefits in attracting and keeping quality employees. This has changed significantly, as more and more companies and employees seek out Downtown for its transit accessibility, bike accommodations, walkable urban environment, and its rich, innovation-stimulating, urban environment.

Several meetings with Downtown employers, particularly those who have recently started up within, or relocated to, Downtown made this particularly clear. While the cost and hassle of parking was consistently cited as a negative component of the experience, nearly all indicate that the advantages of being Downtown far outweighed any negatives, including parking.

This turnaround has been achieved in part by getDowntown’s promotional and informational campaigns to make transit, bike, and rideshare commuting accessible to a population largely unfamiliar with these options. According to the 2013 getDowntown Commuter Surveys, 77% of
go!Pass employers reported that a comprehensive commuting benefit program is either helpful, very significant, or crucial in attracting and retaining good employees. Furthermore, 55% of employees with go!passes said that they consider the program to be an important benefit of their job.37

Commuter Bike Parking

To support regular bike commuting, getDowntown provides long-term, sheltered, and secured parking for bikes in the form of lockers and bike houses. Many local employees mentioned the potential value of having covered bike parking as a regular amenity and were surprised to find out that the DDA actually provides such parking in the form of lockers and bike houses.

Lockers

As of August of 2015, five of the nine bike-locker locations were sold out, and almost two-thirds of the twenty-nine total lockers had been rented for the 2015-2016 program year.38

Figure 26 Ann Arbor Bike Locker

Bike Houses

Figure 27  Ann/Ashley Bike House

The Ann/Ashley Bike House opened at the end of July 2015 upon the request of several adjacent businesses in the area, including Duo Security, MyBuys Inc., Quinn Evans Architects, Mighty Good Coffee, and Workantile.\(^{39}\) Within only two months, Ann/Ashley has reported an extremely high utilization rate, even compared to the two-year-old Maynard (see chart below). In fact, several of the above stated companies had prepaid for bike spaces for their employees to use.

There is a clear trend for when these bike houses are being used the most. During summer 2015, mid-week bike house uses were most common, with Saturdays and Sundays having barely any utilization, as seen in the chart below. This suggests that bike houses are primarily being used by commuters working Monday through Friday.

Data Source: DDA

Figure 29    Average Bike House Accesses per Day of the Week

(May 2015-Sept 2015 for Maynard; Aug 2015-Sept 2015 for Ann/Ashley)
The 464 square-foot bike house is about the size of three 8 x 20 foot automobile parking spaces. In a recent interview, DDA board member Keith Orr explained that the construction of the Ann/Ashley Bike House had a budget of $60,000, the same amount it would take per automobile parking space if they were to build a new parking garage.\textsuperscript{40} Thus, the Ann/Ashley bike house ends up being 3 times less expensive for the amount of space it takes up, and able to securely house 27 more commuters than it would for as an automobile space for those in SOVs. To accommodate future growth, the current design could easily and inexpensively upgrade to accommodate an additional ~50 bikes, by adding and altering the bike hoops.

**COMMUTER COMPETITIONS**

The Commuter Challenge is a competition that takes place every year for the whole month of May to encourage employees to commute using alternative methods of transportation. Commuter Challenge participants receive discounts during the challenge month, and winners receive prizes at the end of the competition.

The cumulative, logged alternative-mode trips of competition participants for this time period is estimated to have eliminated almost 10,000 car miles that otherwise would have been driven in the city.\textsuperscript{41}

**ZIPCARS**

Zipcars are managed by Avis, a publicly-traded, for-profit car rental company. As such, Zipcars that are not well-utilized do not remain in their locations for long. Downtown currently has a Zipcar inventory of 14 well-utilized shared cars. Carsharing fleets like Zipcar have significant potential to reduce vehicle ownership and parking demand in Ann Arbor. This is largely because carsharing replaces marginal cost transactions (driving a privately owned car) with the variable cost transactions of vehicles rented by the hour or day. While only about 40% of carsharing members in North America own private cars, carsharing was responsible for a dramatic shift among these households towards a car-free lifestyle.\textsuperscript{42}

A 2011 peer-reviewed survey of 6,281 carsharing members in North America found that car ownership dropped by about 50% due to carsharing participation. The same study found that each carsharing vehicle effectively removed between 6 and 15 private automobiles from the roads. Meanwhile, 25% of carsharing members reported selling an owned vehicle with an additional 25% reporting they had avoided purchasing a vehicle due to carsharing. Carsharing may also complement Ann Arbor’s non-motorized transportation goals, as carsharing causes net increases of 3% and 6% in walking and bicycling, respectively.\textsuperscript{43}

A recent survey of carsharing members from Ithaca, NY, demonstrates that carsharing helps to reduce parking demand as well. In this 2013 survey, it was found that for every carsharing vehicle available, roughly 4.7 fewer private vehicles are parking on the street.\textsuperscript{44} The geography of this

\textsuperscript{40} Stanton, 2nd Bike House Being Built for Downtown Ann Arbor Bicycle Commuters.
\textsuperscript{43} Ibid.
reduction in parking demand closely corresponded to members’ residences, the majority of whom reported they would park on the street or in off-street parking if the carsharing program did not exist. This suggests that carsharing may yield the most benefits in parking demand reduction in areas like downtown Ann Arbor where parking supply is most constrained.

**UM PROGRAMS**

The University regularly tracks alternative mode use through its Sustainability Cultural Indicators Program (SCIP), a multi-year project designed to measure and track the culture of sustainability on the University of Michigan’s (UM) Ann Arbor campus. One of the SCIP’s first initiatives was the endorsement of a Campus Sustainability Integrated Assessment (CSIA). Among the CSIA’s themes, guiding principles and goals for 2025 is to decrease the carbon intensity of passenger trips on UM transportation options by 30% below 2006 levels. Initially released in 2014, and updated in 2015, the cultural indicators program report presents findings from surveys of U-M students, staff and faculty conducted during the second year of the SCIP.

The report’s findings are intended to inform U-M administrators and others responsible for day-to-day operations of the University, including its academic programs, of the program’s status. Findings to date underscore the ridership disparity between students, faculty, and staff noted above. According to the most recent “Sustainability Cultural Indicators” survey, students are both much more aware of transit, bike, and rideshare options, and much more likely to use these options.45

**Transit Programs**

Ridership of UM buses, and UM ridership of AAATA buses, appears to largely consist of students. In 2013, over 70% of UM students reported to have used a UM bus in the previous year. By contrast, about 70% of staff and 80% of faculty reported that they never used UM buses during the year. Similarly, half of the student population reported using AAATA buses during the year, while about 70% of both faculty and staff reported to have never used AAATA buses that year.46

**Rideshare**

In 2013, about 13% of UM staff and 4% of UM faculty reported using carsharing “sometimes” or “often”. During that time, 500 employees utilized the University’s vanpool program.47

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45 Ibid.
46 University of Michigan, Sustainability Cultural Indicators Program: Second Year Report, 2015, 57-60.
47 Smart Growth America, Existing Practices and Opportunities – Washtenaw Corridor, 13.
TRAVEL PATTERNS

US Census Longitudinal Employment-Household Dynamics (LEHD) data on the resident/employment locations of people in downtown Ann Arbor\(^{48}\) shows that far more people are employed in the downtown and live outside (52,365 people) than live downtown and are employed outside (1,812). Relatedly, only 725 people both live and work within downtown.

![Figure 30 Housing and Employment Locations](image)

Source: 2013 US Census LEHD

Note: For census purposes, University student residences are reported as their parents’ place of residence, not University campus dorms. LEHD data for residence locations is only available at the larger Census Tract level.

The following map depicts the broad distribution of where downtown workers live. Looking at the larger region, the 100 census tracts with the most downtown-employee home locations are almost entirely in Washtenaw County, with a few in tracts in Wayne and Livingston Counties. Outside of Ann Arbor, Ypsilanti has a relatively high density of residents who work downtown, as does Saline. Milan and Chelsea are small outlying pockets with some relative density, as well.

\(^{48}\) The LEHD analysis was run on the existing DDA boundary plus a 500ft buffer to better include data from census blocks that were cut off by the boundary.
At the city scale, some concentration of employees is evident within and near Downtown. Nonetheless, areas of concentrated employment are found across the city.
Figure 32  Home Locations of Downtown Workers within the City of Ann Arbor

Data sources: 2013 LEHD, DDA, Washtenaw County GIS, City of Ann Arbor
Sources: 2013 US Census LEHD, DDA, City of Ann Arbor, Washtenaw County GIS
Note: For census purposes, University student residences are reported as their parents’ place of residence, not University campus dorms.

Within the downtown itself, jobs are distributed throughout the DDA district, and along the Central Campus of the University, as expected.
Lastly, the following map, depicting the employment locations of downtown residents, shows that the majority are employed either within or close to Downtown. This underscores the impact that downtown housing options can have on viable commute options, and the opportunity to increase the Walk share of downtown commuters. It also indicates that strong residential growth should be expected to increase the downtown employment population, and improve employee attraction/retention efforts among downtown businesses.
Figure 34  Employment Locations of Downtown Residents

Data Sources: 2013 LEHD, DDA, Washtenaw County GIS, City of Ann Arbor
PARKING MANAGEMENT

Ann Arbor DDA has long been a recognizable leader in innovative, strategic downtown parking management. Given control over a parking system that had suffered decades of neglect, it has shown the value that right-sized, well-maintained parking supplies can contribute to a vibrant, walkable university-town downtown. At the same time, it effectively checked the sense of entitlement to free and abundant parking that can quickly dominate conversations about parking demand and suburban competition. From the beginning, it insisted that parking should pay for itself, and that maintaining high quality walking, cycling, and transit options served downtown’s competitive strengths better than trying to mimic suburban style parking accommodations.

PRICING

This well-established approach, and the related and remarkable economic success of downtown Ann Arbor, has resulted in parking rates that are distinctly high for a moderate-sized Midwestern downtown. The fact that these parking resources remain well-utilized attests to the fact that these rates have not exceeded their “market rate”. In fact, some rates could be considered too low, resulting in a lack of availability in prime Downtown locations. 

Employers interviewed had different views about parking pricing in the downtown. Many tech firms interviewed were more concerned about permit availability rather than price. Some retail stores and restaurants commented that for employees who work after 6pm, meters are free, and parking is not as much of a problem. However, they also commented that parking is a big barrier between these businesses and their customers, since night-shift employees end up occupying free on-street parking. Some employers interviewed mentioned people complaining about not wanting to come downtown at all because they do not want to “deal with parking” or planning downtown shopping trips specifically when parking is free. It is worthwhile to compare these rates to peer cities, particularly since the cost of Downtown parking continues to be a commonly-cited complaint about Downtown working, living, and visiting.

Peer City Parking Rates

Three cities that have taken a similar approach to the Ann Arbor DDA in terms of parking management are introduced below.

- Boulder, CO – A university town with a downtown parking authority that captures all parking revenue for investment in parking and mobility options to maintain a balanced, multimodal mobility environment that helps protect downtown walkability. Using parking revenue to fund TDM efforts is also a signature practice here, a central strategy of which is the Eco Pass, which is very similar to the go!pass.
- Madison, WI – A Midwestern, Big10 university town, with a reputation for multimodal accessibility and maintenance of a thriving Main Street style downtown.
- Grand Rapids, MI – The city’s DDA plays a similar role in parking management to the Ann Arbor DDA. Grand Rapids, like Ann Arbor, is also one of just a few economically, thriving downtown’s with a strong retail, commercial presence.

The following table presents a summary comparison of key rates among these peers, reference to the same rates in effect in downtown Ann Arbor.
Figure 35 Rate Comparison Table

<table>
<thead>
<tr>
<th>Type of Parking</th>
<th>Boulder</th>
<th>Madison</th>
<th>Grand Rapids</th>
<th>Ann Arbor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>Description</td>
<td>Rate</td>
<td>Description</td>
<td>Rate</td>
</tr>
<tr>
<td>On-Street</td>
<td>$1.25</td>
<td>Single Rate</td>
<td>$1/hr</td>
<td>Remote</td>
</tr>
<tr>
<td></td>
<td>$1.75</td>
<td>Standard</td>
<td>$2.00</td>
<td>Prime Locations</td>
</tr>
<tr>
<td>Off-Street: Hourly</td>
<td>$1.25</td>
<td>Up to 4 hours</td>
<td>$0.75</td>
<td>Varies by Location</td>
</tr>
<tr>
<td></td>
<td>$2.50</td>
<td>After 4 hours</td>
<td>$1.50</td>
<td>Varies by Location</td>
</tr>
<tr>
<td>Off-Street: Monthly</td>
<td>$58.34</td>
<td>Low</td>
<td>$105 - $190</td>
<td>Resident/Carpooler</td>
</tr>
<tr>
<td></td>
<td>$66.67</td>
<td>Mid</td>
<td>$125 - $220</td>
<td>Commuter</td>
</tr>
<tr>
<td></td>
<td>$110</td>
<td>High</td>
<td>$180-250</td>
<td>24/7</td>
</tr>
</tbody>
</table>

As shown, the DDA’s current parking rates are consistent with the range of comparable rates among these peers. In fact, not one of the DDA’s rates represents either the highest or the lowest among comparable rates for the same type of parking among the four peer cities. This indicates that the current DDA rates are within expected parameters for a thriving downtown, with a strong university presence, and a parking authority explicitly seeking to maintain an optimal balance between parking and multimodal levels of service.

**Notable Practices**

Aside from the rates compared above, there are individual rate strategies among these peer cities that are worth consideration for downtown Ann Arbor.

- Discounted carpool parking permits - Madison
- Discounted hourly and permit rates for motorcycles, including on-street – Madison
- Carpools skip wait lists for permits, in addition to receiving discounted rate. - Madison
- 1-hour of free off-street parking for daily visitors entering before 6PM – Grand Rapids
- No time limits on Saturdays – Boulder
- Prepay card allows garage customers to prepay, receive a 10% discount, and enjoy express lane entry and exit - Boulder
  - It is also worth noting that there is a wait list for all monthly permits in Boulder.
- Four, tiered on-street parking rates, based on demand and location – Grand Rapids
REGULATIONS

Time Limits

Time limits are broadly applied to on-street parking spaces across downtown Ann Arbor, as a complement to pricing, to help incentivize turnover and maintain availability for short-term parking. While a few cities have experimented with removing time limits in favor of using pricing alone to maintain availability, time limits remain a standard on-street management practice. The example of Boulder, above, however points to an approach that might work well in downtown, waiving time limits during off-peak times, even if meter rates remain in effect. Several cities have done this, in fact, when extending meter hour into evenings, waiving time limits during the newly-metered periods.

Commuter Permits

Supporting commuters’ use of shared parking facilities is also a common practice among downtowns with publicly managed garages and lots. By absorbing commuter demand within
these public garages, monthly permits help to finance facilities that provide a generous supply of visitor parking during evenings and weekends. It also reduces the necessity for downtown employers to provide on-site parking, helping to preserve more downtown real estate for development, and to maintain traditional, walkable downtown land use densities and proximities.

Among the peers compared above, the DDA’s current rates for monthly permits fall in the middle to low end. It is unsurprising that Boulder, with its distinctly low monthly permit rates, shares the DDA’s predicament of having to “wait list” new permit customers. Like Boulder, all DDA facilities that offer monthly permits have a wait list for new permit customers, as detailed in the table below.

Figure 37  

<table>
<thead>
<tr>
<th>Measure</th>
<th>Ann &amp; Ashley</th>
<th>First &amp; Wash.</th>
<th>Liberty Sq.</th>
<th>Fourth &amp; William</th>
<th>Maynard</th>
<th>Library Lane</th>
<th>Forest</th>
<th>First &amp; William</th>
<th>ALL</th>
</tr>
</thead>
<tbody>
<tr>
<td># on Wait List</td>
<td>416</td>
<td>120</td>
<td>428</td>
<td>309</td>
<td>366</td>
<td>359</td>
<td>285</td>
<td>144</td>
<td>1,721</td>
</tr>
<tr>
<td>Capacity</td>
<td>839</td>
<td>242</td>
<td>573</td>
<td>847</td>
<td>770</td>
<td>744</td>
<td>850</td>
<td>108</td>
<td>3,986</td>
</tr>
<tr>
<td>List/Capacity</td>
<td>50%</td>
<td>50%</td>
<td>75%</td>
<td>36%</td>
<td>48%</td>
<td>48%</td>
<td>34%</td>
<td>133%</td>
<td>43%</td>
</tr>
</tbody>
</table>

ZONING & DEVELOPMENT

The presence of a well-run, public parking system has allowed the City to enact zoning within the DDA District that is parking-exempt, with the exception of development projects that utilize premiums. Projects that utilize premiums may sign a contract for monthly parking permits within the public parking system or make a payment of a contribution in lieu.\(^{49}\) The long-term result of this approach, in theory, minimizes the number of driveways along downtown streets, which makes for higher-functioning sidewalks and smoother traffic flows. It also reduces the cost of developing downtown land uses, generates more parking revenue to help maintain the DDA system, and incentivizes developers to embrace downtown’s multimodal amenities. The majority of projects, however, have chosen to provide parking on-site, rather than monthly permits or parking in lieu to meet their requirements.

Even so, the DDA parking system is running out of capacity to continue to offer permits in support of new development. As such, it increases the likelihood that larger development projects will provide substantial on-site parking facilities, often above and beyond what was required. New zoning strategies may need to be developed if future development trends are to shift back to relying upon DDA parking resources for their parking needs.

TECHNOLOGY

Meters

As noted above, ePark pay stations appear to be much preferred to the standard, single-space meters. Utilization patterns within and outside of meter-enforcement periods indicate that much

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\(^{49}\) MuniCode, Ann Arbor, MI, Chapter 59 – Off-Street Parking: 169 Special Parking Districts, 2015,  
https://www.municode.com/library/mi/ann_arbor/codes/code_of_ordinances?nodeId=TITVZ0PL_CH59OREPA_5_169SPPADI
of this preference is likely linked to the credit-card-payment option they provide for on-street parking. Average payment-per-transaction data also indicate a willingness to pay roughly twice as much for spaces offering this convenience. Comparatively, the standard meters, require coins for payment, which is particularly burdensome when parking rates surpass the $1/hour level.

The DDA plans to replace all standard meters with ePark meters over time. The DDA does also offer a pay-by-phone option, but this is not widely advertised or used. Expanding and/or improving this pay-by-phone option may be the most expedient means of expanding the option to pay by credit card to all on-street meters, as these systems are generally compatible with standard meters.

**Pay on Foot Machines**

Hourly parking payments are accommodated in DDA structures via “Pay on Foot” machines, which have become standard practice for hourly and daily payments in public parking garages. By shifting payment activity to just before drivers return to their vehicles, exiting vehicles can be processed much more quickly. These machines also handle a variety of payment media much more effectively than the typical payment devices located at exit gates.

**Monthly Permits**

Transitions from the standard monthly permit to some kind of “pay as you go” pass, or “draw-down” account on a debit card, have been considered in the past. The first of these options is currently being piloted at the 4th & Washington garage. From the DDA’s perspective, however, any change from the current permit technology must retain two elements of the current system:

1. Provide the same assurance of a parking space for “monthly” customers, even if they commute less frequently under the new pricing structure.
2. Ensure no significant loss of revenue.

The first of these can be achieved through standard facility-management processes similar to what is done today. Achieving revenue continuity is more complicated.

Any system that allows drivers to reduce their parking costs, by parking less frequently, helps to incentivize reduced drive-alone commuting. In particular, such pricing provides better options for those who primarily use alternative modes, but need to drive occasionally, as well as those who, by contrast, primarily drive, but would prefer to use a bike or bus from time to time. Under the current system, the only option is to pay for a full month’s worth of parking, or to forego a permit altogether, and accept less desirable parking options on the days when they drive.

By design then, a pricing system that accommodates variable parking frequencies will result in an aggregate decline in parking revenue, per permit-holder, to the DDA. Simply put, on average, permit holders should be expected to park less frequently, saving money in the process. But, this reduced parking activity should allow the DDA to sell more permits at each facility, creating a system with less money coming in per customer each month, but more customers, and ideally more part-time use of non-driving modes for downtown trips.