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In 2013, the University of Wisconsin-Milwaukee (UWM) Department of Parking and Transit, the UWM Physical Environmental Committee (PEC), the UWM Parking and Transit subcommittee, and a consultant team led by Nelson\Nygaard embarked on a comprehensive review of all aspects of the campus transportation and parking system. With a mandate to balance parking budgets, multiple barriers discouraging the use of buses and bikes, and a campus community clamoring for improvements to the current systems, UWM was in need of a broad multi-modal perspective on how to maximize their existing services, and a targeting plan for implementing changes quickly. The UW-Milwaukee Parking & Transportation Study Report is the summation of the efforts of these stakeholders to identify the key issues, propose strategic improvements to the system, and cultivate support from the greater UWM community to implement cost-effective solutions.

WHY A PARKING AND TRANSPORTATION STUDY?
As UWM continues into the 21st Century following a pattern of growth and expansion into the greater Milwaukee region, a greater premium is being placed on the existing campus footprint. More people are interested – if not dependent – on coming to the Kenwood campus to learn, work, and socialize. However, there are several compelling transportation challenges to overcome, including: an unlimited demand for limited parking supplies on campus; aging and disparate transit services; notable physical and financial barriers to walking and biking; and a scattered allocation of financial and staff resources to parking and transit systems that is bearing a limited return. The current conditions are a warning; if no action is taken in this point in time, the University’s commitment to multimodal transportation and sustainability will fall behind other institutions, the quality of life amongst the community of UWM’s affiliates and neighbors will degrade, and Wisconsinites will absorb the negative externalities to come.

As the campus continues to assess its growth and plan its future, the strategies put forth by this study will serve as a road map specifically for UWM transportation and parking priorities. The recommendations emerging from this study are intended to both positively transform UWM into a regional leader in sustainability and improve the overall experience faced by the diverse array of stakeholders. As already evidenced by the proactive interest and involvement by numerous individuals and organizations during the process leading to this document, the UW-Milwaukee Parking & Transportation Study is not a static planning document; it is an ongoing process to substantially improve the transportation and parking options on campus without placing a disproportionate burden on any single group or sacrificing the unique atmosphere of the campus.

OVERVIEW OF REPORT CONTENTS
The story of UWM’s growth in the Milwaukee region, the future pressures on transportation, and the goals that were set for this study are outlined in Study Purpose. During the 2013-2014 academic year, the existing conditions of UWM’s parking and transportation systems were gathered. At the same time, maintaining a comprehensive, thorough, and inclusive study was a paramount priority of the project managers. Details on the information generated, documents reviewed, and outreach events held on campus and online are described in Study Process.

A thorough review of UWM’s transportation and parking existing conditions produced some salient, yet complex results. The primary themes and takeaways from the existing conditions review are explained in Key Findings. Key strategies have been programmed over a five-year implementation plan. The detailed strategies are grouped by mode of transportation (transit, parking, and nonmotorized transportation, plus overall campus design recommendations).

The report appendices are detailed technical memoranda supporting the above sections. They include a detailed summary of all existing conditions, a summary of progressive transportation strategies undertaken in comparative institutions, a conceptual outline of which strategic objectives are most relevant to UWM, and a series of financial projections. They will be held on file by the Campus Planning office.
STUDY PURPOSE
THE UWM CAMPUS

In 1909, the institution currently known as the University of Wisconsin-Milwaukee (UWM) began instructing at a location near the intersection of East Kenwood Boulevard and North Downer Avenue in Milwaukee, Wisconsin. The Kenwood campus, as it is known, has since grown to a 176 acre site, approximately 2 ½ miles north of Downtown Milwaukee, just south of the municipal boundary between the City of Milwaukee and the Village of Shorewood.

UWM is presently engaged in a comprehensive and profound pattern of transformation. The University has enjoyed substantial growth in enrollment during the 21st Century. As the economy continues to recover, UWM is currently just as populated by students as it was 10 years ago.

Among the most profound transformations, arguably, is UWM diversifying its physical presence throughout the Milwaukee region. For many years, the Kenwood Campus contained all the University’s activities. Although the campus area recently expanded with the acquisition of the Northwest Quadrant, the central core of UWM is limited from further outward growth due to the presence of existing neighborhoods and protected woodlands. As long as UWM continues to faces pressure from University affiliates and boosters to grow, the future of UWM lies beyond the Kenwood Campus.

UWM’s desirability as an urban school is bolstered by the lively arts scene and new redevelopment occurring near North Avenue, where UWM now has 800 beds and a growing academic program.
UWM continues to proactively build its footprint in the region at the following places:

- **The North Avenue District**: UWM’s active investment in student housing over the past decade created dormitories and apartments for over 800 additional students. Often referred to as Riverview and Cambridge Commons, new dormitories have emerged along North Avenue near the campus. At the same time, the remodeling of the Kenilworth facility into the Peck School of the Arts (PSOA) and a graduate student dormitory has contributed to UWM’s presence in this district. Additionally, the whole North Avenue district is emerging as a popular area in Milwaukee, augmented by the completion of a major medical center (St. Mary’s and Columbia Hospital), a large number of newer high-sensory multi-family structures, and a remodeled public library.

- **Zilber School of Public Health**: UWM’s new school of public health is located in the midst of a transforming downtown district (the Brewery).

- **School of Freshwater Sciences (SFS)**: UWM’s remodeled facility is located in Milwaukee’s Inner Harbor, approximately 1.5 miles south of Downtown Milwaukee.

- **Innovation Campus**: This facility represents UWM’s first expansive excursion into an older urban suburb – Wauwatosa – with a facility that will link to the larger regional medical center and surrounding development.
When considering the growing regional influence of UWM, the ongoing renaissance of the City of Milwaukee as a place to live and work, and the vested interests of the Kenwood Campus and surrounding community, a focus on multiple modes of transportation will be necessary to cost-effectively connect places with minimal delay and maximum safety. This pattern of regional campus evolution will no doubt continue, as will the potential impacts and implications on transportation and parking.

**CHALLENGES**

While UWM continues to diversify its role in the transportation network of Greater Milwaukee in the face of regular fiscal constraints, the array of transportation service options, from the perception of its clientele, is an extremely complex web of availability and costs. Among many of the challenges identified on the outset of the parking and transportation study are:

- **Continued growth and expansion are planned for the University**, including expansion at the Southwest Quadrant, expansion at the Innovation Campus, and new downtown facilities;
- **The current supply of parking is saturated**, with few opportunities to add any new parking at the Kenwood Campus;
- **Use of UWM transit systems is imbalanced and access restrictive**, with different services conducted through multiple operators who do not operate open door to all UWM affiliates;
- **Not enough people are walking and biking to campus**, with surrounding roads and intersections often problematic to cross;
- **Not enough people are taking full advantage of transportation benefits**, with low usage of the UPASS, discounted transit passes, car share programs, and ride sharing resources;
- **Existing transportation and parking impacts are spilling into neighborhoods**, with hundreds of affiliates forced to park on surrounding streets every weekday; and
- **Fiscal and budget constraints are an ongoing threat**, with short-term cost cutting winning out over implementing long-term efficiencies.

There are many possible reasons for this complicated setup: multiple structures of management, fiscal mandates from system leadership, and an evolving set of priorities from students and employees are partially to be blamed. Some of these issues can be remedied, and the progress of UWM as a sustainable institution can continue. However, it will be necessary for the transportation conditions to change, improving customer satisfaction, reducing pockets of underutilized services, correcting many negative externalities, and bridging information gaps.
GOALS

The above challenges also represent new opportunities for the UWM community, and this effort has helped identify numerous common interests across all stakeholders that can serve as a platform for improving mobility. By discussing these challenges in detail with Study stakeholders, UWM leadership, neighborhood representatives, Milwaukee agencies, and community transportation advocates, several valuable goals emerged. This study, in addition to other ongoing planning efforts on and around campus, is intended to achieve the following goals:

- **Build a greater UWM presence throughout the Milwaukee region**, recognizing its ongoing investments in multiple campuses and regional mobility;

- **Coordinate ideas and programs under the strategic plan**, building upon UWM’s cross-cutting planning effort and specifically **connect the transportation vision with the land use/housing/growth strategy**;

- **Build new partnerships and collaborate with municipalities and agencies**, not only as part of a regional approach but in an effort to be resource efficient and multi-modal;

- **Use transportation dollars to maximize mobility**, with a focus on moving people, not just vehicles, and;

- **Foster a multimodal culture**, that recognizes the need to **make transit a choice – not a last resort** and **provide the right programs and information to make multimodal transportation easy**.

The institutional policy issues that continue to represent the “status quo” at UWM must be overcome to realize these opportunities. As UWM goes forward on any planning or implementation efforts across campus, it should actively seek solutions that seek to:

- **Cross funding sources and user silos**, overcoming departmental budgetary conflicts for the greater good of the institution;

- **Involve student government** to build stronger support for programmatic changes;

- **Ensure faculty and staff buy-in** to solidify support and create a customer-first approach;

- **Break the driving culture** and embrace the health, safety, and cost benefits of walking, biking and transit that are being recognized by UWM’s peers, and;

- **Reveal the tradeoffs made between user, provider, and funder** to allow leaders and users alike to understand transportation investments and make better mobility choices.

Tackling these issues head-on will not come easy, but in order to realize UWM’s shared vision as a sustainable leader in the Milwaukee region, it will be necessary. The **UW-Milwaukee Transportation & Parking Study** intends to continue this important conversation by revealing the conditions of the current transportation system from the perspective of its users and enabling a series of proactive policies and strategies that respect user’s preferences and make it more cost-effective to choose alternatives to the automobile.
STUDY PROCESS
STUDY SOURCES

Because the original purpose of the study was prompted by a need to examine all aspects of the UWM transportation system at one time, a through process ensued. During the 2013-2014 academic year, this study focused on:

- Inventory of all regulations and prices pertaining to Kenwood Campus parking facilities
- 24 hourly occupancy counts for all Kenwood Campus parking facilities (spread across 2 days)
- Inventory of all regulations and an occupancy count for all on-street blockfaces within a zone bounded by East Edgewood Avenue, North Shepard Avenue, East Newberry Boulevard, and North Bartlett Avenue
- Multimodal traffic counts and turning movement counts at 6 locations surrounding the Kenwood campus
- Inventory of all parking access control mechanisms and technology
- Field reviews of all UWM transit stops, bus routes, and satellite facilities
- Organized bus rides on MCTS, UH Shuttle, and Parking & Transit shuttles serving UWM.
- 25% designs of Maryland Avenue in which, tantamount to a planned repaving, traffic could be limited just to transit vehicles, school buses, bicycles, and pedestrians.

Existing sources reviewed include:

- Annual expenses and revenues by UWM Parking & Transit
- Summaries of permit sales, parking enforcement,
- Operating costs for all transit services at UWM
- Ridership and run schedules for all transit services at UWM
- Ridership for all MCTS bus routes connecting to UWM
- Student segregated fee schedules
- Address zip codes of UWM faculty, staff, and students
- Enrollment figures
- Past transportation surveys
- City of Milwaukee designs of Maryland Avenue reconstruction
- Traffic volume and vehicular collision records of surrounding arterials and local streets
- Audit reports of campus appearance and visitor experience

This study builds on the precedents set by the following UWM plans:

- UWM Campus Master Plan (2012)
- Community Design Solutions Bicycle Plan (2013)
- Recommendations for a Bicycle Friendly Campus (2012)
- Northwest Quadrant Space Planning Study (2011)
- Northwest Quadrant Redevelopment Plan (2013)
STUDY OUTREACH

The many interested and affected parties composing the UWM community were invited to offer their opinions and experiences. In particular, Transportation Week (held November 2013), the Open Forum (held April 2014), and the Community Open House (held December 2014) were all central to the Study’s outreach efforts.

During Transportation Week, the consultant team led a series of interactive tours throughout the campus. These tours, which were intended to provide a “first-hand” look at the parking and transportation experience included, bus rides, walking tours, and parking facility visits. For the Open Forum, stakeholders from all major transportation agencies in the greater Milwaukee Region were invited to discuss how UWM factors into their work. At the Community Open House, representatives of all neighborhood groups surrounding the UWM Kenwood Campus were invited to discuss their ideas and concerns with regards to parking and transportation. At all three of these events, interactive stations were set up for members of the UWM community and neighborhood to identify their experiences and suggestions on a map of the campus. Planners were available at these stations to take notes and facilitate discussion among community members.

Overall, outreach and collaborations during the UW-Milwaukee Parking & Transportation Study process included:

- An online survey which ultimately included 2,190 responses.
- A project web site for UWM affiliates to access the survey and learn about the study.
- Transportation Week (November 2013)
  - A social media campaign prompting the input (and photographs) from dozens of participants.
  - Pop-Up Kiosk in the UWM Union
  - Open House Session
  - Included a public survey, project information, and written public feedback regarding all experiences with parking and transportation around campus
- Open Forum (April 2014)
  - Included a public exhibit and straw poll of potential strategies for UWM affiliates to voice support for or against
  - Open forum with regional transportation stakeholders
- Community Open House (December 2014)
  - Discussion and with representatives from 6 neighborhood organizations
  - Included a separate project web site, forum, and interactive map for the neighborhood
- Separate discussions were held with the following entities:
  - UWM Chancellor’s Cabinet (2)
  - UWM Faculty Senate
  - UWM Community Outreach / Neighborhood Relations (2)
  - UWM PEC Committee (2)
  - UWM Parking and Transit Subcommittee (5)
- UWM Police (2)
- UWM Union
- UWM Student Affairs (2)
- UWM Student Government Relations
- UWM Accessibility
- UWM Bicycle Task Force
- UWM Facilities Services
- UWM Sustainability (2)
- UWM University Housing (2)
- UWM SWQ Planning Team (2)
- UWM Union Redevelopment Planning Team
- UWM Master Planning Team
- City of Milwaukee Department of Public Works (3)
- City of Milwaukee Alderman
- Milwaukee County Transit System (2)
- Village of Shorewood
- Bublr Bikes
KEY FINDINGS
INTRODUCTION

Understanding transportation demands at UWM is complicated because the full supply of parking and transportation options is constantly in flux. For example, the inventory of the Sciences building’s parking facility is subject to change as it is still under construction. Also, with classrooms in the Northwestern Quadrant still being assigned, departments at UWM may continue to reshuffle student and faculty usage patterns. These all potentially impact the demand for various transportation services, including often overlooked resources, such as the location of disabled parking and the need for service vehicle parking.

Nevertheless, there are many key takeaways from the existing conditions research that are very clear and particularly problematic when pitted against the University’s desires for substantial multimodal access, sustainable practices, positive neighborhood relations, and fiscal prudence.

HIGHLY DESIREABLE TO DRIVE TO CAMPUS

According to a 2012 survey of transportation mode choices, 42% of UWM students and 71% of UWM employees drive to campus. If this is still true, then as many as 5,000 cars are arriving on the Kenwood Campus during a typical school day. Although some individuals have to drive out of necessity (for example, they may have another job on the other side of the region), others may simply be incentivized to drive. One immediately apparent incentive is the provision of free parking at over 770 spaces on campus for students (subsidized through student segregated fees), plus another 1,058 free park-and-ride spaces for all UWM affiliates.

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<td>$74.22</td>
<td>$80.06</td>
<td>$85.88</td>
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Student segregated fee schedule, 2013-2014 academic year

Because segregated fees are determined by the initiative of the UWM Student Association and complicated by the inevitable turnover in the student body, this fee schedule is a precarious source of funding for parking facilities with long-term maintenance costs and debt service. Nevertheless, the current provision of free parking directly on the Kenwood campus for students makes it very desirable for both part-time and full-time students to drive to campus – even from off-campus residences that are within a short walk or bike ride.
Although faculty and staff must pay for parking on campus, they primarily do so by buying a one-year or a two-year permit allowing them to “hunt” around campus for a space. The most popular of these permits, costs $900 a year to park at one of 441 eligible surface spaces or below the Engineering & Mathematical Science facility (EMS). There is a limited supply of monthly permits for the Pavilion garage; otherwise, UWM employees can park in the neighborhood, pay between $0.85 and $1.25 per hour at metered spaces on or off campus, or drive up to the free Capitol-Humboldt lot. The sunk cost of an annual permit or a bi-annual permit provides an imperative to drive; over 461 regular hunting permits were sold in the last year they were available (the 2012-2013 academic year).

The incentive for faculty and staff to not drive primarily comes in the form of the Employee Commuter Pass. This pass, which costs $100.50 pre-tax on quarterly basis, provides rides on Milwaukee County Transit System (MCTS) services— only 389 employees participated in the fall of 2013.
EXCESSIVE DEMAND FOR PARKING ON CAMPUS

By 8 a.m. on a typical school day, over 50% of UWM parking will already be full. Parking occupancy will reach its peak plateau (above 90% occupancy) at around 11:00 a.m. and last for approximately 3 hours. During that peak period, students and faculty whose schedule demands a later arrival on campus will have to wait for a space to turnover or park on surrounding streets.

The rapid rise in parking utilization in the morning is reflective of excessive demand across the campus. It is a trend that has even altered student commute habits; particularly to obtain free parking spaces at the Northwest Quadrant (NWQ) and Pavilion facilities. The difference between occupancy levels in these facilities, compared to those with premium or reserved pricing (such as Lubar Hall), reveal a strong willingness to park in locations not immediately proximate to one’s final destination.

Summary of total parking occupancy on the Kenwood Campus

The demand for parking at the Capitol-Humboldt park-and-ride lot reveals this premium on cost-savings over proximity. Analysis of UPARK ridership on Wednesday, November 13th at 1 p.m., reveals a net total of 957 riders located on campus. It is estimated that the 90% peak occupancy also exists at the Capitol-Humboldt facility.
The number of enrolled students in classes scheduled for Wednesday at 1 p.m. is superimposed on the utilization of each parking facility on campus.
TRANSIT SERVICES ARE LIMITING

There are a variety of mass transportation services at UWM, but they all support different needs and are managed by different entities. These transit services (and managing entities) include:

- County public bus (MCTS)
- Intercity buses (Wisconsin Coach)
- Remote parking shuttles (UWM Parking & Transportation)
- Remote campus shuttles (UWM Parking & Transportation)
- Intra-campus dormitory shuttles (UWM University Housing)
- Late-night vans run by UWM students (BOSS)

These services have varying degrees of popularity. For example, about **4,440 riders leave the Kenwood campus every day on a MCTS bus**. However, the services have different financial sources and restrictions on who can ride them (and how much they pay). This complicated structure of transit may discourage additional potential riders.

<table>
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<tr>
<th>MCTS</th>
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<th>Remote Campus Shuttles</th>
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<th>BOSS</th>
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<td><strong>NOT ALLOWED</strong></td>
<td>FREE</td>
<td>FREE</td>
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<td><strong>Employees</strong>*</td>
<td><strong>PAY A FARE</strong></td>
<td><strong>NOT ALLOWED</strong></td>
<td>FREE</td>
<td>FREE</td>
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<td><strong>Members of the Public</strong></td>
<td><strong>PAY A FARE</strong></td>
<td><strong>NOT ALLOWED</strong></td>
<td>FREE</td>
<td><strong>NOT ALLOWED</strong></td>
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Summary of UWM transit service availability. *University Housing employees may ride shuttles on work hours.
BARRIERS TO WALKING AND BIKING

UWM takes pride in being a multimodal campus. Many initiatives to get people to bike and walk to campus—as opposed to drive— are currently underway. The neighborhoods surrounding UWM are safe and dense, but multiple intersections were cited as dangerous for pedestrians to cross.

Kenwood Boulevard is perceived as a barrier limiting the desire to walk and bike to and from campus. In the heart of campus, Maryland Avenue is a source of constant vehicle/pedestrian conflicts. Neighbors of UWM also singled out the unsignalized intersection of North Oakland Avenue and East Hampshire Street as unsafe.

Summary of online map survey responses from the autumn and winter of 2013-2014.
Connections to the rest of the city (including UWM’s remote campuses) are deficient. To even embark on a bike ride leaving campus along Maryland Avenue, one must compete with parked school buses and vehicle traffic. Milwaukee’s central bicycle artery, the Oak Leaf Trail, is just ¼ mile due west of campus, and could be the connection of choice to North Avenue residences for many students. Unfortunately, an overgrown slope leaves the trail inaccessible from where Kenwood Boulevard and Hartford Avenue terminate just feet away. One must continue to bike another ½ mile in the wrong direction or across busy Locust Street to safely get on the trail.
THE IMPORTANCE OF FUNDING

Since the mid-1990’s, students attending UWM are able to ride Milwaukee’s public buses for free. UWM’s investment into the “UPass” program is known as a national best practice for encouraging additional public transit ridership through a partnership with higher education. Currently, the program is backed by a flat student fee of $45.10 per semester and ensures all passholders receive unlimited access to Milwaukee County Transit System (MCTS) rides without any additional cost. At $2.4 million, UPASS is the largest single transportation expense at UWM. Overall, UWM spends approximately $7.2 million on transportation annually.

Breakdown of all transportation expenses at UWM (2013-2014) ¹

¹ The 2013-2014 revenues related to UWM’s transportation are as follows:

Parking & Transit (approximately $7.9 million)
- $442,900 in paid fines
- $4,387,000 in student segregated fees
- $1,344,400 in permit revenue
- $688,000 in meter revenue
- $75,900 in P&T services
- $969,100 in Lubar/Union gate receipts and value passes
- $1,200 in parking card/permit replacement fees
- $2,100 in investment earnings & fund share

University Housing (approximately $220,000)
- 10% of Sandburg resident fees
- 30% of Cambridge, Riverview & Kenilworth fees
Although over half of the annual transportation expenses are devoted towards transit programs such as UPASS, the actual mode share of transit across UWM affiliates is significantly lower. The UPASS was initially successful in fostering multimodal transportation into the campus culture. While it continues to encourage over 30% of students to ride transit, UPASS, like any single campus transportation program, is not a panacea for the current situation at UWM’s Kenwood campus. Thousands of passes remain unclaimed by students every semester. Meanwhile, faculty and staff are not eligible and must spend over $400 per year to ride transit.

2012 UWM Survey – Primary stated mode of transportation to campus

It will be imperative for UWM to improve its return on its large transportation investment, resist exacerbating the current challenges and conditions on and around campus by cutting services, and consider implementing the cost-effective strategies detailed in the following chapter.
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<td>New Transit Terminal Amenities</td>
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<td>Provide Unified and Centralized Information</td>
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<tr>
<td>Tailor MCTS Schedules to Boost Ridership</td>
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<tr>
<td>Alter Remote Shuttle Operations and Vehicles</td>
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<td>Lift User Group Restrictions on UWM Transit</td>
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<td>Establish Late Night Shuttle Bus at Areas of Greatest Demand</td>
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<td>Create a Two-Way North-South Transit Spine</td>
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<td>Pilot Carpool Program</td>
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<td>Create a Parking District</td>
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<td>Create a Service Vehicle Parking Database</td>
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<td>Disability Parking Reservation System</td>
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<td>Simplify Parking Payment System</td>
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<td>Tiered Parking Pricing System</td>
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<tr>
<td>Expand Park-and-Ride Facilities</td>
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<td>Implement Bike Share on the UWM Campus</td>
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<tr>
<td>Close Maryland Avenue to Automobile Traffic Before Reconstruction</td>
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<tr>
<td>Simplify Bike Parking on Campus</td>
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<td>Create Bicycle Network and Dismount Zones</td>
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<tr>
<td>Expand Access to Oak Leaf Trail</td>
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<td>Create Regional Identity with Campus Gateways</td>
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**TRANSPORT & TRANSIT**

**PARKING**

**NON-MOTORIZED TRANSPORT**

**CAMPUS**
## Study - Implementation Plan

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### Cost Legend

- **$** $0 - $50K
- **$$** $75K - $200K
- **$$** $200K - $1M
- **$$** $1M - $3M
- **$$** $3M - $5M
TRANSIT STRATEGIES
TRANSIT

When as many as 15,000 total people move to and from the Kenwood Campus every day, mass transportation can certainly provide a positive impact. The grid of the neighborhood and the relatively high existing service are good indicators of the potential for transit to maximize the mobility of all campus affiliates and visitors. UWM is such a large employer in the region that it receives intercity bus service from Waukesha to Madison.

The potential of the Kenwood Campus to truly emerge as a well-utilized regional transit hub is compromised by a lack of institutional coordination, and funding silos. This has led to inefficient service and discouraged riders.

“For every one Green Line bus that comes through, 2-3 near empty Shuttles drive past me on Oakland, but apparently since I’m not deemed a resident by the school, I’m excluded from service.”

“I could get home about 30 minutes earlier if I were able to hop on the shuttle at Kenilworth and take it back to the main campus, instead of taking two public buses home.”

“….a more immediate change that could take place, is to get timed heating lamps in the bus stop shelters so while we’re waiting for the bus that may or may not come, we are staying comfortably warm instead of freezing!”

The following strategies proposed for UWM address these issues regarding transit. By incorporating the strategies as policy, UWM will:

- Make transit a choice, and not a last resort
- Allow the cross-pollination of service
- Eliminate and/or consolidate redundant services
STRATEGY: NEW TRANSIT TERMINAL AMENITIES

**Issues/Rationale**

- On a daily basis, over 2,000 UPARK bus riders pass through the Capitol-Humboldt park-and-ride lot – going to or from the UWM campus – making it the most popular UWM transit stop on a route that serves UWM. The next most popular transit node (the intersection of Maryland and Kenwood near the Union) has less than half the combined bus ridership on the average weekday.

- For a transit station that is so busy, the amenities of the Capitol-Humboldt lot are very deficient. Trash cans, some lighting, standard unheated bus shelters, and portable trailers for security are the only amenities provided at Capitol-Humboldt.

- Multiple studies have shown that the time spent waiting for a transit vehicle (especially when transferring) is subconsciously valued higher by riders than time spent on a transit vehicle. In short, people do not enjoy waiting.

**Recommendation**

At its most popular transit stops, **UWM needs to provide more amenities for its riders.**

1. **REAL-TIME ARRIVAL DISPLAYS**
   - UWM made strides in developing a unified mobile app that includes bus status. However, not everybody has a smart phone or is willing to reach for their device in freezing temperatures.
   - Real-time bus arrival displays can be customized to also include relevant UWM news, emergency alerts, and community event listings.

2. **FOOD TRUCKS**
   - A simple request for proposals (RFP) from UWM could invite a diverse array of concessionaires—each with the potential to produce even more revenue for the University through licensure.
   - The presence of a concessionaire means there will be another added layer of security for those waiting for the bus or walking back to their car.
   - Establishing a new food location for UWM affiliates increases the variety and selection of lunch and coffee options on campus and may enhance quality of life.
This newly branded transit station on the campus of the University of California, San Diego, provides a minimal yet attractive set of amenities for the bus rider. Even simply refreshing the existing shelters may attract potential transit riders who are otherwise turned off by the spartan and uninspiring settings while waiting for the bus.

3. OTHER AMENITIES FOR UPARK
   - Heat lamps, activated by a push button
   - New benches
   - Additional lighting
   - Vending machines and ATMs
   - Brochure and informational kiosk on UWM Parking and Transportation services, MCTS services, and non-motorized transportation maps
   - More conspicuous security measures, including cameras, motion detectors, and UWM Police call buttons

Cost/Benefits

- **Up-Front Costs are MEDIUM-HIGH.** For some amenities, such as a food cart, bringing them into a transit terminal is about as simple as putting out an RFP. However, the primary amenities needed, such as heated transit shelters, will require some design and construction as much as $500,000.

- **Impact on Mode Shift is MEDIUM-LOW.** The provision of additional amenities, and the comforts afforded by them, may convince some people to choose transit.

- **Ongoing Cost Savings are LOW.** These new amenities may increase the quality and experience of every UWM affiliate who uses them, but they are not a cost-savings measure.

- **Customer Convenience is HIGH.** Creating more established elements of a real place in an otherwise barren surface parking landscape is a great service to customers. Existing transit riders will be happy that their loyalty to the UPARK service is providing additional benefits, and new transit riders may be enticed on the promise of amenities.
STRATEGY: PROVIDE UNIFIED AND CENTRALIZED INFORMATION

Issues/Rationale

- Although the campus benefits from a wealth of multimodal transportation service, UWM lacks the marketing coordination to present an easily understandable system to users.
- UWM Parking and Transit currently offers a well-maintained web site (http://www4.uwm.edu/parking) that offers essential information about its services, including parking options and a parking map.
- However, transit information is inconsistently displayed. There is a list of transit options affiliated with UWM and MCTS, but there is no map displaying all the options in one place.
- Links to other transit providers that serve UWM (including Wisconsin Coach) are not discerned from those which only depart from downtown Milwaukee (such as Greyhound).
- The Parking and Transit site also does not link with the separately hosted “Biking at UWM” page (http://www4.uwm.edu/bicycle) which could cause some people to be uninformed about certain bicycle programs (such as Pedal Prowls).
- There are also gaps in online information. For example, there is no mention on the Parking and Transit Web Site that the Employee Commuter Bus Pass honors rides on Wisconsin Coach Line service to Waukesha County; it is only mentioned on the UWM Human Resources web site.

Recommendation

UWM should design and distribute a unified brochure and website on all transportation options — regardless of which organization is actually providing the service.

IMPLEMENTATION STEPS

- Assign one office and one web site to be the clearinghouse of all information about transportation to, from, and around the UWM campus.
- Have that office continuously update that information and inform relevant University offices (including Sustainability, Community Affairs, Parking and Transit, and Human Resources). Build a new consolidated transit map in partnership with MCTS and Wisconsin Coach.
- Schedule regular updates to the website and brochures in advance of big campus travel days (including the start of the fall semester and admitted student events).

Cost/Benefits

- **Up-Front Costs are MEDIUM-LOW.** Brochures, maps, and websites should be professionally designed.
- **Impact on Mode Shift is MEDIUM-LOW.** Some individuals may have an easier time understanding transit services enough to begin using them.
- **Ongoing Cost Savings are LOW.** This extra effort does not replace any existing practice.
- **Customer Convenience is HIGH.** Bicyclists, current transit riders, and new transit riders alike will appreciate the convenience of centralized information.
STRATEGY: TAILOR MCTS SCHEDULES TO BOOST UWM RIDERSHIP

Issues/Rationale

• The current amount UWM spends on the UPASS program (approximately $2,398,000 annually) makes it the University’s single largest transportation expense.

• However, there is little information as to how much the UPASS is utilized by UWM affiliates for its primary purpose: free rides on the Milwaukee County Transit System (MCTS).

• A student needs a UPASS for other purposes, including BOSS and access to the Northwest Quadrant garage.

• The only specialized MCTS services for UWM are the series of express buses (the UBUS) operated during the fall and spring semesters on weekdays when class is in session. For exam periods, MCTS has a specialized, albeit less-frequent schedule.

Recommendation

UWM should **proactively work with the County to determine and coordinate routes, schedules, and service needs.** By participating now in discussions regarding transit, UWM will be kept in the loop on future projects, including better route alignments, rapid bus treatments, and the construction of a streetcar line.

SERVICE CONSIDERATIONS

The following key service considerations are not well-addressed today and should become a part of future MCTS service plans:

• UWM staff, faculty, and student schedules
• Connections to points south of campus
• Service that is complimentary to (or a possible replacement for) off-campus shuttles
• Safe pedestrian infrastructure and connections to Kenwood Campus stops.

Cost/Benefits

• **Up-Front Costs are LOW.** Most of the costs will be devoted to the planning process.

• **Impact on Mode Shift is MEDIUM.** If staff increase their utilization of MCTS through the Employee Commuter Pass program, the impact on mode shift could become greater.

• **Ongoing Cost Savings are LOW.** While UWM will get a greater utility out of their current expense for the UPASS, they may not necessarily achieve greater cost savings. If the benefit seems unworthy of the cost, UWM would be better suited to negotiate with MCTS for further service improvements. It is worth noting that with better data and increased UWM ridership, MCTS may be eligible for additional Federal funding.

• **Customer Convenience is MEDIUM-HIGH.** Those who take transit to UWM may be more satisfied with more tailored schedules, especially if frequency increases on busier days.

Average Daily MCTS Ridership in the Spring of 2013 totaled 4,440 in the area bounded by Oakland, Edgewood, Locust, and Kenwood.
STRATEGY: ALTER REMOTE SHUTTLE OPERATIONS AND VEHICLES

**Issues/Rationale**
- Of the many transit services at the UWM Kenwood campus, the shuttles connecting to the School of Freshwater Sciences (SFS) and the Zilber School of Public Health (ZSPH) are among the least productive.
- The SFS Shuttle and the ZSPH Shuttle respectively cost $341.36 and $243.60 per day to operate. The average daily ridership of the SFS Shuttle and the ZSPH Shuttle respectively total 9 and 18 riders.

**Recommendation**
A series of solutions must occur to increase the utilization and cost-effectiveness of the remote campus shuttles. UWM should integrate additional stops and purposes, switch operations and vehicles to a more cost-effective fleet, and create additional uses at the remote campuses.

**CONSIDER ADDING STOPS ALONG THE WAY**
- An immediate goal of the shuttles should be to create “multi-purpose” transit as opposed to highly specialized services that operate “closed door” from campus to campus.
- The fact that both shuttles could technically drive past the North Avenue apartments, or that the ZSPH Shuttle ends about a ½-mile from the Marquette University campus—but does not stop there—hinders potential ridership gains.
- If the service is already planned for upcoming semesters, there is little risk in adding an additional stop along the way, and seeing if it is used.

**SWITCH VEHICLES AND OPERATIONS**
- The contracting of school buses to the sparsely used shuttles may be too expensive.
- Meanwhile, the BOSS fleet, composed of a dozen minivans driven by student employees, only operates at night time.
- The BOSS vans, which are a more appropriate capacity for the current needs of the remote campuses, could be used to serve all future remote campuses. Their low operating cost could result in more frequent service as well.
- The Petering study estimates that UWM could operate remote shuttles at about $25/hour.

**CREATE OTHER USES AT REMOTE CAMPUSES**
- The remote campuses currently are dedicated to a specific academic study and offer little reason for other UWM affiliates to travel there.
- In the long run, it may be wise for UWM to continue investing in the areas surrounding the SFS, ZSPH, and the new Innovation Campus.
- Additional uses, such as a park-and-ride facility, a performance space, or off-campus housing would certainly generate new riders and attention to these facilities.
Cost/Benefits

- **Up-Front Costs are LOW.** The investments in minivans on the current fleet were already made.

- **Impact on Mode Shift is MEDIUM-LOW.** By providing people who are willing to walk and take transit to the Kenwood campus by saving money on parking with better transit service, there will be a reduction in the amount of people who are still willing to drive directly to campus and look for parking. However, the overall percentage of the campus population affected by this strategy is low.

- **Ongoing Cost Savings are HIGH.** Any change from the current operation of specialized express transit service to remote locations would reap additional savings for the University.

- **Customer Convenience is MEDIUM.** A more responsive shuttle that can either be tailored to individual demand, or even pick up UWM affiliates along the way, would increase customer satisfaction.
STRATEGY: LIFT USER GROUP RESTRICTIONS ON UWM TRANSIT

**Issues/Rationale**

- UWM’s transit services cover a large area around campus and serve most hours of the day and evening, but several routes are exclusive to a certain user group.

- In particular, the University Housing (UH) Shuttle is available only to residential students and their guests, while the BOSS Shuttle is only available to students with a UPASS.

- Employees and non-residential students are left out of the opportunity to use a service that could potentially replace their need to drive to campus.

- There is currently a perception that transit is a complicated and confusing experience. There is no unified “UWM Transit” system. Rather than hop on any vehicle, riders must wait for a very specific service.

**Recommendation**

UWM should be actively working to integrate its several transit services under one identity that offers rides to anybody with a valid UWM ID.

1. **SHORT-TERM STEPS**
   - Meet with Student Association and Real Estate Foundation about lifting restrictions on BOSS and UH Shuttle, respectively.
   - Meet with MCTS to identify overlapping services.
   - Introduce lifted restrictions on peak period transit (such as GoRiteway service through UH Shuttle).

2. **LONG-TERM STEPS**
   - Develop a unified branding system on all UWM campus buses.
   - Move away from making UWM affiliates take contracted school buses to work, and start purchasing vehicles that can fulfill multiple transit needs.
   - Adjust service to accommodate changes in demand.
Cost/Benefits

- **Up-Front Costs are LOW.** Essentially, there is no additional cost for lifting the restrictions and allowing additional riders.

- **Impact on Mode Shift is MEDIUM-HIGH.** By expanding transit service to all UWM affiliates, bus frequencies will be perceived to be higher, and confusion regarding how to use the transit system will decrease. These major shifts in the rider experience will help increase the viability of transit as a potential travel mode to campus.

- **Ongoing Cost Savings are MEDIUM.** UWM should not expect one unit to subsidize the ideal shared service; there may need to be increased marginal costs of rescheduling transit service to better fit campus-wide needs. However, this does not offset the fact that transit services currently restricting riders will invariably benefit from the additional ridership.
  - Transit services currently strained by demand, such as BOSS, can expect relief; there is vehicle capacity for an average up to 12 passengers per each trip on the UH All-Buildings Loop from 6 p.m. to 1 a.m. Monday-Wednesday, or 828 per evening. Additionally, up to an average of 26 nightly riders who use the overnight UH Shuttle on-call service could switch over to BOSS.
  - There are also implications for cost savings in fleet maintenance. Relatively low-ridership services overlapping with existing high-frequency transit service, such as the UH Kenilworth daytime shuttle (which essentially competes with MCTS Routes 21 and 30), could be reduced or removed, saving the UH fleet up to 110 service hours of wear and tear every week.

- **Customer Convenience is HIGH.** For the average UWM affiliate to walk to the bus stop in front of Golda Meir Library and hop on any transit vehicle would mark a simple yet profound new freedom that the campus as a whole has yet to experience.
STRATEGY: ESTABLISH LATE NIGHT SHUTTLE BUS AT AREAS OF GREATEST DEMAND

Issues/Rationale

- BOSS service, while very popular among the student body, appears to have outgrown its current operating model of 11 minivans which are dispatched on demand.
- Currently, BOSS can carry as many as 8 riders per service hour with wait times of up to 45 minutes on especially busy nights.
- However, the provision of “one-to-one” on-demand trips is very expensive (similar to taxi costs) and should be minimized to the extent possible.
- Unfortunately, while MCTS is more cost-effective, the last ride predictably leaving campus (the 30 bus) is at 1:37 a.m.
- While a more cost-effective transit solution is needed when demand is high, BOSS should continue to provide coverage to less populated areas across its zone of at least 3.25 square miles until as late as 3 a.m. on weekends (thus fulfilling its original mission for campus and neighborhood safety).

Recommendation

UWM should consider developing an alternative fixed-route late night shuttle bus that is available to all affiliates, serves popular destinations, and regularly departs a single point on the Kenwood Campus at the same hourly time every night until 3 a.m. BOSS service should continue serving remote locations until 3 a.m.

Implementation Steps

- The best routing for each trip could be determined by demand-response trip planning software receiving requests from students’ smartphones.
- UWM affiliates would gather at a designated departure point on campus (such as the Library, Union, or a new Maryland Avenue stop) for service to the most popular destinations in the BOSS service zone.
- The service could be piloted for particularly busy evenings (Thursday to Sunday).

Potential Stops

- Sandburg Residence Hall
- Oakland Avenue (between North and Kenwood – could potentially incorporate on-request stops at any corner within this segment)
- Kenilworth Square Apartments
- Cambridge Commons
- Riverview Residence Hall

Cost/Benefits

- Up-Front Costs are MEDIUM-LOW. Costs would be concentrated in improved demand-response trip planning software and the contracting of small transit vehicles.
- Impact on Mode Shift is MEDIUM. If UWM affiliates know they can use a reliable and affordable late night service to and from campus, they may be convinced to not drive to campus on certain occasions.
- Ongoing Cost Savings are MEDIUM. This service can reduce the load on the current campus safety system, including BOSS and police escorts.
- Customer Convenience is MEDIUM. Current BOSS customers who would still need the service will see reduced wait times, while users of the late night shuttle bus will have the benefit of a regular and reliable departure time from campus.
STRATEGY: CREATE A TWO-WAY NORTH-SOUTH TRANSIT SPINE

Issues/Rationale

- The presence of multiple transit providers and roadway constraints around the UWM campus has led to redundant service, one-way loops, and the potential for confused transit riders.
- These loops and diversions are not necessarily the most intuitive transit routes—especially when the urban form around the campus is a dense grid.
- With large one-way loops, no rider gets good service all of the time. Passengers boarding and alighting along the loop are forced to walk out of direction for either their outgoing or returning trip, resulting in longer overall travel times for passengers.

Recommendation

UWM should **simplify all shuttle service into a two-way route** covering nodes around the Kenwood campus, including the Capitol-Humboldt lot, North Avenue apartments, and the Maryland Avenue core. Most activities are within a reasonable walking distance, and one-way loops only occur as turnarounds at both termini.

Cost/Benefits

- **Up-Front Costs are MEDIUM-HIGH.** A new traffic signal would likely need to be installed on North Avenue at the Riverview dorm. Other costs would mostly be in the form of new marketing materials, signage, and scheduling efforts.
- **Impact on Mode Shift is MEDIUM-HIGH.** The simplicity and time savings afforded by a straightforward two-way transit line could signal a new opportunity to gain transit riders.
- **Ongoing Cost Savings are LOW.** Marginal cost savings may be achieved as buses spend less time and fuel avoiding their previous left-turning loops through the congested North Avenue district, but this would be a negligible measurement.
- **Customer Convenience is HIGH.** With colorful branding, limited stops, and an easily understood sense of direction, the transit system at UWM would appear significantly more customer friendly and savvy to hotspots of activity in and around the UWM campus.
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PARKING STRATEGIES
PARKING

The reason “parking” is specifically called out in the title of the UW-Milwaukee Parking & Transportation Study is because the supply, price, and placement of parking throughout the Kenwood campus is a major motivator for transportation choices on campus, as well as well as a major contributor to negative externalities.

The cost of constructing and maintaining parking is continuing the rise across the country, and the impacts of greenhouse gases from idling vehicles waiting to enter UWM facilities cannot be overlooked. Essentially, the University cannot afford to continue to the current trend of subsidizing parking options for certain user groups at the expense of a multimodal system intended for all populations. As UWM continues to be a versatile campus that takes advantage of its urban location and public mission, the parking and transportation policies of the status quo will continue to be unsustainable in the long run.

Looking at peak parking utilization figures across all quadrants of the Kenwood campus and neighborhoods surrounding the perimeter, it was evident that there is an unlimited demand for parking at UWM. Additionally, campus community members voiced similar opinions:

“It is so annoying having to wake up early so I can race to UWM and steal a free parking spot before other students get there. I am also an AFROTC student [...] driving between MU and UWM so I don’t have to sit on the bus for an hour or more every day.”

“Make metered parking longer than 1 hour. Classes are 50 minutes PLUS walking to/from car (causes rush, stress).”

“Short term parking near your destination can be a big problem. We often need 5-10 minutes to run into our offices to pick up something. It is discouraging to turn a very short trip into a long one because of access.”

“I do enjoy the Capitol & Humboldt lot. Only problem is that I think it’s a bit too far out of my way.”

“Build remote parking by Freshwater Sciences... take [advantage] of shuttle”

“Students don’t have enough legal parking spaces (they’re parking in the one hour spots on our block for longer than an hour) and residents can’t have friends park on the street near their homes for much of the time.”

The following strategies proposed for UWM address these issues regarding parking. By incorporating the strategies as policy, UWM will:

- Set priorities for who on-campus parking supply is intended to serve
- Address the reality that on-campus space for new parking is limited and expensive to expand
- Increase the convenience for all who visit and live near UWM
STRATEGY: PILOT A CARPOOL PARKING PROGRAM

Issues/Rationale

- In 2012, 6% of all UWM employees carpooled to campus, while 65% drove alone.
- The current annual cost for employees to park on campus ranges from $900 (unreserved spaces primarily in surface lots) to $1,450 (reserved spaces primarily in garages).
- UWM has partnered with Zimride to provide a secure online platform for affiliates to find carpool opportunities, but there has been little to no follow-up to test the program’s effectiveness.
- Other than Zimride, UWM is providing no incentive for people driving to campus to join a carpool.

Recommendation

UWM should pilot a carpool parking program. The program would be managed by UWM Parking and Transit. Groups of at least 3 UWM affiliates (all students, faculty, and staff) may register their vehicles under one carpool application form associated with the existing Zimride platform. Their vehicle(s) would be registered with Parking & Transit and receive a unique carpool permit. Carpools would park in designated spaces and post their permit tag. Interested participants can post their home location and shift times on Zimride (or a future platform).

CARPOOL PROGRAM PARTICIPANTS COULD BENEFIT FROM:

- Reduced parking price, when the permit cost is split multiple ways across a group.
- When a carpooler must occasionally drive alone to campus, supplementary daily parking passes (capped at a certain number per year) would be provided.
- On days when a carpooler must leave at a different time than the rest of the group, a guaranteed ride home (GRH) program would provide a voucher for a taxi ride home.
- Preferential spaces for carpoolers, including the entirety of the Chapman lot.
- Parking enforcers will look for displayed carpool permits in vehicles parked in designated spaces. Penalties for carpool permit forgery and abuse would be substantially higher than daily tickets. (License plate registration can replace permits in the future.)

Cost/Benefits

- Up-Front Costs are LOW. Initial costs incurred are limited to the permit system and new signage. Later on, the cost of supplemental passes and the GRH vouchers to the University will depend on their usage.
- Impact on Mode Shift is MEDIUM-LOW. While still driving, carpoolers use fewer cars to move the same amount of people, helping to reduce driving overall. However, increasing carpool use can be difficult.
- Ongoing Cost Savings are MEDIUM-LOW. While any increase in overall parking availability will be back-filled in the short-term, long-term parking demand may decline, potentially avoiding supply expansion.
- Customer Convenience is MEDIUM-HIGH. Customers will appreciate the provision of an additional parking program that saves money and can potentially reduce the stress of finding a space in a good location.
STRATEGY: CREATE A NEIGHBORHOOD PARKING DISTRICT

Issues/Rationale

- Currently at UWM, nearby on-street parking is heavily oriented towards short-term parking. Most people who park off-campus are simply trying to access on-campus destinations and were unable to find a space on-campus.
- Where there are meters, they are uniformly priced at $1.00 per hour. This is less than the hourly rate in the Union and Lubar garages.
- Where there are no meters (which is a more common occurrence), many surrounding campus streets have spaces that are free and loosely enforced. The creation of a residential parking permit program in the campus area has aimed to reduce this demand.
- This spillover effect causes tension with the surrounding residential community. Multiple Milwaukee neighborhood associations cover the area surrounding UWM, including Murray Hill, Historic Water Tower, and Cambridge Woods.
- The 2010 Master Plan for UWM recommended the creation of a “collaborative entity that oversees the access and parking issues in the neighborhoods that surround UWM.”

Recommendations

The residential permits should continue to provide security to the neighborhood. At the same time, the number of metered on-street spaces could easily be expanded to those who may still need to park in the campus area for a short amount of time. However, meter fees do not need to go exclusively toward the maintenance and debt service associated with parking facilities. If the City of Milwaukee and the Village of Shorewood, in collaboration with UWM, were to implement additional on-street pay-stations in the surrounding neighborhood, surplus parking funds should be exclusively used for improvements in the neighborhood (i.e. street lights, pedestrian amenities, landscape, street beautification, etc.). This “Parking Benefit District” approach has worked in many cities, including San Diego, Philadelphia, Aspen, Boulder, Pasadena, and Houston, and it ensures that people who pay for parking see and enjoy the fruits of their contribution.

The parking district could be incorporated with the following steps:

1. Establish a parking district committee to oversee parking revenues, regulations, and improvements
2. Increase the on-street rate to match or exceed on-campus rates
3. Ensure the uniformity of on-street regulations (including preserving residential permit areas and potentially expanding them into priced areas as resident exemptions, increasing supply for residents and transients.)
4. Increase time limits for on-street parking
The subtle touch of incorporating signature UWM architecture and colors onto City parking signage establishes the Kenwood campus and community as a proud place within Milwaukee—similar to the efforts of business improvement districts like the Historic Third Ward.

In Pasadena, California, these signs quickly convey the fact that money spent on parking will go towards improvements that can, and will, be visible to all who go to the neighborhood. This transparency is not commonly expected when people are paying for parking.

**Cost/Benefits**

- **Up-Front Costs are LOW.** The regular organization of a stakeholders meeting on parking issues, paired with the installation of new meters and parking district signs, will incur some costs that may be split between the University and the City. Overall, costs will be minimal compared to the revenue created by the district.

- **Mode Shift Impact is LOW.** There is little evidence that the creation of a parking district alone reduces the number of automobiles driving to that particular area. However, increasing rates to match on-campus hourly rates can reduce parking demand.

- **Ongoing Cost Savings are MEDIUM-HIGH.** Creating a new stream of income that can go directly back into neighborhood amenities saves the City and the University on costs for the same infrastructure.

- **Customer Satisfaction is MEDIUM-HIGH.** As long as the user is assured that their dollars are being directed back into the neighborhood, they should be understandably satisfied and more aware of the cost of parking. People who do not drive to campus will also directly benefit from additional neighborhood amenities, such as street lighting.
STRATEGY: CREATE A SERVICE VEHICLE PARKING DATABASE

Issues/Rationale

- To perform essential work on certain campus structures, contractors must sometimes park their vehicles in locations such as paths not intended for parking. There is ambiguity in the enforcement policy of these vehicles.
- In the past, parking enforcement patrolled and ticketed construction vehicles for parking outside of parking spaces.
- Additionally, while the vehicle fleet of UWM is well accounted for, their parking locations are not. Some fleet vehicles have been using parking spaces that could better serve other users, generate new revenue for the University, be used for loading purposes, or aid access of a disabled person to a campus building.

Recommendation

The regular parking location and license plate of every service vehicle, whether a contractor or part of the UWM fleet, must be entered into a single electronic database and map. Both Facility Services and UWM Police will then be regularly informed of all service activity on campus, increasing accountability and allowing for greater focus on other priorities. Designated service vehicle spaces can be removed, increasing parking flexibility.

CONTRACTOR AND VENDOR VEHICLES

- The K-Permit application should automatically be printed and emailed to every contractor and vendor on campus.
- The exact parking location should be entered onto the application form. Parking and Transit would still approve permits, plus enter plate and location into the database.
- Noncompliant vehicles would still be ticketed.

CAR SHARE TECHNOLOGIES FOR FLEET MANAGEMENT

- UWM should consider converting to a shared fleet system, similar to a car share system (like Zipcar, which is presently available at UWM).
- By adding GPS to all service vehicles, the UWM fleet can park anywhere on campus, and they would be reserved online.
- UWM could then track vehicle usage and make cost-saving fleet recommendations.

With limited space on campus, UWM should be aware of where and when any vehicles are parking on locations that are normally designated for pedestrians.

Similar to car sharing services, fleet share relies on mobile apps for reservations, key cards to unlock vehicles, and a transparent database of who is renting what vehicle at which time.

Cost/Benefits

- **Up-Front Costs are MEDIUM-LOW.** Costs will mostly focus on an overhaul of the existing permit system, developing software necessary for a central database, and negotiating a contract with a fleet share provider.
- **Impact on Mode Shift is LOW.** These efforts will not affect the ongoing reduction of automobiles accessing campus.
- **Ongoing Cost Savings are MEDIUM.** Over time, data from fleet share statistics could result in the reduction of the UWM fleet. This would produce additional benefits for the State, which ultimately holds UWM accountable for the size and make of the fleet.
- **Customer Convenience is MEDIUM-HIGH.** All who use the UWM fleet will benefit from the added convenience of a centralized, transparent, and electronic platform for reserving vehicles with greater availability.
STRATEGY: INTRODUCE A DISABILITY PARKING RESERVATION SYSTEM AND CONTINUE MAPPING ACCESS POINTS

Issues/Rationale

- There is a sufficient supply of disability parking on campus. The problem is a lack of knowledge of where spaces are and the extent to which they are available at a given moment.
- If there is a regular employee of UWM who has a disability, there is an expectation that they will be accommodated.
- The campus is making strides to become a more accessible campus, and transit vehicles serving UWM are increasingly including ADA compliant wheelchair lifts as part of their service. However, the full fleet is not ADA compliant, and the provision of a dedicated vehicle on request can increase travel time for the user and costs for the University.

Recommendation

UWM should develop a reservation system for accessible parking that will eliminate the unpredictability of disability parking and reduce the demand for dedicated transit service, while helping UWM gain a greater understanding of the campus locations in greater need of accommodations.
STEP ONE: INTRODUCE A PERMIT RESERVATION SYSTEM

- The system would be phased in by initially providing disabled parkers with hangtags, then adding signs and notes pointing parkers to a contact for the new reservation program.
- To ensure that they will be accommodated, the user will be able to find their preferred parking space online, view whether it will be available for them at a specific time, and also identify their final destination.
- If needed, the option to dispatch a BOSS or lift-equipped vehicle to the parking space should be available upon making a reservation.
- Visitors to campus with disabilities will also be allowed to reserve on this system and would be encouraged to do through the UWM web site.
- This information will inform future planning efforts to better accommodate handicapped travelers to campus.

STEP TWO: MAP CAMPUS ACCESSIBILITY

- Building off of existing data, UWM should coordinate an effort to ensure that all accessible paths, sidewalks, bus stops, parking spaces, building entrances, and access points are mapped and documented.
- It is equally imperative to ensure that access points in need of updating are also documented and prioritized for improvement. Such improvements would be based on an updated database of employee accommodations plus parking reservation patterns pulled from the new system.

Because of the construction of a new sciences complex on campus, the accessible pedestrian bridge over Maryland Avenue is closed. To ensure continued accommodation, clear alternate routes need to be mapped and signed. This effort should be doubled across campus.

Cost/Benefits

- **Up-Front Costs are MEDIUM-HIGH.** Costs will mostly be focused on the development of a new reservation system and assigning resources to map accessibility across campus.
- **Impact on Mode Shift is LOW.** These efforts will not cause a large impact on the current mode share.
- **Ongoing Cost Savings are LOW.** The reduction in on-demand personal transit accommodation may reduce operating costs, but those savings should be diverted to capital projects that increase the overall ADA compliance of paths, parking, building access points, etc. around campus.
- **Customer Convenience is MEDIUM-HIGH.** UWM affiliates and visitors with disabilities will be able to reserve accessible parking in advance and have clear online maps and on-campus signs for accessible routes to buildings on campus.
STRATEGY: SIMPLIFY THE PROCESS OF PAYING FOR PARKING

Issues/Rationale

- UWM's parking system has developed to satisfy different departments and operating needs, including those of commuters, residents, employees, contractors, handicapped parkers, and visitors—all in an extended fashion without the benefit of coordinated implementation.
- There are multiple forms of payment. There are multiple types of permits. It is unclear to the average visitor which is the best option, unless one takes the effort to speak to a staffer in person at the Union.

Recommendation

UWM should introduce new technologies that will simplify all parking payment into one “pay by foot or pay by plate” program, as well as consistent enforcement through a license plate recognition system.

SHORT TERM: CONSOLIDATE THE SYSTEM

- UWM should first eliminate the inefficient in-car meters.
- UWM should then proceed to bring in a single campus-wide vendor for all parking payment systems.
- Convert any remaining facilities and garages to a “pay on foot” system with modern payment stations that accept credit cards and UWM IDs. Affiliates will not need hangtags, receipts, or tickets.
- Because 90-95% of all pay station transactions currently use credit cards, these systems will soon go “cashless”.
- All affiliates and visitors will be able to purchase parking credit in advance tied to their license plate, so they do not need to check in with a meter at each visit.
- The system of parking credit will correspond to the proposed hourly pricing structure.

LONG TERM: INTRODUCE LICENSE PLATE TECHNOLOGIES

- On the same payment station, a visitor can be given the option of entering their license plate number to purchase parking credit. Affiliates can have their plate pre-registered and just park.
- Automatic License Plate Readers (LPRs) will be used by enforcement personnel to verify payment and expedite violation processing, making ticketing subject to fewer appeals.
- LPRs can also be utilized to charge cars upon entry and exit of any parking facility.

If a user enters their license plate number to correspond with a space, their car can be located on a mobile app in case the visitor is lost.
Cost/Benefits

- **Up-Front Costs are HIGH.** The initial investment of retrofitting existing multi-space meters to simply accept UWM IDs is $1,000 per machine, with an additional $5 per month. The implementation of license plate readers as part of garage access can amount to at least $1.2 million. New pay-on-foot machines to replace gates can cost $25-40,000 apiece.

- **Impact on Mode Shift is MEDIUM-LOW.** More efficient enforcement practices may dissuade a certain segment of the population from driving to campus, as they may no longer be able to “cheat the system.”

- **Ongoing Cost Savings are MEDIUM.** LPR photos facilitate quicker and more accurate appeal resolution, which can generally increase overall revenue from tickets. The work of enforcement patrols would be more efficient through LPR technology as well, and cashiers and attendants are not necessary. Also, consolidating vendors could result in additional cost savings.

- **Customer Convenience is HIGH.** The process of paying for parking will be simplified and customers will no longer have to be acquainted with a new system depending on which facility they use. They can begin paying more attention to the cost of parking and their location.
STRATEGY: DEVELOP A TIERED PARKING PRICING SYSTEM

Issues/Rationale

- Regardless of their location, the student parking spaces currently priced by UWM as free are the first to fill up.
- As the day continues—especially by 1:00 p.m.—there is no on-campus parking remaining for part-time students who are attending afternoon and evening classes. These students also may not be able to take transit or bicycles to campus because their irregular schedule requires them to be in multiple locations throughout the day.
- There are only 87 short-term meters on campus (for 30 minutes), and surveys have shown that over 65% of faculty would prefer to pay more to park close to their destination.
- The majority of all other user groups (staff, graduate students, and undergraduate students) prefer to pay less for parking and would be willing to park further away.

Recommendation

UWM should think critically about who the limited supply of on-campus parking is intended for. The creation and development of a tiered parking pricing system will work to ensure that those who have limited schedules and need to drive to campus can park on campus, while those with more flexibility and willingness to walk further from their car will be rewarded for parking further away. Additionally, parking would remain free in the remote Capitol-Humboldt lot, which further incentivizes its use. The system is proposed as follows:

<table>
<thead>
<tr>
<th>ZONE NAME</th>
<th>FACILITY TYPES</th>
<th>FACILITY EXAMPLES</th>
<th>HOURLY COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIGH</td>
<td>Surface lots touching campus core, High-demand garages</td>
<td>Chapman, Lubar</td>
<td>$2.00 (with escalation)</td>
</tr>
<tr>
<td>MEDIUM</td>
<td>Peripheral lots, Lower-demand garages</td>
<td>Zelazo, Union</td>
<td>$1.50</td>
</tr>
<tr>
<td>LOW</td>
<td>Peripheral garages</td>
<td>NW Quadrant, Pavilion</td>
<td>$1.00</td>
</tr>
<tr>
<td>NEIGHBORHOOD</td>
<td>On-street parking</td>
<td>Downer Avenue</td>
<td>$1.50 - $2.00</td>
</tr>
<tr>
<td>REMOTE</td>
<td>Park-and-ride</td>
<td>Capitol-Humboldt</td>
<td>Free</td>
</tr>
</tbody>
</table>

- Parking would be enforced from **7:00 a.m. to 8:00 p.m. on weekdays.**
- “High” zone fees would escalate, meaning that **the hourly rate would increase with each passing hour.** For example, if the first hour is $2.00, the second would be $2.50, and so on. This ensures turnover in the lots and garages that are intended to be convenient, yet prioritized for short-term parking.
- Exceptions would include those with a handicapped permit (or registered license plate).
- Admissions would simply distribute hang tags outside of their facilities.
- A potential idea to consider would be a **half-priced discount on Fridays**, as the current demand for holding Friday classes is significantly less than the rest of the week.
- Although **only hourly and daily rates are recommended**, UWM may still offer monthly or semesterly passes priced according to these proposed tiers.
Cost/Benefits

- **Up-Front Costs are LOW.** Costs would be concentrated in the planning process. This would include a comprehensive educational campaign on the pricing structure and the creation of new road signage directing drivers to the relatively larger parking facilities.

- **Impact on Mode Shift is HIGH.** The tiered pricing system is designed to accommodate those whose schedule or home location requires them to drive to campus. With an easily understood hourly rate, those who are within a short distance of campus (or spend extended periods of time on campus) will be able to track their daily spending on parking and determine whether alternative transportation that they can use (such as the UPASS) is more worthwhile.

- **Ongoing Cost Savings are HIGH.** Over time, the tiered pricing program could encourage more efficient utilization of classroom space. By encouraging people to park at reduced rates on Fridays, faculty may be encouraged to start holding more classes on Fridays, thus relieving the campus of overcrowding that can otherwise only be remedied through new buildings. Additionally, this pricing structure sets a precedent to ensure that garage debt service can continue to be paid off partially through user revenues.

- **Customer Convenience is MEDIUM-HIGH.** Faculty who desire short-term parking at proximate locations will be assured of their availability due to high turnover. Meanwhile, those wishing to save money on parking will be easily directed to cheaper facilities.

Additional Consideration

Although the elimination of free student parking is proposed by this system of tiers, the student population can realize other benefits through the re-allocation of their segregated fees.

<table>
<thead>
<tr>
<th>Student Services</th>
<th>1 credit</th>
<th>2 credits</th>
<th>3 credits</th>
<th>4 credits</th>
<th>5 credits</th>
<th>6 credits</th>
<th>7 credits</th>
<th>8 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NWQ Garage</td>
<td>$3.20</td>
<td>$6.40</td>
<td>$9.60</td>
<td>$12.80</td>
<td>$16.00</td>
<td>$19.20</td>
<td>$22.40</td>
<td>$25.60</td>
</tr>
<tr>
<td>UPARK Lot</td>
<td>$1.81</td>
<td>$3.63</td>
<td>$5.44</td>
<td>$7.25</td>
<td>$9.06</td>
<td>$10.88</td>
<td>$12.69</td>
<td>$14.50</td>
</tr>
<tr>
<td>Pavilion Garage</td>
<td>$0.81</td>
<td>$1.63</td>
<td>$2.44</td>
<td>$3.25</td>
<td>$4.06</td>
<td>$4.88</td>
<td>$5.69</td>
<td>$6.50</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$5.82</strong></td>
<td><strong>$11.66</strong></td>
<td><strong>$17.48</strong></td>
<td><strong>$23.30</strong></td>
<td><strong>$29.12</strong></td>
<td><strong>$34.96</strong></td>
<td><strong>$40.78</strong></td>
<td><strong>$46.60</strong></td>
</tr>
</tbody>
</table>

While full-time students who pay the highest amount for a garage may feel justified occupying it before part-time students come to campus, those same part-time students pay the same amount for the UPASS program and may be the least able to use MCTS service due to their schedules. Ultimately, it will be more “fair” if students who need the NWQ Garage pay a fair remote price, and those who never use the garage do not have to pay at all.
STRATEGY: EXPAND PARK AND RIDE FACILITIES

Issues/Rationale

- Located two miles from campus, the Capitol-Humboldt lot is a very popular parking facility servicing UWM. However, it is normally full, and its location doesn’t conveniently serve many potential users coming from south of campus.

- There are 1,058 spaces at the lot. Peak parking utilization (occurring around 1 p.m.) at Capitol-Humboldt exceeds 90%.

- The typical daily ridership on the connecting UPARK shuttle (which operates from 5:30 a.m. to 10 p.m.) is over 2,000.

- The Capitol-Humboldt parking lot primarily captures traffic coming from the north and northwest. Drivers coming from other points would need to pass by the Kenwood campus so end up searching for campus parking instead.

- UWM campus surveys reveal a majority of staff and students would prefer to pay less and park farther away from their destination.

- A well-situated park-and-ride that intercepts drivers – prior to their final destination – inspires a reduction in on-campus automobile travel and parking (plus the associated hassles and frustrations of searching for parking).

Recommendations

The University should acquire and construct a new remote surface parking lot that intercepts drivers from points south. Any new facility similar to Capitol-Humboldt should be convenient to regional transit and highways. Its location should be perceived as an advantage over driving all the way to campus. Additionally, it needs to be staffed, be well-lit, and have room for vending machines and other amenities. At least four locations appear to be ripe for this.

Options

1. **NORTH AVENUE CORRIDOR (545 SPACES)**
   - Temporary location
   - Convenient to downtown and points south
   - Connecting transit service already exists, and it is near thriving retail that will naturally accommodate future bike share connections

2. **MARINA/BRADFORD BEACH (750 SPACES)**
   - Short-term location
   - Convenient to downtown and points south
   - 1.2 miles (4-6 minutes by bus) to UWM
   - Former site of park-and-ride

3. **SCHOOL OF FRESHWATER SCIENCES (1,700 SPACES)**
   - Long-term location
   - 5.5 miles (15-20 minutes by bus) to UWM
   - Relatively new UWM property served by underutilized campus transit service and express MCTS service
   - Multiple empty parcels in immediate proximity to campus

4. **MILWAUKEE COUNTY ZOO (UP TO 3,000 SPACES)**
   - Long-term location
   - 10 miles (20-30 minutes by bus) to UWM
   - Park-and-ride bus service could also include the Innovation Campus
Cost/Benefits

- **Up-Front Costs are HIGH.** The cost of site investigation, acquisition, and environmental offsets (if applicable) would be very high for UWM.

- **Mode Shift Impact is HIGH.** This project is highly demanded, as it could intercept as many as 1,000 cars away from the Kenwood Campus area. Additional facilities could also encourage greater utilization of connecting transit services.

- **Ongoing Cost Savings are MEDIUM.** Reduced strain on Kenwood campus parking opens up spaces to short-term visitors who are willing to pay more.

- **Customer Satisfaction is HIGH.** The provision of additional parking options away from the Kenwood Campus reduces the hassle and frustration that comes with trying to find a parking space in a congested and high-demand area.

**DETAIL: Opportunity Park-and-Ride Sites**

**NORTH AVENUE CORRIDOR**

Other potential temporary park-and-ride locations that UWM could direct commuters to include:

- **Henry Maier Festival Park/Summerfest Grounds** (up to 1,000 spaces, heavily underutilized in the autumn, winter, and fall seasons)

- **Milwaukee Intermodal Station** at 4th Street and Saint Paul Avenue (3 blocks from Route 30 and Green Line; official Wisconsin DOT park-and-ride facility)

- **Innovation Park** area in Wauwatosa (Potentially served by shuttle connections in the future)
VETERANS PARK MARINA

750 off-street spaces

180,000 square feet (600 possible spaces)
This is currently the most secure parcel location.

MCTS Green Line runs down South 1st Street

SCHOOL OF FRESHWATER SCIENCES

5 story-parking garage at the Rockwell Automation headquarters

238,000 square feet (793 possible spaces)

121,000 square feet (345 spaces)

BRADFORD BEACH

20,000 square feet
(60 possible spaces)
700 spaces to be removed by Zoo Interchange project and may be replaced with a garage.

Approximately 2,300 spaces.

UWM Innovation Campus about 1 1/2 miles north of the Zoo.
NONMOTORIZED TRANSPORTATION STRATEGIES
NONMOTORIZED TRANSPORTATION

As evidenced by the work of the Bicycle Task Force and the 2010 Master Plan, UWM is poised to continue encouraging nonmotorized transportation as a viable option to get to, from, and around the Kenwood Campus. Similar to many college campuses, the presence and mode share of bicycles and pedestrians at UWM is significant. However, this number could ride even higher with the help of an intentional investment in bicycle and pedestrian infrastructure that only makes nonmotorized travel safer than today, but actually enhances the perception of the Kenwood Campus as one of the most sustainable and desirable communities in Wisconsin.

Generally, our findings noted many gaps in the network that compromise the safety of all affiliates, whether they bike to campus from points south or drive to campus and park in the Northwest Quadrant Garage. Comments included:

“I don’t think it would be completely unreasonable to close off the UWM sections of Kenwood, Maryland, and Hartford to pedestrians only during certain times of the day.”

“The place I feel least safe is crossing the street between Lubar and Lapham Halls.”

“I would feel much more comfortable bicycling across the Locust Street Bridge on my commute to campus if automobiles traveled at the speed limit (30 mph)”

The following strategies proposed for UWM address these issues regarding bicycling and walking. By incorporating the strategies as policy, UWM will:

- Reduce auto-oriented clutter on campus
- Build connectivity paths from the inside out
- Make it easier and more attractive to walk through campus
- Establish the Kenwood campus as an active place and destination within Milwaukee
STRATEGY: IMPLEMENT BIKE SHARE ON THE UWM CAMPUS

Issues/Rationale

- Multiple strategies are necessary to reduce the share of UWM trips that involve a single-occupancy automobile. Bike share is one of those strategies because it can be applied to trips that are too long to walk but too short to realistically drive or wait for a bus.

- With their distinctive and prominent stations in urban spaces, bike share is a great way to signal confidence in a bikeable city.

- The flat terrain between UWM and popular areas such as North Avenue makes such trips on bike share possible.

- While Bublr Bikes (www.bublrbikes.com) recently began a system serving Milwaukee, unless UWM aids in the process, it will likely be several years before the network is large enough to incorporate UWM.

- The overall campus parking supply is constrained and should be prioritized for drivers who must travel long distances or to off-campus jobs.

- Students are paying as much as $547.80 per semester in segregated fees, and 17% of those fees are related to transportation, including the debt service for student parking garages and the MCTS UPASS.

Recommendation

UWM should not be expected to create a bike share system from scratch. Instead, **UWM should partner with the existing Bublr Bikes program by sponsoring new infrastructure and providing incentives for UWM affiliates to join.**

1. **COORDINATION WITH BUBLR BIKES**
   - The form of Bublr Bikes is a departure from traditional college bike share systems, in which bikes are loaned from a central office and they are all painted the same color.
   - UWM should be a major contributor to the planned Bublr Bikes system – a next generation bike share system in which bicycles are parked, tracked, and managed by a series of electronic docks.

2. **INSTITUTIONAL SPONSORSHIP**
   - Many bike share stations exist as a result of a sponsoring neighbor. These usually include major employers, including university campuses.
   - By financially supporting a bike share station, UWM can have its logo and brand placed on system bicycles, web site, and mobile app.
   - University and departmental memberships could provide an alternate transportation mode for workday activities.
The semesterly "green fees" that funded the University of Alaska's new bike share system are $3.

3. REALLOCATE STUDENT FEES AND BUILD INCENTIVES

- With sufficient notice and community input, the Student's Association should work to reallocate fees for more environmental purposes, such as a bike share program.
- Incentives for UWM affiliates to join a bike share program, such as a membership discount, can justify any upfront fees that would go towards supporting a system.

Cost/Benefits

- **Up-Front Costs are MEDIUM-LOW.** In 2012, the capital cost of one Capital Bikeshare (Washington, DC) station, along with ten bicycles, was approximately $55,000. The University should also expect to provide an ongoing annual subsidy of about $50,000, which can be raised through segregated fees.

- **Impact on Mode Shift is HIGH.** When successfully implemented, bike share can easily replace trips that are too long for walking on a tight schedule (over a mile) but too short to make driving cost-effective (especially considering parking). The fact that the UWM campus sits just over a mile from the burgeoning North Avenue District and sits on a relatively flat bluff between the lake and the river makes bike share a logical option for travel in between these and other areas.

- **Ongoing Cost Savings are LOW.** Although cost savings are achieved with the reduction of parking demand as a result of bike share, it is still a new project that does not necessarily replace an existing cost or practice. However, some of the current student segregated fees currently used for other transportation purposes could be diverted to the bicycle share.

- **Customer Convenience is HIGH.** With a new bike share system, UWM puts itself on the map as a fun, bicycle-oriented place where people can easily and safely get around without needing the space and expense of an automobile. Amenities in the nearest commercial areas to UWM would not seem as far away, and all UWM affiliates will appreciate the newfound variety in a task as simple as getting lunch.

PROPOSED BICYCLE SHARE STATIONS FROM THE UWM CDS BICYCLE STUDY

- **Sandburg Hall**
- **Meir Library**
- **Union**

ADDITIONAL DESTINATIONS:
- Capitol Avenue, Shorewood
- North Avenue
- Lakefront
- Zilber School (Brewery)
- Downtown Milwaukee
STRATEGY: CLOSE MARYLAND AVENUE TO AUTOMOBILE TRAFFIC BEFORE ITS RECONSTRUCTION

Issues/Rationale

- With a width of 40 feet (3 travel lanes plus 1 parking lane), Maryland Avenue is perceived as a major barrier on campus. Upon surveying the UWM community, the 3100/3200 Block of Maryland Avenue was frequently identified as a “problem intersection” on campus.

- Although Maryland Avenue is the only north-south street cutting directly through the heart of the Kenwood Campus, it has relatively light traffic volumes. The annual average daily traffic for Maryland Avenue between Kenwood and Hartford (6,000 vehicles) is about half (40% and 62%) of the equivalent stretches along Oakland Avenue and Downer Avenue, respectively.

- The driveway of Lubar Hall, originally designed for VIPs, is now used as a turnaround across a sidewalk for everyday traffic.

- The City of Milwaukee is planning on reconstructing Maryland Avenue next summer.

Recommendation

Now is the time to propose a series of cost-effective design strategies that calm traffic along Maryland Avenue and re-establish the streetscape as a central campus location. This idea is supported by the UWM Master Plan transportation element. Before Maryland Avenue undergoes an expensive reconstruction that will have lasting effects for years to come, the community can experience a street restricted from general traffic. There are multiple design elements which could be incorporated into the Maryland Avenue streetscape in the long-term.

The project should incorporate the following elements:

1. **TRANSIT ONLY LANES AND BICYCLE LANES**
   - The creation of a new “transit spine” running down a north-south axis of campus opens up more space for existing and re-routed bus routes (including the UPARK Shuttle, the UH Shuttle, Wisconsin Coach, the MCTS Green Line, and MCTS Route 30) to stop and layover.
   - The elimination of general traffic from this stretch of the road will allow bicycles to move freely along the street with the emphasis of shared-lane “sharrow” markings.
2. PARKLET AND EVENT SPACE
- Parklets are sidewalk-level platforms that typically replace a segment of a street’s parking lane and create a new place for pedestrians to stop and sit.
- The presence of a parklet can “tighten” the driver’s perception of the street width, which inherently calms remaining bus, garage, and loading traffic.
- Parklets are primarily valued as a gathering place and an extra seating area for nearby dining or venues.

3. BICYCLE CORRALS
- Bicycle corrals replace car parking spaces to increase bike parking – one car space typically allows ten or more bike spaces.
- Their easy visibility and convenience to bike routes may increase their utilization.
- When built close to corners at intersections, they increase visibility for drivers as well.

4. PICK-UP / DROP-OFF LANE FOR SCHOOL BUSES ACCESSING THE HARTFORD AVENUE SCHOOL
- Overall, the quality of bus stops on Maryland Avenue should be improved, but school buses using the street bear special consideration.
- All transit and school buses will be allowed to utilize Maryland Avenue. With a dedicated space for the school, school buses can drop-off safely along a much longer stretch of sidewalk, eliminating today’s single-point drop-off which keeps students waiting in idling buses.
- Relocating pick-up from Hartford to Maryland will similarly expand from today’s single pick-up point, while giving buses a location to wait in advance of school dismissal without blocking traffic.
- Students who are picked up and dropped off by private vehicles and carpools can now use the perpendicular spaces along West Hartford Avenue.
**Cost/Benefits**

- **Up-Front Costs are LOW.** Painted street design with signs and movable barriers in advance of major reconstruction efforts allows a low-cost re-imagining of Maryland Avenue. These changes would be aimed at encouraging a more responsive and context-sensitive investment when the actual reconstruction of Maryland Avenue takes place. If instituting these changes permanently, costs can be expected to increase.

- **Impact on Mode Shift is MEDIUM.** The creation of a new bicycle corridor, the consolidation of transit service along a central spine, and the overall comfort afforded to pedestrians from this design can all contribute to a reduction of automobile traffic. If these solutions are incorporated into the permanent design, the impacts could be greater.

- **Ongoing Cost Savings are MEDIUM-HIGH.** The loss of on-street parking can immediately be remedied by eliminating “no parking” restrictions on streets surrounding the Northwest Quadrant (a vestige of the quadrant’s history as a hospital) to increase overall on-street supply. On Maryland Avenue north of Hartford Avenue, as many as 40 on-street parking spaces could easily be created. On Newport Avenue, another 10 parking spaces can be created. Additionally, by closing the driveway to the Lubar School of Business for use by only VIP visitors, the administration can document the real number of times they need to utilize the driveway.

- **Customer Convenience is MEDIUM-HIGH.** Calming buses and eliminating general traffic from Maryland Avenue, will substantially increase the comfort and convenience of any pedestrian who is trying to get across this corridor. Because improvements along Maryland Avenue involve MCTS and the Hartford Avenue School, this is a great opportunity for UWM to build on its relationships with the Milwaukee County Transit System (MCTS) and Milwaukee Public Schools (MPS).

Since the conceptual pilot design (above) was proposed, the City of Milwaukee agreed to support a traffic study regarding the closure of Maryland Avenue to private automobiles. Nevertheless, the incorporation of traffic calming elements will provide lasting benefits for the communities that attend UWM and the Hartford Avenue School.
STRATEGY: SIMPLIFY BICYCLE PARKING ON CAMPUS

Issues/Rationale

- There is a very sizable capacity for bicycle parking on the UWM campus (currently listed as 1,242 spaces), but there are many instances in which people still park their bicycles on railings and other illegal locations.
- In some high-demand areas, more racks are needed.
- In many locations, the inconsistency of rack design, placement, and modern compatibility makes many seek more stable railings designed for other purposes.
- For example, some racks may not be fully bolted to the pavement, while others may be too close to a wall to achieve full occupancy as designed. Many are not compliant with design guidance for modern bikes that can be damaged in old or poorly-designed racks.
- UWM may not have the resources to ensure security if the bicycle parking facilities are too scattered.

Recommendation

On-campus bicycle parking should be installed per the recommendations established by the 2013 Community Design Solutions (CDS) plan. This includes the prioritization of inverted U-type racks, covered bicycle parking shelter design, and the retrofitting of racks that are currently unbolted and improperly spaced and sited. All UWM bike racks should be compliant with the latest Association of Pedestrian and Bicycle Professionals (APBP) guidance.

SHORT-TERM PARKING

- When properly sited away from walls, the inverted U-rack design provides the best security and room for short-term parking.

Including UWM branding into the bike racks would always produce a positive effect on campus, and it would continue other efforts to augment UWM as a distinct place in the city and the region.

LONG-TERM PARKING

- With the extended winters of Milwaukee, UWM should provide covered long-term parking for bicycles.
- As acknowledged by the CDS plan, the central nodes of campus should each contain a long-term bike parking facility with amenities such as lighting, repair kiosks, and protection from the elements.

Innovative designs by the UWM community are already proposed for intra-campus bicycle hubs. These designs should incorporate amenities conducive to long-term bicycle parking.

Cost/Benefits

- **Up-Front Costs are LOW.** Standardizing bicycle racks at UWM may bring purchases and installation down to $300 per unit. Campus-wide, the cost of bike parking maintenance amounts to only $1,000 annually.

- **Impact on Mode Shift is MEDIUM-LOW.** Distinctive and branded racks may signal to potential riders that UWM is committed to keeping bicycles as a viable mode of transportation around campus.

- **Ongoing Cost Savings are MEDIUM-HIGH.** By purchasing new racks in bulk, costs savings can be achieved. UWM is already planning on doing this.

- **Customer Convenience is HIGH.** With increased capacity and visibility of bicycle racks, bicyclists will be less inclined to park further away from their destination, or worse, use a hand railing, tree, or sign to affix and lock their bike.
STRATEGY: CREATE BICYCLE CORRIDORS AND DISMOUNT ZONES

Issues/Rationale

- Pedestrian traffic saturates the network of paths during class changes, restricting bicycle flows. Bicycles can speed through these pedestrian paths during off-peak times, creating inconsistent user expectations that lead to conflicts.
- The bicycle network on campus is completely unmarked. With bicycling becoming a larger mode share, UWM should prepare to accommodate additional traffic safely with marked facilities, especially accessing the core of campus framed by the Golda Meir Library, Spaights Plaza, and the Union.

Recommendation

UWM should paint and sign new corridors reserved for bicycles that connect the heart of campus to planned intra-campus bicycle hub locations from the 2013 Community Design Solutions (CDS) plan. These corridors should be paired on one end with a designated “dismount” zone exclusively reserved for all pedestrians and on the other end with regional connections, including Oakland Avenue, Lakeshore, and the Oak Leaf Trail.
ON & OFF CAMPUS BICYCLE CORRIDORS

• An exclusive bicycle corridor on a campus requires sufficient sidewalk width and noticeable aesthetic differences to clearly and safely separate bicycles and pedestrians.
• Ways to safely separate walkers from bikers on a single corridor include different paving materials, high-visibility paint colors, and designing straightforward signs and markings.
• Bicyclists should expect to be comfortable while moving through the corridor, but they must continue to be vigilant at intersections.
• On-street facilities should conform to the latest guidance from NACTO.¹

DISMOUNT ZONES

• A “dismount zone” is a space designated for pedestrians only. Bicyclists would be expected to “dismount” and walk their bikes to parking.
• To minimize inconvenience to bikers, a dismount zone should only surround a popular destination(s) where foot traffic dominates and not be “in the way” of a major cross-campus corridor already used regularly by bicyclists. Alternative parallel biking routes should be provided, such as installing lanes and shared-lane markings (“sharrows”) on Maryland Avenue and Hartford Avenue.
• The enforcement of these zones relies on the establishment of university policy and a low tolerance for individuals biking at high speeds.

Cost/Benefits

• Up-Front Costs are MEDIUM-LOW. New signing, paint, barriers and enforcement will be part of the initial costs in creating a new corridor and zone.
• Impact on Mode Shift is MEDIUM-LOW. Strengthening the non-motorized infrastructure on campus will make life without a car at UWM even more viable, but it must be supplemented with additional strategies to make a real mode shift.
• Ongoing Cost Savings are LOW. This new infrastructure may help offset future expansions of parking.
• Customer Convenience is HIGH. The calmness and convenience afforded by a pedestrian-only zone will make the campus experience significantly more pleasant to the numerous people walking across the UWM campus. Bicyclists accessing the core of campus will benefit from exclusive routes of their own.

¹ NACTO is the National Association of City Transportation Officials, which publishes the Urban Bikeway Design Guide.
STRATEGY: EXPAND ACCESS TO THE OAK LEAF TRAIL

Issues/Rationale

- Managed by the Milwaukee County Park System, the Oak Leaf Trail is the premier north-south artery for bicyclists, and it is the most proximate multi-use trail to the UWM Kenwood Campus.
- Kenwood Avenue and Hartford Avenue, both designated bicycle routes for the City of Milwaukee, do not directly reach the Oak Leaf Trail. Instead, they both dead end at North Cambridge Avenue, a residential street separated from the Oak Leaf Trail by overgrowth and a 20-foot drop.
- Currently, the closest access points to the Oak Leaf Trail from UWM are an at-grade connection at East Providence Avenue (1/4-mile north of Hartford Avenue) and at Riverside Park (3/5-mile south of Hartford Avenue), which is on the far side of busy Locust Street.

Recommendations

Building a series of direct access points from Kenwood Boulevard to the Oak Leaf Trail is a necessity for completing the bicycle network surrounding the UWM campus. The current status of Kenwood Boulevard as a marked bicycle route leading to campus makes it the logical direct connection to the trail. Because of the cost and time expected to complete this major gap in the network, the following steps should be taken in chronological order.

1. SIGNED AND PAINTED ROUTES ON EXISTING CONNECTIONS (CAMBRIDGE AND NEWHALL)
   Interim/immediate actions
   - North Newhall Street is a relatively quiet and straight street used to access North Avenue. To become a more direct route to UWM, a segment from Park Place to Belleview Place must be signed and designated.
   - North Cambridge Avenue is part of the existing connection from the trail to UWM. Signage and painted lanes are imperative.

2. SOUTHBOUND RAMP FROM KENWOOD
   Short-term action
   - To ensure the access ramp from Cambridge Avenue to the Oak Leaf Trail is ADA-compliant, it must be nearly 300 feet long (to cover the 20 foot height difference).
   - The southbound ramp maximizes convenience to bikers coming from Downtown Milwaukee.

3. BICYCLE LANES ON HARTFORD
   Medium-term action
   - At 30 feet wide (and one lane of traffic in each direction), Hartford Avenue can accommodate bicycle lanes in each direction.

4. NORTHBOUND RAMP FROM KENWOOD
   Long-term action
   - The Oak Leaf Trail continues over 4 miles north. When funds permit, a ramp in the northbound direction should be constructed.
**Cost/Benefits**

- **Up-Front Costs are HIGH.** The cost of constructing a secure, accessible, and paved bicycle/pedestrian facility can be very high (an average of $500,000 per mile). Costs will certainly be increased for the addition of important amenities (such as lighting, handrails, and landscaping around the existing woods), plus engineering services for the grade change currently separating the East Side and the Oak Leaf Trail.

- **Mode Shift Impact is HIGH.** Completing this crucial link in the Kenwood campus area bicycle network will shave as much as 2/3 of a mile off of a commute that incorporates the Oak Leaf Trail.

- **Ongoing Cost Savings are MEDIUM-LOW.** Although a mode shift towards bicyclists will reduce costs associated with parking demand, additional costs will be necessary for maintaining facilities and ensuring additional on-campus amenities (such as parking, showers, and repair stations).

- **Customer Satisfaction is HIGH.** Not only will the distances and times be reduced with a connection, the potential increase in bikers running down Kenwood Boulevard, paired with new signage, will help turn potential bicyclists who are “interested but concerned” into regular bicyclists who are “enthused and confident.”

**DETAIL: New Trail Connections**

KENWOOD BOULEVARD AND THE OAK LEAF TRAIL

- Bikers along Cambridge Avenue should have a comfortable sense of where they are going. Directional signs and arrows should help.
- With direct access to the Oak Leaf Trail, Kenwood Boulevard should have a bicycle lane running all the way to Lake Drive.
- To be compliant with ADA, a ramp must have a ratio of 12 feet in length for every 1 foot in height, plus periodic flat landings. These access ramps would be nearly 300 feet long.
CAMPUS STRATEGY
CAMPUS

As “business as usual” occurs every day for UWM and its many affiliates, a parallel experience of the campus visitor is also happening. Whether a distinguished guest speaker, a fan and spectator of the Milwaukee Panthers, or a prospective applicant planning on spending their time and money at the college of their choosing, it is vital to understand the ramifications of these visitors’ impressions of the UWM campus. Transportation plays a major role in shaping such perceptions.

In 2012, the experience of the visiting prospective student to UWM was audited by TargetX. Among the audit report findings, the points relevant to transportation included:

- **Signage containing the UWM brand on the approach to campus was minimal.**
- **Wayfinding from the Pavilion to the Visitors Center was lacking.**
- **The process of stopping at the Visitor’s Center to receive a parking pass, and then drive to the Pavilion, was unusually cumbersome.**

A comprehensive yet unified approach to campus design, which was encouraged by the 2010 Master Plan, can go a long way toward improving that experience. The single strategy aimed at holistically improving UWM transportation through design will facilitate:

- Building a greater campus presence in the region
- Reducing the auto-orientation of campus
- A better pedestrian environment
STRATEGY: CREATE REGIONAL IDENTITY WITH CAMPUS GATEWAYS

Issues/Rationale

- Situated as a place apart from Downtown and other commercial districts, the unique form and sizable footprint of the UWM campus stands out in the City of Milwaukee’s grid.

- Meanwhile, at ground level, the presence of the Kenwood Campus is indistinct and hidden in the Milwaukee streetscape. The presence of UWM branding is primarily limited to the immediate campus area and buildings.

- Additionally, there is a lack of directional signage to the UWM campus from other parts of the Milwaukee region.

- In a 2012 audit of the prospective student experience, UWM received low marks for a lack of directional signage pointing drivers to campus from other parts of the city. Also, there was little signage to direct guests to on-campus destinations like the Visitors Center and the Pavilion.

Recommendations

As noted in the 2010 Master Plan, **UWM needs to establish a true “gateway” to campus** that identifies it as a welcoming and distinctive place in Milwaukee. However, for the average campus visitor to access and appreciate that gateway, it must be part of a larger comprehensive initiative to cement the University’s presence in the greater region. This includes designing a visible and timeless meeting place (such as a calmed Maryland Avenue), but also establishing guidelines for the campus edge and a wayfinding system for off-campus drivers and transit users, along with on-campus bicyclists and pedestrians.

1. **APPROACHING THE CAMPUS**

   - The experience of visiting UWM actually starts at the airport and along the highway.
   - If there was a single sign along Interstate 43 pointing people to the UWM campus, every passing driver (the 2009 AADT\(^1\) was 144,000 vehicles) would be reminded that UWM is a major regional destination.

2. **AROUND THE CAMPUS**

   - Other aesthetic choices can easily establish and reinforce the presence of the campus in the city.
   - UWM should work with the City of Milwaukee to replace street signs along the campus edge – and through the campus itself – with the university logo, branding, and colors.

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\(^1\) AADT = Annual Average Daily Traffic
3. **THE CENTER OF CAMPUS**  
- A massive gateway with the campus brand can be a traffic calming device and a notable landmark at the same time.  
- When drivers, transit riders, bicyclists, and pedestrians see such a landmark, they will unequivocally know that they have arrived at campus.

4. **THROUGHOUT THE CAMPUS**  
- A variety of design standards will go a long way toward efficiently defining the campus as a special place in the surrounding city.  
- This improved environment will increase the pride taken in campus by the UWM community and improve neighborhood relations.  
- Uniform street frontage, benches, bus shelters, sidewalks, signage, banners, lighting fixtures, and placement of driveways can establish a greater campus presence—even if limited to just a few blocks.

### Cost/Benefits

- **Up-Front Costs are HIGH.** Initial elements of this strategy, including new signage in select areas, are relatively lower in cost. Later elements, including the design and construction of a campus gateway and uniform edges, are higher. The planning and coordination of all these parts, including the assembly of wayfinding standards, urban design, and commissioned art for the gateway, can incur costs as well.

- **Mode Shift Impact is LOW.** Providing a comprehensive wayfinding system and campus gateway project will not alone reduce the automobile mode share of those who travel to UWM. However, if a greater regional presence is paired with marketing of UWM’s efforts at reducing vehicle travel, community relations can be improved while encouraging the UWM community to embrace a less auto-dependent future.

- **Ongoing Cost Savings are LOW.** This is a unique investment that does not replace any particular practice or program at UWM.

- **Customer Satisfaction is HIGH.** The average UWM visitor will encounter a significantly different experience as they approach the Kenwood Campus. They will no longer have to search for their destination without the guidance of a clear and attractive signage system. More importantly, upon seeing a picturesque urban university campus as a defined place within the Milwaukee region, they will come away with a lasting positive impression of UWM.
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