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**MEMORANDUM**

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**Date:** July 21, 2015  
**To:** Arthur Ross  
**From:** Kevin Luecke  
**Project:** Downtown Madison Bicycle & Moped Parking Study (TDG #8019)  
**Re:** Existing Conditions

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This memo provides a summary of existing conditions for bicycle and moped parking in the Downtown Study Area. This memo will become part of the final project report.

### Existing Bicycle Parking

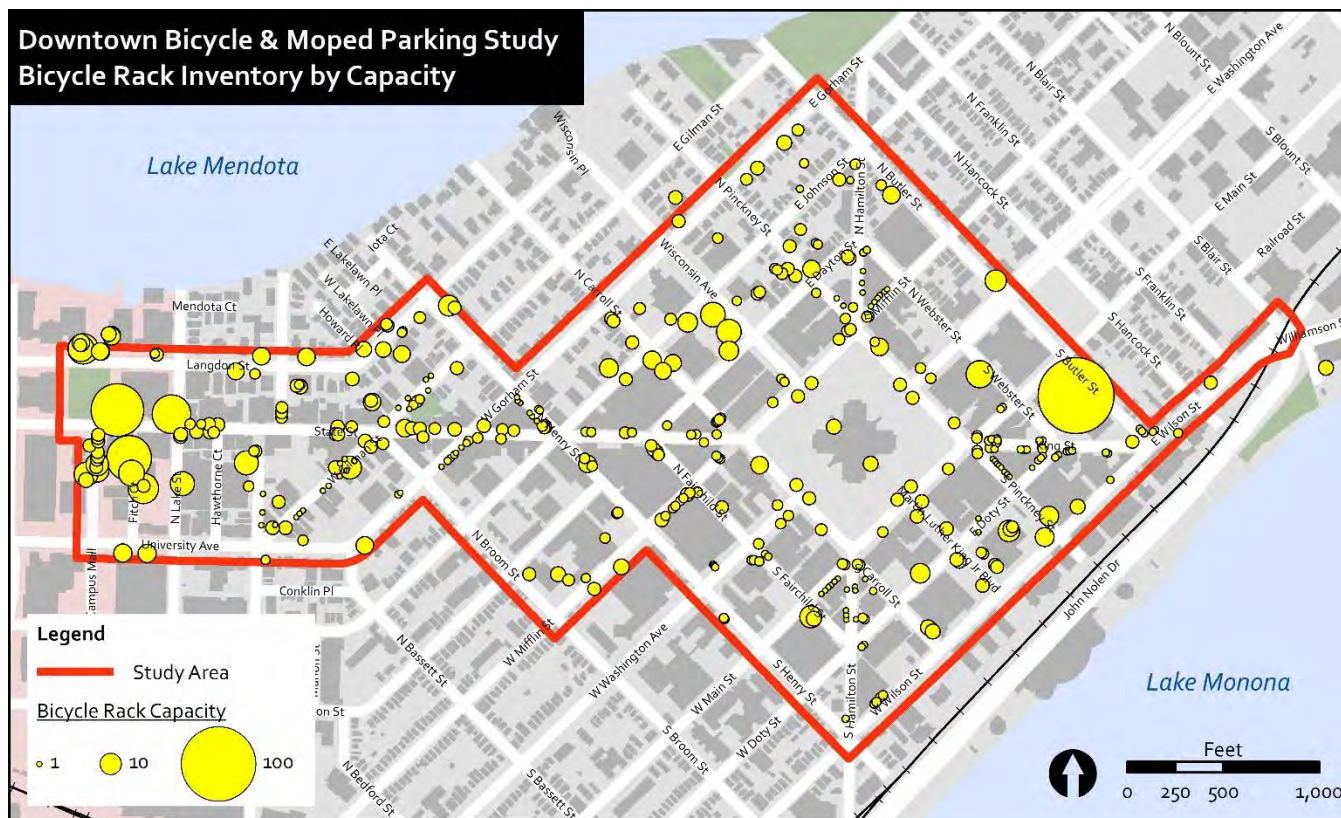
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A full inventory of bicycle racks in the study area was completed during the week of July 7, 2014; there have been some subsequent updates to the initial inventory as a variety of construction projects were completed. Racks that are included in the inventory include all racks within the public right-of-way, racks in public parking garages, and racks on private property that are visible from the public right of way. Table 1 displays the number of different rack types that were inventoried and the total number of bicycle parking spaces provided by those racks.

*Table 1: Total number of bicycle racks and bicycle parking spaces inventoried to date*

Rack Type	Number of Racks	Number of Spaces	Meets City Guidance
Campus Rack	43	323	No
Decorative	3	14	Yes (generally)
Fence	43	244	No
Hanging Loop	129	636	Yes
Hanging Racks	9	72	No
Inverted U	167	348	Yes
Locker	2	16	Yes
Meter Ring	66	66	Yes
Post & Ring	52	104	Yes
Rail Mounted	89	555	Yes
Variety	23	55	Yes (generally)
Wave	20	77	No
<b>Total</b>	<b>646</b>	<b>2,510</b>	<b>N/A</b>

As displayed in Table 1, nearly 650 racks representing 2,510 bicycle parking spaces were inventoried. The locations and approximate capacity of the racks in Table 1 are displayed on the map *Bicycle Rack Inventory by Capacity*. Points on the map may represent multiple racks at a single location, and some rack points may obscure other points on the map.



When bicycle racks were initially inventoried, levels of damage and corrosion were generally noted, with ratings of none, minor, and major. Figures 1 and 2 display the percentages of rack locations, not necessarily individual racks, which displayed each level of corrosion or damage. The inventoried racks are generally in good condition, with few racks showing any significant damage. However, a notable number of racks do display signs of corrosion, with approximately one third of the rack locations having minor or major corrosion. The final project GIS database will include these notations.

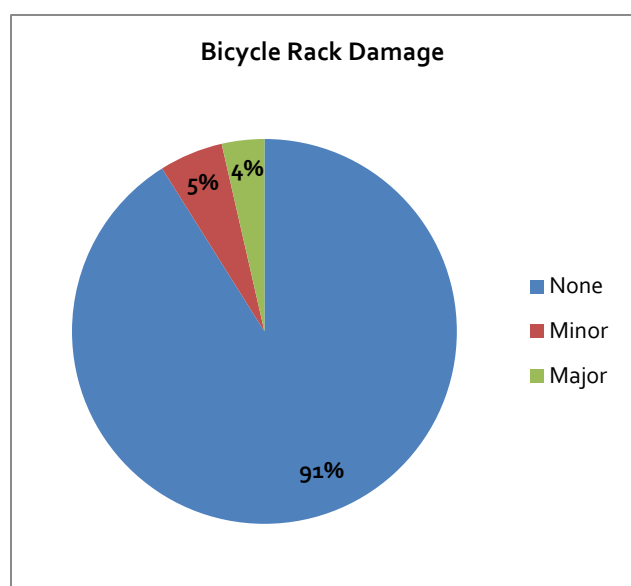


Figure 1: Percentage of rack locations with damaged racks

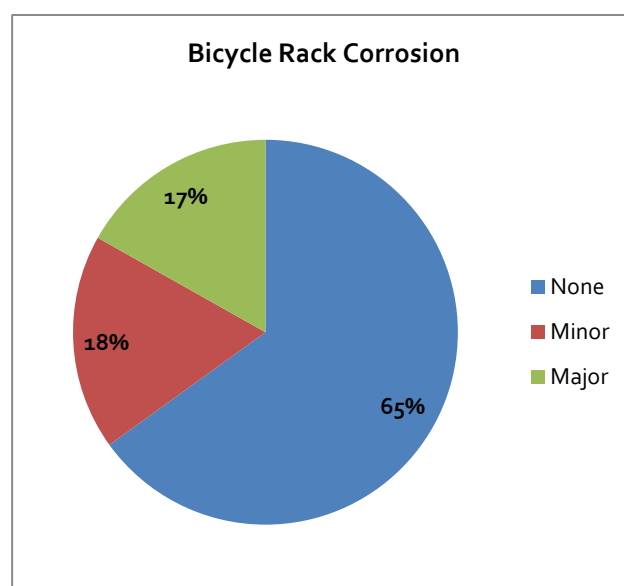


Figure 2: Percentage of rack locations with corroded racks

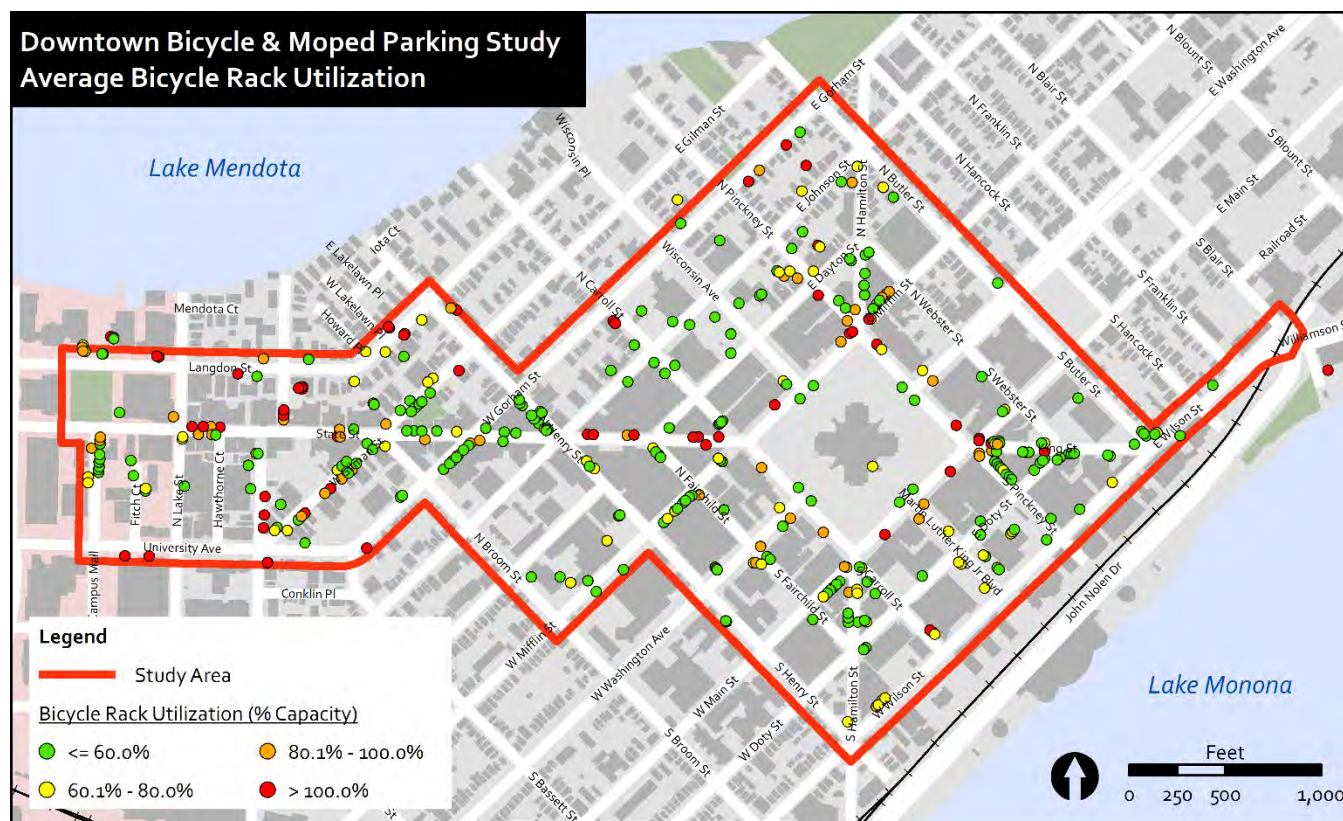
## Bicycle Rack Utilization

A series of counts were conducted to monitor the use of bicycle racks under different conditions. Dates for the counts were selected to cover a range of days of the week, special events, weather conditions, and other factors that may impact the use of bicycle racks within the study area. Table 2 displays a summary of the counts that were conducted.

Table 2: Bicycle inventory count dates and conditions

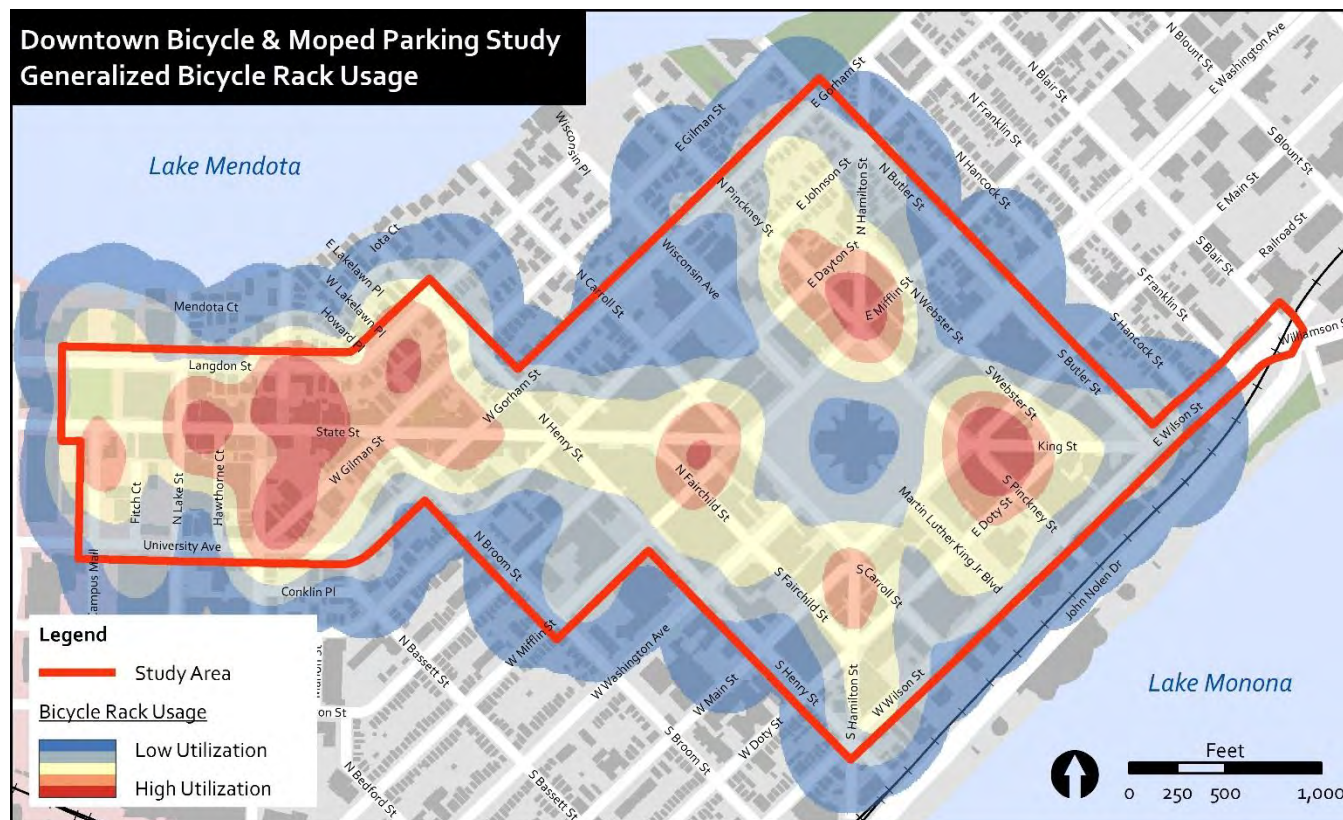
#	Day	Date	Time	Event	Weather	Comment
1	Mon – Thurs	7/7 – 7/11/2014	Mid-day	None	Variable; pleasant	Initial inventory
1	Wednesday	7/30/2014	Early evening	Concerts on the Square	Lower 70s, partly cloudy	Partial count
2	Thursday	8/28/2014	Mid-day	None	70 degrees, overcast	
3	Saturday	8/30/2014	Mid-afternoon	Taste of Madison	80 degrees, sunny	Partial count
4	Monday	9/22/2014	Mid-day	None	70 degrees, sunny	
5	Saturday	10/4/2014	Late morning	Farmers Market	45 degrees, light rain	Partial count
6	Monday	10/20/2014	Mid-day	None	60 degrees, sunny	
7	Tuesday	3/10/2015	Early afternoon	None	40 degrees, sunny	
8	Thursday	5/14/2015	Mid-afternoon	None	60 degrees, sunny	Partial count
9	Thursday	6/18/2015	Late morning	None	75 degrees, sunny	
10	Wednesday	6/24/2015	Early evening	Concerts on the Square	75 degrees, cloudy	Partial count

Partial counts were conducted for a number of days/events to focus on the area around the Capitol Square where rack usage was expected to be high due to the event occurring; partial counts generally included racks within the Outer Square as well as the 0 – 300 blocks of State Street. Map 2 displays the average rack utilization across all of the count events.





Map 3 displays a “heat map” of rack utilization with blue areas having lower average utilization and red areas having higher average utilization. It should be noted that both Maps 2 and 3 display average utilization across all count events – certain areas may experience significantly higher utilization than average when an event is occurring. An example of this may be a large event at the Orpheum Theatre or Overture Center which can bring large numbers of bicyclists to the 200 block of State Street.



In general, a number of locations stand out where bicycle racks are often full, or nearly full, to capacity:

- 100 block of State Street
- 200 block of State Street
- 500 block of State Street
- 600 block of State Street
- Racks near the south end of North Frances Street
- Racks near the intersection of East Mifflin Street and North Pinckney Street
- Racks near the intersection of East Main Street, King Street, and South Pinckney Street
- Racks on Martin Luther King, Jr. Boulevard

Racks in these areas are often at capacity under normal usage conditions, that is, not during an event that brings large numbers of bicyclists to the area. Additional bicycle parking should be provided in all of these areas to address constant overcrowding of racks.

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## **Bicycle Rack Conflicts**

Bicycle rack placement in the public right of way often conflicts with other potential uses for the area. These conflicts include sidewalk cafes from nearby businesses, food cart vending areas, bus stops, and street furniture such as benches and planters. Among these competing uses, sidewalk cafes present the greatest conflict for providing bicycle parking. Sidewalk cafes generally consume all or most of the terrace area in front of a given business, and preclude the placement of bicycle racks to serve that business or other businesses in the same building. At the same time, sidewalk cafes increase the need for additional bicycle parking by increasing the number of people that can be serviced by a business. It is likely that the bicycle mode share in the study area exceeds 20%, which means that if a sidewalk café adds 40 seats to a restaurant's capacity, it should be expected that at least eight of the people using those seats will arrive by bicycle. Given that many sidewalk cafes displace bicycle racks, or at least preclude the addition of new racks, this is problematic. In addition, recent reconstruction of King Street, East Main Street, and East Johnson Street (not in the study area) has included the addition of terrace area with new sidewalk cafes, but has resulted in a loss of bicycle parking spaces in those same areas.

By state statute, moped parking at bicycle racks is generally allowed. While mopeds were observed parked at bicycle racks, particularly near the University of Wisconsin campus, mopeds were not generally a major obstruction at bicycle racks.

## **Summary**

Substantial amounts of public bicycle parking exists within the study area, however, the parking provided is insufficient to meet daily demand in many parts of the study area. Additionally, specific events such as the Farmer's Market, Concerts on the Square, and events at other downtown venues create additional strong demand for bicycle parking in the study area. Additional bicycle parking is needed throughout much of the study area, as is different types of bicycle parking including temporary valet parking for events, and secure bicycle parking such as lockers or cages.