



## STUDENT SUSTAINABILITY COMMITTEE

### Final Report

*Thank you for your commitment to green initiatives at the University of Illinois. One of the final steps in completing the terms of the funding agreement for your project is the submission of a Final Report with key information about your project. You will also need to submit a detailed report of expenses (if you don't list it within this document) as well as supporting photos to showcase your project.*

*Please be as accurate as possible in describing the project (including possible setbacks or challenges in meeting the initial goals of the project). Not fully meeting your project's goals will not disqualify you from making future funding requests as long as your reports are as complete and accurate as possible. If you have any questions, please contact the Student Sustainability Committee, at [sustainability-committee@illinois.edu](mailto:sustainability-committee@illinois.edu).*

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**Project Name:** Campus Bike Parking Overhaul, Phase 1

**Date of Report Submission:** 5/5/2020

**Project Purpose:**

This project intends to replace obsolete bike parking on campus with safe and secure bike parking while adding biking amenities that will contribute to the improvement of the bicycle network on campus, which will ultimately contribute to a more sustainable future on campus at the University of Illinois at Urbana-Champaign. The goals of this project are to encourage bike parking, provide safe, secure, and convenient parking, discourage illegal bike parking, and support a sustainable and healthy campus. The funds approved for this phase (Phase 1) will replace the most deteriorated “donut-hole” bike racks in locations that are also in high demand by campus users. Future phases will ultimately eliminate the outdated and deteriorated “donut-hole” bike racks. SSC is in favor of funding Phase 1 for the full amount requested.

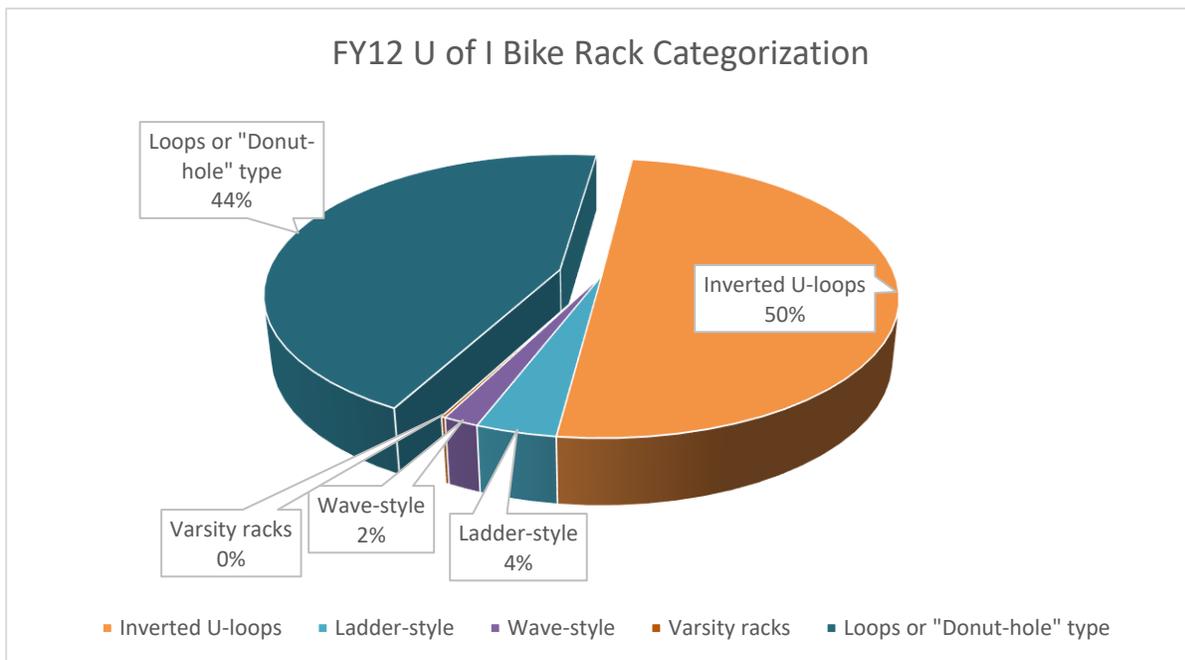
**Project Summary:**

The SSC awarded \$225,000 for the Campus Bike Parking Overhaul Phase 1 in April 2012.

A field survey, completed in the summer of 2009, found that half of the existing bike parking on campus was outdated and not up to current standards. A student worked with the then TDM Coordinator, Morgan White (then Morgan Johnston), to identify all the bicycle parking locations on-campus and characterize them. The five types of bike racks identified were: Inverted U-loops, Ladder-style, Wave-style, Varsity racks, and Loops or “Donut-hole” type. By the end of FY12, the on-campus bike racks owned by the University were categorized as following:

Table 1: FY12 U of I Bike Rack Categorization

FY12 U of I Bike Rack Categorization		
Type	# of racks	# of Parking spaces
Inverted U-loops	2609	5218
Ladder-style	197	985
Wave-style	87	87
Varsity racks	10	10
Loops or "Donut-hole" type	2302	2302
<b>Total</b>	<b>5205</b>	<b>8602</b>



Graph 1: FY12 U of I Bike Rack Categorization

As evident from Graph 1, nearly 50% of the bike parking owned by the University of Illinois was “outdated” by the end of FY12. 88% of these outdated bike parking were the “Donut-hole” type – 44% overall. This project described, in the original SSC application<sup>2</sup>, that the University will remove the donut-hole bike parking, and replace them with the University standard bike racks. They described a three-phase approach to remove and replace the obsolete bike parking:

- Phase 1: replace about 400-500 donut-hole bike parking units
- Phase 2: replace 1,000 donut-hole bike parking units with U-Loops
- Phase 3: replace an additional 1,000 donut-hole bike parking units with U-Loops

<sup>1</sup> [Bike Parking Directory updated April 2015.xlsx](#)

<sup>2</sup> [SSC funding request Phase I Final.pdf](#)

The original estimate to complete all three phases was nearly \$800,000-\$875,000. However, the applicants asked the SSC to fund the Phase I of this project, and the SSC awarded the full requested amount of \$225,000 for Phase 1 in FY12.

In June 2013, Stacey DeLorenzo was appointed as the new TDM Coordinator, and she requested a change of scope for this project in December 2013. In her letter, she explained that by December 2013, only one location, the Art & Design Building, was completed and it had financial support from the Art & Design Department to install new concrete at that site. However, there was no funding available to repair or replace the cracked and degraded concrete for the majority of the other locations.

As a more permanent solution, we decided to install surface mounted U-loop racks mounted on rails, which made the racks moveable and easily relocated – whether to upgrade the pavement beneath them, to temporarily accommodate a construction project, or to permanently relocate a building’s bicycle parking to a more optimal location in the future. This rack unit could also be placed on permeable pavement, pavers, or even in a gravel/grass/mulch location temporarily as needed. Compared to the prior single-loop ground-mounted installations that were permanently core-drilled into pavement, the lifespan of a rail-mounted bike rack is significantly higher and offers much greater flexibility for placement and upkeep of the racks and surrounding landscape.<sup>3</sup>

In the following year, Stacey found a better quality and mobile bike rack style at a significantly lower cost for the bike parking replacement as compared to the original estimates. In December 2015, Stacey reported that we could install 250 bicycle racks in the next year. We actually installed 1,000 bike racks over summer 2016 and fall 2016. By December 2016, we were able to finish the work that was in the original scope of the project, and we had remaining funds that allowed us to replace bike racks at additional locations. In December 2016, we requested another extension for using the remaining funding to support additional phases of the bike parking overhaul.<sup>4</sup>

Owing to the SSC’s generous contribution and patience, as of April 2020, we have removed over 2,000 donut-hole bike parking spaces from the University’s property. This is almost all the poor-quality donut-hole spaces, with the exception of only 240 spaces at<sup>5</sup>

1. South of Noble Hall – 17 loops
2. Southeast of Busey Evans (Busey Halls) – 5 loops (this location had 36 loops)
3. West of Parking lot F-27 – 42 loops
4. North of Vet Med Surgery and Obstetrics lab – 168 loops
5. West of Babcock Hall (PAR) – 8 loops

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<sup>3</sup> [December 17 2013 Bike Parking Letter to SSC.pdf](#)

<sup>4</sup> [November 2016 Bike Parking Letter to SSC](#)

<sup>5</sup> [Donut Hole bike parking inventory as of 4/7/2020](#)

At all other locations we have installed ground-mounted (the old standard) or rail-mounted (the new standard), and we have added more than 3,000 bicycle parking spaces (11,635 bike parking spaces according to Fall 2017 Bike Census)<sup>6</sup> on-campus to serve our students, faculty, staff, and visitors.

The SSC funding, along with funding from Bicycle Programs & Infrastructure Fee, departmental funding, capital project funding, Grounds, and TDM funding, we have been able to remove and replace 89.6% of the donut-hole bike parking from campus.<sup>7</sup> In other terms, we have almost completed all three phases of this project, instead of just the Phase 1. This is precisely the type of outcome that SSC advocates for with their funding allocations, and we are very pleased with these results.

The University of Illinois at Urbana-Champaign achieved the Bronze-level Bicycle Friendly University (BFU) status for the first time in fall 2011,<sup>8</sup> and retained the Bronze-level status in fall 2015.<sup>9</sup> We achieved the [Silver-level BFU status](#) in October 2019!<sup>10</sup> More than 90% of our bicycle parking meet the bicycle parking guidelines recommended by the Association of Pedestrian and Bicycle Professionals (APBP),<sup>11</sup> and we were able to achieve this criterion because of this SSC funding. Learn more about our University's BFU history<sup>12</sup> on the Illinois Climate Action Plan (iCAP) Portal.<sup>13</sup>

### **Summary of Project Expenditures:**

The SSC awarded \$225,000 in April 2012 for the Campus Bike Parking Overhaul, Phase 1. Following is the breakdown of the expenditure per fiscal year. A few major expense allocations are also listed, illustrating some key milestones during the project timeline.

FY13 - \$15,715.18

Major expense in FY13 - \$11,849.50 towards Graber Manufacturing Incorporated for 34 bike racks that were installed at the Art & Design Center.<sup>14</sup>

FY14 - \$1,543.83

FY15 - \$62,925.79

Major expense in FY15 - \$54,182.34 towards the purchase of 70 4-loop and 60 5-loop rail-mounted bicycle racks from RJ Thomas Manufacturing Co. Inc. on 04/02/2015.<sup>15</sup>

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<sup>6</sup> [Campus Bike Parking Map from Fall 2017 Bike Census – not current](#)

<sup>7</sup> [Donut Hole bike parking inventory as of 4/7/2020](#)

<sup>8</sup> [University of Illinois is Bronze-level BFU](#)

<sup>9</sup> [University of Illinois retains its Bronze-level BFU status](#)

<sup>10</sup> [U of I promoted to Silver-Level BFU Status](#)

<sup>11</sup> [Bicycle Friendly University \(BFU\) application 2019](#)

<sup>12</sup> [Bicycle Friendly University Status](#)

<sup>13</sup> <https://icap.sustainability.illinois.edu/>

<sup>14</sup> [New Bike Racks have arrived!](#)

<sup>15</sup> [New 70 4-loop and 60 5-loop rail-mounted bike racks have arrived!](#)

FY16 - \$13,304.45

FY17 - \$126,939.6

Major expense in FY17 –

\$52,712.24 towards the purchase of 25 3-loop, 35 4-loop, and 70 5-loop rail-mounted bicycle racks from RJ Thomas Manufacturing Co. Inc. on 10/20/2016.<sup>16</sup>

\$35,054.62 towards the purchase of 16 3-loop, 20 4-loop, and 50 5-loop rail-mounted bicycle racks from RJ Thomas Manufacturing Co. Inc. on 5/23/2017.<sup>17</sup>

FY18 - \$4,963.30

FY19 - \$(433.20)

### **Problems/Challenges Encountered**

There were several challenges encountered and overcome during this project:

1. Coordination with department/unit that would be impacted
2. These projects could only be undertaken when the weather permitted us
3. Selection of the best bike racks to be purchased
4. F&S site design for all bike rack locations
5. All bike rack designs have to be approved by the Architecture Review Committee (ARC)
6. Staff changes

### **Student Involvement and Outreach to Date:**

Students have been involved in this effort from before the start of this project. The University of Illinois was a leader in bicycle infrastructure in the US. We started our bicycle programs in the 1950s and we built a good bicycle network by the 60s and 70s. However, we did not maintain our bicycle infrastructure as well as we should have, and we did not have all of the features documented. In the late 90s, the equivalent to the current Transportation Demand Management (TDM) Coordinator left the University, and we did not replace that position until 2007, when Morgan White (then Morgan Johnston) was appointed as the TDM Coordinator.

As a result, the bicycle infrastructure declined to poor condition and lack of oversight. Since we did not have a document listing all the bike racks on-campus, we could fix the issues only when a department/unit reported on issues. In 2009, Morgan's student (Joey Salas) was directed to walk around the campus, document the location of bike racks, mark them on a map, categorize them, and sketch pictures. This project resulted in the [Bike Rack directory](#)<sup>18</sup> (file attached to this report), which Patrick Clark (a student in the Department of Urban Planning) used as the basis for the SSC funding request. This project helped us identify and inventory all of the university-owned bike racks.

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<sup>16</sup> [The purchase of new bike racks](#)

<sup>17</sup> [Additional bike racks purchased in FY17](#)

<sup>18</sup> [Bike Parking Directory updated in April 2015](#)

Since then, students have continued to be involved in several aspects of this project. The Facilities & Services (F&S) department at the University of Illinois worked with local volunteers, especially through Champaign County Bikes, to conduct a Bike Census twice a year from 2013 to 2017, asking our students, faculty, and staff to volunteer to collect data on number of bikes parked on-campus (at bike racks and off-racks). These counts help us understand not only the need of adding bike racks at locations (as needed), but also the type and location of bike racks located across the campus. The results from these bicycle counts helped F&S develop the current version of the [Bike Map](#)<sup>19</sup> that lists all the bicycle rack locations along with all the bicycle paths, bike lanes, repair stations, fix-it stations, and other bicycle infrastructure on-campus.

This bike map includes the geographical location of all the bike racks, and includes the bike rack ID, type, capacity, and ownership details. We have been able to develop this amazing resource only because of the help from our students. This map is located on [Bike at Illinois](#)<sup>20</sup>, which is a University program to encourage and promote bicycling on-campus as a sustainable and healthy mode of transportation.

F&S also manages the Bike at Illinois program. We collaborate with Campus Recreation and several others ([see our collaborators here](#)).<sup>21</sup> Bike at Illinois also collaborates with AdBuzz, which is a student-run public relations (PR) agency, for promotion and advertisement. The AdBuzz team proposed and developed (along with Sarthak Prasad from F&S) the idea of [Lock Your Bike Right](#),<sup>22</sup> which is a competition based bike safety awareness event aimed towards the University students and it relies on the upgraded bike parking. AdBuzz helps us promote all other bicycle-related events on-campus and throughout the community as well.

This project has had a huge impact on our student population. Thanks to this SSC funding, we have been able to update our bike rack infrastructure to the highest quality all across the campus. We really appreciate the SSC for funding this project, extending the completion date, and being so awesome!

#### **Marketing and Promotion Efforts to Date:**

[Bike at Illinois](#)<sup>23</sup> is the campus community's comprehensive bicycling resource, helping everyone have a **safer, more comfortable, and enjoyable** biking experience on campus and connected to the surrounding communities. Bike at Illinois website provides the information on where to get a new or old bicycle, how to register your bicycle, bicycle related events happening in the community, how to ride your bicycle safely, rules of the road for bicyclists, campus and community bicycle maps, temporary impact to bike parking and/or routes, among of other helpful resources.

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<sup>19</sup> <https://bike.illinois.edu/maps/biking-map/>

<sup>20</sup> <https://bike.illinois.edu>

<sup>21</sup> <https://bike.illinois.edu/resources/about-bike-at-illinois/>

<sup>22</sup> [Lock Your Bike Right \(LYBR\)](#)

<sup>23</sup> [Bike at Illinois](#)

F&S collaborates with the student-run PR agency, AdBuzz, to promote bicycling on-campus. The [F&S TDM department](#)<sup>24</sup> also participates at tabling events to promote Bike at Illinois among other active modes of transportation.<sup>25</sup>

The F&S TDM department provides information about finding bicycle parking in the [Near & Far Without a Car](#) (Car Free) flyer.<sup>26</sup> This flyer also contains information for all modes of transportation available on campus.

AdBuzz provides F&S with digital signage that we frequently post on digital boards all across the campus. Locations include all residence and dining halls, the Illini Union, all F&S facilities, auxiliary facilities, and Campus Rec facilities.

**Additional Comments:**

We really appreciate SSC and their continued support towards campus' bicycle infrastructure. We are grateful for the grant extensions and continual patience with us for completing this project. We hope and look forward to working with SSC on more projects to improve our students' bicycling experience on and off campus.

In addition to the above fields, please provide a detailed accounting of how the funding was spent as well as pictures of the final project in an email to [sustainability-committee@illinois.edu](mailto:sustainability-committee@illinois.edu). Thank you again for your commitment to sustainability.

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<sup>24</sup> <https://go.fs.illinois.edu/tdm>

<sup>25</sup> <https://www.fs.illinois.edu/services/more-services/tdm/biking>

<sup>26</sup> [All Modes of Transportation: Near & Far Without a Car Flyer](#)