

Bicycle Rack Utilization Study & Bicycle Facilities Improvement Report

August 2006

SUMMARY

- Over 2200 bicycles were counted on May 17th, a 10% increase from 2005.
- Around 2700 total bicycles were estimated to be on campus on May 17th. This estimation includes bicycles in bike rooms, lockers and offices, plus those locked to bicycle racks.
- Bicycle rack utilization in 2006 was 39%, up from 37% in 2005.
- Sixteen (16) bicycle racks were relocated and five (5) bicycle racks were repositioned to better meet demand.
- Over 200 presumed-to-be-abandoned bicycles were tagged in June; the Forty-eight (48) bicycles with tags remaining were removed in July.

I. INTRODUCTION

This report documents the University of Washington 2006 Bicycle Rack Utilization Study, and the bicycle facility improvements that were made in response to the findings.

II. SURVEY METHODOLOGY

The survey was completed by Transportation Office staff on Wednesday, May 17th, 2006, between the hours of 11 a.m. and 2 p.m. Historically, the survey has been conducted on a sunny Wednesday in May with temperatures in the 70s. May 17th fit this description to a tee, with clear skies and temperatures reaching 74°F at the Sand Point monitoring station¹.

¹ NOAA National Climatic Data Center. May 2006 Local Climatic Data, Seattle Sand Point, WA.

Surveyors used CAD maps of campus bicycle facilities to locate and count the number of bicycles parked at each location, including inside bike rooms². Surveyors also noted any bicycles parked illegally on rails, posts, trees, or other non-rack locations. The survey did not include bicycles parked in lockers or those inside in offices or hallways. A bicycle locker survey was conducted separately and is addressed at the end of this report. The total count of the number of bicycles parked includes eleven (11) bicycles that were tagged as abandoned by surveyors.

Utilization is calculated by dividing the number of bicycles parked at legal bike racks by the number of bicycle parking spaces available.

III. FINDINGS

As shown in Table 1, the campus bicycle rack utilization survey has been conducted every year for the past eleven years. Beginning in 2005, bicycles parked on railings at McMahon and Haggett Halls were included in the counts. Findings from the 2006 survey are below.

- Over 2,200 bicycles were counted campus-wide.
- The rack utilization rate in 2006 was 39%, up from 37% in 2005.
- Rack utilization rates at individual locations across campus ranged from zero (no bicycles parked) to over 100% (the number of bicycles parked at the rack exceeded rack capacity). North and West Campus had the highest utilization rates, as shown in Table 2 below.

Table 1: Campus Bicycle Rack Utilization 1995 – 2006³

Year	Capacity	Bicycles	Percent
1995	5632	2198	39%
1997	5560	2250	40%
1998	5544	2091	38%
1999	5811	1916	33%
2000	6178	2030	33%
2001	6161	2204	36%
2002	6184	2009	32%
2003	5722	1835	32%
2004	5218	1923	37%
2005	5487	2011	37%
2006	5757	2227	39%

² At the time of this survey, bike rooms were located in Bagley, Hansee & McCarty Halls, The Paul G. Allen Center for Computer Science & Engineering, and Level 2 of the Surgery Pavilion Parking Garage.

³ Year-to-year capacity changes are primarily due to two things: construction activity, which blocks access to racks, and rack location shifts, which can render portions of individual racks unusable.

Table 2: 2006 Bicycle Rack Utilization by Campus Area

Campus Area	Total
CENTRAL	38%
EAST	22%
NORTH	46%
SOUTH	35%
WEST	42%
Grand Total	39%

Abandoned Bicycles

Of the 2,227 bicycles counted on May 17, 2006, 11 were tagged as abandoned by the Transportation Office on the survey date. These were included in the total count of bicycles parked. In an annual effort to clear campus of abandoned bicycles, the Transportation Planner tagged an additional 220 presumably abandoned bicycles across campus. After one month, the 48 bicycles with tags remaining were impounded by the UWPD. Unless claimed by their owners, the bicycles will be held until September when they will be sold at auction.

V. EVALUATING ADEQUACY OF BICYCLE RACKS

As part of the program of encouraging and facilitating bicycle usage by students, faculty, and staff, the University of Washington has an interest in ensuring the best possible placement of bicycle racks around campus. Two methods were used to identify locations in need of additional bicycle racks and locations with a surplus of bicycle racks:

- Evaluation of specific locations with over 80 percent utilization or under 5 percent utilization, and
- Comments given by campus cyclists and building coordinators to the Transportation Office.

VI. IMPROVEMENT AREAS

One of the objectives of monitoring the use of bicycle racks on campus is to identify locations where the existing bicycle facilities are not well matched to their demand. High demand locations are identified and evaluated for their potential to accommodate additional bicycle racks. Low-use locations are identified and their racks put under consideration for re-location, with care taken to maintain a minimum capacity in all areas. Bicycle racks with maintenance issues are also noted during the bicycle rack utilization survey.

Below is a list of locations that had bike racks added to them in 2006:

- 1) **Aqua Verde / Sakuma Viewpoint:** The ribbon rack was replaced with a Toast-13 Rack, quadrupling capacity at the restaurant. An additional Toast-13 Rack was placed at the Sakuma Viewpoint after the manager of Aqua Verde complained about nearby fences being used for bicycle parking.
- 2) **Health Sciences Center: Wing I:** A Toast-7 Rack was added adjacent to the six R3 racks.
- 3) **Health Sciences Center: Gate 6:** Two (2) Toast-13 Racks were taken from Wing J and added to the two existing racks on the sidewalk near Gate 6.
- 4) **UWMC: NW Court:** A Toast-13 Rack was added to this high-bicycle-use complex in a location that takes advantage of natural cover from trees.
- 5) **Snohomish Lane Overpass:** The Toast-7 Rack on the South-side of the overpass was replaced with the Toast-13 Rack from the North-side, freeing up the walkway for pedestrians while maintaining a high-level of bicycle parking.
- 6) **Bloedel Hall:** A Toast-13 Rack was added to the covered gravel area visible from the Burke-Gilman Trail.
- 7) **Padelford Hall:** Racks were repositioned to allow for the addition of a Toast-13 Rack on the patio in front of the entrance.
- 8) **Sieg Hall:** A Toast-13 Rack was taken from Parking Lot N22 and placed at Sieg Hall on the HUB side.
- 9) **Electrical Engineering:** A Toast-13 Rack was added to the covered bicycle parking area.
- 10) **Wilson Ceramics Lab:** A Toast-7 rack (from Snohomish Lane Overpass) was added to accommodate extra bikes from Wilson and Wilcox Halls.
- 11) **Johnson Annex:** A second Toast-13 rack was added near the existing one.

Below is a list of locations that had bike racks removed in 2006. Bicycle racks removed from these areas were placed at locations with high demand, noted above. No bike racks were taken out of use in 2006. In fact, the 5 Toast-13 Racks and the lone Toast-7 Rack in Corp Yard II were put back into service.

- 1) **Health Sciences Center: Wing J:** Two of three Toast-13 Racks were placed at Gate 6, as mentioned above.
- 2) **Snohomish Lane Overpass:** One Toast-7 rack was removed and placed at Wilson Ceramics Lab, as mentioned above.
- 3) **More Hall:** The two Toast-13 Racks were removed after the building coordinator verified that the racks were under-utilized.
- 4) **Parking Lot N22:** One Toast-13 Rack was removed and placed at Sieg Hall, as mentioned above.
- 5) **Douglas Annex No. 5:** An abandoned Ribbon Rack propped up against the fence was taken back to the Corp Yard.
- 6) **Child Care Center:** The Toast-7 Rack was removed and taken to a new bike room at Odegaard Undergraduate Library.
- 7) **North Physics Lab:** One of three Toast Racks was removed and taken to a new bike room at Odegaard Undergraduate Library.

Lastly, the three Toast-13 Racks at Raitt Hall were pivoted 90 degrees, doubling bicycle parking capacity. Two Toast-13 Racks at Foege Hall were repositioned so that all six racks at that location are covered.

VII. BICYCLE LOCKERS

The week after the bicycle rack utilization survey, the Transportation Office Manager conducted an e-survey of bicycle locker utilization. At that time, there were a total of 562 bike lockers on campus, 556 of which were occupied. 545 of the 556 lease holders had a valid email address, and 359 (66%) of them responded to the survey.

During the week of the utilization survey, respondents reported using their locker 3.4 days, while they commuted to the Seattle Campus 4.8 days. They also reported that during a typical week during Spring Quarter, they use their lockers 3.8 days.

Taking the variability of the number of bicycle lockers leased at any given moment into account, it is safe to say that 75% of all lockers are used each day. Since the survey was completed, twenty more lockers have been added at the Foege Building. These additions bring the total up to 582 lockers on campus.