Technical Brief



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Bike-Share Stations in the United States

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- A total of 3,378 bike-share stations operate in 104 U.S cities.
- Of the 3,378 bike-share stations, 77.0 percent (2,600) connect to another scheduled public transportation mode within 1 block. These connections extend the transportation network by offering a means for reaching places with scheduled public transportation (e.g., heavy rail stations and local bus stops) and a means for reaching destinations not served by scheduled public transportation.
- Transit bus is the most typical connection, with 74.9
 percent (2531) of bike-share stations located a block or
 less from a transit bus stop.

Bike-share systems enhance modal choice and extend the existing transportation system by providing access to destinations off existing public transportation routes.

The Bureau of Transportation Statistics' (BTS') Intermodal Passenger Connectivity Database¹ (IPCD) provides the locations of U.S. bike-share stations and their connectivity levels to scheduled public passenger transportation modes, such as air and intercity and transit modes (bus, ferry, and rail) (see box A). In the United States, 77.0 percent (2,600 of 3,378) of bike-share stations connect to another scheduled public transportation mode within 1 block, 13.4 percent (451) connect within 1 to 2 blocks, and 9.7 percent (327) either have no connection or no connection to a scheduled public transportation mode within 2 blocks (see figure 1).

BOX A. About the Intermodal Passenger Connectivity Database (IPCD)

The Intermodal Passenger Connectivity Database (IPCD) is a nationwide database of passenger transportation terminals, with data on the availability of connections among the various scheduled public transportation modes at each facility. The IPCD data covers the following types of passenger transportation terminals:

- Scheduled airline service airports
- Intercity bus stations (includes stations served by regular scheduled intercity bus service such as Greyhound and Trailways; code sharing buses such as "Amtrak Thruway" feeder buses; supplemental buses that provide additional frequencies along rail routes; and airport bus services from locations that are outside of the airport metropolitan area)
- Intercity and transit ferry terminals

- Light-rail transit stations
- Heavy-rail transit stations
- Passenger-rail stations on the national rail network served by intercity rail and/or commuter rail services
- Bike-share stations belonging to bike-share systems that are open to the general public, IT-automated, and station based (contain hubs to which users can grab and return a bike)

The data elements describe the location of the above types of terminals as well as the availability of intercity, commuter, and transit rail; scheduled air service; intercity and transit bus; intercity and transit ferry services; and bike-share availability. Transit bus service locations are not specifically included in the database. However, the status of transit bus as a connecting mode is included for each bike-share facility in the database.

¹ http://www.transtats.bts.gov/IPCD.aspx

No connection 326 (9.7%)

Connection to another mode 2,600 (77.0%)

Connect to 2 modes 382 (11.3%)

Connect to 3 modes 11 (0.3%)

FIGURE 1. Bike-Share Connectivity to Scheduled Public Transportation

NOTE: "Connection to another mode" indicates the number of bike-share stations in, directly outside, or within one block of another scheduled public transportation mode. "Near connections" means a connecting mode is within one to two blocks of a bike-share station. "No connection" means that another scheduled public transportation mode serves the same metropolitan area as the bike-share station but not within two blocks so it is considered to have no connection. "No service" means that no scheduled public transportation mode serves the same metropolitan area as the bike-share station.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Intermodal Passenger Connectivity Database (as of Apr. 16, 2016)



Capital Bikeshare station, Washington, DC.

A bicycle (bike) sharing system is a service where bikes are available for shared use to individuals. The IPCD includes bike-share systems open to the general public that are ITautomated and station based. In most cases, users of these systems pay a fee to grab a bike at any outdoor docking location (hub) in the system and then return the bike within a speci-

fied time limit to any outdoor docking location within that system. In some systems, users additionally may grab and return a bike to any bike rack (not part of a hub) within a specified geographic area. The IPCD includes the locations of the hubs in a system but not the individual bike racks that some systems allow for pick-up and drop-off of a bike. Bike-share systems generally operate within a city; however a few operate across cities within a metropolitan area.

Bike-share systems typically operate independently of local transit authorities. However, most bike-share docking stations (76.9 percent) can be found near local public transportation stops (transit bus, commuter rail, heavy rail, light

rail, and transit ferry). These locations offer modal choice and the opportunity to connect between modes. Transit bus is the most typical connection, with 74.9 percent (2,531) of bike-share stations located a block or less from a transit bus stop.

Bike-Share Systems

BTS found a total of 3,378 bike-share stations that operate in 104 U.S cities as of April 2016 (see figure 2).² A total of 70 bike-share systems operate these stations. Of the 70 bike-share systems, 13 operate across 1 or more cities within a metropolitan area. Capital Bikeshare, for example, serves 11 cities in the Washington DC-Arlington-Alexandria Metropolitan Area, and Cincinnati Red Bike serves 4 cities in the Cincinnati Metropolitan Area³.

Connecting Options at Bike-Share Stations

Bike-share systems that connect with other transportation modes extend the transportation network and increase modal options. A bike-share facility, for example, located

² This count does not include bike-share systems operated by a college or university and/or operating exclusively on a college or university campus and does not include private rentals.

³ Thirteen bike-share systems operate across one or more cities within a metropolitan area: Bay Area Bikeshare (CA); Breeze Bike Share (CA); Broward Bicycle (FL); Capital Bikeshare (DC-VA-MD); Cincinnati Red Bike (OH-KY); Citi Bike NYC (NY-NJ); Grid Bike Share (AZ); Heartland Bicycle (IA-NE); Hubway (MA); Juice Bike Share (FL); MR Bike Share (ID); Nice Ride (MN); Zagstar Jackson County (OR)

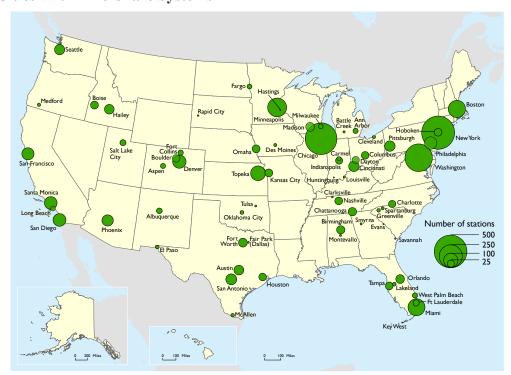


FIGURE 2. Cities With Bike-Share Systems

NOTE: Cities not labeled: Redwood City, CA; Mountain View, CA; and Palo Alto, CA (all part of Bay Area Bike share along with San Francisco, CA and San Jose, CA); Santa Monica, CA and Los Angeles, CA (all part of Breeze Bike Share along with Santa Monica); Ashland, OR and White City, OR (all part of Zagstar Jackson County along with Medford, OR); Mesa, AZ (part of Grid Bike Share along with Phoenix, AZ); Elkhorn Village, ID; Ketchum, ID; and Sun Valley, ID (all part of MR Bike Share along with Hailey, ID); Covington, KY; Newport, KY; and Bellevue, KY (all part of Red Bike along with Cincinnati, OH); St. Paul, MN (part of Nice Ride Minnesota along with Minneapolis, MN); Council Bluffs (part of Heartland B-cycle along with Orlando, FL); Pompano Beach, FL; Lauderdale by the Sea, FL (all part of Broward B-cycle); Kissimmee, FL and Winter Park, FL (all part of Juice Bike share along with Orlando, FL); Rockville, MD; Bethesda, MD; Silver Spring, MD; North Potomac, MD; Takoma Park, MD; Derwood, MD; Redland, MD; Chevy Chase, MD; Alexandria, VA; and Arlington, VA (all part of the Capital Bikeshare system along with Washington DC); Brookline, MA; Cambridge, MA; and Somerville, MA (all part of Hubway along with Boston, MA); Jersey City (part of Citi Bike NYC along with New York, NY).

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Intermodal Passenger Connectivity Database (as of Apr. 16, 2016)

within a block of a transit bus stop offers an alternative to taking transit and provides access to locations off the transit bus route.

BTS' Intermodal Passenger Connectivity Database (IPCD) provides the locations and shows the connectivity of bikeshare stations in the United States to other scheduled, passenger transportation modes. A bike-share station connects with another mode when the other mode serves the same location or stops within one block of the bike-share station (see box B). Of the 3,378 bike-share stations, 77.0 percent (2,600) connect with one or more other scheduled public transportation modes. At bike-share stations where an intermodal connection exists, 2,207 connect with 1 other mode; 382 connect with 2 modes; and 11 connect with 3 modes. An additional 451 offer near connectivity only to facilities with one or more scheduled transportation. At these stations, another mode stops more than a block, but less than two blocks, away (see figure 3).

Bike-Share and Transit Connectivity

Bike-share predominately connects with other transit modes (transit bus, transit rail, and transit ferry).

Across all transit modes, bike-share most commonly connects with transit bus (public transit bus with scheduled, fixed route service). Nationwide, 74.9 percent of bike-share stations (2,531) connect with transit bus and an additional 14.1 percent bike-share stations (477) nearly connect with (are between 1 and 2 blocks from) transit bus (see table 1).

Of the 3,378 bike-share stations, 13.0 percent (440) connect with transit rail (commuter rail, heavy rail, and/or light rail) and 15.2 percent (512) nearly connect (table 1). There are 20 bike-share stations that connect with both commuter rail and heavy rail at a station; 4 connect with commuter rail and light rail; 10 connect with heavy rail and light rail; and 4 connect with all 3 transit rail modes.

Fewer bike-share stations connect with transit rail than transit bus, because transit rail exists in fewer cities. Bike-share systems exist in 27 of the 784 cities served by commuter rail, 17 of the 104 cities served by a heavy rail system, and 20 of the 138 cities served by a light rail system.⁴

⁴ The IPCD identifies connectivity by metropolitan area. In the IPCD, bike-share systems exist in 9 of the 35 metropolitan areas served by commuter rail, 6 of the 11 metropolitan areas served by a heavy rail system, and 16 of the 28 metropolitan areas served by a light rail system. Cities not served by the specified transit rail mode in the metropolitan area are excluded from the count in this paper.

BOX B. How Bike-Share Connectivity is Defined in the Intermodal Passenger Connectivity Database (IPCD)

A bike-share station **connects** to another mode when it is directly outside of another scheduled public transportation mode or within one block (2,600 bike-share stations).

A bike-share station **nearly connects** to another mode when it is between one and two blocks of another scheduled public transportation mode (451 bike-share stations).

No connection means that another scheduled public transportation mode serves the same metropolitan area as the bike-share station but does not come within two blocks, so it is considered to have no connection (327 bike-share stations).

No service means that no scheduled public transportation mode serves the same metropolitan statistical area as the bike-share station (1 bike-share station in Evans, GA).

In cities with transit rail and bike-share, bike-share offers a means for reaching transit rail stations and a means for reaching destinations beyond transit rail stations. Commuters, for instance, may use bike-share to travel from their neighborhood to a transit rail station and/or may use

TABLE 1. Number of Bike-Share Stations with Connections to Transit Modes

Connecting transit mode	Connections	Near connections	No connection	No service
Bus	2,531	477	368	2
Transit rail	440	512	1,707	719
Heavy rail	292	358	1,336	1,392
Light rail	131	149	1,809	1,289
Commuter rail	59	78	2,191	1,050
Ferry	21	34	1,632	1,691

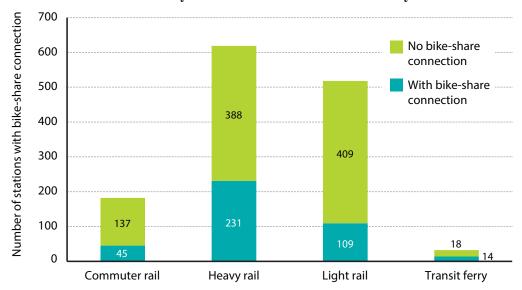
NOTES: "Connection to another mode" indicates the number of bike-share stations in, directly outside, or within one block of another scheduled public transportation mode. "Near connections" means a connecting mode is within one to two blocks of a bike-share station. "No connection" means that another scheduled public transportation mode serves the same metropolitan area as the bike-share station but not within two blocks so it is considered to have no connection. "No service" means that no scheduled public transportation mode serves the same metropolitan area as the bike-share station. Multiple modes may serve a station; connectivity counted for each mode served at the station.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Intermodal Passenger Connectivity Database (as of Apr. 16, 2016).

bike-share share to reach their workplace from a transit rail station. The following discusses the connectivity of each transit rail mode and transit ferry to bike-share.

In the 27 cities served by commuter rail and bike-share, 24.7 percent of the stations served by commuter rail connect with a bike-share station (45 stations). The remaining 137 commuter rail stations in cities with a bike-share system offer no connectivity to bike-share, although a bike-share system exists within the city itself (figure 3).

FIGURE 3. Connectivity of Transit Rail and Transit Ferry to Bike-Share



NOTE: Includes only stations where specified mode offered in same metropolitan area as bike-share system. Multiple modes may serve a station; connectivity counted for each mode served at the station.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Intermodal Passenger Connectivity Database (as of Apr. 16, 2016).

In the 17 cities served by heavy rail and bike-share, 36.4 percent of the stations served by heavy rail connect with a bike-share station (231 stations) and 2.5 percent nearly connect (16 stations). The remaining 388 heavy rail stations in cities with a bike-share system offer no connectivity to bike-share, although a bike-share system exists within the city itself (figure 3).

In the 20 cities served by light rail and bike-share, 20.6 percent of the stations served by light rail connect with a bike-share station (109 stations) and 2.3 percent nearly connect (12 stations). The remaining 409 light rail stations in cities with a bike-share system offer no connectivity to bike-share, although a bike-share system exists within the city itself (figure 3).

A bike-share system exists in 11 of the 145 cities served by transit ferry. In these cities, 43.8 percent of transit ferry terminals connect with a bike-share station (14 stations). The remaining 18 transit ferry terminals offer no connectivity to bike-share, although a bike-share system exists within the city itself⁵ (figure 3).

Bike-Share and Intercity Connectivity

Only 2.1 percent of bike-share stations (70) connect with an intercity transportation mode (intercity ferry, intercity bus, intercity rail, and/or air). Bike-share does not connect with intercity ferry but nearly connects with (is between one and two blocks from) four intercity ferry terminals. Bike-share connects with intercity rail at 23 stations⁶, with air at one airport, and with intercity bus service at 61 locations. Bike-share connects with both intercity rail and intercity bus service at 15 locations. Bike-share nearly connects with intercity rail at 37 locations, and nearly connects with intercity bus at 171 locations. (see table 2).

TABLE 2. Number of Bike-Share Stations with Connections to Intercity Modes

Connecting intercity mode	Connections	Near connections	No connection	No service
Bus	61	171	3,075	71
Rail	23	37	3,053	265
Ferry	0	4	984	2,390
Air	1	1	3,309	67

NOTES: "Connection to another mode" indicates the number of bike-share stations in, directly outside, or within one block of another transportation mode. "Near connections" means a connecting mode is within one to two blocks of a bike-share station. "No connection" means that another scheduled public transportation mode serves the same metropolitan area as the bike-share station but not within two blocks so it is considered to have no connection. "No service" means that no scheduled public transportation mode serves the same metropolitan area as the bike-share station. Multiple modes may serve a station; connectivity counted for each mode served at the station.

Bus refers to intercity bus service. Supplemental and Code Share buses that are in the database are not included in the totals in this table since they are not classified in the database as either intercity or transit.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Intermodal Passenger Connectivity Database (as of Apr. 16, 2016).

About this report

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⁵ The IPCD identifies connectivity by metropolitan area. In the IPCD, bike-share systems exist in 5 of the 32 metropolitan areas served by transit ferry. Cities not served by transit ferry in the metropolitan areas excluded from the count in this paper.

⁶ At 15 of these 23 stations, commuter rail service exists in addition to intercity rail service.