

Bicycle Audit
Borough of Madison
7 September 2019

Summary

Using Cycle Map from Open Street Map, Green Team members and cycling volunteers contributed to this bicycle audit for the Borough of Madison. We inventory three major off-road bicycle paths in our area, including the Traction Line connecting Madison with Morristown, and we identify bicycle lanes on the most heavily trafficked roads. We generated an online Google My Map locating public, accessible bicycle parking. We also explored opportunities and constraints given existing urban design. The bicycle audit demonstrates that modest changes can improve connectivity and use of valuable recreation areas in our community.

Background

In 1989, the New Jersey Department of Transportation passed a policy on Complete Streets, which provided definitions and established guidelines for implementation of complete streets statewide.¹ The idea behind complete streets is to improve the safety and wellbeing of pedestrians and bicyclists and to encourage the design of communities in ways that improve health and environmental outcomes for all through elevating multi-modal transportation options. Though establishment of new developments and communities present the opportunity to design well, with pedestrians and cyclists in mind, the task of retrofitting older, established and historical community designs presents a number of challenges that continue to be addressed thirty years after NJ DOT's Complete Street Policy.

In 2013, the Borough of Madison published a Complete Streets Policy Manual to support the mission of NJDOT policy.² The historic character of the city is evident in this document and in borough code pertaining to transportation. For example, the first 24 roads, paved in Madison in 1896 are listed. And borough code prohibits blocking cross-walks as follows:

§ 166-6 Obstruction of crosswalks prohibited.

No person shall place or stop his or her horse, cart or other vehicle upon or across any crosswalk or in any other manner obstruct such crosswalks.^[1]

[1]

Editor's Note: Original Section 9, which immediately followed this section and pertained to the deposit of dirt, waste materials and wastewaters on streets and sidewalks, was deleted and repealed at time of adoption of Code; see Ch. 1, General Provisions, Art. I. For current provisions on this subject, see Ch. 120, Littering; Handbills; Brush and Trash.

There are now 234 local roads, and residents are concerned about the safety of the roads, particularly because of a few recent pedestrian accidents, one of which was fatal,³ and one involving a child on a bicycle, where the mayor of Madison witnessed the vehicle leaving the scene.⁴

¹ Miller, "Department of Transportation: Complete Streets Policy."

² Borough of Madison, "Complete Streets Policy Manual."

³ CBS New York, "Woman Struck, Killed By Hit-And-Run Driver In NJ – CBS New York."

⁴ Lee, "UPDATED."

In August 13, 2012 minutes of a regular meeting of the mayor and council of the Borough of Madison, Carmen Pico “asked if the Borough has an ordinance regarding parking in bicycle lanes and asked that parking regulations be enforced.” Seven years later, the author of this report was asking the same question, so communication and education on bicycle use is ongoing.

A complete streets priority plan in the town documents identify improvements and rank actions up to 2023. Furthermore, appendices for the complete streets plan include bicycle routes, which were drafted in 2005. These original bicycle plans have been uploaded as supplemental documents.

Bicycle Audit

Review of Existing Bike Routes against 2005 plan.

The 2005 plan divided its proposed bike lane and signage implementation into three categories: streets with striping, stenciling and signage both sides of road; streets with stenciling and signage only; and streets with signage only. Streets to be included in this program were selected to provide access to downtown by bicycle. The first two categories were implemented as proposed; only some of the streets in the third category were implemented.

Analysis of the Efficacy of the Plan and Its Continued Implementation

Basically, those streets originally designated for stenciling have been maintained as such even when streets were repaved. Some streets have stenciling that has faded over time and is barely visible (notably Woodland). Some streets have stencils that use an image of a rider with a helmet and some use only a bicycle. The introduction of traffic calming bump-outs on streets such as Greenwood Ave. and Prospect St. causes the bike lanes to become narrower at the point of the bump-out, thus squeezing the cyclist closer to other traffic. Perhaps the weakest part of the on-road system is a lack of consistent, meaningful wayfaring directions for the cyclists. There is an instance on Danforth Road where signs point in multiple directions. There are places where a bike route sign is on one side of a street but not on the other, and there are instances where a bike route/downtown sign is placed at one end of the street but there is no sign at the other end telling the cyclist which way to turn. Going forward, the Green Team will present an inventory of such instances to Borough staff, recommending modest improvements.

Additionally, one of the first tier roads – Rosedale Avenue passes parkland, with playing fields, a picnic area and a community pool along its eastern flank. Notably missing from these areas are any bike racks. The original proposal included signage for an off-road path that runs from Memorial Park on Rosedale to Delbarton Park on Delbarton Ave. This trail can be accessed from several points along Rosedale but there is no signage.

After the bike plan was created, Madison acquired 49 acres from Florham Park to use as a recreation complex, with playing fields, wooded trails, meadows and a Community Garden. Connectivity to this complex needs to be improved. It lies just to the east of the intersection of Central Ave. and Ridgedale Ave. The bike lands end abruptly here, at the end of Central Ave. There is a pedestrian crosswalk, which could be used by cyclists heading to the high school, just to the left of the intersection, but Ridgedale is an unsigned fairly narrow, almost shoulderless busy road and even though it widens in front of the recreation complex, there are no bike lanes or signage. There are no bike lanes on the long drive into the complex and no bike racks in evidence around the playing field parking lots. A wood-chipped path by the Community Garden can be ridden to connect the complex to Burnet St. just down from a right turn onto Chateau Thierry. There is no

bike signage until a cyclist turns onto Chateau Thierry and coming in the other direction the Bike Route sign on Burnet near the gate to the pathway has no directional arrow to point to the path instead of a dead-end street.

Off-road bicycle paths

There are three primary off-road bicycle paths within the borough of Madison limits. An essential, connective pathway unites Madison from Danforth, to Morristown, New Jersey, via multi-purpose paths next to the NJTransit line (Figure 1).

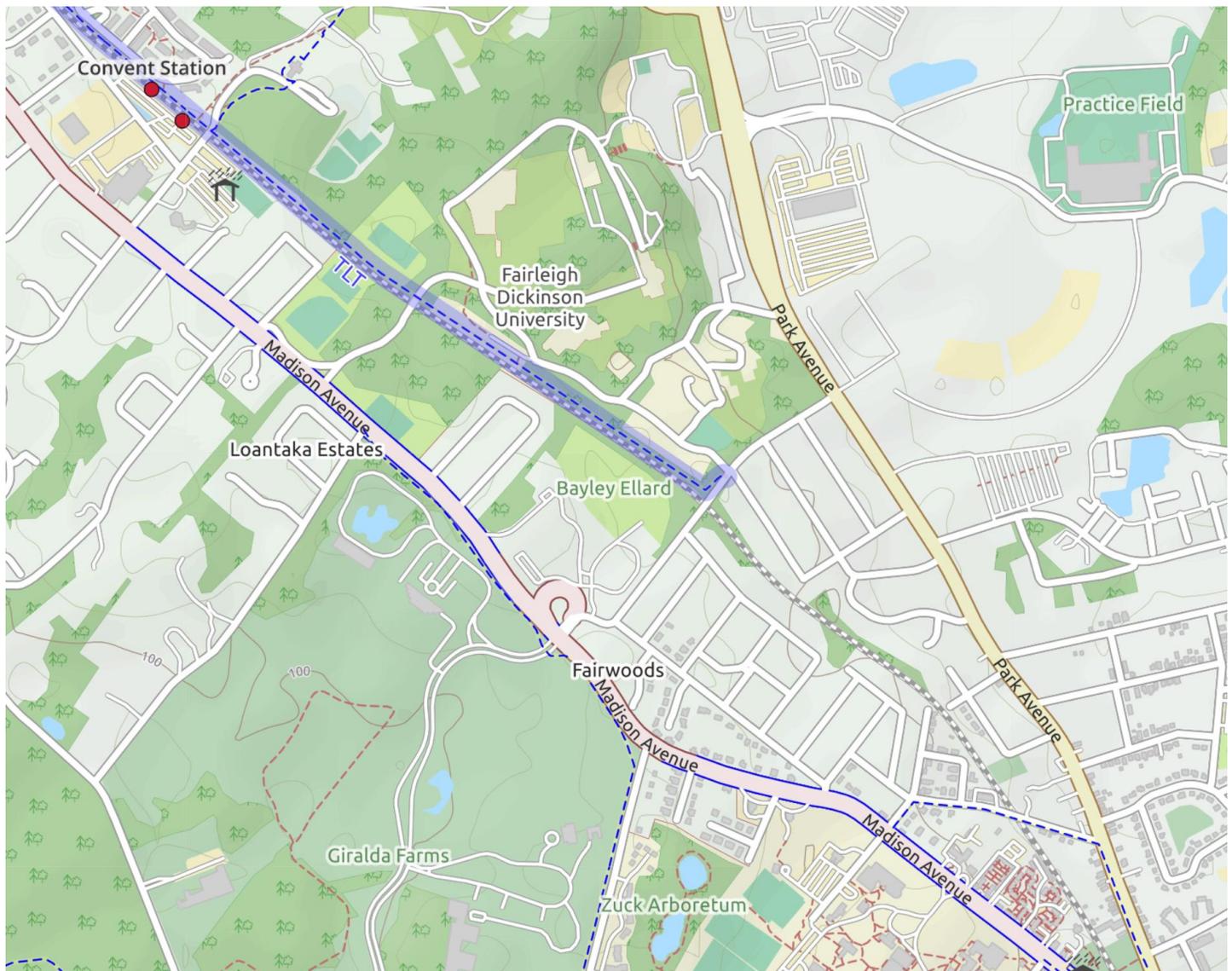


Figure 1. Open Street Maps: Cycle Map depicting Traction Line in purple

Another important and established multi-use path partially encompasses the Giralda Farms corporate park. On the north side, this pathway extends along Madison Avenue to Tredwell Ave, and runs North-South on Loantaka Way from Madison Ave. to Woodland Ave. On the South side, the path goes from Loantaka Way, slightly past the South entrance into Giralda Farms (Figure 2). Though not completely included in the Borough of Madison, this multi-use path provides an important connection to the extensive multi-use trails in Morris County's Loantaka Brook Reservation.

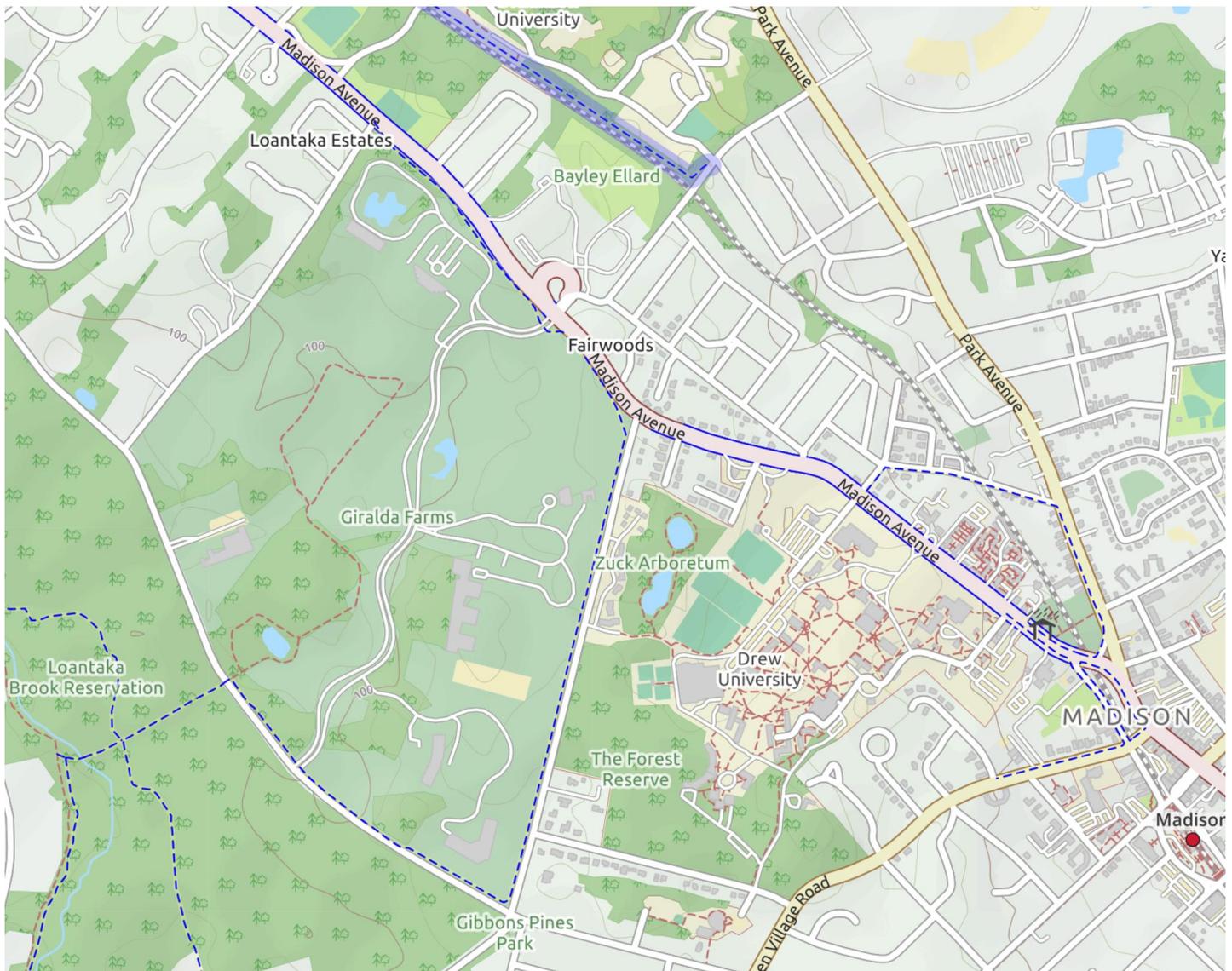


Figure 2. Open Street Map: Cycle Map Depiction of Giralda Farms Multi-use Path

The third off-road bicycle and pedestrian path in Madison recently opened up in Summerhill Park (Figure 3). This 1.5 miles of trail was sponsored by a grant from the Morris County Planning and Preservation Trail Construction Grant Program, and opened June 1, 2019.⁵ The trail connects Dehart Place, which borders Central Avenue Elementary School, to Ridgedale Avenue, across from Madison High School. Please also note that the trail has a loop that is not shown on this map. Also, the northwest exit of Summerhill Park leads to Ridgedale, almost directly across from Burnet Rd, a side entrance to the high school.

⁵ Borough of Madison, "Summerhill Park Trail Ribbon Cutting Ceremony | Madison Borough, NJ."

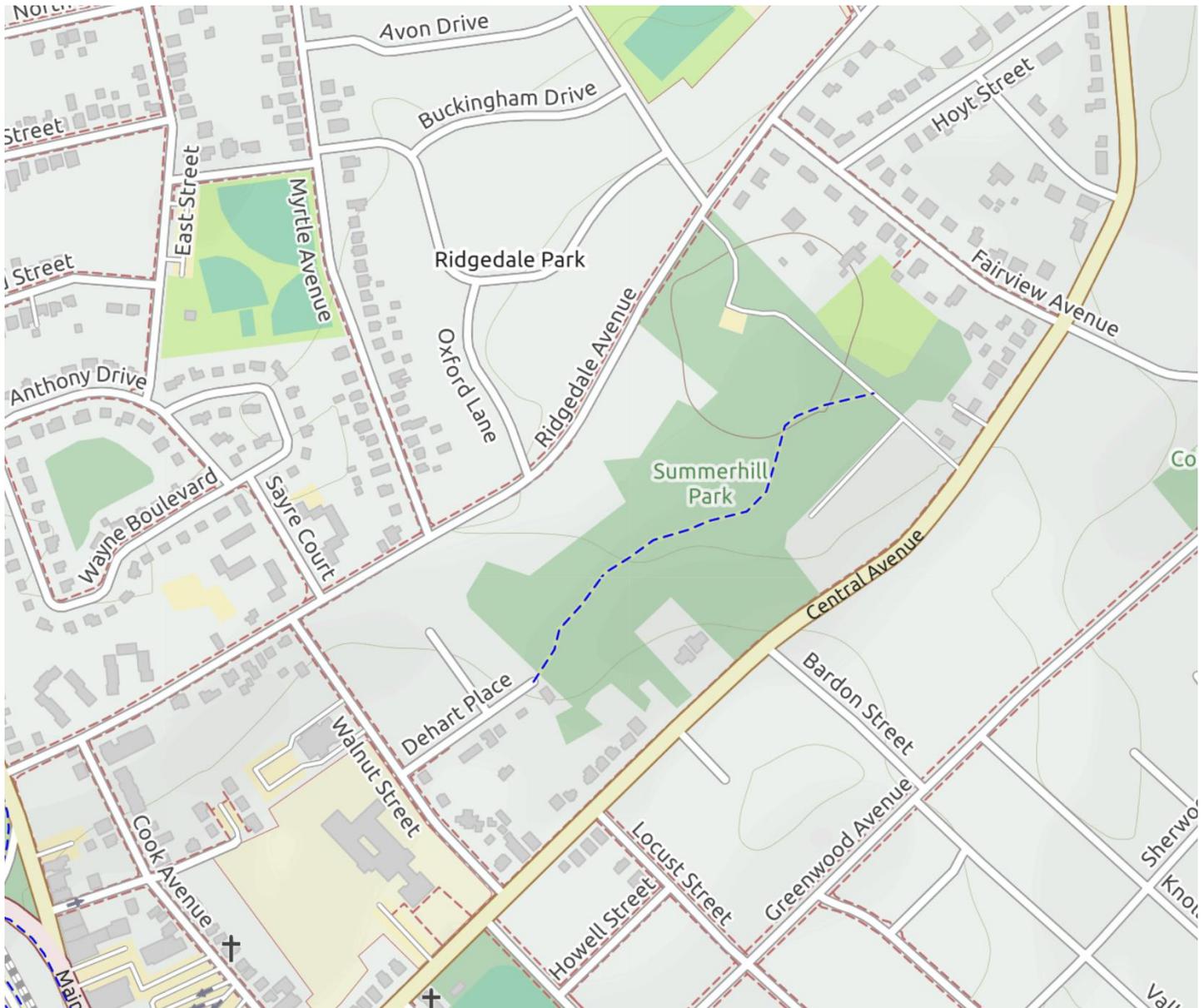


Figure 3. Open Street Map: Cycle Map Depiction of Multi-use Trail through Summerhill Park

Bike lanes

On the west end of town, bike lanes appear on both north and south sides of Madison Avenue between downtown, where Park Ave. intersects Madison Ave, on the east side and Loantaka Way, on the west side (Figure 4). This connects Drew University to downtown Madison. Cyclists can access the Fairleigh Dickinson campus via Danforth Road and the Traction Line, although this route is not as straightforward and signage could be improved.

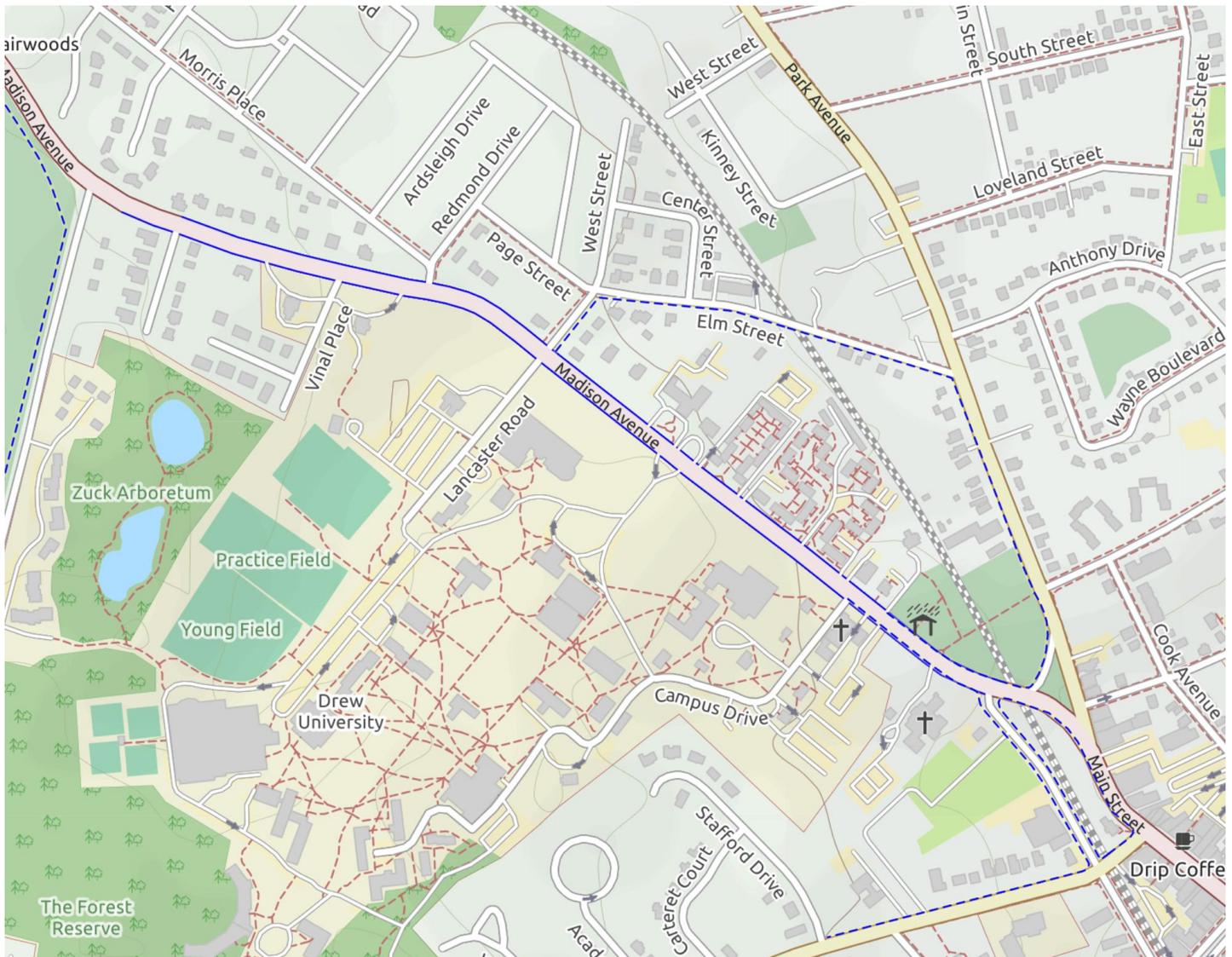


Figure 4. Open Street Map: Cycle Map depicting bicycle lanes on Madison Ave.

Several through streets in town that lead from town borders to downtown are stenciled, striped and signed. These include Rosedale, Greenwood/Prospect, Central/Green; also Chateau Thierry, at the west edge of town, Woodland, which parallels Main Street, and a portion of Green Village Road (between Wilmer and Woodland) are stenciled, striped and signed. Portions of other streets have shoulder striping and/or Share the Road or Bike Route signs (e.g., Kings Road (passes by Kings Rd. Elementary School), Cedar St. (connects Park Ave. to Danforth and the Traction Line), Morris Place (connects Danforth & Traction Line to Madison Ave.), Brittin (passes by the back of Madison Junior School)). Some such as Elm St. (a connector between Park Ave. and Madison Ave.) have only shoulder striping but no bike route or Share the Road signage.

Bicycle parking

Using Google MyMaps and a location-enabled cell phone, we identified over 25 racks next to NJTransit (there are also three in the train station tunnel near the elevator and the ticket kiosks), and an additional four bicycle racks in the downtown shopping areas (Figure 5, and Figures 7-8). There are also about a dozen bicycle racks at the new Rose Hall

complex on Kings Rd., which includes the Madison Community Arts Center, and an old cement bicycle station at the Madison Public Library on Keep St. Whole Foods Market on Main St. has bike racks inconveniently located at the rear of the building where they are often obstructed by shopping carts. We also observed many people leaning unlocked bicycles next to trees or buildings, suggesting the trusting nature of pedestrians who visit these businesses (Figure 6).

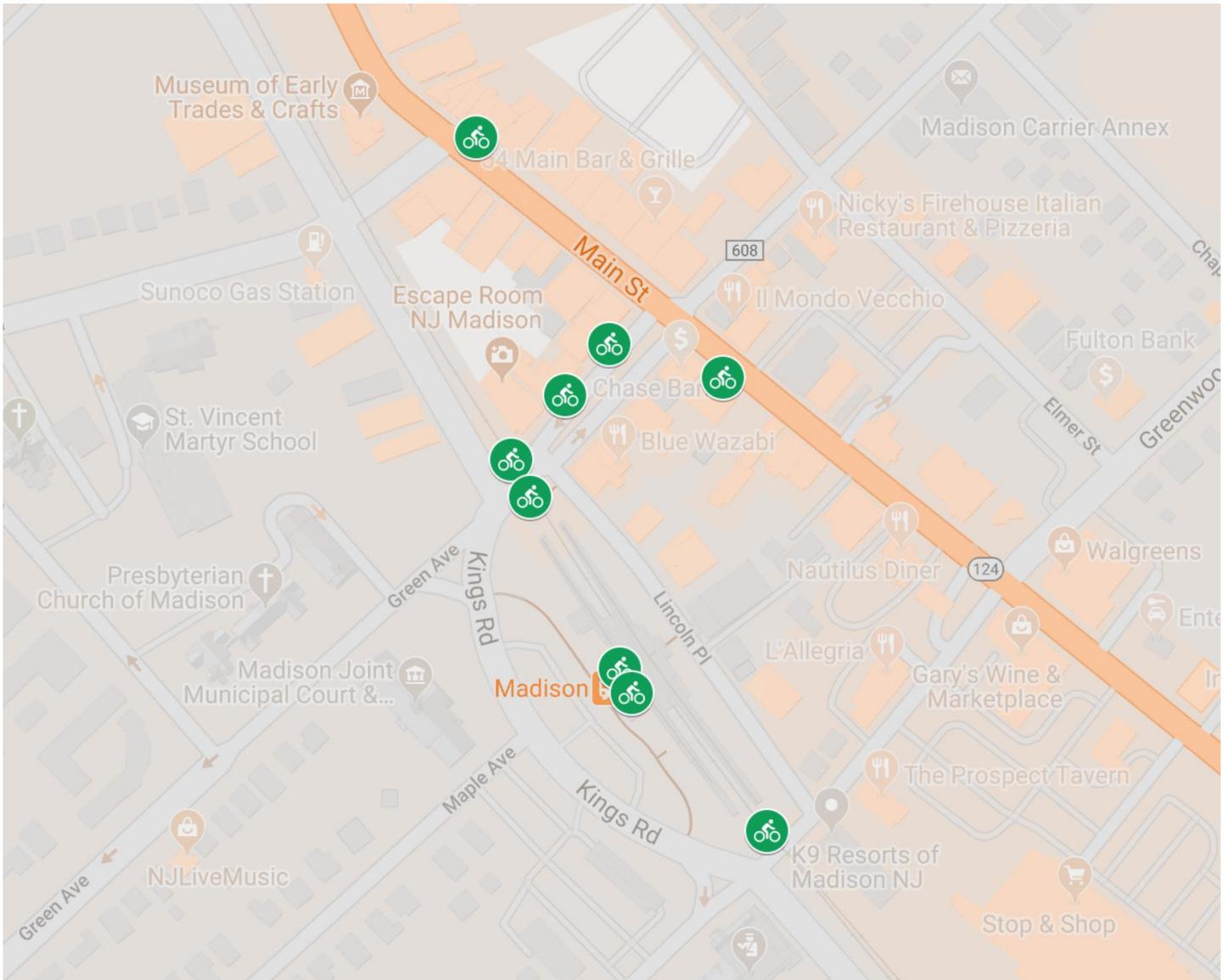


Figure 5. Map of Downtown, Madison Borough Bicycle Parking, available [online, http://bit.ly/MadisonNJBikeRacks](http://bit.ly/MadisonNJBikeRacks)



Figure 6. Unattended bicycles



Figure 7. Madison Bicycle Racks by Local Businesses



Figure 8. Extensive Parking by NJTransit

Shared lanes marked with signs or shared-use arrows

The bicycle lanes described above include a hard line, not dashed, that suggests a separate lane. However, these are shared lanes. As explained in the frequently asked questions in the Complete Streets Policy guide published by the borough:

“Treat a bicycle lane the same as other traffic lanes.” Also, “You may park in a bicycle lane if your vehicle does not block a bicyclist and/or there is not a ‘No Parking’ sign posted.”

Opportunities and Constraints

“Missing link” in the bicycle network on a specific street

At the intersection of Madison Ave. and Loantaka Way, the bicycle lanes merge into the traffic lane. Also notable is the poor connectivity to the vitally important traction line. To have contiguous multi-use path from Madison to Morristown is outstanding, but it is not easily accessed by Drew University students or downtown travelers. Additional signage may help the flow of cyclists trying to follow the established bike routes.

Area with limited facilities

While the access and quantity of storage for bicycles near NJTransit is laudable, the deteriorating conditions of the exterior of the underpass may present users, particularly women, with safety concerns. Improved lighting and beautification (e.g. street art or murals) around the storage may increase its desirability, and call attention to existing bicycle infrastructure in a positive way.

Challenging roadway or intersection crossing

Though bicycle lanes are present along Madison Avenue, so is dangerous traffic. Borough complete street records include average daily traffic volumes, using 1988 data. The busiest road, Main Street, east of Rosedale, experienced an average daily traffic volume of 29,000 vehicles. It is reasonable to assume that these numbers have increased over the past thirty years. Additional signage, speed signs, may slow traffic and alert drivers to the frequent pedestrian and cyclist use of this roadway.

Wide travel lanes

Though ideas for improvements are easy to find, major roadways in Madison are only two lanes. Frequently bicycle lanes are used by motorists to pass other motorists, particularly when turning.

Conclusion

The Borough of Madison is a small area with relatively little traffic compared to many places in New Jersey. However, pedestrians and cyclists still face risks when traveling, due to problems of design and poor recognition by motorists. Furthermore, valuable multi-use pathways may be made much more accessible by improvements in connectivity and wayfaring signage. The expansion of Summerhill trails is a welcome addition for both pedestrians and cyclists.