



Monday, May 9, 2016  
5:30 – 7:00 p.m.  
Hooker Conference Room, Bloomington City Hall  
**AGENDA**

- I. Call to Order and Introductions
- II. Approval of Minutes
  - a. April 11, 2016
- III. Public Comments
- IV. Communications from Commission Members
- V. Reports from Staff
  - a. MUTCD Experimentation Report
  - b. Bicycle Friendly Community Visit – May 16th
- VI. Old Business - none
- VII. New Business
  - a. US Bike Route
  - b. 2016 Local Motion Grant - Call for Projects
- VIII. Topic suggestions for future agendas
- IX. Upcoming Meetings/Events – May is Bikes Month!
- X. Adjourn

*\*Action requested*

***Auxiliary aids for people with disabilities are available upon request with adequate notice. Please call [812-349-3429](tel:812-349-3429) or e-mail [human.rights@bloomington.in.gov](mailto:human.rights@bloomington.in.gov).***



Monday April 11, 2016  
Hooker Conference Room, Bloomington City Hall  
**MINUTES**

*\*Minutes are transcribed in a summarized outline manner. An audio recording of the meeting is available upon request.\**

**I. CALL TO ORDER AND INTRODUCTIONS – 5:30 P.M.**

Members present: Paul Ash, Jaclyn Ray, Mitch Rice, Jim Rosenbarger, and Mark Stosberg

Staff: Scott Robinson – Planning & Transportation and Neil Kopper – Planning & Transportation

**II. APPROVAL OF MINUTES**

Paul Ash motioned approval, Jaclyn Ray seconded to approve the minutes from the March 7, 2016 meeting. *Motion passed.*

**III. PUBLIC COMMENTS - none**

**IV. COMMUNICATIONS FROM COMMISSION MEMBERS** – Jim Rosenbarger mentioned the difficulties crossing at 1<sup>st</sup> and High even with a narrow street and a marked crosswalk. He would like to understand what other measures the city could do to improve this and other school zone crosswalks. He also would like to see a list of Traffic Calming requests once this program gets back up and running again. Paul Ash mentioned the bike parking options were limited at the early voting station in downtown. Jaclyn mentioned several directional sign requests she made using U-Report (Winslow Path, Maxwell Lane, YMCA, Hunter, and stencil markings for sidepaths).

**V. REPORTS FROM STAFF**

a. **Brentwood, TN BFC Tour May 14** – Scott Robinson has confirmed the date and will make arrangements for them to contact Commission members interested in showing them around town.

b. **Engineering Update**

i. **ADA Ramps** – Neil Kopper explained that the cast iron plates with truncated domes that are used in curb ramps are very expensive and for installation they are difficult to cut (when needed) and very heavy. The City is considering alternative ADA ramps that are less expensive, lighter, and easier to install. Feedback from the Council for Community Accessibility prefers yellow ADA ramps because this is the last color that visually impaired individuals may lose the ability to see. Commission members said the aesthetic color for cast iron or similar colored ramps is ideal in locations such as Kirkwood. Other locations may be better suited for yellow ADA ramps, but they also recognize the need of visually impaired individuals. Understanding how many people

these ramps could serve and their priorities may be helpful if the City changes to a new style of ADA ramp.

- ii. **4<sup>th</sup> and Rogers Project** – Neil Kopper announced the public meeting will be held at the City on April 20<sup>th</sup>, from 5:30 to 7:00 P.M. The meeting will begin with a brief presentation, but will primarily be in an open house format. Attendees are welcome to arrive at any time and do not have to attend this meeting in order to provide input.
- iii. **Council Sidewalk Committee** – Scott Robinson reviewed the recent sidewalk projects that are being funded through the Council’s sidewalk program. Jim Rosenbarger said it would be nice to know the walk score for these projects. Robinson explained that staff uses walk score along with other measures to help the Council evaluate and prioritize requests.
- iv. **3<sup>rd</sup> and Clarizz** – Neil Kopper is working with INDOT to get pedestrian signals installed at this intersection. The state has indicated if the City installs curb ramps at this location (state maintained road), that INDOT will install with pedestrian signals. The Commission was pleased with this new direction from INDOT as well as this is a much needed improvement for this signal.

**VI. OLD BUSINESS - none**

**VII. NEW BUSINESS**

- a. **Bike Month Activities** - Scott Robinson outlined some of the various activities throughout the month of May. He encouraged Commission members to volunteer and participate at one or more of these events (hint – hint). Our portable tent and other support material is available to use.
- b. **B-Line Trail Crossings Discussion** – The discussion recognized that many of the current conditions do not send a clear message on what people should do. The location of stop signs, sight distances, and other tangible conditions need to be considered. The current laws may complicate how bicyclists are considered at these locations. Jim Rosenbarger said the stop condition at the Convention Center was on their small needs list to remove. This location is a great example on considering conditions, usage, and other factors. Neil Kopper said staff is looking at changes to local codes as well as making improvements to these and other crossings. Staff will bring these to the Commission for their consideration at a future date. Discussion ensued and may be continued to future meeting.
- c. **US Bike Route** – Commission will discuss this at their May meeting since the Bloomington Bicycle Club was not able to attend for a prior commitment.

**VIII. TOPIC SUGGESTIONS FOR FUTURE AGENDAS – none.**

**IX. Upcoming Meetings/Events**

**X. Adjourn – 7:05 P.M.**

October 5, 2014

Karen Stippich, Traffic Operations Engineer  
Federal Highway Administration  
575 North Pennsylvania Street, Room 254  
Indianapolis, IN 46204

Dear Ms. Stippich,

Please accept this letter as a follow up to the letter dated May 21, 2014 in regards to the use of "bicycle boxes" in Bloomington, Indiana and the need to gain approval by the FHWA as experimental pavement marking traffic control devices under the requirements of the Manual of Uniform Traffic Control Devices (MUTCD). The City of Bloomington requests to enter into an experimentation agreement per the requirements of FHWA and the MUTCD. A proposal is included with this letter, which details the background and need, proposed changes, request to experiment, methods of study, and a timeline.

The City of Bloomington is requesting approval for the use of Green-Colored Bicycle Boxes, Dashed Line Bicycle Lanes and Priority Shared-Lane Markings as detailed in our proposal. The City of Bloomington agrees to maintain records and provide reports for the locations where these markings are being used.

As required in requests to experiment, if approved by FHWA, the City of Bloomington agrees to restore any experimental sites to conform to the requirements of the MUTCD if directed by the FHWA or the City of Bloomington detects any significant safety concerns that are directly or indirectly attributed to the device or application.

We appreciate your time in reviewing this request and understanding on our timing of our request with actual implementation. Please feel free to contact me if you have any additional questions at 812-349-3423 or at [micudat@bloomington.in.gov](mailto:micudat@bloomington.in.gov). We look forward to your response and working with FHWA in this experimentation proposal.

Sincerely,

Tom Micuda, AICP  
Director, Planning and Transportation Department

**FHWA Request to Experiment  
Green-Colored Bicycle Boxes, with Advanced Lane Use Signage  
Dashed Bicycle Lanes on Narrow Roadways  
Priority Shared-Lane Markings**

Submitted by the City of Bloomington  
Bloomington, Indiana  
October 5, 2014

**Background**

The City of Bloomington, Indiana has a long history of accommodating the needs of non-motorized modes of transportation through the most safe, practical, and appropriate means available. The City is currently recognized as a Silver-rated Bicycle Friendly Community by the League of American Bicyclists with high marks for engineering and planning. As we continue to address the wide range of traveling needs of the community, challenges have become more complex as most of our infrastructure is already built-out. This greatly limits our ability to retrofit facilities to meet some standards to accommodate bicycles.

The City has successfully implemented many standard bicycle facilities that conform to current MUTCD specifications. A recent technical analysis of 27 on-street bicycle facilities projects by Burgess & Niple and Alta Planning & Design (Technical Team) identified opportunities to incorporate bicycle facilities that either comply with MUTCD standards, or in a few instances will require a request to experiment through FHWA because of the limitations in dealing with existing infrastructure in an urban context. These instances ultimately are aimed at providing safe, cost effective, and practical solutions. Specifically, these instances will require the use of green-colored bicycle boxes with advanced lane use signs, dashed bicycle lanes on narrow roadways, or priority shared-lane markings.

These few instances were carefully considered by the City and our Technical Team before facilities were identified as improvements slated for implementation. Fortunately, these few instances utilize strategies being used by many cities and therefore we are benefiting from their past efforts and modifications. Therefore, the City of Bloomington will need to seek FHWA experimentation approval for various roadway treatments on our bicycle network detailed below.

**Summary of Proposed Changes**

The City of Bloomington is requesting permission to experiment with green-colored bicycle boxes. The City is also requesting to install green-colored bicycle lanes per the Interim Approval for Optional Use of Green Colored Pavement for Bicycle Lanes (1A-14) 2011 MUTCD. The proposed measures are part of ongoing resurfacing projects or annual capital improvements identified in the Bikeways Implementation Plan. Currently, the following locations are utilizing green-colored pavement for bicycle lanes:

- Smith Avenue between Washington Street and College Street
- Adams Street/5<sup>th</sup> Street/ 3<sup>rd</sup> Street E/N bound bicycle lane intersection approach

The use of green-colored bicycle boxes with advanced signing and green-colored bicycle lanes is intended to increase vehicle driver awareness of bicyclists at intersections or other locations of potential conflict. They also are intended to increase compliance with

control devices and provide the safest, most visible positioning for bicyclists within the roadway. The use of dashed bicycle lanes on narrow roadways is also intended to increase vehicle driver awareness of bicyclists along narrow low-vehicle volume roadways not wide enough for standard bicycle lanes. The dashed bicycle lanes also are intended to improve bicyclist positioning within the roadway as the safest, most visible, and predictable location.

### **Request to Experiment**

The bicycle box, also known as the advance stop line, has been used in the United States since 2000 and in Europe and Asia since the late 1990's. More and more cities are using bicycle boxes, including prominent locations such as Portland, OR, New York City, NY, and Minneapolis, MN. The city of Indianapolis, Indiana, like Bloomington hopes that our experimentation request will further the development of bicycle box standards. The City of Bloomington has implemented, without prior approval to experiment, bicycle boxes at the following signalized locations:

- 7<sup>th</sup> Street and Walnut Street (two existing)
- 7<sup>th</sup> Street and College Avenue (two existing)
- Covenanter Drive and College Mall Road (one existing)
- 3<sup>rd</sup> Street and Jordan Avenue (one existing, but green-colored treatment has not yet been installed)
- 3<sup>rd</sup> Street and Hawthorne (one existing)

The green-colored bicycle boxes connect seamlessly with the same green-colored treatment of the terminating portions of bicycle lanes approaching signalized intersections. This allows a smooth transition for bicyclists to position themselves in advance of vehicles to avoid right-hook conflicts, to better position themselves for travel through the intersection, and to reenter the bicycle lane once through the intersection. To better educate all road users about this treatment, the bicycle symbol will be painted within the bicycle box and a sign will be posted prior to the approach notifying motorists where to stop. A typical layout for these locations is included (see Exhibit 1).

The dashed bicycle lane or advisory bicycle lane is a new method being studied for locations where sharrows don't offer the best solution nor do bicycle lanes because of limitations to travel lane widths. The City of Bloomington has implemented, without prior approval to experiment or is considering, dashed bicycle lanes at the following locations:

- 7<sup>th</sup> Street between Union Street and Hillsdale Drive (existing)
- 12<sup>th</sup> Street between Walnut Street and Woodlawn Avenue (proposed)

The dashed bicycle lane offers a safe and practical solution for locations where growing numbers of bicyclists are using our local bikeways network, but approved MUTCD devices may not address various unique site and use constraints. Sharrows, when used on narrow local streets, are hindered by edge-to-edge pavement widths less than 20'. Similarly, bike lanes are not necessarily warranted for low traffic volumes on narrow streets or are not deployed because of not meeting minimum design standards (width). In a few instances, the dashed bicycle lane offers the best of both applications. The dashed line gives a delineated location for bicyclists to ride as if it were a bike lane and is consistent with a minimum 4' offset for sharrows. Because of the nature of the travel lanes and low vehicular traffic volumes, the queuing nature of the wider center travel

lanes allows safe travel for all users of the roadway under passing situations. A typical layout for these locations is included (see Exhibit 2).

The priority shared-lane marking is an enhancement to the MUTCD approved shared-lane marking or sharrow. The priority shared-lane marking has two parallel skipped white lines surrounding the sharrow marking. This sharrow enhancement further guides the proper location for safe bicycle travel while considering on-street parking whether or not a parked vehicle is present as well as vehicular positioning within the travel lane or parking space. When few or no vehicles are parked the tendency by some bicyclists, and expectation by some motorists, may be to ride within legal on-street parking areas. The use of the priority shared-lane marking is aimed to reduce unpredictable weaving in and out of the travel lane by bicyclists that are often dependant upon the presence of parked vehicles. It also aims to provide additional spatial guidance for motorists for either parking or travel lane positioning. A typical example for these locations is included (see Exhibit 3).

The priority shared-lane marking is a new method being studied for locations where sharrows don't offer the best solution when dealing with on-street parking. These are being used along our Neighborhood Greenways, also known as Bicycle Boulevards that have low vehicular traffic volumes. The City of Bloomington has implemented, without prior approval to experiment, priority shared-lane markings intermittently/as necessary along the following locations:

- 7<sup>th</sup> Street between Indiana Avenue and Adams Street (existing)
- Clifton Avenue between 1<sup>st</sup> Street and 2<sup>nd</sup> Street (existing)
- Rose Avenue between Hunter Avenue and 3<sup>rd</sup> Street (existing)
- Covenanter between College Mall Road and High Street (existing)
- Hawthorne Drive between Sheridan Drive and 3<sup>rd</sup> Street (existing)
- Union Street between 7<sup>th</sup> Street and 10<sup>th</sup> Street (existing)

### **Variables to be Studied and Observed**

Level 1 Study Methodology - Motorist and bicyclist behavior and interaction will be observed by City staff after the installation of green-colored bicycle boxes and advance stop signing.

The following information will be collected to help determine the effectiveness of the green-colored bicycle boxes and signage:

1. Vehicle volume
2. Bicycle volume
3. Percent of stopping vehicles encroaching into the bicycle box
4. Percent of vehicles encroaching into the bicycle lane
5. Number of bicyclists who use the bicycle box
6. Before and after number of crashes (numbers, types, modes)
7. Right-hook crashes or near-misses observed
8. Vehicle compliance with turn on red prohibition
9. Optional bicyclist survey regarding comfort, yielding behaviors, acceptance, symbol recognition, comprehension, etc.

Level 2 Study Methodology - Motorist and bicyclist behavior and interaction will be observed by City staff after the installation of green-colored bike lanes and priority shared-lane markings.

The following information will be collected to help determine the effectiveness of the green-colored bicycle lanes and priority shared-lane markings:

1. Vehicle volume
2. Bicycle volume
3. Percent of vehicles encroaching into the green-colored bicycle lane (where applicable)
4. Before and after number of crashes (numbers, types, modes)
5. Optional bicyclist and motorist survey regarding comfort, yielding behaviors, acceptance, symbol recognition, comprehension, etc.

### **Timeline**

1. September 2014: Submit a request to experiment to FHWA Indiana Division
2. September – October 2014: Compile historical intersection data for before implementation period, which includes vehicle volume, bicycle volume, and number of crashes. Initiate after data collection, as outlined in the previous section for at least two intersections.
3. January 2015: Submit evaluation and initial progress report to the FHWA Indiana Division
4. April – June 2015: Collect data
5. July 2015: Submit evaluation and annual progress report to the FHWA Indiana Division.
6. August 2015 - August 2018: Continue semiannual data collection and annual reporting based on direction from the FHWA Indiana Division.

### **Patent and Copyright Information**

The green-colored bicycle box is not protected by any patent or copyright. The dashed bicycle lanes are also not protected by any patent or copyright.

### **Removal of Experiment**

The City of Bloomington understands that the FHWA may require the City to restore the sites of the experiment to a condition that complies with the provisions of the MUTCD within three months following the end of the time period of the experiment. The City of Bloomington also understands that the FHWA's Office of Transportation Operations has the right to terminate approval of the experimentation at any time if there is an indication of safety concerns. The City of Bloomington acknowledges that the FHWA requires the City to terminate the experimentation if the City determines significant safety concerns are directly or indirectly attributable to the experimentation. The City of Bloomington further understands that if, as a result of the experimentation, a request is made that the MUTCD be changed to include the device or application being experimented with, the device or application will be permitted to remain in place until an official rulemaking action has occurred.

## Separated Bikeways at Intersections

### Bike Box



Level of Protection: ★★★★★

Ease of Implementation: ★★☆☆☆

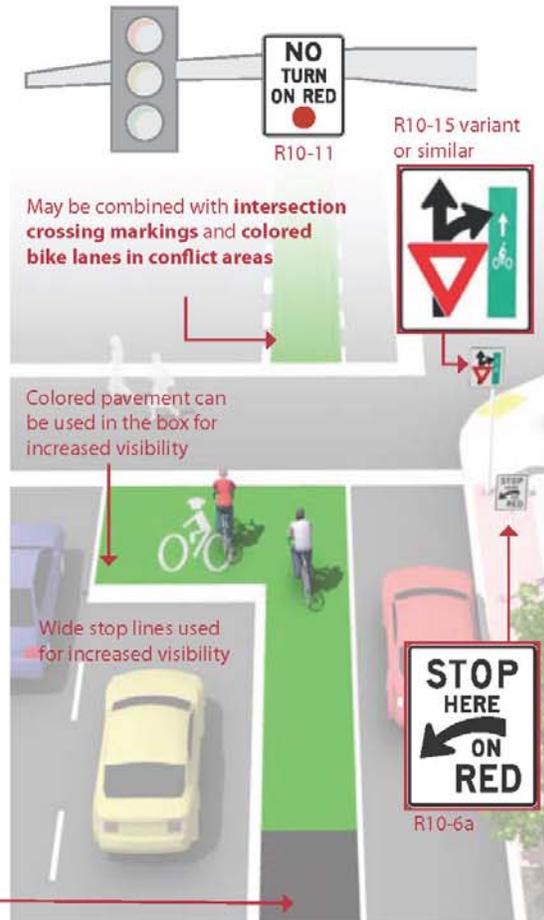
#### Description

A bike box is a designated area located at the head of a traffic lane at a signalized intersection that provides bicyclists with a safe and visible space to get in front of queuing motorized traffic during the red signal phase. Motor vehicles must queue behind the white stop line at the rear of the bike box.

Bike boxes may be used at signalized major crossings of Neighborhood Greenway routes to promote orderly queuing and visibility of bicyclists.

#### Guidance

- 14' minimum depth
- A “No Turn on Red” (MUTCD R10-11) sign should be installed overhead to prevent vehicles from entering the Bike Box during a red signal indication.
- A “Stop Here on Red” sign should be post-mounted at the stop line to reinforce observance of the stop line.
- A “Yield to Bikes” sign should be post-mounted in advance of and in conjunction with an egress lane to reinforce that bicyclists have the right-of-way going through the intersection.
- An ingress lane should be used to provide access to the box.
- A supplemental “Wait Here” legend can be provided in advance of the stop bar to increase clarity to motorists.



#### Discussion

Bike boxes should be placed only at signalized intersections, and right turns on red shall be prohibited for motor vehicles. Bike boxes should be used along designated bicycle routes, or on streets commonly used by bicyclists. Bike boxes are best utilized in central areas where traffic is usually moving more slowly. Prohibiting right turns on red improves safety for bicyclists yet does not significantly impede motor vehicle travel. Engineering judgement and the context of the location should be taken into account when choosing to implement a bike box.

#### Additional References and Guidelines

NACTO. (2011). Urban Bikeway Design Guide.  
 FHWA. (2011). Interim Approval (IA-14) has been granted. Requests to use green colored pavement need to comply with the provisions of Paragraphs 14 through 22 of Section 1A.10

#### Materials and Maintenance

Because the effectiveness of markings depends entirely on their visibility, maintaining markings should be a high priority.

## Exhibit 2 – Typical Dashed Bicycle Lane or Advisory Bicycle Lane Design Guidance

### Advisory Bike Lanes

An advisory bike lane is similar to a regular bike lane, but is used on low-volume streets that are narrow. An advisory bike lane is marked with a dotted line to the left side of the lane. These markings give bicyclists a space to ride, but are also available to motorists if space is needed to pass oncoming traffic.

Advisory bike lanes are currently located on Adams Street between 6th and 7th Streets. At this location, the yellow center line was removed and advisory bike lanes were added to the street. Narrow travel lanes now require motorists to be more cautious when negotiating passing vehicles. Advisory lanes are also present on East 7th Street and Longview Avenue from Union Street to Smith Road.

#### When you drive:

- To safely meet an oncoming motorist you are allowed to merge into **the bike lane. However, you must first yield to bicyclists in the bike lane.**
- Even though the travel area for cars is narrow, it is still a 2-way street.

#### When you bike:

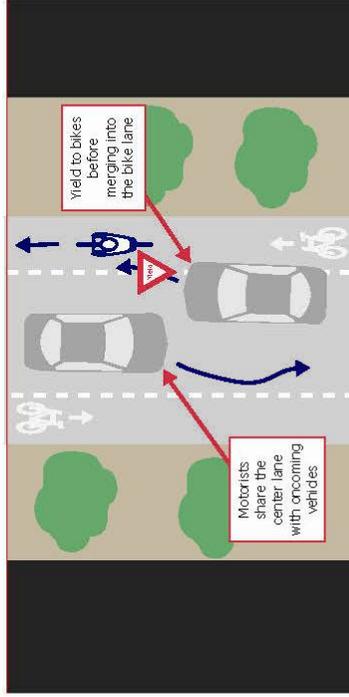
- Be more prepared for a motorist to enter the bike lane than on typical streets.
- Always use caution and assume turning or merging motorists do not see you.



Advisory bike lanes are similar to regular bike lanes, but include a dashed left line instead of a solid line.



To safely meet oncoming vehicles, motorists may need to merge into the **bike lane - but, first yield to bicyclists in the bike lane.**



For questions about information in this packet, please call 812-349-3423.



CITY OF BLOOMINGTON

Exhibit 3 – Typical example of a Priority Shared-Lane Marking





U.S. Department  
of Transportation  
**Federal Highway  
Administration**

1200 New Jersey Avenue, SE  
Washington, D.C. 20590

OCT - 9 2014

In Reply Refer to:  
HOTO-1

Tom Micuda, AICP  
Director  
Planning and Transportation Department  
City of Bloomington  
P.O. Box 100  
401 North Morton Street, Suite 130  
Bloomington, IN 47402

Dear Mr. Miduca:

Thank you for your October 5 revised request to experiment with bicycle boxes, dashed bicycle lanes, and an alternative design of the shared-lane marking at various locations in the City. Your revised request to experiment is approved limited to the locations stated in the request. In the event you would like to expand these experimental devices to additional locations, please contact us stating that you would like to expand the experiment.

We look forward to receiving your semi-annual status update(s) and your final evaluation report at the end of the study period in accordance with Item I of Paragraph 11 in Section 1A.10 of the 2009 *Manual on Uniform Traffic Control Devices for Streets and Highways*.

For recordkeeping purposes, we have assigned the following Official Ruling number and title: "9(09)-71(E) – various Bicycle Facilities – Bloomington, IN." Please refer to this number and title in future correspondence.

Thank you for your interest in improving traffic safety for bicyclists.

Sincerely yours,

Mark R. Kehrli  
Director, Office of Transportation  
Operations



**City of Bloomington**  
**Planning and Transportation Department**

June 3, 2015

Mark R. Kehrl, Director of Transportation Operations  
Federal Highway Administration  
1200 New Jersey Avenue, SE  
Washington, D.C. 20590

RE: Official Ruling # 9(09)-17(E) – various Bicycle Facilities – Bloomington, IN

Dear Mr. Kehrl,

Enclosed is a summary of our first report regarding our approved request to experiment with bicycle boxes, dashed bicycle lanes, and an alternative design of the shared-lane marking at various locations in the City. This first report is intended to provide a snapshot on the baseline conditions. Data from 2009 to 2013 was collected to establish a baseline condition. This data does not have all the baseline information for the locations within our experiment because many of the treatments were installed prior to our request for experimentation and subsequent approval. However, moving forward data will be collected to track progress as outlined in our request.

Currently Indiana University is in their summer sessions and the majority of our target user groups will not return to Bloomington until late August. Indiana University students comprise approximately 50% of our total population. Data collection over the summer will therefore be limited and we will focus most of our data collection efforts again this fall. If you have any questions or comments, please direct them to Andrew Cibor, the Traffic and Transportation Engineer for the City. Andrew can be contacted at (812) 349-3423 and [cibora@bloomington.in.gov](mailto:cibora@bloomington.in.gov).

Sincerely,

Tom Micuda, AICP  
Director, Planning and Transportation Department

## Spring 2015 Report: 9(09)-17(E) – Various Bicycle Facilities – Bloomington, IN

Green-colored Bicycle Boxes - AM & PM Peak Hours Total Entering Vehicle Totals															
Location	Pre-Treatment					Installation Date	Post-Treatment								
	Date	Vehicle Volume	Bicycle Volume	Bicycle Crashes 2010-2013			Date	Vehicle Volume	Bicycle Volume	% Encroach Box	% Encroach Lane	% Use Box	Bicycle Crashes	Near-miss	% no turn on red
7th & Walnut	Mar-10	1030	27	2	Apr-14										
	Mar-13	1267	20												
7th & College	Mar-10	1120	28	1	Apr-14	Apr-15	1039	39	~	~	~	~	~	~	~
Covenanter & College Mall	Jul-10	1089	19	1	TBD										
	Aug-13	1091	23												
3rd & Jordan	Apr-09	3078	5	1	TBD										
	Oct-12	2545	46												
3rd & Hawthorn	Oct-09	3430	7	0	Oct-13										
	Feb-13	3299	4												

Green-colored Pavement for Bicycle Lanes (1A-14) - Peak Hours Totals											
Location	Pre-Treatment					Installation Date	Post Treatment				
	Date	Vehicle Volume	Bicycle Volume	Bicycle Crashes 2010-2013			Date	Vehicle Volume	Bicycle Volume	% Encroach Lane	Bicycle Crashes
Smith: Washington - Walnut	Oct-09	328 (24 hr)	~	1	Oct-13						
Adams/5th & Patterson	Oct-11	3642	9	0	TBD						

Dashed Bicycle Lanes or Advisory Bike Lanes - 24 Hour Totals											
Location	Pre-Treatment					Installation Date	Post Treatment				
	Date	Vehicle Volume	Bicycle Volume	Bicycle Crashes 2010-2013			Date	Vehicle Volume	Bicycle Volume	% Encroach Lane	Bicycle Crashes
7th: Union - Overhill	Apr-11	2052	76 (peak)	0	Oct-13	Apr-15	1366	185	~	~	~
						Apr-15	302	75	~	~	~
12th near Lincoln	May-15	986	8	0	TBD						

Priority Shared Lane Marking - 24 Hour Totals											
Location	Pre-Treatment					Installation Date	Post Treatment				
	Date	Vehicle Volume	Bicycle Volume	Bicycle Crashes 2010-2013			Date	Vehicle Volume	Bicycle Volume	% Encroach Lane	Bicycle Crashes
7th near Madison	Nov-09	3594	~	1	Oct-13						
7th near Maple	Sep-10	1286	~	0	Oct-13						
Anita near 2nd	Aug-10	46	~	0	Oct-13						
Covenanter near Nota	Aug-10	1170	~	0	Oct-13						
Hawthorn near 3rd	Nov-11	2167	~	0	Oct-13						
Union near 10th	Apr-11	5993	~	1	Oct-13						
	Jan-12	6594	~								

March 1, 2016

Mark R. Kehrl, Director of Transportation Operations  
Federal Highway Administration  
1200 New Jersey Avenue, SE  
Washington, D.C. 20590

RE: Official Ruling # 9(09)-71(E) – various Bicycle Facilities – Bloomington, IN

Dear Mr. Kehrl,

Enclosed is a summary of our on-going report regarding our approved request to experiment with bicycle boxes, dashed bicycle lanes, and an alternative design of the shared-lane marking at various locations in the City. This Spring 2016 interim report contains a snapshot on the baseline conditions as well as recent data on various bicycle facilities. If you recall, our baseline data from 2009 to 2013 may not have all the baseline information for the locations within our experiment. This is because many of the treatments were installed prior to our request for experimentation and subsequent approval. This interim report provides data that will be useful to track on-going progress as outlined in our request.

Since our last report, initial data was collected to monitor behavioral characteristics at a location with, and a location without, a bicycle box. Staff collected peak hour(s) data on vehicle encroachments into Bicycle Box and also collected data for vehicle encroachments into crosswalks as a control for stop bar behavior. Crash data was compiled for 2014. No fatalities or incapacitating crashes occurred within the studied facilities. There were however, 4 crashes that involved bicyclists within the City. We hope to have 2015 crash data compiled for our next report.

Also, one bicycle box was removed at 3<sup>rd</sup> and Hawthorn due to resurfacing. There are no plans to replace this bicycle box, therefore we will no longer focus experimentation data collection at this location. The City recently purchased permanent bicycle counting equipment that will be installed later this spring or summer around the city. This will help establish city-wide usage patterns and growth rates. The final locations for these monitors have not yet been determined. It is expected they will not be within any of these experimentation facilities, but perhaps within close proximity.

Sincerely,

Scott Robinson, AICP  
Planning Services Manager

## Spring 2016 Report: 9(09)-71(E) – Various Bicycle Facilities – Bloomington, IN

Green-colored Bicycle Boxes - 7-9 AM & 4-6 PM Peak Hours Total Entering Vehicles												
Location	Pre-Treatment				Installation Date	Post-Treatment						
	Date	Vehicle Volume	Bicycle Volume	Bicycle Crashes 2010-2013		Date	Total Volume	Bicycle Volume	% Encroach Box	% Encroach Lane	% Encroach Control	Bicycle Crashes (2014)
7th & Walnut	Mar-10	1030	27	2	Apr-14	Sep-15	1040	69	50%	<1%	30%	0
	Mar-13	1267	20									
7th & College	Mar-10	1120	28	1	Apr-14	Apr-15	1039	39	~	~		0
Covenanter & College Mall	Jul-10	1089	19	1	TBD							0
	Aug-13	1091	23									
3rd & Jordan	Apr-09	3078	5	1	TBD						0	
	Oct-12	2545	46									
3rd & Hawthorn	Oct-09	3430	7	0	Oct-13	***Bicycle Box Removed***						
	Feb-13	3299	4									

Green-colored Pavement for Bicycle Lanes (1A-14) - 7-9 AM & 4-6 PM Peak Hours Total Entering Vehicles											
Location	Pre-Treatment				Installation Date	Post Treatment					
	Date	Vehicle Volume	Bicycle Volume	Bicycle Crashes 2010-2013		Date	Total Volume	Bicycle Volume	% Encroach Lane	Bicycle Crashes (2014)	Survey
Smith: Washington - Walnut	Oct-09	328 (24 hr.)	~	1	Oct-13	Sep-15	742	59	n/a	0	
Adams/5th & Patterson	Oct-11	3642	9	0	TBD						

Dashed Bicycle Lanes or Advisory Bike Lanes - 24 Hour Totals											
Location	Pre-Treatment				Installation Date	Post Treatment					
	Date	Vehicle Volume	Bicycle Volume	Bicycle Crashes 2010-2013		Date	Total Volume	Bicycle Volume	% Encroach Lane	Bicycle Crashes (2014)	Survey
7th: Union - Overhill	Apr-11	2052	76 (peak)	0	Oct-13	Apr-15	1366	185	~	0	~
						Apr-15	302	75	~	0	~
12th near Lincoln	May-15	986	8	0	TBD						

Priority Shared Lane Marking - 24 Hour Totals											
Location	Pre-Treatment				Installation Date	Post Treatment					
	Date	Vehicle Volume	Bicycle Volume	Bicycle Crashes 2010-2013		Date	Total Volume	Bicycle Volume	% Encroach Lane	Bicycle Crashes (2014)	Survey
7th near Madison	Nov-09	3594	~	1	Oct-13	Oct-15	3564	113	n/a	0	
7th near Maple	Sep-10	1286	~	0	Oct-13	Oct-15	794	51	n/a	0	
Anita near 2nd	Aug-10	46	~	0	Oct-13	Oct-15	57	8	n/a	0	
Covenanter near Nota	Aug-10	1170	~	0	Oct-13	Sep-15	1163	90	n/a	0	
Hawthorn near 3rd	Nov-11	2167	~	0	Oct-13						
Union near 10th	Apr-11	5993	~	1	Oct-13	Oct-15	5789	406	n/a	0	
	Jan-12	6594	~								

2014 crash data has zero bicycle and pedestrian fatalities within the City. There were 4 bicycle and 9 crashes that involved bicyclist and/or pedestrians in the City that resulted with injuries, but none were within the study area.



The goal of The United States Bicycle Route System is to connect America through a network of numbered interstate bicycle routes.

# NATIONAL CORRIDOR PLAN

\*\*\*\*\*

October 2015



**DESIGNATED U.S. BICYCLE ROUTE**

Established U.S. Bicycle Route designated by AASHTO.

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**UNDEVELOPED CORRIDOR**

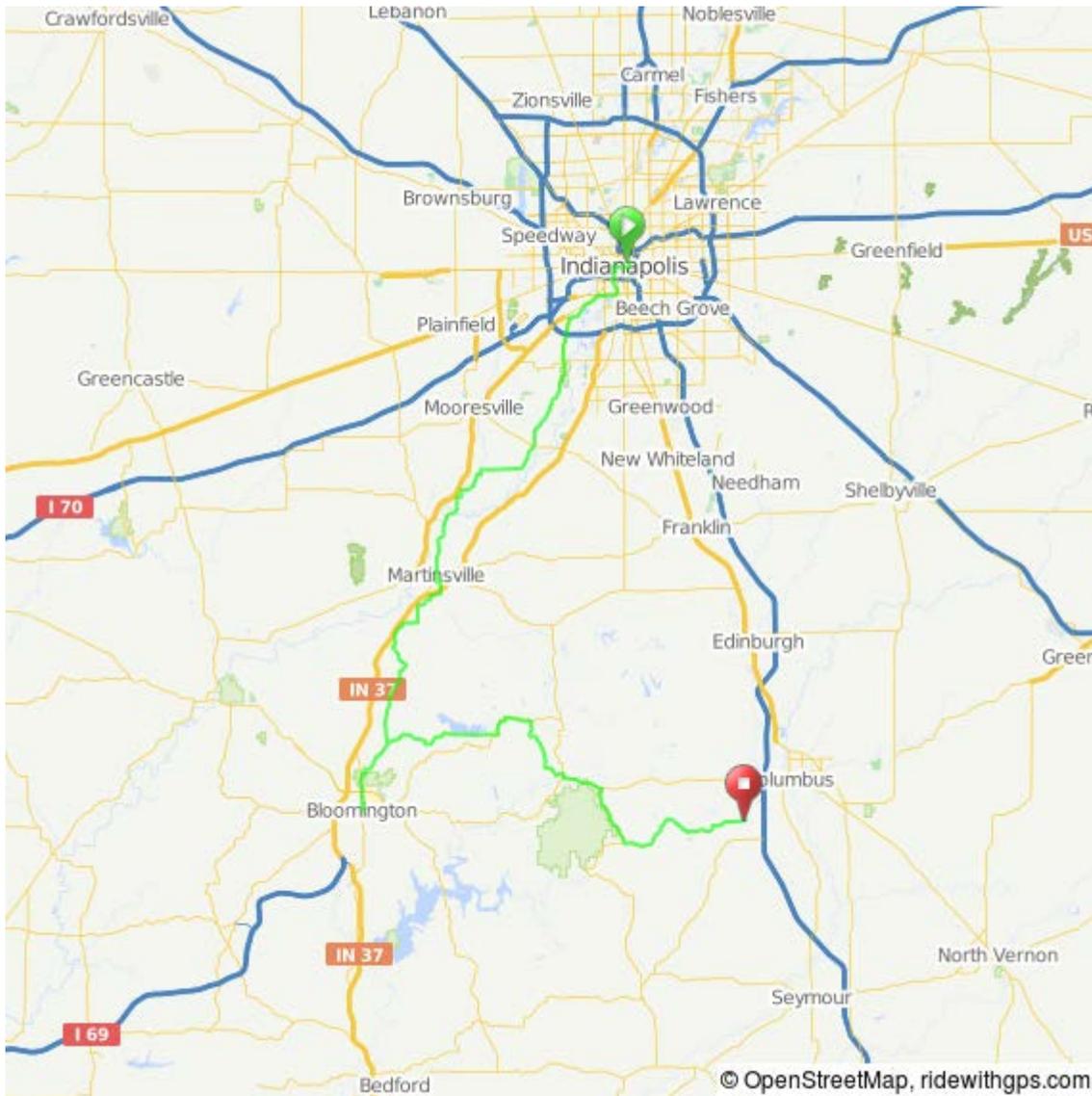
These corridors are not routes, but 50-mile wide areas where a route may be developed.

## 10 Fast Facts



1. The U.S. Bicycle Route System (USBRS) is a developing network of officially numbered interstate bicycle routes that connect America's cities, suburbs, and rural areas.
2. The National Corridor Plan is a corridor-level plan for the development of future U.S. Bicycle Routes.
3. Corridors are not routes, but 50-mile wide areas where routes may be developed, linking key destinations, urban centers, that take into account the natural landscape.
4. Corridors can be added, removed, or shifted by states as opportunities and interest develops.
5. U.S. Bicycle Routes are defined as routes that connect two or more states, a state and an international border, or other U.S. Bicycle Routes.
6. U.S. Bicycle Routes may be on roads or trails suitable for bicycle travel.
7. State departments of transportation (DOTs) apply for U.S. Bicycle Route numbered designation, and work in coordination with local agencies, organizations, and volunteers in planning and choosing routes.
8. U.S. Bicycle Routes are catalogued and designated by the American Association of State Highway Transportation Officials (AASHTO), the lead non-profit organization supporting state DOTs.
9. U.S. Bicycle Routes will be designated with numbers and may be mapped and signed.
10. Projects to help create U.S. Bicycle Routes can be supported through federal, state, and private funds.

For more information or to get involved, please contact [usbinfo@adventurecycling.org](mailto:usbinfo@adventurecycling.org).



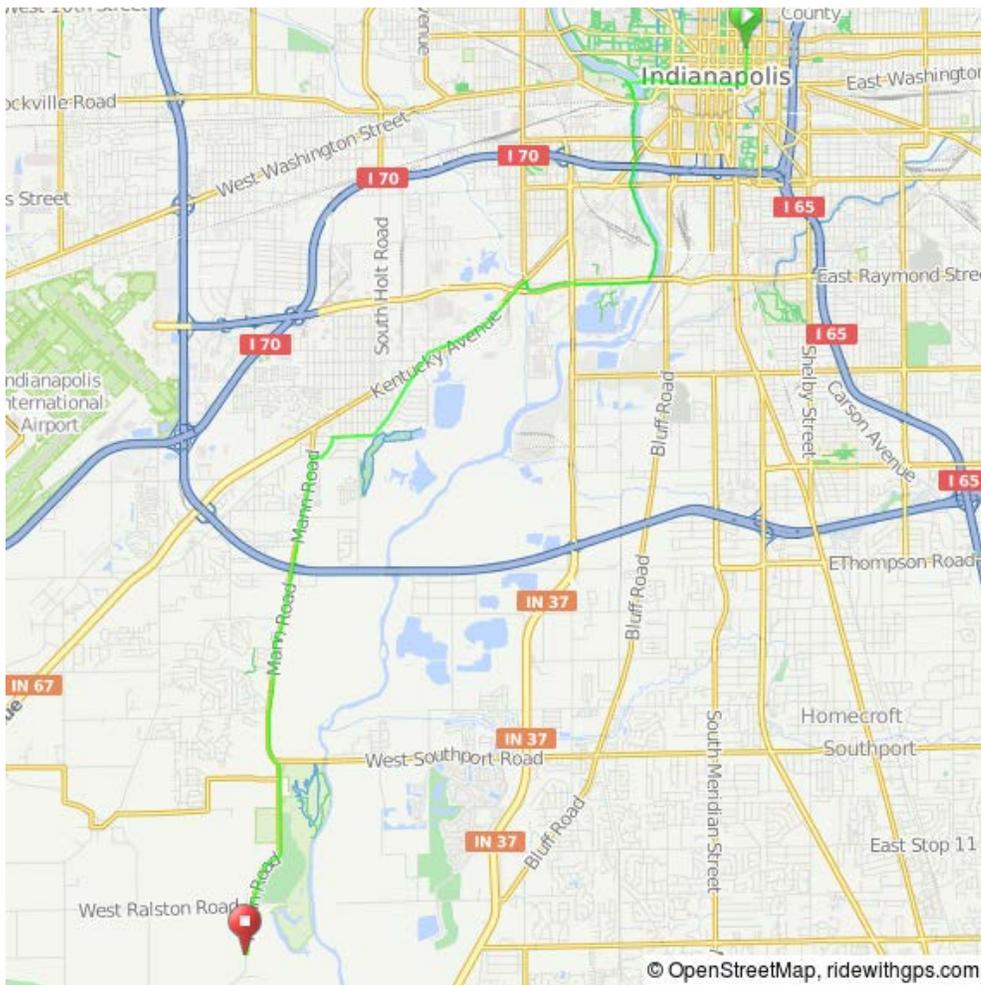
## USBR 235 SPUR INDIANAPOLIS TO COLUMBUS

<https://ridewithgps.com/routes/12095419>

USBR 235 is a proposed corridor and spur of USBR 35 linking important scenic and tourist areas of Indiana that include the cities of Indianapolis, Martinsville, Bloomington, Nashville, and Columbus.

This 103.4 mile spur leaves USBR 35 in downtown Indianapolis and follows many designated bicycle trails and bicycle routes. Leaving Marion County it travels south and west on primary country roads and into cities of Brooklyn and Martinsville. INDOT has assured that Mann Rd – Centenary Rd will remain continuous on all I-69 Section 6 plans. South of Martinsville it stays east of I-69 and utilizes a new I-69 access road from Liberty Church Rd to the present Old 37. The route continues on Old 37 through Monroe County into Bloomington onto College Avenue at Miller- Showers Park to the courthouse and back north on Walnut St, duplicating the southern route but then turn east on Robinson Rd toward Nashville. This duplication is to showcase Monroe County's Bicycle Byway from Griffey Lake to Lake Lemon. In Brown County the route takes IN-45 but enters Nashville the back way on Helmsburg Rd. Continuing east on a wide shoulder of IN-46 past Brown County State Park and around it on IN-135, and then the last leg is primarily Bellsville Pike to the end in Bartholomew County at S 400 W southwest of Columbus where it links back with USBR 35, Columbus to the north and terminates at Jeffersonville to the south..

This suggested route has been broken down into individual counties and cities for a more specific southbound and eastbound narrative to the appropriate government entities.

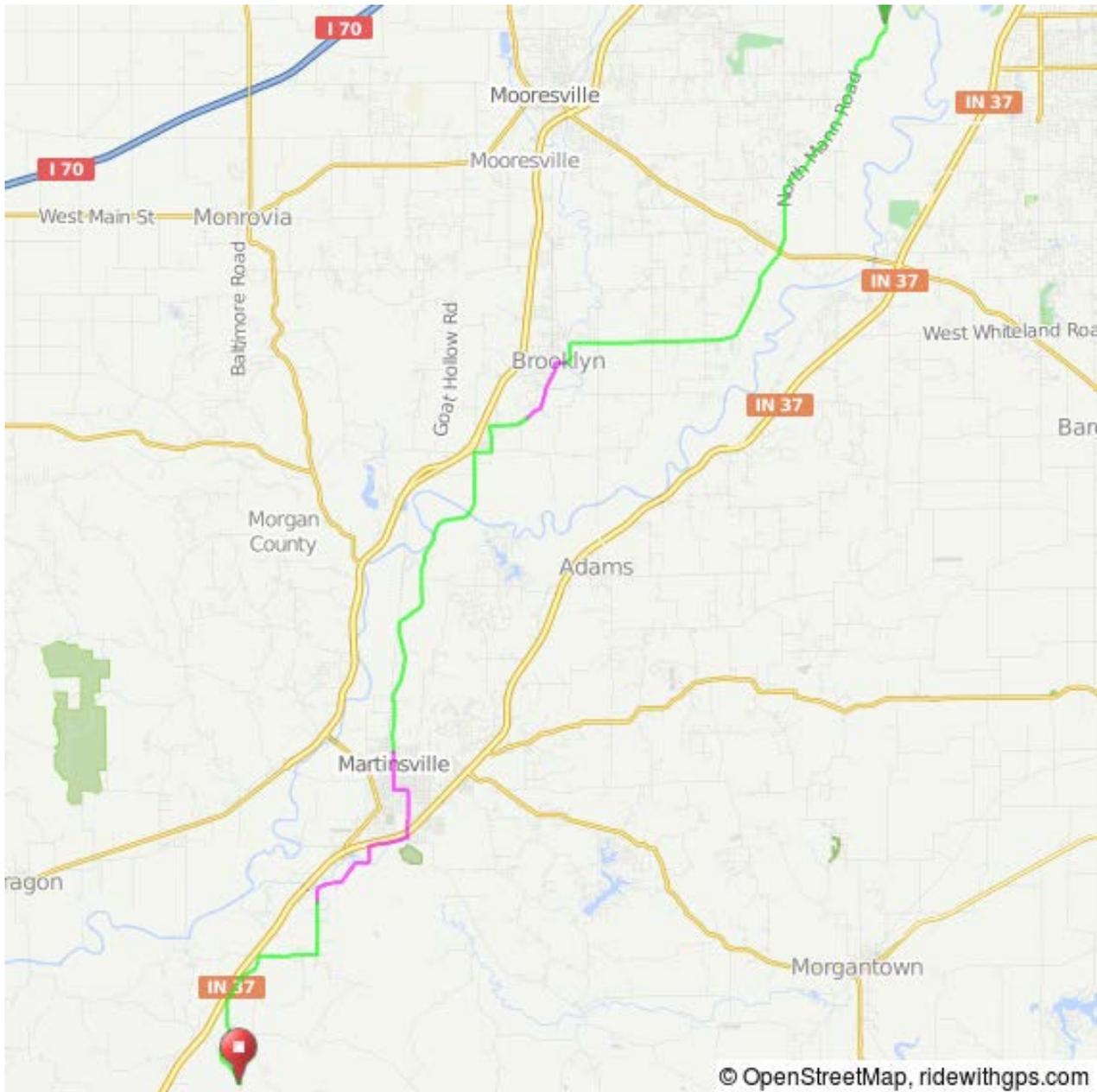


INDIANAPOLIS - MARION COUNTY 14.1 miles <https://ridewithgps.com/routes/12111339>

USBR 235 leaves USBR 35 at Alabama St and Massachusetts Ave on the critically acclaimed Indianapolis Cultural Trail. Heading south on Alabama St, the Indy Bike Garage bike shop will be on the right before turning west on the trail alongside Washington St. At Meridian on the right is Monument Circle and the Indiana State Soldiers and Sailors Monument, the first in the United States to be dedicated to the common soldier. Since its public dedication in 1902, the monument has become an iconic symbol of Indianapolis.

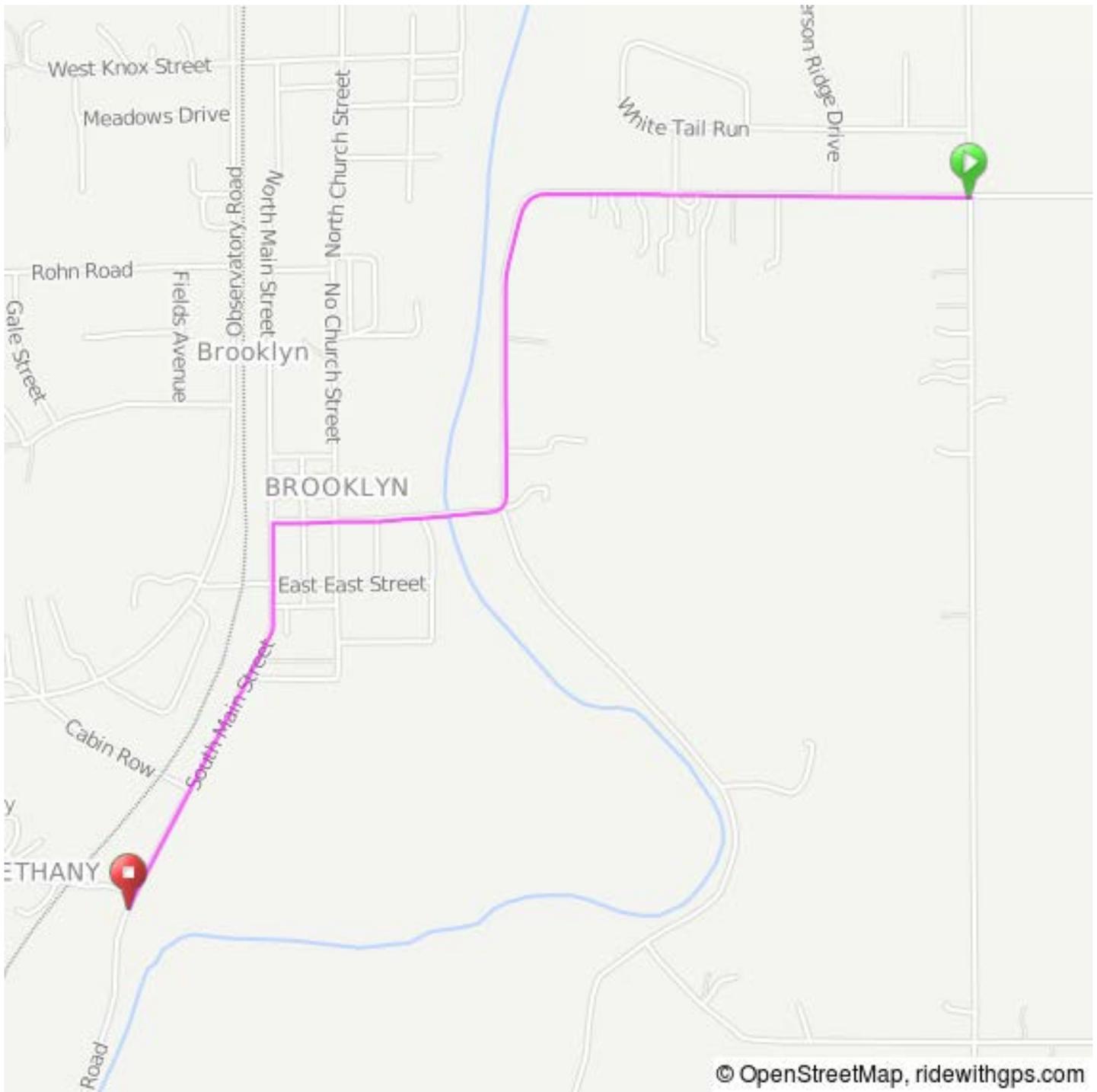
USBR 235 continues west passing by the Indiana State Capitol and into the White River State Park with its many museums and the Indianapolis Zoo where it becomes the White River Trail. There are also many hotels and eating establishments nearby.

After crossing over the White River, USBR 235 then travels south on the White River Trail along the west side of the White River, and then goes west along Raymond St. It becomes Eagle Creek Greenway at the busy intersection of Raymond St and Harding St with traffic lights and crosswalks. The World Headquarters of Eli Lilly is nearby. The Eagle Creek Greenway turns northwest and abruptly ends. *Assuming that Indianapolis is planning extend the greenway, and also utilize the nearby railroad bridge over Eagle Creek at Belmont Ave and the railroad corridor running along Kentucky Ave on the north side.* Currently, the route must be on the shoulder of a busy Kentucky Ave for 0.7 miles where it turns right at Warman Ave and then left onto Maywood Ave, a residential area. This crosses Kentucky Ave and becomes Mooresville Rd, a designated Indianapolis bike route, through more residential neighborhoods. It then turns left on Mayflower Drive and Standish Drive, and then left onto Mann Rd, a primary arteriole leading out to I-465 and rural areas. USBR-235 also intersects the east-west USBR-50 at Southport Rd. This Marion County section then ends at Southwestway Park, a popular mountain bike area of Indianapolis.



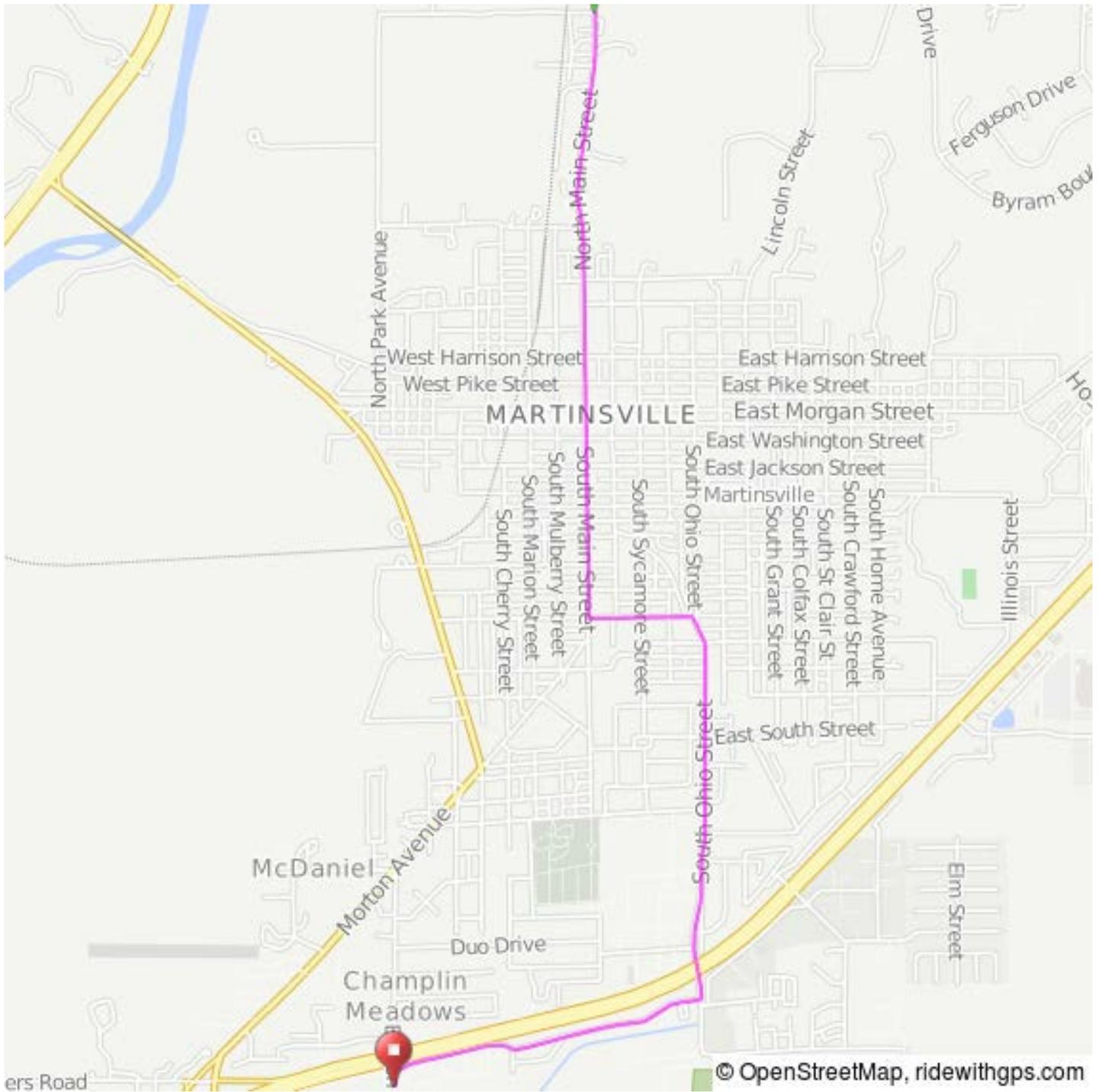
MORGAN COUNTY 29.5 miles <https://ridewithgps.com/routes/12111983>

This northern area of Morgan County is essentially flat farmland, but with section 6 of I-69, Mann Rd may be hugging close to I-69 or intersecting it. INDOT has assured that the Mann Rd – Centenary Road will remain continuous. After crossing IN-144 the road becomes Centenary Rd. As you approach Brooklyn on Centenary Rd, you will curve left and past a park on the left and then a slight curve to the right to cross White Lick Creek and it now is Mill St. While there are eating establishments and a nearby convenience store, the route turns left at Main St. There are actually two more hamlets, Bethany and Centerton, compressed together to confuse things a bit. Main St turns into Tide Water Rd in Bethany and then becomes Center Valley Rd in Centerton, and then turns left on High St. Turn right on Centerton and then Blue Bluff Rd all the way to Martinsville on the John Wooden Interurban Way while passing the coal power plant on the right. Martinsville is also known as the gateway to southern Indiana as the terrain changes drastically to some challenging hilly roads. But, the scenery is well worth it. Winding about Indian Creek, then Jordan Creek, and finally Little Indian Creek, one will realize that these creeks were all created by glaciers that melted out and left the hills to the south. Now approaching I-69 on Liberty Church Rd, turn left before I69 onto a new access road, “new” Old State Road 37. A long gradual climb brings you into Morgan-Monroe State Forest.



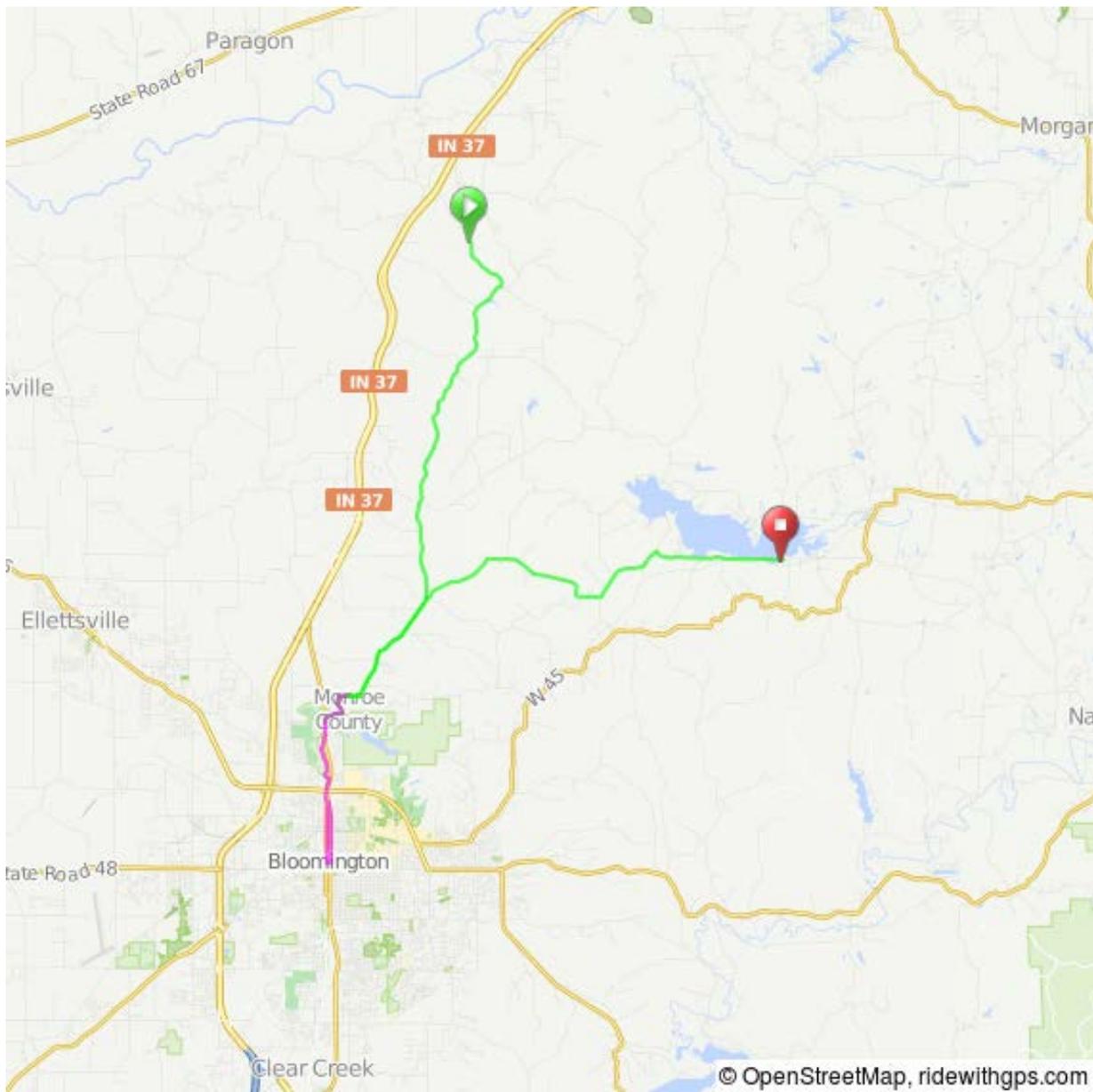
BROOKLYN 1.7 MILES <https://ridewithgps.com/routes/12112037>

As you approach Brooklyn on Centenary Rd, you will curve left and past a park on the left and then a slight curve to the right to cross White Lick Creek and it now is Mill St. While there are eating establishment and a nearby convenience store, the route turns left at Main St into the two hamlets of Bethany and Centerton.



MARTINSVILLE 3.4 MILES <https://ridewithgps.com/routes/12112107>

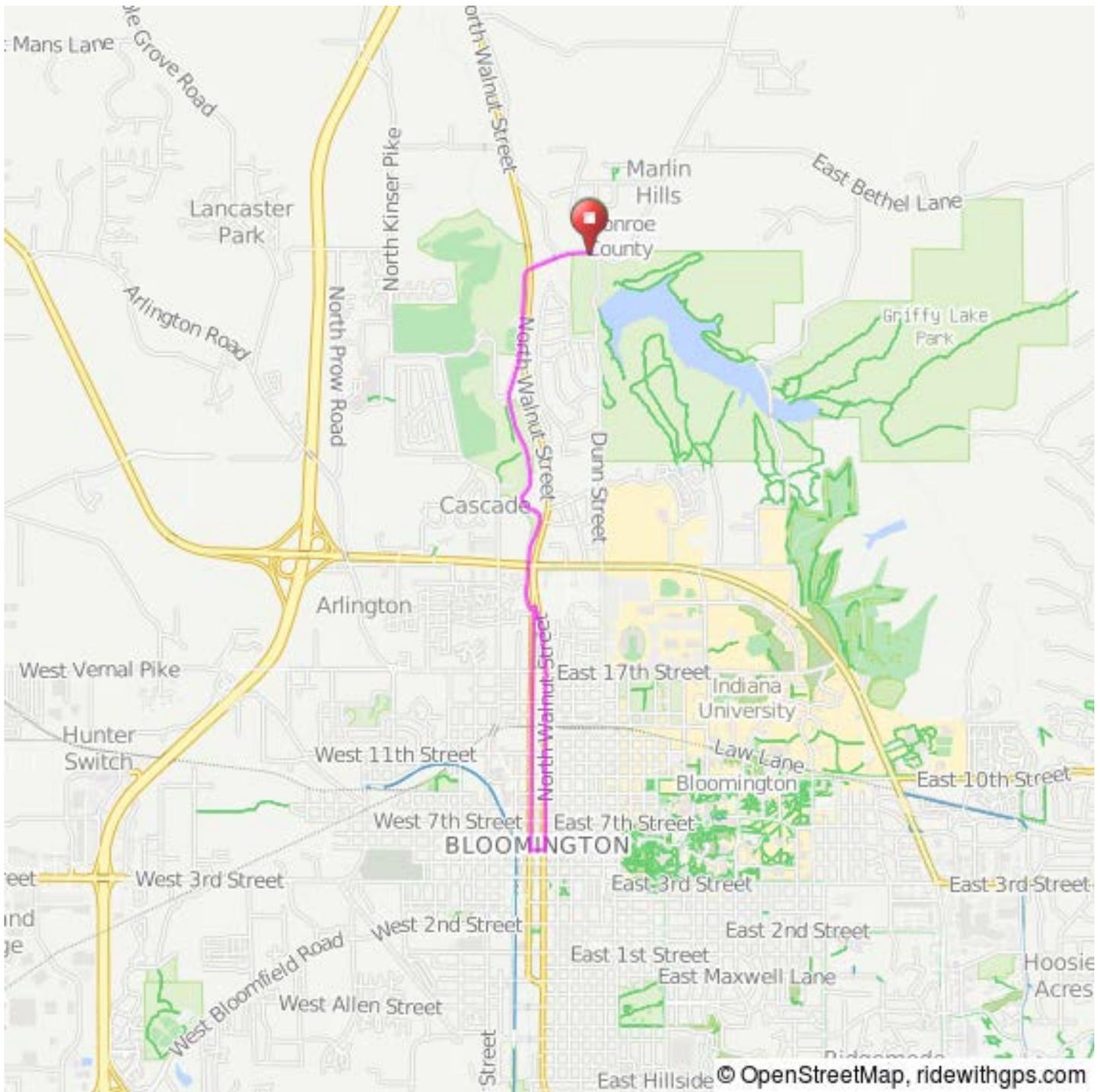
Martinsville is the county seat of Morgan County and is mostly known for its many artesian springs and healing spa's in the late 1800's and 1900's. Entering from the north on Main St, the courthouse square welcomes you with a few diners. Turning left onto Garfield and then curve right onto Ohio St one will find grocery stores, pharmacies, convenience stores, and chain restaurants. After crossing I-69 turn onto Southview Drive, a city access road, and then turn left onto Burton Lane to leave town.



MONROE COUNTY 28.6 miles <https://ridewithgps.com/routes/12112514>

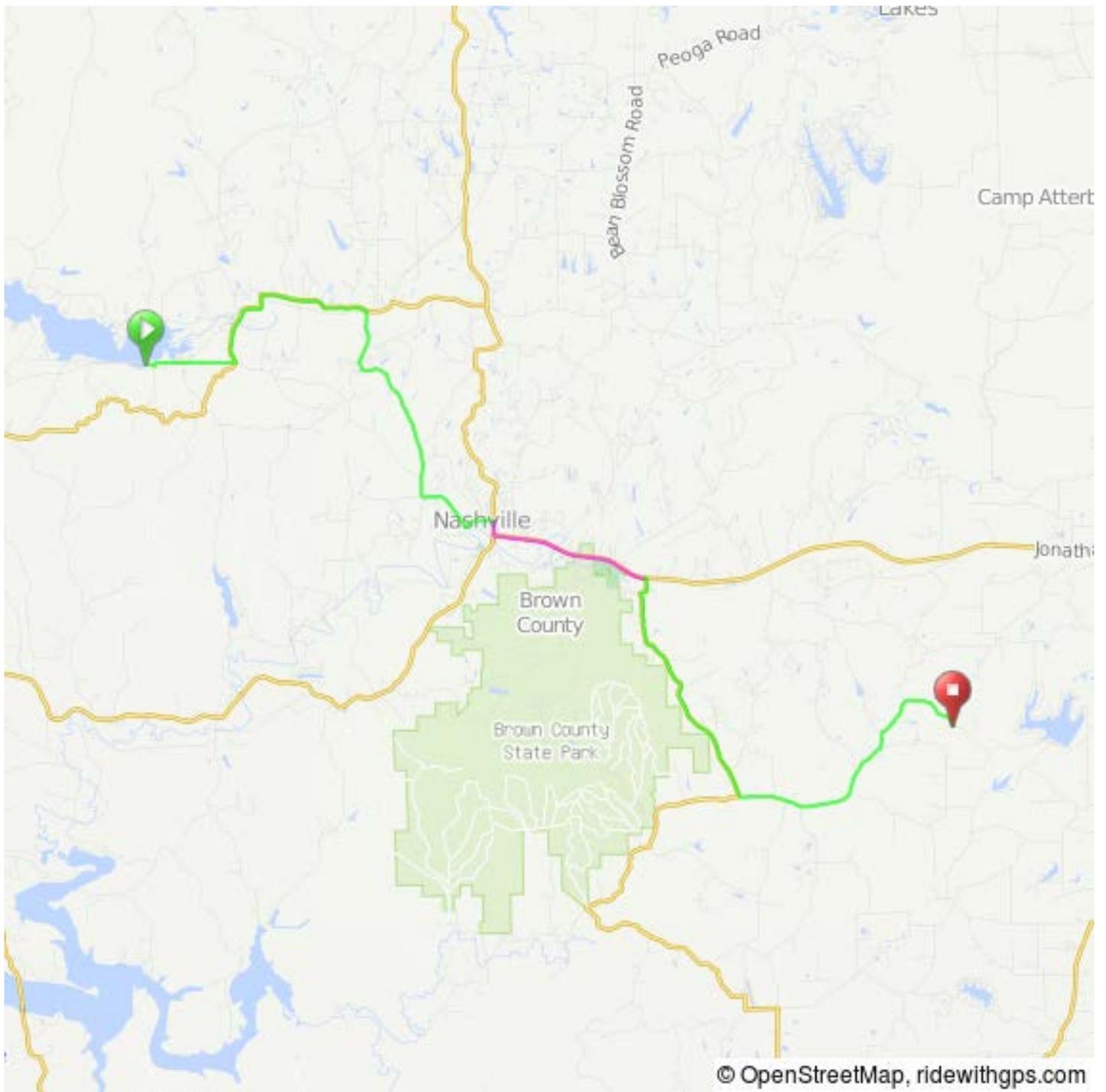
You are now deep into Morgan Monroe State Forest that does offer hiking and a campground around 5 miles to your left where Old 37 veers right. If for some reason one would not want to visit Bloomington, USBR 235 turns east at Robinson Rd. This entire area is a very popular area for bicycling especially in the early spring when IU students are training for the annual Little 500 during spring week. After climbing Firehouse Hill, riders should stop at the firehouse on the right. They have had a drinking fountain for bicyclists for many years. In order to avoid a dangerous blind hill there will be a right turn onto Audubon Drive into a housing addition and then left onto Hillview Dr. Monroe County is developing a bicycling byway from Griffy Lake to Lake Lemon and there will eventually be bike lanes on Old 37 and the route in the addition will be part of the designated byway.

Leaving Bloomington on the north side, this route duplicates with the entrance into Bloomington so that the best bicycling can be offered as one travels eastward. The route then turns onto Robinson Rd. Bicyclists coming from Nashville heading west and not wanting to ride to Bloomington can turn north on Old 37 to reach Martinsville. Butler Winery is located on Robinson Rd where wine tasting is available and a grill with limited hours. Off of Tunnel Rd is Riddle Point Park where one can spend some time at the beach, and an active railroad trestle can be scoped out at the short west causeway to the right. Port Hole Inn is on the left where one can eat some lunch or dinner and cool off with a cold one. The county line is at the end of the long east causeway.



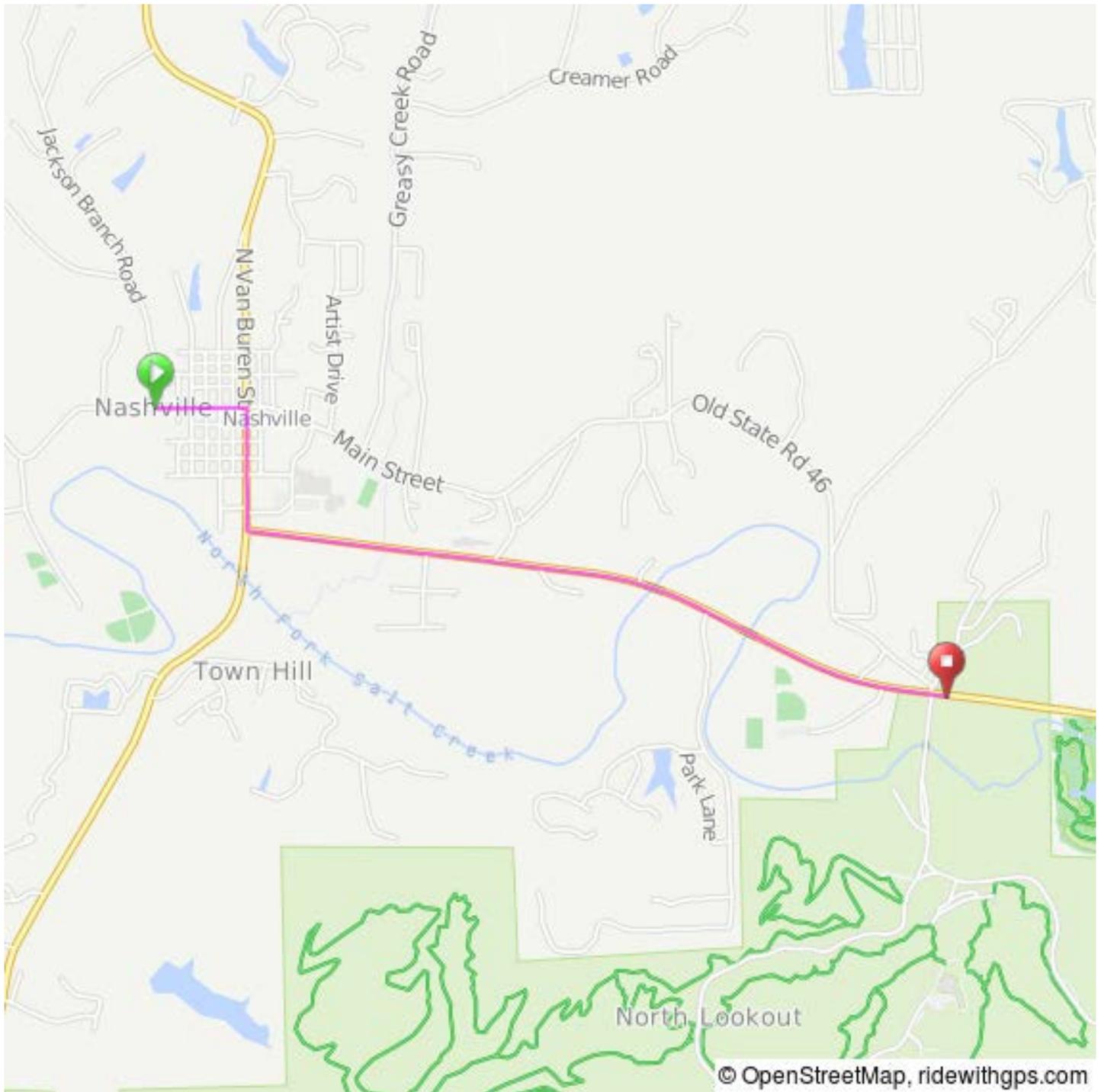
BLOOMINGTON 6.6 miles <https://ridewithgps.com/routes/12112688>

USBR 235 enters Bloomington from the north, and leaves from the north also. Eventually, a *USBR 37* will continue south on the B-Line to Bedford and continue to Evansville. Bicyclists are encouraged to spend ample amount of time in Bloomington, in fact a whole weekend is suggested. This is the home of “Breaking Away” ranking in the top five of sports movies and of course the most popular of cycling movies. Bloomington also is currently a gold level bicycle friendly city as determined by the League of American Bicyclists. It is the highest ranked city in Indiana boasting many bike lanes, bike trails, sharrowed lanes, and designated and signed bike routes. It is the home of Indiana University and their Little 500 every spring. This college town has quite an eclectic choice of restaurants, brew pubs, and nightlife. The B-line is a spectacular bike trail that traverses all of downtown. There are also four bike shops in the city.



BROWN COUNTY 25.4 miles <https://ridewithgps.com/routes/12113373>

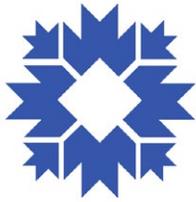
Now entering Brown County at the end of the long east causeway, you then turns left onto IN-45. Motorists are used to seeing bicyclists on this winding state road. In Helmsburg you will turn right at the Helmsburg General Store onto Helmsburg Rd. Stop in for a snack. Continue all the way to Nashville with a long uphill in the middle. At the main intersection of downtown Nashville, turn right and follow IN-135. This has a wide shoulder for bicyclists. About a mile later there is Hesitation Point Bike Shop on the right. You may think it odd that this large bike shop is in the middle of nowhere, but it is near Brown County State Park, the largest in Indiana, and home of the best mountain biking east of the Mississippi. The state park has a large campground and a full service inn. Follow IN-135 when it turns right along the east side of the park. The road T's at Stonehead, which is a historic 1851 mile marker or waypoint between Columbus and Fairfax. This route turns east toward Columbus on Bellsville Pike, quite an idyllic valley ride.



NASHVILLE 2.3 miles <https://ridewithgps.com/routes/12113251>

Nashville has become famous as a haven for artists of all types that started in the 1900's. It had always been a sleepy little town but now has become quite a weekend getaway for city folk from Indianapolis, Louisville, and Cincinnati metro areas. There are shops of all kinds, hotels, many art galleries, and quite tasty food at various restaurants. Proceed south onto Van Buren St and then east onto IN-46 / IN-135. This has a wide shoulder for bicycles. A McDonald's, hardware store, and grocery store is on the right while leaving town.





CITY OF BLOOMINGTON



# BICYCLE & PEDESTRIAN SAFETY COMMISSION LOCAL-MOTION GRANT PROGRAM GUIDELINES -2015

The Bloomington Bicycle and Pedestrian Safety Commission (BPSC) seeks ideas that incorporate bicycle and pedestrian mobility into local events, programs, or other community activities. Actions that celebrate the virtues of Bloomington, while at the same time incorporating values of our walking and biking culture is the core of the Local-Motion Grant Program. Possibilities for ideas are unlimited for their overall intent (e.g. live performance, parade, tour, class, etc.) and only need to incorporate walk and/or bike locomotion into the scope. Walking and bicycling are safe, practical, economic, low-impact, and healthy ways to travel around the Bloomington community.

BPSC is making funds available to support local initiatives that also promote a bicycle and walk friendly culture. The primary goal of the Local-Motion Grant Program is to advance bicycle and pedestrian mobility. The Local-Motion Grant Program will provide direct support to initiatives that focus on cultural, day to day, or other locally-based activities that also aim to strengthen our diverse and vibrant bicycling and walking culture.

The BPSC believes building a bicycle- and walk- friendly community is more than taking a “build it (trails, sidewalks, etc.) and they will come” approach. It is just as important to compliment this approach with an encourage (to bike and/or walk) and educate (safety, health, environmental) platform on the virtues of active modes of transportation. Emerging organizations or existing organizations with new projects are encouraged to apply for the Local-Motion Grant Program. Applicants are encouraged to contact staff for assistance in the grant application process.

There is one grant cycle annually and requests are limited to one project application per cycle. Grant awards are capped at a total maximum of \$1,500 per project application.

## PROJECT PERIODS

The Local-Motion Grant Program has one cycle annually:

**Call:** Announcement of the Local-Motion Grant Program is issued between January and March with program details.

**Letter of Intent:** A Letter of Intent must be submitted by May 22<sup>nd</sup> before 5 P.M. EDT. Applicants are encouraged to coordinate with Planning Department staff to further their Local-Motion Grant concept after submitting their Letter of Intent.

**BPSC Presentation:** Applicants shall present their Local-Motion concept to the BPSC at their regularly scheduled June meeting

(3<sup>rd</sup> Monday of June). Applicants must be present to answer questions from BPSC members and hear any public comments.

**Application:** Based on feedback and discussion from the June BPSC meeting applicants must submit a completed application by the 1<sup>st</sup> Monday of July (7/6/2015) before 12 noon EDT.

**Grant Awards:** BPSC will make their Local-Motion Grant award announcement by the end of August.

## ELIGIBILITY

The Local-Motion Grant Program is open to nonprofit organizations, locally owned businesses, and Neighborhood Associations for projects that take place within Bloomington city limits.

The Local-Motion Grant Program does **not** fund:

- Projects completed prior to funding period.
- Activities and performances not available to the general public.
- 100% of project costs. Applicants are required to provide matching funds through other sources.
- Activities and performances planned **solely** for fundraising purposes.
- Capital expenditures as the sole project activity.
- Training expenses as the sole project activity.
- Interest on loans, fines, penalties and/or litigation costs.
- Indirect costs
- Projects that are longer than one year in duration.
- Individuals directly. Individuals must work with a partner organization/business/association, which must serve as the applicant and fiscal agent.

## REVIEW CRITERIA

Grant applications are evaluated on three (3) general areas of focus detailed below. Applications that demonstrate strengths within all three areas are preferred.

### Transformative Quality

- The overall level of collaboration between other community initiatives and the ability to transform it towards a more bicycle and/or pedestrian friendly activity.
- The extent to which the project will positively impact public understanding or awareness of non-motorized needs.
- The extent of creativity and innovation exhibited in the project design or construct.

- The extent to which the program can be more economically independent with future iterations (e.g. not needing public funding).
- The extent to which the program can become assimilated into the standard/regular operations of partner organizations, businesses, or neighborhood associations.

### **Community Impact**

- The extent to which the project reaches out to a large and/or significant and/or underserved audience.
- The potential for the project's desired effects to endure beyond its completion.
- The extent to which the project enriches the vitality and diversity of the local bicycle and pedestrian community.
- The relevance/importance of the project and its intended outcomes to the needs and interests of the target audience.

### **Organizational Capacity**

- The extent to which stated project outcomes are appropriate and reasonable based on the project's activities (see Application for definition of project outcomes).
- The extent to which the applicant has demonstrated a clear commitment and ability to making the project a success, including activities in marketing, fundraising and audience development.
- The ability of the organization to sustain the project to completion.
- If the project is to be repeated in the future, the applicant must demonstrate plans to sustain and improve upon the project.
- The extent to which the applicant can demonstrate satisfactory adherence to final reporting and acknowledgment requirements.

### **AWARDS**

Grant awards will not exceed \$1,500 per project. The Commission may receive more requests than it is able to fund; not all applications will be approved.

### **FINAL REPORT**

All grant recipients will be required to submit a Final Report to the BPSC within thirty (30) days of project completion. Non-submittal of a final report in a timely manner may negatively impact future funding.

If major changes occur from the original application (i.e. scope, location, budget or schedule), notification of such changes must be submitted in writing and approved by the Chair of the BPSC for funding to continue.

### **REQUIRED ACKNOWLEDGEMENTS**

Grantees shall acknowledge receipt of a Bicycle and Pedestrian Safety Commission Local-Motion Grant by use of their name along with the City's logo and credit line when

appropriate. Evidence of proper acknowledgement should accompany the completed Final Report. Lack of proper acknowledgement may negatively impact future funding.

### **MATCHING REQUIREMENT**

A variety of revenue sources demonstrates good fiscal planning as well as broad community support; therefore the Local Motion Grant program has a matching fund requirement. Funding requests must include at least a 10% cash match (a \$1,650 project would have a \$1,500 grant request and a \$150 match from the applicant.) In-kind support for the request will be viewed favorably, but is not required.

### **REVIEW PROCESS**

Applicants are strongly encouraged to meet with the Bicycle and Pedestrian Coordinator prior to the Letter of Intent (May) and Application (July) deadlines.

Attendance at the BPSC June grant review meeting is required. Applicants will have a maximum of 10 minutes to present their proposal. They also may be called upon to respond to questions posed by the Commission.

Applications will be reviewed by those BPSC members present at their regularly scheduled July meeting. The BPSC will announce their awards by the end of August.

### **HOW TO APPLY**

Please direct questions to Vince Caristo, Bicycle and Pedestrian Coordinator, at 812-349-3423 or [caristov@bloomington.in.gov](mailto:caristov@bloomington.in.gov).

Letter of Intent and Application materials should be submitted via web-based forms posted by the respective deadlines listed above at: <http://bloomington.in.gov/bpsc>

Hard/paper applications will not be accepted.

**Submission of a completed grant application means acceptance of responsibility for having read and understood the information in these guidelines and compliance with all rules, regulations, laws, terms and conditions described in this document.**

Only completed applications will be accepted.

Late applications will not be reviewed.

Funds not claimed by 60 days after award notification will be returned to the grants pool.