

USBRS Designation System Rationale Paper

Background

There are a number of possible ways of designating bike routes. A number system, letter system, naming system or combination of names, numbers or letters could exist. This is a study of what exists already in the continental U.S. and what might be considered the most feasible based upon precedence.

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State Designation Systems

Many states have officially designated bike routes within their borders. State by state, there is no consistent numbering/designation system. Several states have no designated routes. Below is a summary of the systems in place for each state.

Alabama	no cross-state routes, no designation system
Alaska	no cross-state routes, no designation system
Arizona	no cross-state routes, no designation system
Arkansas	no designation system
California	no designation system
Colorado	no cross-state routes, no designation system
Connecticut	no designation system, though some loops have names
Delaware	two state routes (Delaware Bicycle Routes 1 &2), county routes designated with the county initials plus a number (e.g. Kent County route K-1), plus the named Delaware River Heritage Trail
Florida	no cross-state routes, no designation system
Georgia	numbered routes, odd numbers ending in 5 for east-west, even numbers ending in 0 for north-south, numbers increasing west to east and south to north. Routes are referred to as State Bicycle Route, so the shorthand designation of SBR-XX
Hawaii	numbered routes with "sub letters" (e.g. 1a, 2c) route numbers repeat from island to island
Idaho	no cross-state routes, no designation system
Illinois	no designation system, though some routes and loops are named
Indiana	no designation system, but some routes are named
Iowa	no cross-state routes, no designation system
Kansas	no designation system, Adventure Cycling TransAmerica Trail and American Discovery Trail are named
Kentucky	no designation system, but routes are named as tours. USBR 1 is not numbered, but is designated "Kentucky's TransAmerica Trail"
Louisiana	no designation system
Maine	no designation system, routes & loops are named
Maryland	no cross-state routes, no designation system

Massachusetts	no designation system, routes & paths are named
Michigan	no cross-state routes, no designation system
Minnesota	no designation system
Mississippi	no cross-state routes, no designation system
Missouri	no designation system
Montana	no cross-state routes, no designation system
Nebraska	no cross-state routes, no designation system
Nevada	no designation system, routes and loops are named
New Hampshire	no designation system
New Jersey	no designation system but two named trails: Delaware River Trail and Capital to Coast Trail plus named routes.
New Mexico	no designation system
New York	numbered state routes, all but one are odd numbered whether east-west or north-south, all numbered less than 25. The shorthand designation is SBR-XX. Trails and bikeways are also named.
North Carolina	routes are numbered, 1 through 8, and named. East-west routes are even numbered, north-south routes are odd numbered
North Dakota	no cross-state routes, no designation system
Ohio	Most routes are given one or two letter designations, though some trails are named
Oklahoma	no designation system but some routes are named
Oregon	no designation system but two routes are named
Pennsylvania	routes are given one letter designations, but Adventure Cycling routes are named
Rhode Island	no designation system, some named trails
South Carolina	no designation system, routes are named
South Dakota	no cross-state routes, no designation system
Tennessee	no designation system, routes are named
Texas	no cross-state routes, no designation system
Utah	no cross-state routes, no designation system
Vermont	no designation system
Virginia	no designation system, routes are named, USBR 1 and USBR 76 are designated
Washington	no designation system
West Virginia	no cross-state routes, no designation system
Wisconsin	no cross-state routes, no designation system
Wyoming	no cross-state routes, no designation system

National Routes

Major cross country routes are signed in some states. At times, these National Routes run along other named or numbered routes. When this occurs, route coordinators have placed their signs below or alongside the marker naming the trail by the local agency. None of these systems are state designated in their entirety.

MRT or Mississippi River Trail

ECG or East Coast Greenway

ADT or American Discovery Trail

Adventure Cycling Routes are all named, for example, TransAmerica Trail, also known as the TransAm

Rationale

Previously, ACA sent the Task Force four draft designation maps to promote discussion on designating corridors once the Draft Corridor Plan is finalized. Based upon these maps and additional feedback received from a state Bicycle and Pedestrian Coordinator, the following rationale lists assumptions related to choosing a designation system.

Separate draft maps show the east-west and north-south corridors in order to be able to clearly see the corridors. A combined map for each system shows all the corridor designations. The maps reveal how corridors run continuously or connect to other corridors.

Two Digit Numeric System: Draft Map Version 1

Map 1 illustrates east-west corridors which are even numbers ranging from 10 – 90, all routes are two digit number designations.

Map 2 illustrates north-south corridors which are odd numbers ranging from 1 – 95, all routes except USBRS 1 are two digit number designations.

Map 3 illustrates all draft corridors

One and Two digit Numeric System: Draft Map Version 2

Map 1 illustrates east-west corridors which are even numbers ranging from 2 – 90, with main routes primarily single digit number designations with intermediate routes having two digit number designations.

Map 2 illustrates north-south corridors which are odd numbers ranging from 1 – 91, with main routes primarily single digit number designations with intermediate routes having two digit number designations.

Map 3 illustrates all draft corridors

Rationale: There are currently two US numbered routes: USBR 76 and USBR 1. USBR 76 runs east-west from Yorktown, VA to Illinois, and could be extended to Oregon following the Adventure Cycling Association TransAmerica Trail. USBR 1 roughly follows the corridor of US 1 from Washington DC through North Carolina, and could be extended to Maine and Florida following the Adventure Cycling Association Atlantic Coast route. Both these routes are shown on version 1 and version 2 of the Draft Designation Maps.

With these in place, a rationale for route numbering exists: follow the pattern of the US Highway system using the USBR designation with odd numbered routes running north-south, even numbered routes running east-west, and route numbers increasing east to west and north to south.

For **Version 1**, the following assumptions exist:

- US Bicycle north-south routes have odd numbers, with numbers increasing from east to west, opposite to the Interstate Highway numbering order.
- US Bicycle east-west routes have even numbers, with numbers increasing from north to south, opposite to the Interstate Highway numbering order.
- US Bicycle Routes have two- digit numbers.

Version 1 - Possible expansion of the System could include:

- Lower case alphabetical designations such as 76c to show spurs, bypasses or expansion routes. Designations like 76A would need to be reserved for alternate (parallel) that routes may exist.
- OR Three digit US Bicycle Route numbers for spurs into cities, bypasses around cities or expansion into existing urban systems.
- The three-digit US Bicycle Route numbers would end with the two-digit number of the main US Bicycle Route it with which it is associated. Example: USBR 210 would be a bypass of USBR 10 and USBR 195 would be a spur off of USBR 95.
- Three-digit route numbers beginning with an even number would be bypasses that go around a city/destination. Example: USBR 210 would be a spur/bypass around a city.
- Three-digit route numbers beginning with an odd number would be spurs off the main US Bicycle Route. Example: USBR 195 would be a spur from the main corridor, potentially linking an existing state bicycle route or connecting two corridors within the USBRS system.

Advantages:

- Follows existing US Highway designation system.
- Allows for orderly growth between corridors. Example: between corridors 10 -20 you could expand to 12, 14, 16, and 18.
- Three digit expansions could help incorporate growing urban bike route systems.

Disadvantages:

- May be confusing for motorists/cyclists as they are similar to the US Highway system.
- Allows for growth but in dense areas with large bike route systems, might run out of numbers between main corridors.

For **Version 2**, the following assumptions exist:

- US Bicycle north-south routes have odd numbers, with numbers increasing from east to west, opposite to the Interstate Highway numbering order.
- US Bicycle east-west routes have even numbers, with numbers increasing from east to west, opposite to the Interstate Highway numbering order.
- US Bicycle Routes have one- or two- digit numbers.

Version 2 - Possible expansion of the System could include:

- Lower case alphabetical designations such as 76c to show spurs, bypasses or expansion routes. Designations like 76A would need to be reserved for alternate (parallel) that routes may exist.
- OR Three digit US Bicycle Routes numbers for spurs into cities, bypasses around cities, or expansion into existing urban systems.
- The US Bicycle Route begins with the one or two-digit number of the main US Bicycle Route it loops off from. Example: 115 would be a spur off USBR 1 and 764 would be a bypass off of USBR 76.
- Three-digit route numbers beginning with an even number are bypasses that go around a city/destination.
- Three-digit route numbers beginning with an odd number are spurs off the main US Bicycle Route. Example 501 is a spur of USBR 1
- Three-digit route numbers beginning with an even number are bypasses of the main US Bicycle Route. Example 276 is a bypass around a city on USBR 76
- Three-digit route numbers contain the one or two digits of their parent routes.

Advantages:

- Follows existing US Highway designation system.
- Allows for even more growth between corridors therefore less likely to run out of numbers between main corridors since we go from one digit to two digit numbers.
- Three digit expansions could help incorporate growing urban bike route systems.
- Using the corridor number as part of the three digit spur or bypass make the main corridor easily recognizable; using the corridor number to end the spur or bypass makes it less cumbersome for signage.

Disadvantages:

- May be confusing for motorists/cyclists as they are similar to the US Highway system.
- System as appears on Draft Version 2 Designation Map doesn't expand in an orderly fashion; Example: system goes from 2 to 22 to 4 and then to 42. If corridor numbers grew from north to south and east to west, corridors would appear more orderly and future growth could be incorporated in an equally orderly fashion.

Alphabetical System: Draft Version 3

Map 1 illustrates east-west corridors which are alphabetical ranging from A-N.

Map 2 illustrates north-south corridors which are alphabetical ranging from O-Z.

Map 3 illustrates all draft corridors

For Version 3, the follow assumptions exist:

- US Bicycle north-south routes grow with alphabet increasing from north to south and west to east.
- US Bicycle routes will expand where gaps exist in the Draft Corridor Plan; Example: letters F, H, I, J, K, L, O & W aren't assigned although ACA's TransAm route is not incorporated into the Alphabetical system in this map version (TA)

Version 3 - Possible expansion of the System could include adding numbers:

- Combination of Alphabetical and Numeric System for spurs into cities, bypasses around cities, or expansion into existing urban systems.
- The US Bicycle Route begins with the alphabetical designation of the main US Bicycle Route with which it is connected. Example: Z15 would be a spur of USBR A and G64 would be a bypass of USBR G.
- Three-digit route designations ending with an even number are bypasses that go around a city/destination and route designations ending with an odd number are spurs that go through/into a city/destination.
- Three-digit route numbers contain the alphabetical designation of their parent routes.

Advantages

- Wouldn't be confused with the US Highway designation system
- Adding numbers, one, two or three digit, allows for all kinds of potential growth

Disadvantages

- Alphabetical alone limits growth in the system
- Alphabetical alignment between north/south and east/west seems random

ALTERNATIVE DESIGNATION suggested from MD Bike/Ped Coordinator, Michael Jackson:

- Alphanumeric identification system: A1 thru Z99. Perhaps odd lettered alphanumeric routes could be assigned to predominately north-south routes and even lettered ones be assigned to east-west routes. Two digit routes A1 through Z9 could be trunk routes.

If necessary four digit alphanumeric routes could be assigned as variations of two and three digit alphanumeric routes (e.g. F177 could be attached to the F17 route).

Alpha designations could identify regions of the country. Say "A" designations could be reserved for Alaska, Hawaii, California, Oregon and Washington for north south routes, "B" designations for southern most east west routes (e.g. Hawaii, California, Arizona, on east to Florida and Puerto Rico). This would be somewhat consistent with the Interstate highway numbering system.

This should provide sufficient choices for growth.

Named System: Draft Version 4

The Version 4 map illustrates all draft corridors but not all have been named; local knowledge would be required to name all the corridors/routes.

For Version 4, the following assumptions exist:

- The names are obvious to the route; Example East Coast Greenway
- Names can be abbreviated for signage: Example MRT (Mississippi River Trail) and TA (TransAm)
- Adjoining states would be agreeable to the names
- Names connect the routes to the landscape or some other defining feature

Version 4 - Possible expansion of the System could include adding numbers:

- Combination of Name and Number System for spurs into cities, bypasses around cities, or expansion into existing urban systems.
- The US Bicycle Route begins with the name designation of the main US Bicycle Route it loops off from; Example: TA5 would be a spur of TransAm and MRT26 would be a bypass of Mississippi River Trail.
- Name/number route designations having an even number are bypasses that go around a city/destination.
- Name/number route designations having an odd number are spurs of the main US Bicycle Route that go through/into a city/destination.
- Name/number route designations contain the name designation of their parent routes.
- The first digit of the spurs and bypasses increase from north to south and east to west along the parent.

Advantages:

- Follows the US Highway system and US Interstate Highway System as they also allow naming of sections of highway. Example: TransAmerica Trail is also USBR 76, and so on.
- Connects the route to a geographic or landscape feature associated with the corridor/route.
- Some names already exist
- Descriptive in nature.
- Naming system could be combined with other systems such as Numeric, alphanumeric or alphabetical which also allows for future growth.

Disadvantages:

- Naming corridors could elicit territorial issues between states.
- Isn't transparent in terms of growth and expansion

- Issues arise for abbreviating names; Example Natchez Trace vs. ACA's Northern Tier Route – both abbreviate to NT.
- Would need a large key on the National Map

Alphanumeric System: Draft Version 5 (submitted Feb 1, 2008)

After attempting to map a system as described above (ALTERNATIVE DESIGNATION by Michael Jackson from MD), it became apparent that dividing the continental US into alphabetical regions and then create trunk routes that would appear obvious, while simple in concept, was difficult to design. Research revealed an alphanumeric highway system existing in Australia. This system designates "M" routes as primary highways. "A" routes are double lane highways or interregional highways that don't carry as much traffic as "M" routes. "B" routes are secondary highways linking together major towns. "C" roads link smaller settlements and "D" are gravel roads. Using this model, ACA developed the attached map, version 5.

For Version 5, the follow assumptions exist:

- US Bicycle routes running north-south and east-west that go border to border without too much alteration in direction are "M" routes. (M = main)
- US Bicycle routes are long and relatively straight in direction, are "A" routes. Sometimes these routes connect to "M" routes, but not always.
- "B" routes are intermediate routes, shorter than "A" routes and don't link longer routes.
- "C" routes are shorter connector routes.
- "D" routes are spurs into the metro areas.
- Numbers are based upon the existing USBR 1 and USBR 76 system: odd numbers run north-south and even run east-west.
- Numbers grow from east (M1) to west (M9) and from north (M2) to south (M8).
- This System could also include naming the routes, ie. M76 is also called TransAm; M1 is also called East Coast Greenway

Version 5 - Possible expansion of the System could include:

- Urban networks could be letter designations "F" shared roadways, "G" bike/ped paths, "H" bike lanes, etc.
- Urban networks number designations can follow the same east-west (even numbers), north-south (odd numbers) layout as the longer routes.

Advantages

- Wouldn't be confused with the US Highway designation system
- Adding a letter that is easy to interpret (M=main) lessens confusion and tells something about the route.
- Alphabetical combination with numbers allows for all kinds of potential growth
- Integrates both rural and urban networks into a system
- Numbers can expand to double and triple digit designations for accommodating bypasses and other route considerations.

Disadvantages

- System may be confusing to assign as route networks grow.
- Letters and numbers do not convey the route itself – landscape, culture, etc unlike a named system.

- Defining the letter routes other than “M” may be difficult to determine and may change over time as routes expand.

Rationale Summary:

While there are any number of possible ways of designating bike routes, there is no clear reason to choose one over the other except the two existing USBR designations which are USBR 1 and USBR 76. In this first review of potential designations, the maps created were to promote discussion only, not to promote one system over another. In addition, assumptions made in this document are in no way complete. These too, are a starting point for creating the rationale for the designation system that is finally chosen. It will go a long way in helping move the project along if Task Force members would document additional assumptions and rationale that may not be included in this document.

Summary Task Force Ranking (added 3-14-08)

In order to rule out proposed systems and begin to refine a designation system the task force can recommend to AASHTO committees, the proposed designation systems were ranked in order of favorability and functionality. Comments were recorded in order to document positions and potential issues. Here are the results of the ranking by task force members (2 members did not rank).

- 1) Numeric (primarily) 2 Digit System as viewed on Map version 1
- 2) Named only; Map version 4
- 3) Numeric 1 Digit; Map version 2
- 4) Alphabetical; Map version 3
- 5) Alphanumeric; Map version 5

Note: When votes were tallied from interested individuals who have been involved with the project, (attend meetings, providing valuable feedback) but aren't official members of the task force, the results were reversed for Alphabetical (ranking 5) and Alphanumeric (ranking 4). However, what is significant in the ranking was the strong support across all members and non-members for the Numeric system as seen in Map version 1.

Current AASHTO Policy

Purpose and Policy: U.S. Numbered Bicycle Routes Adopted October 14, 1979, Revised June 30, 1982

Purpose: The purpose of the U.S. bicycle route numbering and marking system is to facilitate travel between the states over routes which have been identified as being more suitable than others for cycling.

Definition: A bicycle route is any road, street, path or way which in some manner is specifically designated as being open to bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.

Policies

1. The Executive Committee of the American Association of State Highway and Transportation Officials shall have full authority to review the U.S. numbered bicycle route system and the numbering and marking thereof, to make additions, changes, extensions, revisions or reductions in said route system and to revise the numbering or marking thereof.
2. Before approving any addition, change, extension, revision or reduction in the U.S. numbered bicycle route system, or the numbering or marking of any U.S. numbered bicycle route, the Executive Committee shall consult the State Highway or Transportation Department of the State or States through or within which such addition, change, extension, revision or reduction is located.
3. The State Highway or Transportation Department, by a favorable vote on the adoption of this purpose and policy, agrees and pledges its good faith that it will not erect U.S. markers on any route without the authorization, consent or approval of the Executive Committee of the American Association of State Highway and Transportation Officials, notwithstanding the fact that the changes proposed are entirely within that State.
4. No U.S. numbered bicycle route shall be designated that does not extend between two or more States and is mapped and/or appropriately marked along its length.
5. The bicycle route marker included in the Manual on Uniform Traffic Control Devices is recommended for use to all travel map makers, also for use by the State Highway and Transportation Departments.
6. Any proposal that would exploit the prestige of the U.S. numbered bicycle route system, especially when it appears to be for the purpose of benefiting businesses located along such a proposed route, shall constitute reason for denying any application to make such an addition to the system.
7. Since the U.S. numbered system was established by joint action of the State Highway or Transportation Departments, only those applications for change in or addition to the U.S. numbered system from the Member State Highway or Transportation Department involved shall be considered by the Executive Committee. Those local officials, organizations, groups, or individuals interested in a change or in an addition to the system should contact their State Highway or Transportation Department and not the Executive Committee. The Executive Committee shall consider only those applications from State Highway or Transportation Departments that are filed on the official form and are complete in all detail to the degree that the Executive Committee can evaluate the need for an adequacy of the proposed route from the application form submitted and without a representative of the State Highway or Transportation Department appearing before the Committee to supply additional information.
8. No person or group of persons shall be allowed to appear either before the Executive Committee or its Route Numbering Subcommittee except in the case of a State Highway or Transportation Department requesting reconsideration of an action by the Executive Committee in regard to an application filed by that Department.
9. In case a proposed change or addition to the U.S. numbered bicycle route system involves two or more States, the proposal shall be given official consideration only when all affected State Highway or Transportation Departments have filed applications to cover the complete proposal.

10. No route should be considered for inclusion in the U.S. numbered system that does not substantially meet the current AASHTO design standards contained in the AASHTO Guide for Development of New Bicycle Facilities.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS

STANDING COMMITTEE ON HIGHWAYS RESOLUTION TE-03-06

ESTABLISHING AND EXTENDING US BICYCLE ROUTES

WHEREAS, Thousands of bicyclists every year engage in multi-state and long-distance bicycle travel; and

WHEREAS, AASHTO has an established policy on the designation of US Bicycle Routes; and

WHEREAS, A number of US Bicycle Routes have been established by several States in accordance with this policy; and

WHEREAS, The establishment and signing of US Bicycle Routes provides important route guidance for bicycle travel; and

WHEREAS, US Bicycle Routes can provide tourism and economic development opportunities for States and local jurisdictions; and

WHEREAS, National and regional bicycle route organizations for over two decades have spent considerable effort in researching, mapping, and developing networks of continuous national routes for bicycle travel for over two decades; now therefore be it

RESOLVED, That the AASHTO Subcommittee on Traffic Engineering will work in partnership with the AASHTO Task Force on Nonmotorized Transportation and national and regional bicycle route organizations to encourage the establishment and extension of US Bicycle Routes; and be it further

RESOLVED, That the AASHTO Subcommittee on Traffic Engineering will work in partnership with the AASHTO Special Committee on Route Numbering in reviewing and recommending updates and changes to AASHTO's policy on US Bicycle Routes; and finally be it

RESOLVED, That the AASHTO Subcommittee on Traffic Engineering recommends adoption of this Resolution by the AASHTO Standing Committee on Highways (SCOH).

Approved by the AASHTO Standing Committee on Highways (SCOH) on September 6, 2003.