Public Review Comments and Responses for the
Minnesota Geospatial Advisory Council
Bikeways Data Standard V0.6

The Standards Committee of the Minnesota Geospatial Advisory Council (GAC) held a public review period for proposed version 0.6 of the GAC Bikeways Data Standard from March 26, 2021 to May 15, 2021. Below is a table showing the comments received and responses approved by the Standards Committee on June 29, 2021. Responses include changes to the standard and other actions.

#	Comment	Submitter	Standards Committee Response
	Section 1. Identification Elements		
	Section 2. Primary Feature Elements		
1	Coming from a small MPO/Urban area one way for us to fill gaps and make connections is to sign Bike Routes (D11-1 signs). There is an on-road type for most other urban bikeway types except that. The MnDOT Office of Transit and Active Transportation is moving to this standard. When I asked them what type this falls under they said it was unknown because there was no shoulder on the urban road. There needs to be a clarification on where this usage of the signed routes falls into. In general cities have multiple uses for these signs but generally they guide bike riders are shown a connection that has a lower AADT or wayfinding. In an urban environment roads won't necessarily have a shoulder that will make it a bike route.	Teri Kouba, Grand Forks/East Grand Forks MPO	In this instance the facility type value of Other or Unknown may be used. The committee will consider adding additional values to the domain if more such trail types are identified.
2	Section 2, add Bikeway System Shared name field	Luke Van Santen, MnDOT	We currently have “Bikeway Name”, “Bikeway System Name” and “Bikeway Shared Name”. Because we are not aware of instances in which a bikeway system shared name would be used, we will not add this element to the standard at this time.
3	Section 2, add ability to indicate bikeway segment endpoints (terminus, node)	Luke Van Santen, MnDOT	This standard is specifically for line data. Point data are out of scope. However, nodes and vertices are contained within the structures of geospatial line data.

4	Domain "FacilityType" - add value for Singletrack to differentiate between MUT, SUT, and singletrack. Or, is this handled by "GenFacilityType"?	Luke Van Santen, MnDOT	The Standards Committee will consider modifications to the domain list for this in the future. The value "Singletrack" could apply to existing domain values like Off Road Mountain Bike or Off Road Fat-Tire Bike.
5	Section 2, add Segment Length	Luke Van Santen, MnDOT	Segment length is a default data element in geospatial data formats.
6	Section 2, add Segment Max Grade (as a percent)	Luke Van Santen, MnDOT	The Standards Committee will evaluate adding this to a future version of the standard. End users who need this information can create calculated grades using elevation datasets.
	Section 3. Ownership and Administration Elements		
7	Section 3.12, change name to Managing Organization Type	Luke Van Santen, MnDOT	**Action: Change 3.12 to Managing Organization Type**
8	Section 3, add Physical County and Physical City (to allow grouping based on physical location using non-GIS tools)). For instance, SQL query for all Segments in City X knowing that some segments in that City are owned and/or maintained by other parties.	Luke Van Santen, MnDOT	The Standards Committee removed county and city data elements from the standard based on multiple requests in the previous round of public review. Including them would require all segments to be split at city and county boundaries. End users can overlay jurisdictional boundaries on bikeways data to split segments if needed.
	Section 4. Access and Descriptive Elements		
9	I've reviewed the data and it is something we can crosswalk over from our data though there is one concerns – Facility Type could conflict with what season - Off Road Shared-Use Path in the 'Summer Only' and Off Road Fat-Tire Bike in the 'Winter Only' all on the same alignment – the schema doesn't allow for this. We would just script the ETL to the fields requested – Bikeway Direction is something we already have in place and Signage is pretty simple(I by law State Trails need to be signed) and the Seasonality will be the working issue we'll need to figure out – it's on the web but not in our data. Hope this helps	Dave Lonetti, MnIT partnering with DNR	After discussions with the workgroup and the commenter, all have agreed to leave the standard as it is.
10	Section 4.6, add ability to indicate priority of winter clearing. Some trails are cleared in winter but only 3 days after a snow event so trail condition may have degraded significantly.	Luke Van Santen, MnDOT	The Standards Committee will consider this in the future.

11	Section 4, add field providing additional info regarding current trail conditions / status (like how MORC has Twitter & FB accounts, and a centralized app, for the different trails it maintains). This is more fine-grained than Section 4.1, Bikeway Status.	Luke Van Santen, MnDOT	The standard includes 7.1 bikeway URL which can lead to more information about the trail including sources of updated trail conditions.
	Section 5. Bikeway Feature Elements		
12	Section 5, add a Bikeway Feature Element to reflect whether the trail segment has distance markings (aka mileposts). Options would include No, Unknown, or Spacing (mile, quarter mile, 100 meters, etc)	Luke Van Santen, MnDOT	We will consider this in a future version of the standard.
13	Section 5, add ability to track when Pavement Markings (5.1) were placed.	Luke Van Santen, MnDOT	We will consider this in a future version of the standard.
14	Section 5, add ability to track when Lighting (5.2) was added	Luke Van Santen, MnDOT	We will consider this in a future version of the standard.
15	Section 5, add Pavement Markings Type	Luke Van Santen, MnDOT	We will consider this in a future version of the standard.
16	Section 5, add Lighting Type and spacing	Luke Van Santen, MnDOT	We will consider this in a future version of the standard.
17	Section 5.3 Signage Present - change name to Wayfinding Signage Present.	Luke Van Santen, MnDOT	**Action: Change 5.3 to Wayfinding Signage. Change 5.1 to Pavement Markings. (Remove "Present")**
18	Section 5, add ability to track when wayfinding signage was added	Luke Van Santen, MnDOT	We will consider this in a future version of the standard.
	Section 6. Safety Elements		

19	Thank you for adding detail on the type of bikeway protection. I think "Painted Shoulder" or "Shoulder" should be added as a value to differentiate between a single painted stripe and a larger double striped or shoulder area separating the bike lane from traffic. I also think "Physical Barrier" could be broken down to show the materials involved. Bollards are more of a "Temporary Barrier" because they need to be replaced frequently and offer negligible actual protection while concrete curbs/metal railings/parked cars should be classified as a "Permanent Barrier" because they require little upkeep and offer better protection to bicyclists.	Grant Cooper, MnDOT Bridge Office	**Action: Update BikewayProtection domain as shown below and increase field length to 100.** Vertical Element - Flexible Delineator Posts Vertical Element - Channelizing Curb Vertical Element - Rigid Bollards Vertical Element - Concrete Barrier Vertical Element - Raised Median Vertical Element - Parking Stops Vertical Element - Parked Motor Vehicles Vertical Element - Planters Vertical Element - Landscaping Painted Element - Shoulder Painted Element - Buffer Space Multiple None Other Unknown
	Section 7. Data Maintenance Elements		
	General Comments		
20	Regarding my idea on classifying the type of bikeway, there is a concept that is in use called "Bicycle Level of Traffic Stress" or LTS. It is a rating system from 1-4 that classifies how comfortable a roadway feels to a person biking. The system is currently in use in Seattle, Spokane, Boston, and a pilot program is underway in New Hampshire. We don't need to rate the entire state, we just need to add LTS as a field to the Bikeways Standard so that it is there and ready to go for cities and counties that want to add it to their data. Having this type of data available in the future could make it easier for bicyclists to plan routes, especially if they are biking with children, without having to dig into protection system data and trying to determine on their own what they are comfortable biking on. See the links below for how the classification system works. https://www.seattle.gov/transportation/projects-and-programs/safety-first/vision-zero/resources/bicycle-level-of-traffic-stress https://storymaps.arcgis.com/stories/c307b4dd61d64f90bfada67b7aa46bbf https://www.boston.gov/departments/transportation/bicycle-level-traffic-stress-map	Grant Cooper, MnDOT Bridge Office	We will consider this in a future version of the standard.