



Metro Regional Centerlines Collaborative

# Stakeholder Review Report



May 1, 2015

## Metro Regional Centerlines Collaboration Partners:

Anoka County  
Carver County  
Dakota County  
Hennepin County  
Ramsey County  
Scott County  
Washington County  
Metropolitan Emergency Services Board  
Metropolitan Council  
Minnesota Geospatial Information Office  
Minnesota Department of Transportation  
MetroGIS





# Metro Regional Centerlines Collaborative (MRCC) Stakeholder Feedback Report

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Questions or comments about this document may be directed to:

*Geoff Maas, MetroGIS Coordinator  
Metropolitan Council  
390 Robert Street North  
St Paul, MN 55101  
[geoffrey.maas@metc.state.mn.us](mailto:geoffrey.maas@metc.state.mn.us)  
651.602.1638*



# Metro Regional Centerlines Collaborative (MRCC)

## Stakeholder Feedback Report: Overview and Purpose

**Project overview.** *The MRCC is a joint collaborative project involving the technical and managerial GIS staff from the Seven Metropolitan Counties (Anoka, Carver, Dakota, Hennepin, Ramsey, Scott and Washington), the Metropolitan Emergency Services Board and the Metropolitan Council to develop a road centerline data model and dataset that meets core business needs of local governments, emergency services providers and regional interests.*

**Purpose of this document.** *This summary report encapsulates the results of the feedback, comments, suggestions and critique received from the road centerline data consumer community throughout Minnesota from February 27, 2015 through April 5, 2015.*

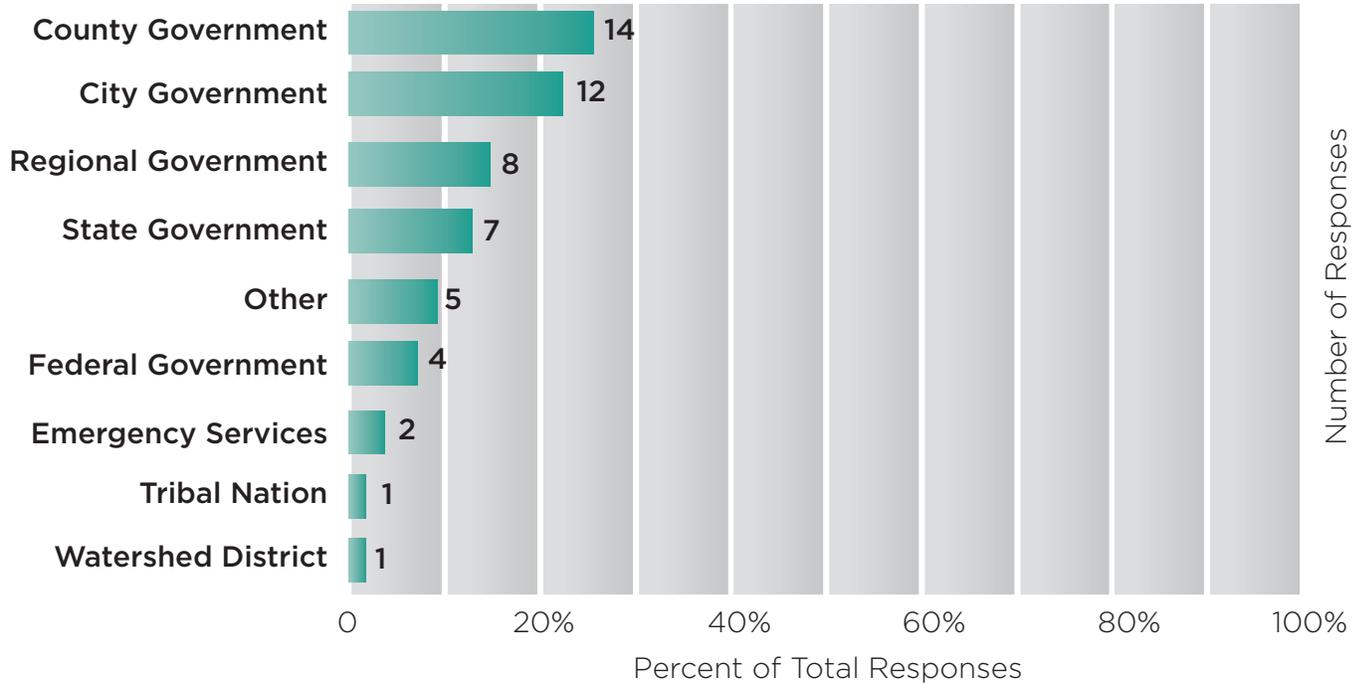
**Stakeholder feedback summary.** *In late February, nearly 450 stakeholder agencies, interests and individuals were contacted (statewide) and afforded the opportunity to comment on the first version the MRCC Data Standard. A sample dataset in the draft standard was prepared and made available to facilitate stakeholder review as well as an on-line survey for respondents to provide input.*

*During the six-week review period, the MRCC received 55 completed surveys and numerous detailed comments submitted via email. This document contains the input and feedback collected.*

### General Timeline of MRCC Activity (May 2014 – May 2015)

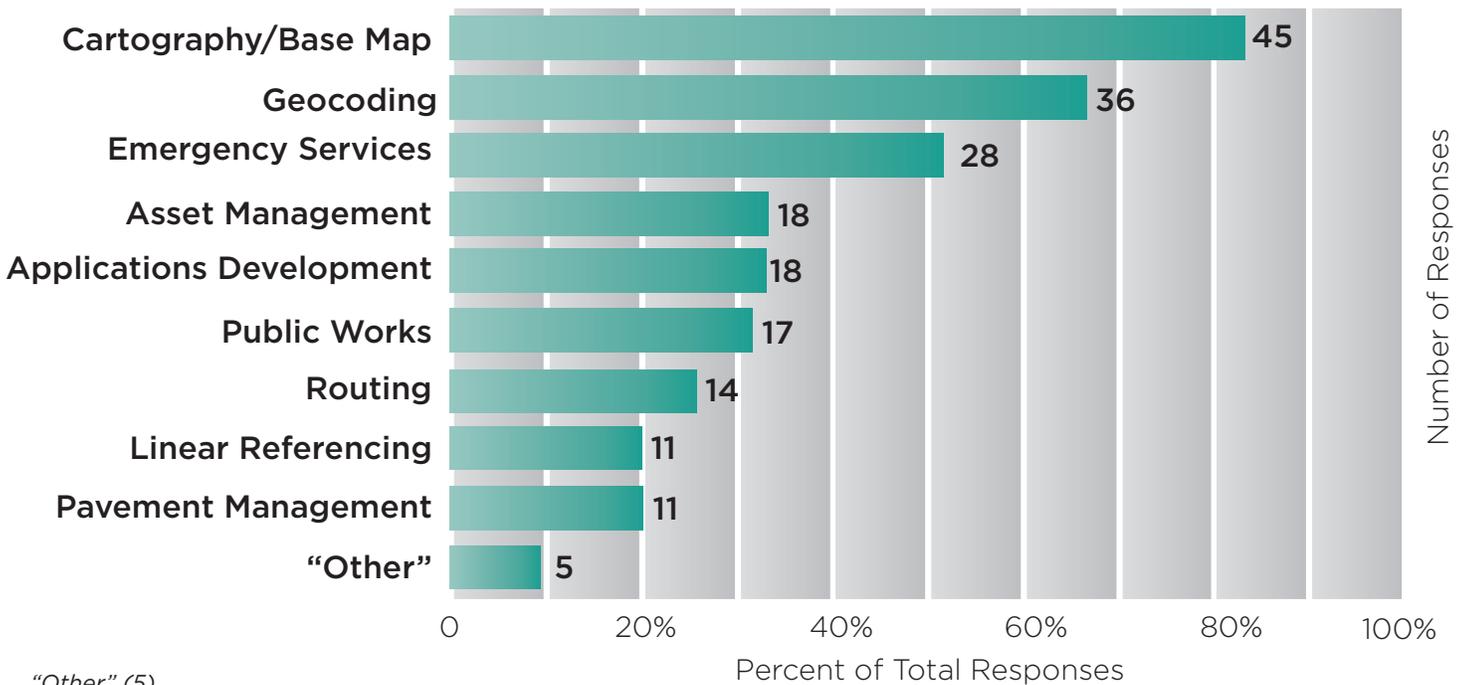
- 05.2014 – 09.2014:** *Documentation of business needs from partners;  
Begin development of Draft Centerline Data Standard;*
- 10.2014 – 02.2015:** *Finalize and MRCC Approval of initial Draft Centerline Data Standard;  
Development of a downloadable sample dataset for stakeholder review;  
Development of stakeholder outreach materials;*
- 02.2015 – 04.2015:** *Publication of Draft Data Standard and sample dataset;  
Review of Draft Data Standard and sample dataset by stakeholder community;*
- 04.2015 – 05.2015:** *Collection of stakeholder input and publication of Stakeholder Feedback Report;  
Review of stakeholder feedback by the MRCC Core Team;  
Modification of Draft Centerline Data Standard by Core Team based on input received from stakeholder review;  
Begin development of first draft of the MRCC Implementation Plan;*

**Question 1: Please indicate which category best describes your organization:**



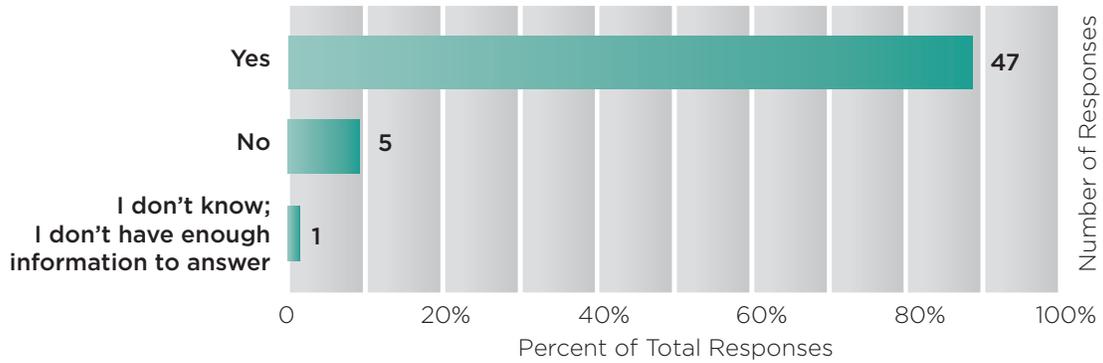
*“Other” (5): Consulting and Design Firm, Private Industry, Private Utility (Xcel Energy)  
Private Sector, (no answer)*

**Question 2: My department/agency uses road centerline data for the following (please check all that apply):**



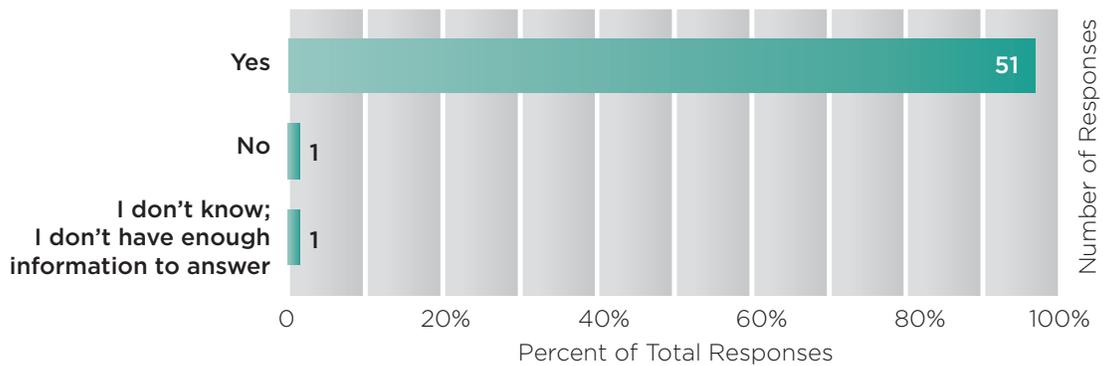
*“Other” (5)  
Reference Data on Acreage Maps to augment the PLSS data we use  
Intersection Point Creation  
Mobile applications  
NG9-1-1 Call routing and location validation  
Imported into transit systems (ATIS and HASTUS)*

### Question 3: My department/agency sometimes needs centerline data beyond our jurisdiction:



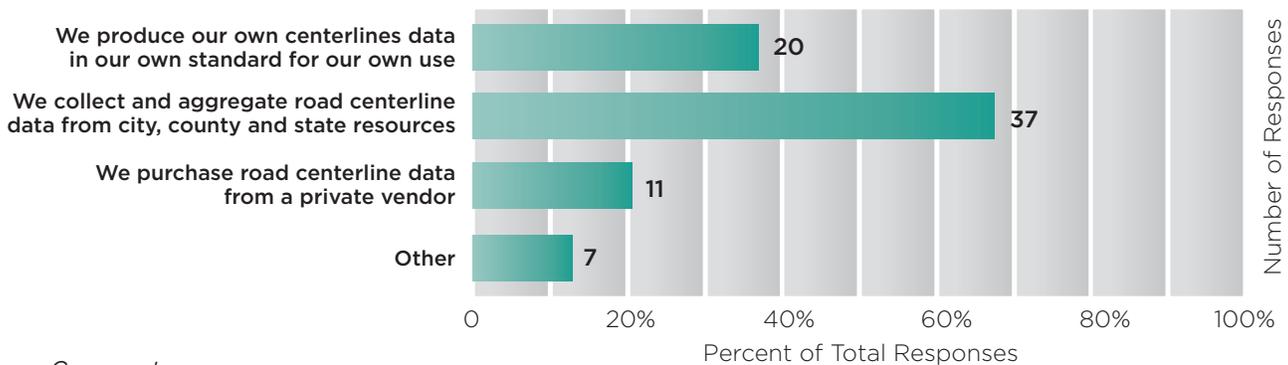
Comments: "[Data is] only utilized by 9-1-1 dispatch and records management"

### Question 4: Having standardized road centerline data within and beyond our jurisdictional boundary would be useful and beneficial for the work we perform:



Comments: Please, this would be ideal; We have addressing information on a buffer area around our county for E9-1-1 applications. We use MNDOT data for cartography;

### Question 5: We currently rely on the following sources for our road centerline data needs:



Comments:

My agency uses County-produced road centerline data, but also centerline data from the other metro counties via MetroGIS

MetroGIS arrangement.; moving to collecting and aggregating center line data from counties

We currently maintain our own centerline due to proprietary application requirements. However, we are considering a process to acquire outside centerline data for future public safety needs. The only data purchased was through NCompass agreement.

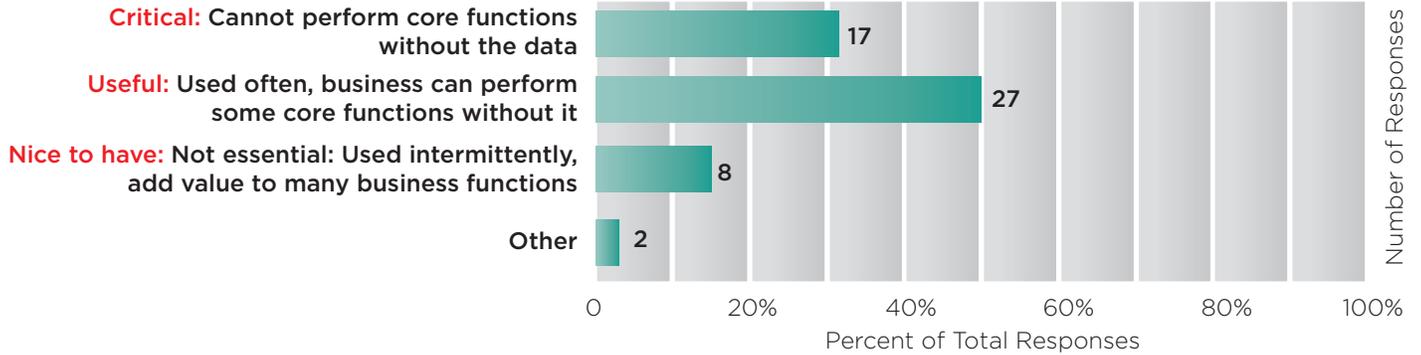
We use MnDOT's current LRS/road files

Our centerline data is determined by the needs of our dispatch mapping software.

GeoComm produces our road centerline data, but we are the ones that provide them with the updates or notify them of any errors that need to be fixed

Another department within the city/county manages it.

## Question 6: How critical is standardized road centerline data to your organization or business?



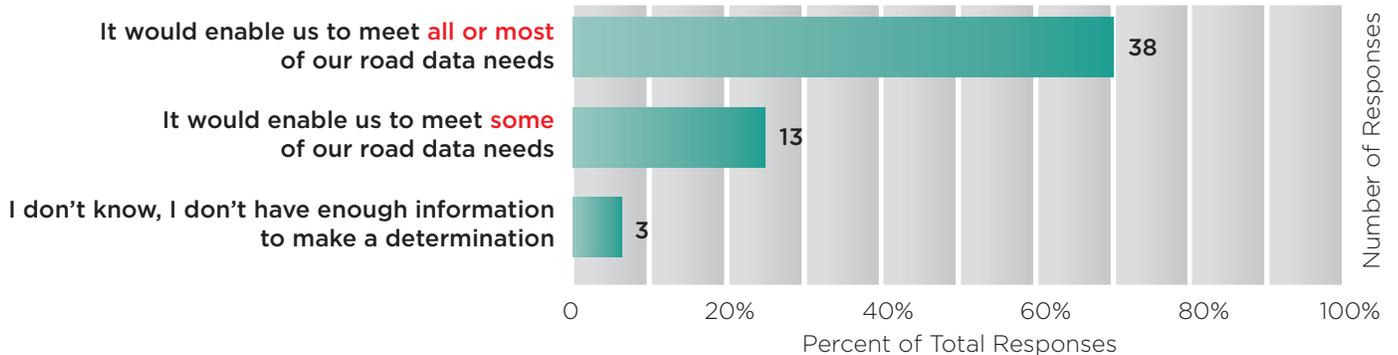
*Comments:* I don't need standardized data, what I need is street centerlines with authoritative geometries, street names, address ranges, county codes, city codes, and zip code as a bonus. So this data set would work for that. I could take this and standardize it to meet my needs;

We need the most up to date road data;

We can function without it being standardized, but we could do a better job with it, in less time;

In the future it will be critical, especially for NG911;

## Question 7: If data for your area, or the surrounding area, was available to you in the proposed data model format, how would it meet your core needs?



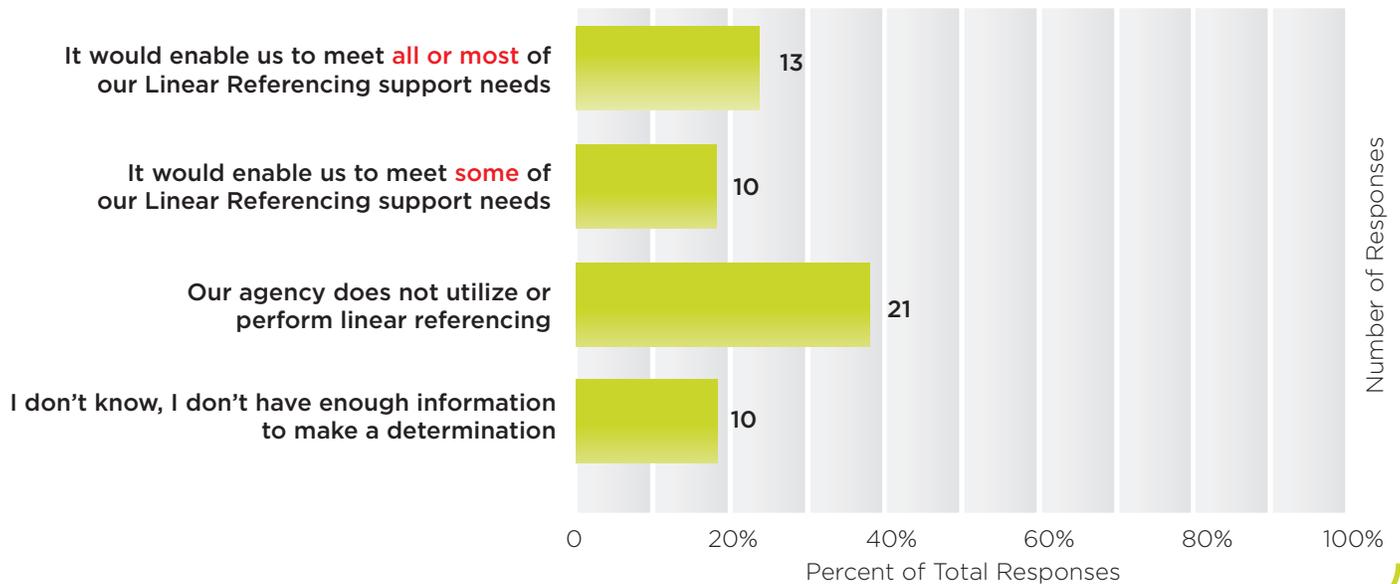
*Comments:* I could take this data set, standardize the street names with mixed case and substitute in USPS street type abbreviations, remove the domains, Keep EMS, FIRE, and Police codes relevant to my agency, and null out the rest. And this would work for me.

Couldn't add functional class or route sys layer because differing GIS versions. Sample data uses soon to be retired TIS code. MnDOT is migrating to a new Route ID standard. Not sure how the proposed data model will perform with MnDOT's new LRS.

I would have to deal with several issues. 1) the data is not formatted well as this file has a mixture of formats between proper case and ALL CAPS. 2) We use a different format to represent road prefix and postfixes. For example we use "CO RD 10" and "4TH ST" vs "County Road 10" and "4th Street." 3) The data in ST\_NAME\_A1 vs ST\_NAME\_A2 needs to be cleaned up. These differences are not anything that cannot be overcome, but it would discourage us from quickly adopting this format.

# LINEAR REFERENCING

## Question 8: Linear Referencing: How well would the proposed data standard be able to support your needs for linear referencing?



## Question 9: Linear Referencing: Please let us know what changes or additions would be required to meet your Linear Referencing needs:

*Comments:*

*Would have been ideal to be able to test some of the more rural areas for our uses*

*Better QA/QC. See St Anthony Parkway & Arthur St NE intersection.*

*Right now we don't use linear referencing but I think if we got a standardized road centerline that had MNDOT's linear referencing then we would be more likely to start using linear referencing.*

*An NG9-1-1 event layer*

*I would be curious to know how you intend to perform linear referencing on township roads (if that is your intention).*

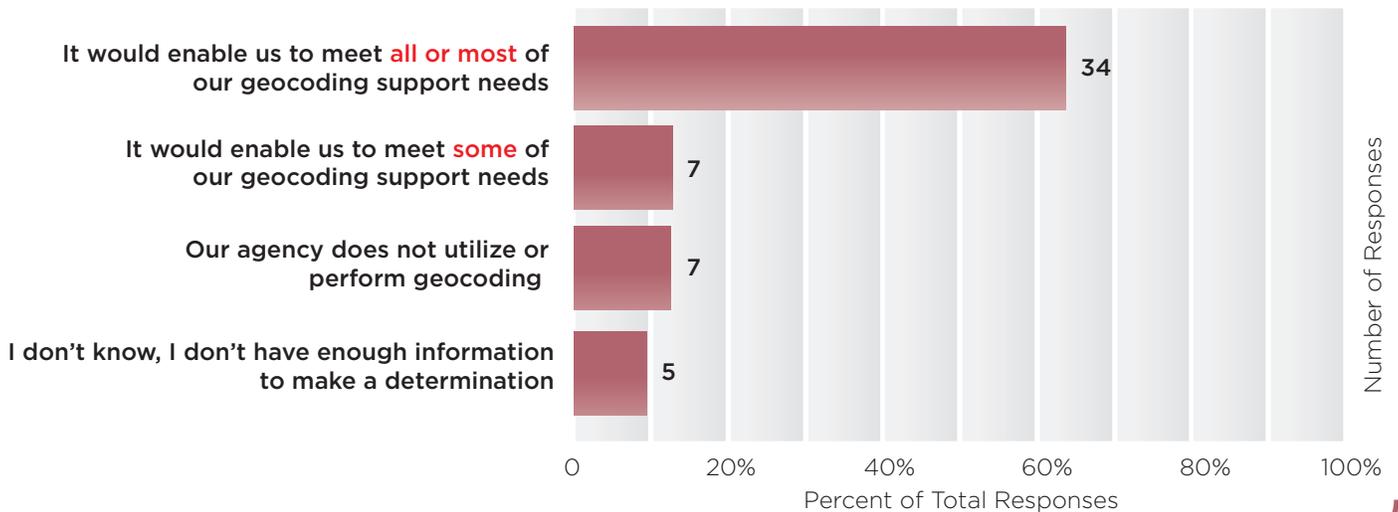
*For a start, change TIS Code to Route ID.*

*Better unique ID formatting than using the built-in GlobalID settings.*

*For example, route number - segment number*

# GEOCODING

## Question 10: Geocoding: How well would the proposed data standard be able to support your needs for geocoding?



## Question 11: Geocoding: Please let us know what changes or additions would be required to meet your geocoding needs:

*There are attributes that need to be converted from code to text.*

*We currently do not use a geocode service, however we would like to in the future, and it looks like this dataset would be able to assist us. We don't geocode by centerline AT THIS TIME. This is something we would look into with the new dataset*

*It would meet my geocoding needs. Meaning I could build an address locator with this data set as it is. However before creating a locator package for use in applications I would probably standardize the case of the street names and sub in USPS street post type and post directional abbreviations. This is easily done for the parsed out street name but would be a pain to do in the unparsed Alternative names. That being said I would not complicate things by parsing alternative street name. Probably the optimal thing would be to specify Alternative names already be in standard USPS format.*

*[We] would like the codes removed and text values entered and you will need to create an abbreviation for street suffixes. The abbreviation should match USPS pub 28 standards. The suffix that do not match the standard should have regional/local abbreviation that MRCC decided upon*

*I would have some concerns that by providing multiple attributes for actual and theoretical address ranges it could lead to difficulty in using/configuring locators due to the fact that in a regional dataset the providers may provide one set of ranges or the other, but not both and there could be holes created in a locator if not configured correctly.*

*Many jurisdictions use a combination of actual and theoretical ranges. I would suggest a primary set of range attributes that get fully populated.*

*Not everyone uses esri for geocoding tools and has composite locator capabilities.*

*Geocoding based off actual, legal addressness is much more beneficial then geocoding based off of street ranges like google/bing maps currently are. Sometimes addresses are geocoded erratically if based off of street ranges rather then existing addresses. Most of the geocoding would be for surrounding cities as we have our local geocoder available for addresses within our city.*

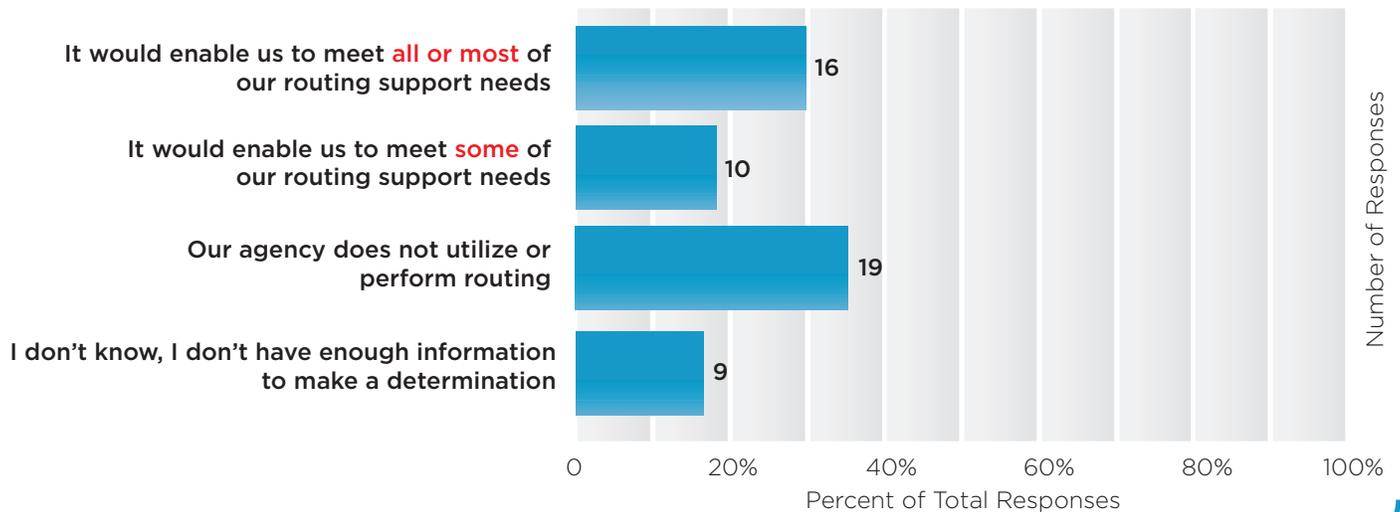
*We'd need to fully assess the addressing standard to make sure it meets all of our needs for aliases (e.g. N suffix vs. no suffix, street abbreviations)*

*It looks like some of the fields need to be cleaned up e.g. ADR\_TO\_R and T\_ADR\_TO\_R seem redundant*

*We need statewide data, but we recognize this is an important first step. Having both actual and theoretical ranges is a good idea.*

# ROUTING

## Question 12: Routing: How well would the proposed data standard be able to support your needs for routing?



## Question 13: Routing: Please let us know what changes or additions would be required to meet your routing needs:

*Future uses of Routing are also a possibility; routing is not currently utilized, however routing functionality will be available as part of our next Public Safety functionality (CAD)*

*There attribute formats that need to be resolved before it can be fed into the call routing location validation elements in NG9-1-1. Who will perform the post processing? Makes sense to have the model reflect the mandatory standards for NG9-1-1 call routing/location validation that each of you will need to provide to the Master GIS that will provision the GIS data to the ECRF where call routing is done and the LVF where location validation is done. Standardization is a must.*

*We route using way-points; not sure how the standard will perform that.  
We would have to test. I think it would be best to ask the E911 software vendors what there opinion is on this subject.*

*We can envision some problems joining from different sources if we're going to do routing.*

*Looking at it, if the geometry is good, we could probably make it work by adding in our local information too.*

*I'm not sure what the exact requirements of our 9-1-1 software would be for routing. Some changes might be required based on that.*

*The key that makes any data set useable for my needs are having planarized lines with T & F elevations, increasing addresses in the direction of the digitized arc and a one way code relative to this; adding a field with time cost in minutes would also help (but not necessary) for loading into Network Analyst.*

*This may not be a metro concern, but I did not see an option for Paved or Unpaved, which would be useful for us, since a good percentage of our county has unpaved roads and I would really like to have that.*

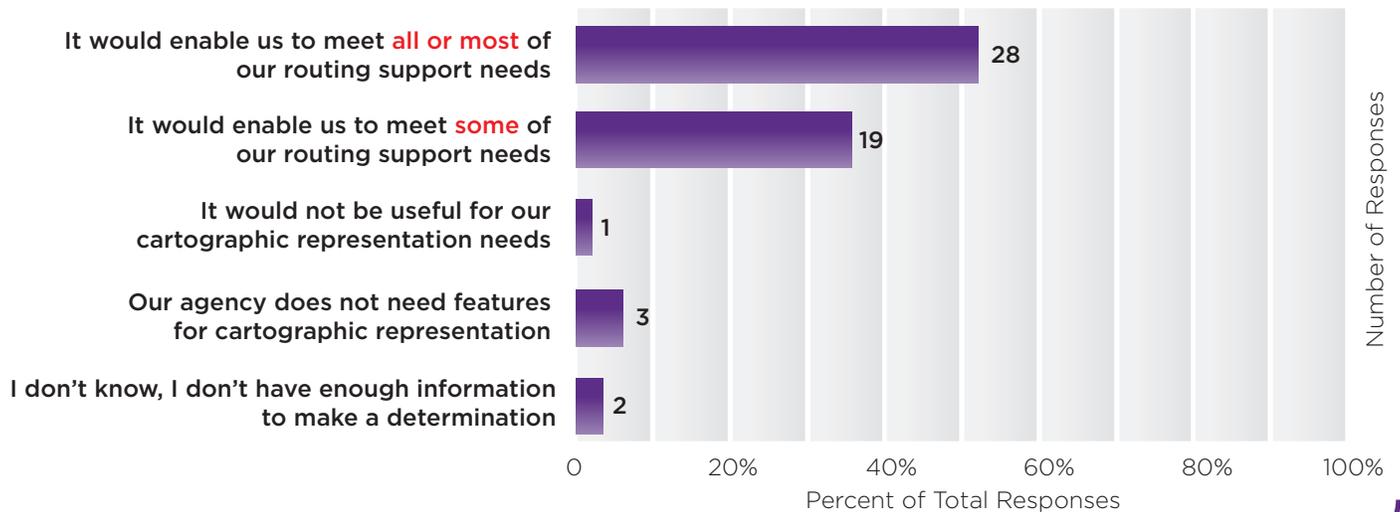
*We need to be able to control speeds and variables such as curves in roads, controlled intersections and traffic patterns that may affect drive time.*

*We would expect code values for ONEWAY; sample data contains literal values; are the street names/alt names, and other attributes in the table going to be all upper case or lowercase? This would be helpful for labeling if all the values were a consistent case.*

*Surface Type, such as bituminous or gravel/crushed rock would be a helpful field, as responders prefer to avoid unpaved roads, which are common in Wabasha County.*

# CARTOGRAPHIC REPRESENTATION

## Question 14: Cartographic Representation: How well would the proposed data standard be able to support your needs for cartographic representation?



## Question 15: Please let us know what changes or additions to the standard would be required to meet your cartographic representation needs

*Would need to incorporate this further into our mapping applications. Ideally we like to have the symbology with the highway shields display for rural areas*

*Currently, we do not utilize this. However, in the new CAD system a new use may be identified for cartographic representation for highways and streets; we would definitely like to see the "Street Name Full" field be uniform throughout the dataset. Right now there's a mixing of Upper-case and Lower Case as well as differences in "Street Post Type" and "Street Post Directional".*

*Having a "dumbed down" cartographic representation for major roads - that just has one centerline for highways, for example, would be good for large-area maps. But that seems out of scope for this. Having consistent, mixed-case street names would be good for labeling.*

*Street Name Full for labels is good. Needs to be consistent not some UPPER CASE and others mixed. Ideally Mixed Case with abbreviations for street type and suffix/prefix directions. ie. 39th Ave NE not 39th Avenue Northeast.*

*As far as cartographic representation, there are way too many categories, again I could process the data myself to get meaningful categories, which for me would be: Interstate, US Hwy, State Hwy, Ramp, County Road, City Street, Walkway, and Private or Service Road.*

*More detailed feature classification scheme such as is being used in the current regional centerline data. Specification/design techniques used in creating centerlines for cartographic representation should be defined.*

*Would like to denote paved or unpaved roads; I think it would be helpful to have "surface type" (ie blacktop, gravel, etc) on the centerline geometry.*

*We have a field that indicates the surface of the road (paved or gravel) because we often display the roads by their surface type.*

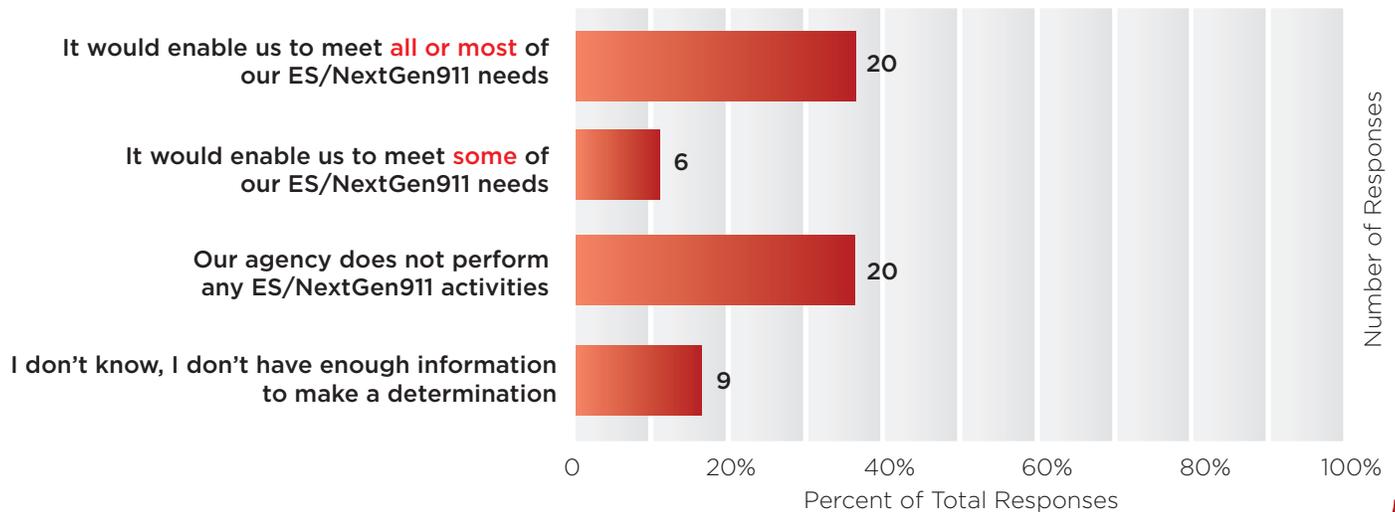
*We mostly use street types to determine symbol and label settings, but we sometimes need stable unique IDs other than the GlobalID to make a specific symbology or label for a street segment.*

*I don't like the stacked road lines. It gets confusing and somewhat messy cartographically. I'd prefer one centerline per roadway.*

*We currently have a "Road Label" field, which sometimes differs from the other road fields. Also, a "Shield Type" field would be helpful to indicate which type of cartographic shield is to be used, e.g., Interstate, US Highway, State Highway, etc.*

# EMERGENCY SERVICES/NEXTGEN911

## Question 16: Cartographic Representation: How well would the proposed data standard be able to support your needs for cartographic representation?



## Question 17: Please let us know what changes or additions to the standard would be required to meet your cartographic representation needs

*GeoComm recommends MRCC conduct a comprehensive review of the MRCC's GIS data model and the GIS data from each individual county's GIS data to identify inconsistencies. The analyses should provide an overview of issues related to the accuracy and synchronization of the county's GIS map data, MSAG, and ALI database. Following the analyses, the MRCC would be able to develop a plan for how to overcome inconsistencies and move towards NENA-compliant NG9-1-1 readiness on county-by-county and regional platforms. In addition, the following sections would benefit from further clarification or examples would be useful in the absence of specific domains (1.3) It would be beneficial to input a more specific definition of UNIQUE\_ID to explain if each source entity uses a similar numeric scheme for unique IDs, it could cause duplication in a regional or statewide coalesced dataset. The numeric portion would need to be combined with a text domain or other identifier for the source entity to make it truly unique in a coalesced dataset. This is to provide guidelines assuming this is the centerline which would be provisioned into the State ESInet. 8.6 also could use some clarification – is the source intended to follow any particular naming conventions or codes?*

*As our Public Safety product is supported by LOGIS and its configuration is based on the overall needs of the consortium we would look to their understanding of any additional needs.*

*I think it would meet all of our needs but changes might be needed based on the 9-1-1 software.*

*Street Names should be the same from County to County. In the sample dataset they are different.*

*All I need for NG911 is address range and City name left and right, which would meet all NENA standards for NG911 for use by a PSAP.*

*the addition of road suffix abbreviations for the transition to fully NG90-1-1 compliant, Field widths need to be inside the NENA field width requirements to be compliant. Use of an Alternate road name table, Addition of Country L & R, County L&R spelled out, St name pre dir (abbreviated) Street Name post type abbreviated, St Name post type (abbreviated) St NAME post directional (abbreviated), Postal community spelled out. Parity values should be O,E,B,Z to match NENA standard*

*Would like paved/unpaved option*

*Accurate routing based on speeds, construction, intersection, traffic and other variables.*

*We have fields for left and right cross roads that was added for E911. Are they no longer needed in NG911?*

*Small reporting area districts or reporting area neighborhoods, left and right, as additional attributes would be a useful layer of information in the 911 incident workflow.*

*Surrounding areas would be highly beneficial as more and more jurisdictions come closer together and are helping each other out more and more. Also for times in emergency, disasters, etc.*

*I'm not too involved with this but I have provided road network data for emergency services on the reservation.*

## Question 18: Please provide the name of your agency (optional)

Allina EMS  
Benton County  
Burnsville Fire Department  
Carver County Sheriff's Office Communications  
Chisago County  
City of Brooklyn Park  
City of Eden Prairie  
City of Lino Lakes  
City of Richfield  
City of Shoreview  
Department of Public Safety  
GeoComm, Inc.  
Hennepin County Human Services & Public Health  
Hennepin County Sheriff's Office Dispatch  
Isanti County Sheriff's Office  
LOGIS (Local Government Information Systems Association)  
Lyon County  
Metropolitan Emergency Services Board  
Metro Transit (Metropolitan Council)  
Minnesota Department of Transportation  
Minnesota Department of Health  
Mississippi River Watershed Management Organization  
Ramsey County CC  
Rice County  
Shakopee Mdewakanton Sioux Community  
St. Croix County, Wisconsin  
State of Minnesota  
US Army Corps of Engineers-St Paul District  
US Fish and Wildlife Service  
USDA Farm Services Administration  
Wabasha County  
WSB & Associates

## Written Comments (Received Via Email)

### **Matt Koukol, GIS Manager, Ramsey County**

*Recommended changes to the data model:*

- 1.2 RouteID = we should match the new RouteID as MnDOT will soon implement. Up it to String 30*
- 2.3 Directional RouteID = as above. Increase to 32*
- 2.5 Route Type = I think we should drop this. We are not equipped to have non-street features in this dataset.*
- 7.1thorough 7.6: Drop these; originally added in place of 7.7 and 7.8. If we have those, we don't need 7.1-7.6*

### **Kevin Etherton, GIS Specialist, Pierce County (Wisconsin)**

*How you will be able to update these attributes in a timely and accurate manner?*

*Will all of the sources be on board in providing all of these attributes?*

### **John Nerge, GIS Coordinator, City of Brooklyn Park**

*From that glance, it looks like a good idea.*

*Having speed limits for all of our streets in GIS would be really helpful for us.*

*That being said, what advantage do you see in doing this yourselves instead of purchasing Esri's Street Map Premium dataset? I would think that the amount of operating costs with help from all the different metro organizations would cost at least as much collectively.*

### **Tony Monsour, Principal GIS Analyst, Scott County**

*We noticed that there were quite a few inconsistencies- ST\_POS\_TYP for example had values of Avenue, AVENUE, and AVE, similarly with ST\_POS\_DIR and some other fields. Also we were curious on <null> vs. blank values. We want to pass it around to our various departments and just want to make sure we are working with the latest sample. I downloaded the .zip provided on the MetroGIS webpage for reference.*

### **Michael Simmons II, Public Safety Support, LOGIS**

*We at LOGIS Public Safety are very involved this year with the build-out and deployment of a new software solution for our member agency PSAPs and cities. As we near an anticipated go-live period for our agencies later this year, the development of this centerline is something we are watching closely. Moreover, we are very interested in knowing the timing of its release as this solution may become the primary source of centerline data for the majority of our members.*

### **Fong Yang, Senior Engineering Technician, City of Minnetonka**

*Mike Simmons (LOGIS) and I were going over the data and in the field "STATUS". I thought it would be nice to have "Under Construction" as one of the coded values. What's your thought on this? Also, the Proposed and Planned values, aren't they both similar or do they have totally different representation?*

### **Jason Podany, Business Systems Analyst, Transit Control Center, Metropolitan Council**

*Overall this looks like a well thought out plan. Just a few comments:*

- It would be nice to know who owns/maintains/has jurisdiction for a particular road segment. Perhaps codes from the city and county layer would be appropriate for this.*
- The functional class is very helpful for mapping purposes. I see it as optional information. We use this information in HASTUS, TransitMaster and for general mapping purposes.*
- We create extra streets to ensure our bus routing is complete. It's helpful to have all of these for operational purposes too. Currently an F\_CLASS of A64 is used by NCompass to distinguish bus only streets.*

- *There are additional streets open to general purpose traffic that often get left out. For example, perimeter roads at shopping centers. Due to this, I think Metro Transit/Met Council should be an additional supplier of street centerline data.*
- *There are roads where road traffic flows one way but only transit traffic flows in the opposite direction. Not sure what the best way to handle this is. We may have to modify internally to accommodate transit traffic flow.*

### **Bill Blake, GIS Specialist, St. Croix County (Wisconsin)**

**Alternate Street Names** – *There are three fields holding alternate names for the same segment. I’m curious if a separate alternate name table was considered. Also why three? It seems you could have a situation where you either have too few alternate name fields or one too many in most cases. In the data it looks like either one of these alternate fields may have data, or multiple for a single segment. I’m wondering if there’s some priority to how they’re populated.*

**Actual Ranges vs. Theoretical Ranges** – *I’m assuming the purpose of this is to cover two business models. For example, emergency responders or callers can assume a block ends at the end of a hundred range, and it will geocode, even if local addressing policy may never assign a house number up to 100. Just to clarify my understanding, all route and status types are required to have a populated address ranges. If we have a connector, private road, bike trail, or planned centerline, then they too must have address range fields populated. But in these cases, the parity would likely be set to ‘Zero address’.*

**Routing Elements** – *It seems in my mind there could be some discussion that explicitly deals with how centerlines are modeled. For example, when is a dual carriageway (impassible median) captured as two parallel one-way centerlines versus a no-go painted median? How are complicated intersections being represented for something like a traffic circle? It looks like in the Routing Elements section that the centerlines are split at grade-separated crossings in order properly populate the relative elevations. Are there any cases where the segments would not be split? Also, is digitizing direction assumed to be in direction of increasing house numbers, or does it matter in this standard? Perhaps a modeling section early in the document could address some of this.*

*Our own model is based on the ESRI Local Government Model for street centerlines. Some of the elements in the Metro Regional Centerline Model that we don’t have should probably be added. It may also be good to see how you’re capturing address points as well.*

### **Anna Burke, Government Relations Intern, Metro Cities**

*I received an email from our Executive Director, Patricia Nauman, forwarded from Jim Kosluchar about the GIS project being developed. Mr. Kosluchar contacted us suggesting it may be an item of note to include in our weekly newsletter, so I am hoping to get a little more information from you about the project and if this sounds like something worth sharing on a larger scale. If you would like, you can call me at 612-406-9485 at your convenience.*

### **Jeff Grussing, Great Rivers Energy**

Is the road centerline data GPS accurate?  
And if so, at what level?

## Rachel Wiken, GIS Specialist, Metro Transit Services, Metropolitan Council

I really like the proposed model; lots of good info there. I like the info on system type and splitting out road name, post type and direction.

Additions that Metro Transit Services would like:

- Number of lanes (directional)
- Bus shoulder lanes
- Meter bypass lanes
- MNPASS access points – possibly a coordinating point file?

I don't love the use of Connector (Ramp) under road system to designate ramps. This should be coded separately as it is in current road file. Connector is a separate class of Functional Class. This is confusing. It would be nice to know which ramps belong to interstates, state highways, etc. It should be an extra field, not a separate category in this field.

This file includes functional class but it isn't Metropolitan Council functional class; it's MnDOT's system. How would we reconcile the local/state/regional differences? Within the Metro the MetCouncil has the official version of the functional class. Locals are supposed to match theirs to ours, or submit changes to us, in the Comprehensive Plan Review process. But often lower level roads are missed in this process. Collector systems are drastically different between cities and Metropolitan Council.

MnDOTs system is supposed to match ours in the metro region, but they have slightly different categories. We would love to have access to both . Perhaps a **MetCouncil Functional Class** field and a **MnDOT Functional Class** field?

Hard to tell with this small sample, but consistent breaks for interchange / intersection / bridges would be huge. No turn allowed, no break.

Also, we'd love to have sidewalks, non-motorized trails, and alleys

## Kenneth Kirk, Senior GIS Specialist, Crow Wing County

This statewide road file will be housed and utilized over the entire state. Even to the point of centralized 911 dispatching. The local organizations and agencies will be collectively contributing and updating the individual data and submitting changes.

How is the Unique\_ID being managed under such a premise? As the local author of centerline data, it would be difficult for us to add that value in our data and not have it clash with another update from some other agency. While somewhat unlikely, it is possible to do that. Would we leave this field blank until all changes have been consumed by Minnesota and updates sent back to us?

My other thought is referencing page 39 where we are using code for city, township groups. It seems like someone is not appropriately using a FIPS system that is already in place.

In the case of **Apple Valley** they are assigning a code of 2393967 which appears random when the same code could be construed through FIPS codes already established. APPLE VALLEY should have a code value of 02703701900.

Naturally, 027 is the state code, 037 is assigned to Dakota County, 01900 is assigned to the city of Apple Valley. This just seems less cumbersome than creating a new code and value system.

Does this make any sense? I am sure there is a reason for how it works, and might take a little longer than 2 hours to fully appreciate the content. I have sent this to the group here that have a direct input in this subject and am working to have an opinion on this topic by the close of the comment period.

***Response from Matt Koukol, Ramsey County to K. Kirk (during comment period)***

*Regarding FIPS, we are using the GNIS id, not the FIPS code.*

*Regarding FeatureUniqueID; you bring up a good point. We have been a bit lazy perhaps with this. What we did is use a GUID (Global Unique ID) from a database. There is a chance using this that there could be some replication as, in my understanding, the GUID is only truly guaranteed to be unique within a single database. So while the chance of replication is small, perhaps we should move to something a little more universal. If we were to append the GNIS in front of the GUID, that would likely guarantee a unique feature ID, and be one that each data owner could generate on their own. Let me know if you have other questions, and please submit feedback suggesting a add-on to the GUID that would help ensure uniqueness!*

***Return response from Kenneth Kirk, Crow Wing County to M. Koukol (during comment period)***

*Your interpretation of the GUID is pretty much the same as mine, hence the question. I like and agree that the GUID in addition to the GNIS ID should be unique enough that it would be nearly impossible to replicate. I really think this would be an effective solution to this particular potential issue. Thanks for the explanation and consideration of the question.*