Self-Driving Vehicles and Travel Demand Modeling

Many people consider autonomous vehicles to be a significant part of the future of transportation. As technology continues to develop, state and municipal governments will be tasked with addressing the potential impacts of these vehicles on the road.

However, transportation planning processes have been slow to catch up with this technology. Most Metropolitan Planning Organizations (MPOs) and Departments of Transportation (DOTs) still proceed with planning and forecasting paradigms that don’t have proper placeholders to account for this emerging change in travel technology. Many agencies are still planning for twenty to thirty years in the future based on the same transportation planning principles used in the past. At the same time, implications of wide spread autonomous vehicles on both passenger and freight modes are most likely to be enormous in terms of travel demand, travel behavior, travel trends and vehicle miles traveled, household expenditures, and residential and work location choices.

Transportation planning models are a necessary part of planning decisions and will continue to play an important role in the observable future. In order to maintain relevance of these models and based on the models transportation forecasts, the models need to reflect changes in transportation policies, technologies, and travel behavior in a timely manner. This will be important as Metro COG moves forward with its 2019 Long Range Transportation Plan, where its own travel demand model is modeled and that necessary information can be provided for planning decisions.

Steps have begun to adjust transportation planning efforts by developing a new travel forecasting paradigm that builds on the latest achievements in demand modeling, in particular the second Strategic Highway Research Program (SHRP 2) efforts, and taking it to the next level by effectively and explicitly accounting for the new passenger transportation technologies involving autonomous vehicles.

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**Fargo-Moorhead Regional Freight Plan**

On September 21, Metro COG approved the Fargo-Moorhead Regional Freight Plan. Metro COG began this plan back in August 2016 to better understand freight issues and to help inform regional leaders about transportation service and infrastructure needs for companies in the region. While Metro COG’s primary planning interests lie in the public elements of the region, the plan examines freight infrastructure and freight service demands across all modes in the regional transportation network.

The Regional Freight Plan complements state freight plans in North Dakota and Minnesota, but reflects the needs and objectives of the region. The plan examines factors affecting freight movement to, from, and within the region to inform Metro COG’s other short- and long-range transportation planning efforts. These factors include information from first and last mile truck movements, to long-haul freight entering and exiting the region. Understanding regional supply chain elements is important in determining future investment needs to keep local infrastructure efficient and effective in supporting freight movement.

The Fargo-Moorhead Regional Freight Plan is intended to help guide freight investments in the region that support the safety, social equity, economic productivity, sustainability and livable community goals established under Metro COG Long Range Transportation Plan (LRTP). The plan also presents performance metrics to assist Metro COG in monitoring programs, project prioritization, selection, and support federal guidance for competitive funding programs.

To view or download a copy of this plan, please visit Metro COG’s website at www.fmmetrocog.org.

**Regional Railroad Crossing Safety Study**

One of the primary methods for increasing public safety as it relates to the freight railroad network is by reducing at-grade crossing hazards. With this in mind, the Railroad Crossing Safety Study applies a systematic approach to evaluating or screening each of the 215 rail crossings within Metro COG’s planning area to help provide a prioritized listing of improvements at specific locations and other system-wide recommendations.

The primary purpose of this study is to evaluate each of the crossings for predicted accidents based on quantifiable data, review those crossings in the context of local traffic and pedestrian uses, provide a rational basis for ranking of the crossings, and arrive at a prioritized list of those that merit improvements. This plan identifies ten crossings and provides recommendations that would improve the safety at locations in Fargo, Moorhead, Sabin, Glyndon, and Hawley. A secondary purpose of this study is to provide a regional context for rail safety by addressing safety trends and issues that may assist Metro COG in developing and implementing a broader, area-wide, rail safety plan.

This plan is scheduled to be reviewed by Metro COG’s Policy Board in October. To view the draft plan, please visit Metro COG’s website at www.fmmetrocog.org.

**17th Avenue South Corridor Study**

Fargo’s 17th Avenue is a heavily used corridor that stretches the entire length of the city and into West Fargo. While primarily residential, the corridor supports some of the most intense retail and commercial development in the region, including West Acres. It serves three area schools (Lewis and Clark Elementary, South High School, and Cheney Middle School) and several of the largest residential, the corridor supports some of the most intense retail and commercial development in the region, including West Acres.

Fargo’s 17th Avenue is a heavily used corridor that stretches the entire length of the city and into West Fargo. While primarily used as a local and regional connection, the corridor supports some of the most intense retail and commercial development in the region, including West Acres. The purpose of this study is to understand the current and long-term vision of 17th Avenue and analyze impacts of potential improvements which address declining level of service (LOS) operations and the identified need for a cross-town bicycle route.

The study area is broken into two segments:

- The west segment from the western City of Fargo limits to 32nd Street includes residential, commercial, and retail land uses. This segment is primarily three- and four-lane sections. The goal of this segment is to improve traffic flow while balancing the needs of pedestrians, bicyclists, and transit.
- The east segment from 32nd Street to 5th Street includes mainly residential land uses and is primarily a two-lane section. The goal of this segment is to improve bicycle mobility and safety while balancing the needs for other modes of travel.

For questions on this study, please contact Dan Farnsworth at farnsworth@fmmetrocog.org.

**BIKE FM to Become Chapter of the Bicycle Alliance of Minnesota**

Metro COG has long sought the creation of a local organization that could implement various bicycle education events and safety campaigns throughout the community. Such an organization has been recommended in both the 2011 and more recent 2016 Metropolitan Bicycle and Pedestrian Plan.

In early 2017, PartnersHP4Health laid the groundwork for the creation of BIKE FM, an organization for information, knowledge, and education in the Fargo-Moorhead area. One of the ways this organization has promoted its efforts is by using Metro COG’s existing website www.bikefm.org as a platform for community efforts.

BIKE FM is now poised to become a chapter of the Bicycle Alliance of Minnesota (BikeMN), a non-profit 501(c)(3) organization which strives to make Minnesota a more bicycle-friendly state. BikeMN advocates for bicycle friendly laws, policies, projects, and programs; and uses awareness campaigns geared towards motorists based on national best practices. BikeMN also works directly with businesses and communities to be more bicycle friendly through sponsored events and promotions.

Becoming a chapter with the alliance will allow a number of benefits including potential funding opportunities for BIKE FM through the alliance’s donation network, as well as program support and state-wide publicity of efforts happening in the community.