

Appendix C: Description of 2021 Consultant Projects

This appendix provides a more detailed description for each of the consultant work projects programmed for 2021. Each study includes a breakdown of the total project cost and the funding from both federal planning funds (CPG) and local match funds. Also included is a discussion of how each project reflects goals, objectives, and strategies included in the Transportation Policy Plan (TPP). The TPP provides an avenue for which projects are prioritized and ultimately selected, and each project is linked to priorities outlined in the 2040 TPP. A summary of each consultant project is provided below.

Task A: Planning and Programming Processes

Before and After Study Phase 2: This project will continue previous work efforts to measure existing, proposed, and actual levels of Regional Solicitation scoring criteria and determine the outcome of projects on the region. It will focus in particular on what types of projects ultimately lead towards achieving the goals of the Transportation Policy Plan and whether the Regional Solicitation is using the correct measures in its scoring criteria. It will also identify how the scoring criteria can better tie in with federal performance targets and the Congestion Management Process.

Total Budget: \$100,000
Federal CPG Funds: \$80,000
Local Met Council Match: \$20,000
Start Date: April 2020
2021 Budget: \$40,000

Task B: Modal System Planning

Twin Cities Highway Mobility Needs Analysis: The goal of this study is to provide MnDOT with a mobility need monetary value to be incorporated into the next Minnesota State Highway Investment Plan (MnSHIP) Update. It will identify a mobility need monetary value based upon performance measures and targets. The study began in 2020 and will conclude in 2021. The analysis is directly called for in the 2040 TPP Update's Work Program under the Highways Performance Measures and Funding Decisions work task.

Total Budget: \$225,000
Federal CPG Funds: \$180,000
Local Met Council Match: \$45,000
Start Date: April 2020
2021 Budget: \$40,000

Functional Classification Process Updates: This is the first year of a two-year effort to implement recommended changes from MnDOT's metro-wide functional classification study. This study will work closely with TAC Planning to update Appendix D of the 2040 Transportation Policy Plan and complete a peer review of how other MPOs review functional classification change requests. Based on these findings and stakeholder input, the functional classification change request forms, website, and process will be amended. MnDOT will also be a close partner in the study.

Total Budget: \$60,000
Federal CPG Funds: \$48,000
Local Met Council Match: \$12,000
Est. Start Date: September 2021
2021 Budget: \$30,000

Principal Arterial Intersection Conversion Study Update: This is the first year of a multi-year effort to update the Principal Arterial Intersection Conversion Study, which was first completed in 2017. The project will be co-led by MnDOT and will update the data used in the first study. A database will be created in such a way that it can be updated with current data every two years prior to each Regional Solicitation as the study results are used in the scoring.

Total Budget: \$300,000
Federal CPG Funds: \$240,000
Local Met Council Match: \$60,000
Est. Start Date: September 2021
2021 Budget: \$50,000

Regional Truck Freight Corridors Data Analysis Tool Update: The original Regional Truck Highway Corridors Study analysis tool used to identify and prioritize regional truck freight corridors will be updated to:

- Incorporate systematic adjustments based on newer data
- Reflect potential local changes to roadway systems, and/or
- Account for the additions of new or expanded freight facilities that generate significant increases in truck volumes

The enhanced analysis tool will facilitate Council reviews of agency-proposed additions or extensions to the regional truck corridors which are used in scoring applications for federal transportation funds. Any additions or extensions of the regional truck corridors resulting from these Council reviews will be incorporated into the official map of Regional Truck Freight Corridors prior to each Regional Solicitation.

Total Budget: \$35,000
Federal CPG Funds: \$28,000
Local Met Council Match: \$7,000
Est. Start Date: March 2021
2021 Budget: \$35,000

RBTN Bikeway Facility Guidelines and Measures Study: As the RBTN is expected to expand to serve regional growth, formalized measures for evaluating corridor spacing and route directness are needed to improve regional network planning and to supplement the review process for future RBTN additions. This study will be conducted to fulfill two primary purposes: to provide recommendations for preferred facility treatments on RBTN alignments in urban, suburban, and rural areas hosting the RBTN; and to develop guidelines for applying quantifiable measures when evaluating potential RBTN corridors and alignments.

Total Budget: \$100,000
Federal CPG Funds: \$80,000
Local Met Council Match: \$20,000
Start Date: August 2020
2021 Budget: \$45,000

Pedestrian Safety Action Plan: This project will include systemic crash data analysis to identify crash characteristics and risk factors for pedestrians, as well as working with regional stakeholders on identifying countermeasures and program recommendations, including the regional solicitation. The need for pedestrian crash data analysis is identified in the 2040 TPP's Work Program and supports the Plan's safety goal and its objective to reduce fatal and serious injury crashes and improve safety for all modes. Pedestrians are the initial focus for this crash data analysis because of the increase in fatalities

and serious injuries for the most vulnerable travelers on the transportation system as other types of traffic deaths and injuries decrease.

Total Budget: \$200,000
Federal CPG Funds: \$160,000
Local Met Council Match: \$40,000
Start Date: August 2020
2021 Budget: \$150,000

Mobility Hub Planning Guide: This project will develop a planning guide for regional stakeholders involved in the development of mobility hubs -- places where travelers can easily access and connect among multiple transportation options (including public transit, shared vehicles, and other modes). The project will document the various mobility hub design and implementation options and provide specific guidance for both regional and local stakeholders as they plan, design, implement, and manage mobility hubs within the different contexts they are being considered. The planning guide is needed to ensure a consistent and successful customer experience for mobility hubs across different jurisdictions and in different contexts. The project will also deliver an analysis of local land use and transportation contexts where mobility hubs are best supported. The guide will also include an analysis of existing transportation services, land use, demographics and other factors in order to highlight areas with the highest need for and the most benefit from mobility hubs.

Total Budget: \$120,000
Federal CPG Funds: \$96,000
Local Met Council Match: \$24,000
Start Date: October 2020
2021 Budget: \$100,000

Task C: Long-Range System Planning

Regional Travel Demand Management Study: The region has a goal to increase the number and share of trips taken by carpool, transit, bicycling, and walking as well as reducing transportation-related air emissions. While there are a variety of strategies to increase the availability of these options, the region's last travel demand management study was completed in 2010 and much has changed since then. This includes the introduction of shared mobility options and mobility as a service, rapid changes in technology, the continued expansion of infrastructure like regional transitways, MnPASS, and regional bicycle travel facilities, and expanded interest in remote work resulting from the COVID-19 pandemic crisis. A Regional Travel Demand Management Study will research the latest and greatest strategies in the TDM and evaluate their potential implementation in the region. The results will be an updated set of strategies to encourage these options and encourage the reductions in single-occupant vehicle trips through travel demand management (TDM). Because TDM is best achieved as a regional strategy with many local stakeholders partnering together, the study will be a collaborative effort that includes state, regional, and local governments as well as businesses, property owners, and non-profits.

Total Budget: \$200,000
Federal CPG Funds: \$160,000
Local Met Council Match: \$40,000
Start Date: September 2021
2021 Budget: \$20,000

A Path to Accelerate Electric Vehicle Adoption in the Twin Cities: As metropolitan regions begin to shift to connected and autonomous vehicles and implement shared mobility options, there is a general consensus that both public and private vehicle fleets will become electrified. Electric vehicles in fact already widely exist in the market. Fleet electrification can have many positive environmental benefits including climate mitigation and public health but may also require substantial changes in the regional electric grid and where and how vehicles are charged. This study on vehicle electrification is to plan a network of charging stations to support and encourage electric vehicle (EV) purchase and use in the Twin Cities. This study would summarize the role EVs can play in local climate mitigation, the hurdles to widespread EV adoption, current and planned energy production capacity and greenhouse gas mix, the capital and operating costs of EVs as compared to internal combustion engine vehicles and, national and local best practices and resources. The work will include determining how and if scenarios related to vehicle electrification should be included in the next update of the Regional Development Guide (*Thrive MSP 2040*) and seek to quantify regional benefits of electrification.

Total Budget: \$100,000
Federal CPG Funds: \$80,000
Local Met Council Match: \$20,000
Start Date: September 2020
2021 Budget: \$60,000

Regional Transportation Investment Equity Evaluation: This study will engage the Council and Transportation Advisory Board in a discussion and evaluation regarding how transportation planning and investment decision-making occurs in the region and use an equity lens and evaluation process to determine where and how the planning and engagement processes can be changed to make the system more representative and transportation investment decisions more equitable. Specific recommendations and actions for improving equity in the regional planning and decision-making process will be developed, prioritized and identified for implementation. During 2021 a work scope will be developed with input and engagement of Equity populations and a consultant selected and hired to begin the overall work, with the anticipation that the majority of the project work will continue on into 2022. This process will also coordinate with the work of MnDOT in its Advancing Transportation Equity Initiative to select and utilize equity metrics and select metrics.

Est. Total Budget: \$100,000
Federal CPG Funds: \$80,000
Local Met Council Match: \$20,000
Est. Start Date: September 2021
2021 Budget: \$25,000

General Peer Regional Research and Comparison: A best practice for long-range planning is to understand the issues and work of other peer metropolitan regions and learn from our national peers on similar concerns and issues. This work will engage a consultant on an identified issue(s) to help determine where and how innovative planning work is occurring. At this time the particular issues that might be researched have not been identified. Two potential peer region comparisons for 2021 are understanding how other regions prioritize and invest in their regional transportation system and understanding how other regions are planning for climate change. Early in 2021 Council staff will engage the TAC Planning committee and other partners to determine research interests and identify a scope of work.

Est. Total Budget: \$10,000
Federal CPG Funds: \$8,000
Local Met Council Match: \$2,000

Est. Start Date: April 2021
2021 Budget: \$10,000

Task D: Travel Model Development and Forecasting

ActivitySim Local Initial Implementation: The goal of this project is to locally implement the ActivitySim advanced open-sourced activity-based travel behavior modeling software in the MSP region, and to estimate models based on local travel behavior inventory data. This implementation will be following similar implementations in the Atlanta and Detroit regions, and will benefit from their experience. This will lay the foundation for the next generation travel demand model in this region.

Est. Total Budget: \$70,000
Federal CPG Funds: \$56,000
Local Met Council Match: \$14,000
Est. Start Date: January 2021
2021 Budget: \$70,000

Network Wrangler Maintenance and Enhancement: In 2019-2020, the Council engaged a Consultant to rebuild its highway, transit, bicycle, and pedestrian networks, used in the regional model based on official and open-source data sources. This was done in way that can be reproduced from refreshed data as needed. This project also developed an open-source network management tool, called Network Wrangler to help staff manage the coding of projects and scenarios into the network. In the next phase of this work, the Council will hire a consultant to enhance Network Wrangler, to evolve it as the Council implements ActivitySim and learns more about its application. This work will also involve improvements to the network creation process

Est. Total Budget: \$75,000
Federal CPG Funds: \$60,000
Local Met Council Match: \$15,000
Est. Start Date: March 2021
2021 Budget: \$50,000

University of Minnesota Transitways Impact Research: This project funds a portion of a transitway research project to be selected in late 2020 by the funding partners of the Transitways Impact Research Program at the UMN.

Est. Total Budget: \$15,000
Federal CPG Funds: \$12,000
Local Met Council Match: \$3,000
Est. Start Date: January 2021
2021 Budget: \$15,000

U of M Accessibility Observatory Work: This work funds the Council's participation to the Accessibility Across America pooled fund study, providing locally focused accessibility data sets and reports from the Accessibility Observatory, as well as funding a set of Council-directed accessibility analyses that focus on specific analytical needs.

Est. Total Budget: \$20,000
Federal CPG Funds: \$16,000
Local Met Council Match: \$4,000
Est. Start Date: January 2021

2021 Budget: \$20,000

Zephyr Foundation: Agency membership dues in the Zephyr Foundation. The mission of Zephyr is The Foundation's mission is to advance rigorous transportation and land use decision-making for the public good by advocating for and supporting improved travel analysis and facilitating its implementation. Foundation goals are to advance the field through flexible and efficient support, education, guidance, encouragement, and incubation.

Est. Total Budget: \$10,000
Federal CPG Funds: \$8,000
Local Met Council Match: \$2,000
Est. Start Date: January 2021
2021 Budget: \$10,000

CityCast: This is a subscription to cloud-based travel forecasting platform based on national data. The goal is to provide access to alternate travel forecasting tools, both as a check of current methods and to provide a faster access to forecasts for smaller projects.

Est. Total Budget: \$20,000
Federal CPG Funds: \$16,000
Local Met Council Match: \$4,000
Est. Start Date: January 2021
2021 Budget: \$20,000

AMPO ActivitySim Consortium: Agency membership in the ActivitySim consortium. The mission of the ActivitySim project is to create and maintain advanced, open-source, activity-based travel behavior modeling software based on best software development practices for distribution at no charge to the public. The ActivitySim project is led by a consortium of Metropolitan Planning Organizations (MPOs) and other transportation planning agencies, which provides technical direction and resources to support project development. All member agencies help make decisions about development priorities and benefit from contributions of other agency partners.

Est. Total Budget: \$35,000
Federal CPG Funds: \$28,000
Local Met Council Match: \$7,000
Est. Start Date: January 2021
2021 Budget: \$35,000

Task E: Short Range Planning and Performance Monitoring

Detailed Congestion Management Process Corridor Analysis Methodology: This study will be used by regional partners as a step-by-step process so that each of them can identify specific CMP strategies that apply to their corridors. This study will seek to develop of a user-friendly handbook that details the processes required to develop an in-depth corridor congestion assessment. This handbook will list the data required to perform a corridor assessment; a detailed description of how to process the data; templates for analyzing and presenting the results; an outline of how the results will be verified by the Council; and guidance on presenting and documenting the results of the corridor assessment. It is anticipated that the guidance provided in this study will be used in the Council's Regional Solicitation selection process in the future.

Est. Total Budget: \$100,000

Federal CPG Funds: \$80,000
Local Met Council Match: \$20,000
Est. Start Date: August 2020
2021 Budget: \$40,000



390 Robert Street North
St Paul, MN 55101-1805

651.602.1000
TTY 651.291.0904

public.info@metc.state.mn.us

metro council.org