



Planning Studies

2040 Transportation Policy Plan Work Program(s)



June 2022

2050 TPP Technical Working Group



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Planning Cycle



Work Program Carries 2040 TPP and Informs 2050 TPP

Example Completed

- Mobility Hub Planning Guide
- Highway Mobility Study

Example Ongoing

- TDM Study
- Equity Evaluation of Transportation Investments
- Transportation and Climate Change Multimodal Measures

2050 Transportation Policy Plan

- Goals and Objectives
- Policies and Strategies
- Investments
- Modeling
- Performance

Unified Planning Work Program (UPWP)

An annual plan of federally funded and Council-involved transportation planning activities

- Outlines and describes transportation planning activities for a calendar year
- Serves as application for federal transportation planning funds; describes project schedules and costs
- Must include list of consultant-led projects and their annual budgets
- Can include a list of partner-led studies that Council staff are working on, but are not required unless they are funded by federal planning dollars including:
 - Corridor studies
 - MnDOT, County, City, transit provider or other partner studies

Today's Goal

Identify missing areas for further study.

- The 2023 UPWP will be coming for action in July 2022, all major studies must be identified in the document to begin work
- As additional items come up through the 2050 TPP development, Work Program items can be identified to begin after the TPP is adopted in 2024
- Are there major areas of concern or interest for 2023 that are not addressed in past, present, and proposed work program projects?

Completed Studies



MnPASS System Study Phase 3

What did the study do?

- Evaluated key MnPASS issues, opportunities, and risks from both a regional needs perspective and a national state-of-the-practice perspective
- Updated MnPASS (now E-ZPass) system vision using a modeling and scenario evaluation process
- Prioritized list of potential corridors for the 2018 update of TPP
- Built on 2005 and 2010 studies

How will the study impact the 2050 TPP?

- Technical work to support listed current and increased revenue scenario corridors
- Provides valuable technical information on prioritizing future corridors through 2050

Freeway System Interchange Study

What did the study do?

- Evaluated all interchanges where two freeways meet to analyze congestion and crashes
- Developed and evaluated a range of possible improvements, focusing on the top 17 locations

How will the study impact the 2050 TPP?

- Technical work to support listed current and increased revenue scenario improvements

Twin Cities Highway Mobility Needs Analysis

What did the study do?

- Identified a highway mobility performance measure and target for the region
- Modeled a range of outcomes (job accessibility, freight impacts, transit delay) based on different highway mobility funding levels
- Completed a sensitivity analysis based on different future telework rates

How will the study impact the 2050 TPP?

- The study was an input to MnDOT's Minnesota State Highway Investment Plan, which will identify future state funding for this investment area
- Incorporate study findings into the 2050 TPP's Highway Chapter and Performance Outcomes Chapter

Transit Service Allocation Study

What did the study do?

- Evaluated the benefits of substantially different investment options for transit network expansion
- Facilitated discussions about the trade-offs inherent in transit network investment decisions among regional stakeholders
- Provided potential design guidelines for geographic coverage-oriented transit service

How will the study impact the 2050 TPP?

- Qualitative and quantitative inputs into the update of Appendix G: Transit Service Design Guidelines and Performance Standards
- Input into updating the 2050 TPP's goals and objectives for what makes for a successful transit system

Transit Service Allocation Study (cont.)

SCENARIO 1 - INVEST ADDITIONAL RESOURCES IN IMPROVING TRANSIT THAT SERVES ALL TRIP TYPES

Ridership Estimate

- Will generate between 30-40% more additional ridership than Scenario 2

Improved Transit Service

- Improves service for 37% of the region's population and 51% of the region's employment vs. Scenario 2's 27% of the population and 44% of employment
- Improves service for 280,000 more people than Scenario 2, 150,000 of which are low-income people and 160,000 are BIPOC
- Improves service for 120,000 more jobs than Scenario 2, including 60,000 low-wage jobs

Change in Access to Transit by Service Level

- Provides 400,000 additional people and 220,000 additional jobs with access to high-frequency transit
- Most people and jobs with a change in access are in Transit Market Areas 1 and 2

Network Access to Jobs

- Scenario 1 expands access to between 2-7 times more jobs for the average resident than Scenario 2

SCENARIO 2 - INVEST ADDITIONAL RESOURCES IN INCREASING REGIONAL ACCESS TO TRANSIT

Expanded Access to All-Day Transit

- Scenario 2 provides 110,000 more people with access to all-day service, and 20,000 more affordable housing units than Scenario 1
- Scenario 2 provides all-day access to 60,000 more jobs, of which 30,000 are low-income, than Scenario 1

Change in Access to Transit by Service Level

- Provides 380,000 additional people and 290,000 additional jobs with access to local transit
- Most people and jobs with a change in access are in Transit Market Area 3

Network Next Arterial BRT Study

What did the study do?

- Identified, screened, evaluated, and prioritized future arterial bus rapid transit corridors
- Recommended near-term implementation corridors for METRO F, G, and H lines; an input into Regional Solicitation project selection
- Recommended long-term future corridors

How will the study impact the 2050 TPP?

- Recommendations for METRO F, G, and H and long-term corridors incorporated in TPP amendment in 2022
- Corridors were incorporated into either the Current Revenue Scenario or Increased Revenue Scenario
- Considerations for funding status of corridors will need to be addressed

<https://www.metrotransit.org/arterial-bus-rapid-transit-brt-planning>

Mobility Hub Planning Guide

What did the study do?

- Provides a classification system for mobility hubs that is context-sensitive
- Provides a guide for mobility hub factors in planning, design, construction, and management
- Identified the most promising mobility hubs across the region

How will the study impact the 2050 TPP?

- Expanded discussion of the role and context for mobility hubs
- Consider including mobility hub typologies or other overarching themes from the Planning Guide
- Potential to inform funding decisions through Regional Solicitation update

<https://metro council.org/Transportation/Performance/Emerging-Trends/Mobility-Hub-Planning-Guide.aspx>

Regional Bicycle Transportation Network (RBTN) Bicycle Facility Guidelines and Measures

What did the study do?

- Developed new quantitative measures for reviewing agency-proposed updates to the RBTN
- Developed potential guidelines for determining the appropriate type of bicycle facility to be implemented on the RBTN along various road conditions and across Thrive community designations
- RBTN was updated in 2021 for use in 2022 Regional Solicitation

How will the study impact the 2050 TPP?

- Include any necessary information in the RBTN discussion in the 2050 TPP
- Consider incorporating guidelines for bicycle facilities on the RBTN in consultation with implementing partners

Regional Bicycle Barriers Study

What did the study do?

- Identified most significant physical barriers to daily bicycle travel
- Prioritized regional bicycle barrier crossing areas into three priority tiers, which are used in the Regional Solicitation project scoring criteria

How will the study impact the 2050 TPP?

- Several new or extended regional bicycle barriers were added during the 2021 update process which have been incorporated into the TPP through an Administrative Modification and will be included in the 2050 TPP

Regional Truck Highway Corridors Study and Update

What did the study do?

- Identified the set of Twin Cities' major highway segments most heavily relied upon by the trucking industry for delivering the region's freight and goods
- Prioritized regional truck freight corridors into three priority tiers; used in the Regional Solicitation project scoring criteria
- Base data was updated, and agencies proposed new and extended regional truck corridors through formal update process in 2021

How will the study impact the 2050 TPP?

- Several new or extended regional truck freight corridors were added during the 2021 update process, which have been incorporated into the 2040 TPP through an Administrative Modification
- These changes will be included in the 2050 TPP

CAV Scenario Development and Performance Measurement

What did the study do?

- Analyzed multiple automated futures, looking at partial vs future adoption, and shared vs privately owned models of automated vehicle (AV) adoption
- Looked at effects on vehicle miles traveled (VMT), congestion, fleet size, and fleet efficiency

How will the study impact the 2050 TPP?

- Reminder that different scenarios of AV futures have different consequences for increased VMT and congestion, but most are likely to result in increases

Ongoing Studies



Pedestrian Safety Action Plan

What will the study do?

- Analyze historic pedestrian crash data from 2016-2019 for trends, including roadway characteristics, geographic distribution, demographics, and land use
- Systemic safety analysis to identify risk factors with fatal and serious injury pedestrian crashes and screened the network for locations with these risk factors
- Identify countermeasure resources and programmatic recommendations
- Wrapping up Summer 2022

How will the study impact the 2050 TPP?

- Consider development of a separate safety chapter for the 2050 TPP for all modes and incorporate key takeaways
- Could further develop safety within the goals, objectives, strategies and Pedestrian chapter
- Results will be considered for implementation of the TPP (e.g., Regional Solicitation)

<https://metro council.org/Transportation/Planning-2/Reports/Bike-Pedestrian-Planning/Regional-Pedestrian-Safety-Action-Plan.aspx>

Regional Travel Demand Management Study

What will the study do?

- Evaluate the existing TDM programs in the region and the state of the practice around the world
- Develop TDM goals for the region
- Create a list of recommended TDM strategies to help achieve the goals
- Create an action plan for new or improved TDM strategies to begin implementation
- Create a shared structure for TDM implementation when using shared resources (e.g., Regional Solicitation)

How will the study impact the 2050 TPP?

- Consider development of a separate TDM chapter for the TPP that identifies specific actions, roles and responsibilities, funding priorities, and evaluation methods
- Contribute to strategies in other focus areas like Congestion Management Process, climate change mitigation, and land use policies

Local Bus Speed and Reliability Study

What will the study do?

- Evaluate local road segments where transit operates for transit passenger delay
- Identify approximately ten corridors with the most impactful passenger delays, taking into account additional factors like social equity
- Develop transit advantage strategies for the most promising corridors to reduce passenger delays (e.g., bus lanes, turning movements, transit signal priority)

How will the study impact the 2050 TPP?

- Update discussion and identified opportunities in the transit advantages section of the Transit Investment Direction and Plan
- Potential to set priorities for local governments to plan for during road improvement projects

Principal Arterial Intersection Mobility Study (Phase II)

What will the study do?

- Analyze a variety of outcomes of recently constructed interchange projects
- Identify and update regional priorities for existing at-grade intersections on the principal arterial system

How will the study impact the 2050 TPP?

- Add regional priorities from the study into the Increased Revenue Scenario (similar approach as 2040 TPP)
- Inform Regional Solicitation project scoring criteria

Congestion Management Process

What will the study do?

- Phase 1: Developed Policies and Procedures document
 - Objectives, strategies, multimodal performance measures
 - Formally defined a CMP network
 - Methodology for measuring congestion
 - Creation of regional datasets to that provide consistency in measuring levels of congestion
- Phase 2: Development of Corridor Assessment Handbook
 - Serves as a “how-to” guide for partners to assess congestion along a corridor in a consistent manner

How will the study impact the 2050 TPP?

- Ensure consistency between congestion mitigation strategies and goals of the 2050 TPP
- Performance measures and congestion mitigation strategies will be integrated into 2050 TPP
- Will be used to refine measures and scoring into our Regional Solicitation

Functional Classification Process Update

What will the study do?

- Peer review of other MPO's role in the functional classification process
- Make recommendation for update of Appendix D on Functional Classification
- Make recommendations for update of future Principal Arterial map
- Evaluate the A Minor classification and associated subclassifications

How will the study impact the 2050 TPP?

- Update/revise the guidelines of Appendix D on Functional Classification
- Identify future Principal Arterials and update map

Regional Safety Action Plan

What will the study do?

- Create a high injury street identification by mode
- Proactive systemic analysis for fatal and serious injury crashes
- Identify potential safety countermeasures
- Make programmatic recommendations to better connect investments to safety goals
- Meet requirements of US Department of Transportation Comprehensive Safety Action Plan under their Safe Streets and Roads for All funding program

How will the study impact the 2050 TPP?

- Consider development of a separate safety chapter for the 2050 TPP
- Alternatively, further develop safety within goals, objectives, strategies and modal chapters
- Results will be considered for implementation of the TPP (e.g., Regional Solicitation)

Electric Vehicles Planning Study

What will the study do?

- Emphasis on light duty vehicles
- Collect background information on transportation electrification
- Develop and prioritize actions MTS Planning staff can undertake to accelerate the benefits of greenhouse gas reduction and improvements in public health

How will the study impact the 2050 TPP?

- A part of climate mitigation discussion and goals and objectives
- Proposed strategies for climate mitigation

Regional Transportation and Climate Change Multimodal Measures

What will the study do?

- Evaluate gaps and methodologies to estimate resulting life cycle greenhouse gas emissions from mobility type investments
- Includes criteria and projects in the Regional Solicitation, Transportation Improvement Program (TIP) and TPP
- Propose improved methodologies including data requirements, logic, formulas and software tools

How will the study impact the 2050 TPP?

- Improve estimation of greenhouse gas emissions and the component parts in project evaluation processes
- Support improved discussions around climate mitigation

Travel Behavior Impacts of COVID-19

What will the study do?

- Continued monitoring of data relevant to understanding pandemic and post-pandemic travel including:
 - Freeway traffic volumes
 - Vehicle miles traveled
 - Amount, mode, and purpose of travel
 - Delivery, e-commerce behavior
 - Telecommuting behavior

How will the study impact the 2050 TPP?

- Provide insight into ongoing and emerging trends
- Help identify places where fundamental discontinuities in travel behavior trends have policy or investment implications

<https://metro council.org/Transportation/Performance/Travel-Behavior-Inventory/2020-COVID-19-Surveys.aspx>

Travel Behavior Inventory and On-Board Survey Programs

What will the study do?

- Conduct a regular program of comprehensive surveys of household travel, collecting data on how, why, where, and how much people in the region travel
- Conduct specialized and regular surveys of transit riders systemwide
- Conduct special generator studies and data purchase as necessary
- Produce reports, deep analyses, visualizations, and interactive applications to delve into important issues, learn more about travel in the region, and get data and findings to partners and the public

How will the study impact the 2050 TPP?

- Basis of travel demand forecast models
- Helps to understand how and why we travel in order to inform discussions on values and priorities
- Provide data on observed travel patterns to inform discussions and policy development

<https://metro council.org/Transportation/Performance/Travel-Behavior-Inventory.aspx>

Transportation Attitudes and Needs Assessment

What will the study do?

- Conduct qualitative research to:
 - Capture how constraints, values, needs, and relationships shape daily travel experiences
 - Define needs surrounding transportation infrastructure
- Examine commonalities and disparities in identified travel needs

How will the study impact the 2050 TPP?

- Provide input on 2050 TPP goals and objectives
- Provide broad insight to policy development
- Provide a potentially strong equity lens to both of the above

VMT Reduction Mode Shift Modeling

What will the study do?

- Estimate regional *mode shift potential*: the number and percentage of trips made by private motor vehicle that could be made by walking, biking or transit
- Evaluate the *who, what* and *where* of mode shift potential: by demographic groups, trip type, and community type
- Provide a baseline for the region and local planning groups when developing mode shift goals

How will the study impact the 2050 TPP?

- Provides benchmark estimate when setting mode shift goals
- Provides baseline for evaluating ability of current transportation system and development to support transportation alternatives beyond personal vehicle
- Opens door for future work to use behavioral levers (incentives, TDM work) to affect mode share

Equity Evaluation of Regional Transportation Investments

What will the study do?

- Develop and pilot an equity framework and tool for evaluating transportation investment processes and outcomes
- Work with a community-centered and led Equity Policy Group that will guide this project
- Recommend changes to improve equity in regional transportation investment processes, decision making, and outcomes

How will the study impact the 2050 TPP?

- Provide input on goals, objectives, and strategies to better incorporate equity
- Identify actions and changes to regional planning and decision-making processes that will result in more equitable regional transportation investments
- Provide input on considering equity when prioritizing future investments

Upcoming Studies



TPP Goals and Objectives Review, Engagement & Update

What will the study do?

- Evaluate the current goals and objectives for what's still relevant, needs updating, or missing
- Convene stakeholder groups to discuss what the region wants for 2050 TPP goals and objectives
- Produce working drafts of the 2050 TPP planning framework, building off the 2050 Development Guide

How will the study impact the 2050 TPP?

- Will provide engagement and language this is the basis for direct inclusion in the 2050 TPP
- Goals and/or objectives will provide structure and policy guidance for actions, roles, measures and investments in the 2050 TPP

Regional Aviation System Study

What will the study do?

- The Study will compile regional aviation data (operations, enplanements, aircraft storage)
- The study will identify airport/aviation needs for the region
- The study will compare MSP regional aviation system with other regional aviation systems
- The study will review state aviation statutes and recommend possible changes

How will the study impact the 2050 TPP?

- The Regional Aviation System Plan in the 2050 TPP will include updates from the study
- Study conclusions may identify impacts on how people access regional airports

Urban Freight Distribution Study

What will the study do?

- Will focus on trends in e-Commerce sales and distribution, and their implications and opportunities for urban planning
- Will assess impacts to regional VMT
- Will report trends in "last-mile" delivery systems including the use of new and emerging technologies
- Will examine trends in curb management practices and warehouse/distribution center locations; explore strategies for more efficient practices with less impact to VMT, energy use, and carbon emissions

How will the study impact the 2050 TPP?

- Will update the narrative about e-commerce in Freight Investment Direction
- May incorporate new strategies that encourage more efficient practices in urban freight distribution

Proposed 2023 UPWP Studies



Regional Solicitation Evaluation and Redesign

What will the study do?

- Evaluate project-level outcomes of past Regional Solicitation projects
- Consider changes to the Regional Solicitation to ensure that this funding is consistent with priorities in the new 2050 Development Guide and 2050 TPP

How will the study impact the 2050 TPP?

- Updates to the Overview and Finance chapters related to the Regional Solicitation
- Study to be completed after 2050 TPP, so the TPP will inform this study

Electric Charging Stations Regional Framework and Gaps Analysis

What will the study do?

- Develop goals and evaluation criteria for public charging
- Collect related GIS data layers including existing and planned charging, multifamily housing,
- Describe a variety of gaps in the public charging network
- Describe a variety of public charging strategies to fill those gaps

How will the study impact the 2050 TPP?

- A developed framework of shared principles to guide public charging investments in the Twin Cities
- A shared vision of a public charging ecosystem that will serve all the Twin Cities' residents

Congestion Management Process (CMP) Corridor Analysis Pilot Projects

What will the study do?

- Consultant will work with interested jurisdictions to perform CMP corridor analyses as outlined in the CMP Handbook
- Test the methodology to specific example corridors
- Refine methods and guidance as necessary through the CMP Advisory Committee

How will the study impact the 2050 TPP?

- CMP will be included in the 2050 TPP; refinement ensures regional vision is reflected in CMP

Discussion

Work Program and the 2050 TPP

- The 2023 UPWP will be coming for action in July 2022, all major studies must be identified in the document to begin work
- As additional items come up through the 2050 TPP development, Work Program items can be identified to begin after the TPP is adopted in 2024
- Are there major areas of concern or interest for 2023 that are not addressed in past, present, and proposed work program projects?