DEPARTMENT OF TRANSPORTATION

Advancing Equity in Capital Investment Decision-Making

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Transportation capital investment planning plays a crucial role in shaping infrastructure that supports community growth and well-being. While many studies have examined capital investment decisions within specific jurisdictions, there is limited understanding of how equity is defined, measured, and integrated into these processes more broadly. This research addresses this gap by investigating how equity is incorporated into transportation capital investment planning and decision making across Minnesota localities and Native Nations. The study includes a literature review, a statewide survey, and nine case studies reflecting diverse populations and practices. Findings shed light on the development of three key resources: (1) a set of successful practices for integrating equity into capital investment decisions, (2) a list of quantitative and qualitative equity metrics, and (3) a community engagement toolkit to support trust-building with historically underserved communities. These findings and tools aim to support local governments and Native Nations in improving transportation investment practices and advancing equity in infrastructure planning processes and outcomes.

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Final Report

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List of Abbreviations

Acronym	Definition
ACP	Areas of Concentrated Poverty
ACS	American Community Survey
ACTT	Advocacy Council for Tribal Transportation
ADA	Americans with Disability Act
AIRFA	American Indian Religious Freedom Act
ATNI	Affiliated Tribes of Northwest Indians
BIPOC	Black, Indigenous, and People of Color
CBA	Cost-Benefit Analysis
CBTF	Capital Budget Task Force
CEAM	City Engineers Association of Minnesota
COCs	Communities of Concern
CTEED	Center for Transportation, Equity, Decisions and Dollars
DBEs	Disadvantaged Business Enterprises
DEI	Diversity, Equity, and Inclusion
DOTs	Departments of Transportation
EJ	Environmental Justice
EPG	Equity Policy Group
ETC	Equitable Transportation Community
EUPRPD	Eastern U.P. Regional Planning & Development
FHWA	Federal Highway Administration
IAP2	International Association for Public Participation
IIJA	Infrastructure Investment and Jobs Act
J40	Justice40
LEP	Limited English Proficiency
LICs	Local Indian Councils
LOS	Level of Service
LRTP	Long-Range Transportation Plan
LRTTP	Long-Range Tribal Transportation Plan
MHRA	Minnesota Human Rights Act
MIC	Metropolitan Interstate Council
MnDOT	Minnesota Department of Transportation

MOU	Memorandum of Understanding
MPOs	Metropolitan Planning Organizations
NAGPRA	Native American Graves Protection and Repatriation Act
NMTF	Non-Motorized Transportation Facilities
OTA	Office of Tribal Affairs
PACS	Pedestrian and Cyclist Safety
PASER	Pavement Surface Evaluation and Rating
RAISE	Rebuilding American Infrastructure Sustainability and Equity
RBC	Reservation Business Committee
REI	Race, Equity, Inclusivity
RETF	Race and Equity Task Force
RPOs	Regional Planning Organizations
SR2S	Safe Routes to School
SS4A	Streets Safe for All
TAC	Technical Advisory Committee
TAP	Technical Advisory Panel
TAZ	Traffic Analysis Zone
TDM	Travel Demand Management
TERO	Tribal Employees Rights Ordinances
THPOs	Tribal Historic Preservation Officers
TIP	Transportation Improvement Program
TTIP	Tribal Transportation Improvement Program
TTPSF	Tribal Transportation Program Safety Funds
USDOT	U.S. Department of Transportation

Executive Summary

Transportation capital investment planning plays a vital role in shaping the future of transportation infrastructure that supports communities and fosters their growth and well-being. However, current transportation investment plans fall short on equity. Equity in transportation lacks a universal definition and is often associated with the allocation of benefits among social groups based on their capacity to pay and interpreted just as the study of accessibility. Equity objectives are often not specified and not prioritized. Most equity efforts focus on facility access but overlook existing disparities among population groups. Overall, these plans rarely involve community input. When they do, there is limited representation of vulnerable populations and inputs seldom influence final decisions.

This study investigates how, and to what extent, equity is incorporated in transportation capital investment planning and decision-making processes in Minnesota localities and Native Nations sharing geography with the state. Methods used in this research include a literature review, a statewide survey of current equity practices in transportation, and case studies of nine jurisdictions reflecting diverse populations and practices for integrating equity in transportation planning. The research identifies best practices to integrate equity in the transportation investment processes.

Survey Findings

Among the few responding Minnesota localities, a range of regulations, rules, and practices guide equity in transportation investment planning. Title VI of the Civil Rights Act of 1964 and the Americans with Disability Act (ADA) are the most mentioned by counties and cities, followed by comprehensive and active transportation plans in cities. While there is not shared definition of equity, common elements include referring to it in terms of *access to*, *accessibility to*, and *safety* of the transportation system. Most localities generally refer broadly to all users, with few referring to specific population groups such as underserved, overburdened, and vulnerable communities and people with disabilities. In contrast, Native Nations associate equity with sovereignty, sacred sites, and environmental protection.

Equity is occasionally considered when setting goals (cities) or allocating funding (counties) but is more often addressed during project design — especially for roads and pedestrian facilities. Public input is typically gathered at the design stage, more so by cities than counties, while Native Nations tend to seek input when prioritizing projects for funding. Cities and counties often engage business and community organizations, and Native Nations engage businesses and Tribal historic preservation officers.

Case Study Findings

Several policies guide jurisdictions in incorporating equity in their transportation investment planning. Some of them emerge as a response to federal funding requirements such as Title VI and the ADA, the most mentioned policies. While these policies address equality, they do not necessarily provide for equity. In transportation capital investment, equality-oriented laws provide uniform services to all people regardless of status or needs, and equity-oriented laws address historical and systemic disparities by allocating resources or services to address disparities for disadvantaged groups. Among

existing policies, the ADA comes closest to advancing equity, as its provisions address specific needs of certain disabilities to ensure the same access. Native Nations also discussed the availability of certain transportation funding programs to support equity in Tribal transportation planning including the Tribal Transportation Program Safety Funds, Safe Streets and Roads for All, and Safe Routes to School.

Other policies emerge from initiatives of local governments and Native Nations and then extend to transportation agencies. A crucial factor among these initiatives is the leadership position toward equity. In most cases, initiatives focus more on racial inequities; a few also emphasize income inequities. Common components across these initiatives include (i) providing diversity, equity, and inclusion staff training; (ii) increasing contracting opportunities for local businesses, particularly Disadvantaged Business Enterprises; (iii) engaging community members, through surveys and in-person events, to understand their transportation needs and identify projects that address them; (iv) emphasizing multi-modal transportation investments that support mobility for all individuals rather than just roadway investments that support vehicle travel; and (v) understanding the history of the communities with transportation projects.

Additional strategies for incorporating equity in transportation capital investment planning include using project prioritization frameworks that integrate equity-based criteria and/or criteria that reflect multimodal connectivity of the project with infrastructure condition; involving and empowering community members in the decision-making process; and performing equity evaluations of the processes that plan, select, and fund transportation investments.

Successful Practices in Incorporating Equity in Transportation Capital Investment Planning

The following practices should be adapted to each community's demographic, cultural, historical, and economic context recognizing that equity is not a one-size-fits-all approach. Effective implementation requires committed leadership and a strong understanding of the community and how people experience the transportation system and its barriers. These practices are emerging and continue to evolve through incremental changes.

1. Assessing internal policies and practices for equity: Review agency policies and guidelines, decision-making structures, public engagement procedures, and the processes for identifying, selecting, and funding transportation investments to identify systemic biases and barriers to equitable transportation planning. Provide equity training for staff at all levels in cultural competency and sensitivity, and identify and raise awareness of personal and institutional biases.
2. Conducting a community assessment: Identify community resources and assets to guide equitable transportation investment. Findings from it shape long-term transportation goals and capital investment planning, project implementation, education and community engagement strategies, and agencies-community relationships.
3. Identifying disadvantaged/underserved populations in past transportation decisions: Demographic factors used in identifying these populations (such as race and ethnicity, income level, disability status, age, vehicle access, and English proficiency) should be tailored to each community's context and needs.

4. Defining equity in transportation**:** A shared definition of equity is essential for building a common understanding, guiding staff efforts, aligning stakeholders, and preventing misinterpretation or inconsistent application of equity principles. It supports priority setting, process adaptation, performance measurement, and accountability.
5. Developing equity goals and objectives: Goals provide a general direction and long-term aims, while objectives translate them into actionable items. Objectives should follow a SMART approach (be specific, measurable, attainable, realistic, and timely).
6. Determining the process to incorporate equity in capital investment planning: Achieving equitable outcomes requires an equitable process. While each phase of the transportation capital investment planning process should integrate equity, real-word efforts are limited by staff capacity and budget constraints. Identified phases of the transportation capital investment process that incorporate equity include:
   - Identification of projects: Combining a data-driven approach with community engagement to ensure that planning aligns with community needs and priorities.
   - Prioritization of projects: The process should reflect the agency's goals and objectives, combine data-driven and qualitative assessment, and consider factors beyond traditional measures (community characteristics, user distribution, connectivity, and access).
   - Selection of projects for funding: Directly involving and empowering community members to be more active in transportation capital investment planning and decision-making through community representative bodies like community advisory committees or boards that assess and recommend projects to governing councils.
7. Defining metrics for equity analysis: These metrics, which serve to guide and monitor equity efforts, are context-sensitive and reflect each jurisdiction's demographics. Measures should be regularly monitored and adjusted to ensure their effectiveness and responsiveness to community needs.

Community Engagement Tool in Transportation Capital Investment Planning and Decision-Making

Building trust is critical when engaging communities in transportation capital investment processes, especially historically marginalized and disadvantaged groups. Without a sufficient level of trust, the engagement process draws the same participants and merely reinforces historical inequities. The tool include two components: assessing trust levels and building relationships with community members.

Assessing the trust level of community members, especially disadvantaged/underserved communities: Trust is one of the most critical factors in facilitating meaningful interactions between transportation agencies and community members. When it exists, community members are more likely to participate in meetings and share their authentic feedback and suggestions about projects. Based on the integrative framework, three key factors should be considered when assessing community trust levels:

1. Trust is relational. Clarify "trust in whom" (e.g., in the transportation agency, civil servants).
2. Community members' trust level depends on their perceived trustworthiness of agencies. Three dimensions shape the level of trustworthiness: (a) Ability: community trust in government agencies rests on how well the agency would get the job done. (b) Benevolence: community members'

perceived intention of transportation agencies. (c) Integrity: whether government agencies act consistently based on a set of principles.

3. There is a feedback loop between engagement outcomes and perceived trustworthiness of government agencies. It is critical to track and communicate the outcomes of engagement processes and the trust level of community members.

Transportation agencies can do these assessments through interviews or surveys and should collect demographic information to break down trust levels across different population subgroups. Demographic variables to collect are determined by each jurisdiction's definition of disadvantaged and underserved communities.

Guidelines and strategies for building relationships with and gathering input from disadvantaged or underserved communities: Two key principles underly these guidelines. First, officials need to go to the community rather than wait for the community to come to them. Second, activating the trust-building loop is key when building relationships with disadvantaged communities. Strategies include:

1. Start relationship-building from the assumption that there is an absence of trust or distrust.
2. Partner with community-based organizations serving disadvantaged communities. Search for rooted organizations and offer them fair compensation.
3. Build internal consensus and trust within the public agency to ensure consistency across staff members and over time.
4. Focus on small wins. Transportation agencies should first try small and achievable wins in the engagement process to activate and sustain the trust-building loop. For example, community members notice if key leaders and staff show up consistently and follow through on commitments. It is critical to pay attention to these details to rebuild trust gradually.
5. Start with interpersonal trust building to rebuild trust with disadvantaged communities. Agency leaders and key staff members should attend community-organized events, get to know community members on a personal level, and consistently show up to their meetings.
6. Make it fun and embed relationship-building in existing social events. If possible, set up small funding to support communities organizing events, without any formal goals set by the agency.
7. Conduct public meetings in disadvantaged/underserved communities, ensuring that participation is accessible and inclusive. Where feasible, offer financial compensation to participants in recognition of their time and efforts. Provide childcare and food and support community-owned businesses.

Special considerations with Native Nations: First, distinguish between Tribal governments, Indigenous communities, and their applicable jurisdiction. Meaningful engagement requires becoming familiar with the nuances surrounding Tribal government and jurisdictional boundaries. Understanding the difference between an Indigenous community and a Tribal government clarifies the level of engagement and resources required for a particular capital improvement project. Second, depending on the jurisdiction and authority of the location, Minnesota mandates regular consultation from state agencies when they conduct official business with Tribal governments. Localities, metropolitan planning organizations (MPOs), and regional planning organizations (RPOs) may choose to adopt practices similar to state mandates.

Chapter 1: Introduction

Transportation capital investment planning plays a vital role in shaping the infrastructure that supports communities and fosters their growth and well-being. Transportation agencies often undertake significant maintenance and construction projects over specific periods to advance their community goals. While numerous studies have examined the decision-making processes related to capital investments within specific jurisdictions, there remains a significant gap in understanding how equity considerations are incorporated into this process more broadly. There is a pressing need for systematic research on how equity is defined, measured, and integrated into transportation capital investment planning and decision-making processes, as well as on the challenges and opportunities that accompany these efforts.

This research study investigates how, and to what extent, equity is incorporated in transportation capital investment planning and decision-making processes in Minnesota localities and Native Nations sharing geography with the state. Findings from the research contributed to the development of a set of successful practices for transportation agencies for integrating equity in capital investment decision-making, a list of quantitative and qualitative equity metrics used in transportation capital investment, and a community engagement toolkit to support and advance equity efforts in transportation investments.

The report proceeds as follows. The second chapter reviews existing literature on equity in transportation capital investment, including definitions, approaches, and metrics used by US localities and Native Nations. The third chapter presents findings from a statewide survey of Minnesota localities and Native Nations regarding their current equity practices in transportation. The fourth chapter presents findings from nine case studies that further investigate the efforts taken to incorporate equity considerations in their capital investment planning and decision-making, the challenges encountered, and the strategies used to overcome them. The fifth chapter compiles a list of successful practices and quantitative and qualitative equity metrics commonly used for integrating equity in transportation capital investment. The last chapter introduces a community engagement toolkit designed to assess and build trust with communities that have been historically underserved, excluded, and harmed by past transportation investment decisions. The results of this analysis are intended to support localities and Native Nations in improving their planning and decision-making processes and thus advance equity and improve the quality of life for their communities.

Statement about terminology: In this study, we adopt the term Native Nations, in alignment with guidance provided by the Native Governance Center. Using *Nation* emphasizes the sovereignty and distinct governance systems of Indigenous communities, respecting and recognizing their unique status. However, some policies, programs, or official names of specific Native Nations may include the term *Tribe.* These references are retained throughout this document to reflect the original language used in those contexts.

Chapter 2: Review of Existing Literature

Transportation capital planning is a process that envisions the future of transportation infrastructure within a built environment of a region. The process helps identify transportation needs and funding strategies to meet those needs.

As part of the transportation planning, transportation agencies in localities and Native Nations typically develop short- and long-term programming documents that inform decision-making. Local transportation agencies develop a Transportation Improvement Program (TIP) and a Long-Range Transportation Plan (LRTP), and Native Nations develop a Tribal Transportation Improvement Program (TTIP) and a Long-Range Tribal Transportation Plan (LRTTP). The improvement program (TIPs and TTIPs) is the capital plan, a short-term programming document that lists at least four years of funded multi-modal transportation projects.[1] TIP projects include capital and non-capital surface transportation projects, bicycle and pedestrian facilities, and other transportation enhancements. The long-range plan (LRTPs and LRTTPs) is a longer vision document (20-year horizon) that reflects the application of programmatic transportation goals to project prioritization and includes financial components for project implementation (FHWA, 2023). Long-range plans serve as the foundation for the development of transportation improvement programs.

This section presents findings from studies examining the incorporation of equity in transportation planning across localities and Native Nations. This document presents their respective practices in separate subsections for two purposes. First, equity considerations differ across localities and Native Nations. While localities refer to equity as addressing disparities of communities of concern (primarily low-income and minority populations - typically not explicitly referring to Native populations), Native Nations refer to it as a concept rooted in Tribal sovereignty, Indigenous cultural practice and preservation, cooperative agreements, and issues specific to individual Nations. Second, Native Nations have sovereign status, distinguishing them from other ethnic minorities. Native Nations have been historically discriminated against and despite all the equity conversation being around communities in positions of disadvantage, Native Nations are not explicitly mentioned either in the literature or in the methodology's localities use for incorporating equity in their capital investment planning.

2.1 Equity in Transportation Capital Investment Planning across Localities

Existing studies have explored the inclusion of equity in transportation capital investment planning throughout different process stages. Some studies look early into the planning process and have analyzed equity goals and objectives that guide the different ways equity is approached in the planning process. Other studies analyzed equity lenses of the processes of project identification, prioritization,

[1] The TIP is federally mandated for all Metropolitan Planning Organizations (MPOs) in the US (49 USC § 5303).

and decision-making. Lastly, some studies have analyzed the stakeholders involved during the planning and decision-making processes.

Overall, equity lacks a universal definition. Throughout the literature, authors approach equity in transportation through various concepts, mostly related to vertical and horizontal equity (Bruzzone et al., 2023). Vertical equity is defined as social equity analyzing the allocation of benefits among social groups based on their capacity to pay, while horizontal equity is defined as spatial equity analyzing the distribution of benefits among geographical regions. Most transportation agencies are focused on vertical equity and often interpret it as the study of accessibility and cohesion, which affects how equity goals are included in the planning process.

The transportation plans generally fall short in the integration of equity. Manaugh et al., (2015) analyzed equity considerations in transportation plans in North America and found that equity objectives are often not clearly specified. In addition, when equity goals exist, these are not prioritized; environmental sustainability or congestion reduction goals receive higher priority than equity goals. Furthermore, appropriate equity measures are lacking. Most equity efforts focus on the distribution of outcomes, particularly on access to facilities, but ignore the disparities that exist between population groups (or the underlying circumstances that lead to access, such as car availability) (Bills et al., 2012; Golub & Martens, 2014; Karner et al., 2020; Lee et al., 2017; Litman, 2002; Martens et al., 2012).

Transportation agencies additionally use a variety of management systems and optimization methods for the identification and prioritization of transportation projects in these plans, which generally do not consider equity as part of the assessment. For instance, localities identify and prioritize roadway and bridge construction and maintenance projects based on pavement management systems, which take into consideration roadway conditions and traffic volumes, among others (Ahmed et al., 2017; Putman et al., 2016; Saha, 2023; Saha & Ksaibati, 2016; Shah et al., 2014; Torres-Machí et al., 2014). In Minnesota, for example, localities consider infrastructure condition ratings, safety needs, infrastructure age, infrastructure usage, and maintenance history when selecting roadway and bridge maintenance and construction projects to a large extent (Fonseca et al., 2002). Few localities considered geographic equity as an option, and to a lesser degree.

Even when these management systems are only a part of the decision-making process, equity is difficult to assess. Many transportation agencies use cost-benefit analysis (CBA) as a method to evaluate transportation projects. However, this approach focuses on the effects of a given project on the aggregate level of welfare and does not account for the effects on the levels of welfare of certain groups or areas (Di Ciommo & Shiftan, 2017). In addition, not all impacts can be monetized - especially socio-economic impacts[2] and may be ignored.

[2] Such as community cohesion, pedestrian safety, the ability to reach individuals or destinations, and the relocation of housing (Forkenbrock et al., 2001).

Lastly, scholars have explored the stakeholders involved in the planning and decision-making process in terms of representation and participation. On the one hand, government boards may not have an equitable representation of vulnerable populations. In many cases, population representation is correlated with racial and ethnic composition, which is only one dimension of public participation and representation (Luna, 2015; Sanchez, 2008). On the other hand, adopting capital budgeting documents does not always involve community input. Although transportation planning solicits public involvement, it is often pro forma, and findings are not likely to affect final decisions (Karner et al., 2020). According to Mathur (2019), capital improvement plans occur in a time-constrained setting with insufficient time for community engagement -typically with one or two opportunities for the public to comment on projects- and, therefore, receive minimal input from the community.

Even when public participation processes exist, marginalized groups may not be engaged. Older, male, longtime residents and homeowners are significantly more likely to be engaged in the public participation process (Einstein et al., 2019). Engaging marginalized groups in the transportation planning process is crucial to identifying community transportation needs and delivering transportation investments that positively impact them (Brown, 2022). Strategies to effectively engage marginalized groups take many forms, such as partnering with community-based organizations and using digital tools -surveys, interactive tools, and virtual meetings. In addition, there should be a continuous dialogue among agencies and communities before project plans are solidified.

2.1.1 Incorporation of Equity in Transportation Capital Investment Planning in Metropolitan Planning Organizations

Scholars have particularly examined how equity is incorporated into transportation planning processes across localities. Most current studies examine investment processes across numerous and typically larger local transportation agencies. Metropolitan Planning Organizations (MPOs) are referenced in studies, as in Williams et al. (2019) and Krapp et al. (2021), because regulations such as Title VI of the Civil Rights Act of 1964 and the Environmental Justice (EJ) executive order require them to conduct equity-based analyses on LRTPs and TIPs to demonstrate that transportation projects do not discriminate against people of color, low-income people, and other protected groups.

Williams et al. (2019) analyzed project prioritization approaches relevant to equity across 19 MPOs (mostly from Florida). The authors reviewed long-range transportation plans (LRTPs), transportation improvement programs (TIPs), equity analysis reports, and public involvement plans among others, and identified seven practices in equity-based project prioritization: (1) defining, profiling, and mapping communities of concern (COCs); (2) involving COCs in project prioritization processes to ensure that their needs are appropriately understood and addressed; (3) performing a qualitative assessment of individual projects; (4) performing a quantitative assessment of individual projects - using scoring and weighting; (5) using equity performance and targets for project prioritization; (6) assess equity evaluation measures through modeling, GIS, or scenario evaluations; and (7) performing an equity assessment of the distribution of total investments to evaluate all investments in the transportation system.

The authors pointed out several variables considered in identifying COCs and three approaches to identify disadvantaged areas (Williams et al., 2019). MPOs considered low-income and minority populations, elderly and disabled populations, Limited English Proficiency (LEP) populations, zero-vehicle households, female-headed households, single-parent households, and rent-burdened households as communities of concern. The three main approaches to identify disadvantaged areas or areas with higher proportions of COCs include (i) the population-weighted approach (weighted mean of a demographic variable in an area), (ii) the community-based approach (COCs identify their locations in the planning region), and the most commonly used, (iii) the threshold-based approach (regional thresholds based on available data[3]).

In terms of involving COCs in project prioritization processes, Williams et al. (2019) found that all MPOs perform some level of public involvement in project prioritization. However, few MPOs specifically target COCs as part of the process. MPOs use several strategies to connect with COCs, including inviting representatives of COCs to prioritization meetings and conducting focus groups and open houses with materials translated into several languages. MPOs also work with community-based organizations and, in some cases, provide them with funding to hold engagement activities and workshops targeted to COCs.

Williams et al. (2019)'s work led the Center for Transportation, Equity, Decisions and Dollars (CTEED) to develop a transportation equity toolkit for MPOs, transportation agencies, and communities (Williams et al., 2021). This tool aims to help address the inequities in the transportation system for underserved communities. The authors identified key criteria to use in evaluating and ranking transportation projects based on their contributions to addressing the transportation needs of disadvantaged populations (e.g., safety and emergency evacuation, mobility, affordability, health and environment, burdens, and access to opportunity - employment, education, and community services), and developed a screening tool and scoring system.

Krapp et al. (2021) explored the Transportation Improvement Programs of the MPOs that serve the 40 largest US urbanized areas. The authors found that 30 MPOs had a prioritization process for some funding sources, and 24 of them included equity-related criteria in their methodologies. The equity-related criteria were categorized into six types (see Table 2.1).

[3] Thresholds based on rates, standard deviations, z-scores, percentages, ratios, or densities. Available data such census tract data, American Community Survey (ACS) data, and Traffic Analysis Zone (TAZ) data.

Table 2.1 Categorization of Metropolitan Planning Organization equity criteria

Type	Description	Points Awarded	Limitations
Location burdens-based (2)	Considers location of a project within COCs as detrimental	Points awarded if project is not located in these areas or if they integrate measures to mitigate harm	Assumes that burdens are intrinsic features of transportation projects
Location benefit-based (16)	Considers location of a project within COCs as beneficial	Points awarded if project is located in (or adjacent to) these areas, some scale scoring according to concentration of COC	Confers access to benefits due to more/improved transportation. However, geographic access does not necessarily reflect the ability to use it.
Impacts-based (10)	Assess potential benefits and burdens of a project on COCs	Awards more points to projects with positive effects Might subtract points from projects with negative effects	Some require project sponsor to provide an assessment with increases subjectivity
Access to destinations-Based (5)	Considers accessibility improvements to COCs	Awards more points to projects that provide greater increase in access to key destinations	Some have unclear guidelines of how access is calculated
User-based (3)	Consider who will use the proposed project	Awards more points when more people from COCs use the facility	Requires sophisticated tools (travel demand models) that are costly. Models can be imprecise and limited by assumptions
Community-engagement based (2)	Considers how project sponsors involved COCs before/during a project's development	Awards more points to projects that show stronger community participation efforts	Information provided by project sponsors might not accurately reflect COCs involvement and perspectives.

Note: *Numbers in parentheses in the first column reflect the number of MPOs using each type of criteria. COCs: communities of concern.* ***Source:*** *(Krapp et al., 2021).*

Overall, the authors found that most of these MPOs used a simple definition of equity that only verified the proximity of transportation investments to locations where communities of concern were concentrated (Krapp et al., 2021). In addition, the criteria currently used do not consider benefits, burdens, and engagement simultaneously, which limits a holistic assessment of projects. Regarding populations identified as communities of concern, most MPOs include only low-income people and people of color. At the same time, some also include other groups such as people with disabilities and older adults. However, these are mostly identified in a dichotomous way, based on whether a

neighborhood had high concentrations of the target populations which limits the understanding of project effects on different population groups.

Karner (2016) analyzed equity analysis practices in eight MPOs in California's San Joaquin Valley representing small and rural regions. The author focused on these agencies as they do not possess the staff or financial resources to implement more advanced models, methods, or data. Findings revealed that three of the analyzed MPOs have explicitly defined environmental justice (EJ) communities and some established thresholds for EJ communities that do not fit the characteristics of the community. In addition, MPOs use qualitative map-based assessments and proximity-based metrics to measure benefits, but these may be misleading (e.g., people traveling within a zone do not necessarily reflect the demographics of a zone). Other approaches and metrics could be used instead to measure benefits such as origin-destination tables disaggregated by income and automobile ownership. Lastly, the study highlights the need to consider equity across multiple dimensions instead of using a single low-income category and developing approaches that illuminate disparities between automobile and transit performance.

2.1.2 Other Efforts to Incorporate Equity in Capital Investment Planning

Localities are expanding their efforts to promote equity in their locality-wide investments, beyond transportation planning. A case in point is Baltimore City, which employed an equity-focused approach to analyze its Capital Improvement Plan (CIP) (The Baltimore Neighborhood Indicators Alliance, 2019). The analysis included several improvement projects in the city[4] in the 2014 to 2020 period and considered four overarching areas of equity, including structural (considers historic advantages and disadvantages), procedural (considers plan year), distributional (fairness in terms of race and income), and transgenerational equity (fairness for future generations).

The results of the equity analysis in Baltimore City suggest advancement in equitable allocations as well as the inclusion of other metrics into the decision-making to advance equitable CIP allocations. In terms of structural equity, the greatest increases in per capita CIP allocation occurred within communities with between 4 and 14.9 percent vacant buildings. Regarding procedural equity, neighborhoods with plans adopted more recently than 2015 had a higher per capita allocation than those with plans adopted before 2015. In terms of distributional equity, CIP allocation progressed towards a more equal distribution over time, with a more equal spending level between areas with the highest and lowest rates of the African American population,[5] however middle-income neighborhoods had more than double the allocation occurring in the lowest median income neighborhoods. Lastly, in terms of

[4] Projects included bridges, major road reconstructions (excluding resurfacing), parks, recreation centers, playgrounds, athletic fields, pumping stations, reservoir improvements, municipal building (fire stations, police stations, city office buildings, libraries, etc.), cultural organizations receiving City General Obligation bonds, the City's landfill and solid waste transfer stations, among others.

[5] This allocation, however, does not overcome years of unequal investments.

transgenerational equity, per capita CIP allocations have been greatest in communities with the lowest percentage of children under five.

2.2 Equity in Transportation Capital Investment Planning across Native Nations

For Native Nations, equity is a concept intertwined with Tribal sovereignty, Indigenous cultural practices and preservation, cooperative agreements, and issues specific to individual Nations. First, concepts of Indigenous sovereignty emphasize it as a legal concept and an intellectual construct that empowers Indigenous identities and ideas outside of the Western nation-state (Laluk et al., 2022). Second, Indigenous cultural preservation strives to preserve each Nation's way of life while planning for future transportation infrastructure. This includes identifying and protecting the places of religious and cultural significance to Native Nations. Third, coordination and collaboration are highlighted with tribal staff from other departments, Tribal Council, and community members as well as in building and maintaining intergovernmental collaboration with federal, state, regional, and local units of government.

Tribal equity is also identified in issues that are specific to individual Nations. Although transportation planning goals and priorities differ across Nations, these reflect the values and principles that are central to supporting Tribal quality of life. Some of the common transportation priorities identified in the literature are related to safety, cultural heritage, public health, and economic development (USDOT Volpe Center, 2021).

Tribal equity is demonstrated in several aspects of the transportation planning process. Nations exercise their sovereignty and self-governance by adopting resolutions, codes, ordinances, and statutes to guide and manage construction on Reservation lands. Building permits, environmental protection codes, and funding priorities are areas that Nations use to shape their CIP. One example is the establishment of Tribal Employees Rights Ordinances (TERO), which promote the fair employment of Native Americans on or near the Reservation and facilitate the development of a skilled workforce (NCAI, 2013). Six out of the 11 Native Nations sharing geography with Minnesota, including the Mille Lacs Band of Ojibwe, have designated Tribal Employment Rights Offices to ensure equitable opportunities for employment and contracting with businesses in each Nation (Mille Lacs Band of Ojibwe Statutes - Chapter 4, Title 15; MnDOT, 2023c).

The Sault Ste. Marie Tribe of Chippewa and the Mille Lacs Band of Ojibwe illustrate the inclusion of Native equity in the transportation planning process. According to the USDOT Volpe Center (2021), the Sault Ste. Marie Tribe of Chippewa developed its LRTP which aligned with the Nation's Strategic Master plan and Tribal codes and ordinances. The Nation published a Long-Range Transportation and Capital Improvement Plan in 2018 that covers current and future social, safety, health, economic development, tourism, and employment needs (Hoffman & Sawyers, 2018). The Nation has adopted several strategies to meet these needs focusing on the equitable distribution of resources. First, the nation's transportation department collaborated with the Environmental Department to provide on-site ArcGIS training. In addition, the department entered into a cooperative agreement with the Eastern U.P.

Regional Planning & Development (EUPRPD) to create a Tribal GIS System that includes Tribal Lands and Trust Parcels for the use of Tribal departments and programs.

Second, the Nation developed priorities and a scoring system to prioritize their transportation needs. The Nation's priorities are generated from the Nation's membership and leadership, and later shared with external stakeholders including BIA, Michigan DOT, contract engineers, and local officials as necessary (Hoffman & Sawyers, 2018). Each project considered for funding is analyzed in terms of safety, community benefits, alternative transportation, and cooperative agreements (rated on a scale from 1 to 6). The prioritization happens in three steps of the process: (1) Project Identification, (2) Project Screening, and (3) Project Evaluation and Technical Review. The Tribe also utilized a Pavement Surface Evaluation and Rating (PASER) system and Roadsoft condition rating system.

Third, the Nation's Transportation Department facilitated extensive public involvement processes to ensure citizens were provided the opportunity to guide the development. After the Plan was presented, it was disseminated to the public for their comments via (i) an official Public Notice advertised in the Win Awenen Nisitotung - the tribal newspaper, (ii) tribal email, and (iii) printed copies distributed throughout the tribal seven-county service area and made available at each tribal Health and Human Services Facility or Community Centers. The Plan was available to the community for three weeks.

The Mille Lacs Band of Ojibwe has also developed strategies to ensure that Native equity is embedded in their and other agencies' transportation plans. For instance, this Nation has established a Planning Department that works with local, state, and federal jurisdictions to advocate for the Nation's interests (Mille Lacs Band of Ojibwe, 2023). The establishment of this Department advances equity in transportation investment as it positions the Nation to exert project management oversight of a diverse range of government-funded projects, coupled with representation on various boards,[6] which ensures that the specific transportation needs of the community are addressed and that their Indigenous knowledge, culture, and practices are considered. The Nation's Planning Department identifies transportation projects important to the Nation and communicates those interests to other transportation agencies through regional and state boards.

The Mille Lacs Band of Ojibwe also preserves and protects its cultural interests. They conduct cultural surveys by Tribal statute to identify and protect historical, archeological, spiritual or religious assets that belong to their Nation (Mille Lacs Band of Ojibwe Statutes - Chapter 1, Subchapter 6, Title 10). These surveys influence capital investment planning as they identify sacred sites, burial grounds, and other culturally sensitive areas that preclude and supersede development or adjust development planning altogether. The data collected by these surveys is considered private and it is protected by Tribal law

[6] Planning Department members represent the Nation in boards that include: MnDOT District I Transportation Advisory Board, Lake Mille Lacs Scenic Byway Committee, East Central Regional Development Commission Board, MnDOT Pedestrian and Bicyclist Taskforce, Advocacy Council for Tribal Transportation, and MnDOT Transportation Alternative Program Scoring Committee, among others.

and the Native American Graves Protection and Repatriation Act (NAGPRA[7]). In addition, Tribal Historic Preservation Officers (THPOs)[8] or similar officials attend CIP meetings to mitigate cultural concerns that may impact Tribal equity.

2.2.1 Consultation and Tribal Capital Investment Planning

In the planning of transportation investments, it is crucial for federal, state, regional, and local units of government to consult with Native Nations. Tribal consultation may vary across government units but generally operates with a shared goal of collaborating with Native governments in the transportation planning process. Tribal consultation requires an understanding of the highly specialized legal relationship between Native Nations and the US Government,[9] including legislation and administrative requirements (e.g., memorandums of understanding -MOU to enhance roadway improvements).

At the federal level, the FHWA's Tribal Transportation Planning Module on Tribal Consultation highlights the importance of federally mandated consultation with Native Nations regarding actions affecting Native lands ensuring that they participate in planning and decision-making. The module explains early notification and structured consultation processes to be essential due to the historical complexities between Native Nations and the US Government. In addition, successful government-to-government relationships depend on effectively addressing communication, coordination, and cooperation throughout the project timeline. Communication involves information sharing, coordination includes organizing tasks, and cooperation entails collaborative planning and project delivery agreements (USDOT, 2017).

Examples of Tribal consultation in the statewide transportation planning process also exist. In New Mexico, Native Nations are encouraged to identify Tribal roads to include in the state's inventory and funding processes. In South Dakota, the focus is on Tribal projects and deeper community engagement. Lastly, in Wisconsin, the transportation leaders from the DOT and Native Nations discuss transportation priorities and develop a matrix of transportation improvements based on Tribal priorities (USDOT Volpe Center, 2021).

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[7] The Native American Graves Protection and Repatriation Act (NAGPRA) was passed in 1990, "to redress the dark history of genocide and appropriation… As of 1990, federal agencies and museums across the country house[d] extensive collections of Native American ancestral human remains, funerary objects, sacred objects, and objects of cultural patrimony… NAGPRA is specifically intended to protect the human rights of Native Peoples through a statutory process of repatriation for items" (Laluk et al., 2022).

[8] THPOs ensures compliance with Section 106 of the National Historic Preservation Act. THPOs enable Tribes to shape federal and state policies in ways that are more sensitive to Indigenous ethics, values, and methods of protecting and preserving cultural heritage (Laluk et al., 2022). THPOs engage governments, agencies, and businesses to ensure that NAGPRA is enforced and to ensure that the views of a Native Nation are represented in areas of cultural heritage.

[9] For instance the United States Government (federal) has consistently recognized this specialization through executive orders and regulations (Bush, 2000, 2004; Clinton, 1994; National Archives, 2004, 2023).

In Minnesota, the law requires direct government-to-government consultation with specific Nations if a policy or action taken by a state Department affects them so that the specific needs of a Nation are considered.[10] Minnesota Statute 10.65 defines the consultation process as the direct and interactive involvement of the Minnesota Tribal governments in the development of policy on matters that have Tribal implications (Minn. Stat. § 10.65). According to the statute, consultation is the proactive, affirmative process of identifying and seeking input from appropriate Tribal governments and considering their interest as a necessary and integral part of the decision-making process. The burden to initiate a consultation is on the affected Department.

At the department level, the Minnesota Department of Transportation (MnDOT) "requires the principles of the Minnesota Tribal Nations policy to be considered at all phases of planning and project development in the establishment, development, operation, and maintenance of a comprehensive, integrated, and connected multimodal transportation system." This entails a consultation process between MnDOT and Tribal Nations that requires the recognition of Tribal sovereignty, appointing Tribal liaisons,[11] and regularly engaging with Tribal governments (Minn. Stat. § 10.65; Dayton, 2013; Walz, 2019).

MnDOT, through its Office of Tribal Affairs (OTA), is committed to work with Native Nations. This joint work is based on consultation, collaboration, and coordination (MnDOT, 2023b). In line with the International Association for Public Participation (IAP2) spectrum of engagement, consultation is government-to-government communication about a proposed or contemplated decision to secure meaningful tribal input and involvement in the decision-making process, and advise the tribe of the final decision and provide an explanation. Collaboration refers to all parties involved in carrying out planning and project development working together to achieve common goals or objectives. Lastly, coordination refers to each party sharing and comparing transportation plans, programs, projects, and schedules with related plans, programs, projects, and schedules of the other parties; and adjusting their schedules to optimize the efficient and consistent delivery of transportation projects and services. These three must happen in a timely manner (IAP2, 2018).

The OTA has developed programs that demonstrate how consultation, collaboration, and coordination work in practice. For instance, Tribal governments and MnDOT created the Dakota and Ojibwe Language Signing Program to provide dual language displays for English and Ojibwe or Dakota on roads and highways that traverse Native lands (MnDOT, 2023a). Historically, Native languages and religions were outlawed in the United States through the process of assimilation (Deloria, 2020) and with the American Indian Religious Freedom Act (AIRFA) (1978) Indigenous peoples could practice their beliefs without

[10] Additionally, coordination with the Minnesota Indian Affairs Council or the Minnesota Chippewa Tribe is encouraged. This, however, does not satisfy individual consultation.

[11] The MnDOT tribal liaison facilitates meetings, negotiates intergovernmental agreements and helps reconcile differences between MnDOT and Tribal Governments. The MnDOT tribal liaison also works to coordinate with all MnDOT regions and other agency tribal liaisons to ensure constant and effective communication with the tribes in Minnesota (MnDOT, 2023b).

government interference. These programs enhance the practice and preservation of Indigenous culture by contributing to the language revitalization efforts of Native Nations and informing all people of the historic pre-settlement names of geographic features on Native Nations.

The naming of these sites holds significant value and representation. As reflected by (Deloria, 2023), “American Indians hold their lands—places—as having the highest possible meaning, and all their statements are made with this reference point in mind”. Furthermore, American Indian religious traditions are “taken directly from the world around them, from their relationships with other forms of life.” The fact that these sites are being named Indigenously brings equity full circle due to the initial renaming of these sites through colonization. Therefore, equity in this context is represented in the name, location, and recirculation of the entire process.

Figure 2.1 presents an example of a sign in White Earth Nation. Signs are displayed with the Native name on top and the English name below it while meeting signage requirements. The Native word may not translate to the English word directly and it may carry its own meaning, history, and morphology. In the example provided, Gaajikajiwe Gamaag in the Ojibwe language more closely translates to “lake enclosed by steep bluff banks.”

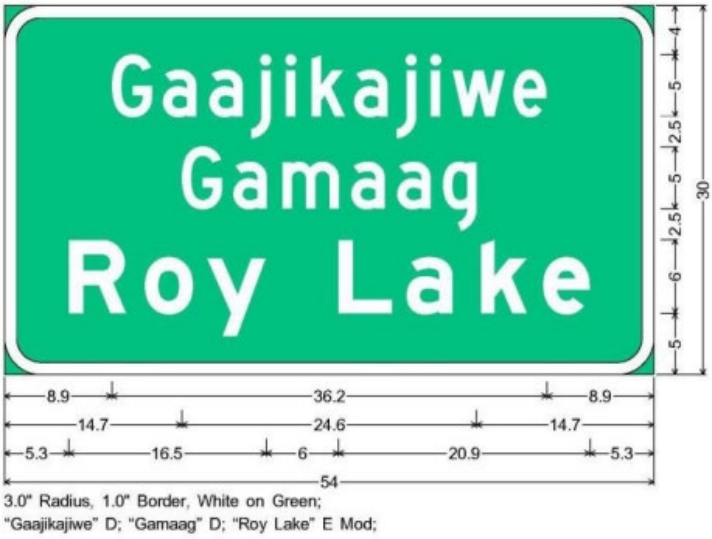


Figure 2.1 Example of a sign in Ojibwe Language on White Earth Nation

Some examples of Tribal consultation in the transportation planning process of MPOs and localities exist at the local level (USDOT Volpe Center, 2021). In Washington state, for instance, the Nisqually Tribe and the Confederated Tribes of the Chehalis Reservation participate as members of the Thurston Regional Planning Council (TRPC). TRPC collects demographic data on behalf of members to inform development and ensures all products (e.g., reports, maps, etc.) display the Reservations. In addition, TRPC pools funds that are allocated to smaller Nations so that they do not have to compete with larger Nations. Tribal involvement in regional transportation planning has contributed to developing several transportation projects focused on Native priorities. Similarly, in Colorado, the Southern Ute Indian

Tribe Tribal Council, the town of Ignacio, La Plata County, and the Colorado DOT entered into a collaborative agreement to develop the Ignacio Area corridor Access Plan, including strategies to support freight mobility and pedestrian safety.

In addition to the involvement of federal, state, and local agencies in the consultation process, Native Nations have taken proactive measures to engage with these governments and thus ensure relevance of transportation projects to their citizens. For instance, The Affiliated Tribes of Northwest Indians (ATNI) provide an example of active engagement with the Federal government, as they have consistently advocated for their tribal transportation requirements and concerns within federal legislation, which influenced the transportation advancement (Winchell & Rolland, 2009). This engagement has resulted in the identification of transportation priorities through community survey[12] for adequate BIA funding. These priorities for road maintenance in the Great Plain, Rocky Mountain, and Northwest Regions, specifically include critical areas such as snow and ice control, interior pavement sealing, pavement maintenance, gravel maintenance, and remedial work on improved earth roads (*Assessing the Transportation Needs of Tribes, Federal Land Management Agencies, and U.S. Territories*, 2020).

Even though these former examples show progress, meaningful engagement of Native Nations in regional transportation planning continues to be underscored. Factors that are crucial for a meaningful engagement include involving Native Nations from the beginning, demonstrating respect for each Nation's sovereignty, understanding cultural differences, and developing collaborative approaches (KFH Group, Inc., 2022; NCAI, 2013; WITPAC, 2015).[13] Additionally, it is crucial to engage each Native Nation independently since their goals, aspirations, and needs vary.

Lastly, it is important to understand that Tribal transportation planning does not stop at the reservation boundary, and it is essential to plan with this broader perspective in mind. Most Native Nations have members living off-Reservation and the number of Native-owned facilities off-Reservation lands is increasing.[14] Therefore, transportation planning requires a multi-jurisdictional approach, for which consultation, collaboration, and coordination between regional and local transportation units and Native Nations are crucial. A factor that could facilitate this multi-jurisdictional approach is engaging

[12] BIA-approved Road Maintenance Survey generated by the Oglala Sioux Tribe and the Great Plains Region in the Tribal-Interior Budget Council (*Assessing the Transportation Needs of Tribes, Federal Land Management Agencies, and U.S. Territories*, 2020).

[13] In Minnesota, the OTA issued the "Indian Country Guidance, Guidance for MnDOT's work in Indian Country" that details the consultation process (Office of Tribal Affairs, 2020).

[14] These Native-owned facilities serve Natives and non-Natives peoples by providing services such as homeless prevention, harm reduction, and cultural and spiritual services. Some examples in Minnesota include The Red Lake Band of Chippewa that operates a Red Lake Embassy and recently built a living facility in Minneapolis; the Mille Lacs Band of Ojibwe that acquired the Intercontinental St. Paul-Riverfront hotel in St. Paul in 2015 (St. Anthony, 2015); and the White Earth Nation that operates an urban facility in Minneapolis.

Native Nations leaders and Local Indian Councils (LICs).[15] Active engagement of Native Nations in the transportation planning process contributes to providing transportation options to Native community members off-Reservation and that these needs are actively considered when projects are funded or prioritized.

2.3 Influence of Justice 40 Initiative for Equity in Capital Investment Planning

The Justice 40 (J40) initiative is an emerging framework that can assist state Departments of Transportation (DOTs) and MPOs to embed equity in their capital investment planning. Through this initiative, the Federal Government has set a target to ensure that 40 percent of the total advantages from specific Federal investments are directed toward marginalized, underserved, and pollution-affected communities (The White House, 2022). In terms of transportation, the United States Department of Transportation (USDOT), views J40 as an opportunity to tackle historic disparities in transportation infrastructure and public services. USDOT's main goals through this initiative are to enhance access to resources and quality of life in communities in every state and territory in the country, while also connecting Americans to good-paying jobs and addressing climate change, and there is a focus on increasing affordable transportation options (USDOT, 2023c). J40 shifts the priority from environmental sustainability or congestion reduction (as identified in the literature) to equity and uses previous measures as a means to achieve the ultimate goal of equity.

The USDOT equips state DOTs and MPOs with tools and funding through J40 and Equitable Transportation Community (ETC) Explorer[16] to choose projects that address transportation needs, promote equity, and engage communities meaningfully. J40 supports these entities in identifying and prioritizing projects for communities facing transportation inequalities, including rural, suburban, tribal, and urban areas lacking affordable, reliable, and safe transportation access (USDOT, 2023e). The ETC Explorer is a dynamic tool that helps communities nationwide understand how transportation investments can address or alleviate their unique burdens. The tool uses 2020 Census Tracts and data to assess the collective impact that communities endure due to insufficient investment in transportation, focusing on five components as defined in Table 2.2 (USDOT, 2023b).

[15] Native Nations may encourage entities working with Community Impact Plans located near a Native community to engage in consultation with them and these councils. For example, the Leech Lake Band of Ojibwe has Local Indian Councils (LICs) in each of the Nation's communities and one in the Twin Cities.
[16] This tools contributes to the enhancement of the Council on Environmental Quality (CEQ)'s Climate & Economic Justice Screening Tool (CEJST) as it ensures that the advantages derived from the DOT's investments are effectively addressing the transportation-related sources of inequality.

Table 2.2 Transportation Community Explorer components

Component	Description
Transportation Insecurity	**Definition:** It happens when people cannot regularly, reliably, and safely access essential destinations in their daily lives. **Metrics:** Transportation access, cost burden, and safety. **Impacts:** Research suggests it is a key contributor to ongoing poverty.
Climate and Disaster Risk Burden	**Definition:** Potential adverse impacts on the transportation system due to factors like sea level rise, precipitation changes, extreme weather, and heat. **Metrics:** Sea level rise, precipitation changes, extreme weather events, and heat levels, all impacting transportation and accessibility. Anticipated changes in extreme weather relate to event frequency and severity. Annualized disaster losses quantify the financial aspect, and impervious surfaces. **Impacts:** Affects the transportation system performance, difficult access to critical destinations (e.g., homes, schools, stores, and medical appointments), financial losses, and other adverse consequences such as heat islands, compromised air quality, and heightened health risks, especially in communities already grappling with environmental challenges.
Environmental Burden	**Definitions:** Evaluates factors like pollution, hazardous facility exposure, water pollution, and the built environment, which can lead to adverse consequences such as health disparities and economic hardship. **Metrics:** Ozone levels, PM2.5 levels, diesel particulate matter levels, air toxics cancer risk, proximity to hazardous sites and toxic release sites, and the presence of pre-1980 housing, among others. **Impacts:** Communities with higher scores experience greater environmental burdens, including elevated air pollution, noise pollution, and potential exposure to toxic substances, which can have significant health and quality of life implications. Additionally, issues like proximity to high-volume roads, railways, airports, ports, and impaired surface water further contribute to the overall environmental burden.
Health Vulnerability	**Definition:** This category aims to gauge the health risks and vulnerabilities that communities face due to their environmental and lifestyle conditions. **Metrics:** Higher asthma prevalence, cancer prevalence, high blood pressure prevalence, diabetes prevalence, and low mental health prevalence in communities with elevated scores. These health issues are associated with factors such as exposure to pollutants like PM2.5, ozone, and diesel particulate matter, as well as long-term exposure to pollution, a lack of active transportation options, and the potential negative impact of pollution on mental well-being. **Impacts:** Increased occurrence of health conditions linked to exposure to air, noise, and water pollution, as well as lifestyle factors like limited walkability, car dependency, and long commute times.
Social Vulnerability	**Definition:** Encompasses a range of socioeconomic factors significantly affecting quality of life, and their access to opportunities and resources including poverty, education, employment, housing, and access to essential services. **Metrics:** income levels, education, employment, housing stability, health insurance coverage, internet access, income inequality, and the demographics of the population, such as age, disability, and language proficiency.

Component	Description
	Impacts: Reduced quality of life and limited access to opportunities that lead to inequality.

Source: *(USDOT, 2023b).*

USDOT's flexible non-federal matching for Justice40-covered programs in Native Nations

The USDOT provides Native Nations with flexibility in terms of non-federal matching requirements for specific programs falling under the umbrella of the Justice40 initiative. Through this framework, Native Nations may have an opportunity to obtain additional funding if they capitalize in the consultation processes with state DOTs and MPOs (USDOT, 2023d).

Chapter 3: Survey of Minnesota Localities and Native Nations

3.1 Survey Methodology

The research team designed survey questionnaires to identify localities and Native Nations currently including equity considerations in their capital investment decision-making and gather information about how they are including it. The research team developed two questionnaires, one distributed across localities, MPOs, and regional planning organizations (RPOs) in Minnesota (see survey questionnaire in Appendix A), and another distributed to the 11 Native Nations that share geography with Minnesota (see survey questionnaire in Appendix B).

The survey questionnaires included several questions to capture which regulations and policies enable the incorporation of equity considerations in transportation investment planning, how equity is defined, and how equity considerations are included at different stages of the planning process (setting goals and objectives, project identification, project prioritization, project selection, project funding allocation, and project design) and the transportation areas for which it was included (e.g., roadways, bridges, transit, pedestrian and bicycle facilities). The survey also requested information on which stakeholders are involved in the planning process and how public feedback is included in it. Both questionnaires also included questions to capture perceptions of the collaboration between Native Nations and localities. Overall, the questionnaires reflected the differences in equity conceptions between localities and Native Nations (found in the literature review), but the questions were nearly identical for both surveys.

The research team used Qualtrics[17] to make both surveys available online. The surveys were available to respondents on January 9, 2024, and closed on February 29, 2024. The surveys were distributed through several channels and members of the Technical Advisory Panel (TAP) helped amplify the survey's reach. The survey for localities was distributed through the LRRB list server, the City Engineers Association of Minnesota (CEAM) list server, and the LRRB newsletter. An initial email was sent to communicate the availability of the survey and request the participation of local officials. A reminder email was sent two weeks after the first email. This survey reached more than 3,000 transportation professionals across cities, counties, MPOs, and RPOs.[18]

The survey for Native Nations was presented at the quarterly meeting of the Advocacy Council for Tribal Transportation (ACTT) and distributed through the ACTT list server. An initial email was sent to communicate the availability of the survey and request the participation of Tribal officials. A reminder email was sent two weeks after the first email, and phone calls were made to encourage the

[17] A survey software that enables data collection and management.
[18] The LRRB list server has 3,100 subscribers and the CEAM list server has 247 subscribers.

participation of Tribal officials. This survey reached 16 Tribal transportation professionals across Native Nations sharing geography with Minnesota.

3.2 Survey Findings

Among MN localities that responded to the survey, there are a variety of regulations, rules, and practices in place for the inclusion of equity considerations in their transportation investment planning. Title VI and the Americans with Disabilities Act (ADA) plan were the most mentioned by counties and cities. Furthermore, respondent cities also refer to the city's comprehensive plan and the bicycle and pedestrian plan.

Although there is not a common definition of equity in transportation investment planning among the respondent localities, there are some common elements across the definitions localities provided. First, in most cases, localities refer to equity in terms of access to, accessibility to, and safety of the transportation system. Second, localities generally refer to all transportation system users. Few localities refer to specific population groups, which include underserved, overburdened, and vulnerable communities and people with disabilities. For respondent Native Nations, equity is related to sovereignty, sacred sites, and environmental protection.

In transportation investment planning, equity is more often incorporated in the planning of roadways and pedestrian facilities among respondent localities and Native Nations. In addition, equity considerations are incorporated mainly in project design. Although respondent cities also consider equity for setting goals and objectives. Among respondent counties, funding allocation was the stage with the least mentions of equity considerations for transit, bicycle facilities, and bridges, but ranked higher for roadways.

Stakeholders involved in transportation investment planning, and the extent of their involvement, vary across counties, cities, and Native Nations but they all tend to involve MnDOT. Localities also tend to involve localities similar to them: more counties involve counties, and more cities involve cities. Nations tend to also involve USDOT and counties.

Most city respondents and some county respondents engage community members in their transportation investment planning. Localities engage business organizations and community organizations. Respondent Native Nations also engage Tribal members in their transportation investment planning mainly business organizations and tribal historic preservation officers. The public feedback received is incorporated mostly in project design, and more by cities than counties and in project prioritization for Native Nations.

3.2.1 Findings from Localities

The localities survey had a total of 26 responses that were totally or partially completed (see Appendix C for the list of counties and cities that filled out the survey).[19] Of these responses, 11 were from county representatives (8 identifiable and 3 anonymous), 14 from city representatives (11 identifiable and 3 anonymous), and one representing the state of Minnesota (*other*). MPOs or RPOs did not respond to the survey. Figure 3.1 shows the counties and cities that responded to the survey.

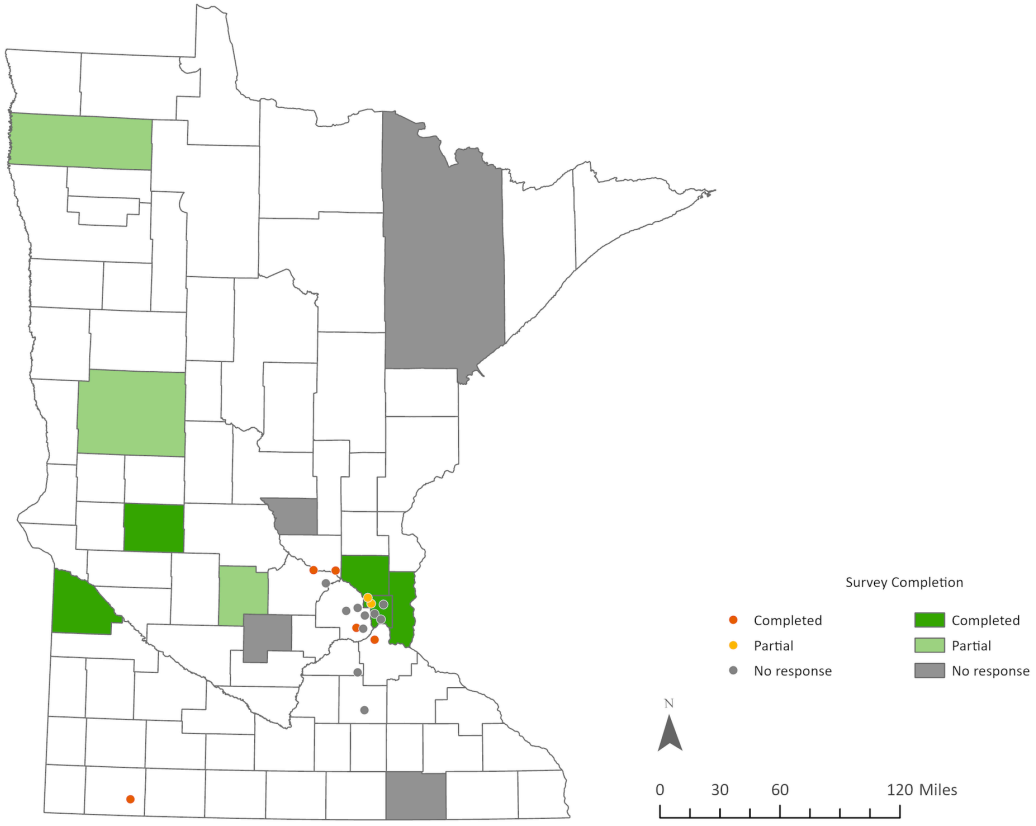


Figure 3.1 Minnesota counties and cities that responded to the survey

Policies in place for the inclusion of equity considerations in transportation investment planning

Localities that responded to the survey have a wide variety of regulations, rules, and practices in place for the inclusion of equity considerations in their transportation investment planning. At the county level, respondents mostly referred to one regulation or policy. The ones mentioned include a Title VI Plan (Washington County), the Complete Streets Policy (Otter Tail), and the Advancing Racial Equity

[19] The locality survey had a total of 54 responses, but 28 of them were empty.

Policy (Ramsey County). Only one county representative mentioned not having an equity policy and treating all residents equally (Marshall County). Representatives from four counties mentioned not having any (Anoka, Meeker, Pope, and one anonymous). For counties, these are mainly included in the county's capital improvement plan (four out of seven respondents), the transportation improvement plan (three out of seven respondents), and in the long-range transportation plan (two out of seven respondents).

At the city level, respondents most commonly referred to at least two plans and less to regulations or policies. The plans mentioned include the city's comprehensive plan (Monticello, New Brighton, and two anonymous), the bicycle and pedestrian plan (Eagan, Edina, and one anonymous), the ADA transition plan (Monticello), the capital improvement plan (one anonymous), and the Race, Equity, Inclusivity (REI) plan (Eagan). Policies and regulations mentioned by cities include Title VI (Worthington), the Living Streets Policy and Zoning Code (New Brighton), and the Constitution (Elk River). For cities, these are mainly included in the city's capital improvement plan (seven out of eight respondents) and in the long-range transportation plan (four out of eight respondents).

Definitions of equity in transportation investment planning

Most respondent counties and cities do not have definitions of equity in their transportation investment planning (complete responses in Table 3.1). Of the 11 county responses, three provided information regarding the policies that guide their county's equity work. Similarly, of the 14 city responses, five provided a definition. Of all respondents, only one county representative mentioned the equity definition being developed as part of their long transportation planning (Ramsey County).

There is not a common definition of equity in transportation investment planning among the respondent localities. However, there are some commonalities among the equity definitions localities provided. First, in most cases, localities refer to equity in terms of access to, accessibility to, and safety of the transportation system. Second, localities generally refer to all transportation system users. The few referring to specific population groups highlight underserved, overburdened, and vulnerable communities and people with disabilities.

Table 3.1 Definitions of equity in transportation investment planning by county and city

Locality	Equity Definition
Counties	
Lac qui Parle	Most economical benefit for the traveling public
Meeker	Our transportation system is relatively simple and vastly rural. We prioritize projects based on pavement quality, safety improvements, and coordination with other local road authorities.
Otter Tail	The Complete Streets Policy defines requirements for county roadway projects, provides best practices and context-specific design recommendations, and clarifies procedures for project planning, implementation, and evaluation. Implementation of this policy will ensure Otter Tail residents have access to safe, convenient,

Locality	Equity Definition
	reliable, and accessible transportation – balancing the needs of all while prioritizing underserved, overburdened, and vulnerable communities.
Washington	Title VI is what drives our equity work.
Cities	
Eagan	Ensure that people with disabilities can use the transportation system in an accessible and safe manner. Integrating pedestrian and bicycle facilities in all levels of infrastructure is a primary objective.
Edina	• Community Characteristics include resident demographics in the vicinity of proposed projects. • Neighborhood Characteristics include the geographic context of proposed projects. • Cost Characteristics include considerations for opportunities to reduce and/or share costs of proposed projects.
Monticello	Provide transportation/mobility to all users.
New Brighton	Inclusion of alternative modes of transportation, boulevard trees, and climate adaption
Worthington	Complete transportation services
Other	
State of MN	Too complex to explain here. See MnDOT's transportation project selection policy, MnSHIP plan, and many other docs

Notes: *Verbatim responses taken from the survey.*

Equity goals for transportation investment planning

Table 3.2 lists the equity goals provided by respondent localities. Across respondent counties, only one referred to having equity goals, particularly for the provision of transit services. Two counties referred to general goals (not specific to transportation). Across respondent cities, five out of eight referred to transportation goals, and two of them related their goals with meeting ADA requirements.

Table 3.2 Equity goals for transportation investment planning

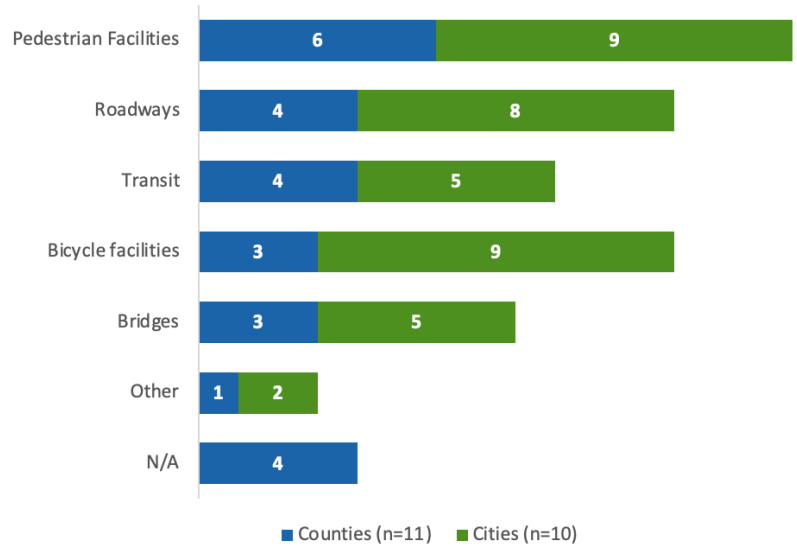
Locality	Stated Goals
Counties	
Anoka	Transit for all plans
Lac qui Parle	Serve the taxpayers of Lac qui Parle County
Marshall County	NA
Pope	None
Ramsey	Being developed as part of the Long-Range Transportation Plan

Locality	Stated Goals
Washington	We don't have explicit goals outside of the Title VI plan
Anonymous	Fix what needs to be fixed
Cities	
Eagan	Updating existing sidewalks, trails and crossings to meet ADA requirements. Develop a vision for a future where pedestrians and bikers can navigate the city safely and efficiently alongside other modes of transportation.
Edina	Community and Neighborhood Characteristics are given more weight overall to prioritize projects that support community goals and visions over those that are merely cost-effective.
Elk River	Be fair to all
Monticello	no specific goals
New Brighton	Reduction of heat island and future climate impacts, trail/bike connectivity to commercial/government/park locations
Spring Lake Park	Solicit input from all and respect opinions of all.
Worthington	Meet ADA requirements on all improvements. Provide connectivity to existing infrastructure.
Anonymous	Reduce trail gaps, accommodate all abilities and all modes within the system
Other	
State of MN	Too detailed and complex to list here. See SMTP 2022 update, for starters.

Notes: *Verbatim responses taken from the survey.*

Transportation areas for which equity is considered in the investment planning process

There are several transportation areas for which localities consider equity in their investment planning process. These areas vary across counties and cities (see Figure 3.2). Pedestrian facilities were the transportation area with the most mentions of taking into account equity considerations when planning investments across all respondent counties and cities (six out of 11 counties and nine out of ten cities). For counties, pedestrian facilities were followed by roadways and transit (mentioned by four out of 11 counties each). For cities, pedestrian and bicycle facilities had an equal number of mentions (nine out of ten each), followed by roadways (mentioned by eight out of ten). Of all transportation areas, bridges were less likely to include equity in the planning process.



Note: *For counties, "other" includes passenger/freight rail improvements. For cities, "other" includes parks and micro-mobility options and program-wide.*

Figure 3.2 Transportation areas for which equity is included in the investment planning process

Equity at different stages of the planning process by transportation area

When incorporating equity in the planning process, localities may opt to do so at different stages of the planning process. The survey asked localities if they considered equity when setting goals and objectives, during project identification, prioritization, selection, funding allocation, and design. Among Minnesota localities that responded to the survey, equity is considered when setting goals and objectives and in project design, particularly for roadways and pedestrian facilities.

Table 3.3 presents the responses from counties. Most county respondents considered equity in the project design, particularly for pedestrian facilities, roadways, and bridges. Interestingly, of the stages considered, funding allocation was the stage with the least mentions of equity considerations for transit, bicycle facilities, and bridges, but ranked higher for roadways. When considering transportation areas, all county respondents mentioned taking equity considerations in the project design of roadways. For transit, half of the county respondents considered equity when setting goals and objectives. For bicycle facilities, equity is included by some counties when setting goals and objectives and in project design.

Table 3.3 Equity at different stages of the planning process for counties

	Goals and Objectives	Project Identification	Project Prioritization	Project Selection	Project Funding Allocation	Project Design
Pedestrian Facilities	2	2	2	3	2	4
Roadways	3	3	3	4	4	6
Transit	3	2	2	2	1	2
Bicycle Facilities	2	1	1	1	1	2
Bridges	2	1	1	2	1	3

Notes: *The number of county observations is six. Cells colored have higher counts by transportation area.*

Table 3.4 presents the responses from cities. Most of the city respondents considered equity when setting goals and objectives and in the project design for all transportation areas, except for transit. For transit, half of the city respondents considered equity in project selection and project design. Compared to the county results, funding allocation in cities received relatively higher mentions, particularly in pedestrian and bicycle facilities.

Table 3.4 Equity at different stages of the planning process for cities

	Goals and objectives	Project Identification	Project Prioritization	Project Selection	Project funding allocation	Project Design
Pedestrian Facilities	7	6	6	5	5	7
Bicycle Facilities	7	6	5	6	5	7
Roadways	6	5	5	5	4	6
Transit	3	3	3	4	2	4
Bridges	4	3	3	4	3	4

Notes: *The number of city observations is eight. Cells colored have higher counts by transportation area.*

Definitions of disadvantaged groups used in transportation investment planning

Localities across Minnesota defined disadvantaged groups differently, mainly depending on the needs of each community. Table 3.5 provides the definitions as stated by respondents. Four out of nine county respondents and one out of seven city respondents mentioned not having a definition of disadvantaged groups. Those who provided a definition refer to demographic characteristics and access to transportation alternatives to define disadvantaged groups. Demographic characteristics generally include income and having disabilities, and some mentions refer to race (minority populations), age, and language. Access to transportation options or alternatives includes communities with insufficient multimodal infrastructure, zero-car households, and access to transit, trail, bike, and park facilities.

Table 3.5 Definitions of disadvantaged groups

Locality	Definition
Counties	
Anoka	Only in general terms.
Lac Qui Parle	All people are disadvantaged and need service we do not discriminate
Marshall	N/A
Meeker	We do not
Otter Tail	People within Otter Tail County that have not historically been engaged in processes, are overburdened on several levels, or have limited transportation options. This includes, but is not limited to, minority populations, low-income residents, people with disabilities, or communities with insufficient multimodal infrastructure.
Pope	N/A
Ramsey	Socio-economic status and zero-car households.
Washington	Via Title VI statute
Anonymous	None
Cities	
Eagan	Neighborhood density
Edina	Community characteristics include resident demographics in the vicinity of proposed projects. Neighborhood characteristics include the geographic context of proposed projects. Cost characteristics include considerations for opportunities to reduce and/or share costs of proposed projects.
Elk River	We don't understand this question.
Monticello	income/age/language/etc.
New Brighton	Economic disparity and access to transit/trail/bike/park facilities
Worthington	Based on Physical, Economical, Geographical challenges
Anonymous	Income, disability. The comprehensive plan defines these groups

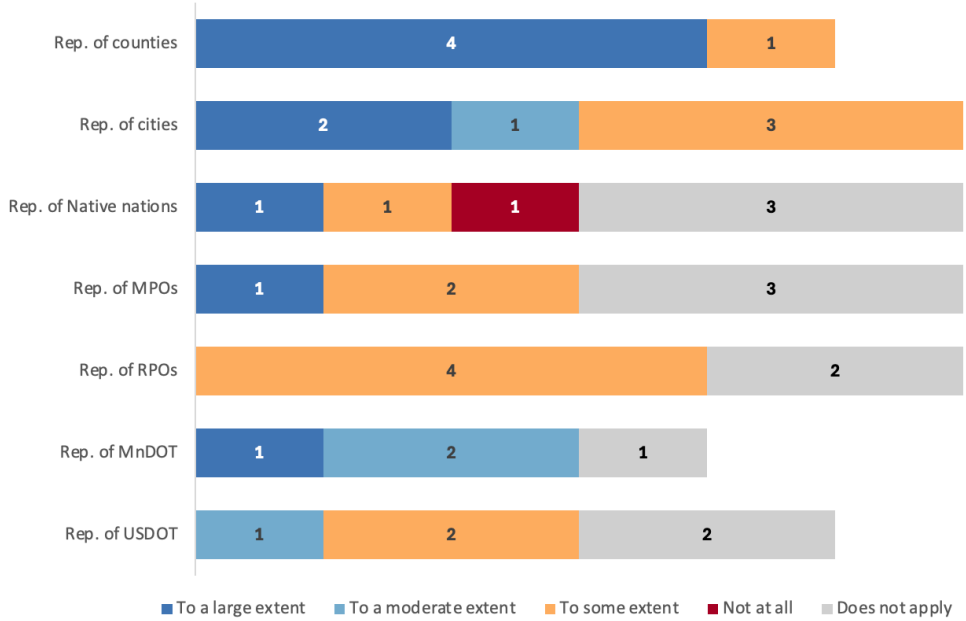
Notes: *Verbatim responses taken from the survey.*

Equity metrics used for transportation investment planning purposes

Survey respondents have not used equity metrics for transportation investment planning purposes. One out of six county respondents mentioned using metrics outlined in the Title VI plan but did not provide them (Washington). Of the six city respondents, one mentioned conducting public meetings to request input (Worthington), two referred to the definition of disadvantaged groups (Edina and Elk River), and one anonymous city mentioned to be developing these metrics. In one of the cities, the respondent mentioned not having equity metrics and following asset management criteria for transportation improvements.

Stakeholders involved in the transportation investment planning process

Figure 3.3 presents the extent to which different stakeholders are involved in the transportation investment planning process of respondent counties. Most county respondents involve other counties to a large extent, followed by cities and MnDOT. Most county respondents engage RPOs to some extent. Respondent counties in the metro area also involve MPOs mostly to some extent. Two respondent counties in the metro area mentioned involving Native Nations in their transportation planning.[20]

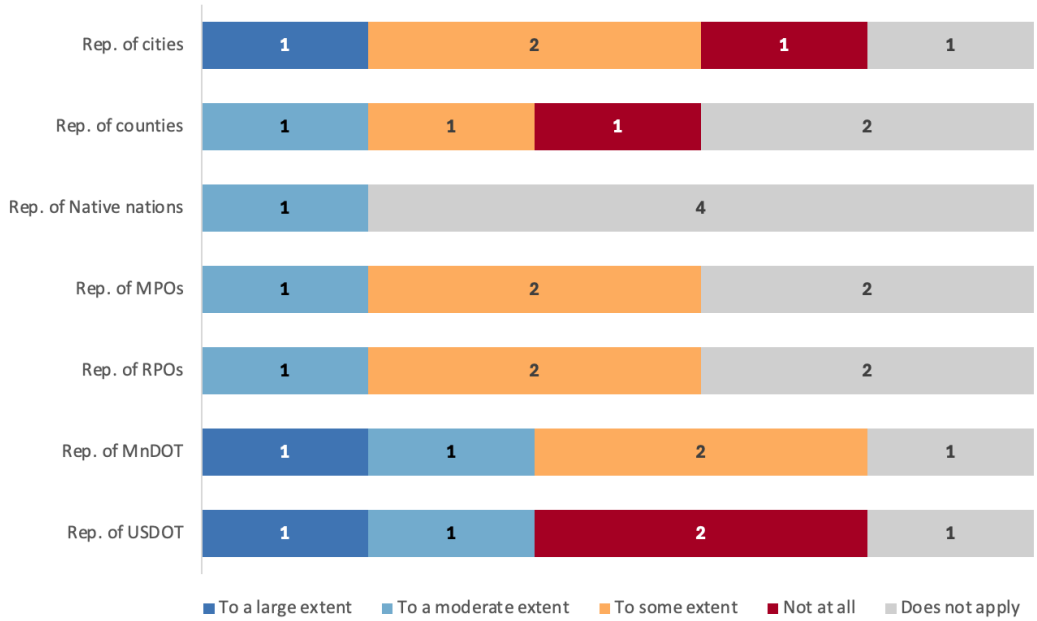


Notes: *Number of county observations is six.*

Figure 3.3 Stakeholders involved in the transportation investment planning of counties

Figure 3.4 presents the extent to which different stakeholders are involved in the transportation investment planning process of respondent cities. Cities involve other cities and MnDOT in their planning mainly to some extent. Compared to counties, cities are less likely to involve other stakeholders, and if it is involved it is mostly to a lesser extent.

[20] Other respondent counties do not share boundaries with Native Nations.



Notes: *Number of city observations is five.*

Figure 3.4 Stakeholders involved in the transportation investment planning of cities

The survey further asked localities to explain how they involve Native/Tribal Nations in their transportation planning, and most mentioned that it did not apply. Consequently, few also discussed their experience with government-to-government relationships.

Ramsey County, which involves representatives of Native Nations to a large extent, explained that county staff reaches out to federally recognized tribes to include them on project committees or to see how they would best like to be informed or provide direction to the project. In addition, they also work with local populations to gather input, and it is treated as any engagement. The county representative also highlights that engagement with the Native Nations is provided more weight as they are sovereign.

In their experience, consultation, coordination, and collaboration positively influence equity outcomes if local staff listen to Native Nations, recognize their red lines, and do not cross them. In addition, engaging Native Nations and then negatively impacting them (e.g., sacred areas) negatively impacts trust and future engagement.

Of other respondent cities, a representative from Monticello mentioned involving Native Nations to a moderate extent in their transportation investment planning, and a representative from Elk River mentioned involving Native Nations in every step of the transportation planning and having an American Indian on staff.

Incorporation of the general public feedback in transportation investment planning

Most respondent localities in Minnesota incorporate the general public's feedback in transportation investment planning (see Figure 3.5). The extent of public feedback incorporation in respondent cities is

higher than in respondent counties. Most respondent counties include feedback to some extent for project identification, prioritization, selection, funding allocation, and design. Similarly, most respondent cities include the feedback but to a larger and moderate extent. In addition, most respondent cities incorporate public feedback in project design, and a larger number of cities mentioned not including it in the allocation of funding.

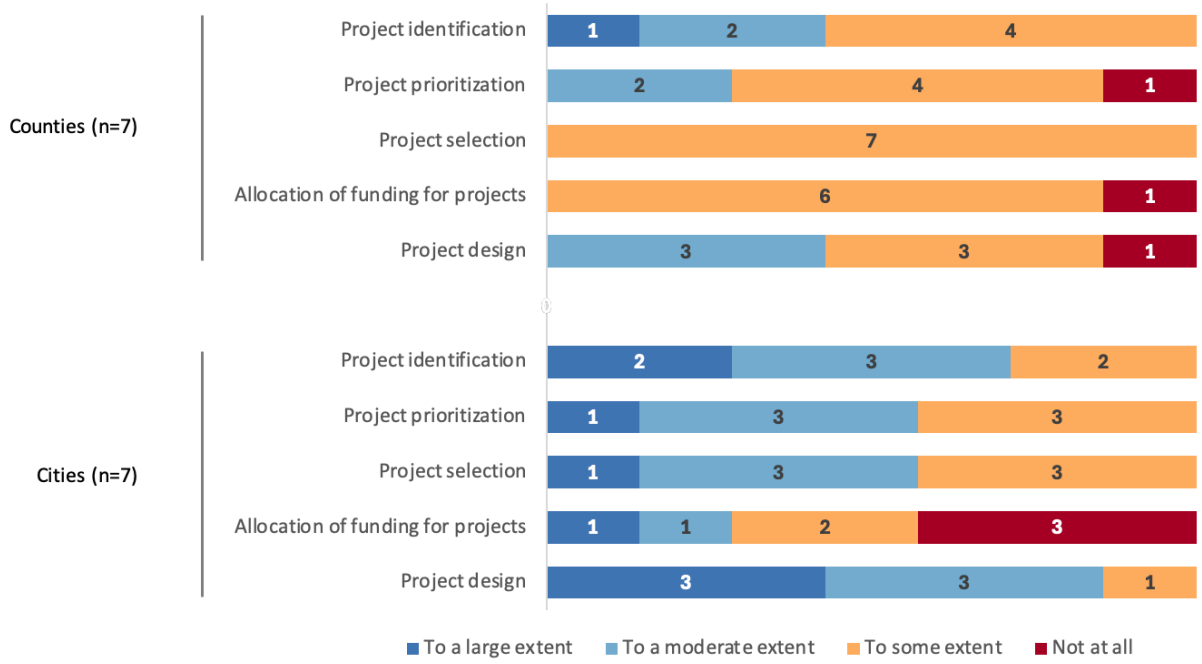


Figure 3.5 Public feedback in transportation investment planning across counties and cities

Several community members are engaged in transportation investment planning across respondent counties and cities (see Figure 3.6). Business organizations are the community members that are most commonly engaged in transportation investment planning, followed by community organizations.

Note: *Other for counties include "anyone who has a legitimate concern", "public at large", and "Tribal Nations".*
Figure 3.6 Community members engaged in transportation investment planning

Most respondent localities mentioned gathering public feedback through in-person meetings. These meetings include open house workshops, public meetings, and road and bridge hearings. Cities also mentioned using online venues such as social media, email, and generally online (which potentially includes websites too). Other means to gather public feedback include letters, telephone, adjacent landowners, feedback received from city commissions, and public meeting records.

Two county respondents and one city respondent mentioned public feedback to be important in setting goals. In particular, a respondent from Ramsey county mentioned that public feedback helped define the problem and inform the solution. Similarly, a respondent from an anonymous city mentioned feedback being received on policy documents, which are the backbone of investment planning and set goals and priorities.

Additional comments from localities

A representative from one county and another from one city provided additional comments related to the role that MnDOT plays in equity in transportation investment planning. According to the county representative, "the state needs to nudge localities into better planning". The city representative also mentioned that *"often times MnDOT is a barrier as representatives state maintenance dollars are limited and push the responsibilities for equity in transportation to local agencies to lead and fund*".

3.2.2 Findings from Native Nations

The survey had eight responses from Native Nation, four of which were complete, and four were open but did not have responses recorded. Figure 3.7 shows the Native Nations sharing geography with Minnesota that responded to the survey (see Appendix C for a list of Nations that responded to the survey).

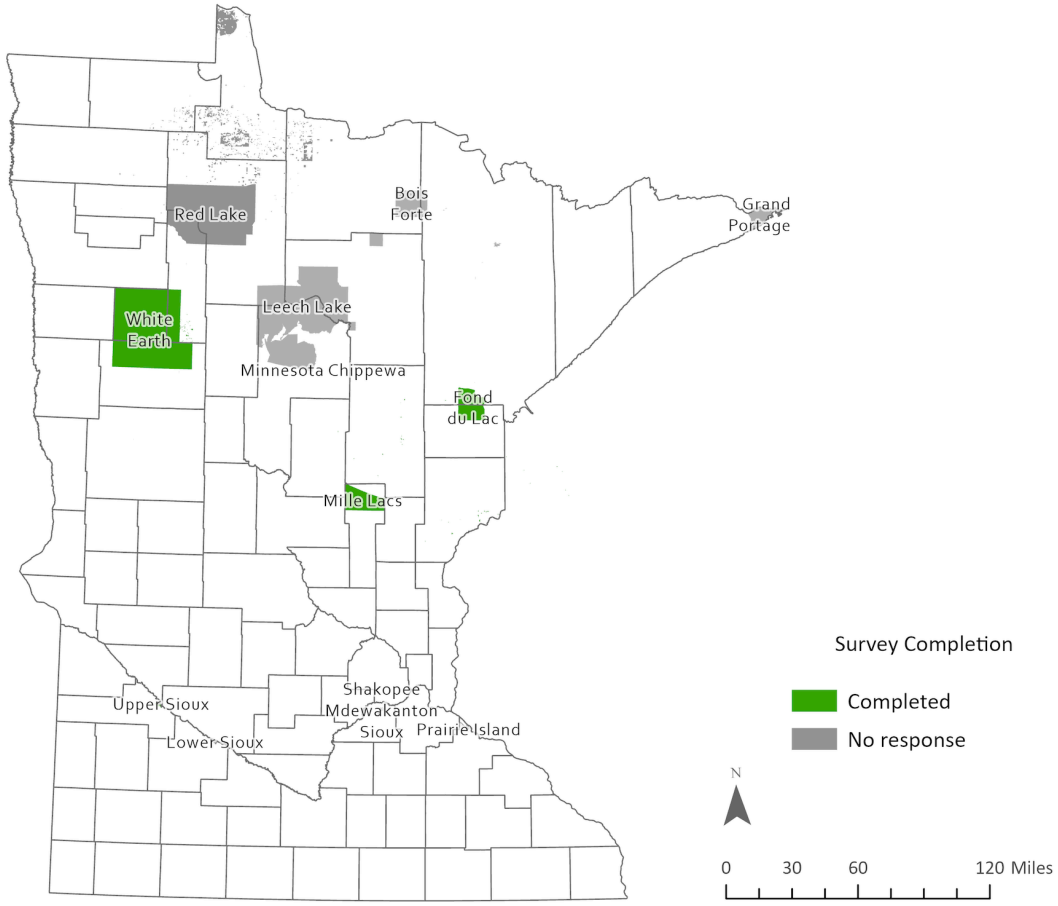


Figure 3.7 Native Nations that responded to the survey

Equity aspects considered across Native Nations in transportation investment planning

All respondent Native Nations considered sovereignty, sacred sites, and environmental protection to a large extent for equity in transportation planning (see Figure 3.8). Other aspects such as consultation, historic preservation, cultural preservation, cultural medicines, and access were also considered, but the extent to which they are considered varies across respondent Nations. Of these aspects, access was considered by three out of four Native Nations to a large extent; however, one Native Nation mentioned that it did not consider it.

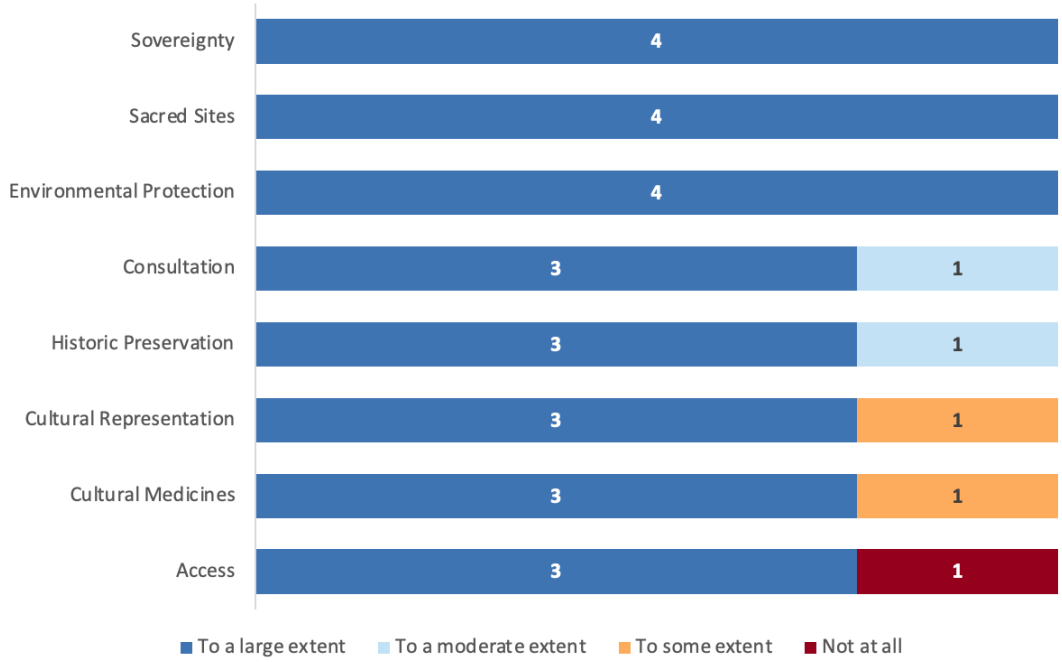


Figure 3.8 Aspects considered in equity in transportation planning for Native Nations

Transportation areas for which equity is considered in the investment planning process

All respondent Native Nations considered equity in transportation planning for roadways (see Figure 3.9). Most Nations also considered pedestrian facilities as an area where equity was included. Bridges, bicycle facilities, and transit were marked by half of the respondent Nations.

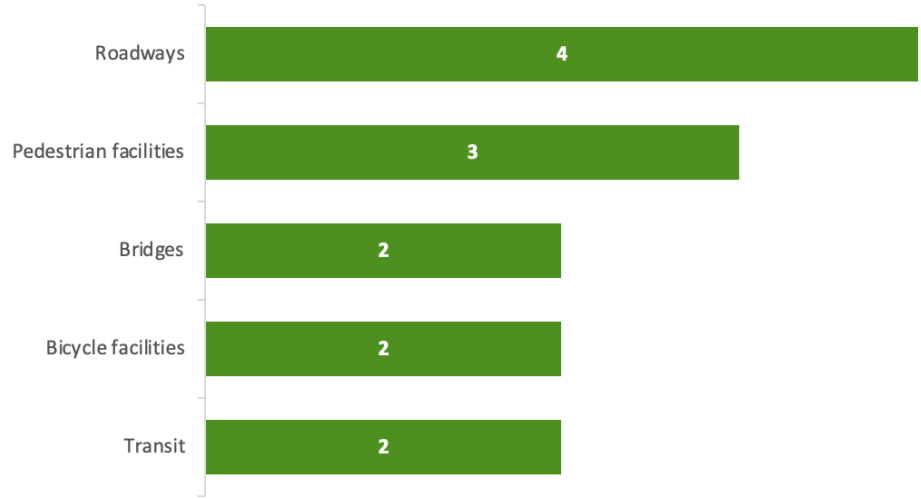


Figure 3.9 Transportation areas for which equity is included in the investment planning process

Equity at different stages of the planning process by transportation area

Most respondent Native Nations considered equity in designing roadways, pedestrian facilities, and bicycle facilities (see Table 3.6). Interestingly, equity was consistently overlooked for bridge planning across all respondent Nations. However, one Nation (Fond du Lac Band of Lake Superior Chippewa) did mention that they only had one bridge. Other nations did not discuss bridges, likely because they lacked bridges.

Table 3.6 Equity at different stages of the planning process for Native Nations

	Goals and objectives	Project Identification	Project Prioritization	Project Selection	Project funding allocation	Project Design
Roadways	3	3	3	3	3	4
Pedestrian facilities	2	2	2	2	2	3
Bicycle facilities	2	2	2	2	2	3
Transit	2	2	2	2	2	2
Bridges	0	0	0	0	0	0

Notes: *The number of Native Nations observations is four. Cells colored have higher counts by transportation area.*

Equity metrics used for transportation investment planning purposes

Native Nations were asked about the equity metrics they used during their investment planning processes. Table 3.7 shows the responses provided by each Nation. Respondent Nations mainly referred to documents and requirements rather than specifying equity metrics. Only one of them mentioned the use of accessibility as an equity metric.

Table 3.7 Tribal equity metrics used for transportation investment projects

Nation	Equity Metrics
Mille Lacs Band of Ojibwe	None
White Earth Nation	1.) Long range transportation plan, 2.) pedestrian studies, 3.) road safety audits
Fond du Lac Band of Lake Superior Chippewa	Federal and state regulations and guidelines. Funding requirements. Internally it would accessibility to goods and services.

Notes: *Verbatim responses taken from the survey. Upper Sioux Community not included in the table because no answer was provided.*

While sovereignty, culture, and environmental considerations were mentioned in the survey, these concepts were unspecified in the responses. However, this could be the result of Nations responding to

the requirements outlined by federal and state regulations, which do not mention equity in their documentation.

Factors affecting equity in Native Nations' transportation planning

All respondent Native Nations mentioned sovereignty, culture, and environmental considerations to be factors that affect equity in transportation planning to a large extent and state legislation to a moderate extent (see Figure 3.10). BIA regulations influence equity in transportation planning, but the extent of the impact varies.

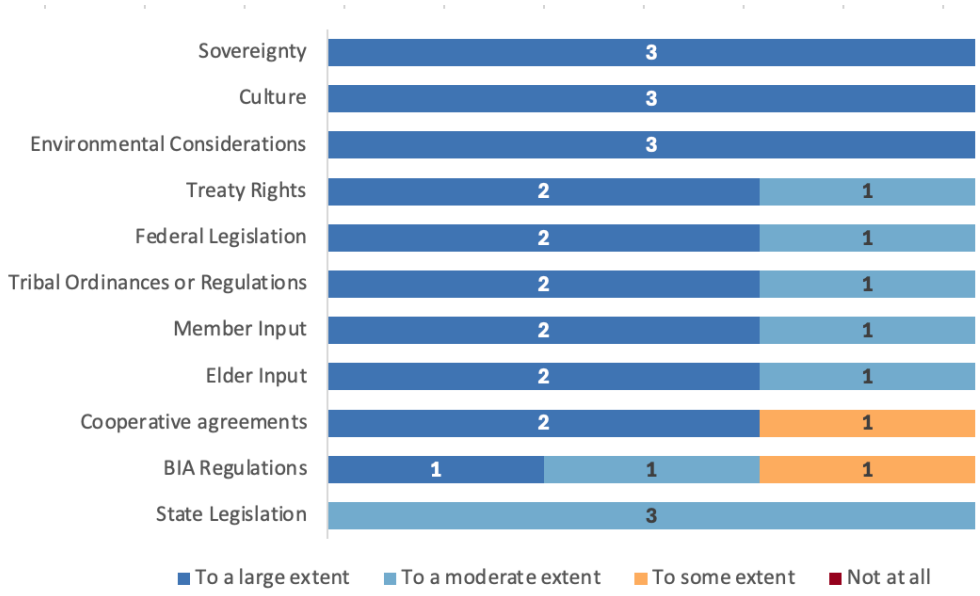


Figure 3.10 Factors affecting equity in Native Nations' transportation planning

Other factors internal to Nations, such as treaty rights, tribal ordinances, and input from members and elders, influence equity in transportation planning. External factors, such as cooperative agreements, BIA regulations, and state legislation, affect equity to a lesser extent. Nations prioritize their needs over other factors involved in planning.

Stakeholders involved in the transportation investment planning process

All respondent Native Nations involved MnDOT in their transportation planning, although half mentioned they only involve MnDOT to some extent (see Figure 3.11). USDOT and counties were also mentioned by three out of the four respondent Nations, with the majority involving USDOT to some extent. Community councils were involved by half of the respondent Nations and to a large extent. MPOs were entities least likely to be involved in the transportation planning of Nations.

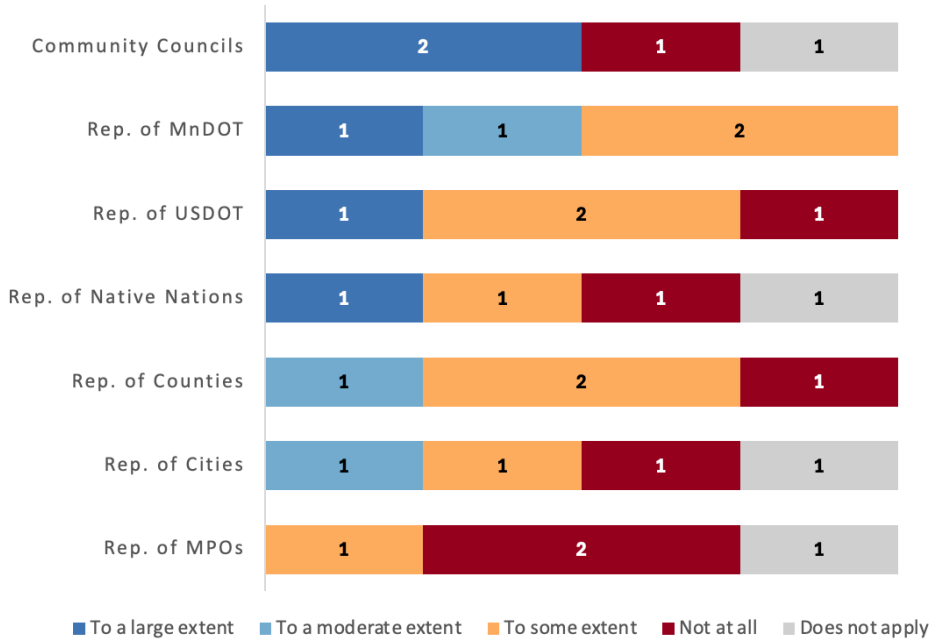


Figure 3.11 Stakeholders involved in transportation investment planning in Native Nations

White Earth Nation, which involves MnDOT to a large extent and localities to some extent, mentioned that consultation, coordination, and collaboration have positive impacts if the Nation is consulted on the ground level and stays consistently involved. According to their experience, MnDOT has reached out to meet with the Nation to consult, coordinate, and collaborate. Similarly, Fond du Lac Band of Lake Superior Chippewa, which involves MnDOT to some extent and localities to a moderate extent, mentioned that consultation has helped the Band through the clarification of rules, funding, and by working together to solve issues. The Nation also highlighted that it had a positive relationship with MnDOT for a while.

Incorporation of Tribal members feedback in transportation investment planning

Three out of the four respondent Native Nations incorporated Tribal members feedback in project prioritization to a large extent (see Figure 3.12). Tribal member feedback was also included during project identification, selection, and funding allocation for three Nations. Project design was the least likely category to include Tribal members' feedback. Only one Nation mentioned not incorporating Tribal members' feedback in its transportation investment planning.

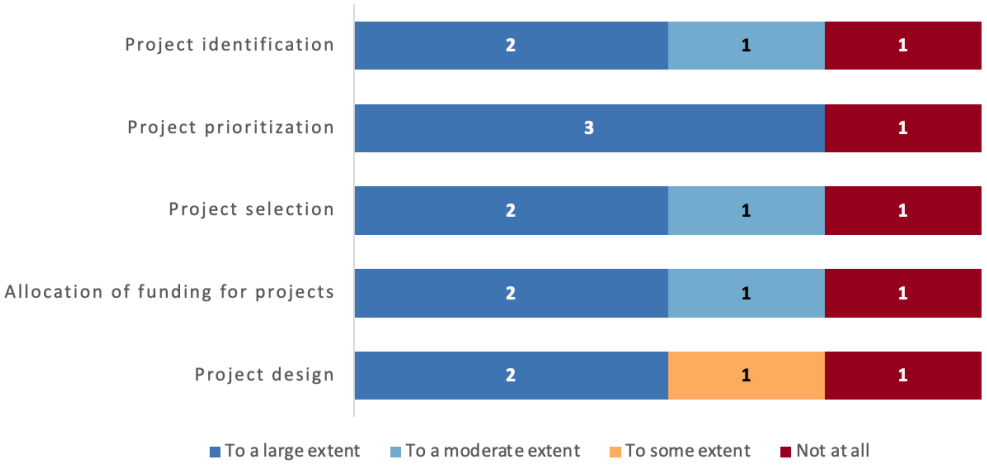


Figure 3.12 Tribal member feedback in transportation investment planning across Native Nations

Several community members were engaged in transportation investment planning across respondent Nations (see Figure 3.13). Business organizations and Tribal Historic Preservation Officers (THPOs) were most commonly engaged. Others, such as representatives of disadvantaged communities, elders, and cultural staff, were engaged by half of the respondent Nations.

Note: *Other includes "general population."*

Figure 3.13 Tribal members engaged in transportation investment planning

Chapter 4: Findings from Case Studies

This chapter presents findings from a series of case studies of Minnesota counties and cities, and Native Nations sharing geography with Minnesota that are incorporating or have incorporated equity in their transportation capital investment planning and decision-making.

4.1 Methodology

The research team conducted case studies of three Minnesota counties, one Minnesota city, two MPOs, and three Native Nations sharing geography with Minnesota that are incorporating or have incorporated equity in their transportation capital investment planning and decision-making. Case studies included in this research include:

- Hennepin County
- Ramsey County
- Washington County
- City of Edina
- Metropolitan Council
- Duluth-Superior Metropolitan Interstate Council (MIC)
- Fond Du Lac Band of Lake Superior Chippewa
- Lower Sioux Indian Community
- White Earth Nation

These case studies were selected based on findings from the literature review and the survey conducted as part of this study, recommendations from members of the Technical Advisory Panel (TAP), and recommendations from interviews with transportation officials from other localities selected as case studies.

For each case study, the research team reviewed publicly available documents. This included transportation policies, transportation investment plans, strategic plans, comprehensive plans, and equity-related policies.

The research team also conducted interviews with local and tribal transportation officials from the selected case studies. For localities and the MPOs, the research team contacted transportation officials identified on the websites as well as other staff involved in equity-related plans. For Native Nations, the research team contacted tribal officials identified with the help of the MnDOT Tribal Affairs Liaison. The team also used a snowball sampling approach to identify relevant stakeholders. We conducted online interviews between July 2024 and December 2024 and interviewed 14 transportation officials. We also conducted one onsite visit. Some local officials were unresponsive to our requests, while others directed us to other officials who could speak to us about the ways they incorporate equity in transportation investment planning and decision-making. This lack of response may stem from officials' capacity to participate in interviews, lack of active engagement on the process, or the locality not incorporating equity in transportation investment planning and decision-making.

4.2 Detailed Findings from Case Studies

Several policies guide Minnesota localities and Native Nations in incorporating equity in their transportation investment planning. While some of them emerge as a response to federal funding requirements, others are initiatives of local governments and Native Nations that extend to their departments.

4.2.1 Equity as a Response to Federal Funding Requirements

Across Minnesota localities, Title VI and the Americans with Disabilities Act (ADA) are the most mentioned policies that guide equity in transportation investment planning and decision-making (see Table 4.1). Title VI of the Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, and national origin in programs and activities receiving federal financial assistance (DOJ, 2024). Other federal policies supplement Title VI and extend protections based on age, sex, disability, limited English proficiency (LEP), and low-income status. All these policies require recipients and subrecipients of federal funds to ensure all programs and services are delivered to the public without discrimination.

Table 4.1 Federal policies guiding equity in transportation investment planning and decision-making

Policy	Plan adopted in each Locality
Title VI (Civil Rights Act - Anti-Discrimination in Federally Funded Programs)	Prohibits discrimination on the grounds of race, color, or national origin in any program or activity receiving federal financial assistance, including transportation projects. - Title VI Plan for Hennepin County (Hennepin County, 2024a). - Title VI Plan for Washington County (Washington County, 2023). - Title VI Plan for Duluth-Superior MIC (Duluth-Superior MIC, 2021). - Title VI Program for the Metropolitan Council (Metropolitan Council, 2022).
Extension of Title VI via Minnesota Human Rights Act	Hennepin County extends Title VI protections to all classes protected by the Minnesota Human Rights Act (MHRA), including race, color, creed, religion, national origin, sex, marital status, disability, sexual orientation, gender identity, and public assistance.
49 USC 5332 (Non-Discrimination in Employment/Business)	Prohibits discrimination on the basis of race, color, creed, national origin, sex, or age in employment.
Public Law 114-357 (FAST Act)	Addresses the involvement of disadvantaged business enterprises in US DOT-funded projects.
23 CFR Part 230 (Equal Employment Opportunity - EEO)	Equal employment opportunity program for Federal and Federal-aid highway construction contracts.
42 USC 12101 (Americans with Disabilities Act - ADA)	Prohibits discrimination against individuals with disabilities.

Policy	Plan adopted in each Locality
42 USC 6101 (Age Discrimination Act)	Prohibits age-based discrimination in programs receiving Federal financial assistance.
Section 324 Title 23 (Gender Equality in Transportation)	Prohibits discrimination based on gender.
29 USC 794 (Rehabilitation Act)	Prohibits discrimination against individuals with disabilities.
Executive Order 12898 (Environmental Justice Order)	Requires MPOs to address environmental justice for low-income and minority populations.
Executive Order 14096 (Revitalizing the Nation's Commitment to Environmental Justice for All)	Directs agencies to identify, analyze, and address the disproportionate and adverse human health and environmental effects of federal activities.
Executive Order 14008 (Justice 40)	Relates to ensuring that 40 percent of the benefits of federal investments flow to disadvantaged communities. Also updated the definition of environmental justice to include people with disabilities.

While these policies provide for equality, they do not necessarily provide for equity. Equality in transportation provides the same services to all people regardless of status or needs. In contrast, equity in transportation allocates resources or services to address disparities for disadvantaged groups (DOJ, 2024; FHWA, 2022; USDOT, 2023a). Among existing policies, the ADA comes closest to advancing equity, as its provisions address specific needs of certain disabilities to ensure the same access. In the context of capital improvements, equality-oriented laws provide uniform services to all while equity-oriented laws address historical and systemic disparities (also known as corrective equity).

Some localities also referenced the Complete Street policy as a way to incorporate equity in transportation investment planning. This approach to roadway planning and construction helps prioritize other transportation modes (such as biking, walking, and taking transit) instead of just focusing on driving.

The Duluth-Superior MIC also mentioned the Infrastructure Investment and Jobs Act (IIJA)/Bipartisan Infrastructure Law (BIL) that passed in 2021 as a policy including new requirements that emphasize transportation equity along with multimodal safety and infrastructure resilience (MIC, 2024a).

Native Nations also discussed the availability of certain transportation funding programs to support equity in tribal transportation planning. Funding from the Tribal Transportation Program Safety Funds (TTPSF), Safe Streets and Roads for All (SS4A), Safe Routes to School (referred by Native Nations as SR2S,

and by MnDOT as SRTS) Program, Rebuilding American Infrastructure Sustainability and Equity (RAISE) grants, and Reconnecting Communities grants were identified by tribal transportation officials as funding sources that contribute to addressing the disproportionate risks in transportation that have impacted reservation lands. For instance, Tribal transportation officials from Fond Du Lac Band of Lake Superior Chippewa refer to these funding sources as a way to improve the Tribal Nations' autonomy (Representatives of Fond Du Lac Band of Lake Superior Chippewa, personal communication, August 2, 2024). According to the Nation, because of the design of the funding program,[21] the Nation is better positioned to exercise control over planning, implementation, and management, which support the Nation's goals for self-determination, sustainability, and cultural preservation. Programs such as the Tribal Transportation Program and the Tribal Transit Program offered through federal programs support and enhance Tribal control through self-governance and self-determination.

4.2.2 Equity as part of Local Initiatives

The transportation or public works departments across analyzed localities highlight the leadership position toward equity as a crucial factor in prioritizing equity in investment planning. Leaders across analyzed localities have been or are in the process of advancing and prioritizing equity as a key commitment and component of the locality's goals, reflecting it in their comprehensive planning. This position, in turn, triggers or requires local departments to adapt internal policies, processes, and procedures to align with and support the vision, goals, and objectives.

In several of the case studies, representatives from the local transportation department referenced local equity policies and efforts as drivers of change in their departments for transportation investment planning (see Table 4.2). Most of the policies focus more on racial inequities and a few also emphasize income inequities.

[21] In the past, non-Native governments imposed restrictions on how Native Nations should use funding. Currently, although some limitations exist, Native Nations have flexibility to decide how to distribute and use their allocated funding to address transportation needs.

Table 4.2 Equity policies across analyzed case studies

Locality	Policy	Description
Hennepin County	Disparity Reduction (Hennepin County, 2021)	General: Driving institutional change to reduce racial disparities across seven key domains of education, employment, health, housing, income, justice, and transportation. Transportation: Focus on infrastructure improvements that address disparities; increase contracting opportunities for small, minority, and women-owned businesses; refine capital project evaluation criteria to ensure the impact on communities of color and those in poverty are considered; and prioritize the needs of these communities.
Ramsey County	Racial Equity Policy (Ramsey County, 2024a)	General: Aims to advance racial equity by reducing racial and ethnic-based disparities. Racial equity is achieved when outcomes for all people are improved and race can no longer be used to predict life outcomes. Advancing racial equity ensures all people who need access to the opportunities and services the county provides will receive them. Transportation: The county utilizes a Pavement Quality Index to support its equity measures related to advancing racial and health equity and shared community power. The poor road condition is set to 10 percent for 2025 and 2027, with a condition of 12 percent in 2024. The county also tracks the rate of crashes on the county road system. Rate goals have been set at 1.8 (2025) and 1.7 (2027) with a rate of 1.9 for 2024 (rate of crashes on county roads based on vehicle miles traveled). The dashboard is publicly available (Ramsey County, 2024b).
City of Edina	Race and Equity Plan (City of Edina, 2024)	General: The plan includes calls for an analysis of current operating processes and improvement, professional development growth opportunities, deepening community engagement, transparency, and awareness through a race and equity lens. Transportation: City's Race and Equity Task Force (RETF) recommended the application of "race equity criteria for allocating funds" for the Pedestrian and Cyclist Safety (PACS) Fund.
Metropolitan Council	Racial Equity Framework (Metropolitan Council, 2024c)	General: The Racial Equity Strategic Plan will lead with race, recognizing that in the metropolitan region, communities of color experience the worst economic and social outcomes in the country due to a long history of exclusionary and discriminatory policies. The region's economic health is tied to greater racial inclusion and smaller income gaps due to the projected growth of communities of color. The Council will advance racial equity because it will allow them to more effectively serve all communities. **Contextualized*: Ensure that solutions address systemic inequity. **Community centered*: Work with impacted people and populations to co-create solutions. **Reparative*: Seek restorative remedies commensurate with the level of negative impact. Transportation: Accessible and affordable transportation

4.2.2.1 Common Elements Across Initiatives to Incorporate Equity in Transportation Investment Planning and Decision-Making

Several components are common across the initiatives that localities and Native Nations undertake to advance equity and that impact transportation investment planning.

First, **providing Diversity, Equity, and Inclusion (DEI) staff training.** This was mentioned by transportation officials from Hennepin County, the City of Brooklyn Park, and Fond Du Lac Band of Lake Superior Chippewa. These trainings contribute to increased awareness and cultural sensitivity. These trainings also provide insights and practical knowledge that help advance equity such as identifying and mitigating biases; and in identifying, developing, and adapting meaningful strategies that help advance equity goals. Staff from transportation departments in Native Nations also participate in these trainings and the DEI concept remains tailored to Native understandings ensuring that Tribal members are represented and lead these initiatives.

In addition to providing DEI training, some localities are also examining their practices and policies through an equity lens. For instance, the Metropolitan Council is currently conducting an equity evaluation of the processes that fund, plan, and select transportation investments (see section 4.2.2.4). Similarly, Washington County includes the objective of examining current county service delivery approaches using DEI lens and conducting a needs/gap analysis by 2026 as part of their strategic planning (goal of safe communities and thriving people; objective E) (Washington County, 2024).

Second, **increasing contracting opportunities for local businesses, particularly Disadvantaged Business Enterprises (DBEs) across localities.** This effort is cited as a priority for Hennepin County in its disparity reduction efforts and by Ramsey County in its Racial Equity Policy. Particularly to transportation, transportation officials from the Metropolitan Council and Lower Sioux Indian Community, emphasize the need to generate wealth that stays in the community as a way to advance equity in transportation investment planning. As part of this effort, the Metropolitan Council is prioritizing the development of a community asset mapping that among others helps identify local businesses, particularly DBEs, that can contribute to different phases of their investment planning. They intended to "bring the community into the project, rather than just engaging them" (Representatives of Metropolitan Council, personal communication, July 31, 2024). The Lower Sioux Indian Community described an intent to generate business for its members and member-owned businesses.

Third, **engaging their communities to understand their transportation needs and identify projects that address their needs**. Typically, transportation investment planning relies on asset management guidelines and practices that meet established standards. However, these systems do not take into consideration the transportation needs of the community. Transportation officials across localities and Native Nations mentioned that these systems can identify much of the transportation needs, but those using the transportation infrastructure can point out transportation gaps not identified by these systems.

"*If you know that the problem is coming from the community, you know the community wants it. (...) Starting with the appropriate question is needed as it drives the discussion and decision-making.*" - Transportation official

Localities and Native Nations employ several methods to engage their communities and understand their transportation needs. Conducting surveys and in-person engagement are the most mentioned by localities and Nations selected as case studies. According to a transportation official, it is worth noting that the engagement of communities, particularly those that have been historically underrepresented, has to be intentional and engagement methods have to adjust for this (for instance, partnering with local DBEs that know the community could contribute to this effort).

Surveys: Native Nations generally leverage nationwide efforts to understand transportation needs of the community. For instance, the Tribal Transportation Department of the Lower Sioux Indian Community includes transportation-related questions in their Nation's annual survey to gather information about the needs of the community. The survey is available online and it is distributed among all members of the community. In addition, there is a paper version that is offered to elders. The Nation offers stipends recognizing the time community members spend in taking the survey, which in turn, increases the response rate (about 30 to 40 percent of the total population responded to the last survey conducted). Once the information is compiled and analyzed, the results are used to conduct focus groups to gather more feedback on the type of transportation projects that are needed by the community. [22]

In-Person Engagement: Few localities conduct in-person engagement with their communities. Among selected cases, the Metropolitan Council, Duluth-Superior MIC, and Ramsey County provided examples of this type of engagement to learn about the transportation needs of the community and to build and maintain trust and relationships with community members.

The Metropolitan Council mentioned the need and highlighted the importance of having more community conversations to identify transportation needs not only for transportation investment planning purposes but also to build trust in the community (Representatives of Metropolitan Council, personal communication, July 31, 2024). For them, having a conversation on the need, exploring alternative approaches, and then providing projects that address the need (particularly, when comparing pre-approved projects to community-driven projects) gives a different message to the community. In addition, transportation officials highlighted during the interview the importance of partnering with local businesses and community-based organizations for a more intentional engagement process. These organizations know their communities, how to reach out and engage community members, and community members trust them.

[22] Similarly, tribal transportation officials from Fond Du Lac conducted a one-time survey for health-related projects. This survey was contracted with a third-party vendor that went door-to-door with tablets surveying community members to learn about their needs. The Nation owns the resulting data from the survey.

Similarly, the Duluth-Superior MIC conducts a series of focus groups to learn about the infrastructure needs of different population groups. As part of these efforts, they hosted an Equity Focus Group (targeted stakeholder consultation) in 2023 to discuss inequities for historically underserved populations in the MIC service area (Duluth-Superior MIC, 2023). The conversation brought up several challenges including car-focused infrastructure; snow clearance issues for pedestrian pathways; unreliable transportation for students, seniors, and rural residents; and lack of transportation for Indigenous communities. The conversation also highlighted solutions to these problems including covered multi-modal system repair, equity-based transportation funding allocation, the application of the Justice 40 framework to regional transportation projects, and reimagining US 61 as an equity project. As part of their goals, the Duluth-Superior MIC aims to have these conversations regularly, if possible, on an annual basis, rather than every four years as they currently have them. According to officials, this would contribute to building trust and relationships where parties can focus on what they can improve and celebrate any strides.

Ramsey County also engages in person, in neighborhoods and important community facilities, and regularly with its communities as a way to build trust (Ramsey County Representatives, personal communication, December 5, 2024). A prime example of this engagement is the effort conducted as part of the Rice Street redevelopment, in which transportation officials visited the Hmong Town Marketplace and other types of food venues to reach community members. As part of this effort, officials developed a cookbook, *Cooking with Rice*, for the area to inform visitors of culturally relevant stories and food recipes unique to Rice Street (Ramsey County, 2022). Overall, as future steps, transportation county officials would like to conduct public engagement events with marginalized communities rather than historical engagement, which is skewed toward more affluent or retired individuals. Incorporating more voices into the process ensures that all voices are heard for the projects that the county is working on. County officials also indicated that collaboration with community groups is essential for authentic engagement, which supports adaptive planning.

For Native Nations, community engagement is more personal and on the ground. Tribal transportation officials participate in community events such as festivals, fairs, and Powwows to get closer to the community and gather input from the community and partners. This engagement also happens with specific community groups and is extended not only to Tribal community members on-reservation but also off-reservation. Tribal transportation officials from the Fond Du Lac Band of Lake Superior Chippewa, for instance, participate in meetings of Tribal Elders where they learn about the intergenerational needs - "*Elders not only discuss their needs but also those of their children and grandchildren*" (Representatives of Fond Du Lac Band of Lake Superior Chippewa, personal communication, August 2, 2024). Similarly, officials participate in the quarterly meetings of the Reservation Business Committee (RBC) to learn the concerns of community members in Duluth and Minneapolis. Tribal transportation officials from White Earth Nation also mentioned they attend the State of the Nation event every year and provide information to the public for those who may have an interest in current or upcoming capital improvement projects (White Earth Nation Representatives, personal communication, August 28, 2024).

Fourth, **local transportation departments are emphasizing multi-modal transportation investments that support mobility for all individuals rather than just roadway investments that support vehicle travel.** This was brought up in the conversations with transportation officials from Hennepin County, Ramsey County, Washington County, the City of Edina, Duluth-Superior MIC, and Lower Sioux Indian Community. There has been a shift in transportation planning that recognizes that just a portion of the population has access to a vehicle and that to advance in equity, investments are needed to support all types of travel (walking, biking, or using public transit) in addition to driving. Some localities mentioned investing more dollars in multi-modal transportation investments, while others are developing and adopting prioritization criteria that help in prioritizing this type of transportation investment projects (see subsection 4.2.2.2).

Fifth, **understanding the history of the communities with transportation projects**, mentioned by transportation officials from the Metropolitan Council, Lower Sioux Indian Community, White Earth Nation, and Fond Du Lac Band of Lake Superior Chippewa.

The Metropolitan Council recognizes the history of racism and inequities embedded in the transportation investment process and as part of its equity evaluation of regional transportation investments, they are incorporating efforts to overcome and reconcile it. In particular, they are trying to understand specific details of the community's history with transportation projects and the experiences of the community with regard to them. This also includes learning about the community (e.g., the existence of community groups, important community assets, etc.) and sharing this with project partners (such as construction companies).

For Native Nations, the understanding of the history of the community extends beyond transportation and it is tied to sovereignty and cultural significance. In terms of sovereignty, Tribal transportation officials emphasized the fact that Nations make their own decisions and bring to the table the investments that are important for them. This is important because, in the past, non-Native governments-imposed decisions on Native Nations through the treaty-making process.

In terms of cultural significance, Tribal transportation officials emphasized three practices they implemented to advance cultural significance: the involvement of the Tribal Historic Preservation Officer (THPO) in investment planning, having traditional medicines as part of the landscaping, the use of dual language in road signs, and the generation of data that reflects the reality of the Native Nation.

(1) Across Native Nations, preservation plans emphasize the importance of protecting traditional cultural properties and THPO offices play a crucial role in protecting these resources across Nations. THPOs are involved in the transportation investment process to ensure the protection of cultural resources such as cemeteries, artifacts, remains of ancestors, and areas for ceremonial practices. In the Lower Sioux Indian Community, for instance, the THPO office is notified when a transportation investment project occurs within a 100-mile radius of the Nation to assess their cultural impacts (Lower Sioux Indian Community Representatives, personal communication, August 22, 2024).

(2) Some Nations also highlighted the importance of having traditional medicines as part of the landscaping in the projects they consider. For instance, the Lower Sioux Indian Community is working on the riverwalk (scenic walkway) project that, among others, teaches community members and visitors about the Nation's history by including QR codes and plant labels. Similarly, the White Earth Nation mentioned the Highway 200 Project as an example of how cultural significance is incorporated into projects. The Nation reported that MnDOT recognized cultural medicines and transplanted them during construction to preserve the integrity of the plants. This project also features Ojibwe designs in a section of the project.

(3) Tribal transportation officials mentioned the importance of having road signals in dual languages to advance sovereignty and cultural representation. The Lower Sioux Indian Community, White Earth Nation, and Fond Du Lac Band of Lake Superior Chippewa have worked with MnDOT to have road signs available in their language Dakota/ Ojibwe, and English. Road signs include traditional names for locations, lakes, and even the designation of treaty territories.

(4) According to interviews with Tribal transportation officials, existing data from the US Census Bureau is aggregated and not reflective of the community. Collecting information that is meaningful for the Nation's investment planning has become vitally important. According to the Tribal transportation official from the Fond Du Lac Band of Lake Superior Chippewa, when Native Nations properly sample their communities and directly gather information, the data shows disparities for Tribal communities.[23] The information Native Nations gather enables them to better understand their member needs and better assists application efforts when pursuing grants.

4.2.2.2 Funding Prioritization Schemes for Transportation Projects

Among case studies, Hennepin County, the City of Edina, the Metropolitan Council, and the Duluth-Superior MIC mentioned using a funding prioritization scheme for transportation projects that uses equity-based criteria and/or incorporates criteria that reflect multimodal connectivity of the project.

Hennepin County's Project Prioritization Tool

In Hennepin County, equity focuses on how the projects impact populations facing racial, socioeconomic, and mobility disparities (Hennepin County, 2023a). In the County's Transportation Department, each division evaluates its capital project requests considering their impact on key county priorities such as disparity reduction, climate change, and environmental sustainability. The roadway and bridge team, for instance, uses a quantitative data-driven approach complemented by a qualitative

[23] As an example, income for members of the Fond Du Lac Band of Lake Superior Chippewa is typically half of what is reported in the Census data (Representatives of Fond Du Lac Band of Lake Superior Chippewa, personal communication, August 2, 2024).

assessment to evaluate projects and incorporate them into the CIP (Hennepin County Representatives, personal communication, September 27, 2024).

First, as part of the quantitative assessment, the roadway and bridge team recommend projects in the capital improvement program based on a prioritization process that considers infrastructure condition, safety, and equity (see Table 4.3).

Table 4.3 Hennepin County prioritization criteria for roads and bridges

Criteria	Weight	Description
Condition	50%	
Safety	25%	
Equity	25%	
Disparity Reduction (1)	60% (of the 25% in equity)	50% Low-income households: Areas of Concentrated Poverty (ACP) defined by the Met Council (census tracts with at least 40% of households at or below 185 percent of the federal poverty level; buffer area of half a mile). Certain tracts with a high percentage of college or graduate student populations are omitted to avoid skewing the results. 50% Percentage of population with a disability (categorized in low, medium, and high)
Usage (2)	40% (of the 25% in equity)	25% Percentage of people driving 25% Percentage of people walking 25% Percentage of people biking 25% Percentage of people using public transit

Notes: *(1) Data from the American Community Survey. (2) Data from StreetLight.* ***Source:*** *(Hennepin County Representatives, personal communication, September 27, 2024).*

The equity component focuses on two factors: (i) disparity reduction and (ii) usage of the transportation system by transportation mode. The disparity reduction component reflects mobility disparities for low-income populations and people with limited mobility, and receives the highest weight within the equity category reflecting the county's disparity reduction policy. The usage of the transportation system by transportation mode includes all modes of transportation (walking, biking, using transit, or driving) each weighted equally reflecting that all transportation modes are equally important.

Second, the roadway and bridge team perform a qualitative assessment to internally rank the projects before finalizing the CIP. For instance, a factor considered as part of the assessment includes whether opportunities for coordination with other entities exist. In addition, although race is not a factor of consideration within the tool, when it is asked to be considered for the review of transportation projects, they involve the County Attorney's Office.

The team goes through this prioritization process every two years. After completion of this step, the team sends their capital project request to the Capital Budget Task Force (CBTF) for their review and recommendations (see subsection 4.2.2.3).

City of Edina's Project Prioritization Tool

The Transportation Commission in Edina recommended in 2016 the use of equity-based criteria to prioritize capital investment in non-motorized transportation facilities (NMTF)[24] (City of Edina, 2022). The developed criteria used 12 factors divided into three categories: (i) neighborhood, which reflects geographic proximity to local and regional amenities and services; (ii) community, which reflects resident demographics in the vicinity of proposed projects; and (iii) infrastructure and cost, which reflects the financing of the proposed projects (see Table 4.4). These criteria are used to evaluate the extent to which proposed projects support the objectives of the proposed plan and community vision, and more weight is assigned to the community and neighboring categories reflecting support toward community goals over those that are merely cost-effective. Projects that rank high are prioritized for investment.

Table 4.4 Edina's prioritization criteria for non-motorized transportation facilities

Criteria	Max Points	Description
Neighborhood Characteristics (1)	30 / 70	
Network Growth	10	Number of adjacent pedestrian or bicycle facilities. This promotes improvements that fill gaps or branch out from existing pedestrian and bicycle networks. Higher points to areas with a higher number of facilities.
Transit Access (2)	5	Proximity to public transit stops (in miles). Higher points to areas with a public transit stop immediately adjacent.
Education Access (2)	5	Proximity to school (in miles). Higher points to areas with a school immediately adjacent.
Commercial/Industrial Access (2)	5	Proximity to commercial/industrial areas (in miles). Higher points to areas immediately adjacent to commercial/industrial areas.

[24] Capital investments in roadways and bridges are prioritized based on pavement condition (City of Edina Representatives, personal communication, August 22, 2024).

Criteria	Max Points	Description
Parks Access (2)	5	Proximity to a public park (in miles). Higher points to areas immediately adjacent to a public park.
Community Characteristics (3)	25 / 70	
Population Density	5	Number of residents per acre. Higher points to high-density areas.
Age Distribution	5	Combined percentage of population under age 18 or over age 65. Higher points to areas with higher percentages of these populations.
Racial Demographic	5	Percent identifying as BIPOC. Higher points to areas with higher percentages of BIPOC.
Disabled Population	5	Percent of population identifying as having one or more disabilities (hearing, vision, cognitive, ambulatory). Higher points to areas with higher percentages of disabled population.
Income	5	Median household income. Higher points to areas with lower median household income.
Cost Characteristics (1)	15 /70	
Proactive Pavement Management Program	10	Whether a project coincides with a scheduled pavement management activity in the city's 5-year CIP. Construction costs and property impacts can be significantly reduced when the work is combined with adjoining construction projects. Reconstruction: 10 pts, Overlay: 5 pts, none: 0 pts.
External Funding	5	Eligibility and extent to receive additional funding (MSA funds, partnerships with other agencies, grants, gifts, donations). Yes, more than 50% of estimated costs: 5 pts; Yes, less than 50% of estimated project costs: 3 pts; no: 0 pts.
Bonus		
Resident Support	5	Petition submitted combined with percent of impacted properties. Reflects that potential improvements may not be accounted for in current plans and gives special consideration for improvements desired by adjacent property owners (supporting engagement and seeking input from stakeholders). Yes, and more than 50% of properties impacted: 5 pts; Yes, and less than 50% of properties impacted: 3 pts; No: 0 pts.

Notes: *(1) Data from the City of Edina. (2) Area buffer is 1 mile, projects within more than a mile receive 0 pts. (3) Data from 2020 US Census - Census Block groups.* ***Source:*** *(City of Edina, 2022).*

Metropolitan Council's Regional Solicitation for transportation projects

The Metropolitan Council's Regional Solicitation is a competitive process to award federal transportation funding to projects that meet regional transportation goals and needs (Metropolitan Council, 2024d). Regional transportation goals are defined through Thrive MSP 2040[25] (the regional development framework) and Transportation Policy Plan - TPP (the region's long-range transportation plan). The Regional Solicitation happens every two years and awards about $250 million in federal funding.

The scoring committees assess and score all project submissions on specific measures and provide recommendations of the most suitable regional projects to the board. The criteria used in the assessment include the role in the regional transportation system and economy, usage, equity and housing performance, infrastructure age, congestion reduction/air quality/emission reduction, safety, multimodal facilities and existing connections, risk assessment, and cost-effectiveness. Each with several measures identified. In addition, project applications are grouped into three primary modal categories: (i) Roadways including multimodal elements, (ii) transit and Travel Demand Management (TDM), and (iii) bicycle and pedestrian facilities. Each of these includes three to five application categories for a total of 12 categories. All categories are assigned different points in each evaluation criterion (see Table 4.5).

[25] Thrive MSP 2040 was adopted in May 2014 and is the vision for the region over the next 30 years. The Metropolitan Council currently has the draft of its Imagine 2050 plan, which is set for adoption in February 2025. In this plan, the Metropolitan Council places equity as a top priority embedded as a value, as a goal, and in transportation specific objectives (Metropolitan Council, 2024h).

Table 4.5 Metropolitan Council Regional Solicitation prioritization criteria

	Roadways including multimodal elements					Transit and travel demand			Bicycle and pedestrian facilities		
	Traffic Mgmt Technology	**Mobility and safety**	**Strategic capacity - road expansion**	**Roadway Recon/ Mod**	**Bridge Rehab/ Repl**	**Transit Expansion**	**Transit Mod**	**TDM**	**Multiuse trails and bicycle facilities**	**Pedestrian Facilities**	**Safe routes to school**
Role in the regional transportation system and economy	175 (15%)	115 (10%)	210 (18%)	105 (9%)	195 (16%)	100 (9%)	100 (9%)	200 (17%)	200 (17%)	150 (13%)	250 (21%)
Usage	125 (10%)	NA	175 (15%)	175 (15%)	130 (11%)	350 (32%)	325 (30%)	100 (8%)	200 (17%)	150 (13%)	250 (21%)
Equity and housing performance	100 (8%)	100 (8%)	100 (8%)	100 (8%)	100 (8%)	200 (18%)	175 (16%)	150 (13%)	120 (10%)	120 (10%)	120 (10%)
Infrastructure age/ Condition	75 (6%)	NA	40 (3%)	175 (15%)	450 (38%)	NA	NA	NA	NA	NA	NA
Congestion reduction/ air quality / Emission reduction	200 (17%)	275 (23%)	150 (13%)	80 (7%)	NA	200 (18%)	50 (5%)	400 (33%)	NA	NA	NA
Safety	300 (25%)	435 (36%)	250 (21%)	280 (23%)	NA	NA	NA	NA	350 (29%)	400 (33%)	350 (29%)
Multimodal facilities and existing connections	50 (4%)	100 (8%)	100 (8%)	110 (9%)	150 (13%)	100 (9%)	100 (9%)	NA	100 (8%)	150 (13%)	NA
Service and customer improvements	NA	NA	NA	NA	NA	NA	200 (18%)	NA	NA	NA	NA

	Roadways including multimodal elements					Transit and travel demand			Bicycle and pedestrian facilities		
	Traffic Mgmt Technology	**Mobility and safety**	**Strategic capacity - road expansion**	**Roadway Recon/ Mod**	**Bridge Rehab/ Repl**	**Transit Expansion**	**Transit Mod**	**TDM**	**Multiuse trails and bicycle facilities**	**Pedestrian Facilities**	**Safe routes to school**
Innovation	NA	NA	NA	NA	NA	NA	NA	200 (17%)	NA	NA	NA
Risk assessment	75 (6%)	75 (6%)	75 (6%)	75 (6%)	75 (7%)	50 (5%)	50 (5%)	50 (4%)	130 (11%)	130 (11%)	130 (11%)
Cost-effectiveness	100 (8%)	100 (8%)	100 (8%)	100 (8%)	100 (9%)	100 (9%)	100 (9%)	100 (8%)	100 (8%)	100 (8%)	100 (8%)
Total Points	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**	**1,100**	**1,100**	**1,200**	**1,200**	**1,200**	**1,200**

Notes: *Values represent points assigned. In parenthesis is as the percentage of total points. Abbreviations used include Recon: Reconstruction; Mod: Modernization; Rehab: Rehabilitation; Repl: Replacement; Mgmt: Management.* ***Source:*** *(Metropolitan Council, 2024e).*

The criteria used for evaluation include a specific equity component. This criterion advances the Thrive MSP 2040 outcomes of equity and livability, and TPP goals of providing access to destinations and leveraging transportation investment to guide land use (Metropolitan Council, 2024e). The three measures included in this criterion are: Equity engagement, equity population benefits and impacts, and affordable housing access.

Across all project categories, the Equity and Housing Performance criterion receives a minimum of 8 percent and a maximum of 18 percent of the total points assigned. It receives the highest weight in the project categories included as part of the transit and travel demand category, followed by those in bicycle and pedestrian facilities, and roadways.

The Metropolitan Council also incorporates multimodal facilities and existing connections in its prioritization criteria. This criterion advances the Thrive MSP 2040 outcomes of equity, livability, prosperity, and sustainability; and the TPP goals of providing access to destinations, transportation and land use, and a competitive economy (Metropolitan Council, 2024e). The measures to assess this criterion include the transit, bicycle, or pedestrian project elements and connections.

Duluth-Superior MIC's Project prioritization tool

The Duluth-Superior MIC uses a multi-step project prioritization framework (MIC, 2024b). In Step 1, MIC uses a data-driven and spatially-based approach to prioritize transportation projects (see Table 4.6). All projects submitted by MIC area jurisdictions are scored through this approach. All projects are ordered from the highest to the lowest score and the priority project list is presented to jurisdiction staff for review and to conduct the second step.

Table 4.6 Duluth-Superior MIC's prioritization tool

Criteria	Max Points	Description
Number of Bike/Pedestrian crashes	15	Number of crashes within the 200-foot buffer of the project. Higher points to areas with higher number of crashes (range: 0-13).
Fatal and serious injury vehicle crashes	15	Number of crashes within the 200-foot buffer of the project. Higher points to areas with higher number of crashes (range: 0-10).
Existing level of service (LOS)	10	LOS is determined by comparing model results and AADT to the total capacity of the road segment (100-foot buffer around each project). Calculated maximum existing LOS within proposed area (range: 0-1.8)
Future year (2050) LOS	10	Uses the 2050 E+C travel demand model to determine LOS (100-foot buffer around each project). Calculated maximum existing LOS within proposed area (range: 0-1.8)

Criteria	Max Points	Description
Community Connectivity	10	Number of community facilities within 600 feet of proposed project area. Higher points to areas with higher number of facilities (range: 0-33)
Multimodal connectivity	15	Points assigned for the presence of sidewalks, bike facilities, and transit routes within a 100-foot buffer. (0: none; 5: presence of 1; 10 presence of 2; 15: presence of 3)
Short-trip analysis	10	Use short trip data by TAZ. Higher density of short-trips receives a higher score. Points awarded based on the quantiles (range: 0-2900)
Challenging areas	15	Projects to impact/be impacted by floodplains, historical areas, outstanding or exceptional resource waters, and wetlands within a 100-foot buffer of the project. Points assigned for each occurrence of a challenge (15: none; 10: presence of 1; 5 presence of 2; 0: presence of 3)

***Source**: (MIC, 2024b).*

In Step 2, staff reviews the priority project list to assess whether the list generated in the first step truly reflects the MIC area's most regionally significant projects. This step is more qualitative and includes making sure that projects are deemed regionally significant. In this step, the staff offers the opportunity for a jurisdiction to make the case that a project scored lower in should be included in the priority project list. Projects submitted by a jurisdiction for review are reviewed, and the MIC's Technical Advisory Committee (TAC) is asked about whether they support the inclusion of the particular project into the priority project list.

In Step 3, an additional layer of scoring is provided for all projects in the priority list. Each appropriate jurisdiction answers 18 questions (yes: 5 points; no: 0 points; unknown: 0 points / maximum number of points: 90) to determine how well the project will help meet the plan's goals and objectives. Figure 4.1 presents the list of questions.

ID	MTP Project Final Review Question
1	Will the project include a robust public engagement component/opportunity from its onset?
2	Does the project improve or maintain critical infrastructure to ensure good condition and performance?
3	Does the project help build or expand resiliency within the transportation system?
4	Does the project design specifically incorporate snow storage for year-round use and maintenance?
5	Does the project include an enhanced stormwater management feature, rain garden, or other "green infrastructure" in addition to or beyond what is typically installed?
6	Does the project directly include additional or improved pedestrian facility integration or connection within the transportation system?
7	Does the project directly include additional or improved bike and/or micromobility facility integration or connection within the transportation system?
8	Does the project help meet a specific local bike plan, pedestrian plan, and/or Safe Routes to School plan goal(s)?
9	Does the project intentionally improve connection between transit and other modes of transportation through sidewalk extension to bus stops, additional and/or improved bus stops, bike parking options near transit stop, park and ride associated with transit, etc.?
10	Does the project intentionally improve accessibility for older adults, children, and/or persons with disabilities?
11	Does the project expand and/or improve transportation options for disadvantaged populations?
12	Will the project have a direct or indirect benefit on the human health, environmental, social, and economic components of minority populations and/or low-income populations?
13	Does the project directly address a known safety problem?
14	Does the project include technology designed to intentionally improve efficient use and/or safety of the system?
15	Does the project intentionally help meet a goal(s) of a local or state transportation safety plan, and/or incorporate FHWA Proven Safety Countermeasures?
16	Does the project intentionally help meet a goal(s) of a local small area plan or similar type plan?
17	Does the project intentionally help meet a goal(s) of a local economic development or strategic plan, including the D-S Port Land Use Plan or other port economic development or strategic plan?
18	Does the project intentionally improve access, mobility, and travel connections for the movement of freight throughout and across the system?

***Source**: (MIC, 2024b)*

Figure 4.1 Duluth-Superior MIC's final review questions for project prioritization

Points from Step 3 are added to the points in Step 1 to calculate a final priority project score. The final scores are organized from highest to lowest to produce a final rank of the priority projects. For the plan adopted in October 2024, TAC members decided (for the first time) to leave the list as an unranked priority project list rather than listing the ranks in the plan.

Using this approach allowed MIC to reduce the list of 254 projects in the transportation plan to a final list of 40 priority projects that are expected to carry the goals and objectives envisioned for the long-range transportation plan (MIC, 2024b). Projects included in this final list include a variety of project types, mostly for preservation or reconstruction, but also including some projects dedicated for bike/pedestrian trails, intersection control, safety, and bridges. None are for roadway capacity expansion.

4.2.2.3 Practices for Incorporating Equity in the Transportation Investment Decision-Making Process

Transportation investments are typically reviewed and approved by members of the locality's council. Although in most cases residents are provided a space to learn and react to these projects, few localities

directly involve them in the decision-making process. Among case studies, Hennepin County provides an example of this type of involvement.

Hennepin County's Capital Budgeting Task Force (CBTF)

The Hennepin County Capital Budgeting Task Force (CBTF), established in 1973, is responsible for reviewing capital project requests from County departments and making recommendations to the County Board of Commissioners (Hennepin County, 2023b). The CBTF is composed of eleven citizens residing in Hennepin County, seven of whom are each appointed by each of the seven county commissioners, and the remaining four serve at-large for four-year terms and are appointed by a majority of commissioners.

The CBTF evaluates capital project requests, including those related to transportation and transit. The CBTF attends meetings where the various county departments present their capital project requests as well as the processes used to identify, prioritize, and select the proposed projects (Hennepin County, 2023b). To review funding requests, the CBTF meets about ten times a year in county buildings/facilities that will be requesting funding. In evaluating capital project requests, the CBTF focuses on the long-term impacts of improving, replacing, or acquiring new assets; and the use of various revenue streams to finance the capital projects. Overall, the CBTF reviews how capital project expenditures will affect departmental operating costs and how the investment will promote the full use of county assets, both at present and in the future. In addition, it considers maximizing all non-county revenue sources to reduce the property taxes and debt for capital projects to maintain a minimum amount of revenues to finance the county's long-term capital improvement program.

When the CBTF has evaluated capital project requests, it makes recommendations to the County Board of Commissioners (Hennepin County Representatives, personal communication, November 14, 2024). Recommendations might include questioning specific aspects of a project, providing a perspective that changes the priority of a project, and providing feedback to ensure the project addresses disparity reduction, among others. Commissioners evaluate recommendations from the CBTF and provide feedback to the different departments to adjust or approve their requests. Overall, the CBTF's recommendations inform the annual capital budget and the five-year capital improvement plan.

In the last meeting of the CBTF in 2024, the roadway and bridge team presented their project prioritization tool that incorporates equity as one of the considerations (Hennepin County Representatives, personal communication, November 14, 2024). Members of the CBTF were getting familiarized with the new approach to project prioritization and will potentially provide feedback in future meetings as the tool is utilized.

4.2.2.4 Other Practices for Incorporating Equity in Transportation Investment Planning

There are some localities and planning organizations that are also performing an equity evaluation of the processes that they undertake to plan, select, and fund transportation investments. Among case studies, the Metropolitan Council provides an example of this type of assessment.

Metropolitan Council's Equity evaluation of the processes that fund, plan, and select transportation investments

The Metropolitan Council (Council) considers equity as one of the five desired outcomes that define the shared regional vision (Metropolitan Council, 2024f). For the Council, equity connects all residents to opportunity and creates options for people of all races, ethnicities, incomes, and abilities. As part of the Thrive MSP 2040 plan and to promote equity, the Council has to use its influence and investments to build a more equitable region and engage a full cross-section of the community in decision-making. In addition, the Council will use equity as a lens to evaluate its operations, planning, and investments, and explore its authority to use its resources and roles to mitigate the place-based dimension of disparities by race, ethnicity, income, and ability.

The plan also highlights the need to have a full range of voices at the table to move toward equity (Metropolitan Council, 2024f). For this, the Council is strengthening its approach to outreach, public participation, and community engagement by defining consistent expectations of how the Council will engage with the region's residents and constituencies, evaluate levels of engagement for the different types of policy, planning, and operational decisions, collaborate and consult with members of the community (especially historically underrepresented populations), focusing on developing lasting relationships with the region's residents and constituencies, and working toward making decisions with people (not for people).

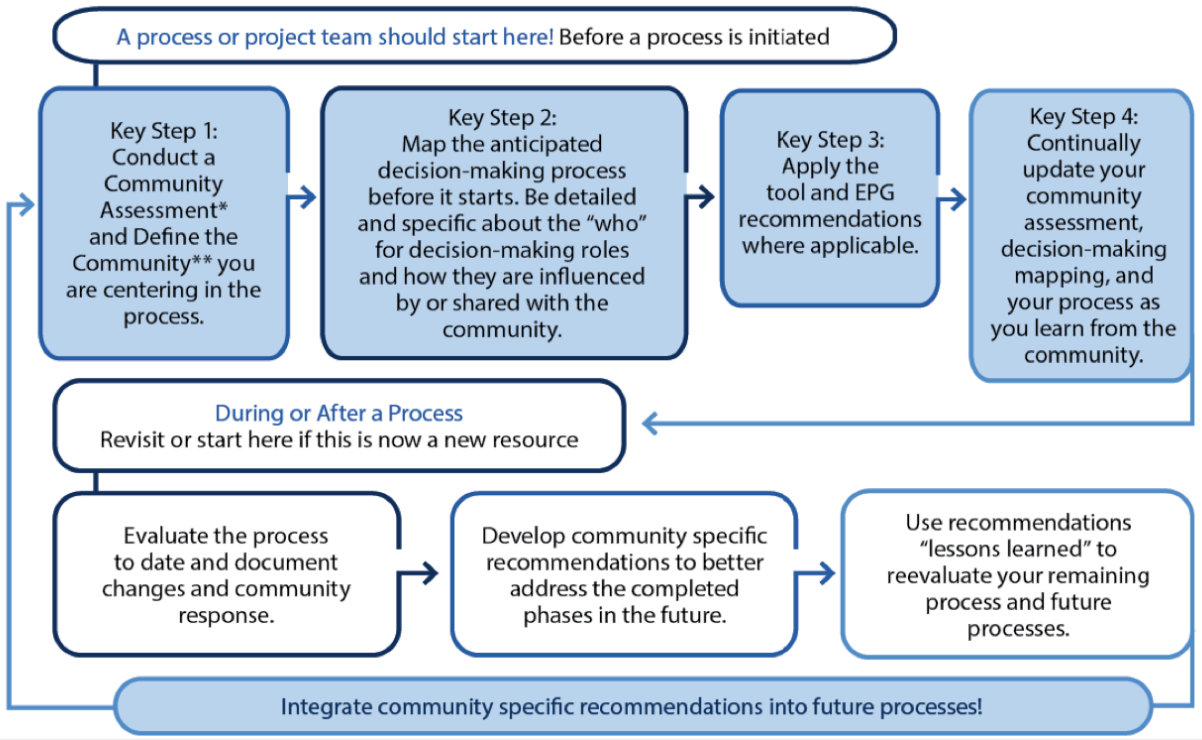
In terms of equity in transportation, the plan emphasizes several key elements. First, there is an emphasis on households that do not own private automobiles. Second, conducting service equity analyses and environmental justice analyses to ensure that changes in transit service and transportation projects do not lead to disparate impacts on the region's low-income populations and communities of color. Third, prioritize transportation investments that connect low-income areas to job opportunities and provide choices for people with disabilities. Lastly, engage communities in transit planning to understand how to use transit services and investments to promote access to opportunity.

As part of this regional effort, the Council is currently conducting an equity evaluation of the processes that fund, plan, and select regional transportation investments (Metropolitan Council, 2024b). The goal of the evaluation was to identify inequities in the processes and identify and prioritize actions to make these processes more equitable (Metropolitan Council, 2024a). The evaluation acknowledges the history of racism and inequities embedded within transportation investment processes and focuses on populations defined in Title VI and Environmental Justice laws (Black, Indigenous, and People of Color and low-income communities). The evaluation is facilitated through a pilot study to develop prioritized strategies and actions to reduce transportation-related inequities" (Metropolitan Council, 2024a).

The Equity Policy Group (EPG) guides the pilot study. This group consists of 15 community members who were selected to represent the racial and geographic diversity of communities in the metropolitan area (Metropolitan Council, 2024a). Key members include residents of Washington County, Hennepin County, Carver County, Ramsey County, Dakota County, and Anoka County, along with ex officio members from MnDOT and the Metropolitan Council. The group will co-create with the project team the

Transportation Equity Framework & Process Evaluation Tool, provide recommendations and feedback, and guide local agencies in their efforts toward equitable processes in transportation.

The Transportation Equity Framework & Process Evaluation Tool consists of a framework providing a guide for using the evaluation tool and a tool that contains a set of questions and recommendations to guide and evaluate processes for racial equity (Metropolitan Council, 2024a). The process involves four key steps identified in Figure 4.2. This evaluation framework applies to all five phases of the investment process: (i) problem and opportunity identification, (ii) planning and project identification, (iii) budget and funding, (iv) project delivery, and (v) construction.



***Source**: (Metropolitan Council, 2024a).*

Figure 4.2 Process evaluation model

As of August 2024, the equity framework and evaluation tool were a working document that will evolve as it is piloted and applied to various transportation decision-making processes (Representatives of Metropolitan Council, personal communication, July 31, 2024). The ongoing refinement will assist localities in adopting more equitable practices related to transportation projects. In addition to piloting it in various transportation decision-making processes, the Council plans to provide staff training, discuss the frameworks' use in other contexts, and continue to build trust with the community (Representatives of Metropolitan Council, personal communication, July 31, 2024).

Additionally, the Council discussed **community asset mapping** as an important tool for its evaluation framework and in its efforts toward equity and will be developing guidance on how to properly conduct

a community assessment in the next phase of their project. For them, this tool will contribute to understanding the specific details of the community going from "simply stat[ing] that 20 percent of the population is of a certain race" (Metropolitan Council, 2024g) to understanding the community's history, their transportation needs, and barriers (physical, cultural, and social). Some of the preliminary community assets that need to be mapped include the following:

- Race/Ethnicity
- Income, particularly identifying low-income housing locations
- Age, particularly identifying youth and seniors
- People with a disability
- Households without a car
- Elected officials and community leaders[26]
- Local contractors/consultants
- Physical environment, such as transportation barriers and access, tree canopy, parks and trails, bodies of water, community and environmental health factors
- Social and cultural environment, such as landmarks, community centers, small/local businesses, major employers, schools, community organizations, Indian burial sites, and religious centers
- Historic context, that is, the past or ongoing transportation policies or investments that benefited or harmed the community
- Transportation data, such as safety and travel numbers

Information gathered through the community asset mapping would be crucial to define the "community" or "communities" of the project, who is being centered in the process, how to prioritize these communities' needs, and who are the users of, beneficiaries from, and burdened by the investment. In addition, this information will also contribute to other tools, such as a community contacts guide, important community destinations, demographic and cultural mapping, and historical context.

[26] Individuals with capacity to lead within the community. In addition, these individuals are likely to be involved in conversations and advocate for the community. These individuals may also have the ability to influence budget allocations, planning, policies, and might help facilitate changes.

Chapter 5: Successful Practices for Incorporating Equity in Capital Investment Planning and Decision-Making

This chapter connects findings from the literature review, survey, and case study analysis, with the aim of providing localities and Native Nations sharing geography with Minnesota to develop a set of best practices to incorporate equity in their capital investment planning and decision-making processes. By incorporating equity in these processes, localities and Native Nations contribute to ensuring that transportation investments are inclusive and responsive to the diverse needs of their populations.

Recognizing that equity is not a one-size-fits-all approach, these practices must be tailored to reflect the demographic, cultural, historical, and economic contexts of each community. Effective implementation depends on leadership that is committed to advancing equity along with a deep understanding of the community, how community members experience the current transportation system, and identifying the barriers they face.

The practices listed in this chapter reflect emerging practices adopted across reviewed case studies. In many localities and Native Nations, the incorporation of equity in their transportation investment planning has occurred through a gradual accumulation of small changes that continue evolving.

5.1 Assessing Internal Policies and Practices for Equity

Across some case studies, local transportation agencies examine current agency policies and guidelines to identify systemic biases and barriers that exist and could affect the incorporation of equity in transportation investment planning. This includes, for example, the review of project planning and decision-making structures; processes for public engagement; and the processes used for funding, planning, and selecting transportation investments. It is appropriate for transportation agencies to have a third-party facilitator who could guide and support the examination and discussion around current policies and practices. Third-party facilitators may bring another perspective that is needed in the process and mediate difficult conversations as they arise.

The Metropolitan Council is currently conducting an equity assessment of the processes that fund, plan, and select transportation investments. This assessment will help identify the inequities that exist in the processes and identify and prioritize actions to make these processes more equitable.

This assessment is often part of a broader, locality-wide initiative aimed at fostering equity in the locality. It is complemented by providing equity training to staff members at all levels (from leadership to managers and planners) to help them identify and recognize their own biases. Training can also equip staff with the tools to understand how these biases may influence their work. Other equity-related training to offer to staff includes cultural competency and sensitivity training for understanding and working with diverse populations.

In Hennepin County, for instance, the Diversity, Equity, and Inclusion Division coordinated the countywide delivery of the Advancing Racial Equity training in 2019. This was a four-hour, classroom-based training to help employees gain awareness, develop skills, and be positioned to apply the learning in their work (Hennepin County, 2021). More than 95 percent of Hennepin County staff are trained to understand values, attitudes, skills, knowledge, and expertise that guide county efforts to have respect and sensitivity to the uniqueness of each individual and provide awareness for effective interactions and services that are inclusive to all, regardless of cultural characteristics.

5.2 Conducting a Community Assessment to Build an Equitable Transportation Investment Process

Several localities and Native Nations analyzed as case studies mentioned conducting community assessments as a tool to build an equitable transportation investment process. Although only one mentioned it explicitly, others alluded to similar approaches by emphasizing the creation of inventories of all types of local assets. These inventories often included assets such as public facilities like parks and places of cultural relevance, in addition to transportation infrastructure like roads, sidewalks, bike infrastructure, and transit stops. Conducting community assessments contributes to ensuring that transportation investments across local and Native transportation agencies are directed to areas where they are most needed.

Community assessments emphasize mapping out community resources and assets that could be leveraged for development (Phillips & Pittman, 2015). Conducting these assessments helps transportation agencies understand the current transportation infrastructure, its capacity and conditions, while also identifying gaps and opportunities for improvement. This process allows transportation agencies to build upon the community's existing strengths and local resources to create capacity from within and thus strengthen community assets (this approach shifts the focus from deficits to capacities and potential).[27]

Scholars and practitioners have identified several types of assets to identify in a community assessment, which are categorized into human, social, and physical capital assets (Phillips & Pittman, 2015).

- ***Human capital assets*** encompass community members' skills, talents, and knowledge. This is important to identify vulnerable communities such as children and senior populations, people with disabilities, and people who rely on transit, among others. In addition, it is also crucial to identify community members in positions of leadership that may contribute to the transportation

[27] Phillips and Pittman describe the importance of asset focus rather than deficit focus to prevent participants from becoming demoralized or distracted by negative community attributes. For example, identifying local resources enables the community to visualize its strengths directly and allows for capacity building since participants learn the process.

capital investment process, such as in community engagement and advocating for different community groups.

- ***Social capital assets*** refer to the relationships within a community, including trust, norms, and social networks. These assets are essential to identify paths for connection, collaboration, and community engagement. For instance, understanding the history of communities with transportation projects contributes to identifying projects and strategies to mitigate the negative impacts of previous transportation investment projects, and prevent their occurrence. Similarly, understanding current health and housing outcomes contributes to identifying transportation projects that positively influence and improve those outcomes. Furthermore, social capital assets are crucial to identify how community relations might contribute to transportation capital investment, such as by identifying community-based organizations that can facilitate engagement efforts (particularly with communities that have been excluded from the process) and local businesses that can contribute to project design, development, or execution of transportation capital investment projects.

Physical capital assets refer to tangible resources such as roads, buildings, infrastructure, and natural resources within a community. These assets are crucial to identify areas where improvements are necessary, not only for their structural condition and capacity but also to enhance mobility and access, create and enhance community connectivity, and promote sustainability and health in the community. Table 5. 1 provides a list of examples of assets to identify in a community assessment process. This list serves as a starting point, but it is not comprehensive. The list may vary depending on the unique characteristics and needs of each community and the transportation capital investment project considered. Transportation planners, in collaboration with key stakeholders,[28] should contribute to the development of the community assessment. In addition, the process should be flexible, adaptive, and evolving as new information is learned, or factors initially overlooked are identified.

Table 5.1 Factors to include in community assessment

Factors	Variables to consider
Human Capital Assets	
Population	● Race/ethnicity ● Income level (poverty) ● Age ● Population with disabilities ● Vehicle ownership ● Education levels
Labor Market Skills	● Technical skills: engineering, healthcare, construction, IT, etc. ● Soft skills: communication, teamwork, leadership ● Entrepreneurship ● Fiscal literacy

[28] This includes, for example, studies perform by other local agencies. For example, Ramsey County Public Works relies on the county's Public Health Department Strategic Plan, Climate action Plan, and ADA Transition Plan to identify and reduce transportation disparities (Ramsey County, 2025).

Factors	Variables to consider
Education	● Educational attainment: degrees, certificates, vocational training ● Trade and vocational skills (e.g., commercial driver's license, heavy machine operator, masonry, laborer)
Local Leadership	● Elected officials ● Community leaders
Social Capital Assets	
Community's history	● Past transportation projects and their impacts on the community
Community relationships	● Local businesses (e.g., Disadvantaged Business Enterprises) ● Community-based organizations
Social and cultural events/environments	● Governmental and recreational facilities ● Landmarks ● Markets
Housing outcomes	● Housing values ● Ownership vs renting rates
Health outcomes	● Infant mortality and obesity rates ● Incidence of respiratory diseases
Financial	● Access to credit markets and funds ● Financial literacy
Government environment	● Government agencies ● Patronage ● Inclusion
Physical Capital Assets	
Transportation system	● Types of roads and their condition ● Types of bike paths and their conditions ● Existing pedestrian facilities and their condition ● Transit services ● Transit infrastructure and its condition ● Types of crashes (including fatalities and injuries)
Natural resources	● Parks and other green spaces ● Rivers and lakes ● Air quality ● Wildlife and biodiversity
Buildings and Infrastructure	● Healthcare facilities (e.g., hospitals, community clinics, minute clinics, pharmacies) ● Educational facilities (e.g., schools, universities) ● Places of worship (e.g., churches and powwow grounds) ● Community centers ● Casinos and hotels

Conducting a community assessment contributes to informing a more equitable, community-based transportation development strategy. In particular, results from the community assessment inform long-range transportation goals and transportation capital investment planning, support project implementation and sustainability, inform education and community engagement strategies, and contribute to building relationships between the transportation agency and community members.

5.3 Identifying Populations that have been Underserved, Excluded, and Harmed by Past Transportation Decisions

The mission of local and Native transportation agencies is to serve their populations, including those that have historically been underserved, excluded, and harmed by past transportation decisions. To incorporate equity in transportation capital investment planning and decision-making, it is necessary to identify the populations that have disproportionately borne the negative impacts of transportation decisions. Identifying these populations is the initial step for a transportation capital investment planning process that is equitable, inclusive, and responsive to the needs of all community members.

In identifying these communities, localities and Native Nations have used various demographic characteristics to define and incorporate them in their transportation capital investment planning. It is important to acknowledge that the demographic characteristics selected may differ across localities and Native Nations, and there is no universal, one-size-fits-all approach. These characteristics depend on the unique needs and contexts of each community. The following list provides common characteristics used across localities and Native Nations sharing geography with Minnesota:

- **Race and ethnicity** - Help in identifying communities that have faced historical discrimination or exclusion in transportation planning. Racial and ethnic minorities have experienced disparate access to transportation options and have been disproportionately impacted by transportation capital investment projects.
- **Income level** - Low-income populations have limited access to private vehicles and face barriers to accessing public transit due to its affordability.
- **Disability status** - Population groups that face significant barriers to accessing the transportation system
- **Age** - Groups like children and many seniors do not drive and rely on alternative transportation options for mobility.
- **Vehicle access** - Populations without vehicles are dependent on public transit or nonmotorized transportation modes to travel.
- **English Proficiency** - People with Limited English Proficiency (LEP) face language barriers to accessing and understanding transportation services.

These demographic characteristics help in identifying populations that face more significant challenges in reaching destinations and accessing other services. They may encounter financial barriers to travel, have limitations in getting a driver's license, and face difficulties in navigating a congested environment. Additionally, many are dependent on public transit or nonmotorized transportation modes to travel.

5.4 Defining Equity in Transportation

Having a clear definition of equity in transportation is essential for building a common understanding, guiding staff efforts, and ensuring clarity and alignment among stakeholders. In addition, it prevents misinterpretation or inconsistent application of equity principles, especially when decisions involve

trade-offs and resource allocations. A clear definition of equity serves as a foundation for setting priorities, adapting processes and measuring systems, and fostering accountability.

While few localities and Native Nations have formally defined transportation equity, some examples illustrate how the definition can be shaped. These examples offer a starting point for jurisdictions seeking to articulate what equity in transportation means in their specific context and how it could be operationalized in their planning and investment frameworks. It is worth noting that there is no universal definition for equity in transportation and the current definitions continue to evolve to meet community needs and reflect communities' experiences with transportation.

The Metropolitan Council, for example, in its MSP 2040 plan defines equity as "*connects all residents to opportunity and creates viable housing, transportation, and recreation options for people of all races, ethnicities, incomes, and abilities so that all communities share the opportunities and challenges of growth and change*." Such a definition was critiqued for being too aspirational, and vague, describing the destination but not the process of getting there, and not recognizing the existence of past and current inequities (Metropolitan Council, 2023).

The proposed language for transportation equity in the 2050 regional plan is "*Equity is a process of improving outcomes toward eliminating disparities between Black people, Indigenous people, and people of color and white people living in the Twin Cities region. Equity requires an intentional, ongoing, and consistent practice of adapting policies, systems, and structures to measurably improve outcomes as defined by those most affected by them. These outcomes must reflect a nuanced and shared understanding of positive change built through community-centered, culturally responsive engagement. Equity requires that historically excluded communities - especially Black communities, Indigenous communities, and communities of color - share power in all levels of decision-making throughout Council development processes. Lastly, equity often requires the redistribution of both power and resources to improve the lives of Black people, Indigenous people, and people of color as these groups continue to bear exceptionally large and persistent inequities across nearly all metrics of well-being and economic opportunity. Equity at the Metropolitan Council means that the benefits and burdens of Council systems, services, and spending are fair, shared, and just, and designed to repair both historic and ongoing injustice*" (Ramsey County, 2025).

In their Imagine 2050, the Metropolitan Council defined equity as "*that historically excluded communities – especially Black communities, American Indian communities, and communities of color – have measurably improved outcomes through an intentional and consistent practice of adapting policies, systems, services, and spending so that they contribute to the repair of both historic and ongoing injustice*" (Metropolitan Council, 2025b). This definition was also used to guide their equity evaluation of internal processes.

MnDOT also defines transportation equity as "*Transportation equity means the benefits and burdens of transportation systems, services and spending are fair and just, which historically has not been the case.*

Transportation equity requires ensuring underserved communities, especially Black, Indigenous and People of Color, share in the power of decision making"[29] (MnDOT, 2025a).

5.5 Developing Equity Goals and Objectives

Aligning with the equity definition discussed above, develop equity goals and objectives to provide a clear direction for advancing transportation equity and prioritizing transportation investments. While goals provide a general direction and long-term aims, objectives translate the goals into actionable items that are specific, short-term, and measurable. To foster effectiveness, it is recommended to follow the SMART approach when defining objectives, making them (University of California, 2017):

- **Specific**, that is, define exactly what is being pursued. This includes defining what needs to be accomplished, who needs to be involved, when should this be accomplished by, where, and the reason for it.
- **Measurable**, that is, define the metrics or milestones as ways to measure progress.
- **Attainable**, that is, define how the goal could be achieved or accomplished and the resources needed to advance.
- **Realistic**, that is, is it doable. This involves assessing the relevance of the action for stakeholders and alignment with overall objectives.
- **Timely**, that is, provide target dates for deliverables or when activities need to be accomplished by.

Across case studies analyzed, some have already established formal equity goals and objectives related to transportation equity. Examples of these can be found in Table 5.2. It is important to note that this work is still in develop evolving with institutional learning, capacity building, and iterative refinement. In addition, in interviews conducted as part of this study, some localities shared that they are still in the process of developing and setting clear equity goals and objectives. For many, this process involves internal discussions, community engagement, and agency coordination to ensure that these goals and objectives are meaningful and actionable.

[29] Further, they define sharing power as "creating opportunities for underserved communities to access decision making power. This includes institutional and structural power. Institutional power is the ability to create or greatly influence and shape the rules, policies and actions of an institution. Structural power is the ability to create or greatly influence and shape the rules, policies and actions that govern multiple and intersecting institutions or an industry. Sharing power requires engaging early and often with underserved communities to better understand community needs and incorporating those needs to transportation initiatives that lead to real, measurable change in the lives of community members. Shared power framework recognizes and addresses the power imbalance that often leads to poor and uninformed decisions that perpetuate harms on underserved communities especially Black, Indigenous and People of Color" (MnDOT, 2025b).

Table 5.2 Goals and objectives by case study

Equity-Related Goals and Objectives by Locality
Metropolitan Council
Objectives: *Historically disadvantaged communities are better connected to jobs, education, and other opportunities. *We repair and eliminate disparate and unjust impacts and harms to Black people, Indigenous people, and people of color. *We better meet the transportation needs of people who have disabilities or limited mobility. **Source:** Imagine 2050 - Transportation Policy Plan (Metropolitan Council, 2025a).
Duluth-Superior MIC
Goal: Livable communities and equity - Develop and maintain a reliable year-round Duluth-Superior area transportation system that equitably enables people of all ages, incomes, and abilities to engage in our community's civic, economic, and social opportunities and access needed services. **Objectives**: *Ensure that investments in the Duluth-Superior area transportation system led to improved and reliable transportation options for people of all ages, incomes, and abilities across all modes. *Ensure early and ongoing opportunities exist for the public to engage in two-way discussion about planned or proposed transportation improvements to the Duluth-Superior area transportation system. *Appropriately scale transportation-related projects across the Duluth-Superior area transportation system. *Make information about the Duluth-Superior area transportation system available to the public in a variety of ways. *Build and maintain Duluth-Superior area transportation system infrastructure in a manner that expands and/or enhances connectivity with key community resources (e.g., schools, parks, community centers, community gardens, the Lake Walk, etc.). **Source:** Sustainable Choices 2050 - Long-Range Transportation Plan (Duluth-Superior MIC, 2024).
Hennepin County
Goal: Provide affordable transportation choices and convenient access to destinations. **Objectives**: *Expand multi-modal travel options for people of all ages and abilities to connect to jobs and other opportunities *Operate our system to efficiently and cost-effectively connect people and freight to destinations *Provide a transportation system that is affordable and available to all users, regardless of mode of choice, ability or economic status *Create connectivity within and between transportation modes to improve mobility *Reduce transportation costs, especially for people in areas of poverty **Performance indicators** (baseline 2017, target 2040): *Affordability: Housing + Transportation Cost Index (Baseline 44% = Target 2040 < 45%) *Choices: (1) Bike to work (Baseline 1.8% = Target 3.4%). (2) Walk to work (Baseline 3.4% = Target 5%). (3) Regional transit ridership (Baseline 27 million = Target double). (4) Mode split - single occupant vehicles downtown Minneapolis (Baseline 60% = Target < 60%) *Access: Number of households within ½ mile of Blue and Green lines (Baseline TBD = Target TBD) **Goal**: Improve our transportation system to enhance quality of life, health, livability, and competitiveness. **Objectives:** *Create healthy and livable communities by including pedestrian, bicycle, and transit facilities in roadway projects

Equity-Related Goals and Objectives by Locality
*Strengthen the connection between land use planning and transportation to promote orderly growth and development *Target our transportation investments to create opportunities for people to live active and healthy lifestyles *Link transit, bicycle, pedestrian and road projects to housing, jobs and recreational opportunities *Provide convenient, affordable access to destinations, especially for residents experiencing high transportation and housing cost burden *Implement context-sensitive projects that respect cultural, historic and natural resources *Use transportation investments to support broader county goals including growing our economy, reducing disparities, improving health, enhancing livability, and protecting the natural environment **Performance indicators** (baseline 2017, target 2040): *Quality of life/livability: ADA pedestrian ramps in compliance (Baseline 53% = Target 100%) *Health: Number of miles of bicycle facilities built/year (Baseline 18 = Target 20) *Competitiveness: Number of jobs (Baseline 920,000 (2020) = Target 1.03 million (2040)) **Source:** Mobility 2040 Plan (Hennepin County, 2024b).
Ramsey County
Goal: Provide a multimodal transportation system that is equitable for all. **Objectives**: Ensure all users have access to a multimodal system that is accessible, maintained, and improved regardless of location within the country. **Performance measures**: Projects applied in high social equity score areas. **Source:** All Abilities 2050 Transportation Plan (Ramsey County, 2025).
City of Edina
Goal 8: Invest in infrastructure to support the continued growth in low- to zero-emission technology and support regional and statewide efforts to educate and adopt electric vehicles. **Objective 8.2:** Ensure that the methodology to determine electric vehicle charging locations considers both public and private facilities with an inclusive and equitable lens. **Goal 10**: Engage, seek input from and educate all segments of the community regarding transportation-related issues and projects impacting the City. **Objective 10.2:** Seek inclusive, equitable and meaningful public participation throughout the community in all transportation studies and projects conducted by the city. **Source:** Comprehensive Plan - Transportation (City of Edina, 2020).

5.6 Determining the Phases of the Capital Investment Planning Process that Incorporate Equity

For the outcome to be equitable, the process used to achieve those outcomes should also be equitable. The transportation capital investment planning and decision-making process consists of several phases where equity could be integrated. Ideally, local and Native transportation agencies should strive to incorporate equity into each phase of the process. However, in practice, this is often limited due to staff capacity and budget constraints that local and Native transportation agencies face. Across the localities

and Native Nations sharing geography with Minnesota considered as case studies, equity is incorporated into the transportation capital investment planning and decision-making processes at three different phases:

Phase I: Identifying transportation capital investment projects

Many localities and Native Nations use equity lenses to identify transportation capital investment projects. For this, some transportation officials use a data-driven approach to identify existing transportation gaps and assess those within the context of the community.

Many transportation officials couple this data-driven approach with community engagement to ensure that the planning aligns with the needs and priorities of the community. Through community surveys and by meeting directly with community members, transportation officials can gain a deeper understanding of the unique transportation challenges the community faces and their transportation needs and thus identify projects that address those needs. Across various case studies, common themes in community engagement include intentionality and tailoring outreach efforts to the specific characteristics and dynamics of the community. Table 5.3 presents examples of practices used across case studies that have contributed to successful community engagement in identifying transportation capital investment projects.

Table 5.3 Examples of best practices in community engagement

Community Engagement Strategy	Best practices identified across case studies
Surveys	*Offer stipends recognizing the time community members spend in the taking the survey
In-person engagement	*Meeting community members where they are (e.g., local markets, community events, powwows) *Minimizing barriers to participation (e.g., providing on-site translation services, providing childcare arrangements, supporting transportation of participants) *Partnering with local leaders/community-based organizations for an intentional engagement process *Presenting preliminary identified transportation capital investment projects and gathering feedback from the community *Conducting follow-up meetings to present how the community's feedback is incorporated into the process *When the engagement is outsourced, ensure that a representative of the transportation agency is always present at the meetings.

As transportation capital investment plans are long-term plans, localities and Native Nations are currently conducting these efforts every few years due to staff capacity, budget constraints, and budgeting timeline constraints. However, across many case studies, there is a growing desire to engage in these efforts more regularly (for instance, every year instead of every four years) to stay aligned with changing community needs. Overall, having regular community engagement for identifying transportation capital investment projects also contributes to building trust in the community and helping prevent the perpetuation of past inequities.

Phase II: Prioritizing transportation capital investment projects

Due to budget constraints, transportation officials need to prioritize transportation capital investment projects to receive funding. Therefore, the process of prioritizing projects is crucial to ensure that limited resources are allocated in a way that provides the most benefit to all community members. Across case studies, three local transportation agencies have designed project prioritization schemes to assess transportation projects to align with border community goals while addressing equity challenges within the transportation system.

Overall, the identified schemes involve a multi-step process that considers a wide range of factors. In addition, the prioritization scheme reflects the transportation agency's goals and objectives in the evaluation criteria selected (as well as in how these are defined) and their corresponding weights. Prioritization schemes often follow a two-step approach that complements a quantitative and spatial data-driven approach with a qualitative assessment. The wide range of factors considered extends beyond traditional transportation measures such as infrastructure condition and safety. Factors may

involve community characteristics, distribution of transportation system users, and connectivity or access to community physical assets, among others.

Phase III: Selecting transportation capital investment projects for funding

Most localities across case studies provide a space for community members to react to the transportation capital investment projects that are recommended for funding approval. This takes the form of public hearings and public comment periods, where input is collected and considered before the final decision is made. However, few localities go beyond this process by directly involving and empowering community members to play a more active role in the planning and decision-making of transportation capital investment projects. For example, in one of the case studies analyzed, community members part of a Capital Budgeting Task Force assessed and recommended which transportation capital investment projects should be considered by the locality's governing council for funding consideration.

Having these Community Advisory Committees/Boards helps bring an additional and outside perspective to assess transportation capital investment projects considered for funding. In addition, a best practice in this area is that the membership of these Community Advisory Committees/Boards should reflect the community's makeup, which contributes to having diverse voices at the table and ensuring decisions represent all community members, including those that have historically been underserved, excluded, and harmed by past transportation projects. Having these groups involved in decision-making also contributes to enhancing the community's sense of ownership and accountability in the transportation planning and decision-making process.

5.7 Defining Elements for Equity Analysis

The localities and Native Nations analyzed as case studies established equity measures to guide and monitor their efforts. The selection of these measures is context-sensitive and reflects the demographics and lived experiences of the population in each locality and Native Nation. These measures are not static, as localities and Native Nations regularly monitor them to adjust them when needed to ensure they remain effective in achieving their equity goals. This dynamism allows for ongoing learning and responsiveness, ensuring that transportation capital investment projects address the diverse needs of the community.

There are several factors that localities and Native Nations assess when defining the equity measures to be used in their transportation investment planning process. First, they select the metrics that best describe or reflect their communities and their needs. These metrics are context-sensitive and are directly tied to the specific needs of the population. In very few cases, transportation agencies borrowed metrics created by other agencies. While more general metrics are helpful for comparisons, they often fail to capture the challenges that different communities face. Second, transportation agencies assess transportation investment projects by assessing information in a determined area adjacent to the project (with buffer areas of between 100 feet to a mile). This helps assess how projects may affect their immediate vicinity. Third, transportation agencies establish categories by assessing the

distribution of the variables in the area. Table 5.4 presents a list of variables used by localities and Native Nations sharing geography with Minnesota to incorporate equity in their transportation investment planning.

Table 5.4 List of variables to incorporate equity in investment planning

Metric	Definition	Rationale	Data Source & Level of Analysis	Case Study Source
Income Level				
Median household income	Median reported household income (categories: C1: Less than $109K; C2: 109K–143K; C3: 143K–164K; C4: 164K–203K; C5: 203K–229K; C6: More than 229K)	Low-income households are less likely to own a vehicle and are more likely to walk, bike or roll to get around. People walking in low-income neighborhoods account for a disproportionate percentage of fatal pedestrian crashes.	2020 US Census data Census Block	City of Edina - Project Prioritization
Low-income households	Areas of Concentrated Poverty (ACP) defined by the Metropolitan Council. Census tracts with at least 40% of households at or below 185% of the federal poverty level.	Not available.	American Community Survey Census Tracts - Buffer area of half a mile	Hennepin County - Project Prioritization
Poverty and low income	Low-income household whose income is less than or equal to twice the poverty level. *The federally defined poverty threshold ranges from an annual income of $13,788 for a family of one to $52,386 for a family of nine or more.	People in poverty or of low income are often limited in their options for transportation due to cost or other access barriers, which increases the importance of maintaining an equitable transportation network that offers multiple, safe, and accessible transportation options for all people, regardless of income.	Not available.	MIC Long-range planning
Race				
BIPOC population	Percentage of the population identifying as Black, Indigenous, or People of Color. Includes those who identified as being from two or more races. (categories: C1: Less than 1%; C2: 1-4.1%; C3: 4.1 - 6.4%; C4: 6.4 - 11.1%; C5: 11.1 - 14.4%; C6: Over 14.4%)	City's responsibility to address racial inequities to foster an inclusive community. Transportation equity requires an understanding of the unique needs and safety concerns of different populations and providing appropriate resources to address them. BIPOC pedestrians have higher fatality rates in motor vehicle collisions than white.	2020 US Census data Census Block	City of Edina - Project Prioritization

Metric	Definition	Rationale	Data Source & Level of Analysis	Case Study Source
Native American Self-Identification				
Native American Self-Identification	Native Nation's identification of Native community member Percentage of the population that live on, near, or away from Reservation lands.	Not available.	2020 US Census data Census Tracts Native Nation's Tribal Enrollment Statistics	
Age				
Senior & Youth	Percentage of the population under the age of 18 or over the age of 65. (categories: C1: Less than 34.5%; C2: 34.5-42%; C3: 42%-44.1%; C4: 44.1-48.5%; C5:48.5-52%; C6: over 52%)	Group of people more likely to rely on pedestrian, bicycle, or transit facilities rather than motor vehicles for independent mobility.	2020 US Census data Census Block	City of Edina - Project Prioritization
Disabilities				
Disabled population	Percentage of the population identifying as having one or more disabilities (hearing, vision, cognitive, or ambulatory). (categories: C1: Less than 5.3%; C2: 5.3 - 6.2%; C3: 6.2 - 6.8%; C4: 6.8 - 8.7%; C5: 8.7 - 10.9%; C6: More than 10.9%)	People with disabilities are less likely to own or have access to personal vehicles than people without disabilities. Providing affordable and reliable mobility options for populations with special transportation needs can significantly improve transportation equity.	2020 US Census data Census Block	City of Edina - Project Prioritization
People with disabilities	Percentage of people with disabilities	Not available.	American Community Survey Census Tracts	Hennepin County - Project Prioritization
People with ambulatory difficulty	People with a serious difficulty walking or climbing stairs	This group's transportation needs need to be considered within the overall network in order to implement the vision of the long-range plan and to provide an equitable and accessible system for all.	Not available.	MIC Long-range planning

Metric	Definition	Rationale	Data Source & Level of Analysis	Case Study Source
Other population-related variables				
Disadvantaged Communities' Benefits and Impacts	(qualitative) Description of projects' benefits & acknowledgment and descriptions of projects' negative impacts to BIPOC, low-income populations, children, people with disabilities, youth, and older adults. Describe measures to mitigate negative impacts. (e.g., benefits: pedestrian and bicycle safety improvements; public health benefits; direct access improvements for residents or improved access to destinations -jobs, school, health care, or other; travel time improvements; gap closures; new transportation services or modal options; leveraging of other beneficial projects and investments; and/or community connection and cohesion improvements. Negative impacts: decreased pedestrian access through sidewalk removal/narrowing; placement of barriers along the walking path, increase in auto-oriented curb cuts, etc.; increased speed and/or "cut-through" traffic; removed or diminished safe bicycle access; inclusion of some other barrier to access to jobs and other destinations).	Successful projects are designed to provide direct benefits to BIPOC populations, low-income populations, persons with disabilities, youth, and older adults. All projects must mitigate potential negative benefits as required under federal law. Projects that are designed to provide benefits go beyond the mitigation requirement to proactively provide transportation benefits and solve transportation issues experienced by Disadvantaged communities.	Metropolitan Council Project	Metropolitan Council - Regional Solicitation

Metric	Definition	Rationale	Data Source & Level of Analysis	Case Study Source
Population density	Number of residents per acre (Categories: C1: Less than 3.1; C2: 3.1-4.8; C3: 4.8-6.8; C4: 6.8-7.3; C5: 7.3-9.1; C6; Over 9.1)	Projects in areas of high population may be used by the greatest number of people. High-density areas tend to have high traffic volumes and walkable or bikeable destinations. Pedestrian and bicycle infrastructure in these areas may contribute to reducing single occupancy vehicle and encourage the choice of alternative transportation options.	2020 US Census data Census Block	City of Edina - Project Prioritization
Environmental				
Challenging Areas	Count of challenging areas	Identifies whether a project is likely to impact or be impacted by floodplains, historical areas, outstanding or exceptional resource waters, and wetlands	Duluth-Superior MIC Project - 100-foot buffer	Duluth-Superior MIC - Project Scoring
Safety				
Bike/ Pedestrian crashes	Number of bike/pedestrian crashes within buffer	Not available.	Duluth-Superior MIC Project - 200-foot buffer	Duluth-Superior MIC - Project Scoring
Fatal and serious injury vehicle crashes	Number of severe and fatal crashes within buffer	Not available.	Duluth-Superior MIC Project - 200-foot buffer	Duluth-Superior MIC - Project Scoring
Connectivity				
Network Growth	Number of existing pedestrian or bicycle facilities connecting to a proposed improvement.	Pedestrian and bicycle facilities are most utilized when they have logical endpoints or connect to other facilities. This factor promotes improvements to fill gaps in the existing pedestrian and bicycle network.	City of Edina Project	City of Edina - Project Prioritization
Multimodal Connectivity	Number of existing dedicated pedestrian ways, bicycle lanes/ways, and transit routes	Not available.	Duluth-Superior MIC Project - 100-foot buffer	Duluth-Superior MIC - Project Scoring

Metric	Definition	Rationale	Data Source & Level of Analysis	Case Study Source
Community connectivity	Number of community resources in close proximity (schools, churches, parks, and community centers)	Not available.	Duluth-Superior MIC Project - 600-foot buffer	Duluth-Superior MIC - Project Scoring
Access				
Transit Access	Distance between a proposed project and a public transit stop. (categories: C1: immediately adjacent; C2: less than 0.25 miles; C3: 0.25 - 0.5 miles; C4: 0.5 - 0.75 miles; C5: 0.75 - 1 mile; C6: more than 1 mile)	Transit service supports many community goals and its success is reliant on pedestrian access. Transit is more attractive when there is adequate pedestrian or bicycle infrastructure connecting transit stops to riders' origins and destinations.	City of Edina Project	City of Edina - Project Prioritization
Education Access	Distance between a proposed project and schools (public, private or charter) and libraries. (categories: C1: immediately adjacent; C2: less than 0.25 miles; C3: 0.25 - 0.5 miles; C4: 0.5 - 0.75 miles; C5: 0.75 - 1 mile; C6: more than 1 mile)	This factor recognizes the importance of extending the benefits of education to the entire community.	City of Edina Project	City of Edina - Project Prioritization
Commercial/ Industrial Access	Distance between a proposed project and a commercial or industrial area. (categories: C1: immediately adjacent; C2: less than 0.25 miles; C3: 0.25 - 0.5 miles; C4: 0.5 - 0.75 miles; C5: 0.75 - 1 mile; C6: more than 1 mile)	Commercial or industrial areas tend to have higher volumes of vehicular traffic than residential areas. Pedestrian and bicycle infrastructure in these districts promotes safe alternatives to motor vehicle travel. It may also improve access to employment opportunities, retail, restaurants, and other amenities.	City of Edina Project	City of Edina - Project Prioritization
Park Access	Distance between a proposed project and a public park. (categories: C1: immediately adjacent; C2: less than 0.25 miles; C3: 0.25 - 0.5 miles; C4: 0.5 - 0.75 miles; C5: 0.75 - 1 mile; C6: more than 1 mile)	Parks and trails provide recreational, fitness, and transportation opportunities for people. These facilities generally have limited vehicle parking and could be more easily accessed by non-motorized modes. Improving access to these facilities increases health and wellness	City of Edina Project	City of Edina - Project Prioritization

Metric	Definition	Rationale	Data Source & Level of Analysis	Case Study Source
		opportunities, strengthens community and safety, and provides an additional source of recreational activity.		
Usage				
People driving	Percentage of people driving	Recognizes all users of the transportation system that will be impacted or benefited by the transportation project	StreetLight	Hennepin County - Project Prioritization
People walking	Percentage of people walking		StreetLight	Hennepin County - Project Prioritization
People biking	Percentage of people biking		StreetLight	Hennepin County - Project Prioritization
People using public transit	Percentage of people using public transit		StreetLight	Hennepin County - Project Prioritization
Existing level of service	Areas experiencing operational deficiencies Comparing model results and AADT to the total capacity of the road segment	Not available.	Duluth-Superior MIC Project - 100-foot buffer	Duluth-Superior MIC - Project Scoring
Future year (2050) Level of Service	Areas that are projected to be experiencing operational deficiencies. Using 250 E+C travel demand model	Not available.	Duluth-Superior MIC Project - 100-foot buffer	Duluth-Superior MIC - Project Scoring
Short-Trip Analysis	Number of short trips (1-mile or less) within TAZ (categories assigned based on quantiles)	Identifies areas where there is latent demand and opportunity for increased bicycle and pedestrian trips	Duluth-Superior MIC Project	Duluth-Superior MIC - Project Scoring

Metric	Definition	Rationale	Data Source & Level of Analysis	Case Study Source
Transportation Operation				
Proactive Pavement Management Program	Whether a proposed project coincides with a scheduled pavement management activity in the City's 5-Year CIP.	Pavement management projects can provide opportunities to reallocate portions of the public right-of-way for new pedestrian and bicycle infrastructure. Construction costs and property impacts can be reduced when the work is combined with adjoining construction projects. Reducing construction costs allows the City to maximize use of the PACS Fund and accelerate implementation of the proposed pedestrian and bicycle networks.	City of Edina Project	City of Edina - Project Prioritization
External Funding	Whether a proposed project is eligible to receive additional funding and to what degree. Funding opportunities may include Municipal State Aid funds, partnerships with other agencies, grants, gifts or donations. Opportunity for funding covering less or more than 50% of the estimated project cost	Supplementing the PACS Fund with external funding sources allows the City to maximize use of the PACS Fund and accelerate implementation of the proposed pedestrian and bicycle networks.	City of Edina Project	City of Edina - Project Prioritization
Housing				
Affordable housing access	(qualitative) Description of affordable housing developments (existing, under construction, or planned). Note the number of existing subsidized units (refer to the Socio-Economic Conditions map); describe other types of affordable housing (e.g., naturally occurring affordable housing, manufactured housing) and under construction or planned, and [optional] describe how a	Not available.	Metropolitan Council Project - within half mile of the proposed project	Metropolitan Council - Regional Solicitation

Metric	Definition	Rationale	Data Source & Level of Analysis	Case Study Source
	project connects affordable housing residents to destinations (e.g., childcare, grocery stores, schools, places of worship). Describe project's benefits to current and future affordable housing residents (e.g., direct access improvements for residents improved access to destinations such as jobs, school, health care or other; new transportation services or modal options; and/or community connection and cohesion improvements).			
Engagement				
Resident Support	Whether a resident petition is submitted in favor of a pedestrian or bicycle improvement and how many of the adjacent impacted properties are represented on the petition. Impacted properties submitting petitions are less or more than 50% of impacted properties.	This factor reflects that some potential improvements may not be accounted for in current plans and gives special consideration for improvements that are desired by many adjacent property owners.	City of Edina Project	City of Edina - Project Prioritization
Engagement	(qualitative) (i) Descriptions of BIPOC, low-income, and disabled populations, youth, or older adults and how these populations relate to regional context. (ii) Descriptions of how BIPOC and low-income populations, persons with disabilities, youth, older adults, and residents in affordable housing were engaged (e.g., through community planning efforts, project needs identification, or during the project development process). (iii) Descriptions of the progression of engagement activities	A successful project is the result of active engagement of BIPOC populations, low-income populations, persons with disabilities, youth, older adults, and residents in affordable housing. Engagement should occur prior to and during project development, with the intent to provide direct benefits or solve an expressed transportation issue, while also limiting and mitigating any negative impacts.	Metropolitan Council Project - within half mile of the proposed project	Metropolitan Council - Regional Solicitation

Metric	Definition	Rationale	Data Source & Level of Analysis	Case Study Source
	in the project (including Engagement methods and tools used; Process of engaging specific communities and populations likely to be directly impacted by the project; Techniques used to reach populations traditionally not involved in community engagement related to transportation projects; Process to identify the project's purpose and need; Process to engage community as the project was developed and designed; Process to provide multiple opportunities for BIPOC and low-income populations, persons with disabilities, youth, older adults, and residents in affordable housing to engage at different points of project development; How did engagement influence the project plans or recommendations? Process to share back findings with community and re-engage to assess responsiveness of these changes; If applicable, how will NEPA or Title VI regulations will guide engagement activities?			

Chapter 6: Community Engagement Tool in Transportation Capital Investment Planning and Decision-Making

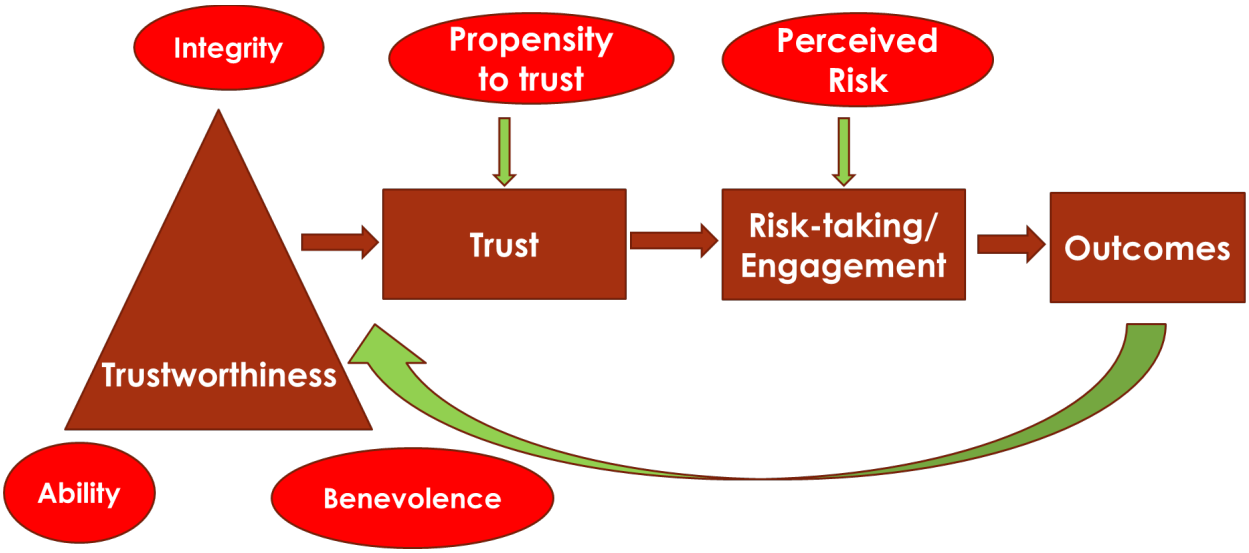
Building trust is critical as local governments and Native Nations engage their residents in the transportation capital investment process, especially for historically marginalized and disadvantaged community members. Without a sufficient level of trust, the community engagement process in those communities often results in the same pool of participants, reinforcing rather than correcting historical inequities. Based on our survey and interviews, while government officials agree with the importance of trust and relationship building, there are scant practices related to assessing and building trust with historically marginalized and disadvantaged communities in the transportation capital investment process. It is critical to build a community engagement tool for Minnesota localities and Native Nations to assess the trust level and build relationships with these communities.

This chapter will draw on past research and surveys/interviews to propose guidelines for assessing and building trust with historically disadvantaged and marginalized communities. We hope this community engagement toolkit will help Minnesota localities and Native Nations gather more diverse and balanced community inputs during their capital investment decision-making process.

6.1 Assessing the Trust Level of Community Members, especially Disadvantaged/Underserved Communities

Trust is regarded as one of the most critical factors in facilitating a healthy and positive interaction between government agencies and community members. In our surveys and interviews, public officials in local governments and Native Nations also recognize the importance of trust in advancing equity in the capital investment decision-making process. Only when community members trust government agencies and civil servants will they show up in meetings and share their authentic feedback and suggestions about these projects.

Following the classic definition proposed by (Mayer et al., 1995), we define trust as "*the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party."* They also developed an integrative model of trust to explain the determinants of trust (see Figure 6.1).



Note: *Adapted from (Mayer et al., 1995).*
Figure 6.1 An integrative model of trust building

Based on this integrative framework, there are three important things to consider when assessing the trust levels of community members. First, trust is relational. Therefore, when assessing the trust levels of communities, it is critical to be clear about "trust in whom." Is it historically marginalized community members' trust in other community members, in civil servants working for the government, or in government agencies in general? In practice, public agencies may want to collect data on trust levels along all these dimensions so they can comprehensively compare and assess different kinds of trust.

Second, community members' trust levels depend on their perceived trustworthiness of government agencies. This is critical as government agencies try to rebuild trust with disadvantaged/underserved communities. All three dimensions matter and they shape the level of trustworthiness in different ways. The first dimension is ability, or one group's competency, skill, and ability to achieve results in their key domain of influence. In the context of transportation planning, community trust in government agencies rests on how well the agency would get the job done. The second dimension is benevolence, the belief from community members that government agencies want to do good for them. It is about community members' perceived intention of government agencies. The final dimension is integrity, or whether government agencies act consistently based on a set of principles. All these dimensions shape how trustworthy government agencies are, from the perspective of community members.

It is critical to understand that these three dimensions have a differential impact on how trust is built or broken. Trust is very fragile. It takes tons of effort to build trust but maybe one little thing to break trust, especially when the community is skeptical toward the benevolence and integrity of government agencies. When trust is jeopardized due to lack of ability, it can be rebuilt relatively easily by having more training or hiring more professional staff members. However, when trust is damaged due to a lack of benevolence and integrity, it takes much more time and effort to rebuild it.

Finally, there is a feedback loop between the engagement outcomes and the perceived trustworthiness of government agencies. Therefore, it is critical to track and communicate the outcomes of engagement processes and the trust level of community members.

Based on the above discussions, we propose the following items to assess the trust level of community members (Table 6.1). These assessments can be done by interviews or surveys. Oftentimes, interviews are more effective in assessing these complex concepts. Government officials can also ask deeper questions during interviews. Also, governments should consider using both formal and informal ways to ask these questions. The formal methods of data collection have the advantage of trackability and comparability. However, engaging in informal conversations with community members is more likely to generate truthful and reflective answers.

When assessing the trust level of community members, government agencies should also collect demographic information regarding the gender, age, income level, profession, and race of the respondents so they can break down trust levels based on different subgroups of the population. Appendix 3 of the *Department of Education Public Engagement Planning Handbook* offers detailed examples about the survey design in collecting such demographic information from community members (MnDOT, 2021). The specific design of which demographic variables to collect in their data collection depends on how they define disadvantaged and underserved members in their community. Reimaging the Commons also has a very useful toolkit for survey data collection and an observation map worksheet: https://civiccommons.us/app/uploads/2019/01/Final_RCC_DIY-Toolkit_Executive-Summary-2.pdf

Moreover, government agencies should consider collecting these data regularly (for example annually or biannually) so they can understand the changes in trust levels among community members and assess the effectiveness of their engagement strategies.

Table 6.1 Data collection guide for assessing the trust level of community members

Metric	Definition	Survey or Interview question	Source
General social trust	Community members' general inclination to trust other people in the community	Please indicate how much you agree with the following statement: *1) most people can be trusted, and/or 2) you can't be too careful in dealing with people (reverse coding)*	(Sturgis & Smith, 2010)
Trust in other people in their local community	Community members' trust level in other people in their local community	How much do you trust people in your local area? a. A lot b. A fair amount c. Not very much d. Not at all	(Sturgis & Smith, 2010)
Trust in government	Community member's trust level in the local government serving their community	Please indicate how much you agree with the following statement: *I trust that the local government in my city always does what is right almost always or most of the time.*	(Reimagining the Civic Commons, 2025) - Site Intercept Survey

Metric	Definition	Survey or Interview question	Source
Trustworthiness of government agencies: ability	Community members' perceived competency, skill, and ability of the government agency to achieve results in their key domain of influence.	Please give your honest opinion about the following statement: *X agency knows what they are doing and has deep knowledge about the problems the community is facing.*	(Grimmelikhuijsen & Knies, 2017)
Trustworthiness of government agencies: benevolence	The perception from the community members regarding whether government agencies want to do good for the community.	Please give your honest opinion about the following statement: *X agency keeps our community's interests in mind when making decisions.*	(Grimmelikhuijsen & Knies, 2017)
Trustworthiness of government agencies: Integrity	The perception from the community regarding whether government agencies act consistently based on a set of principles.	Please give your honest opinion about the following statement: *X agency has always been fair in communication with our community and fulfilled its promises.*	(Grimmelikhuijsen & Knies, 2017)

6.2 Guidelines and Strategies for Building Relationships with and Gathering Input from Disadvantaged/Underserved Communities

Based on our literature review, interviews with community members and government officials, and the authors' own research experiences, we propose the following guidelines for building relationships with disadvantaged/underserved communities. There are two key principles underlying all these guidelines. First, government officials need to go to the community rather than wait for the community to come to them. Second, activating the trust-building loop is key when building relationships with disadvantaged communities. As public agencies plan their community engagement efforts, they should keep these guidelines in mind.

1. Start relationship-building from the assumption that there is an absence of trust or distrust.

This is probably the single most important guideline or principle we can offer regarding engaging historically disadvantaged or marginalized communities. Because of the absence of trust or even historical distrust existing between government agencies and disadvantaged communities, it is very hard for public agencies to start relationship-building under normal circumstances, especially at the starting phase of a capital project. These communities have been excluded from these decision-making processes. Why should they suddenly trust the government that it is genuine about engaging them in this project? This should be the baseline understanding of the relationship when government agencies plan for any engagement efforts, rather than assuming disadvantaged communities would appreciate such opportunities and suddenly show up. Our following guidelines also build on this foundation and find ways to gradually build trust and repair distrust.

2. Partner with community-based organizations serving disadvantaged communities.

Because of the barriers due to historical interactions, it is hard for public agencies to start relationship building by directly interacting with community members at the beginning of the project. Rather, they need to find partners to help them deliver the message and break the ice with the communities. Oftentimes, community-based organizations led by and serving these communities are great intermediaries between disadvantaged communities and government agencies. Therefore, government agencies should first identify and reach out to these organizations to get their support and suggestions before they directly interact with the community members. These intermediary organizations can make a big difference. As community-based organizations serving disadvantaged communities also tend to be smaller and less resourceful than other organizations (Deng, 2024), it is very important to offer them fair compensation when partnering with them for community engagement. Allen & Slotterback (2021) offered a great example of how the collaboration between planning agencies and migrant civil society organizations resulted in better engagement with the Somali community.

Regarding which kind of community-based organizations to reach out to or consult with, government agencies should go beyond the convenient path of only contacting those who have worked with the government before. Instead, they should do a thorough study of which organizations are rooted in those communities. They can get this information by looking at the history, board composition, and key leadership profiles of the organizations. Preferably, those community-based organizations should have some community representation on their board and key leadership positions. Government agencies should also take advantage of lists such as the Minnesota BIPOC Nonprofits Index to identify those organizations in their local communities (https://minnesotanonprofits.org/resources-tools/resources-detail/bipoc-nonprofits-index).

3. Internal trust building within the public agency is key.

As discussed in subsection 6.1 out of the three factors in shaping the trustworthiness of public agencies, integrity is the most critical in terms of breaking trust. Community members often judge public agencies for how consistent they are. To ensure consistency not only over time but also across staff members inside the agency, it is critical to build consensus and trust within the agency, so they show up to the community consistently with one goal. Oftentimes, leaders of the public agency overlook this step and hurry to carry out their reforms. However, due to leadership transitions or other unexpected changes, these engagement efforts often fall apart when key individuals leave the organization. From the perspective of community members, they do not know such reasons and these occasions would increase their distrust in government agencies.

The example of the Minnesota 2-Generation Policy Network, (Cheng & Sandfort, 2023) showed how directors of the MN Department of Human Services prioritized building trust and consensus within their agency and among themselves so they could consistently show up to those community-based organizations as one entity. This level of organizational readiness is critical when public agencies plan their public engagement efforts.

4. Focus on small wins.

Because of the often-existing distrust between government agencies and disadvantaged communities, it is very hard to jump-start the process and achieve an ambitious goal on the first try. Therefore, government agencies should first try small and achievable wins in the engagement process so the trust-building loop can be activated and sustained. As discussed in subsection 6.1 (Figure 6.1), the outcomes of those engagement processes feed back to the trustworthiness of public agencies. Community members often judge the trustworthiness of public agencies by very small things, for example, whether the key leaders and staff members show up consistently and whether they stick to what they have said. It is critical to pay attention to these details so trust can be gradually rebuilt.

In the context of capital project planning, public agencies should start engaging disadvantaged communities when the project is small and more controllable by the agency so trust can be built in such processes. As the trust level of community members goes up, they are more likely to support and engage in more complex processes.

5. Start with interpersonal trust building.

While trust in government agencies is critical when engaging disadvantaged communities in the capital investment decision-making process, community members often have a loose feeling about what a government agency represents. They often associate their trust in government agencies with whom they know inside the government. Therefore, interpersonal trust building is key to rebuilding trust with disadvantaged communities. Leaders and key staff members of the public agency should go to social events organized by those community members and get to know them on a personal level. They should also consistently show up to their meetings with disadvantaged community members, so those residents know that they take their commitment seriously. A relational approach should be prioritized as compared to a transactional approach when engaging disadvantaged community members.

To increase engagement with people of color for the Carver County Parks and Recreation, Demler et al., (2016) offers a very useful Entry Points tool to help staff locate where disadvantaged community members are and initiate conversations with them. For example, in the report, they list various types of entry points including schools, athletic associations, businesses, churches, community organizations and metropolitan organizations (p.13-21 in their published report). Localities can learn from the report to compile a list of entry points that are specific to their community.

6. Make it fun and embed relationship-building in existing social events.

Because of the importance of interpersonal trust building, public agencies must go beyond formal public meetings to engage and build relationships with disadvantaged communities. If possible, they should set up small funding to support those communities organizing social and cultural events, without any formal goals set by the agency. When community members are in a relaxed atmosphere, they are more likely to open up and build relationships with others. Never underestimate the power of these fun social events. Government officials should participate in these events as other community members and begin to know their community on a personal level. Moreover, these events are great opportunities for

disadvantaged community members to build relationships among themselves and with other community members in their locality.

7. **Hold public meetings in disadvantaged/underserved communities and make it easy for them to participate.**

Finally, when hosting formal public engagement meetings, go to the disadvantaged/underserved communities and host the meetings there. Do not always use the default room and wait for those community members to come to you. Also, those community members often lack resources to escape their busy work or life responsibilities to come to the meeting. Therefore, try offering financial incentives for them to participate in the meetings to help compensate for their time and efforts. Hosting the meeting with a community lunch or dinner is also a great way to get those community members to participate. Nothing beats good food! If possible, choose local businesses that are started and managed by those community members so the community can enjoy the full benefits of these initiatives.

6.3 Special Considerations with Native Nations

The guidelines and strategies discussed are generally consistent when engaging with most under-represented communities. However, special consideration must be exercised while engaging with Native Nations. First, planners must distinguish between Tribal governments, Indigenous communities, and their applicable jurisdiction. Second, depending on the jurisdiction and authority of the location, the state of Minnesota mandates regular consultation from state agencies when they conduct official business with Tribal governments. Localities, MPOs, and RPOs may choose to adopt practices similar to state mandates, which are more locally enhanced and nuanced.

1. **Tribal Governments, Tribal Communities, and Patchwork Jurisdictions**

According to Minnesota Law, the state recognizes 11 Minnesota Tribal governments, specifically "the federally recognized Indian Tribes located in Minnesota including: Bois Forte Band; Fond Du Lac Band; Grand Portage Band; Leech Lake Band; Mille Lacs Band; White Earth Band; Red Lake Nation; Lower Sioux Indian Community; Prairie Island Indian Community; Shakopee Mdewakanton Sioux Community; and Upper Sioux Community" (Minn. Stat. § 10.65, 2024). While not listed, the Minnesota Chippewa Tribe would technically be considered a 12th Tribal government with federal recognition, which includes the following constituent Bands: Bois Forte Band, Fond Du Lac Band, Grand Portage Band, Leech Lake Band, Mille Lacs Band, and White Earth Band. Each of these respective Bands falls under the federal registrar for the Minnesota Chippewa Tribe, but not individually. Additionally, the Minnesota Chippewa Tribe has recognized the Sandy Lake Band under its own laws, but the Band has yet to obtain federal or state recognition. Similar to the other Bands listed, the Sandy Lake Band operates its own government and regularly participates in the 1855 Treaty Authority, which focuses on resource management in the respective ceded territories.

The listing of these recognized and unrecognized Tribal governments may seem highly technical. It is, and meaningful engagement requires planners to familiarize themselves with the nuances surrounding these Tribal governments. At times, MnDOT, localities, and other affected agencies may engage these

governments through their respective work. However, the recognition of these governments does not fully encapsulate the complex jurisdictions that affect Indigenous people.

Several Indigenous communities live outside the jurisdiction of their Tribal governments and live within the jurisdiction of the state. Thousands of Indigenous individuals are transient, often between jurisdictions. An effective engagement strategy employed by a locality would strive to learn where these jurisdictional boundaries exist. Moreover, at a minimum, if a locality becomes confused about when to engage a Tribal government regarding a community, a best practice would be to reach out to the Tribal government for clarification. Common points of contact for Tribal governments include: Tribal liaisons published with the Minnesota Indian Affairs Council, Tribal Office of Governmental Affairs (located directly within the Native Nation), Tribal attorneys, Tribal executive directors, Tribal councilmembers, and Tribal chairpersons or chief executives. Often, localities will already have established points of contact within Tribal departments that facilitate the work they are doing. These interactions are based on trust, and levels of formality built through regular consultation as described by Minn. Stat. § 10.65.

Gathering input from an Indigenous community or Tribal government pays due respect to the *sui generis* (unique and special) legal and political status that predates state and federal law. Ignoring these entities disregards the historical importance these groups have on societal identity, at the very least, and further exacerbates erasure and inequity. Understanding the difference between an Indigenous community and a Tribal government clarifies the level of engagement and resources required for a particular capital improvement project.

Overall, the patchwork of jurisdictions that affect Indigenous peoples and Tribal governments is a heavy burden. Yet, that burden is not a unipolar issue affecting them since the mere recognition of their status spreads that burden to states, localities, MPOs and RPOs. Assuming that the patchwork of jurisdictions is unidirectional is a form of neglect, avoidance, or abdication of governmental responsibilities. Ignoring their status is derelict.

Indian Country has a fragmented jurisdictional landscape. Tribal governments are not solely responsible for navigating and resolving its issues. Borrowing from international relations theory (Ikenberry et al., 2011), Native Nations interact with states, localities, MPOs and RPOs through a multipolar system of authority. Framing the jurisdictional order as unipolar—Tribal problems alone—is flawed and unjust. All jurisdictions distribute responsibility and share authority—a diffuse system of governance rather than a centralized one.

2. **Section 10.65, Government-to-Government Relationship with Tribal Governments**

Minnesota has partially addressed these responsibilities through Section 10.65, which outlines a Government-to-Government Relationship with Tribal Governments. Localities, MPOs, and RPOs should familiarize themselves with this law to create meaningful and effective consultative policies while engaging with Tribal governments. While Section 10.65 only applies directly to state agencies, localities, MPOs and RPOs are more likely than not to expend state and federal funds on capital improvement projects. This would subject the locality, MPO or RPO to this provision, meaning they should refer to Section 10.65 when carrying out capital improvement projects that affect Indigenous communities.

Taking broad strokes with government-to-government engagement initially will prevent oversight on behalf of the jurisdiction.

Section 10.65 further details Tribal recognition, definitions, consultation duties, and applicability. The practices found within this law are leaps and bounds ahead of the history of neglect. However, localities, MPOs, and RPOs may improve on Section 10.65 by adopting policies that are more inclusive of Indigenous communities and Tribal governments. A current listing of practices in Section 10.65 (2024) may inspire more locally adjusted policies depending on geography and jurisdiction:

> "*Consultation Duties*
>
> - *An agency must, in consultation with Minnesota Tribal governments, implement Tribal consultation policies...*
> - *Consultation under this section is a duty of an agency to consult with the governing body or bodies of each individual Minnesota Tribal government.*
> - *An agency must consult with each Minnesota Tribal government at least annually, and as often as is required to address matters that have Tribal implications.*
> - *An agency must develop and maintain ongoing consultation with the Minnesota Tribal governments related to matters that have Tribal implications.*
> - *An agency must designate a Tribal liaison to assume responsibility for implementation of the Tribal consultation policy and to serve as the principal point of contact for Minnesota Tribal governments. The Tribal liaison must be able to directly and regularly meet and communicate with the agency's commissioner and deputy and assistant commissioners to appropriately conduct government-to-government consultation and cooperation.*
> - *The state has instituted Tribal-state government relations training, which is the foundation and basis of all other Tribal government relations training sources. All agencies must direct certain staff to complete available training…*"

Planners may treat this sample of the law as a minimum threshold for engagement. Adopting or enhancing similar practices will foster stronger relationships and gather input from Native Nations more effectively. However, policies alone are not enough to build effective relationships, since leaders must take ownership of this engagement, which can only be executed through leader-to-leader discussions.

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Appendix A. Questionnaire for Localities

Equity in Transportation Investment Planning

This survey is part of research conducted by the Institute for Urban and Regional Infrastructure Finance (IURIF) at the University of Minnesota's Humphrey School of Public Affairs. This research is funded by the Local Road Research Board (LRRB) and the Minnesota Department of Transportation (MnDOT). The purpose of this survey is to understand how localities incorporate equity in their transportation investment planning and the stakeholders that are involved in the process.

Your participation in this survey is entirely voluntary. You are not obligated to respond, and you may skip any questions you prefer not to answer.

We also understand your time is valuable. On average, completing this survey should take approximately 20-30 minutes. However, the exact duration may vary depending on your familiarity with the topics and the level of detail you choose to provide.

If you have any questions about this survey or general research, please contact Alan Roy at royx0072@umn.edu or Camila Fonseca at fonse024@umn.edu.

We greatly appreciate you taking the time to respond to this survey. If you agree to take this survey, please click next.

General Questions

1. Which locality/organization do you represent?
    a. County
    b. City
    c. Metropolitan Planning Organization (MPO)
    d. Regional Planning Organization (RPO)
    e. Other (please specify): [space provided to fill in information]
2. Name of the locality/organization you represent: [space provided to fill in information]

Equity in Transportation Investment Planning

3. What regulations or policies does your locality/organization have in place for the inclusion of equity considerations in transportation investment planning? [space provided to fill in information]
4. Which documents capture the regulations to incorporate equity in transportation investment planning (select all that apply)
    a. Transportation Improvement Plan
    b. Long-Range Transportation Plan
    c. Locality's Capital Budget
    d. Locality's Capital Improvement Plan
    e. Other (Please specify): [space provided to fill in information]
5. How does your locality/organization define equity in transportation investment planning? [space provided to fill in information]

6. What are the equity goals that your locality/organization has established for transportation investment planning? [space provided to fill in information]
7. For which transportation areas does your nation consider equity in the planning process?
    a. Roadways
    b. Bridges
    c. Bicycle facilities
    d. Pedestrian facilities
    e. Transit
    f. Other (please specify): [space provided to fill in information]
8. For each transportation area, at which point(s) of the planning process is equity considered in your locality/organization?

	Roadways	Bridges	Bicycle facilities	Pedestrian facilities	Transit
Goals and Objectives					
Project Identification					
Project Prioritization					
Project selection					
Allocation of funding for projects					
Project Design					
Other (please specify)					

9. How does your locality/organization define disadvantaged groups in transportation investment planning? [space provided to fill in information]
10. What equity metrics does your locality/organization use for transportation planning purposes? [space provided to fill in information]

Stakeholders involved in Transportation Investment Planning

11. To what extent does your locality/organization involve the following public stakeholders in your transportation investment planning process:

	To a large extent	To a moderate extent	To some extent	Not at all	Does not apply
Representatives of other cities					
Representatives of other counties					

Representatives of Native Nations					
Representatives of MPOs					
Representatives of RPOs					
Representatives of the state DOT					
Representatives of the USDOT					
Other (please specify)					

12. How does your locality/organization specifically involve Native/Tribal nations in transportation planning? (N/A if it does not apply) [space provided to fill in information]

Community Feedback in Transportation Investment Planning

13. To what extent does your locality/organization incorporate the general public's feedback in transportation investment planning?

	To a large extent	To a moderate extent	To some extent	Not at all
Project identification				
Project prioritization				
Project selection				
Allocation of funding for projects				
Project design				
Other (please specify)				

14. Which community members does your locality/organization engage in transportation investment planning? (select all that apply)
    a. Community organizations
    b. Business organizations
    c. Representatives of minority populations
    d. Representatives of people with disabilities
    e. Representatives of low-income populations
    f. Other (please specify): [space provided to fill in information]

15. How does your locality/organization incorporate the public's feedback in transportation investment planning? [space provided to fill in information]
16. Is there anything else you would like to add for equity in transportation investment planning in localities? [space provided to fill in information]
17. May we contact you for additional questions or clarification?
    a. Yes (skip to contact information)
    b. No

Contact information

Email address: [space provided to fill in information]

Name: [space provided to fill in information]

Title: [space provided to fill in information]

Appendix B. Questionnaire for Native Nations

Equity in Transportation Investment Planning

This survey is part of research conducted by the Institute for Urban and Regional Infrastructure Finance (IURIF) at the University of Minnesota's Humphrey School of Public Affairs. This research is funded by the Local Road Research Board (LRRB) and the Minnesota Department of Transportation (MnDOT). The purpose of this survey is to understand how Native Nations incorporate equity in their transportation investment planning and the stakeholders that are involved in the process.

This survey has been thoughtfully crafted to ensure cultural relevance and to acknowledge the sovereignty of Native Nations sharing geography with Minnesota. This is attributed to the active involvement of a Native American team member in the design and revision of the survey. This team member has undergone training in the Tribal-State Relations program, which has enriched his understanding of the government-to-government consultation process, contributing to the survey's cultural sensitivity and inclusivity.

Your participation in this survey is entirely voluntary. You are not obligated to respond, and you may skip any questions you prefer not to answer.

We also understand your time is valuable. On average, completing this survey should take approximately 20-30 minutes. However, the exact duration may vary depending on your familiarity with the topics and the level of detail you choose to provide.

If you have any questions about this survey or general research, please contact Alan Roy at royx0072@umn.edu or Camila Fonseca at fonse024@umn.edu.

We greatly appreciate you taking the time to respond to this survey. If you agree to take this survey, please click next.

General Questions

1. Name of your nation (drop down menu)
    a. Bois Forte Band of Chippewa (Sharing territory with MnDOT District 1 in Koochiching and St. Louis counties)
    b. Fond du Lac Band of Lake Superior Chippewa (Sharing territory with MnDOT District 1 in Carlton and St. Louis Counties)
    c. Grand Portage Band of Chippewa (Sharing territory with MnDOT District 1 in Cook County)
    d. Ho-Chunk Nation (Sharing territory with MnDOT District 6 and primarily located in Wisconsin)
    e. Leech Lake Band of Ojibwe (Sharing territory with MnDOT Districts 1, 2, and 3)
    f. Lower Sioux Community (Sharing territory with MnDOT District 8 in Redwood County)
    g. Mille Lacs Band of Ojibwe (Sharing territory with Mille Lacs County, mostly in MnDOT District 3 with a small portion in MnDOT District 1)

h. Prairie Island Indian Community (Sharing territory with MnDOT District 6 in Goodhue County)
i. Red Lake Nation (Sharing territory with MnDOT District 2, primarily in Beltrami County with additional land in various counties)
j. Shakopee Mdewakanton Sioux Community (Sharing territory with MnDOT's Metro District in Scott County)
k. Upper Sioux Community (Sharing territory with MnDOT District 8 in Yellow Medicine County)
l. White Earth Nation (Sharing territory with MnDOT District 4 in Becker County, Mahnomen County, and Clearwater County)

Equity in Transportation Investment Planning

2. What regulations or policies does your nation have in place for incorporating equity considerations in transportation investment planning? [space provided to fill in information]
3. Which documents capture the regulations to incorporate equity in transportation investment planning (select all that apply)
    a. Tribal Transportation Improvement Plan
    b. Tribal Long-Range Transportation Plan
    c. Nation's Capital Budget
    d. Nation's Capital Improvement Plan
    e. Other (Please specify): [space provided to fill in information]
4. How does your nation define equity in transportation investment planning? [space provided to fill in information]
5. Which equity goals does your nation have for transportation investment planning? [space provided to fill in information]
6. To what extent does your nation consider the following aspects for incorporating equity in transportation investment planning?

	To a large extent	**To a moderate extent**	**To some extent**	**Not at all**
Access				
Sovereignty				
Consultation				
Cultural Representation				
Sacred Sites				
Cultural Medicines				
Environmental Protection				
Historic Preservation				
Other (please specify)				

7. For which transportation areas does your nation consider equity in the planning process?
    a. Roadways
    b. Bridges
    c. Bicycle facilities
    d. Pedestrian facilities (e.g., sidewalks)
    e. Transit
    f. Other (please specify): [space provided to fill in information]
8. For each transportation area, at which point(s) of the planning process is Tribal equity considered for your nation?

	Roadways	**Bridges**	**Bicycle facilities**	**Pedestrian facilities**	**Transit**
Goals and objectives					
Project Identification					
Project Prioritization					
Project Selection					
Project funding allocation					
Project Design					
Other (please specify)					

9. What Tribal equity metrics does your nation use for transportation planning purposes? [space provided to fill in information]
10. To what extent do each of the following factors affect equity in your nation's transportation planning?

	To a large extent	**To moderate extent**	**To some extent**	**Not at all**
Treaty Rights				
Sovereignty				
Culture				
Cooperative agreements				
Tribal Ordinances or Regulations				
Member Input				
Elder Input				

	To a large extent	To moderate extent	To some extent	Not at all
Environmental Considerations				
Federal Legislation				
BIA Regulations				
State Legislation				
Other (please specify)				

Stakeholders involved in Transportation Investment Planning

11. To what extent does your nation involve the following public stakeholders in your transportation investment planning process:

	To a large extent	To a moderate extent	To some extent	Not at all	Does not apply
Representatives of other Native Nations					
Representatives of cities					
Representatives of counties					
Representatives of Metropolitan Planning Organizations					
Representatives of Regional Planning Organizations					
Representatives of the state DOT					
Representatives of the USDOT					
Community Councils					
Other (please specify)					

12. In your experience with government-to-government relationships, specifically regarding transportation planning for your nation, how have consultation, coordination, and collaboration positively or negatively influenced equity outcomes? Please provide concrete examples if possible. [space provided to fill in information]

Community Feedback in Transportation Investment Planning

13. Which community members does your nation engage in transportation investment planning? (select all that apply)
    a. Community organizations
    b. Business organizations
    c. Representatives of disadvantaged communities
    d. Native Elders
    e. Cultural Staff
    f. Tribal Historic Preservation Officers
    g. Other (please specify): [space provided to fill in information]
14. To what extent does your nation incorporate the member's feedback in transportation investment planning?

	To a large extent	**To a moderate extent**	**To some extent**	**Not at all**
Project identification				
Project prioritization				
Project selection				
Allocation of funding for projects				
Project design				
Other (please specify)				

15. Is there anything else you would like to add for equity in transportation investment planning in Native Nations? [space provided to fill in information]
16. May we contact you for additional questions or clarification?
    a. Yes (skip to information)
    b. No

Contact information

Email address: [space provided to fill in information]
Name: [space provided to fill in information]
Title: [space provided to fill in information]

Appendix C. List of Localities and Native Nations responding to the Survey

Table C.1 Survey responses

	Completed	Partially Completed	No Responses Recorded (1)
Counties	Anoka, Lac Qui Parle, Pope, Ramsey, Washington	Marshall, Meeker, Otter Tail	Benton, McLeod, Mower, St. Louis
Cities	Eagan, Edina, Elk River, Monticello, Worthington	New Brighton, Spring Lake Park	Richfield, Elko New Market, Falcon Heights, Faribault, Minneapolis, Plymouth, Robbinsdale, Saint Paul, St. Michael, Vadnais Heights
Native Nations	Fond du Lac Band of Lake Superior Chippewa, Mille Lacs Band of Ojibwe, Upper Sioux Community, White Earth Nation		Lower Sioux Community, Prairie Island Indian Community, Red Lake Nation, Shakopee Mdewakanton Sioux Community

Notes: *(1) Localities and Native Nations in the column opened the survey and fill their names but did not respond to any other questions.*