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Stakeholder Attitudes, Knowledge and Engagement in Local Road Systems Planning and Decision Making

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16. Abstract

Political and policy dynamics associated with local road systems planning, management, and financing merit special attention. This study: 1) analyzes stakeholder attitudes, knowledge, and engagement about financing for local road system management, to identify key gaps and conflicts, and 2) evaluates public communication and engagement methods, to provide practical guidance for improving stakeholder engagement methods. Qualitative research methods were used because they are particularly apt for studying stakeholder attitudes towards policies and outreach methods. Data sources included a survey of 128 local public works leaders; content analysis of 198 articles from local to national media; 30 hours of observation of deliberations in the state and local legislatures; 22 semi-structured interviews with key stakeholders; and 4 case studies of local public communication and engagement processes. Analysis of these data support the following recommendations for local policy makers: a) Support rising public attention to local transportation issues with high-quality, accessible information; b) Invest in the high short-term costs of proactive, good quality engagement, to gain substantial benefits over the longer term; c) Use multiple communication channels, including new technologies for targeted outreach; d) Employ a consultative process and thoughtful, timely explanations from local public works leaders, to improve stakeholder satisfaction with project outcomes and the engagement process; and e) Include stakeholders in defining the policy problem and developing options as well as the preferred policy options.

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Stakeholder Attitudes, Knowledge and Engagement in Local Road Systems Planning and Decision Making

FINAL REPORT

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We particularly thank Bruce Hasbargen (Beltrami county engineer and the technical leader for this project), Dan Ruiz and Josie Shardlow (public works director and community engagement coordinator, respectively, of the City of Brooklyn Park), Paul Oehme and Alyson Fauske (director of public works / city engineer and assistant city engineer, respectively, of the City of Chanhassen), and Pat Oman (county administrator of Mille Lacs County). We also thank John Powell (formerly public works director / city engineer of the City of Savage) and Lyndon Robjent and Darin Mielke (county engineer and deputy county engineer, respectively, of Carver County) for their generosity with their time and knowledge, as we considered their jurisdictions as potential case study sites for this research.

Kenneth Buckeye, Gina Baas, Paul Czech, Wayne Sandberg, and Ryan Wilson also served on the project's technical advisory panel. We also gratefully acknowledge the guidance of Dan Sullivan and Farideh Amiri (project coordinators at Minnesota Department of Transportation Research Services) and Elizabeth Andrews (of the University of Minnesota Center for Transportation Studies) on project administration.

Last but not least, we enthusiastically thank Giulietta Perrotta for transcribing interviews and focus group recordings, Chen Zhang and Victoria Fiorentino for assistance with some data collection, and Brynn Saunders and Peder Garnaas-Halvorson for assistance with data management and editing. Project PI Guillermo Narváez and Co-PI Kathryn Quick are responsible for all data analysis and writing.

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EXECUTIVE SUMMARY

Keywords: Local road systems. Public involvement in transportation. Public engagement methods and evaluation. Infrastructure finance (local option sales tax, franchise fees). Public communication on road projects. Qualitative research (Case study methods, surveys, focus groups).

Research question

Decision-making about local road systems sustainability is fundamentally a political process, deeply embedded in values about what the public needs, the role of government, and what to prioritize when there are resource constraints and tradeoffs. Thus, political and policy dynamics associated with local road financing and planning – the subject of this study of stakeholder attitudes, knowledge, and engagement in local road systems planning and decision making – merit special attention. The research objectives are:

- to analyze stakeholder attitudes, knowledge, and engagement about financing for local road system management, to identify key gaps and conflicts, and
- to test and evaluate public communication and engagement methods, to provide practical guidance for improving stakeholder engagement methods.

Research design and data sources

This study involved extensive primary data collection and analysis. Qualitative research methods were used because they are particularly well-suited to analyzing people's values, perceptions, and preferences about policy topics and options, and their reactions to different methods and processes for public engagement. Data were gathered through surveys of 128 local public works leaders; a comprehensive LexisNexis search of local, regional, and national media and trade publications and content analysis of 198 articles; 30 hours of observation of deliberations in the state and local legislatures; 22 semi-structured interviews with key stakeholders; and 4 case studies of local public communication and engagement processes.

Stakeholder perceptions of local road system sustainability: Survey findings

Analysis of data from the survey, interviews, observations, and media content reveals these patterns:

Road Quality. Most counties rated the condition of roads to be poor to fair, as did many cities. The public became much more attentive to and concerned about road system maintenance between 2014-16 compared with 2009-14.

Funding. Local public works leaders, political leaders (regardless of party, from local through the national level) and media coverage consistently highlight a lack of funding impeding the proper maintenance of local roads and bridges. Consistently also, the public wants the roads they rely on to be in good condition, but is unaware of the costs and often unwilling to contribute to their upkeep, particularly when the problem is considered remote and investment does not seem to offer immediate value. Views on different sources of infrastructure funding (for or against) tend to be exacerbated by broader regional and national political debates.

Public Engagement. In general, there is little participation in transportation policy and planning unless there are specific issues of concern. More populated cities and counties typically have greater capacity to involve the public through engagement processes and extensive public communication, whereas smaller units (especially rural jurisdictions) can communicate more directly with the public through one-to-one relationships and small meetings. Regardless of the size and scale of the jurisdiction and project, public works leaders consistently found that to get people involved it was necessary to make a lot of effort and use multiple modes of outreach, and that well-structured meetings with good quality information and ample time for Q&A were much more productive than loosely structured meetings or presentations without dialogue.

Impacts of public engagement methods: Case study findings

<u>City of Brooklyn Park</u>

Policy issues. A high percentage of local roads needed major reconstruction. City staff were interested in introducing a citywide franchise tax to provide a consistent funding stream and remove the burden of large, one-time assessments on adjacent property owners for individual road projects.

Public process. Facilitated small group meetings in most affected neighborhood and city hall, incorporating Q&A and small group dialogues, involving 120 people. Several discussions with City Council. Lots of direct outreach, accessible public information explaining the recommendation for a franchise fee.

Outcome. Franchise fee was passed and implemented.

Takeaways for transportation leaders: Residents' confidence in and acceptance of the proposed franchise fee option increased substantially, according to pre- and post- surveys, because they got good information about the needs and options, had a chance to debate options with their neighbors, and had ample opportunity to ask questions and get thorough answers.

<u>City of Chanhassen</u>

Policy issues. Off-road crashes, increasing commuting traffic, and urbanization of the region led to a proposal to transform a winding, 2-lane undivided road into a four-lane divided highway with trails and increased traffic volume. This was anticipated to transform the character of the community.

Public process. Direct mailings to affected property owners, series of open houses to share road alignment options, and some scheduling and closure updates during construction. The county and state were involved in the project, but the city was the lead public liaison.

Outcome. Selection of road alignment configuration was made, plan was approved, and project was completed.

Takeaways for transportation leaders: Some residents did not like how the project transformed the look and feel of their rural community. The project was needed for safety, outreach was extensive, and some disappointment was probably unavoidable. However, residents assert that they could have accepted the project more easily if the reasons for a 4-lane highway were explained better, or if they had not felt that "the decisions were already made" by the time point they were consulted.

Beltrami County

Policy issues. Large county road network in poor condition and very little funding for repair.

Public process. Identification of diverse stakeholders and outreach. Facilitated, small interest group meetings of businesspeople, related jurisdictions, and residents, followed by a roundtable of all stakeholders. Open-ended discussion of needs, multiple options, and extended Q&A with county engineer. Many stakeholders changed their minds, resulting in strong unified support for local option sales tax (LOST) and taking care of less used but critical roads in more rural areas.

Outcome. LOST was unanimously adopted with a work plan to cover rural as well as urban areas of the county.

Takeaways for transportation leaders: Q&A with the public works leader and dialogue with other stakeholders led to new appreciation for the nature, extent, and urgency of the road issues. Stakeholders found themselves changing their minds, finding unexpected alignments of policy options with their values, sympathy with others (e.g., rural residents), and desires for more comprehensive solutions. Communication enhanced confidence in the policy direction and leaders.

Mille Lacs County

Policy issues. Extensive county road system with insufficient and diminishing funds to maintain.

Public process. After a resident asked about a local option sales tax ("LOST"), an independent research study estimated road system costs and revenues from different policies. Three public meetings to discuss LOST held around the county, extensive communication by county administrator with county commissioners.

Outcome. LOST was adopted by the County Commission with a high level of buy-in from diverse parties.

Takeaways for transportation leaders: Thoroughly, clearly, and objectively presented information about local conditions (the economy, sales tax base, road quality, etc.) strongly supported stakeholders' buy-in to LOST as a policy solution that would be workable for their area. The county administrator took time to do this, and resulting in a lot of confidence in the decision.

Recommendations for practitioners

Support rising public attention to local transportation issues with high-quality, accessible information. The analysis of survey, observation, and media content data indicates that there are ideological differences that hinder policy solutions, but the first barrier to resolution is awareness and information. Needs and opportunities vary by jurisdiction, so that local public works leaders must consider and make the best recommendations for their particular context. However, they would benefit from a central investment in resources for communication, such as infographic templates or accessible interfaces to easily query and customize to communicate about road quality, ownership, and costs.

Invest in the high short-term costs of proactive, good quality engagement, to gain substantial benefits over the longer term. The case studies demonstrate that a more intensive effort up front to draw together key stakeholders, representing divergent experiences and ideologies (for comprehensive information, good decision-making, and legitimacy) in a well-aired dialogue, often pays off in terms of buy-in, adoption, and implementation of policy decisions that expand resource availability.

To gain and sustain diverse stakeholders' attention to transportation project planning, financing, and other policy, use multiple communication channels, including new technologies for targeted outreach. This is costly in terms of staff time, but the survey and case study data make clear that traditional outreach methods do not reach the full range of parties with interest and influence on policy issues.

Employ a consultative process and thoughtful, timely explanations from local public works leaders, to improve stakeholder satisfaction with project outcomes and the engagement process. In surveys and interview, stakeholders consistently expressed that having good quality information, transparently presented, early in the process, with an opportunity to express concerns and have their questions answered, increases their trust in the integrity of the decision and acceptance of policies, even when they dislike the specific policy outcomes. (The full report includes several detailed public process designs.)

Include stakeholders in defining the policy problem and developing options as well as the preferred policy options. In two case studies, this led to surprising unity and compelling advocacy for effective long-term approaches to road system sustainability challenges. Conversely, where there was not an opportunity for greater input, frustrated stakeholders accused public works leaders of being disingenuous, indicating it is important to clearly communicate and explain limitations to avoid distrust.

Contributions of this research

Deliberation is considered an important and distinctive part of public engagement because it promotes learning. This study provides evidence from a novel perspective: participants' own accounts about how and why their understandings, attitudes, and policy preferences change through deliberation.

Scholars and practitioners acknowledge that evaluation is one of the weakest areas of theory and practice in public engagement. This study triangulates previous research with a new source

of data: participants' judgements about the criteria they use to evaluate public engagement, their feedback about how different designs and methods affect them, and their suggestions about how to improve.

For more information

The authors gratefully acknowledge funding support from the Local Road Research Board of Minnesota, the participation of local collaborators in Beltrami County, Brooklyn Park, Chanhassen, and Mille Lacs County, guidance from Bruce Hasbargen (technical liaison) and the other members of the Technical Advisory Panel, and help with some survey administration and data organization from several graduate research assistants.

Details on these contributions may be found in the full text of the final report, published by the Center for Transportation Studies of the University of Minnesota and the Minnesota Department of Transportation, online at http://www.cts.umn.edu/publications/researchreports.

The authors encourage correspondence from anyone interested in further information or in exchanging research and practice ideas relating to this study. Guillermo Narvaez, Principal Investigator and Research Associate at the Humphrey School of Public Affairs, may be reached at gnarvaez@umn.edu. Kathryn Quick, Co-Principal Investigator and Associate Professor at the Humphrey School of Public Affairs, may be reached at ksquick@umn.edu.

CHAPTER 1: INTRODUCTION

Transportation policymakers and researchers have long been aware of persistent funding challenges in maintaining large and complex local road networks throughout the country, especially in states like Minnesota where local roads constitute a large portion of the state's road network. These challenges are complex and cannot be pinned to specific causes, but shifts in the national and local economies, demographic changes and political motivations all contribute to the continual financial pressures to meet the needs of existing roads and bridges. In order to meet the challenges, public managers seek innovative means to finance public infrastructure as the existing models are strained to meet the demands. This is a particularly poignant issue for public managers of local jurisdictions, who are further constrained in finding ways to enhance existing or in finding new sources of revenue.

Frequently, the public is presented with news about the declining state of the nation's infrastructure, of congestion of roads, and of how streets, highways, and bridges are deteriorating. This is particularly true during high profile political campaigns as roads are quite visible to the public and often seen as serving to gauge government effectiveness. While the public is presented with many stories of the problematic state of roads, in general people are unaware of efforts and costs required to keep up the transportation systems they rely on day to day. The public is likewise unaware of the long-term impacts and costs resulting from seemingly easy solutions that result in deferred maintenance and postponed projects. Transmitting this to the public and policymakers is something public works managers are challenged to do frequently, but they do so with different levels of support and resources.

1.1 PURPOSE OF THIS RESEARCH

The communication of these concepts is an ongoing challenge that public works managers face when engaging with stakeholders, policymakers and the public in general. Indeed, the lack of understanding of the multiple effects to road systems resulting from deferred actions is one of the principal issues that came across in the discussions with stakeholders that led to the call for this report. In a previous research project, we described our work with public works leaders on implementing and evaluating communication and stakeholder engagement techniques on three separate local road systems (Beltrami, Jackson, and Dakota counties), focusing on the high-priority policy issues that they identified (Quick et al., 2014).

In this study, we elaborate those findings through additional data collection and analysis. The objectives of this research project, sponsored by Minnesota's Local Road Research Board, are two-fold:

- to analyze stakeholder attitudes, knowledge, and engagement about financing for local road system management; and
- to improve this policy environment with practical guidance to name and address gaps in understanding or conflicts and improve stakeholder engagement methods.

1.2 GUIDE TO THIS REPORT

In Chapter 2 **Critical Questions about Public Engagement Methods, Evaluation, and Design** (page 4), we set the stage by reviewing key features of public engagement research and practice that drive this study, and name our three major contributions: 1) deepening understanding of how deliberative forms of public engagement influence learning and change, through focusing on participants' accounts of whether and how their understandings and attitudes change over time; 2) improving evaluation measures – generally acknowledged as one of the weakest areas in both scholarship and the practice of public engagement – through identifying what participants like and dislike about the engagement methods they experience; and 3) informing design choices for organizing public engagement through highlighting participants' descriptions of how different designs for public outreach and engagement affected them.

In Chapter 3 **Policy and Political Context: Local Road Systems Challenges and Financing** (page 7), we describe the prominent issues and status of political discourse on local roads financing in Minnesota, complemented with an overview of the relevant transportation legislation and financing mechanisms from federal, state, and local levels. Decision-making about local road systems sustainability is fundamentally a political process, deeply embedded in a context of articulating and negotiating values about what constitutes a public need and the proper role of government, resource constraints, and trade-offs. Therefore, these political and policy dynamics merit special attention as the context for this research on stakeholder attitudes, knowledge, and engagement in local road systems planning and decision making.

In Chapter 4 **Research Methods** (page 21), we describe the data collection and analysis methods for this empirical research, which involved two major activities:

- An analysis of the general climate of stakeholder knowledge and attitudes regarding road system financing in the views of local public works leaders in Minnesota; and
- Case studies of four Minnesota cities or counties, in which the research team worked in conjunction with local units of government on design, implementation, and/or evaluation of their methods for engaging stakeholders in local road systems policy-making.

Notably, this section includes an explanation of our selection of the four case study sites. Because we use qualitative analysis – a valuable yet relatively unfamiliar method to the great majority of public works and transportation policy leaders – we explain why qualitative methods are particularly well suited for illuminating dynamics that are especially important to stakeholder engagement: people's values, perceptions, and preferences about policy topics and options, and their reactions to different methods and processes for engagement.

In Chapter 5 **Local Public Works Leaders' Assessments of the Climate for Local Roads Issues** (page 28), we summarize key themes from a survey of 128 city and county public works leaders. We ask them to assess the condition of local road systems in their jurisdictions, to describe what measures they had implemented and were considering to address road needs and fiscal constraints; to identify what communication and engagement strategies they were using and their assessment of their effectiveness,

and generally to comment on the climate for working with stakeholders on local roads issues. We complement this with an overview of media coverage in Minnesota of issues relating to local road system sustainability between 2013-2016, when public attention on these issues was rapidly increasing.

In Chapter 6 **Development and Comparative Analysis of Diverse Public Engagement Models** (page 35), we present the four case studies: the **City of Chanhassen** (page 38), the **City of Brooklyn Park** (page 49), **Mille Lacs County** (page 59), and **Beltrami County** (page 65). These sections of the report are of particular interest to city and county engineers or administrators who want to improve their work with stakeholders, because they provide great how-to examples and lessons learned. Each case write-up includes:

- A short brief on the particular policy issue under discussion, which in most cases centers on local road financing challenges and creating new revenues through taxes or fees;
- A detailed description of how the city or county organized the outreach, what process (sequence and approach) they used to walk through a whole decision-making process, and examples of what questions or format they specifically use in community meetings;
- Summary and analysis of how the process worked, from stakeholders' perspectives, including what they liked and disliked, whether and how they changed their minds about the plans or policies being proposed, and the suggestions they had for improvement.

In Chapter 7 **Conclusions and Recommendations** (page 79), we conclude by highlighting a few key recommendations about sustaining what is working and for improving and addressing gaps in public engagement around local road system sustainability issues.

CHAPTER 2: CRITICAL QUESTIONS ABOUT PUBLIC ENGAGEMENT METHODS, EVALUATION, AND DESIGN

2.1 PUBLIC ENGAGEMENT IN TRANSPORTATION

Public engagement is of great importance in local road system decision-making. Road and bridge infrastructure needs are great, and the decision-making context is highly complex. Stakeholders are not only entitled to have a say about these issues, but potentially they also constrain and/or enable solutions (Bryson, 2004). Public participation plays an important role in a variety of transportation-related activities, including planning, formal policymaking, program and service design, and evaluation.

Since the 1991 passage of the "Intermodal Surface Transportation Efficiency Act" (ISTEA) and continuing with all the subsequent Transportation Acts, public engagement processes have been required for federally funded projects. These requirements have been codified in U.S. Code Title 23 Ch. 1§124, §128 and §135. Of particular interest are documents outlining guidelines for public engagement. At the federal level, FHWA, TRB and AASHTO have made available a number of documents to help guide state departments of transportation on their public engagement efforts. Of particular interest are FHWA's "Public Involvement Techniques for Transportation Decision-Making," and other guidance (Federal Highway Administration 2015, 2017) and AASHTO's (2017) "Communications Guide for State Departments of Transportation."

Transportation planning is done in combination with federal with state law, and in Minnesota there are a number of legal statutes §160 to §174A (and §473 for the Metro area) that outline the public engagement requirements. MNDOT has developed a number of guidelines regarding public involvement to meet the various federal and state requirements (Minnesota Department of Transportation, 2017). These are geared to different types of transportation infrastructure that require a wide range of approaches according to the various types, scope, and jurisdictions involved. For local projects (county, city and township) MNDOT's State Aid for Local Transportation office supports local jurisdictions by managing the distribution of funds for highway maintenance and construction according to formulas determined by the Legislature. They also provide technical assistance and coordination for a wide range of local projects, detailed in the *State Aid Manual* (Minnesota Department of Transportation, 2015). The State Aid for Local Transportation office also makes available a number of public outreach resources and guidelines to help different jurisdictions on engaging stakeholders on transportation project planning and related decision-making processes.

2.2 PUBLIC ENGAGEMENT RESEARCH QUESTIONS AND CONTRIBUTIONS OF THIS STUDY

Beyond the context of transportation policy-making and Minnesota, this research has broader relevance. The theory and practice of democratic decision-making in public policy, urban planning, and public program administration have taken a decidedly deliberative turn (Fung 2006; Jacobs et al. 2009; Nabatchi and Leighninger 2015). The implications of this study extend beyond the four case study areas in a number of ways. They provide models and guidance for local governments that are grappling with transportation finance issues that similarly involve fiscal and political complexity, resource constraints,

and outcome compromises that challenge the political positions of stakeholders and policy makers. These cases bring together stakeholders with diverse kinds of knowledge, interests, needs and expectations. Thus, this study makes three kinds of contributions to this area of scholarship, as follows. We summarize our findings and recommendations in these areas in Chapter 7.

First, many prominent claims about what is distinctive and important about deliberation, relative to other forms of public participation and political activity, center on the idea that deliberation promotes learning. One source of these claims is empirical analysis demonstrating participants' opinions or knowledge change in some way after deliberation. An extensive literature in political philosophy also provides normative theories of why deliberation should accomplish such changes. Even knowing that deliberation should and does bring participants to change their minds, however, we have relatively little information about how people come to change their minds through deliberation. Through this study, we help to address that gap through employing a novel and especially rich source of data: *participants' accounts to understand if and how perceptions change over time.*

Second, scholars and practitioners acknowledge that evaluation is one of the weakest areas of theory and practice in deliberation. The most common measures currently in use are counts of how many people participated, sometimes accompanied by some judgment about the perceived socio-economic diversity and representativeness of the participants. These are reasonable guidelines, but they provide limited guidance for setting goals, designing, and evaluating engagement. Previous scholarship recommends expanding this palette to attend to content- and process-oriented outcomes; immediate, mid-term, and long-term impacts; *and* participant-oriented outcomes (Innes and Booher, 1999; Margerum, 2002; Rowe, March, and Frewer, 2004; Slotterback, 2007; Mandarano, 2008; Deyle and Slotterback, 2009; Laurian and Shaw, 2009). The contribution of this research relates closely to the last of these kinds of outcomes, with a twist. This study triangulates previous research with an untapped source of data: *what participants like and dislike about how public outreach and engagement is implemented, and their explanations of what would improve commonly used approaches.*

Third, the lack of good evaluation metrics reflects in part the complexity of engagement practice: given varied and divergent purposes for public engagement, there can be no single set of evaluation metrics for different forms of public outreach or engagement (Quick and Zhao, 2011; Bryson et al., 2013). Thus no single dimension explains success or failure; the results of outreach and deliberation arise through a complex mixing of contextual and design features (Sandfort and Quick 2017). However, as public engagement becomes an increasingly expected mode of governance (Nabatchi and Leighninger 2015), there is a thirst for more practical guidance about how to design and facilitate outreach and engagement to make it more successful. Seasoned practitioners know there is no "master recipe" or set of rules that will reliably produce successful public deliberation. Instead, they are aware that a variety of deliberative techniques exist to serve particular purposes (Creighton 2005), and are able to draw nimbly on a wide palette of them to design each deliberation to suit particular purposes (Carson and Hartz-Karp 2005). Again, most of the literature on design choices for outreach and engagement is heavy on practical guidance for practitioners or empirical analysis of facilitators' accounts of what does or does not work (Quick and Sandfort, 2014). This study adds an important yet typically missing perspective to those

foundations: *participants' experiential accounts and judgement regarding how different designs for public outreach and engagement affected them.*

CHAPTER 3: POLICY AND POLITICAL CONTEXT: LOCAL ROAD SYSTEMS CHALLENGES AND FINANCING

Most of the roads in Minnesota (about 67%) are the responsibility of local jurisdictions and rely on local funding sources for their maintenance and construction. However, this responsibility is nested in a complex system of transportation funding from three sources: federal, state and local revenues, all allocated through their own constitutional and statutory formulas, legislative allocations, and grants. While most of work of building and maintaining transportation systems falls on counties and cities, these require consistent and predictable revenue from the federal and state governments to support projects and set the overall tone to enable financing of local projects. Indeed, when this research team asked Minnesota policymakers and public works managers were asked about the challenge they are facing with maintaining their roads, the *lack of sufficient and predictable funding* was the most common response (as discussed further in Section 5.2 of this report). This is a common theme identified in a 50-state review of state legislatures and departments of transportation, conducted in 2016 by AASHTO, in which respondents pointed out that they face a chronic lack of revenue and investments, in particular they identified the continual uncertainties in Federal funding as well state revenue shortfalls and other resource limitations (Rall, 2016: 48-49).

Decision-making about the overall level of transportation funding, its availability at different levels of government and for different purposes, and the kinds of financing mechanisms available is not merely a technical process. It is fundamentally a political process, deeply embedded in a context of articulating and negotiating values about what constitutes a public need and the proper role of government, resource constraints, and trade-offs. These political and policy dynamics merit special attention as the context for this research on stakeholder attitudes, knowledge, and engagement in local road systems planning and decision making.

The reason to pay close attention to funding is because infrastructure is not free: maintenance costs accumulate and indeed may accelerate. All built structures, such as roads and bridges, require ongoing maintenance to uphold their operational performance status. Policymakers and public works managers should decide on the efforts and resources to maintain, repair or replace these, by considering well-established assessment techniques such as life-cycle analysis and cost benefit analysis methodologies (e.g., Rall, 2016; US Energy Information Administration, 2017). Preventive maintenance practices aim to proactively address problems before assets deteriorate from their desired performance levels. Decision-making about prioritizing maintenance needs and cost allocations should take into account probabilistic concepts and methods to determine life-cycle costs and the impacts of inadequate preventive and required maintenance on the operational life of structures (Barone, Frangopol, & Soliman, 2013). While postponed maintenance actions might seem an easy way to save expenses in the short-term, statistical models show that over the life of structures (or systems) preventive maintenance costs saved through deferral, cannot be recuperated in future essential maintenance activities (Ang & Tang, 1984; Frangopol & Kong, 2001).

Despite the fact that *everyone* – all residents and all organizations in the United States – is strongly affected by transportation infrastructure availability and quality, the technical and political aspects of this decision-making process are opaque to most people. That is unfortunate, because a basic understanding of how different levels of government operate to fund transportation infrastructure would seem to be indispensable for the public and key stakeholders to better engage in the decision-making process. Thus, it is important to pursue the objectives of this research: examine stakeholders' attitudes and knowledge, identify where different stakeholders' preferences and knowledge diverge, and assess and recommend methods for supporting better informed policy-making through stakeholder engagement.

To situate the data analysis of local stakeholder perspectives on local road issues and financing options (Chapter 5), the four comparative case studies on public engagement approaches to involve stakeholders in decision-making (Chapter 6), and our recommendations (Chapter 7), here we provide a brief summary of the current status of political discourse on local roads financing (Section 3.1) and a summary of the relevant transportation legislation and financing mechanisms from the federal (Section 3.2), state (Section 3.3) and local (Section 3.4) levels.

3.1 STALEMATE ON FINANCING OF LOCAL ROADS IN MINNESOTA, 2012-16

As this research project began, many transportation policy specialists and legislators were expressing their expectation of a possible agreement on long term transportation funding for the state – including for local road systems - during the 2013 legislative session. As it turned out, that was not forthcoming. There has long been agreement in Minnesota's divided legislature that the transportation system is aging and that it needs to be updated. Legislators also agree that there is a substantial funding shortfall to meet the needs of the state's transportation system, yet agreements have not been reached due to some fundamental philosophical differences.

Relying primarily on the excise fuel tax has been shown to be insufficient in meeting the fiscal needs for our current transportation systems due to the declining revenue ensuing from a combination of factors such as increased fuel efficiencies and on changing driving habits resulting in an overall drop in vehicle miles traveled (Figure 1). Nonetheless, in seeking fiscal solutions that are long-term sustainable, fuel excise taxes remain a very important part of the picture, particularly if the excise tax is formulated to account for inflation and other related variable costs.

Project financing through bonds and other forms of borrowing are not a sustainable long-term solution as these have to be paid back, with interest. Investors are only willing to participate if they see a clear path to a return on investments, but not all categories of transportation are to be linked directly to revenue generation and collection, thus fees, taxes and other forms of revenue are needed to pay for the construction and upkeep of transportation systems.

Property taxes collected by counties and cities have traditionally been the main funding source for roads, streets and bridges in their respective jurisdictions. This system worked relatively well until the waves of tax revolts in the 1970s and 1980s that resulted in a move away from raising property taxes to fund local government forcing them to seek other mechanisms to meet their needs and obligations. The

legislative flurry that chipped away at the local governments' ability to raise property taxes also eroded local governments' autonomy and made them increasingly dependent on state and federal governments to help them maintain their transportation infrastructure. It should be noted that, while much attention is paid to one direction of this relationship (namely, how to use property values to generate taxes to fund roads) – the *converse* direction of this relationship (namely, how investment in roads affects property values) is typically ignored. This is unfortunate because it is important: resources invested in local roads (combined from all sources) have been shown to have a positive effect on assessed property values (Zhao, 2015).

Over the past few decades, in order to meet the fiscal shortfalls, states have given local governments a range of authorities to use a number of revenue sources, including various sales taxes and user fees (Goldman & Wachs, 2003). Minnesota's legislature has proceeded with caution in authorizing counties Minnesota to raise local sales taxes for transportation. In 2008, the legislature provided the metropolitan area counties authority to local sales taxes to help fund transportation. At that time a 0.25 percent sales tax was adopted by five counties that form part of the Metropolitan Transportation Area to fund transit projects through a joint powers board – the Counties Transit Improvement Board (CTIB, described in 2008 Minnesota Session Laws, Chapter 152-H.F.No. 2800).

Governor Mark Dayton established a bipartisan commission in January 2012 to identify a number of options for the operation, maintenance and expansion of Minnesota's transportation infrastructure. The Transportation Finance Advisory Commission (TFAC) was established after transportation finance became one of the major points of contention in a protracted disagreement on reaching long-term budget deals for the state, which saw a 20-day shutdown of the Minnesota state government in the summer of 2011. In December 2012, the commission presented a set of recommendations to identify needs, state and local issues, and funding options in consideration of the national, state and local capacities (Minnesota Transportation Finance Committee, 2012). Their recommendations included:

- Increasing the motor vehicle registration fees, given that cars last longer consequently the revenue raised overall is lower due to the age of the fleet.
- Increasing the excise fuel tax ("gas tax") rate so that it is linked to projected needs and inflation.
- Creating or expanding local government revenue options such as the wheelage tax and local option sales tax for transportation.

These and other recommendations were presented in ways that considered the different revenue and policy options that would produce three possible desired outcomes:

- *Status Quo* — This scenario assumes no new funding or inflationary adjustments to the current funding stream.
- *Maintaining Current Performance* — This scenario assumes sufficient funding to maintain and operate the system in a condition equal to today, including existing service levels and condition ratings.

- *Economically Competitive / World Class* — This scenario greatly improved road surface and bridge condition, additional safety improvements, congestion reduction and some regional highway expansions, as well as significant transit and modal enhancements.

These and similar recommendations have driven efforts to improve the transportation fiscal situation. Some of the recommendations from the TFAC were adopted by the Minnesota legislature in 2013, when an agreement to modify the local option sales tax – hereafter abbreviated to its commonly recognized acronym, LOST – was reached. This expanded existing authority, previously restricted to the counties in the Twin Cities metropolitan area, to all Minnesota counties to adopt LOST, which is a ½ cent sales tax to help fund local transportation needs. Section 3.4 on financing options for local roads in Minnesota and their status, provides more details on how this mechanism works, and what counties have taken it up and to what effect. Other measures that were aimed to improve the long-term transportation fiscal situation did not succeed and instead produced "Lights On" agreements instead of dealing with transportation finance in the state.

Otherwise, following the TFAC recommendations, the Minnesota state legislature has tried but been unable to reach a deal on how to adjust funding to meet the present and future transportation needs in a long-term sustainable way. Subsequent legislative sessions (2014, 2015 and 2016) saw some activity to minimally address specific transportation needs, but little to no progress on sustainable solutions for the long term.

The efforts during the past few years have been repeatedly characterized by people whom this research team interviewed as "missed opportunities," yet what the "opportunities" were differ depending on whom one asked. For some it was an opportunity to find a long-term revenue stream for transportation; for others as a way to divert existing revenues to fund some aspects of transportation (road and bridges), while starving funds for programs that are not politically palatable to their constituents, namely transit in the metro area and passenger rail expansion (Biersbach, 2016).

The political reluctance to increase the excise fuel tax is one of the key issues hampering agreements on transportation funding. This follows a trend nationwide that uses the underfinancing of infrastructure as a blunt tool to strip funding away from non-transportation programs that are not palatable to different political factions (Transportation for America, 2013). Yet, in the current political climate, 18 other states besides Minnesota have reached some form of agreement on implementing an indexed excise tax on fuels to address the fluctuations in infrastructure financing and provide for long-term financial stability (Rall, 2016). Looking at the number of states that have implemented indexed forms of fuel taxes, we see that there is no significant difference in their political composition with states that have not adjusted their rates in the past few years (Davis, 2016).

Differences on how to fund roads continues to be acutely contentious and have largely stalled any long-term solution agreements since 2012. As the date of this report, there has been no significant resolution of the differences that had prevented agreements in the previous four years, and it is unlikely that any long-term solution will take place in the near future.

3.2 FEDERAL TRANSPORTATION FUNDING

In the period of this study, there have been two major federal transportation statutes, the Moving Ahead for Progress in the 21st Century Act (MAP-21) of 2012, and the Fixing America's Surface Transportation Act (FAST-ACT) of 2015. Both major pieces of legislation did not alter the federal excise tax on gasoline of 18.4 cents per gallon and on diesel of 24.4 cents per gallon. The rate has not been modified since it was set in 1993 but the purchasing value of the revenues raised from these excise taxes has declined given that the cumulative rate of inflation from 1993 to 2016 is calculated to about 66 percent, although the rate from 2012 to 2016, the period of this study, has been at a more moderate rate of 4.54 percent (Bureau of Labor Statistics, 2013). This is coupled with the effects of the efficiency increase of automobiles and trucks following the Corporate Fuel Average Efficiency (CAFÉ) standard's requirements. For the same period fuel efficiency has increased from 27.5 to 34.2 miles per gallon or about 24 percent improvement for the same period (Bureau of Transportation Statistics, 2016). This is compounded by a decrease in the total vehicle miles per capita traveled since 2008 according to FHWA and Federal Reserve Bank data (Bureau of Transportation Statistics, 2017), as shown in Figure 1.

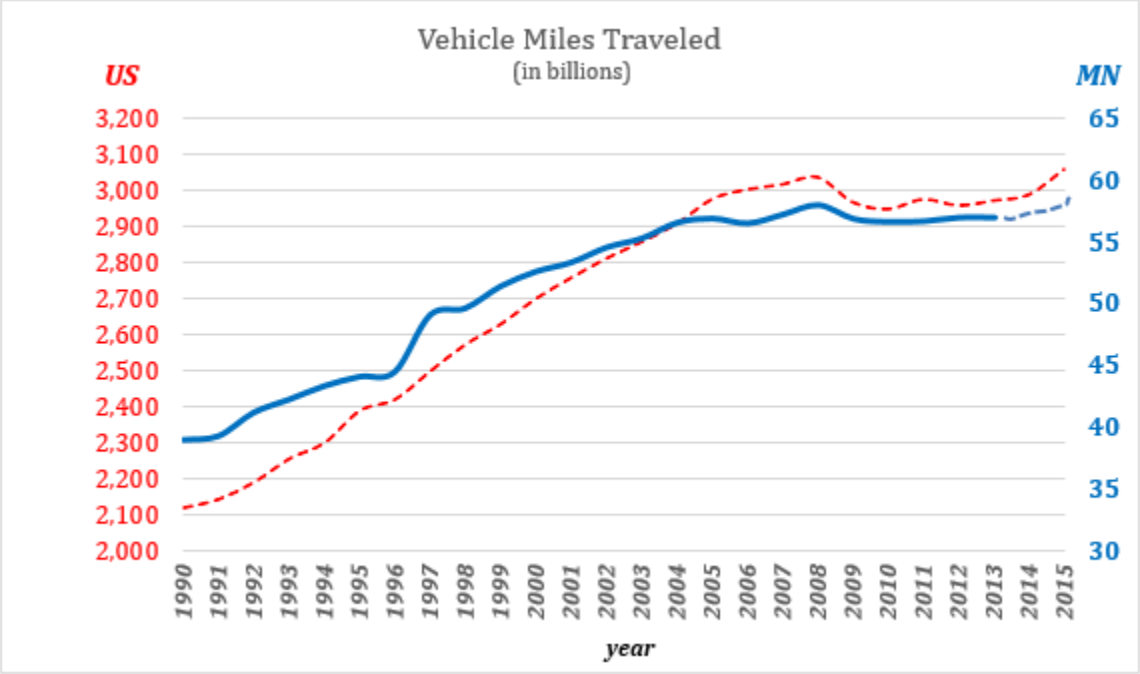


Figure 1. Vehicle Miles Traveled in the US and Minnesota (1990-2015)

Note: Data source is Office of Highway Policy Information (2015). VMT data is not available in detailed form since replacement data systems are under development and route and system updates have not been made since 2013, thus a 3% annual growth is estimated.

A 2009 bipartisan commission report, *Paving Our Way: A New Framework for Transportation Finance* opens with the following:

> The roots of our current crisis lie in our failure as a nation to fully understand and, more important, act on the costs of deferred investment in our surface transportation infrastructure, especially in the face of an aging infrastructure, a growing population, and an expanding economy (NSTIFC, 2009: 2).

The report makes the case that the real spending for miles traveled has fallen some 50 percent since the fund was established in the late 1950s, and that the purchasing power has diminished about 33 percent since 1993, when the excise tax was last adjusted (NSTIFC, 2009).

This sense of the state of the nation's transportation infrastructure is restated in many other reports, scholarly articles, and news pieces published by many different organizations during the past couple of decades. This has been a particularly contentious issue during the past eight years (since 2008) as there is little political agreement on how to adjust the fuel excise tax rate to keep up with inflation, much less to raise the rate to meet needs.

While the funding of state and local roads mostly relies on local funding sources (e.g., state, county and municipal and user fees), deliberations of federal transportation funding have an overarching influence on the public's attitudes regarding the funding and operational capacities of the jurisdictions they depend on to maintain and expand the infrastructure they are responsible for. Lack of federal action on transportation funding to make it sustainable in the long-term has consequences that ripple throughout all jurisdictional levels. Inaction in adjusting or indexing the excise fuel tax to the rate of inflation has resulted in an overall decline of the real value of these revenues (NSTIFC, 2009). Part of this is due to an overall lower fuel consumption resulting from increased fuel efficiency and in a significant decline in vehicle miles traveled during the past decade in the U.S. (Rall, 2016). While this was something that had been examined before the Economic Downturn of 2007-2009, the impacts became increasingly apparent in the aftermath of the Downturn (Dill and Weinstein 2007; Goldman and Wachs 2003), as can be seen in Figure 1. Policymakers and public works managers have operated under these constraints for a sufficiently long time that they are now are considered "normal."

The preceding description pertains only to what is needed to *maintain* the current infrastructure at an operational level and does not consider projected infrastructure investments to meet the challenges of a growing population and increased freight associated with the increased economic activity. A U.S. Department of Transportation (2016) report to Congress on the 2015 conditions and performance of the nation's highways, bridges, and transit indicates that there is $836 billion backlog of unmet capital investment needs for highways and bridges for the next two decades to deal with the additional demands.

3.3 MINNESOTA STATE TRANSPORTATION FUNDING, 2012-16

Like other states in the country, Minnesota has sought innovative ways to secure new revenue sources to maintain and expand its transportation systems. While fuel excise taxes have long been the preferred revenue option in the past, during the last two decades it has faced a similar unwillingness from the state legislature to adjust the fuel excise tax and fees since 2012. There have been modest adjustments

to service bond debts, but still insufficient to meet the shortfall in revenue resulting from an overall decline in vehicle miles traveled, and inflationary forces (Minnesota Department of Revenue, 2016; MNDOT, undated). The state of Minnesota has about 2.3% of the nation's landmass, yet it has a relatively large road network for its landmass with 3.3% of the nation's road miles as of 2014 (Federal Highway Administration, 2016). Other states with similar land mass and road networks are compared in Table 1.

Table 1: State Road Systems Comparisons

State	Minnesota	Wisconsin	Michigan	Pennsylvania	Ohio
Total Lane Miles	285,083	238,608	256,747	250,380	262,166
Rural	236,244	186,362	171,081	151,751	154,729
Urban	48,838	52,246	85,666	98,629	107,437
Main Revenue Sources					
Gas tax	$0.286	$0.309	$0.4044	$0.5820 Var	$0.2801 Var
Diesel tax	$0.286	$0.309	$0.4108	$0.7470 Var	$0.2801 Var
State revenue sources (other)	Registration Oversize/overweight truck permit fees Commercial vehicle inspection fees Sales taxes on motor vehicle sales Fees on rental vehicles Congestion pricing/high-occupancy toll (HOT) lanes Traffic fines Outdoor advertising revenues General obligations bonds	Oversize/overweight truck permit fees Fines for truck size and weight violations Fees on rental vehicles Driver's license and state ID card fees Outdoor advertising revenues Driver and vehicle record information fees Property sales Petroleum inspection fund revenues Revenue bonds	Tolls Registration and Title Oversize/overweight truck permit fees Vehicle dealer license fees Revenue bonds	Tolls Registration and Title Oversize/overweight truck permit fees Driver's license and other fees Outdoor advertising revenues General obligation bonds Revenue bonds	Tolls Leases of rights-of-way Outdoor advertising revenue General obligation bonds
State funding to local entities	29% county, 9% municipal, plus 5% discretionary.	20% to county and municipal	39.1% county, 21.8% municipal,	20% fuel tax municipal.	Fuel tax formula (five levies – See .
Local revenue sources authorized in state law	Wheelage tax aggregate tax 0.5% sales tax $20 vehicle excise tax Property tax	Registration fees and property taxes Development capital improvements	Municipal and metro districts property taxes special assessments	County property taxes vehicle registration fees Municipal special assessments, impact fees.	County, municipal vehicle license fee property tax Transportation Improvement District Levy prop. tax or assessment

According TRIP (2017), a national transportation research group, some 20% of the nation's roads are rated as being in poor condition along with 23% of bridges being considered to be structurally deficient. This is said to cost the nation's drivers about $112 billion or about $523 per motorist in additional repairs yearly – this does not consider the added safety-related costs due to the conditions of roads and bridges. Table 2 is a comparison of how they rate the roads and bridges of states that have similar road network sizes to Minnesota.

Table 2. State Road Systems Conditions

State	Minnesota	Wisconsin	Michigan	Pennsylvania	Ohio
Road Condition	37% are in poor state	42% are in mediocre or poor state	39% are in mediocre or poor state	44% are in poor state	43% are in poor state
Bridge Condition	12% are deficient or obsolete	14% are deficient	37% are deficient	42% are deficient or obsolete	23% are in critical or poor state

Sources: American Society of Civil Engineers (2017a, 2017b); American Society of Civil Engineers – Michigan Section (2017); TRIP (2014a, 2014b, 2016, 2017a, 2017b).

While Minnesota's roads seem to be in a better condition than in neighboring states, there are limitations in comparing road conditions across these as each face unique sets of environments and circumstances. Yet it is a good rating system to understand changes over time for a given state. Also, even with the given limitations in the comparisons across states, it does serve to contextualize the impacts of fiscal shortfalls in transportation investments over the long term in areas of the country that share many similar characteristics in transportation infrastructure.

As stated previously, states provide a significant portion of funding for all road categories, bridges, rail, airports and public transit. As funding shortfalls continue over the long term, states and other jurisdictions are searching for different ways to raise sustainable funding dedicated to transportation. To this end a wide variety of taxes and fees are used. These include state fuel taxes, vehicle fees, sales taxes, tolls, and an assortment of other sources like congestion pricing and mineral (aggregate) resources taxes.

Table 1 lists the major revenue options used by Minnesota and neighboring states (Rall, 2016).

A number of states promote their low vehicle registration and titling fees, fuel excise tax and other related expenses paid by vehicle (e.g., Wisconsin DOT, 2017). But many of these states, Wisconsin in particular, have maintained their transportation network by postponing needed activities and funding what is minimally required by increasing their bond debt load – all the while failing to provide for sufficient dedicated revenue to pay it down (Stein, 2015). Also the additional costs associated with long-term debt, these analyses often elide the added costs of operating vehicles due to additional repairs from added congestion which includes lost time, wasted fuel and vehicle wear and tear – not to mention that degraded roads increase crashes and injuries which costs and impacts go beyond monetary costs. As described above, there is a significant body of work on the life-cycle costs and the consequences of deferred actions on the maintenance of the road networks. The effects of these can be seen in a number of reports on the conditions of roads and bridges (e.g., TRIP, 2017).

3.4 FINANCING MECHANISMS FOR LOCAL ROADS IN MINNESOTA AND THEIR STATUS

In the United States, about 75 percent of roads are the responsibility of local governments such as counties, cities, and townships. In Minnesota, 87 percent are classified as local (Table 3). This puts a great burden on local governments, who rely on their residents and local businesses to fund these roads.

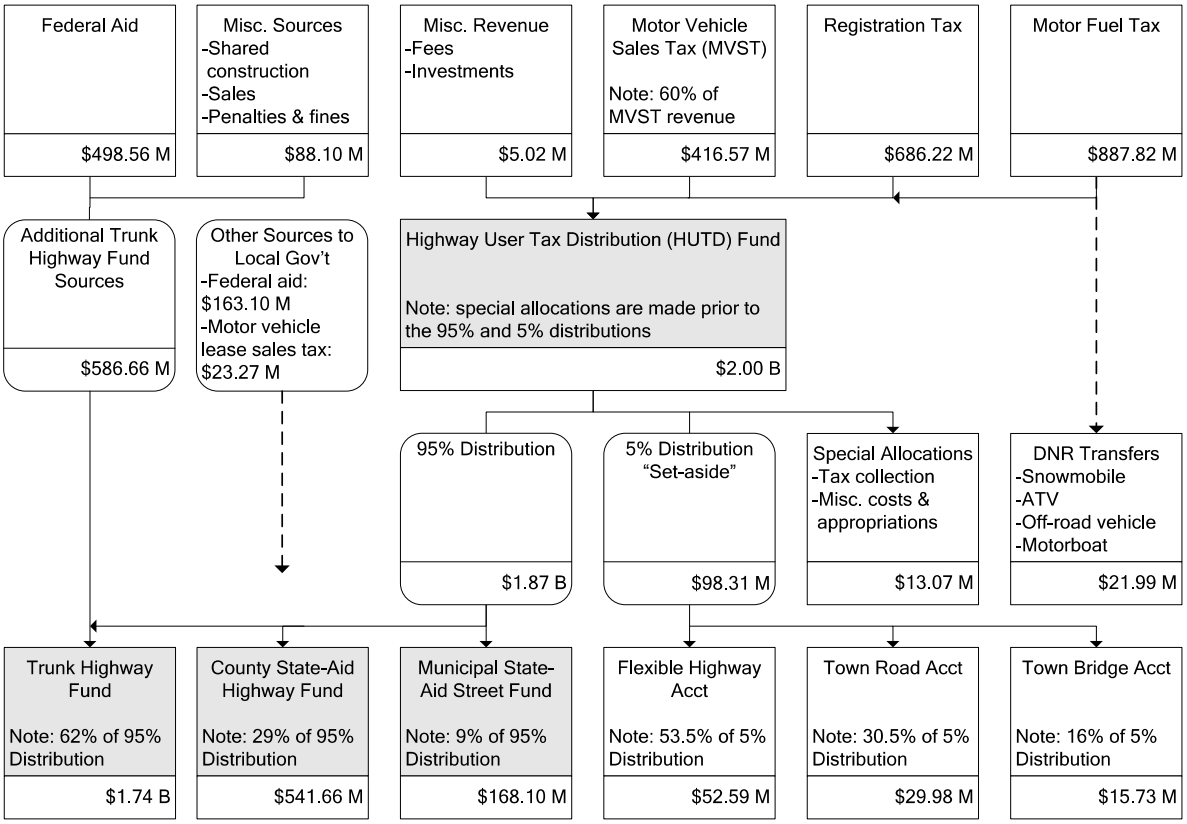
Table 3. Overview of Minnesota Roads Networks, Highlighting Local Funding

Route Type	Center Line Miles	Percentage of Roads
Interstate	914	0.7%
US Hwy	3,245	2.3%
MN Hwy	7,697	5.6%
County State Aid Hwy	30,584	22.1%
County Road	*14,326*	*10.3%*
Municipal State Aid	3,382	2.4%
Municipal Street	*18,816*	*13.6%*
Township	*53,717*	*38.7%*
Other	*6,019*	*4.3%*
TOTAL	*138,700*	*100.0*

Data source: Minnesota Transportation Information System Database (2015). The difference between "Lane Miles" and "Center Miles" listed this in this table and Table1 reflects how the overall length of roads is measured. Lane Miles gives a more precise figure of the size of the road network as it reflects the surface area, whereas Center Line Miles reflects the length of a given road regardless the number of lanes for a given road.

Most Minnesota transportation funding follows constitutional and statutory distribution formulas for the distribution of federal and state revenues to the different road system networks in the state. In addition, there are statutes that specify how counties, municipalities and other local entities can raise funds through taxation and fees and their use.

Figure 2 below is from the Minnesota House Research Department (Burress 2016a: 2), it shows how transportation funds are distributed by highway and road categories. These categories are specified in Article XIV, Section 5 of the Minnesota Constitution.



Notes: chart excludes $358.9 million in expenditures from trunk highway and other general obligation bonds, and (2) some federal funds for traffic safety and enforcement.

Figure 2. Minnesota State Funding and Allocation Summary (FY 2015 amounts)

Below are the principal revenue sources that make up the Highway User Tax Distribution Fund (HUTDF):

- *Motor Fuel Tax* on each gallon of gasoline and diesel is $0.286 per gallon. Other fuel types are taxed according their definition in Minnesota Statute § 296A.07-08.
- *Registration Tax* is an annual fee for vehicles based on their original value and age. For trucks and similar it is based on weight and age.
- *Motor Vehicle Sales Tax* is a 6.5 percent tax applied to both new and used vehicle sales.

- *Federal Aid*, another significant funding source for both state and local road systems, is provided through a number of federal programs that are both allocated through formulas and discretionary assistance.
- *Bonding* is used to find both state and local highway projects. There are two main forms, 1) Trunk Highway Bonds used for capital projects that are part of the trunk highway system, and 2) General Obligation Bonds used for local roads and bridges.

The HUTDF allocation formula is detailed in Figure 2. It is often referred to by policy makers and other transportation specialists as the "62/29/9 formula" whereby 95% of available funds for transportation are distributed as follows: 62% for the Trunk Highway Fund, 29% for the County State-Aid Highway (CSAH) Fund; and 9% for the Municipal State-Aid Street Fund. The remainder is referred to as the five-percent set-aside, and it is distributed by legislative determined formulas which currently distribute through the CSAH Fund to the Township Roads, Township Bridges and Flexible Highway Accounts, at the discretion of the MNDOT commissioner. Minnesota Senator Scott Dibble, Ranking Minority Member of the Senate Transportation Finance and Policy Committee, explains that legislators consult *Information Briefs* from the Minnesota House of Representatives Research Department, which are updated regularly to inform policymakers of the current funds levels, sources, and their distribution according to constitutional and statutory formulas (interviews July 7, 2015 and January 19, 2016).

Again, funding for the construction and maintenance of local roads in Minnesota comes from a combination of federal, state and local sources, allocated through constitutional and statutory formulas, legislative allocations, and grants. The Highway User Tax Distributions Funds (HUTDF) are used to finance certain categories of local road depending on their jurisdictional classification (CSAH and MSAS roads, as shown in Figure 2). Yet, as shown in Table 3, most of the roads in Minnesota (about 67%) are the responsibility of local jurisdictions and are not eligible for HUTDF allocations. Instead, these roads rely on local funding sources for their maintenance and construction.

3.4.1 Counties: Local option sales tax (LOST) as an emerging option

The following are the main local funding sources available to counties (Minnesota House Research Department, 2016; Association of Minnesota Counties and the Minnesota County Engineers Association, 2017; Minnesota State Aid for Local Transportation, 2017):

- *Local property taxes*. County boards levy taxes to pay for maintenance and construction of transportation infrastructure.
- *Highway User Tax Distribution Fund*. Counties receive 29% of regular HUTDF allocations, distributed 60/40 for construction and maintenance of CSAH roads.
- *Motor Vehicle Leased Sales Tax*. MVLST is allocated outside the HUTDF, with the first $32 million going to the General Fund, and the remainder is split between metro and transit for greater Minnesota counties for a number of transportation related projects.
- *Federal Aid Transportation Funding*. These funds are provided by the FHWA and managed by MNDOT are provided for specific projects.

- *Aggregate materials tax*. These are set by individual counties on the aggregate materials excavated and transported in the county. Revenues are for the maintenance and construction of roads and bridges.
- *Bonds*. Counties can raise money for specific projects that include road and bridge construction, replacement and maintenance. These are general obligation bond that rely on sources such as LOST to pay back the bonds.
- *Local option wheelage tax*. These are set by counties, and collect $10 per registered vehicle. Revenues are for the maintenance and construction of county roads and bridges. Currently 50 of the eligible counties have adopted the tax.
- ***Local option sales tax*** (also referred to as LOST). This is a ½ cent tax for transportation. This tax is implemented by county boards for specific transportation projects. Until 2013 this tax was limited to Metro Area counties. Starting in 2014, counties in Greater Minnesota were given the authority to implement this tax.

LOST is especially important to consider because it became available during this period as the major new opportunity for raising local revenues for road. Indeed, it is the focus of both county case studies in this research project (Beltrami County and Mille Lacs County), described in Sections 5.2 and 5.3. According to an analysis in 2013 by the Transportation Alliance, if all the 80 counties in Greater Minnesota collected LOST, they could generate about $145 millions dollars a year in new revenue to fund county transportation systems. In 2014, the first year that counties were allowed to adopt this tax, 14 counties did so. As of February 2017, the number of counties had risen to 26 (Dalton, 2016). There are a number of factors that go into determining the viability and desire for counties to adopt LOST, but most county administrators, engineers and commissioners have expressed that the property tax base is insufficient to meet the maintenance of their transportation infrastructure. Many of the counties that have adopted LOST share a combination of factors including: a) constraints on their property tax base, particularly having a large portion of their area be held as federal, state and county public lands; parks, wetlands and others that are categorized as exempt from property tax; and b) having strong potential to gather revenue from sales tax because of significant economic activity in the areas of retail, services, and tourism that pull consumers from surrounding areas.

3.4.2 Municipalities: Franchise fees as an emerging option

Municipalities rely on different mechanisms to fund the operation, maintenance and reconstruction of their transportation infrastructure. Like counties, they have depended on property taxes and assessments to accomplish this, but have faced long-term pressures that have kept the revenues collected from these sources below the levels required. In terms of state funding availability for municipalities to maintain local roads, in Minnesota only some 20% of city streets in the state, located only the 148 cities with more than 5,000 residents, are eligible to receive MSAS funds. The funding is for streets classified as collector and arterial streets which carry heavier traffic volume and connect to county, CSAH or trunk highways (Burress, 2016b).

Municipalities with less that 5,000 do not have access to MSAS or CSAH funds. Counties that have roads under their jurisdiction within these municipalities are eligible to CSAH funds under certain conditions outlined in Minn. Stat. § 162.145 and § 162.08, subd. 1 (Burress, 2016b).

Increasingly, therefore, municipalities are pursuing other sources to contribute to funding transportation infrastructure, such as franchise fees (Zhao et al., 2010). The principal local revenue sources available currently to municipalities in Minnesota are:

- *General Funds* – City councils can fund street construction and maintenance with revenues raised from city property taxes. Often property taxes alone are insufficient.
- *Special Assessments* – City streets are often financed with special assessments, which is a levy imposed on a property. Often the assessment amount is tied to the road frontage length corresponding to the specific parcel.
- *Bonds* – Cities are restricted in how they can raise money and one of the main instruments is through Local Municipal Bonds (a form of general obligation bond). These are to fund specific projects, but rely on the taxing power the cities have to pay back, with interest, the amounts borrowed to investors.
- ***Franchise Fees*** – Cities are authorized to levy franchise fees on utility services like gas and electricity. These are set by the city council and negotiated with the utility providers and the funds can be dedicated to the maintenance and reconstruction of roads and bridges. Franchise fees allow cities to have a stable revenue source to service the debt on Local Municipal Bonds. These may be collected monthly from all users, including non-profits, schools, churches and others that are users of the infrastructure yet exempt from property taxes (League of Minnesota Cities, 2016a, 2016b).

Franchise fees are especially important to consider because of the practical and political limitations described above on general funds, special assessments, and bonding. There is increasing interest among municipalities in franchise fees as an option for raising local revenues for roads. Thus, we chose the City of Brooklyn Park as a case study (described in Section 6.2, page 49), in large part because of its focus on public engagement with stakeholders about franchise fees as an option to remedy or close gaps on some shortcomings and disadvantages of the other available mechanisms.

CHAPTER 4: RESEARCH METHODS

This research is a form of engaged scholarship, intended to support both immediate, actionable analysis to support ongoing work by the study partners and to generate generalizable research findings to assist other local governments with related issues. This research approach and the qualitative methodologies were chosen because of the research objectives of the study, described in Section 4.1. Thus, the researchers interacted with state and local government agencies and their stakeholders through interviews, surveys, facilitated community meetings, and observations of public meetings. We describe these data collection and analysis methods in more detail in Section 4.2, explain the selection and implementation of case studies in Section 4.3, and explain and the advantages of the combination of qualitative methods for these research question in Section 4.4.

4.1 RESEARCH OBJECTIVES

The objectives of this research, sponsored by Minnesota's Local Road Research Board, are two-fold: 1) to analyze stakeholder attitudes, knowledge, and engagement about financing for local road system management; and 2) to improve this policy environment with practical guidance to name and address gaps in understanding or conflicts and improve stakeholder engagement methods.

We accomplished these objectives through three related sets of research activities:

1) Analysis of the general climate of stakeholder knowledge and attitudes regarding road system financing. Data were collected through a survey of county government leaders, observations of the state legislature, and media analysis. The results of this part of the study are described in Chapter 5 of this report, specifically in Table4. The findings of the first phase of data collection and analysis – scoping of stakeholder perspectives on the nature of local roads issues, accomplished through media content analysis and a survey of county engineers and other local experts in Minnesota – confirmed that the focus of the case studies should remain on funding and public engagement in the context of local roads.
2) Case studies, in which the research team worked in conjunction with local units of government on design, implementation, and/or evaluation of their methods for engaging stakeholders about plans and financing mechanisms to address local road system needs. The case studies were conducted in two Minnesota cities (Chanhassen and Brooklyn Park, Sections 6.1 and 6.2 of this report) and two counties (Mille Lacs and Beltrami, Sections 6.3 and 6.4). The results of this part of the study are described alongside each case study.
3) Recommendations, which synthesize the public policy and management implications of this research and provide practical guidance for future public communication and stakeholder engagement around local road system sustainability. These contributions are located in Chapter 7 of this report.

4.2 DATA COLLECTION AND ANALYSIS METHODS

Statewide scoping survey of city and county transportation issues managers. At the start of this project we sent out a scoping survey to better understand the issues of concern to local government managers

relating to local road systems management issues. The invitation to participate in this online survey was sent to county and city engineers, public work directors and public administrators. This survey was modeled in the form of a semi-structured interview where questions are open-ended and organized in a sequence that help guide the responses and make the data more comparable across multiple participants, time periods, and settings (Bernard, 2011). A total of 128 unduplicated individuals responded to the survey between 2014 and 2016, including 69 from county governments and 59 from city governments.

Observations of legislative dialogues. Observations were conducted of deliberations of transportation issues at the state legislature during the 2014, 2015 and 2016 sessions (particularly at the House Transportation Finance Advisory Committee, and Senate Transportation Finance and Policy Committee). This also included interviews with individuals chosen due to their particular knowledge and involvement with transportation policy issues, for example because they were county and city engineers, legislators, MNDOT managers specializing in relevant content areas (e.g., local roads management, transportation finance, or public engagement efforts), facilitators or researchers working on associated public engagement efforts such as those just described. Accordingly, these were unstructured and extended interviews, designed to tap the specific expertise of each individual.

Media content analysis. As part of this scoping analysis, the research team conducted a media content analysis. This consisted of a survey of coverage of local road funding issues in Minnesota and elsewhere during the research period (2014-2016). The sources searched included Minnesota newspapers (regional, city, and local) and leading national papers for coverage of Minnesota transportation issues, news releases and reports by organizations working on transportation issues like the National Association of Counties, AASHTO (Rall, 2016), Transportation for America (McAndrew, 2016), Minnesota Transportation Alliance (2013), Heritage Foundation (Sargent, 2015), and others representing a variety of perspectives on transportation policy. The content of these are part of the literature review as well as analysis in the different sections of this report.

Interviews and surveys. Confidential, semi-structured interviews were conducted with key stakeholders and/or focus groups. In some cases, this data collection to gather information from individual participants was accomplished instead through short, semi-structured surveys (administered on paper or online, per the participants' preference), followed by a short phone interview with willing participants. Interviews were of two general types:

> Exploratory or scoping interviews to identify key local roads issues and concerns, to identify the public policy issues and design or evaluate the public engagement methods associated with them. These interviews were conducted primarily at the beginning of the project, but continued throughout as needs and opportunities arose.
> Interviews or surveys with interested members of the public, to gather their feedback about the engagement methods that had been used.

Study participant selection: Survey and interview participants fell into three general categories:

> *Sponsors / organizers / implementers of the public outreach and engagement*. This category includes: a) government managers and elected officials of the local government agency in the case study area; b) staff or volunteers of organizations who assisted with funding, designing, and implementing the outreach and engagement work.
> *Interested members of the general public*. This includes participants in community meetings, online exchange, or media stories about these policy, planning, or program issues.
> *Stakeholders with a particular interest in the policy, planning, or program issue.* This includes individuals specifically impacted by the issue (e.g., property or business owners affected temporarily or permanently by a proposed road financing measure or construction project) and, where relevant, representatives of organizations with a particular thematic interest in the policy issue (e.g., bicycling or pedestrian advocacy groups for road construction issues).

Protection of human subjects. The researchers took care to assure the confidentiality of data and other aspects of the protection of study participants, in accordance with our ethics and a protocol for the protection of human subjects developed by the research team and approved by the Institutional Research Board of the University of Minnesota (IRB exempt protocol 1207E17847, subsequently renewed through IRB exempt protocol STUDY0000799). These procedures ensure voluntary participation, protect participants' confidentiality, and minimize potential harm associated with participating. Public meetings are an exception to the policies of maintaining confidentiality and obtaining informed consent to participate in the study, since by definition these settings were public.

4.3 CASE STUDY SELECTION AND DESIGN

Purpose of case studies. The purpose of this part of the research is to support, when requested, implementation of public communication or engagement programs, and to evaluate the approaches so that the effects could be compared and recommendations could be made about whether and how to use them in other settings. In this phase of the work, the researchers collaborated with local public works staff to develop the topics and methods for their public communication and engagement plans, identify and recruit participants, and interpret the results. An integral part of this aspect of the research included interviews with the senior staff of city and county public works departments, county administrators, or county commissioners to develop the issue topics, identify stakeholders, and design the process for the public engagement efforts. These interviews – using the same methods and participant selection criteria described above - began with open-ended questions about their key concerns and opportunities, and became more focused on the particular issue area that would be the topic of the public meeting. Some included consultations over maps and visits to particular road sites of interest.

Case study sites and topics. The researchers examined public engagement efforts in four areas of the state: the City of Chanhassen, the City of Brooklyn Park, Mille Lacs County, and Beltrami County (the latter being an extension of a case study begun in a previous, related LRRB-funded research project, described in Quick et al., 2014). We examined communication and engagement around a major, multi-

jurisdiction road redesign and construction project in the City of Chanhassen, the adoption of Franchise Fees by the City of Brooklyn Park to fund street maintenance and reconstruction, and the adoption of a ½ cent sales tax for transportation (LOST) by the two counties, Beltrami and Mille Lacs. Considering new forms of revenue generation – as occurred in three of these jurisdictions – demands especially intensive and innovative forms of public engagement. We studied the required and suggested forms of public engagement efforts that different jurisdictions need to meet when considering the adoption of innovative revenue generation.

In these cases, we see how local jurisdictions use various forms of engagement to present transportation projects, and how these fit into the published guidelines by different public agencies and related organizations as these not only deal with specific road projects, but also include changes in fiscal policies, namely sales taxes and franchise fees.

The four cases in this report are:

City of Chanhassen, where the Public Works Department and City Engineer facilitated extensive community outreach and a series of open houses regarding a major road project, which transformed a winding, two-lane, undivided highway into a four-lane, divided highway with multi-use trails and a much-increased traffic volume. The project was complex in terms of stakeholder interests, as it implicated changes in the character of this rural community as well as property acquisition from longstanding owners. Three jurisdictions – the City of Chanhassen, Carver County, and the State of Minnesota – were involved in the project; we worked with the city (the mutually agreed lead on community engagement on behalf of all three jurisdictions during the design and planning stages) to gather stakeholder feedback on a multi-phase engagement effort that had recently been completed.

City of Brooklyn Park, where the office of Operations and Maintenance for the city wanted to gauge public opinion prior to presenting a proposal to the city council to find feasible funding options to deal with a faster than expected pavement deterioration on much of the city's 165 miles of streets. In the past assessments have been used to reconstruct streets, but franchise fees were considered as a viable way to fund reconstruction and maintenance instead of the previously utilized funding sources (mostly from property taxes to the general funds) as these were deemed insufficient and increasingly unpalatable by homeowners. We assisted the city in designing and implementing a series of public engagement sessions where they presented their proposal.

Mille Lacs County, where we studied public meetings and county commissioners' deliberations in 2016 to adopt LOST to fund county roads and bridges. The county sought this option in response to an economic downturn in the region from a decline in tourism, the main stay of the local economy. Mille Lacs held three public information sessions, followed by two county board meetings. After a number of months of consideration, they adopted the LOST option on August 2nd, 2016.

Beltrami County, where we continued to examine the work done previously with Beltrami County which was the model that lead this research on public engagement and stakeholder attitudes regarding local transportation finance. In 2014 Beltrami county was trying to find a

solution to their situation of insufficient revenues to adequately maintain their road network and led them to consider adopting the recently authorized LOST to fund their local roads maintenance and construction. We previously assisted in organizing three stakeholder meetings to help Beltrami county present the Local Options Sales Tax proposal and other related policy options. Here we further examine that work with a follow up survey of participants to discover how, over a more extended period of time, the methods for engagement and outreach may affect the long-term attitude of stakeholders towards the quality, fairness, and effectiveness of the policy decision-making process, policy choice, and policy implementation.

Case study selection. These case study sites were selected through the initial scoping work, done through the statewide survey, observation of legislative dialogues, and media analysis described above. In addition, the selection of cases was the product of several rounds of discussion with local transportation planning and finance professionals with particular expertise and knowledge of key issues and developing issues around the state; these individuals included the project technical leaders, members of the Technical Advisory Panel for the project, and MNDOT staff. After sorting the options down to seven case study candidates, we selected these four cases so that we could optimize the options for comparative case analysis.

- For three of the cases – the City of Brooklyn Park, Mille Lacs County, and Beltrami County - the combination of a *consistent policy topic* – new local financing mechanisms for local road systems – with *variation in public engagement methods* (described in Table 5) is ideal for comparative case analysis for the research objectives listed above. In addition; these three selected cases permitted direct observation of the public engagement meetings, which provides richer data for analysis than exclusively collecting data on people's attitudes towards a previously conducted process.
- In the early stages of development of this study, we had begun exploration with local government collaborators working on public engagement for major local road improvement projects. The City of Chanhassen is the case we developed because the initial data were intriguing and merited additional exploration, in addition to which the timing was not conducive for the other two sites due to staffing changes or legislative issue. Chanhassen complements and provides foundations for comparative analysis of another case study we had previously made of Dakota County (Quick et al., 2014) regarding the everyday criteria that members of the public and other interested stakeholders use to evaluate the effectiveness and value of engagement processes.

The diversity of engagement approaches across the four case study sites is an advantage for the project as a whole, as it provides a greater range of models to develop, evaluate, and share for application in a broader array of settings across the state.

Case study data collection. For these case studies, the primary data collection methods included observations, surveys, and interviews, but this varied somewhat. In some cases, the researchers played a role in designing, facilitating, and / or participating in the public outreach and engagement effort, so as to gain a participant observers' perspective. In those cases, the researchers compiled ethnographic

fieldnotes and analyzed transcripts of the community meetings to permit analysis of the communication and engagement dynamics (Feldman 1995; Lofland et al. 2006; Emerson et al. 2011). Other cases, we were observers only of an engagement process that was organized by public managers, in which case we only attended community meetings, took notes, sometimes recorded and transcribed the portions that were open to the public and media (and thus commonly understood to be on the public record), and followed media coverage of the context of the issue.

Researcher involvement in design. In two of the locations (Beltrami County and City of Brooklyn Park), the research team facilitated public engagement meetings. In these study areas, the researchers continue to engage with the local study partners, after facilitating meetings, to discuss interpretation of the data. In a third (Mille Lacs County), the researchers conducted observations of public meetings and hearings, complemented by interviews with the County Administrator and County Engineer to gather their perspectives on what led them to consider funding alternatives and how their County Commission came to adopt LOST. In a fourth (City of Chanhassen), the researchers became involved only after the engagement process and road improvement project was concluded, and thus collected data exclusively through surveys and interviews with stakeholders about their reactions to an effort that had already concluded. In accordance with the different circumstances and needs of each area, the plans for public communication and engagement took different forms in the four study sites. Because the stakeholder engagement methods are distinctive for each case study, we describe them with the write-up of each case study in Chapter 6.

4.4 ADVANTAGES OF MIXED METHODS AND QUALITATIVE ANALYSIS APPROACH

The mixed methods and qualitative analysis approach adopted in this project offer several advantages for the depth and validity of this research. First, our participant observer perspective (Lofland et al., 2006; Dewalt and Dewalt, 2011) allowed us to identify and unpack jargon or unfamiliar data and concepts that needed to be better explained to the general public and interested stakeholders. It also allowed us to discern patterns in the views of different kinds of stakeholders, and zero in on some of the common misunderstandings and divergences in opinion that could be addressed through better communication or facilitated engagement efforts.

Second, the data provide the perspectives of many kinds of stakeholders, which were gathered and analyzed through a wide range of quantitative and qualitative modes of inquiry, including quantitative data from confidential individual surveys, qualitative data from in-depth interviews, content analysis of public media and policy documents, close analysis of the dynamics of group dialogues in facilitated focus groups and policy roundtable, and comparative analysis across four case studies (Eisenhardt, 1989; Yin, 2013). This diversity of views and methods allowed the research team to triangulate among various interpretations of the policy issue and public engagement processes (Altheide and Johnson, 1994; Yin, 2013).

Together, these features allowed the researchers to generate thick descriptions, enhancing the validity of the qualitative data analysis and theory development (Bernard, 2011; Kirk and Miller, 1986; Lin, 1998; Schwartz-Shea and Yanow, 2012). The researchers analyzed these data using standard coding,

categorizing, and memoing techniques (Bernard, 2011; Emerson et al., 2011; Lofland et al., 2006; Corbin and Strauss, 2008).

CHAPTER 5: LOCAL PUBLIC WORKS LEADERS' ASSESSMENTS OF THE CLIMATE FOR LOCAL ROADS ISSUES

The researchers gathered information about convergent and divergent perspectives on local roads issues in Minnesota. The methods are described in greater detail above in Chapter 2. Briefly, they included scoping surveys, interviews with key stakeholders such as county engineers and policy makers, discussions with the county commissions of two counties, observations of public hearings, policy dialogues, and media content analysis.

5.1 MEDIA CONTENT ANALYSIS FINDINGS

The long-term sustainability of the roads and bridges that we rely on has become a recurring topic that resurfaces in the media when the legislature is in session. The political stalemate on finding long term sustainable transportation funding options continues year after year has become increasingly newsworthy. A LexisNexis search of local, regional, and national print media dated between January 2013 and November 2016 yielded 198 unique articles with content specifically relevant to road system sustainability in Minnesota, including lifespan of roads, bridges, and the continual failure of efforts to reach a sustainable funding solution for Minnesota's transportation infrastructure.

The researchers examined this content to better understand the topics of concern as expressed in the media. We used these data on stakeholder knowledge and attitudes to inform the design of our interview and survey protocols and our design, observation, and assessment of community meetings. The main topics that emerged are:

- The lack of legislation that addresses the long term fiscal stability of transportation funding at the state level. Lack of agreement on how to deal with the financial shortfall has been a point of continual disagreement at the legislature during the three cycles covered during this research project (2013-2016).
- The declining condition of roads and bridges in Minnesota, where coverage often links this to revenue shortfalls and points to this as contributing to the decline in quality of infrastructure.
- The drawn-out deliberations that led to the latest federal transportation proposal (culminating in the December 2015 passage of the *Fixing America's Surface Transportation Act*, or "FAST Act"), which drew the attention not only of those interested in transportation quality and finance, but of political observers concerned by partisan tensions and polarization at federal and state levels of government.

5.2 SCOPING SURVEY FINDINGS

Table 4 is a thematic summary of responses from 128 respondents to our survey of city and county leaders. It was conducted between 2014 and 2016, a period when state legislation on transportation finance has not changed significantly, as discussed in Section 3.1. We performed this survey to elicit their views on local road systems issues in their jurisdictions and the rest of the state; identify what measures they had implemented and were considering to address road needs and fiscal constraints; and find out what communication and engagement strategies they were using and their assessment of their effectiveness.

Table 4. County and City Leaders' Perceptions of Local Roads, Stakeholder Attitudes, and Pros/Cons of Public Outreach Methods.

Question	Counties Summary of Responses	Cities Summary of Responses
How would you describe the state of the local roads in your jurisdiction?	Most responders rated the conditions of roads to be *poor* to *fair*, only very few respondents in counties rated their roads to be in *good* condition. The main concerns expressed were a lack of funding resulting in delayed in critical maintenance and construction. Some expressed the need to improve a number of roads as traffic and loads are increasing from population growth (more vehicles), and expansion of agricultural, commercial and industrial activity (more and heavier vehicles).	Most responders rated the conditions of roads to be *fair* to *good.* The state of streets is split, local streets are good, but collectors and arterials are deteriorating due to MSA budget constraints. Some stated the status was horrible, too far gone to do mill and overlay. They observe that all funds to go maintain streets, and that is not enough, that homeowners are not too keen on special assessments, and that roads are deteriorating faster than what we can maintain.
In general, how would you describe the state of local road systems in Minnesota?	Similar to the previous question respondents feel that the condition of roads in the state are in *fair* to *poor* condition. They express concern that many roads were built in the 1950's and have exceeded their life expectancy. The state has not been paying sufficient attention to the condition of local roads (and bridges), and that they are deteriorating faster than the maintenance they receive (due to lack of resources and increased traffic and loads). A couple of respondents pointed out that some communities have greater capacities to raise funds locally through property and sales taxes. In general, newer suburbs and other areas that are growing have a greater capacity to invest in infrastructure.	Respondents feel the condition of roads in the state are *fair*. They state that Minnesota has not been paying sufficient attention to local roads (and bridges). They are deteriorating much faster than they are being repaired. It varies greatly by the tax base of the community. Suburbs or areas that are growing have the ability to levy more tax dollars per mile to keep their systems in relatively better shape. Cities and counties that are not growing as fast, or that are spending more of their general fund on human services, see a spiraling down on all counts because the appearance of being less affluent shows up in all public infrastructure.
Do you feel that stakeholders you interact with view the state of local road systems in a similar manner? If not, what are the main differences?	There is lack of understanding of how transportation infrastructure is funded, and which roads are under the responsibility of different jurisdictions. The public wants better roads but don't realize the costs. Some members of the public do have a sense of the needs, but are leery of new funding sources – there are deep divisions where the public expects roads to be of high quality, but feel the costs can be covered with existing revenue. Some of the responses expressed the concern that local legislators could be better educated on funding and what it takes to keep the roads and bridges in good working conditions as they seem more concerned with lowering taxes without taking into the account of what it means to the transportation network.	Respondents feel that yes, stakeholders do see the need to maintain streets, but, there are deep divisions on how to address issues. Many specifically mentioned that homeowners are leery of assessments to fund streets.

Question	Counties Summary of Responses	Cities Summary of Responses
How are stakeholders involved in issues related to the local road system in your jurisdiction?	Frequently, there is very limited involvement by the public. Counties and cities conduct regular meetings (annual) to discuss 5-year plans. Meetings with township associations, coalitions and business groups in preparation to public hearings on specific projects and issues are effective ways to communicate. Otherwise getting people to actively engage is often difficult in the early parts of a project.	Residents are not active in transportation issues until it is an issue or project that directly affects them. There is good stakeholder involvement, but there is a lack of support on reprioritizing budgets. This respondent's statement encapsulates the views many expressed: "Encouraging engagement and getting people active in conversations often is very difficult right up until you're about to put the shovel in the ground. It's unclear how to engage a good cross section of the community all the time early enough in the project. There are often minority view voices that speak up at early stages only."
What public outreach efforts have worked well for you?	Responders mentioned project open houses, charrettes. direct invitations, phone calls and one-on-one conversations, newspaper and social media, community, neighborhood and township meetings.	Responders recommended communicating with coalitions and business alliances (e.g., I-94 Coalition and Corridors of Commerce), neighborhood meetings, open houses, public hearings, targeted neighborhood meetings, phone calls, and one-on-one conversations. They observe that online media has helped.
What public outreach efforts have not worked well?	Some respondents mentioned that newspaper notices, direct mailings and newsletters yield responses (these are the typical ways used to contact members of the public). Others noted that public notices or announcements on government websites or social media have little impact. Some respondents noted that public hearings are attended by a few people and are often only motivated to come when they have an opposing position.	Respondents report that the public only comes out when they have an opposing position (many were more specific, stating that residents only come out to oppose assessments). They suggest that meetings without structured presentations do not work well and that public notices, and announcements on their local government website do not have adequate reach. They also assert that social media has little impact.
Do you feel that stakeholders you interact with share similar views on the state of local roads in your county?	One respondent summed up, "There is an agreement on the importance of local roads, on the needs to maintain and improve, but little agreement on funding." Others observed that stakeholders want good roads but are surprised at the costs and that there is a need to educate the public, but more importantly, to train elected officials at the city, county and state level.	Generally, yes, they share similar views about the state of roads, but not on how to address the funding.

Question	Counties Summary of Responses	Cities Summary of Responses
Have stakeholders expressed any particular concerns regarding the current funding climate in relation to the condition of roads in your county?	The public does not have a clear idea of what it takes to maintain roads. Many feel that that roads can be funded by reallocation existing funds away from programs they don't agree with. Some have expressed that funding for roads be dedicated to their original purpose and not in other areas like sidewalks or trails. There is a significant portion of the public that understands that there should be more money for roads, but are not versed with the details on how roads are funded.	Many feel that there should be more money for roads, but they are not versed on how roads are funded. Many feel that while the roads need to be well maintained, the best solution is to reallocate funds to them away from existing funds for other programs they do not agree with.
Have there been changes in the funding of local roads in your jurisdiction during the past few years? Do you expect any significant changes in the near future?	In some counties the wheelage tax and local option sales tax (LOST) have been adopted along with local bonding for projects. Respondents indicate that over the past few years, they have seen a significant reduction in State Aid distributions all the while costs continue to increase. Increasing general tax levy and assessments have been relied on, but there is a need to find alternatives to raising property taxes as reducing other general fund expenditures is not sustainable.	Many observed that funds had decreased due to declining State Aid distributions and stated a need to find alternatives to increasing property taxes as reducing other general fund expenditures is not sustainable. Some have not adjusted revenue sources, while operating costs continuing to increase. Others are staying the course with annual improvement projects and funding levels. Many identified greater reliance on local funding during the past 15 years, including through increasing general tax levy and assessments, new bonding, franchise fees on utilities, or directing more resources to local roads (unspecified whether these are new or reassigned funds).
What strategies are you considering to shortfalls in resources to the local road system in your jurisdiction?	Delay of projects. Increase in local levy and bonding. Increasing franchise fees and allotments. Un-paving low volume roads. Turn back low volume roads to townships. Adopt wheelage tax and LOST. Implementing weight limited roads to reduce heavy truck traffic, thereby extending road life. Extending repayment periods for bond repayments. Purchasing asphalt recycling equipment to reduce costs.	Increase reliance on local funding sources as other funding streams have diminished. Increase assessment amounts, and general obligation bond spending. Extending repayment periods for bonds. Applying for more state and federal funds. Lobbying legislature to address funding shortfalls Increasing franchise fees and allotments. Purchasing asphalt recycling equipment to reduce costs. Trying to find alternatives to assessments and tax levy as these are controversial with residents.
What would a sustainable and resilient local road system look like to you?	Predictable and sustainable funding to be able to carry out proactive maintenance and construction of local roads. Flexibility for different modes of transportation. Road designs and materials that last longer. Funding indexed to inflation. Roadways designed to handle commercial and industrial vehicle traffic.	Flexibility for different modes of transportation. Streets designs and materials that last longer. Funding indexed to inflation. Roadway design to handle commercial and industrial vehicle traffic.

Question	Counties Summary of Responses	Cities Summary of Responses
What are the most pressing challenges to the sustainability of your local road system?	Lack of funding to help maintain an aging system beyond its life expectation. Dealing with an increase of heavier and larger equipment on roads that are not designed to handle the loads. Asset preservation challenges. Maintaining roads when they need it, and not waiting until the completely deteriorate.	Maintaining roads when they need it, and not waiting until the completely deteriorate. Predictable and adequate funding to meet increasing needs.
Longer term, what would make for a better road network?	Increase and maintain awareness of how transportation systems are vital for a healthy economy. Consistent funding dedicated to roads. Match expectations to funding. Increase in maintenance and construction funding nationwide. Widening roads and increasing load limits to meet needs of agricultural, commercial and industrial sectors. Having sufficient resources to maintain roads so that they reach their 50-year life span without major deterioration.	More consistent funding dedicated to roads. Having sufficient resources to maintain roads so that they reach their 50-year life span without major deterioration.

Source: Original data collection conducted by the research team 2014- 16. Data were gathered from 69 unduplicated county leaders and 59 unduplicated city leaders (public works directors, city/county engineers, planning directors, and city managers or county administrators).

5.3 KEY PATTERNS IN STAKEHOLDER PERCEPTIONS OF LOCAL ROAD SYSTEM SUSTAINABILITY

Analysis of the survey responses as well as interviews and meetings with stakeholders, observations of policy dialogues, and media content reveals the following patterns.

- **Road Quality.** Most counties rated the condition of roads to be poor to fair, as did many cities. The public became much more attentive to and concerned about road system maintenance between 2014-16 compared with 2009-14.
- **Funding.** Local public works leaders, political leaders (regardless of party, from local through the national level) and media coverage consistently highlight a lack of funding impeding the proper maintenance of local roads and bridges. Consistently also, the public wants the roads they rely on to be in good condition, but is unaware of the costs and often unwilling to contribute to their upkeep, particularly when the problem is considered remote and investment does not seem to offer immediate value. Views on different sources of infrastructure funding (for or against) tend to be exacerbated by broader regional and national political debates.
- **Public Engagement.** In general, there is little participation in transportation policy and planning unless there are specific issues of concern. More populated cities and counties typically have greater capacity to involve the public through engagement processes and extensive public communication, whereas smaller units (especially rural jurisdictions) can communicate more directly with the public through one-to-one relationships and small meetings. Regardless of the size and scale of the jurisdiction and project, public works leaders consistently found that to get people involved it was necessary to make a lot of effort and use multiple modes of outreach, and that well-structured meetings with good quality information and ample time for Q&A were much more productive than loosely structured meetings or presentations without dialogue.

The findings of the first phase of data collection and analysis – scoping of stakeholder perspectives on the nature of local roads issues, accomplished through media content analysis and a survey of county engineers and other local experts in Minnesota – confirmed that the focus of the case studies should remain on funding and public engagement in the context of local roads.

CHAPTER 6: DEVELOPMENT AND COMPARATIVE ANALYSIS OF DIVERSE PUBLIC ENGAGEMENT MODELS

The research team collaborated with public works leaders in the City of Chanhassen, City of Brooklyn Park, Mille Lacs County, and Beltrami County (Figure 3), to support implementation and/or evaluation of public communication and engagement strategies. For key features of the transportation systems in each location, the focal topic for the public engagement efforts, the engagement methods used, and the policy outcomes in each location, please refer to the side-by-side comparison provided in the explanation of case selection in Table 5.

This section of the report describes the four case study sites separately, providing for each one an orientation to the local road policy problem, the communication and engagement activities undertaken, the results, and an evaluation of the strengths and weaknesses of these approaches.

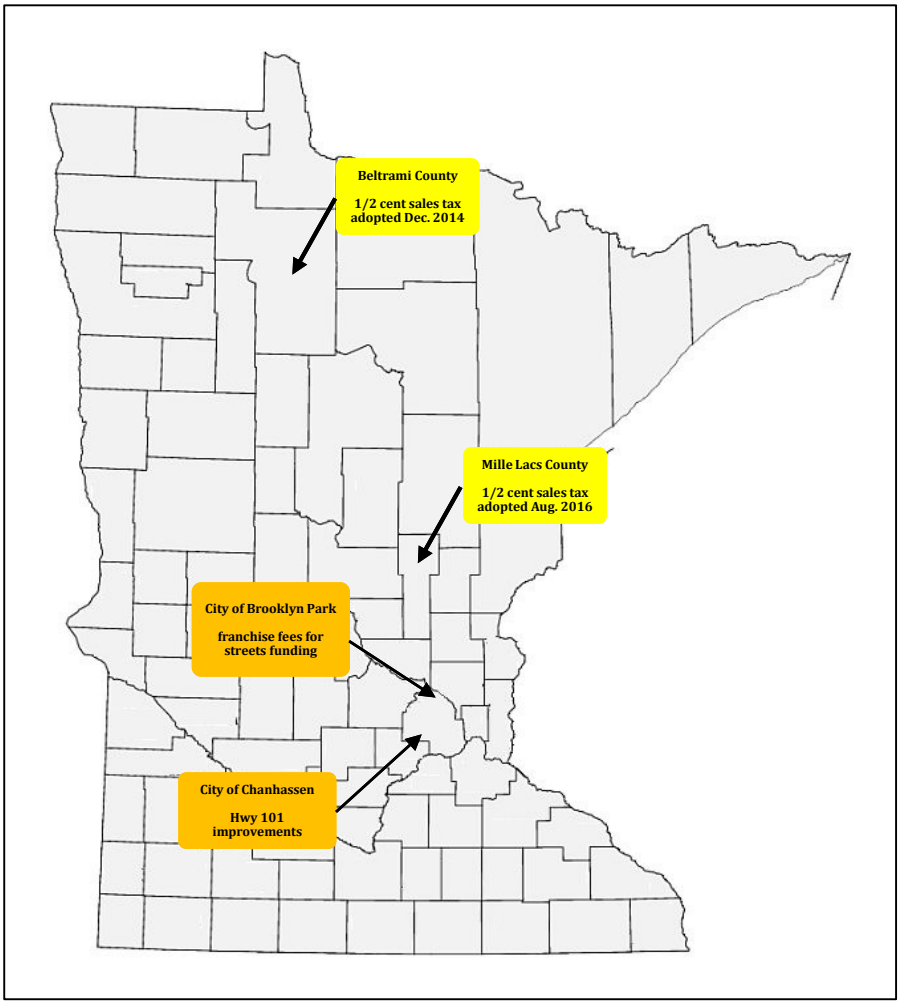


Figure 3. Location of the Four Case Studies

Table 5. Policy, Demographic, and Public Engagement Features of the Four Case Studies

	City of Chanhassen	City of Brooklyn Park	Mille Lacs County	Beltrami County
Focus of public engagement effort	Corridor area along Trunk Highway 101: Major reconstruction to realign and expand from two-lane undivided to four-lane divided highway with turn lanes and adjacent trails.	City wide: Coping to maintain an extensive street network with insufficient revenues from existing funding streams, and examining revenue alternatives.	County wide: Extensive county road system with insufficient and diminishing funds due to local economic stagnation from a downturn in tourism.	County wide: Coping to maintain a large local road network with insufficient revenues from existing funding streams, and examining revenue alternatives.
Methods used in public engagement	Direct contacts with residents along the path of the project, also two open houses and online details of the project.	Two community meetings (one in highly impacted neighborhood, one for all interested public), involving 120 persons. Format was a short presentation, extended Q&A about needs and financing options with the Public Works Director, and hour-long, facilitated small-group discussions about franchise fee options.	Three public meetings held in different locations around the county, and discussions in two county commissioners' public hearings.	Focus groups with particular interest groups, followed by analysis of the participants' input, followed by roundtable dialogue of all parties. Facilitators helped roundtable participants to focus on areas of disagreement or confusion to seek clarity, explore convergence.
Researchers' role	Evaluated, post-engagement, via survey and interviews.	Assisted with design and implementation and led evaluation of the public process.	Observed community meetings; analyzed documents and media.	Led design, implementation, and evaluation of public process.
Policy decisions reached	Selection of road alignment configuration from among three choices, detailed design including environmental impact assessment, property acquisitions, and construction.	Overwhelming majority of public meeting participants strongly supported the using franchise fees to fund maintenance and constructions of streets in lieu of raising property taxes and assessment fees. Subsequently the city council passed a franchise fee (administered through utility bills) bolstered by the feedback received through the engagement efforts.	County commissioners passed the half-cent sales tax, in an effort to keep property taxes down which has been the main revenue to pay for transportation needs in the county. Support for the measure was restrained, but there was little opposition during hearings for the measure.	Participants strongly opposed doing nothing and allowing roads to deteriorate, and came to strongly support a half-cent sales tax to fund transportation. Subsequently the county commissioners unanimously passed the half-cent sales tax, bolstered by champions developed through this process.

	City of Chanhassen	City of Brooklyn Park	Mille Lacs County	Beltrami County
Rural/urban	Twin Cities metro. Small town; project site is traditionally rural area shifting to new large-lot homes. Population 25,469. 1,123/square mile	Twin Cities metro. 2nd tier suburb in the Minneapolis-Saint Paul Metropolitan area, Population 79,707. 2,586 people/square mile.	Mostly rural, with several small towns, overlapping Mille Lacs Band reservation. Population 25,866. 45 people/square mile.	Mixed: rural with a regional center, Population 46,106. 18 people/square mile.
Major economic activities	Primarily a high-income, bedroom community; no large concentration of any particular sector.	Retail, industrial, transport (trucking hubs), and services	Tourism and hospitality (casino, lake, and fishing), education and health services, and retail.	Regional retail and service center, recreation and tourism, timber, agriculture.
Other relevant features	State road with heavy local impacts. Areas adjacent to construction are undergoing change from traditional rural to new, large-lot homes.	There is heavy commuting traffic as it is part of the Twin Cities metro area. Neighborhood next due for an assessment included many politically active, long-established homeowners.	Tribal and state lands in the region are exempt from property taxes. Many road users are visitors not subject to county wheelage tax.	Extensive state, tribal federal, and nonprofit-owned lands in the region are exempt from property taxes. County is a major shopping destination for a large region.

6.1 CITY OF CHANHASSEN

6.1.1 City of Chanhassen policy issues

This case study involves improvements of Highway 101 through the City of Chanhassen. Highway 101 is a Minnesota state highway, but the project also involved Carver County and City of Chanhassen roads. While this is not a "local" road because it is a state highway, it has heavy impacts on locals in terms of the potential impacts for safety, traffic, and land use and development. When the project is complete, this state highway will be turned back to Carver County to own and manage the road. However, the City of Chanhassen was the mutually agreed lead on community outreach and engagement for the preliminary design, environmental review, and property acquisition, both because the city is particularly interested in seeing the project done and because of its existing relationships, staff, and other capacities for communicating and coordinating with Chanhassen residents.

The primary impetus for this major road project was to improve safety. Analysis of crash data in 2007 had indicated that crash rates and their severity in this section of Highway 101 were more than twice as bad as the average for two-lane rural highways in Minnesota. A predominance of crashes involved vehicles running off the road, reflecting the challenging topography. Due to steep grades of up to 13%, curves, and large trees, there were several blind areas involving road intersections, driveways, and trail crossings along this section of Highway 101 (City of Chanhassen, 2015).

Another key feature of the project context is that these highway improvements are integral to major changes in the region, so that issues about community identity, property ownership, and development are prominent in this project and stakeholders' responses to it. This section of Highway 101 is in an area of the Twin Cities metropolitan region with rapid population growth and increasing traffic volumes. There have been longstanding concerns about speeding and traffic volume along the entire length of Highway 101 through the Chanhassen, particularly following several fatalities involving drivers, passengers, or pedestrians (Norfleet, 2012). The section of Highway 101 in Chanhassen that we are focusing on in this study have a rural feeling. While historically large farm properties are being transformed by new housing, lot sizes are still very large. However, even in this area traffic volumes had been increasing, and this was only expected to accelerate rapidly because of how this section of Highway 101 is embedded in a set of complex, multi-year set of projects (Figure 4).

These include a $34 million new bridge and approach where Highway 101 crosses the Minnesota River - with a traffic volume of 20,000 vehicles per day (Harlow, 2015) - a series of adjacent segments of Highway 101 through the City of Chanhassen, and the intersection of Highway 101 and Flying Cloud Drive (Carver County CSAH 61) (Figure 4). As part of all of this work, the segment of Highway 101 we are focusing on here was joined more smoothly with the section of Highway 101 over the bridge at its connection to Flying Cloud Drive, inevitably meaning more traffic along this previously winding, 2-lane, rural road.

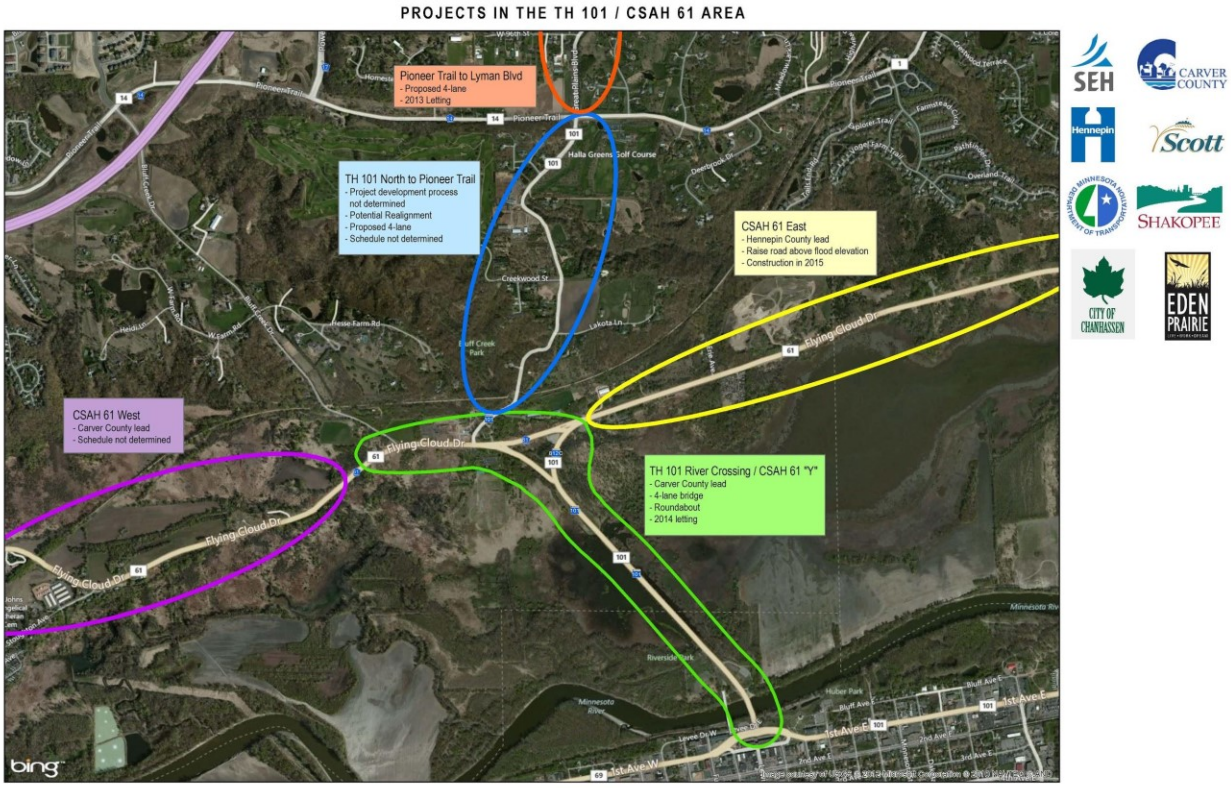


Figure 4. Highway 101 improvements, in the context of several major road projects

Note: the focal areas of this case study are the two segments circled in blue and red in the northern half of the map. (Image source: MNDOT, 2013).

The improvements transformed almost 4 miles of Highway 101 to transform it from a two-lane, undivided, winding road without turn lanes to a four-lane, divided highway with turn lanes at key intersections. The realignment also realigned sharp road curves to meet current safety standards and adding paved, multi-use trails on one or both sides of most of the stretch (Figure 5). Changing Highway 101 at this scale obviously implicated more than road geometry and traffic volume, and thus residents along this stretch of the road had a strong interest in how it would change the character of their area and property values.

Figure 5. Completed Highway 101 road and trail improvements.

Source: https://eurekaconst.com/projects-2/ visited July 15, 2017

The City of Chanhassen is an unusually affluent, well-educated, and white community. According to the latest census figures, the household median income is 180% of the statewide median, 86% of residents lived in owner-occupied housing (vs. 71.7% statewide), the poverty rate is a relatively low 3.4% (vs. 10.2% statewide), a full 60.5% of adults aged 25 or older have at least a bachelor's degree (vs. 33.7% statewide), and 91.3% of residents identify as white alone and not Hispanic or Latino (vs. 83.1% statewide). And, the character of the areas immediately adjacent to the Highway project are also changing or anticipating change, as new and expensive homes on large lots are being built in this traditionally rural area. Increasingly Chanhassen is a bedroom community of commuters; the top ten employers in the city include Rosemount, Inc. (a sensor manufacturer), a direct mail marketing service, the headquarters of Lifetime Fitness, a specialty printing company, the school district, a dinner theatre, an arboretum, and a grocery store.

6.1.2 City of Chanhassen stakeholder engagement approach

The research team was *not* directly involved in implementing the public communication and engagement effort in Chanhassen, and instead helped the City of Chanhassen to fill in piece of information they did not have: participants' reactions to and evaluation of the engagement approaches they use. As a neutral third party, we were uniquely able to gather that data. Before sharing residents' feedback in the following section, here we briefly describe the City's communication and outreach approach.

The City of Chanhassen used a variety of outreach methods to engage key stakeholders. They contacted individual property owners by letter, created a special newsletter about the project that they distributed widely, and maintained an active website with comprehensive current and archived information about the project. They also circulated announcements through articles in the local newspaper and the city Facebook page. In particular, the City held two open houses (February 25, 2015 and August 19, 2015) about one proposed segment of the Highway improvements. Turnout for these events was good; at least 40 of the 150 most immediately affected households attended at least one open house, where the city engineer described the project and three alternative design options and led a Q&A session with

participants regarding the purpose of the project and different design options. The purpose of these open houses was to provide information and try to identify and settle the preferred alignment among numerous options.

In the phases of the project that were recently concluded or underway at the time of our data collection, the major disagreements and decision choices centered on three topics:

- *Configuration:* Which of 3 different route options to choose for the re-alignment of the highway to straighten curves and widen it, particularly but not only relating to connecting sections of Highway 101 where it crossed Flying Cloud Drive (CSAH 61).
- *Property impacts:* Acquisition of the right of way through eminent domain takings, involving land from a half dozen single family home properties and one business.
- *Development and change in the character of the area:* Concerns about the scale of the project, especially the shift from 2 to 4 lanes and the associated increase in traffic, grief over the loss of many mature trees for the road widening, and general concerns and questions about the associated change in the look and feel of the area due to the development and increased traffic the road improvements would bring.

Previous phases of Highway 101 improvement had experienced more controversy and concern, in part because at that point it was hard to imagine what the road would look like and the impacts of construction, as the shift from a two-lane to a four-lane highway was first undertaken. Carver County engineering leaders actively used social media and frequently appeared in regional news media to provide updates about planning, detours, and progress on the major Highway 101 Minnesota River bridge crossing, so residents were well informed about this associated aspect of work.

6.1.3 Chanhassen engagement outcomes and evaluation

It is important to understand the larger context of the project because of the relatively small number of affected property owners and other key stakeholders for any single project segment of Highway 101. It is consistently difficult to get a high response to any social science survey. And, the City of Chanhassen used comparable outreach and engagement methods for different segments of the project. For all of these reasons, the research team decided to reach people to gather their reactions to outreach and engagement methods about reconstruction of any road section of Highway 101 in Chanhassen other than the approach to the Minnesota River crossing and the bridge itself.

Our focus was to gather participants' perspectives on their engagement methods. We reached out to 64 households identified by city staff as the most directly affected by TH 101 reconstruction in City of Chanhassen. Through multiple efforts to reach people - via direct mailings with hard copies of the survey and a prepaid return envelope or an option to complete it online, emails to ask people to complete the survey online, and phone calls - we were able to gather data from 18 unduplicated households. The questions asked in the surveys and interviews are shown in the first column of Table 6.

Clearly, this *not* a representative survey of the city as a whole or even of all of the most directly affected stakeholders. And, some potentially under-recognized stakeholders are residents and other users of

roads parallel to Highway 101 who might experience a benefit from the project because trucks that had been avoiding Highway 101 might redirect to it following the improvements. Nonetheless, we were able to collect sufficiently rich data to serve two useful purposes:

- to provide objective feedback to the City of Chanhassen on their constituents' experience of their typical engagement methods; and
- to illuminate consistent patterns in reactions to different aspects of the city's engagement methods (e.g., whether people needed to be happy with the project decision outcome in order to judge the community meeting positively).

Table 6 summarizes the key themes in the stakeholders' responses to our questions about different features of their experience of the engagement process: how they were informed and whether they felt the outreach and information provided were adequate, whether their participation was worthwhile, whether they felt engagement made any difference (whether they or anyone else changed their preferences or understanding about different aspects of the project, whether they influenced the outcomes), and their suggestions for what the City of Chanhassen could sustain and improve about their engagement and outreach methods.

Table 6. Key Stakeholders' Reactions to Chanhassen Engagement Methods

Question	**Thematic summary of responses and illustrative quotes (n=18)**
How long have you lived on or near Highway 101?	Most of the 15 households responding had lived on or near Highway 101 for a very long time. The median tenancy of respondents was 34 years (range was 1-over 50 years). Almost all are owners.
Were you aware of the project prior to the start of road construction in 2013?	Overwhelmingly, yes. Every owner was aware; only the renter was not. Communication appears to have been very effective.
How did you learn about this project? (Select all that apply)	Responses indicate the value of using multiple outreach methods: word of mouth was working, but most also received a project mailing and/or saw road signs about upcoming closures; selected individuals also heard through a variety of other media that speak to the value of diverse channels (city Facebook page, local newspaper, neighborhood meeting, county commissioner hearing)
Did you participate in any of the information sessions (such as neighborhood meetings, open houses, etc.)? If "Yes," how did you participate?	Highly engaged respondents; 15 of the 13 went to at least one community meeting (an open house about the project or a city council meeting). (This is atypical and implies that the project was very high stakes for people, and that this is a population that typically has the means - time, comfort, and confidence - to attend community and government meetings and assert their views.)

Question	Thematic summary of responses and illustrative quotes (n=18)
What were your expectations of the meetings when you were invited to participate?	Information: Informational (2); "To gain knowledge of the proposed construction and how it would affect our property"; "to be able to learn specifics about the project"; "complete understanding"; "I thought the open houses would include a presentation"; "Being told of proposed project and schedule" Transparency: "questions answered truthfully" "I thought the open houses would include an opportunity to ask questions" Desire / expectation of consultation & ability to provide input / influence: "I thought questions would get a response in writing, they did not" "That it was <u>not</u> a done deal" "that government would listen and be fair and open to input from owners" "I felt they were looking for my opinion and ideas";" To be able to learn specifics about the project and voice concerns" None (1)
How would you describe the purpose of the meetings?	Consultative: "To show alternative design solutions and get community feedback"; "opportunity to voice concerns" "communication" "to show the property owners the plans as they developed, and to offer us the opportunity to ask questions and provide feedback"; Informational: "to inform people of the project," "be able to learn specifics about the project," "Being told of proposed project and schedule"; "to show the property owners the plans as they developed, and to offer us the opportunity to ask questions and provide feedback"; "to designate information" Disingenuous: "P.R." "to inform people of the project and to act like they had some input"; "a pretense of public input"; "to follow the rules set up by the state"
Are you satisfied with the recommendations and outcomes of the Highway 101 improvement project meetings? Do you feel that it was worth participating?	Strong affirmation; 8 of 13 who attended the meetings simply answered yes. Several elaborated that they liked getting good information ("I learned a lot about the project"; "it is better to know what is going on" "they kept me informed"), one pointed to a concern they had that was addressed ("yes - did not like the [proposed elevation] of the intersection at Pioneer and 101. That was not changed!"), another noticed that "people were cordial." Four disagreed, mostly because they felt their input was not taken seriously and they were unhappy with the project outcome. "I don't feel our opinions made much difference. The decisions seem to have already been made, and my major question was not answered (why is a 4 lane road necessary?)" "No, in the end the city did as it pleased, for the most part" "No! They did what they (city) wanted not the residents or property owners. Most residents are going to move. Because increased noise and traffic counts."

Did your participation change your mind about aspects of the project you had been uncertain about?	For 7 people, yes, mostly for unspecified reasons. One observed “I learned about the safety concerns that the road design would address” Four (4) people responded “Not really” to “No!!”
Do you feel others changed their mind about things related to the project? (these could be other residents, city or county officials)	Yes (4, not elaborated) No (3, not elaborated), Not much (3): “Not really… now that I am reflecting on the project, I didn't notice any residents changing opinions substantially” “Not that I could tell - many residents expressed concerns regarding the width of the new road and the many old trees (spruce & oaks) that would be removed (it was heartbreaking to witness). And there was nothing we could do about it.” “My neighbors did not” Not sure / don't know / have no feelings on this, (3)
With regards to the process, what was particularly good, bad, confusing, satisfying – or whatever word you want to use to describe it?	No reaction (3 people who participated) Satisfying: “Process was good”; “satisfying” "Good - visuals showing proposed realignment and helpful to have engineers/designers available to answer questions.” Not sufficiently responsive: “It seems that they were asking for your opinions but really they had no idea of changing anything”; “I now understand the saying ‘You can't fight City Hall.’ The City officially let me to believe that my input was important; impactful. Not the case. I would rather that they told me from the start that the project would continue regardless of public input!” “the idea for the meetings was good, but a lack of formal response by the city to questions raised in regards to their reasoning for the improvement was disappointing” “City, county and state should try to take into consideration land owners needs and thoughts. Like working sewer systems and putting in pipes at front of project.” Confusing: “confusing: lack of idea of when construction will start" “I remain confused about why a 4-lane divided highway was necessary” Other negative feedback: “long and time consuming”; “frustrating [reason not explained]”; Construction-phase feedback on need for more signage to avoid traffic on dead-end streets.

Thinking back on your experiences with this project, what are good ways for the City to involve people so they are better informed? Is there anything from this process that was especially good, that they should keep, or anything the City should do differently?	Keep up / improve timely notices: "Send out something in the mail detailing the project and closure dates." "Give more advanced notice of road closures, especially for businesses that are affected. Need at least 9-12 mo. notice of major closures so that we purchase & market differently" "updated mailing to residents on progress, i.e., on schedule, this has been done, still need to…, on target for x date on completion" "The city kept us informed about the project before it started but not after construction started" "People become involved when their property is affected. Talk with them early and often." "Meetings and updates as project progressed." Keep: "they listened and acted on citizens' concerns" "Good - the city would answer questions, and made the designers accountable to meet with us." The city kept us informed about the project before it started but after construction started I don't remember if there were further meetings. & on a couple of occasions, I talked with the construction workers or supervisor directly, and that was helpful, and they were helpful" Improve responsiveness and accountability "Change - keep your promises! Do what you agree to do! Thank goodness we had a legal agreement, so that we could hold the city to what they agreed to do!" "the meetings were good information, but the city did not seem to have any interest in changing anything substantial based on comments. The planning was complete" "Perhaps, informing residents of the intent before securing funds." "Listen to the people and try to keep them informed and be honest with their responses. Cost was the number one concern - not the land owners' desires. (Road location, business interruption, access sewer pipes etc. - to allow for future developments)" Neutral/no response (4 people): "The whole process was ok. It's impossible to make everyone happy."
What suggestions do you have on how the City of Chanhassen or Carver County should do public outreach and engagement in the future on projects like this?	Desire for more information: "Mail us!" "Before construction, make community aware of what businesses are still open and how to reach them. If closures are too cumbersome for customers, then consider compensating businesses." "More project specific mailings on meetings w/ multiple participation dates" "Continue to provide information after construction starts (especially with such a long project like this one)." The city could have helped us understand why this project needed to be as expansive in size as it was. Then we could have been more accepting of it." Be more responsive: "Meet with each involved owner and discuss the project before the public meetings and their designs are cemented they should be flexible." Satisfied: "None - information was adequate" "I'm satisfied with the current approach." "I can't think of anything to add to what is already done." "Same" No feedback: N/A; no response (4 people)

Analysis of their reactions, and especially the interactions between different parts of their reactions (such as whether they were happy with the project, and how that related to whether they were happy with the process) illuminate a few patterns that merit special attention:

Outreach was effective, especially because multiple modes of communication were used. Overall, the city's outreach and communication strategies seem to have been very effective. While it should be acknowledged that the people who did respond to the invitation to participate in our study are likely generally attentive to outreach and communication, it is still encouraging that all except one study participant who lived in the area at the time felt adequately informed about the project. While the road construction project would naturally hold these stakeholders' attention because of the high stakes for them, these data affirm that getting their attention in the first place still requires a multi-pronged effort. The respondents named various methods that had worked to communicate with them (from word of mouth to project mailings to the local newspaper) and there was no single method that worked for everyone, affirming that it is not effective to rely on any one or two channels alone.

Those with hopes to influence the project were frustrated by feeling key decisions were already made. People whose hopes and expectations for the community meetings were simply that they would get good information and have a chance to ask questions and get answers were pleased with the outreach. They praised City staff for providing good information, having staff available at meetings to answer questions clearly, and for the project turning out quite similarly to what they had been led to expect. They were the most likely to say some version of "I'm satisfied," when invited to comment about what the city could improve. In other words, people who expected the purpose of the City's engagement effort to be on the "informing" end of the Spectrum of Public Participation (© International Association for Public Participation, IAP2) found their expectations met, and thus were happy.

On the other hand, those who had wanted something further along the IAP2 Spectrum - such as consultation (providing feedback about project alternatives and influencing the final choice) or involvement (considering stakeholders' input to define the problem, options, and solution) - were frustrated. Their frustration often took the form of a critique of the *timing* of the engagement because they felt it came too late for them to stop or significantly reshape the project. Examples of these sentiments are:

> *I went to 2-3 meetings, expecting that it was <u>not</u> [their emphasis] a done deal, but what I experienced was a pretense of public input. I am not satisfied with the project or with the meetings about it. In future, perhaps inform residents of the intent before securing funds for the project.*
>
> *I think, for the most part, my opinion was ignored because during the process they had a pretty detailed study [already]. Now that I am reflecting on the project, I didn't notice any residents changing opinions substantially, and now I understand the saying "You can't fight City Hall." The City officially led me to believe that my input was important and impactful. Not the case. I would rather that they told me from the start that the project would continue regardless of public input!*
>
> *I went to the meetings with an expectation that government would listen and be fair and open to input from owners; afterwards my impression was that their main purpose was to follow the*

rules set up by the state. I am not happy with the project or the process. They did what they (city) wanted not the residents or property owners.

People who liked or could influence the project outcomes expressed higher satisfaction with the engagement process. Although this comes as no surprise, it is still worth noting that people who were happiest with the process were also the people who wanted it in the first place or who could specifically see their impact on the design. These residents, when interviewed, were explicit about that connection:

The way I saw it, how the city of engages with the public on projects was fine. Of course, let's put it this way: because I was pleased to see it [the road improvements] coming, I didn't really want to rattle any cages. You know, I was just pleased to see it be done. [Before] we were totally blinded because of trees… and restricted visibility over the hill.

Some, even while they were not enthusiastic about the project, said they felt better about it because at least some of their concerns had been respected and accommodated:

Obviously, they had done their homework for the project before they spring this on people, and they make provisions for people to come and speak about it. But obviously I don't think you're going to get enough people to do anything about it at that point. I think they're already too far into the planning stage to shut things down. That was kind of the opinion on our street here…. We participated and tried to make suggestions for the project. The biggest concern for us on our street, that joins 101, was the traffic volume. I do think that we were able to make some changes because of that, and some environmental changes.… Yes, the city did give us enough opportunity to participate. I was able to influence the project, probably, just a little. You know, more voices are better. Every little voice is a piece of the pie.

Asked whether they were satisfied with the recommendations and outcomes of the Highway 101 improvement project meetings, and whether it was worth participating in them, one respondent directly connected their satisfaction with seeing impact:

Yes - I did not like the (elevation) of the intersection at Pioneer and 101 [which was proposed in one of the design alternatives that was not adopted]. That was not changed! I felt strongly about it and the meetings did not change my mind about that. I feel that I did influence the decision-makers to respond to my concerns about that.

There was high demand for information and answers, suggesting that comprehensive explanations support buy-in even from people who don't like the project. A small but passionate group of respondents felt they had not had their questions answered. For some people making this complaint, their question may actually have been answered, but not with the outcome they preferred. That seems to be the case for this resident:

The lack of formal response by the city to questions raised in regards to their reasoning for the improvement was disappointing. In the end the city did as it pleased, for the most part. The idea

for the meetings and was good, but the city did not seem to have any interest in changing anything substantial based on comments. The planning was complete.

However, unhappiness with project decisions is not a complete explanation for the thirst for much more information. Several people insisted that even though they did not like the project, they could have accepted it more easily if they had a better explanation of the justification for it. One respondent put it this way:

My major question - why is a 4-lane, divided road necessary? - was not answered. Many residents expressed concerns regarding the width of the new road and the many old trees (spruce & oaks) that would be removed (it was heartbreaking to witness), and there was nothing we could do about it…. I'm not convinced public engagement makes a difference, but the city could have helped us understand why this project needed to be as expansive in size as it was. Then we could have been more accepting of it.

Another suggested that getting their questions addressed was simply important to their trust and relationship with public officials, as this person put it:

The city did a reasonably good job about trying to keep people involved. But, I expected the city engineer to respond to my questions, but I was not contacted…. That just…it kind of troubled me because when I know in the past, when [my workplace] was doing things that had an impact [on people], we were expected to answer the questions. That, particularly, troubled me, and I know I've said it before, but that's the only real problem I had.

And, even those people who somewhat resented the engagement efforts because they felt they were inauthentic also did very strongly value the opportunity to get good quality information, like this individual:

I thought I was being invited because they were looking for my opinions. In retrospect, I would describe the purpose of the meeting to be to inform people of the project and to act like they had some input. It seems that they were asking for your opinions, but really they had no idea of changing anything. Still, it's better to know what is going on.... The whole process was okay. It's impossible to make everyone happy…. I'm satisfied with the City's current approach.

Request for more communication during construction. Many respondents requested more detailed information and more frequent communication about the schedule and disruptions during the construction phase. For several people this was their only recommendation for improving the process, as stated by this resident, "*I feel the city kept me informed, at least until the project started,*" and another who said:

I would have liked more mailings… about project progress and schedule, like about what is complete, what they still need to do, and the target date on the completion

Most provided this feedback because they would have liked to be better able to anticipate how it would affect their own travel to and from their home to work and services. However, two called out other

areas for improving communication about construction: doing more advanced and sustained outreach that businesses would be open during construction (to minimize negative impacts on them); and providing better signage in the construction zone to head off people from getting stuck in dead-end streets.

6.2 CITY OF BROOKLYN PARK

6.2.1 Brooklyn Park policy issues

This consultation looked at engagement efforts around financing options for city roads in the City of Brooklyn Park, a 2nd tier suburb of the Twin Cities area with a socioeconomically diverse population of approximately 80,000. In addition to the state and county roads within Brooklyn Park, the city owns and maintains 208 miles of residential streets and 54 miles of arterial (MSA) streets. The Public Works Department's strategy for street maintenance is sealcoats every 7-8 years, overlays every 25 years, and complete reconstruction every 40-50 years for all miles of roadway. However, the city is struggling to keep up with that desired schedule due to budget challenges, and a higher than desired percentage of road miles are in poor repair (Figure 6). Notably, out of the city's 2015 miles, 165 were 15-25 years old and wearing out faster than expected, so that the Public Works Department estimated they would need to spend $28 million – well beyond their regular road work budget – on overlays in the coming 14 years.

Figure 6. Deteriorating Street Surface in Brooklyn Park

Source: Guillermo Narváez

The public tended to agree with the professional staff's assessment of the quality of roads in the city. In a telephone survey of 400 randomly selected Brooklyn Park residents conducted in summer 2015 by the Morris Leatherman Company, respondents rated city street repair and maintenance as follows: 11% judged it excellent, 61% judged it good, 24% judged it fair, and 5% judged it poor. Asked what one city

service area they would be willing to cut, if the city should experience a serious budget shortfall, 5% of respondents identified public works as an area where they would accept reduced service; unfortunately, the survey did not go into greater depth (for example, to distinguish sewer from road, or snow clearing from road repair).[1]

As stated previously, only about 20% of city streets in the state – only the higher volume, collector and arterial streets - are eligible for state funding assistance. Cities have four options for local revenue sources, namely general funds, special assessments, bonds, and franchise fees. The City of Brooklyn Park's staff had become interested in franchise fees. Cities are authorized to levy franchise fees on utility services like gas and electricity; a city council may create these for a dedicated purpose (such as road maintenance and/or reconstruction) and set the rates, and the utility providers then collect the fee and channel it to the city. The Brooklyn Park staff's stated reasons were that franchise fees: offer stability and predictability of funds (facilitating good planning and sustained stewardship of the road system); are protected and dedicated for roads (in contrast with general funds); and – if they were scoped and sufficiently large to cover road overlay and reconstruction as well as routine maintenance – avoid waste and reduce long-term costs for asset maintenance (because deferred maintenance ends up being more expensive). Staff also felt a franchise fee would be preferable to their existing system of special assessments – a levy imposed on a property that corresponded with the city road length adjacent to the land parcel – which they felt created a large, one-time burden on those in reconstruction areas.

6.2.2 Brooklyn Park stakeholder engagement approach

Staff had discussed the franchise fee option with the City Council, who directed them to hold community meetings to gather input. Therefore, public meetings were held in 2015 with Brooklyn Park residents and elected officials regarding options for financing the upkeep and repair of the city's road systems. Input was gathered from approximately 120 community members during two community meetings. The purposes of the community meetings, as defined by key city staff (the public works director, the city's leader on community engagement, and selected engineering and road management staff), were to:

- inform the interested public about the problem of financing road repairs and about upcoming roadway construction and repair needs;
- present financing options (including current system of assessments, raising the general levy, bonding, and franchise fees);
- explain staff's interest in franchise fees, by being transparent about their views that: taxpayers would prefer paying ongoing, predictable, small payments (franchise fees) to one-time, less predictable, and very large special assessments; that franchise fees would reduce long-term

[1] Detailed results are available at www.brooklynpark.org/file.aspx?DocumentId=4738

costs (by enabling timely, efficient road asset maintenance); and that road maintenance is a system-wide issue meriting a system-wide solution, in that all roads need to be fixed and residents use the whole road system, not just "their" road.

- gather more feedback on the franchise fee option (how much people accept this approach, how much they would be willing to pay, and for what).

The first community meeting was held in the Bass Creek neighborhood (Figure 7) located in the southwestern area of Brooklyn Park, because their neighborhood was the area of the city most needing and next slated for major local road reconstruction. Thus, residents in that area were expected to be particularly committed to implementing road improvements and especially concerned about cost, since the financing system in place at that time involved paying for most local road improvements through assessments on the property owners of the affected area. This meeting was held in a community school on July 16, 2015 and attended by 101 residents. The second public meeting, held four weeks later, was more broadly advertised and meant for the community in general. It was held on August 18 in City Hall (Figure 7) and attended by 38 residents and 5 of the 7 City Council members. Across the two meetings, a very high percentage of the participants were from the southwestern area of Brooklyn Park (which includes the Bass Creek neighborhood), and some people attended both meetings, so that the unduplicated number of participants is approximately 120. This is not a representative sample of the city's residents.

Figure 7. Small Group Dialogues at Brooklyn Park Community Meetings

Source: Guillermo Narváez

Each of the meetings began with all residents being personally greeted and asked to sign in, offered refreshments, and invited to sit at a table large enough for 6-8 persons plus a facilitator (a member of city staff, the research team, or a volunteer graduate student from the Humphrey School of Public Affairs). Participants were also given an anonymous pre-meeting survey; exactly the same survey was distributed and collected following the meeting as well. The survey asked respondents to:

- describe what brought them to the meeting
- state how well informed they considered themselves about road issues in the city
- name their three top priorities for maintaining or improving the road system; and
- indicate their level of support or opposition to several road system maintenance options (including letting streets deteriorate and a number of options for increasing revenues)

During the course of the meeting, Dan Ruiz (Public Works Director) started with a 10-minute presentation explaining roadway needs, the plan the coming several years of road work in the city, and the financing options. The second half of his presentation focused on franchise fees: what they are and how they work, the reasons that city staff were exploring this option, and the effects of different funding levels. After the initial presentation, there was an extended question and answer period. This was followed by a small group discussions where participants were asked a number of questions regarding the conditions of roads, funding options (mainly franchise fees) and the level of fees and how it would relate to the level of service. In small groups, they discussed three options: a franchise fee that would cover overlays only (about $7/month), one that would cover overlays plus reconstruction (about $14/month), or a higher fee that would include overlays, reconstruction, and perhaps additional amenities (about $15/month).

Table Table 7 lists the questions asked during the meetings; we include this for reference for other jurisdictions to replicate this approach since it proved successful in meeting the Brooklyn Park organizers' stated goals for stakeholder engagement.

Community members' input was thoroughly compiled and analyzed to find prominent themes, consistently expressed preferences and attitudes, and areas of divergence and disagreement among participants. In addition, the community dialogues were analyzed to highlight areas where the public needed more information; these areas were identified both by residents' explicitly asking questions or requesting additional information and by the research team or city staff's observation of areas where there seemed to be confusion about the policy issues and options. A full compilation of the input was provided to the City Council.

The City Council subsequently discussed the franchise fee option on September 28, 2015. After receiving a summary of community input from the meetings, they signaled that they were ready begin the public hearing process for formal adoption of a franchise fee. On November 23, 2015, the Council by a vote of 6 to 1 adopted a franchise fee of $14/month per residence (and up to $320/month per commercial property). The franchise fee went into effect 30 days later.

Table 7. Process Design and Format for Community Dialogue on Franchise Fees

Entrance: Check in, name tags, disperse people to small group tables, refreshments
Greeting and welcome by Public Works Director / City Engineer Dan Ruiz
Q1: What are your top priorities for keeping and improving road quality in the City of Brooklyn Park? (10 minutes, small group with table facilitators)
Presentation and Q&A: 10-minute presentation from Dan Ruiz on road conditions, financing, and the franchise fee option plus 10-20 minutes of Q&A with him.
Q2: What benefits do you see from the franchise fee? (5 minutes)
Q3: What disadvantages do you see to the franchise fee? (5 minutes)
Q4: What questions do you have about the franchise fee? What do you still need to have clarified so that you understand what it is and can decide how you feel about it? (5 minutes)
Q5: What amount of franchise fee would you prefer? A franchise fee that would cover overlays only (about $7/month), a franchise fee that would cover overlays plus reconstruction (about $14/month), or a franchise fee that would cover overlays, reconstruction, and additional amenities (about $15/month). If you prefer the franchise fee that would include amenities, what amenities would you want to include (sidewalks, bike trails, etc.)? (5 minutes)
Q6: We want to be sure that we receive and understand the most critical point you want to convey to city staff and council about financing and maintaining our road system. What is your most important piece of input that you want to be especially sure that city staff and council members gather from your participation this evening? Please take a few minutes to write that down on one of the index cards on your table, for us to collect. [Where time allowed and they were willing, residents were asked to share this with others at their table.]
Close: Thank you, description of next steps, and close from Dan Ruiz.

6.2.3 Brooklyn Park engagement outcomes and evaluation

This report includes the highlights of the engagement outcomes and evaluation of the meeting design. The complete summary and detailed analysis of community members' input during the community meetings and their survey responses may be found in the City Council agenda packet for August 24, 2015.[2]

The meeting participants were asked to brainstorm the advantages and disadvantages they saw to adopting a franchise fee and to express questions they have about how it would work. Generally, meeting participants felt the advantages outweighed the disadvantages and repeatedly brought up ideas about fairness to explain why they find the franchise fee option compelling. Indeed, almost all

[2] Item 8.1B, pages 6-26, located here: http://www.brooklynpark.org/assets/1/29/ccep082415sprm.pdf

meeting participants came to support the franchise fee, once they had an opportunity to learn more about the road repair context and the financing options. *Among the people who attended the meetings, support was strongest for a franchise fee that would be high enough to include road overlays and reconstruction.* Only 3 people expressed a preference for the lowest franchise fee option, which would cover overlays only, meaning that major road reconstruction would still be financed in part through special assessments. Most participants were strongly opposed to this option, feeling it would be a "double hit," "double jeopardy," or "worst case scenario" to have to pay a franchise fee of $7 for overlays *and* pay special assessments when it was their turn for reconstruction. Notably, participants diverged in their openness to paying an additional $1 month for *other* roadway amenities. Some were enthusiastic about improving pedestrian safety, sidewalks, or biking trails, while others asserted that they did not have and do not want sidewalks in their neighborhood, so they shouldn't have to pay to improve them anywhere in the city. This seems to contradict the argument that it is fair for everyone to pay for reconstruction, even if they don't need it. The following figures present data regarding some aspects of this **methodology for public engagement**. Here, we highlight two key findings from the data:

1. They show a strong **increase in people's self-assessment about how informed they feel** about the relevant issues and options. This indicates successful alignment of the stakeholder engagement design with the organizers' first two goals, namely to inform the interested public about roadway repair needs and financing issues and to present and explain some financing options for their consideration.
2. Participants demonstrated a **strong shift in opinion over the course of the meetings**. Most participants initially did not have enough information to formulate an opinion regarding franchise fees, but after the meeting most participants were very supportive of franchise fees. This indicates successful alignment of the stakeholder engagement design with the organizers' final two goals. As a group, the meeting participants evidently found clear and compelling staff's explanations about the advantages of introducing franchise fees. Through the meeting design, the facilitators were able to gather and document detailed feedback on participants' openness to the franchise fee, for what purposes they would (and would not) want it to be used, and how much they would be willing to pay.

Figure 8 shows residents' self-perception of their awareness of issues faced by the city of Brooklyn Park to maintain its streets. As expected, prior to the meeting most responses range from *completely uninformed* to *moderately informed,* which shifts after to *moderately or well informed.* This suggests the meeting design served its intended purpose of informing attendees of the options the city is considering to finance ongoing work of restoring and rebuilding streets.

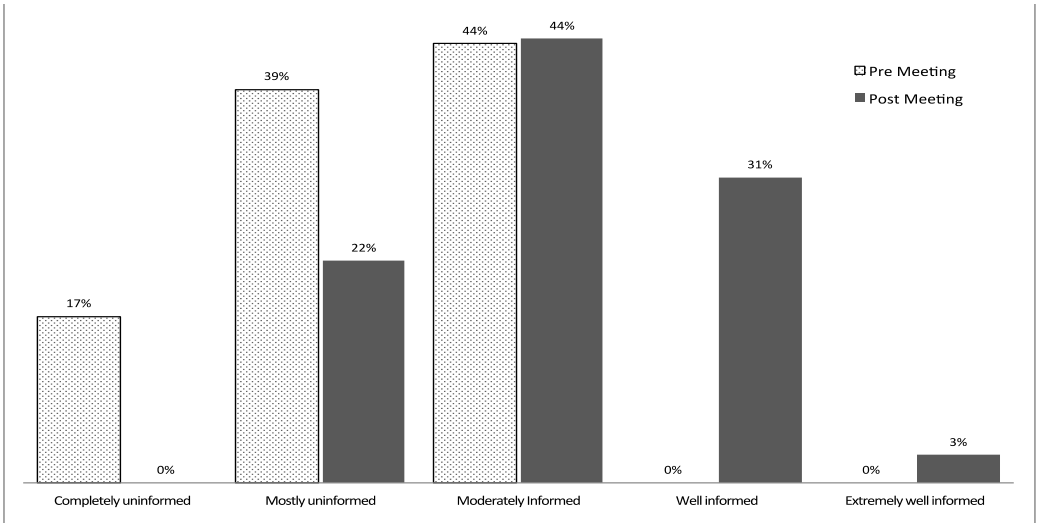


Figure 8. Self-assessment of knowledge about city street maintenance issues

Figure 9 gages residents' attitude regarding the needs to maintain and repair streets. It is important to note that there is a significant shift between responses, in particular the decline of the *neutral* position from 27% pre-meeting to 12% post meeting, and a *strong opposition* to letting the streets deteriorate from 17% pre-meeting, to 26% post-meeting. This along with the decline of *Don't know* from 20% pre-meeting to 2% post meeting indicates that there is general support to improving the conditions of streets in the Bass Creek neighborhood.

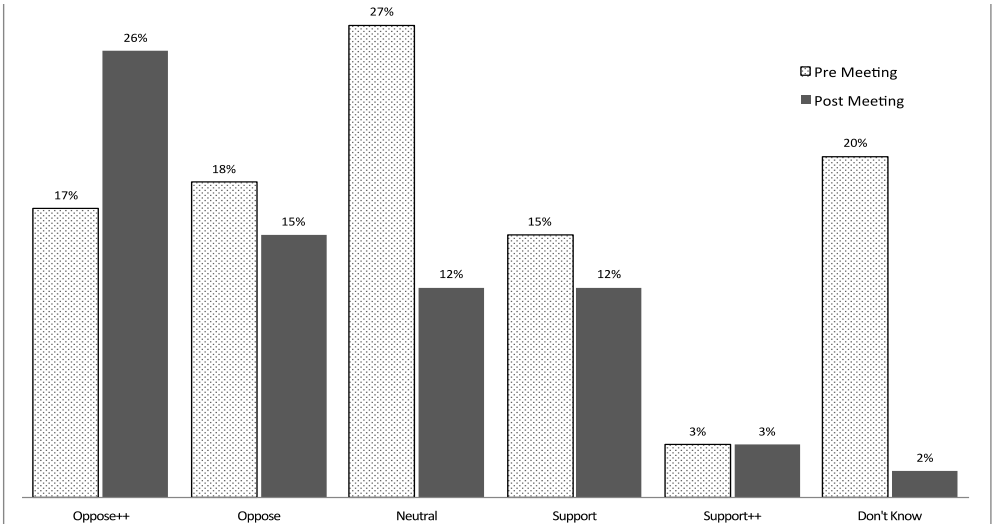


Figure 9. Support/opposition to allowing streets to deteriorate

Figure 10 gages residents' willingness to increase property taxes to maintain and improve streets. After residents heard more about the franchise fee options, their willingness to pay for street maintenance and reconstruction through property taxes shifted to greater opposition, although there were still some residents who might support this method of increasing funding for roads.

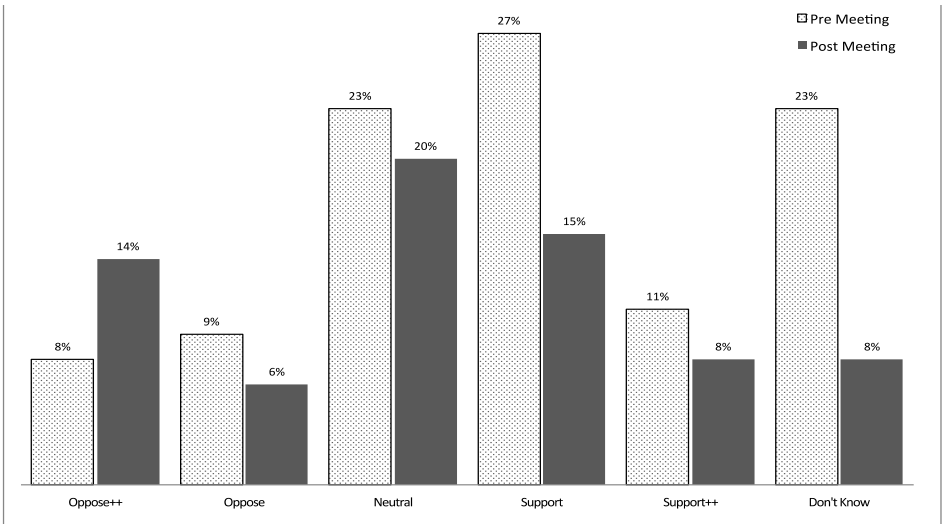


Figure 10. Support/opposition to increasing property taxes to maintain or improve streets

Figure 11 gages residents' attitude to the adoption of a franchise fee of about $7 per month to fund the rehabilitation of streets (overlays). This option would still leave the street assessments in place for the reconstruction of streets. The responses show that there was a significant shift in support for a franchise fee after the meeting.

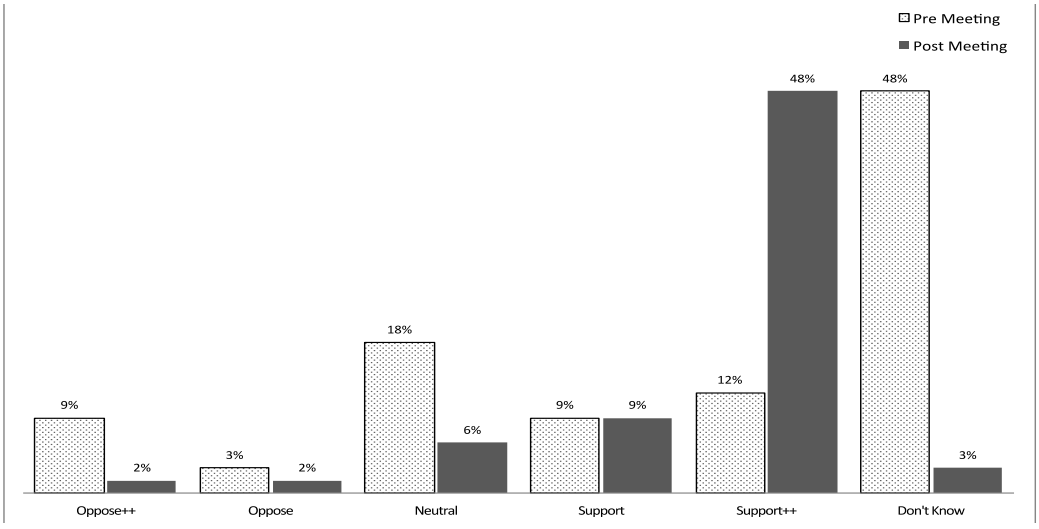


Figure 11. Support/Opposition to Low Franchise Fee Option

This level of funding would support street rehabilitations (overlays) but not necessarily avoid assessments for major reconstruction.

Figure 12 gages residents' attitude to the adoption of a franchise fee of about $14 per month to fund the rehabilitation *and* reconstruction. This option would be in lieu of assessments for the reconstruction of streets. Much of the discussions after this option was presented was in support and the shifts in

attitudes are evident in the survey responses, in particular with a significant shift in the *strong support* for the franchise fees, and a significant decline in *"Don't know"* responses.

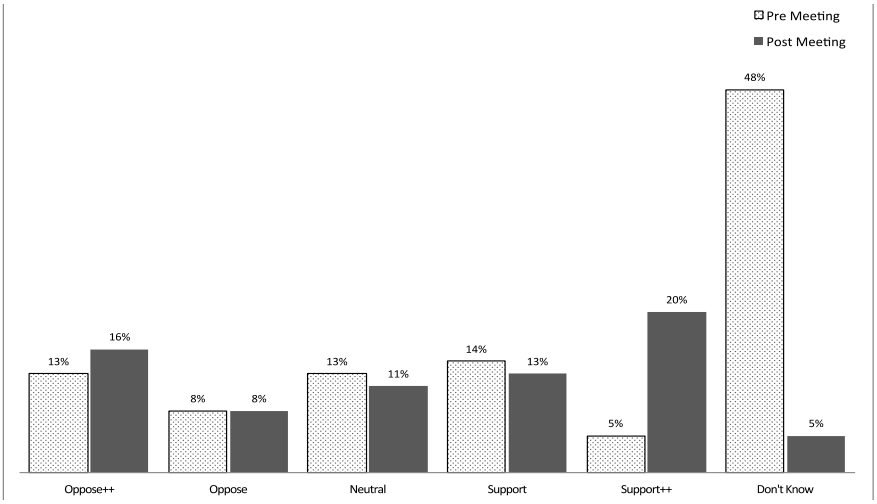


Figure 12. Support/Opposition to Medium Franchise Fee Option

This level of funding would fund street rehabilitations (overlays) and major reconstruction (without assessments), but not including sidewalk/trail improvements.

Figure 13 gauges residents' attitude to the adoption of a franchise fee of about $15 per month to fund the rehabilitation *and* reconstruction, as well as sidewalks and trails. Much of the discussions after this option was presented was in support, which was reflected in a significant increase in the *strong support* for the franchise fees, and a decline in *Don't know* responses.

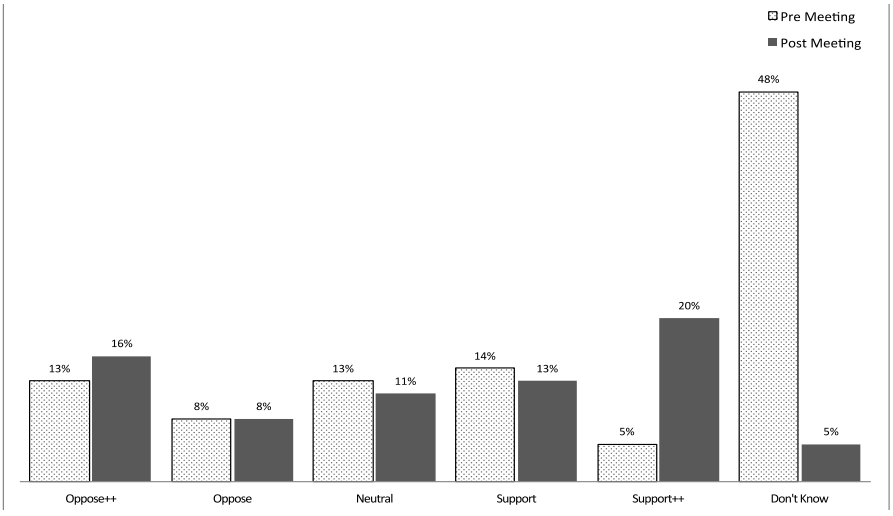


Figure 13. Support/Opposition to High Franchise Fee Option

This level of funding would cover street rehabilitations, major reconstruction (without assessments), *and* sidewalk/trail improvements.

6.3 MILLE LACS COUNTY

6.3.1 Mille Lacs County policy issues

Mille Lacs County has been in a situation over the past few years where an over-reliance on a limited number of economic activities have challenged their ability to properly fund their essential services and infrastructure. Most of the county's economy is in the tourism sector and is highly dependent on walleye fishing (a source of contention between local businesses, state agencies, tribal governments, and others). Ultimately, all are dealing with the situation that there is a significant decline in the walleye population, but little agreement in how to manage the fish to have a sustainable stock to satisfy the needs and concerns of all actors. State and local policy-makers are aware of these challenges and are undertaking efforts to make their local economy more diverse and resilient, but such efforts take time (UMN Extension, 2014). The reasons of this decline continue to be a highly contentious topic for many, and beyond the scope of this project to examine (Sarley, 2015; Scheck, 2015). The downturn had an impact on the tax revenue collected by the county, thereby impacting its budget (Oman, 2016).

On December 2015, when the county convened an annual Truth in Taxation meeting (a required process to enhance public participation in Minnesota's property tax system), local residents were updated on the fiscal situation of the county. Many expressed a great deal of dissatisfaction with the property tax increase as the local economy was facing a significant decline in local tourism activity, on which many residents and their businesses depend on (Griffin, 2015). One take-away from this meeting was an agreement by county officials to examine new and innovative ways to raise revenue as a way to contain property taxes to fund transportation projects. Interestingly, the idea to consider LOST came from a resident, and once the idea was proposed the great majority of attendees were interested in pursuing it:

> *Well in fact, I didn't bring it [LOST] up, someone from the audience brought it up and said, "You know what? What about a local option sales tax? I've heard other counties are doing that. Wouldn't that lower the taxes?' And I went through the steps and I said, 'Here's how it would affect you.' And the whole group of 50 or 60 people were, like, 'Why don't you do that?*

County Administrator Pat Oman, interviewed prior to the third and last public hearing, June 13, 2016

During the next County Board Meeting (January 5, 2016), a motion was made to consider LOST to fund transportation projects, and the county commissioners agreed to hold public hearings on the possibility.

An important backdrop for the local road financing issue in Mille Lacs County is the long history of ups and downs in the relationships among the Mille Lacs Band of Chippewa, state, and county governments over tribal members' boundary recognition, hunting and fishing rights, law enforcement and many other issues (Buchholtz, 2013; U.S. Department of Interior, 2015). Part of that story is that properties owned by the Band and its members are not subject to property taxes. While it is beyond the scope of this study to examine the many issues and dynamics among these actors, it is nonetheless vital to mention this context as it was manifest in the dialogues in this county about local road financing. In particular,

the public discussions about maintaining roads, property taxes, and revenue sources in the county were occurring at *exactly* the same time as some particularly acute stages of the headline-attracting conflict over the suspension of a law enforcement agreement between the Mille Lacs County sheriff's department and the Band's police department (for background and one opinion, see: Star Tribune Editorial Board, 2016).

6.3.2 Mille Lacs public engagement approach

A total of three meetings were held between February and June 2016, first at County Government Building in Milaca (February 16), followed by two in other areas of the county (City of Isles on March 22 and Princeton on June 28). The two first meetings were well attended. When the participants introduced themselves, many identified themselves as business owners, current and former city and township officials

At each of the meetings, County Administrator Pat Oman showed the projects identified in the County's 5-year plan for road improvements (Figure 14), stated that Mille Lacs County has been collecting a wheelage tax to support transportation, and explained that this tax was generating about $250,000 per year, a modest level of revenue insufficient to fund the proposed projects. He provided information on LOST and how it would work for Mille Lacs County. According to the analysis he presented, LOST would bring in about $2,100,000 a year in dedicated revenue for transportation, of which approximately 58% would be paid by residents and 42% by non-residents visiting the county. He explained the intent of LOST would be to raise $20,800,000 over the next ten years to fund the projects listed in Table 8.

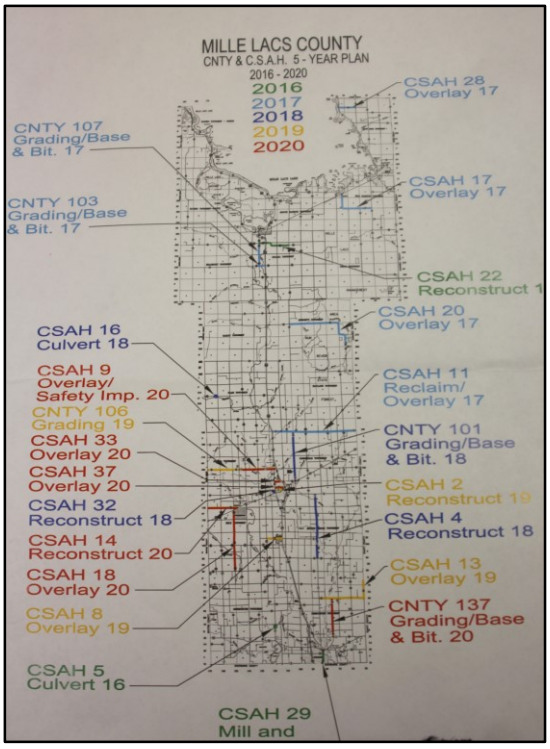


Figure 14. Map of Proposed Road Improvement Projects

Source: Mille Lacs County staff presentation, reproduced in Griffin (2016).

Table 8. Mille Lacs County Proposed Roads for Local Option Sales Tax (LOST)

Road	*Length*	*Cost*	*Notes*
CR 103-107	2.5	$1,800,000	high traffic
CR 101	4.0	$3,000,000	high traffic
CR 106	2.5	$2,000,000	high traffic
CR 112	2.5	$2,200,000	school traffic
CR 151	2.0	$2,000,000	serves gravel pits
CR 140	4.0	$4,000,000	local connector
CR 137	3.0	$3,000,000	pavement
CR 138	1.5	$1,500,000	connector
CR 131	2.0	$2,000,000	future industrial park
Total	**24.0**	**$20,800,000**	

The County Commission adopted LOST on August 2, 2016 (Resolution No.: 8-2-16-1), with implementation starting on January 1, 2017. The adopted resolution states that the sales tax is required to terminate when the revenues raised are sufficient to finance the projects identified during the public hearings or December 31, 2026 (whichever occurs first) and that any additional or future project be adopted through the adoption of a new resolution and undergoing the same process of public engagement. Most of the tax measures available for local jurisdictions, LOST included, have sunset clauses and are open for review.[3]

[3] Full text of the resolution is available at: http://www.co.mille-lacs.mn.us/vertical/sites/%7BC9C389E6-53AB-4A89-94CA-D3EE1F5EB922%7D/uploads/LOST_Resolution_081816(1).pdf

6.3.3 Mille Lacs County engagement outcomes and evaluation

Unlike other case studies in this project, stakeholders were not open to speaking with the researchers. We approached key stakeholders and other interested individuals who attended open houses or commission meetings and the county commissioners. We were able to have brief conversations with many, but all declined to be interviewed or requested that we forward our questions to the county administrator, which we did. Thus, our data is comprised of observations of public meetings, media accounts, and a few interviews with the county administrator.

From the brief conversations we had with participants, it was important to them to feel that their concerns were answered, that they were not merely present to hear something that was previously decided, and that they were there merely to be "window dressing" on a process that they could not really influence. Thus, as in the other cases examined in this report, stakeholders want to get a sense that their concerns are being listened to and are being taken into consideration.

During these meetings, the most salient comments clustered around the following three themes: 1) We like smaller government and less taxes, and the state needs to do more; 2) We are concerned about the effects of a tax increase the local economy; and 3) We need to fund our roads, and the sales tax looks like the best way to do that.

We like smaller government and less taxes, and the state needs to do more. This theme was expressed in the following forms during the community meetings or commission public hearings:

> *There's too much government, and taxes are too high.*
>
> *Our government is top heavy, and that we should start trimming our county. One-third of people who live here don't pay taxes.*
>
> *The county should slim down and see where else it can reduce its budget.*
>
> *"The Metro" is taking money away from the area to fund projects that are not benefiting their county or Greater Minnesota.*
>
> *The county state aid road system redefined and looked to as an alternative to raising taxes.*
>
> *The state should give more funding to Greater Minnesota counties.*
>
> *I am opposed to the tax because the roads that are being improved are not in my community*

In the current political climate, these kinds of sentiments are recurrent themes with the public. Often they are driven by a sense that others have greater access to resources without properly investing in them. As mentioned, these are particularly contentious and complex issues in Mille Lacs County due to contests over tribal reservation boundaries, tribal fishing rights and fishing-related tourism sector, and the fact that the reservation is not subject to property taxes. However, Mille Lacs is not exceptional in

terms of the public's lack of knowledge and misperceptions regarding costs and benefits associated with adequate investment on the transportation network. This is an ongoing challenge for policy makers and public works specialists, as attested to by the feedback from the 128 county and city local public works leaders who responded to our confidential scoping survey (summarized in Table 4). It takes a lot of resources to be able to reach the intended public and be able to provide detailed data to the public so they know of costs, impacts and other information related to the roads they rely on, and not all public works managers and policy-makers have the tools and resources available to mount public engagement efforts and ensure that stakeholders feel they have adequate, trustworthy information about policy options, including the financial aspects of proposals.

Thus, it is notable that the stakeholders who participated in Mille Lacs County seemed to feel that they had adequate combination of tools to address stakeholder's priorities and concerns in ways that they feel informed and considered in the decision-making process. This suggests that it was valuable that the county administrator and staff dedicated their effort to do thoughtful and responsible data collection and analysis, created good visual and other materials to present the information, and invested time in the public meetings.

We are concerned about the effects of a tax increase on the local economy. This theme was expressed in the following forms during the community meetings or commission public hearings:

> *This tax would de-incentivize people from shopping in the county.*
>
> *This tax will drive business away from the county.*
>
> *Once a tax is imposed, it never goes away.*

The Mille Lacs County case, like the accompanying Beltrami County case study, underlines the significance of the particular features of the local economic context in figuring out the benefits and risks of LOST and how the public will perceive it. As the county administrator pointed out during the public meetings, a 0.5% sales tax would add 50 cents to a $100 purchase, which did not seem sufficient to make residents take their business to another county. This is by definition true everywhere. And, most counties in Minnesota that have significant retail and services centers already have adopted LOST, as they have similar road resource needs, so that the proposition that businesses would move to avoid the tax is becoming less actionable.

However, what seemed to particularly be compelling about the sales tax option in Mille Lacs county is that a great portion of the transactions in Mille Lacs County are for purchases and services that are location-specific – such as food and drink, lodging, recreation, fuel, and other similar activities – meaning that the argument that the tax would "drive business away" was less compelling. The unique tourism attraction of the Mille Lacs Lake – the second largest inland lake in Minnesota – cannot be relocated to another region. Significantly, Mille Lacs county does not have any large retail centers – such as building materials stores, new car dealers, or superstores – so that Mille Lacs County already make

much of their most costly retail purchases outside the county, typically in Princeton (notably, in the section of Princeton located in Sherburne County, not the portion of the town located in Mille Lacs County), Cambridge or Brainerd – the three closest retail centers. If the revenue were obtained through property taxes, the resulting increase will be higher as it is paid by property owners in the county and not spread out to a larger number of road users who both live in and out of the county.

We need to fund our roads, and the sales tax looks like the best way to do that. This theme was expressed in the following forms during the community meetings or commission public hearings:

> *While I am a conservative, I am completely in favor of this consumption tax, because it would make everyone pay and not just property owners.*
>
> *A sales tax is preferable to higher property taxes.*

During these meetings, once the needs were explained and attendees had a chance to ask about them, the discussions turned to who would pay the tax. Following the presentation, during the Q&A portion of meetings, many residents present started to feel the LOST option would be an acceptable way to generate revenue for local roads. Many expressed their preference to raising revenue in this manner from users of the roads, and not just by property owners. One of the issues that was brought up repeatedly is the level of property taxes that residents have to pay and the rate of increase. Property owners stated they feel they are over-relied upon to raise revenues. They see alternatives to property tax increases or assessments in a positive light if these are shared by a wider population and not collected at once. Many who attended these meetings expressed their preference to raising revenue in this manner from users of the roads, and not just by property owners.

Based upon hearing stakeholders' questions and comments, the county commissioners came to feel confident that LOST was a good option and would be supported. In this regard, the engagement process was successfully designed and implemented. Its intended purposes – namely to enable a good airing of the issues and options, to allow the public to be informed of the issues and options on the table and to provide their perspectives, and to lead to a thoughtfully made decision – was accomplished. The policymakers needed to communicate their intentions behind the proposed policy to the public, and in turn to know what was being proposed could be accepted by those whom they represent. In two other case studies in this research, Beltrami County and the City of Brooklyn Park, decisions to introduce new revenue-generating measures for transportation (LOST and a franchise fee) were informed by the outcomes of focus groups, surveys and similar measures. In the Mille Lacs County case, what occurred is more typical of most local decision making: policymakers relied on feedback they received from participants in public meetings, communications to their office, and local newspaper editorials.

On December 5, 2016, the researchers had a follow up conversation with the county administrator, Pat Oman, to inquire about reactions to adoption of the LOST and plans for its implementation. Among other things, it seems that it had no significant impact on the electorate's attitude towards their representatives, which local news media coverage to date also suggests. While there is a strong "no new

taxes" attitude by many of the local elected officials, there was no change in the composition of the elected board of commissioners that was attributable, one way or the other, to the adoption of the sales tax.

6.4 BELTRAMI COUNTY

6.4.1 Beltrami County policy issues

This case study is based upon a series of deliberations held in 2013 with interested stakeholders in Beltrami County, Minnesota about the status of the county road system and options to address challenges in sustaining and repairing its quality. Located in northern central Minnesota, Beltrami County is primarily rural but also encompasses a mid-sized city commercial center, parts of two American Indian reservations, and protected state and federal forests or parks. The county is responsible for 700 miles of the roads within its border. By 2012, much of the county road system was in poor repair, and public administrators, elected commissioners, and residents had become concerned. On December 11 of that year, Bruce Hasbargen, then the new county engineer, advised the county commissioners that much of the county road system was in poor repair following years of deferred maintenance and that $80 million would be needed to bring it back to an acceptable performance level. In early 2013, the state legislature introduced the new policy to allow Minnesota counties to institute a ½ cent local option sales tax (LOST) for transportation by a majority vote of their commissioners.

6.4.2 Beltrami County public engagement approach

Anticipating that their commissioners would be considering the sales tax, senior public administrators from Beltrami County invited the authors to implement and evaluate a public engagement effort about system-wide local road needs and options. Thus, we helped to design and implement the engagement process describe here as part of the related research project previously funded by the Local Road Research Board (Quick et al., 2014).

The goal of the engagement process was to allow the interested public and commissioners to dialogue and become more informed of policy needs and preferences prior to any vote. The participants included elected officials and administrators from Beltrami County and other jurisdictions, businesspeople, and other members of the interested public. The form deliberation took in this case was a series of face-to-face interactions, over more than one meeting, in small groups involving diverse participants.

The authors prepared by exploring the local roads issues through reviewing policy documents and media coverage, site visits, and extensive dialogues with local and state government administrators and elected officials to understand the nature of the road system challenges in the county. We then identified a broad array of potentially interested or influential stakeholders and actively recruited them to participate through extensive individualized outreach. The process began with three initial deliberations in August 2013: the first involved the business community (4 participants); the second involved agencies that rely upon and/or maintain roads in the region as part of their core work (11 participants, including school bus coordinators, emergency responders, and representatives of city,

state, federal, and tribal agencies); and the third involved members of the interested public (12 participants, comprised mainly of people who had been calling to complain about road conditions and representatives of the county's rural townships). The county engineer and at least one county commissioner participated in each deliberation.

As they arrived for the deliberation, all participants individually completed a confidential survey in which they named their key concerns, stated their level of knowledge about local road system issues, and registered their opinion on an array of policy options. For each policy option, they rated their level of support or opposition on a five-point Likert scale. They then received a one-page handout conveying basic information about the local road system, management challenges, and policy options, and had an opportunity to ask the county engineer for additional information and explanations about the technical and financial issues. We facilitated these sessions, using the same structured series of questions with all groups (described in Quick et al., 2014).

All participants were asked to name features of the roads system that are working well and their 1-2 greatest concerns. The researchers then facilitated a group discussion about the highest priorities for action and the participants' positive and negative reactions to six common policy options for managing county road systems in the region (e.g., let roads deteriorate, implement ½ cent local option sales tax, reduce snow and ice removal). To conclude, each participant named the key point he or she wanted the group as a whole to take away from the deliberation.

The fourth and final meeting, held in September 2013, brought together the diverse perspectives expressed in the previous deliberations (Figure 15). All 27 participants of those meetings were invited back, and 25 attended. The researchers gave a brief summary of the key themes emerging from the surveys and initial deliberations. To address areas where participants had expressed confusion over a particular concept or policy, the county engineer gave a brief informational presentation, followed by a question and answer session. The authors then highlighted the policy options where our data analysis indicated greatest convergence and divergence of opinions. The purpose was to make areas of agreement and disagreement visible to the array of stakeholders, not to force consensus. The areas of convergence were not discussed further. Instead, the authors facilitated in-depth exploration of the option where there had been most divergence, the ½ cent local option sales tax (LOST).

Figure 15: Participants deliberating at Beltrami County policy roundtable dialogue

Source: Guillermo Narváez

6.4.3 Beltrami County engagement outcomes and evaluation

Shortly after the deliberations, the county commissioners unanimously approved LOST. This was a surprising turn of events, given that previously a diverse array of parties in the county had vigorously opposed the sales tax option, as indeed a strong majority of voters in rural Minnesota typically oppose any kind of tax increase (Scheck, 2015). In fact, Beltrami was one of the first counties to pass LOST, and the motion to do so was made by the county commissioner who had initially most vehemently opposed it. Public administrators in Beltrami County believe the deliberations transformed participants' attitudes towards the tax and led the commissioners to feel it would be a legitimate response to their constituents' needs and preferences.

The marked shift in opinion, combined with the rich data we had from the case, allowed us to probe important questions about how deliberation brings participants to change their minds. To do so, we drew on four sources of data: observations and transcripts from the deliberations, comparison of pre- and post- deliberation surveys of participants, and follow-up, confidential, semi-structured interviews with half of the participants. We asked each participant to complete the short, written survey three separate times: before the initial small-group deliberation, immediately before the large-group roundtable, and immediately following the large-group roundtable. The response rate was high: of the 25 people at the roundtable, 24 completed a pre- and post- deliberation survey. Because we could identify individual participants, this allowed us to track whether and how they changed their minds regarding their key concerns, self- assessment of their level of knowledge of these issues, and level of opposition or support for the six policy options, before and after the deliberations (Figure 16).

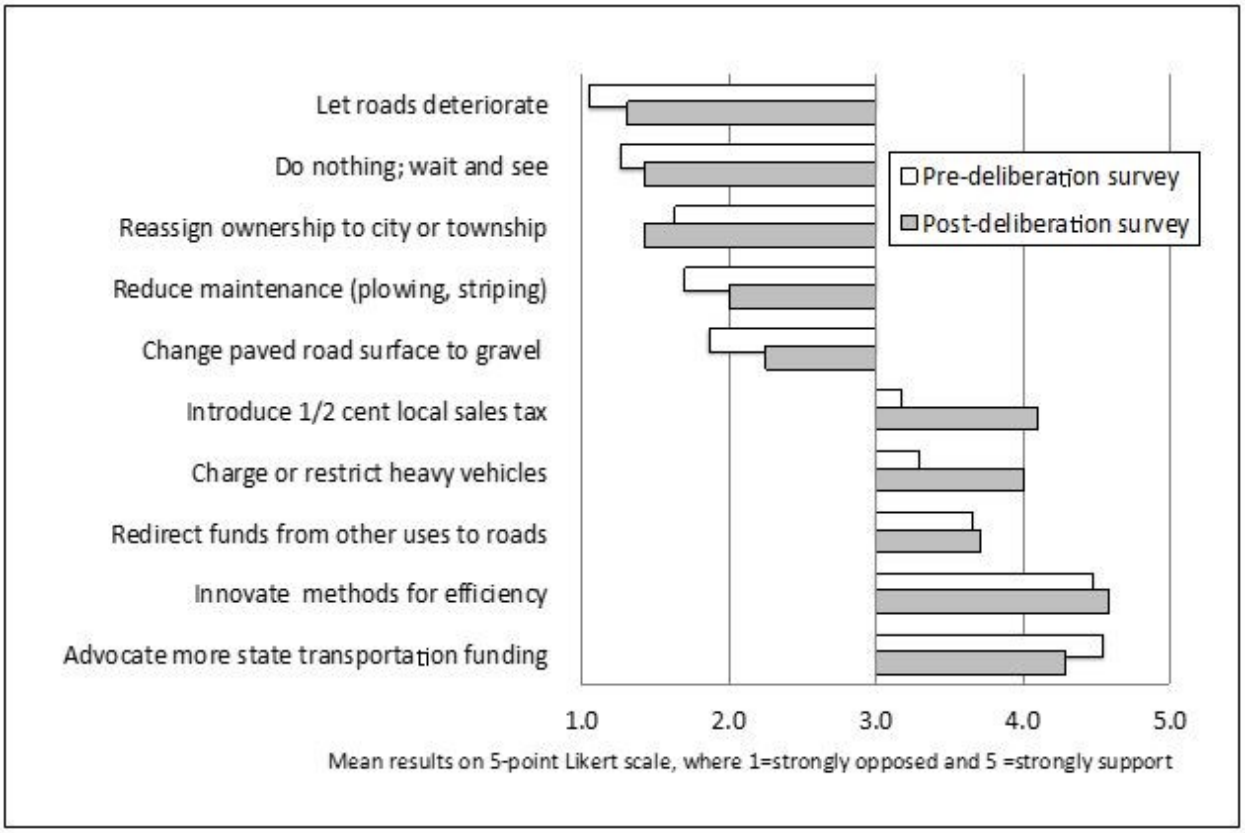


Figure 16. Stakeholder Attitudes towards Policy Options, Compared Before and After Deliberation

To gather their accounts of how they changed their minds, one to three months following the deliberations, Emily Saunoi-Sandgren[4] conducted interviews with 12 participants, selected to represent the diversity of stakeholders (e.g., public administrators, businesspeople, interested residents) and the full range of initial support or opposition to the local option sales tax. Interviews began with Saunoi-Sandgren re-administering the survey verbally and reflecting back to the participant any changes found between their earliest and most recent surveys. The interviewees were then asked if any of the observed changes seemed meaningful to them, to describe how they were meaningful, to explain

[4] We were concerned that stakeholder participants in the policy dialogues might not speak freely with us about their experience of the process, since we had been visibly involved as facilitators. Therefore, to gather higher quality data, another researcher (Emily Saunoi-Sandgren, formerly of the University of Minnesota), conducted confidential interviews with them in 2014. In 2016, we arranged for fourth researcher to conduct an additional round of interviews with them to study the long-term effects of deliberation, but unfortunately this could not be completed due to an illness. Therefore, we returned to the existing data to do the deeper analysis presented in this section.

whether and how they had come to change their minds, to identify any surprises, and to reflect generally on the effects of the deliberation method.

We focus this analysis on the two areas where numerous data sources indicate that participants changed their minds in ways they considered significant: a) coming to support the sales tax; and b) changing their criteria for prioritizing road improvement projects. The most permanent, visible marker that deliberation did change minds is that several county commissioners who had previously opposed LOST became advocates for it, and ultimately the commission unanimously adopted, which many study participants attribute to what the commissioners learned about the issues and constituents' concerns through the deliberation. Pre- and post- deliberation survey data reflect participants' increasing support for the sales tax (Figure 16), as do transcripts of the deliberations and the subsequent interviews.

"Like a religious revival"

The most notable evidence that participants did change their minds comes from study participants' own spontaneous attestations that they felt differently about policy and management issues after the deliberation. Indeed, *all twelve* of the people interviewed made a statement to that effect. For example, when asked their opinion about policy options, three began by asking whether they should state their feeling "as of now, after the meetings," or "as of when I started," because their views had changed. A fourth laughed and exclaimed, after completing the survey again, "My answers have changed!" Four other interviewees volunteered observations about how their opinions had changed on specific issues. One immediately cautioned, after stating her option, "I don't know that I felt that way prior to that roundtable." Another noted he had significantly shifted his opinion "as a direct result of these meetings." Another stated "an awareness" developed through the deliberations had led her to view an issue in a new light. Another said he had re-prioritized his set of concerns because deliberation "changed the way I viewed" them. The three other interviewees, though they had not changed their own stances on the policy options, all shared their observation, without being prompted to do so, that they had "learned a lot" and that they noticed others change their points of view.

These changes were most visible at the conclusion of the policy roundtable, when each participant was asked to summarize briefly the one or two points they wanted to be sure that policy-makers gathered from the meeting. Many took that opportunity to highlight that they had changed their minds by learning more about the options. After the meeting, a county government leader summarized the closing moments like this:

> *That meeting was like a religious revival where, at the end, people stand up and give testimony about how, 'Now I've seen the light.' There was a huge shift from where we started to where we ended.*

Notably, the two participants who had initially been especially outspoken in their opposition to the sales tax became less attached to that position after the deliberation. In their post-deliberation surveys, each responded, "Need more information" and declined to take a position on this option.

Shifting from "engineering" to "qualitative" criteria for prioritizing projects

Another shift occurred in how some participants came to view the nature of the needs and challenges for maintaining the road system. Deliberation led them to change their minds about their preferred criteria for setting policy priorities and evaluating proposed solutions. The shift started at a meeting with representatives from other public agencies to discuss the regional road system. When the county engineer explained that he was prioritizing repair on the country roads based on average daily traffic (ADT) so that roads with the highest volumes of traffic would get more attention, representatives of agencies in more rural areas of the county suggested there were other ways of looking at the problem that need to be considered. Numerous residents of outlying areas of the county challenged this, suggesting that while only a small percentage of the total traffic in the county used the rural roads, a very high percentage of rural residents' travel – to work, school, shopping, services, or church – was on that road.

One small town administrator put it this way:

> *If it were just a quantitative measure of doing things, it would be easy, but it's qualitative a lot of the time. A count of vehicles or trucks going into and out of [my town] is probably less than 1% of what comes in and out of [the big regional city] every day, I am sure it is. But, at some point or another in a given week I would say 100% of our residents use that county road in one way or the other, so for them it is a big deal.*

The transportation supervisor of a rural school district added:

> *You look at a traffic count and it tells you, "A vehicle went by." There are things that doesn't account for. Was that vehicle a piece of the infrastructure of trying to get kids home from school in a timely manner? What was the number of students on the bus? And for how long did they have to be on those roads? An hour?*

A school principal reinforced that poor road conditions make his students' trips to and from school very uncomfortable, and concluded:

> *A few of my kids are on the bus 3 hours a day… We just need a way to maybe look at this in a qualitative way, not just numbers, specifically to meet the needs for those in the far reaches of the county*

Very soon, others in the room were suggesting that "qualitative" measures as well as "numbers" should be used in the decision-making. At the end of the meeting, when the facilitators asked each participant to highlight briefly the one key point that they were taking away from the session, a lead engineer for the state transportation said only, "The rationale is not always ADT [average daily traffic counts]." The county engineer indicated his key learning was "What [the school principal] said about qualitative vs. quantitative measures," and stated that both types of measures need to "be taken into consideration" in identifying priorities.

These shifts in individual- and group- level opinions about introducing a new sales tax and about measures for setting and evaluating priorities were sufficiently provocative to lead us to do additional data analysis about the reasons for this change. We find four primary explanations given by participants, during the deliberations and subsequent interviews, of how they or others came to change their minds. These are described below and summarized in

Table 9.

Table 9. Key Themes of Beltrami County Participants' Accounts of Changing their Minds

Participants' explanations	**Effects**
More information and exploration led participants to new understandings of the policy problem and appreciation of its seriousness.	Novices and professionals were surprised by the extent of road quality problems and the challenges of financing road maintenance and repair. Participants came to appreciate the necessity of action and become committed to find solutions. They "saw the need" to address road issues or realized "we've got to do something."
Extended exploration of policy problems and options allowed participants to discover alignments with their values.	Dialogue facilitated openness to reconsidering options, not simply advocating their initial position. Participants came to see the sales tax as a practical solution, a "viable" or "not so bad" option. Participants judged the sales tax to be fair, by their criteria: users pay, and everyone has to pay.
Hearing others' perspectives inspired participants' empathy and desires for comprehensive solutions.	Stories about emergency responders, rural residents, school bus riders, and truck owners and drivers suffering from poor roads led participants to sympathize with and want to address their needs. Participants heard that residents throughout the county have concerns, and became supportive of a "comprehensive solution." Residents and administrators changed evaluation criteria for prioritizing projects to include "qualitative" as well as "engineering" considerations.
Communication enhanced participants' confidence in policy directions and government leaders.	Being heard, having questions answered, and hearing commitments that their concerns would be addressed increased residents' trust in county public administrators and elected officials. Upon being assured it would be used to respond to their needs, rural residents came to support the sales tax option. Participants felt others would see issues and needs similarly if they also had the benefit of dialogue, and advised county leaders to improve communication. Ultimately, there was no organized opposition to passing the sales tax.

More information provided new understanding of nature, extent, or urgency of problems.

The dialogues allowed people to gain additional information about the policy issues, which was critical for them to change their minds about the nature, extent, or urgency of the problem. Participants received new information about what it costs to maintain roads, where the money comes from, and the persistence of shortfalls in funding. They heard the county engineer's opinion that $80 million was needed to catch up on long-deferred road maintenance, compared with $4 million in annual revenue from existing funding sources. This information was eye-opening for many, including those with experience with road maintenance. One participant gasped, "Jeez!" upon hearing the current cost for a road overlay project during deliberation. Later, when asked whether she had learned anything by participating, she said:

> *Yeah, that we have more of an issue than even I thought we did! Having worked in the construction field for a private contractor, you know some of it and you know the dollar amounts, but I didn't realize that it was that eminent.*

From both technical information and stories told by others in the deliberation, many participants gathered a sense that the quality of the roads was worse than they had previously understood. When we asked public administrators from three other agencies with responsibility for roads within the county whether they had learned anything new, they all affirmed they had:

> *Yes. It was good to hear about the emergency vehicles – not just ambulance, but fire – and how difficult it was for them to drive even at the speed limit on some roads without the passengers getting bounced around.*

> *I was amazed at some of the information that came out, for instance, that the county doesn't even levee a local tax for the road. They count on all the other funding sources. And so there was good back and forth, there, of ideas about what we should all do as a group to improve the level of funding and the roads.*

> *I got a better understanding of how poor some of our roads are in the far northern part of the county, which I guess I didn't really realize and I also didn't realize that some of the [road improvement] projects that have been promised had been pushed back and pushed back and pushed back for years and years. It was quite alarming that that has been happening.*

Even before the deliberations, virtually all participants had expressed strong opposition to the options of "Do nothing; wait and see what happens," and "Let the roads deteriorate" (Figure 16). However, becoming more aware through the deliberations about current funding sources and situation was a turning point for many to decide the county needs to find its own solutions, and to do so very soon. A leader of the regional economic development council observed soberly during the business community deliberation:

> *It seems to me with that big of a gap, you're going to have to deal with a pretty comprehensive strategy. That's going to be like pulling a Band-Aid off. No matter what you do, it's almost like*

you gotta do it all at once and get it over with. That may mean triage on roads and maybe some revenue increases. I'm the one to help share the message and help people understand. But it's not going to be fun, I suspect, to go through. But you might just have to. You just have to.

Similarly, a township official commented at the end of the roundtable deliberation:

My thoughts are that having a safe, efficient road system is going to be expensive, but not having one that's safe and secure and efficient is probably more expensive. So, we have some real tough decisions that we have to face.

Asked later to explain the shift in opinion towards the sales tax, the county engineer focused on the fact that participants had entered the deliberations with knowledge and concerns, yet gained new perspectives on the need for some local government action:

They see the need. There's those that drive and live on those roads that are in poor shape. They see it. We explained the road conditions in the meetings. But I think they see it and drive it enough, and so when you tell them and explain it a little bit, they understand or fall in agreement. So I think that really is key.

Indeed, during the conclusion of the final deliberation, many indicated that, while they did not like the idea of a new sales tax, they had come to support it through accepting that the road system challenges need to be addressed through local government action. Two participants stated:

Well, I wasn't supporting that ½ percent at all when I came in here today. But as I heard everybody talking and everybody explain stuff to me and picked up this and that, it's not such a bad deal. I mean, we've got to do something to do this.

It seems like the consensus in here is a way to fund this through a ½ cent sales tax. And it will be unpopular. But it will also be unpopular if nothing is done.

A leader of another government agency, interviewed later, attributed his and others' changes in opinion to "realization" accomplished through having more information:

My impression is we started to be open to the sales tax once everybody realized that money is not earmarked currently except from what we get through the state for road repairs and we're falling further and further behind. The county engineer brought those numbers to the table and we realized how much money it would take to bring our roads up to standards…. I know for a fact that a couple of county commissioners' point of views were changed when they saw what could be done, for example, how much money could be generated with just the ½ cent sales tax and for a specific purpose. I was happy to see them change their minds. If a vote was taken at the end of that meeting, you probably would have had four [of five commissioners] vote in favor. The only thing I could attribute that kind of change to is realization.

One of the commissioners affirmed this view in his follow-up interview, when one of the authors observed he had shifted from neutral to strongly supporting the sales tax between his pre- and post-deliberation surveys. He elaborated:

> *The reason for that change, in my mind, is not having enough information previously as to the value of the ½ cent sales tax, the fact that I was concerned that it was similar to a real estate tax or probably wasn't even thinking that through.*

Extended dialogue led to discovery of alignment of some policy options with their values.

Participants' accounts also indicate that they changed their minds about policy options by coming to see, through extended deliberation, that some choices fit their values. Deliberation allowed them to understand, weigh, and play with the different policy options and to reach such judgments about them. One participant later speculated that extended dialogue opened participants to consider the options and not feel a need to stick to a particular position:

> *I think that oftentimes, people are opposed or adamantly strongly feeling a certain position when they don't feel like they've had an opportunity to express their opinion. That obstacle got removed when we had a genuine, lengthy dialogue at all the meetings. And through that dialogue and sharing of ideas, I think people began to realize that there are very few potentially realistic and viable options, especially if we want to solve this problem relatively soon. Like on the sales tax, I was surprised when quite a few people seemed to be sharing the notion that, "You know, maybe this isn't the worst idea, this ½ cent raise." When it was mentioned also that it wouldn't only be a burden on property taxpayers, that a lot of people from outside the county would be supporting and helping raise funds, I think that was another straw that clinched it, that we're paying for something we want. Tourists who use the roads would be paying too.*

This individual references two key values that came up consistently in participants' explanations, during the deliberations and afterwards, of how they came to make up their mind about particular policy options. In this analysis, we reference these values and their fit to a policy problem or solution from the perspective of the study participants. The first prominent value was practicality and pragmatism, what this participant termed the "viability" of an option. The other was fairness, which he expressed in terms of people who use the roads paying for them.

These values were persistent, turning up in interviews conducted several months after the deliberations. Through the deliberations, participants learned from county administrators and elected officials that an unusually high percentage of land in the county is not taxable. They would have to multiply the existing property tax rate, which is already relatively high for the region, several times to gain as much revenue as they could gather from the ½ cent sales tax. Since the county includes the city of Bemidji, the major commercial and service regional center for a large area of the state, nearly everyone drives into Bemidji, including from surrounding counties, for their shopping. LOST gained acceptance as participants discussed how it would be a way to capture revenue from people who use the roads but do not

contribute to their upkeep through property taxes or vehicle license fees. This exchange, from the deliberation among interested residents, is representative of numerous moments in the deliberations:

> *Participant 1: Now, I don't mind paying my share, but there is a select group of residents in Beltrami County that do not pay road fees on Minnesota license plates [referring to enrolled residents of two American Indian reservation communities, which have their own license plates], so that fee would not affect them, and yet they're on the roads.*
>
> *Participant 2: I really feel the ½ percent sales tax is the fairest because even if you don't own land, if you are renting, you are out purchasing. And so, you're going to be helping pay for roads that you're using.*
>
> *Participant 3: I agree.*

By their own accounts, these arguments compelled many people to change their minds. For example, two people stated during the closing comments of the final deliberation:

> *I came in here opposed to the sales tax. I now recognize the fairness of it and I recognize the need. Communication in the rural areas and the fact that we're keeping in mind that we need to have arteries that go to the businesses that have value added, manufacturing and all of those, are very important.*
>
> *I was kind of against the sales tax, too, but it looks a little more like it might be better because you get everybody, pretty much, contributing to it that's doing business in the county.*

Hearing others' perspectives inspired sympathy and desires for comprehensive solutions.

Participants also described changing their minds about the scope, nature, and prioritization of local road issues by coming to recognize other people's concerns as important. People who were invited to the deliberations because they had been complaining about the conditions on their particular road segments of the county road system heard from others all over the county with similar concerns. Through this, they gained an enlarged sense of their concerns being part of a countywide issue, as expressed by a resident who explained he had participated because "I don't drive on every road in the county" and wanted to become "at least as informed as a lot of people" about the extent of the issue. He elaborated:

> *I wanted to listen to see if there was problems up there in the north part of the county or the eastern part of the county that are the same as what we have here in the south part. And they generally are.*

Through the conversations, he and others began to see that the problem was widespread and systemic, and that the solutions would have to be systemic as well. Some of the participants quoted above were expressing similar sentiments about becoming motivated to support a "comprehensive solution" because what they learned from the exchanges was "quite alarming."

In addition, hearing stories from others influenced some participants to become sympathetic to some specialized concerns and want to see them addressed. One of the key markers that people had changed their minds was their changing some of the criteria for prioritizing road improvement projects to incorporate "qualitative" measures about who uses the roads and the effect it has on them, not just the conventional quantitative measures that would lead to prioritizing roads with the highest volume of users. Participants' accounts of this change point to developing sympathy with the people with rural residents, school children and their bus drivers, and emergency responders. For example, township fire companies and a trainer for ambulance staff shared during the meetings that their teams would drive fire trucks and ambulances as fast as possible to respond to emergencies, no matter the condition of the roads, but that poor conditions imposed terrible wear on their vehicles. Other participants later described these stories as a way of being reminded of what the roads mean to other people:

> *I thought it was really good that there was a very diverse group of people there that all have a need or have some connection to the road system, and how important it is to everybody that uses it, even though you don't know how important it is to other groups that you don't even think about, you know, like school buses and fire trucks and certain road conditions.*

When we asked the county engineer six weeks later if anything about the process had surprised him, and he immediately pointed to those same interactions:

> *I recall the meeting with professionals in the transportation area, the school districts, the other smaller cities, emergency services. They all expressed concerns about their rural areas needing work. It wasn't surprising. I mean, I knew the rural roads were in bad shape. [pause] But I guess the way they described it even changed the way I viewed it, that even those rural, small, low-volume roads need to be addressed at some point…. I was surprised that I softened on that. [laughs] Because coming in, I really stuck to the engineering side of it, the numbers: I'm going to put the dollars on our high-volume roads where it's going to affect more people. Then the school principal talked about the qualitative needs of getting road improvements versus the quantitative, just the number of users on the road. There's a need for even those small, rural areas and low volume roads to be addressed at some point. That really, for me, kind of opened my viewpoint. Personally, I was surprised at that – how that changed my view. The way those meetings were conducted, it really allowed people to hear other people's concerns or issues or even solutions or ideas. It was good that way.*

Another effect was that participants came to like – or dislike – certain policy options more or less after interacting with and hearing the perspectives of people who knew more about or would more directly experience the effects. For example, one of the policy options to which the group collectively became more opposed was limiting or requiring additional fees from heavy vehicles (Figure 16), which would minimize or help remedy the extra damage they do to roads. The deliberation among the interested public included an extended dialogue with a building contractor who would be affected. The conversation quickly evolved into other participants sympathizing with his employees traveling on bumpy roads and with him because his trucks were requiring extra repair because of damage the participants attributed to even heavier semi-trucks. By the final meeting, this had coalesced into

sympathy rather than rancor for this group of mid-sized truck operators. A resident recapped the discussion from a small breakout session during the roundtable like this:

> *It didn't seem that there was a lot of support for additional taxes on heavy vehicles because, as [another resident] said, heavy vehicles and truckers are already taxed from A to Z, and it probably would hurt local business a little bit. If anything, rather than taxing, we should maybe look at more restrictions on the roads, maybe turn a 9-ton limit road into a 7-ton or something, but not tax users who are trying to operate businesses and make a living.*

There was a similar shift of people becoming more opposed to turning back-county roads to other jurisdictions, after many township officials spoke up during the deliberations to question whether they could ever find enough resources to take care of the roads. For example, one participant, when we observed that he had become more strongly opposed to turning county roads over to township ownership and asked "Was that a significant shift for you?" responded:

> *I think so, and that was a direct result of those meetings. We often want to pass the buck and I think that it was a wakeup call for me that passing the buck isn't going to eliminate the problem and is just probably going to create a bigger headache for local forms of government. I was getting that information from township representatives reminding us all that if we were to shift the burden onto more local government entities, that would become, perhaps, a greater problem for these local people than it would be for a larger organization.*

Communication enhanced confidence in policy directions and leaders.

The fourth and final commonly found theme in participants' accounts of how they came to change their minds is that they developed more trust in county government leadership. We have already described several ways in which they developed more confidence in particular policy recommendations, because of the substance of the deliberation. Another theme of many interviews was that the deliberative process itself had contributed to their confidence in the need for action and their trust in government managers and elected officials. Participants entered the deliberations with low expectations, based on previous experience with meetings where they had not learned anything new, no progress was made on the problem, or they felt unable to contribute or influence problem definitions or outcomes. Asked if anything had surprised them about these meetings, they repeatedly mentioned that there was good dialogue, that they had pressed hard for more information and had their questions thoughtfully answered, and that county administrators and commissioners took their concerns seriously and committed to address them.

Transcripts and our fieldnotes show participants' combativeness and frustration with the county government diminishing as deliberations proceeded. An elected official observed later:

> *I sensed, right from the beginning, that people who live in more remote areas are worried we're going to raise the taxes, but just build up roads closer to the urban part of the county. The frustrations they were expressing had to do with the fact that we're always on the five-year plan and they're Year Five, but we never get to year five. I heard that quite a bit! I think they just*

wanted to know, to be assured, that some of the money is going to be directed to help them. With assurances that that was going to happen, I think they were all very supportive of paying more taxes. They just wanted to know that their roads are going to be addressed.

Several participants reflected that they had come to see the county had more limitations, or was doing a better job than they had realized. As a complement to that, they emphasized that a great deal more communication was needed, on an ongoing basis, to build their trust. A resident summarized this point during the deliberation:

Our new highway engineer inherited a problem, no question about it. [speaking to the county engineer] You're doing a fine job. But I agree with a lot that's been said: people need to be educated and you need more communication.

Indeed, participants indicated they would have been less confused or angered in the first place if the county had explained it to them with signs on the road, better media coverage, or letters to them. Their comments convey their expectations that others would also trust the sales tax recommendation, or government leaders more generally, if only they also had more opportunity to dialogue. A participant conveyed this as his key take-away at the conclusion of the roundtable:

If indeed the county commissioners are on the same page that the priority is to solve the road and infrastructure problems to do with transportation, and if it's billed that way to the residents that this is now what needs to happen, the next priority in Beltrami County, I believe there would be a wonderful reception. That's the take I get from people, almost every day talking to someone about roads. I really think people are willing to pay for it if they know they're paying for that, not paying for somebody's bigger salary or something like that. I think people are ready to have that be the problem that's being solved in whatever way: bonding, ½ cent sales tax, whatever is come up with.

Perhaps the most remarkable testament to the influence of communication turn-around came from a participant who had previously traveled to the state capitol to lobby against LOST when the state legislature was considering introducing the legislation to enable it. At the end of the roundtable, he publicly stated, "I can agree with the idea that a tax is going to have to be done," and in an effort to facilitate that happening then advised county administrators and commissioners that they needed to break down the budget figures so that people could understand and accept the need. County administrators later acknowledged to one another that he had a good point and decided to rethink the budgeting figures and arguments.

CHAPTER 7: CONCLUSIONS AND RECOMMENDATIONS

Based on the preceding data and analysis on local public works leaders' assessments of the climate for local roads issues (Chapter 6) and comparative analysis of the four case studies of local government's engagement on these topics with their stakeholders (Chapter 6), we make the following recommendations. These are the priority areas for sustaining or improving resources, tools, or practices to support informed and productive public problem-solving to address key local transportation challenges:

Provide good quality information to support increasing public attention to local transportation system issues.

Coherent information supports coherent decisions. In 2012 and again in late 2016, we scanned Minnesota newspapers (regional, city, and local) and leading national papers for coverage of Minnesota regarding these issues. For the five-year period ending in November 2012, we identified only 18 relevant articles. When we repeated this survey in November 2016, we found 198 articles for the previous four-year period with Minnesota-specific content about the lifespan of roads, bridges, and the continual failure of efforts to reach a sustainable funding solution for Minnesota's transportation infrastructure (discussed in Section 5.1).

This suggests that the challenges of local road system sustainability and finance are no longer invisible, and that Minnesotans understand that their infrastructure cannot be taken for granted. Similarly, the survey of county and city public works leaders (summarized in Table 4) finds that residents increasingly appreciate the importance of local roads, and are coming close to sharing engineers' concern about their deteriorating quality. As community attention to these issues is on the rise, there is a timely opportunity to gain community input and buy-in to address these longstanding issues. However, the county and city public works leaders surveyed also stated that stakeholders want good roads but are surprised at the costs, disagree about how to address funding, unrealistically expect to reassign funds from other local government activities to road, and often balk at creating new funding mechanisms such as LOST or franchise fees (described in Section 3.4). These gaps make it all the more important to ground these dialogues with strong foundations of high quality data, impartial analysis, and thoughtful explanations of the policy options in play.

Use multiple communication channels, including new technologies for targeted outreach.

One of the areas of concern identified in the survey of county and city public works officials (Chapter 5, especially in Table 4) is the problem of reaching the public. Many people do not see public notices, newspaper announcements, newsletters, and other forms that local governments use to reach out. The City of Chanhassen case study (Section 6.1) makes clear that getting people's attention to begin with requires a multi-prong effort with multiple channels of communication, even for projects and policies that will naturally hold people's attention because of the high stakes for them. In the general survey of public works leaders, they strongly express that direct contact is very effective, but very resource-

intensive and also limited in scope (reaching known stakeholders such as residents and businesses located in a project area, but not more diffuse groups of stakeholders such as commuters moving through the project area).

Local governments are starting to look at technologies to reach out to inform and encourage the public through channels that are geographically based (Quick & Zhao, 2011), including frequently used routes by specific drivers, such as commuting routes, frequent weekend trips, etc. which can be discerned from location specific information from smartphones and targeting specifically tailored messages to the specific users. Google AdWords (2013) claims that its geographic targeting can be used to help reach these specific users. While this might raise a great deal of privacy concerns, there are mechanisms in place to protect users' personal data and privacy. These are in place currently for commercial advertisements, but the technology could be easily adapted for use by local governments to address these hard-to-reach users.

Using social media for outreach is not only expedient but increasingly necessary. A very large and growing share of the population relies on social media to do things linked to their daily routines like looking up addresses, getting business recommendations, and communicating with others including public agencies, businesses, friends and families. By 2013, 56% of U.S. adults had smartphones (Rainie, 2013), and thus public agencies have to consider the prevalence of this channel for exchanging information as part of their core outreach plans. Many public agencies dealing with transportation have been relatively proactive in this area, with a particularly rapid increase over the last two years in the use of Facebook and Twitter for outreach (Brown, 2015). These technologies can be useful platforms for exchanging information, but there is still the problem of drawing people's attention to them as options. As mentioned, some push-oriented technologies can help target messages based on location. These technologies are new to local governments and information and guidelines for their use is still sparse, but it is a popular topic of research and figures frequently in publications by AASHTO and TRB. One source of reference on these technologies for transportation is *Public Involvement Techniques for Transportation Decisionmaking* (FHWA, 2015), which is updated every few years with guidance on these and other new tools to engage the public on transportation projects and related issues.

Build resources to support stakeholder participation, including *both* human resource capacity and skill for outreach and engagement *and* high-quality, accessible information to inform the public about issues.

All of the agencies involved in the four case studies in this research invested considerable resources in public engagement. Brooklyn Park and Chanhassen are unusual, among cities of their size, for having numerous dedicated and highly skilled staff members specializing in and available to support public engagement. This level of commitment is understandably more difficult for smaller governments (which resources due to their small staff size and fiscal constraints), yet the complexity and challenge of managing the local road system is no less complex. Beltrami County, for example, is responsible for 700 miles of county roads, and Mille Lacs County for 412 miles.

Federal and state agencies, as well as associations of local governments (the League of Minnesota Cities and Association of Minnesota Counties) and transportation interest groups have done excellent work to support training of transportation professionals on engagement methods, but there is no avoiding the high level of time, effort, and skill that any local government must invest in engagement for it to be successful. They also provide advocacy support and basic materials to explain the general principles and benefits of particular local road system management options, such as LOST and franchise fees (discussed in Section 3.4). These materials are helpful. However, every jurisdiction is unique in terms of its transportation needs, political context, and resource options, so that there can be no single "packet" to be replicated and operated as a turnkey approach everywhere in the state.

We make three specific recommendations for building human resource and technical information resources:

- *Sustain (and preferably enhance) current resources from state agencies and organizations (such as LMC and AMC) to provide basic training and public outreach materials.*
- *Invest in the high short-term costs of proactive, good quality engagement, to gain substantial benefits over the longer term.* While engagement consumes all kinds of resources, it also generates them (Feldman & Quick, 2009), for example, in the forms of increased buy-in and political support to enact policy change, additional funding, and long-term stability and predictability. This allows ongoing maintenance of infrastructure, which is more efficient for sustaining these assets over the longer term. All three case studies of local financing mechanisms in this report -- the City of Brooklyn Park (Section 6.2), Mille Lacs County (Section 6.3), and Beltrami County (Section 6.4) -- demonstrate that a more intensive effort up front to draw together key stakeholders, representing divergent experiences and ideologies (for comprehensive information, good decision-making, and legitimacy) in a well-aired dialogue, while intensive in resources, often pays off in terms of buy-in, adoption, and implementation of policy decisions to expand resource availability. Although we did not gather data about this in the City of Chanhassen, and thus cannot present a finding one way or the other in that particular case, studies of other American cities indicate that the substantial up-front engagement with key stakeholders reduces or avoids the costs of project delays and litigation for major infrastructure and redevelopment projects (Innes & Booher, 1999).
- *Build centralized efforts to make some of the basic data – such as "whose road is this?" information – immediately available and understandable, in easily produced infographics, in any jurisdiction.* Currently these data are more readily available for the Twin Cities metropolitan area than for greater Minnesota. Again, coherent information supports coherent decisions.

Employ a consultative or inclusive process and thoughtful, timely explanations from public managers and project sponsors to improve stakeholder satisfaction with project outcomes *and* the engagement process.

We make three specific recommendations in this area:

- *Comprehensively answer stakeholders' questions about transportation issues and proposed projects or policies.* Across all four case studies, stakeholders repeatedly affirmed that they had more

acceptance of policies when they felt trust with the public managers who were guiding the decision making, and lots of open exchange with the managers was key to that trust. There was a consistent theme in their feedback that having good quality information, transparently presented, early in the process, with an opportunity to express concerns and have their questions answered, increased their trust in the integrity of the decision. For example, in the City of Chanhassen (Section 6.1), many residents were troubled by the heavy impact on their properties and the character of their area that they anticipated from a major road construction project to transform a winding, rural, two-lane road into a four-lane, divided highway. Yet, residents stated they could have been "more accepting of it" if the city had "helped us understand why this project needed to be as expansive," and even people who were resigned to the idea that "progress is inevitable" and "something needs to be done," felt they would have been comforted by having their questions and concerns more directly addressed. (To be clear, as researchers we are not evaluating whether or not staff did address concerns and questions in these two cities, but rather are pointing out the strong connection that stakeholders make between feeling they are getting good explanations and their confidence in the policy decision making.)

- *Be inclusive: Involve stakeholders in defining the policy problem and developing options as well as the preferred policy options.* Mille Lacs County (Section 6.3) and Beltrami County (Section 6.4) are both compelling examples of community members finding their way together to a preferred and workable solution by exploring the problem together. In the Mille Lacs case, the idea of a local sales tax for transportation – which ultimately culminated in the county adopting the local option sales tax (LOST) in late 2016 – originally came from a resident who spontaneously suggested such an approach during the annual Truth in Taxation meeting. In Beltrami County, the idea was one of a half-dozen options placed on the table for discussion during community dialogues, which began with an open-ended question about whether there even was a local road infrastructure problem that needed fixing. In both cases, stakeholders expressed how important it was to not merely be present to hear something that was previously decided, and how they came to support a particular option through dialogues that led them to a new understanding of the needs and the best ways to address them. Even in the Brooklyn Park case (Section 6.2), where city staff were much more directive about presenting their proposed solution to a problem and explaining it, the data clearly show that participants experienced a strong downward shift, after the meetings, in the percentage of people who selected "I do not have enough information / don't know" when asked to state their opinion about different policy options, and a strong upward shift in support for an option (franchise fees) that they had known nothing about or had been opposed to initially. This is consistent with other research findings that "inclusive" approaches to engagement (i.e., stakeholders are involved in co-producing the definition of the problem, the process for making decisions, and the selection of preferred alternatives) receive much greater stakeholder buy-in than "participatory" approaches (i.e., stakeholders are asked to provide input on solutions that have already been well developed, to address pre-defined problems) (Quick & Feldman, 2011).
- *Be clear about expectations and sensitive to the timing of consultations, to avoid distrust and accusations of inauthenticity.* Having just recommended the merits of more inclusive processes and early consultation, we also recognize that this is not always appropriate or possible. In this context, we strongly endorse the guidance from the Spectrum of Public Participation, developed by the

International Association for Public Participation, about communicating fair expectations about the purpose of the engagement effort. Perhaps using the prompts from Bryson et al. (2014) to clarify this, and the kind of influence that stakeholders may expect to have. Some feedback from the City of Chanhassen is instructive here; this construction project was complex and impactful, so that a great deal of study and prior consideration had gone into the project design before it was brought to the public. Thus, the engagement efforts included a strong emphasis on the "informative" (defined as keeping the public well informed through balanced and objective updates) or "consultative" (defined as obtaining feedback and acknowledging concerns about alternatives and decisions) ends of the spectrum, as opposed to "involved" (defined as having stakeholders' concerns and preferences be directly reflected in the decisions made). The stakeholders who responded negatively to the process were most likely upset in large part because they did not like the substantive outcome of the project, but it is also clear they were irked by their feeling that it was a "pretense" of engagement because they had expected to have more influence and be involved at a point when the options were more open-ended.

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