



# Community Engagement in Rural Communities

Research Final Report from East Tennessee State University | Drs. Mohammad Moin Uddin, Kelly N. Foster, and Candace Forbes Bright | June 14, 2021

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## DISCLAIMER

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16. Abstract Public involvement is defined as a two-way communication aimed at providing information to the public and incorporating the views, concerns, and issues of the public in the transportation decision-making process. By involving the public early in planning transportation projects and throughout the development and implementation of projects, a transportation agency can enhance its ability to establish relationships, credibility, and consensus throughout the course of the project. Most of Tennessee consists of rural and small communities. These communities face challenges such as scarce resources, technological, geographical, demographic shifts, which can limit effective engagement capabilities. Engagement strategies that are effective for urbanized and metropolitan areas may not be as effective for these rural communities. This study employed a mixed method research approach to identify best practices for engaging rural communities in transportation planning and decision making. The research methodology involves an extensive literature review, interviews with four OCT supervisors, interviews with twenty-four community leaders in four case communities in Tennessee, and two rounds of Delphi community survey. The research process brought together all key stakeholders to build a true consensus of best practices to engage rural communities in transportation planning. Data analysis showed rural communities feel detached and unaware of TDOT's role in and plans for community transportation. Engaging rural communities using social media and conducting virtual meetings can reach wider sections of the community. However, due to lack of consistent internet and cell phone coverage in rural communities, this type of outreach cannot replace in-person engagement. Securing support of the community leaders, having a presence in the community, and building partnerships will increase trust in TDOT and foster better engagement. A list of recommendations is provided that will enhance rural engagement for long range community transportation planning in Tennessee.			
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# Executive Summary

Public participation helps to ensure that decisions are made in consideration of, and to benefit, public needs and preferences; as such, it is an integral part of the transportation development process. Early and continuous public involvement brings diverse viewpoints and values into the decision-making process and helps to ensure that the public feels vested in the process going forward. Engaging the public early and appropriately allows agencies to make better informed decisions through collaborative efforts and builds mutual understanding and trust between the agencies and the public they serve. As a predominately rural state, Tennessee's rural transportation system plays a vital role to Tennessee's economy. Historically, rural communities receive less attention from the federal and state governments compared to urban communities in terms of mobility issues. Moreover, due to barriers with regards to technology, geographic location and resources, rural communities often hold a different array of views and concerns on issues pertaining to their own specific transportation needs. Conducting meaningful public engagement with these communities can help agencies to access first-hand information about community-specific issues and concerns otherwise unknown to the agency. Effective rural community engagement can flag potential controversies, solutions to problems that best meet their needs and provide feedback on how to get the community involved.

At Tennessee Department of Transportation (TDOT) there are basic standards and protocol that must be followed for community engagement and public input/outreach. While these practices and policies do exist, TDOT has an opportunity to contribute to rural community engagement. The Office of Community Transportation (OCT), in collaboration with state's 12 rural planning organizations (RPOs) and 11 metropolitan planning organizations (MPOs), provides timely public engagement activities in rural and urban areas for statewide transportation planning. However, it seems TDOT, while having success with urban engagement, felt that rural engagement was lacking. Therefore, there is a need to identify methods and best practices to enhance and improve the engagement of rural communities. This research project investigated and identified best rural community engagement strategies and offers recommendations for tools and techniques that can be incorporated into the current TDOT engagement plan in order to better serve rural communities.

To this effect, we employed a mixed method research approach for this study. We began by conducting an extensive review of scientific literature to learn what rural community engagement strategies are most effective. Information gained from this literature review was used to develop a semi-structured interview instrument for conducting interviews with four regional OCT supervisors, and leaders in four Tennessee rural communities identified by TDOT as communities of interest: Cookeville, Gordonsville, Greeneville, and Brownsville. This helped us identify technological, cultural, social, and economic factors of these rural communities that impact the ways in which they engage with State agencies. The outcome of this task provided us with an organizing framework for identifying various effective practices, tools, and techniques for rural engagement. These recommendations were coded and organized to develop a Delphi survey. The survey consisted of recommendation statements made in the interviews and was analyzed against a 70% agreement threshold. Statements meeting this threshold were then included in a

second survey that was again subjected to the 70% agreement threshold to build true consensus of best practices for rural community engagement.

## ***Key Findings***

- Strategies that work for engaging communities in urban settings may not work in the same way in rural communities – transportation, technology, and resources vary widely.
- Community outreach via social media seems effective to connect and communicate with a broader demographic in rural communities. However, because of lack of consistent internet and cell phone coverage in rural communities, social media should be viewed as a complementary communication strategy but one that is incomplete.
- Virtual meetings are also problematic because of internet coverage. Though this does have the potential to increase community engagement, virtual meetings cannot replace in-person meetings in rural communities.
- Securing support of influential community leaders and elected officials is vital to improving engagement and successful implementation of the project.
- Transparency and open communication are vital in rural communities from the onset of a project. This will increase trust in TDOT and make citizens feel as if they have an impact on the projects that are planned for their communities.

## ***Key Recommendations***

Based on the key findings and objectives of this project, five recommended courses of action are proposed.

1. **Rural Engagement Meetings and Communications.** TDOT should treat all communities with respect regardless of their size and understand that the needs of rural communities are different than larger/urban cities. It is of the utmost importance to keep the lines of communication open between TDOT and the community to build trust and credibility. It is essential that TDOT have strong presence in the community so as not to be seen as an outsider. As it is important for the community to understand TDOT and its purpose. In this regard, TDOT can offer periodic educational workshops on the role and positive impacts of TDOT projects. Additionally, this information can be included in community meetings. Besides informational meetings, TDOT needs to do more to seek community input on projects, such as conducting community surveys or short informational polls to assess opinions. The input should go beyond that of community leaders and should include the broader sections of the community. Rural communities are often skeptical of the government, but they still like to be asked for their input on projects. It is also recommended that TDOT follow up with how they have incorporated feedback from communities.
  - **Meeting Format.** While community engagement meetings are often conducted in-person, due to COVID-19 pandemic, the option to conduct these meetings virtually was explored. While there is interest in virtual meetings, this format may not be accessible to everyone in rural communities given limited internet access. However, there is strong support in communities for TDOT to conduct these meetings in a hybrid format in which there would be a virtual broadcast

of an in-person meeting. TDOT can work with local media outlets to help with engagement by streaming on their platforms or use social media platforms (e.g., Facebook) to live broadcast the meetings. Technology can also be incorporated into the meetings, by using visual and interactive tools during meetings to engage rural communities (for example, digital maps, scenario building, user-friendly interactive websites, and infographics). It is important for individuals hosting such meetings to be familiar and comfortable with using technology at the meeting.

- **Meeting Location.** It is recommended that community engagement meetings are conducted at a location that is well-known, easily accessible through transit and near to the project. While there are some locations that are community specific, community centers, city/town halls, auditoriums at public schools, and lecture halls at local colleges are preferred locations of meetings. TDOT also should consider holding multiple meetings in more rural areas to improve access for and attendance by community members.
- **Timing of the Meeting.** In addition to the location of the meeting, TDOT should consider the time of the meeting. It is recommended that community meetings should be held after 5 pm and take into consideration the average commute time to the meeting location. To engage the business community, TDOT may consider a lunch time meeting. The meetings should be no more than two hours long.

2. **Guidelines for Media outreach and Improving Attendance.** Appropriate advertisement and media outreach are key to successful community engagement. It is recommended that TDOT implement multifaceted advertisement strategies by taking into consideration generational difference. Articles in the local newspaper are more likely to reach older community members, while advertisements on social media are more likely to reach younger community members, as well as reach across socioeconomic statuses in the community. Word of mouth can also be effective in spreading meeting information in small communities. Thus, TDOT should use a combination of radio, newspaper, social media, and local news media to advertise meetings. Email alerts, text alerts, and flyers at community centers are also recommended for advertising meetings. Giving multiple reminders and sharing information in multiple languages help reach broader sections of the community. Finally, the advertisements should include details about what will be addressed in the meeting.

Recommendations for improving attendance include communicating how the project will have a positive impact on the community. Currently, people are more likely to go to meetings when they feel the issue is controversial, so it important to understand these perceptions in the community. One recommendation for approaching this is to allow community members to submit questions and comments through the TDOT website prior to community meetings. Moreover, it is recommended that TDOT work to have insider knowledge of the community before advertising the meeting so they can better understand the community viewpoint of the project and create appropriate

advertising messages. Another recommendation for improving attendance is to collaborate with existing events and meetings.

Beyond community meetings, there are other ways that TDOT can engage in rural communities. It was recommended that TDOT develop and share a digital newsletter. The newsletter could provide meeting agendas and schedule information, as well as details like project timelines. Additionally, TDOT can use informational videos to promote meeting attendance and make visual and interactive tools such as digital maps, scenario building, user-friendly interactives, and infographics, available on the website.

- 3. Engaging with Rural Community Leaders.** In rural communities, it is important for TDOT to work with and have the support of community leaders. This will get more community members involved and results in better engagement. It is recommended that TDOT work with elected officials, local planning departments and local road committees, leaders of civic organizations, the chamber of commerce, and city staff when planning community engagement activities. Because most community leaders are actively involved in many aspects of the community, they are able to see the big picture of need and impact of transportation projects in their community development. So, TDOT officials should follow the chain of command of local elected officials before communicating with the community. There were multiple recommendations for ways that TDOT can work with community leaders. For instance, TDOT can advertise meetings or share a digital newsletter on the social media of local elected officials. TDOT also can bring community leaders into the meeting to draw support and create a trusting environment.
- 4. Consideration of Generational Differences in Shifts in Transportation Planning.** Generational divide is prominent in rural communities with aging population and outflux of younger members. In rural communities, baby boomer and Generation X are more likely to be engaged with TDOT projects. However, this presents unique challenges due to generational differences such as meetings not representing the entire community. Younger Millennials and Gen Z's preferences of more public and green transportation projects may not be well supported in the communities. Generational shift is also visible in technology use as the younger generation are more tech-savvy. Therefore, TDOT needs to be creative in striking a balance of the needs of the generational groups in the community in their transportation plans and designs. In every step of rural engagement, TDOT should thrive for multiple strategies to entice different generations in effective engagement.
- 5. Incorporating Rural Community Engagement Strategies Within TDOT's Existing Public Involvement Plan.** TDOT has a "Public Involvement Plan." The goal of the plan is to develop its transportation products and services in partnership with stakeholders and constituents to ensure accountability for its actions, continuous communication, consistency in approach, and integrity in its dealings. The TDOT has identified five levels of public involvement in order to establish minimum levels of required public involvement



and allow for development of flexible public involvement programs for different projects. The rural engagement strategies identified in this study are applicable in all five levels of rural transportation planning, but these are especially applicable for level 5 projects which involve statewide or systems-level efforts undertaken by the Department, including the Statewide Long-Range Transportation Plan, the Statewide Transportation Improvement Plan (STIP), the Statewide Rail Plan, Statewide Aviation Plan and Statewide Transit Plan. It is recommended that in the next cycle of the update of the “Public Involvement Plan”, TDOT includes the best practices and strategies identified in this document to enhance its rural engagement and help shape the future of the state’s transportation infrastructure that is designed and developed for all.

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## **Glossary of Key Terms and Acronyms**

A rural community is defined by the US Census Bureau as a community with less than 2,500 members. According to the U.S. Department of Transportation, a rural area needing a functional highway of some kind has a population of 5,000 people. For purposes of planning, an area is classified as rural if it has a population of fewer than 50,000 people. Rural areas are also quite diverse; the rural south is incredibly different from the rural Midwest and strategies that work in one may not work in the other (Kidder, 2006).

Community engagement is defined as “the process of informing or collaborating with a variety of top-down and bottom-up stakeholders, with the objective to obtain public feedback and opinions on the planning and development of infrastructure within the built environment” (Head, 2007; L. Jacobs, Cook, & Carpini, 2009; Johnston, Lane, Devin, & Beaston, 2018; McLaverty, 2017; Nabatchi & Leighninger, 2015)” (cited in Friedrichs, Tomitsch, & Haeusler, 2020, p. 14).

# Chapter 1 Introduction

Public involvement is an important process in transportation planning. It ensures that the public is fully informed and has the opportunity to be meaningfully involved in developing, building, and maintaining transportation systems. The Federal Highway Administration (FHWA) and the Federal Transit Administration have issued policies for promoting public involvement at all stages of planning and project development. State departments of transportation, metropolitan and rural planning organizations, and transportation providers are required to develop, with the public, effective involvement processes tailored to local conditions. Public involvement strategies that are typically effective elsewhere may not be effective in rural and small communities due to barriers such as technological, geographical, limited resources, etc., effectively limiting meaningful involvement by rural populations in the transportation decision-making process. Lack of rural engagement in rural transportation planning may have a detrimental impact on their mobility, access, and environment.

Transportation networks are designed for public use and are more effective and supported when developed with public engagement (Owens, 2000). For this study, public includes individuals and organized groups who reside, work, have an interest in, or do business in a given area potentially affected by transportation projects. Community members intimately know their region's transportation issues and challenges and are vested in improving their transportation systems. FHWA and other federal agencies implementing the National Environmental Policy Act (NEPA) of 1969, FHWA environmental procedures (23 CFR 771) and Council on Environmental Quality implementing regulations outline requirements for public input during the project development process. These regulations include publishing notices and providing the opportunity for public hearings to obtain input about transportation projects (23 CFR 771.111, 2009). The Inter-modal Surface Transportation Efficiency Act of 1991 (ISTEA); its 1998 successor, the Transportation Equity Act for the 21st Century (TEA-21); the 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU); and the Moving Ahead for Progress in the 21st Century Act 2012 (MAP-21) emphasize public participation in the transportation planning and programming process. FHWA's "Public Involvement Techniques for Transportation Decision Making" is the most recent guide which provides a variety of tools to secure meaningful input from the public on transportation plans, programs, and projects, and it can help agencies improve their overall public involvement techniques (FHWA, 2015). According to the Tennessee Department of Transportation's Public Involvement Plan, five levels of public involvement activities have been constructed by TDOT to ensure engagement at different stages of a project (TDOT, 2012).

Morris and Fragala (2010) investigated the state of the practice, cost-effective strategies, and implementation techniques used to engage the public in the development of transportation plans and projects using limited resources. Based on telephone interviews with transportation agency and community representatives, their report found that some agencies are creatively engaging in effective public involvement using limited resources, which includes: utilizing the Internet, using visualizations, holding the meeting in the right place, on the right day, at the right time, leveraging relationships, playing interactive games, taking the time to sit and listen, and

using appropriate public involvement programs. In their white paper, O'Connor, Schwartz, Schaad, and Boyd identified a number of challenges to developing best practices in public involvement in transportation planning. To promote successful public involvement, they recommended: (1) removing agency barriers by dedicating budget and staff to public involvement, (2) ensuring a broad-based audience and improving communication tools, (3) maintaining public attention and conveying complex information, as well as receiving complex feedback, (4) managing effectively with issues of timing, (5) developing standards and assessment tools, and (6) developing training programs (O'Connor, Schwartz, Schaad, & Boyd, 2000). The NCHRP 25-25 Task 80 report identified and evaluated how state departments of transportation and other transportation agencies are utilizing social media and web-based tools during the NEPA process, specifically in regards to public involvement. The research included an online survey and case study interviews to inform recommendations for implementing social media during the NEPA process. The research provided a compilation of information on the applicability of various social media platforms as public involvement tools for NEPA public outreach in the form of an online tools matrix (Barron, Peck, Venner, & Malley, 2013).

Before broad recommendations can be implemented in rural communities, the challenges of engaging rural communities as well as their unique transportation needs must be better understood. Elderly individuals in rural communities, for instance, are more likely than those in urban settings to have transportation challenges in accessing healthcare (Bolin et al., 2015; Smith et al., 2017). When looking at the differences between urban and rural communities, one must look at poverty levels, diversity, and education level. The percentage of individuals living in poverty in rural communities is notably higher than those living in poverty in urban or sub-urban communities, and the rural-urban disparity is even greater for minorities (Thiede, Greiman, Weiler, & Conroy, 2017). Additionally, the percentage of elderly residents is higher in rural communities than in urban and suburban communities. Another challenge facing rural communities is their educational level in which many community members do not receive a high school diploma. Anderson and Perrin also discovered that residents living in rural communities were two times less likely to use the Internet than residents in urban communities (Anderson & Perrin, 2015). Collectively, rural demographics indicate that the recommendations and strategies present in the extant literature for public engagement in transportation policy are often geared towards urban communities and that more research is needed on engagement with rural communities to improve public participation standards around transportation. There is a wealth of studies on public involvement, however; there is limited information and guidance about rural and small community engagement which can be critical for rural state like Tennessee.

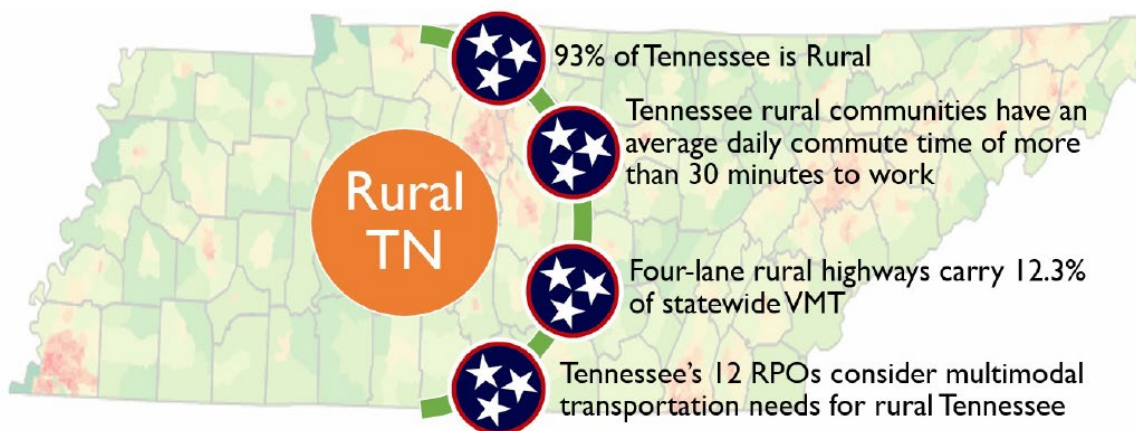
## **1.1 Research Problem**

For transportation agencies, quality planning and project development require meaningful input from the public. Many members of the public are genuinely interested in what is happening in their community but do not know how they can effectively provide input to influence the outcome of a transportation plan or project. Public involvement is just one of the terms planners use for gathering information from the public. Other terms include public participation, public outreach, and public engagement. These terms are often used interchangeably. Whichever term is utilized, they all have the same overarching goal, which is



to ensure that community members have a voice in their transportation systems. Like many other transportation agencies around the country, TDOT has developed basic standards and protocol that must be followed for community engagement and public input/outreach (TDOT, 2012). A majority of these standards have origins in standard policy from the Federal Highway Administration ([FHWA], 2017). Public engagement provides significant value as it helps to reach effective transportation solutions by considering a wide variety of viewpoints. It encourages people to speak up and share their ideas, which can influence infrastructure in their community. Effective public engagement activities build credibility and trust between the department and those whom it exists to serve. Public engagement also promotes the likelihood the projects are widely accepted, that projects are effective solutions, and that the citizens are knowledgeable about the projects and their benefits (Bassler, 2008). While these public engagement practices and policies do exist, TDOT sometimes finds it challenging to involve the public in a meaningful way, especially in small town and rural community.

Most of the land area in Tennessee is rural. Based on the 2010 Census, 93% of Tennessee is rural. Some 70 of 95 counties had at least 50% of their residents living in the 38,330 square miles of rural Tennessee (TN.gov, 2018). Tennessee's rural transportation networks not only provide connection to major urban cities but play a vital role in Tennessee's economic development by also carrying 12.3% of statewide VMT (vehicle mile traveled). Interestingly, people in rural areas have unique differences and challenges when it comes to economic and community development, transportation needs, and health care. It is not surprising then that TDOT would have difficulty effectively engaging rural population. Rural communities are often distant from the technological, geographically, and socially dense urban and suburban communities, which presents distinct challenges in policy engagement.



**Figure 1-1.1 Rural Tennessee**

Rural areas often find themselves somewhat isolated with regards to technology, geographic location, and resources. Because of the inherent geographical isolation and dispersed populations, community engagement can be more challenging because access issues exist at the outset. When several rural communities are involved in the community engagement process and there is only one meeting venue, it can be difficult to travel to that one location due to distance or lack of transportation. Poorer, older, and disabled persons may be particularly disadvantaged. The time involved in participation is greater. Technology such as

internet access, which plays a key role in engagement in a lot of scenarios, may be limited in rural areas. Generational divide is more prominent in rural communities with more aging population and fewer younger people. While the younger generation prefers public and green transportation, older person's preferred travel modes are still cars and pedestrian facilities. In addition to this, budgetary and staffing limitations may constrain the scope of public involvement programs and what communities can actually do with their community participation campaigns. As a result, community engagement techniques that may successfully work and yield greater outcomes in urbanized and metropolitan areas may not always translate well in rural and small communities. Therefore, this study addresses two research questions:

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***Research Question 1. What are the best practices and strategies when engaging rural communities?***

***Research Question 2. How can these practices be incorporated into current procedures and policies to better serve rural communities across the state in regard to transportation needs?***

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## **1.2 Purpose of the Research**

Public participation helps to ensure that decisions are made in consideration of and to benefit public needs and preferences; as such, it is an integral part of the transportation process. Early and continuous public involvement brings diverse viewpoints and values into the decision-making process and helps to ensure that the public feels vested in the process going forward. Engaging the public early and appropriately allows agencies to make better informed decisions through collaborative efforts and builds mutual understanding and trust between the agencies and the public they serve. Rural communities, often underserved or neglected, may hold a different array of views and concerns on issues pertaining to their own specific transportation needs. Conducting meaningful public participation with these communities can help agencies to access first-hand information about community-specific issues and concerns otherwise unknown to the agency. Effective rural community engagement can flag potential controversies, identify solutions to problems that best meet their needs and provide feedback on how to get the community involved. This research project has investigated and identified best rural community engagement strategies to offer recommendations for tools and techniques that can be used with the current TDOT engagement plan to better serve rural communities. The specific objectives related to the two aforementioned research questions were as follows:

1. Identify appropriate locations for meetings and other planned activities, as well as the best time of day to engage, and any geographic or technological barriers.
2. Develop guidelines for appropriate outreach channels including social media, newspapers, and radio.
3. Identify best practices for working with rural community leaders including building consensus between county government and rural community, personnel and staffing shortages that may impact community engagement, and guidelines for interacting with community leaders who may not use communication technology like emails or computers.
4. Document generational differences in shifts in transportation best practices.

5. Incorporate rural community engagement strategies within TDOT's existing public involvement plan.

### ***1.3 Organization of the Report and Outcomes***

This report is organized in the following chapters:

**Chapter 1. Introduction** – provides an overview of the public engagement in transportation planning and need for guidance about rural and small community engagement which can be critical for rural state like Tennessee.

**Chapter 2. Literature Review** – provides a comprehensive review of literature related to public engagement and identifies recommendations based on the publications.

**Chapter 3. Methodology** – provides a detailed description of research methods consisting of OCT supervisor interview, community leader interview and Delphi community survey.

**Chapter 4. Results and Discussion** – provides detailed results of the interviews and two rounds of Delphi community survey and summarizes effective rural engagement strategies.

**Chapter 5. Recommendations** – provides a set of recommendations to improve rural engagement and process to incorporate them in the existing Tennessee public involvement plan for easy implementation.

**Chapter 6. Conclusion** – provides concluding remarks, summary recommendations and limitations of the study.

The development of the best practices and new applications of existing public involvement practices are key tasks of this research project. It is anticipated that there are always key differences within communities and social groups, therefore, a “one-size-fits-all” strategy will be ineffective. For effective engagement, TDOT needs to gain a better understanding of the communities that they are trying to engage before committing resources to public involvement approaches and a public involvement plan. Once various contextual factors related to the community are identified, emphasis must also be given to the customization of the outreach program with TDOT being flexible and prepared to respond to feedback or problems with further adjustments. Collectively, the efforts of this project will allow the TDOT Long Range Planning Division to continue relationship building and planning efforts in rural communities with greater effectiveness, as well as input and buy-in from the community.

## Chapter 2 Literature Review

The qualitative and quantitative data collection stages were guided by the recommendations made in the extant literature. Reviews and analysis of the literature identified six themes: location, timing, and method for engaging rural communities; outreach channels for engaging rural communities; interacting with community leaders to engage rural communities; generational differences in engaging rural communities; communication campaigns for engaging rural communities; and additional recommendations for engaging rural communities.

### ***2.1 Location, Timing, and Method for Engaging Rural Communities***

The literature on rural community engagement argues for well-advertised and non-traditional meeting locations and times (INDOT, 2014). Rural communities often have longer commute times which can impact their ability to participate in community meetings. Accessible events with outcome orientated goals and engaging interactions are likely to bolster community engagement (Wagner, 2013). A multi-faceted approach to community engagement such as public advisory boards made up of local community members and leaders, clear infographics, and solicitation of public opinion help advertise meetings to the community and make it seem as if their opinions are valued, which can increase turnout at community meetings (Wilmapco, 2010).

A Pew Research Study conducted in April of 2020 reported that 53% of Americans claimed the internet was vital to them during the pandemic. 44% of rural respondents reported that access to the internet was essential; 39% reported that it was important but not essential (Vogels et al., 2020). Internet access in rural communities is lower than that of more densely populated areas. The Federal Communications Commission estimates that approximately twenty million, largely poor or rural, Americans do not have access to broadband internet (Lourenco & Tasimi, 2020). In 2018, the Federal Communications Commission reported that 31% of rural Americans did not have access to broadband internet (Ramsetty & Adams, 2020). It is also possible that even if someone has access to the internet, it may not be reliable enough to support something like a videoconferencing platform (Zhai, 2020). Rural internet access has more barriers than urban areas because of the wide geographic areas that would need to be covered and the low number of people that would be provided with internet access (Whitacre, 2010). There have been several federal and state awards granted to internet service providers to help them broaden access to internet (USDA, 2011). The Recovery Act provides grant and loan money to expand access to the internet in rural parts of the United States. The last year has shown how far many rural areas still are from having reliable internet access through the reactions of internet providers and school systems when many communities retooled to go online to protect their community members. As access to the internet increases and the cost of internet decreases, this financial burden could play a role in why rural areas who might be expected to have internet access do not. Rural areas tend to have a lower socioeconomic status than nonrural areas, meaning the financial burden of internet may not seem necessary to large swaths of the community (Boase, 2010). This is further shown in the relation of social networks within rural communities. Rural community members may not have many network ties that are

outside of the community, which further decreases the need or desire for internet access because they will not be using it to maintain social ties with people who live outside of their community.

Studies that use internet-based technologies to study rural areas and people of lower socioeconomic status show that the community is not adequately represented due to lack of access to the internet in rural areas (Evans-Crawley & Griffin 2012). The use of internet-based data gathering methods is increasing in popularity partly due to the less costly nature of this kind of data, but it does not adequately represent the population (Griffin & Jiao, 2019).

## ***2.2 Outreach Channels for Engaging Rural Communities***

Social media is any website or app which allows users to create and share content or social network with other users. Social media has become an increasingly used medium in western societies, however there do seem to be some differences in use based on population density of an area. In urban areas, social media is able to have a broader reach and bigger impact on its users' opinions; in rural areas people seem less likely to use social media and are more likely to use their friends to shape their opinions. This could be related to the low network externality of rural areas. People who live in rural areas are more likely to be friends with people in the area because people are less transient in rural areas in comparison to urban areas (Boase, 2010).

This does not mean social media is not useful in communicating with rural communities. Social media can be used in tandem with websites, blogs, and flyers in the community to communicate with constituents (Wagner, 2013). It is also important to highlight the use of community spaces such as the library in rural communities. Since rural communities have less access to the internet than more urban areas, libraries could hold a greater use for these communities. So even though the definition of social media is internet based, it is also important to broaden the thinking in rural communities to include where people access the internet (Hamilton-Pennell, 2008). Effective engagement with communities involves detailed plans to communicate information using social media. It is important not to focus resources on one specific type of social media, as this may not capture everyone intended. Using many forms of advertising, including print campaigns with social media and website information, is supported by evidence that web traffic of community resources increases throughout the advertisement campaign (Imagine Central Arkansas, 2019). The literature recommends using a wide array of outreaches, such as advertising at other meetings, print and electronic newsletters, the use of community text and email alerts as well as social media sites such as Twitter and Facebook (Wilmapco, 2010). A study of microblogging on sites such as Twitter and Facebook show that social media posts and interactions can be analyzed to show how engaged community members are with topics and projects that will impact the community. This can be done by measuring the number of times a topic is mentioned using specific hashtags. It can also be done by measuring how often a specific user posts about a topic and the interactions their posts receive. Parameters such as immediately after a project plan is announced or during a certain timeframe before or after a community meeting can be added so the data can be

most applicable to the specific project being discussed (Evans-Crawley & Griffin, 2012). Social media can also be used in this way to create a brand for the organization or the project by actively engaging with community members, responding to public opinion, and using social media to keep community members informed (INDOT, 2014). These brands take time to build trust within the community, but it can be a cheap and fast way to communicate with the community and then to assess engagement using tools to analyze micro-participations, such as hashtags and other user interactions. Social media can also be used as a way to make community meetings more accessible to the public because a community member would not have to attend a meeting to know what was discussed or decided during that meeting (Wagner, 2013).

### ***2.3 Interacting with Community Leaders to Engage Rural Communities***

“Governments across the developed world legislate that formal community engagement be undertaken about proposed infrastructure developments, environmental assessments and legislative changes. However, the overall engagement undertaken can often be reduced to informing people only, therefore limiting community input from a variety of stakeholders” (Head, 2007; L. Jacobs, Cook, & Carpini, 2009; Johnston, Lane, Devin, & Beaston, 2018; McLaverty, 2017; Nabatchi & Leighninger, 2015, pg. 14). This admission that sometimes engagement can be reduced to just informing community members is incredibly important. It shows that government agencies are recognizing that the way they are engaging with rural communities is not completely effective and they want to find better methods of engagement. It is also important to reiterate that rural communities are diverse compared to each other, and an engagement style that works for one community may not be as effective in another (Kidder, 2006). An approach such as Middle Out Engagement, which is where the government organization gives information from the top and the community gives organization from the bottom of the hierarchy and they meet in the middle to come up with a plan (Fredericks, Hespanol, & Chamorro-Koc, 2021).

Effective public participation is classified as "1. involving citizens in planning and design decision making processes, 2. Providing citizens a voice in planning for improvement of plans and decision making and, 3. Promoting a sense of community by bringing people who share common goals together" (Evans-Crawley & Griffin, 2012, p. 90). This definition of effective public participation is important because it outlines the three major goals which, if implemented, would lead to increased engagement with communities. These goals also help establish a way for the community to hold the organization accountable for seeking ways to adequately engage with them. It is important to review and evaluate engagement throughout the process, foster peer to peer conversations, harness existing relationships, and make it convenient to the community (MnDOT, 2015). This will help ensure the organization is receiving representative feedback. It is important to give community members plenty of ways to engage with government organizations, such as written feedback (Antonson, 2014).

According to Imagine Central Arkansas (2019) Plan Smart. Live Smart., there are four outreach objectives: listen, create awareness, educate, and collect feedback. These four outreach

objectives can be implemented to show the community that the organization truly wants to work with them and have their input on projects. Through these objectives, the agency is intending to have better community participation. There are “four phases of outreach: Kickoff/listening/educating, development of alternative futures, selecting a preferred vision/future, and implementation”. Input from the community can be beneficial when developing alternative futures and implementing plans. This step can help foster a sense of collaboration, trust, and respect between the two entities.

Three more important aspects of engaging with rural communities are “accessible events, engaging interactions, and outcome-oriented process” (Wagner, 2013). These are important because they outline how organizations can seek to engage with their target communities. Each of the three goals are also broad enough that the organization can tailor them to their specific needs for engaging the community. In this, accessible events can be defined as physically accessible events for people who are differently abled, or it can mean implementing social media live streams so more people have access to an event such as a community meeting. Engaging interactions, for example, could be responding to questions at a community meeting or interacting with people on social media. Having an outcome-oriented process helps orient the goals of the engagement both on the side of the organization and for the public. Keeping the intended outcomes at the forefront of engagement helps foster relationships between the organization and community members (Wagner, 2013).

For outside organizations to engage well with communities, they need to understand how the community sees themselves. Rural communities can have a high degree of social cohesion through relationships built over years of working together in the community, but this is not always the case. A study of two rural communities shows that as the world evolves rural communities must find their footing. This can be difficult as they are often hesitant to accept and changes to their way of life. The study found that the rural community that was still trying to find its place was more disjointed and engagement, though positively thought of, was not high, whereas the other rural town in this study was embracing change and was more engaged. Rural communities tend to evolve at a slower than average rate, so it is important to think about what a good resource for engagement would be, and one that the literature continually brings up is the local library. The library functions as a place to network, find out information about the community, and advertise to the community (Hamilton-Pennell, 2008). Rural community outreach should focus on what is specifically necessary to the community because it shows that the organization knows what will directly impact the community and that they care about the community's opinions and value their input (Public Participation Plan, 2019).

It is valuable to engage with local community leaders. Local leaders can provide more detailed information on what the community needs, rather than what it is most vocal about wanting. Communicating with local leaders can also help assess some of the challenges staff of local governments face, needs of local governments, opportunities for district collaboration, and consistency of administration (Florida's Rural Transportation Planning Process Phase 1, 2018; (Beaudoin and Stephenson, 2016). These things can be addressed through interviews, interactions with, and surveys of community leaders (Kentucky Transportation Cabinet Statewide Transportation Planning Program Rural Consultation Survey, 2015). The community

can also put together a public advisory board for specific projects to act as community liaisons. These boards can be made up of elected and non-elected community leaders and can help inform decisions, disseminate information, and garner support for projects (Wilmapco, 2010; Public Participation Plan, 2019).

## ***2.4 Generational Differences in Engaging Rural Communities***

Age is an important factor to take into consideration when planning engagement with rural communities. Rural communities have a high out-migration of young people, and a high in-migration of people around retirement age (Von Reicher, Cromartie, & Arthun, 2014). This is important because there could be different ways to engage with the population based on age. Younger people, specifically millennials, are more likely to use public transportation than Generation X. Millennials are also less likely to own a car or have a driver's license. There is some debate on if this will change as millennials age and enter new life stages. For now, it is important to consider how millennials in rural areas are impacted by these differences. If they would prefer public transportation, they may be limited to living in more urban areas, especially if they do not own a car (Rhaimi et al., 2020). This could maintain the standard that younger people tend to leave rural areas for more urban areas. Public transportation is challenging in rural areas because public transportation is funded by local taxes which can be different based on county of residence, so public transportation would be implemented one county at a time (Kidder, 2006). If an older person is new to the rural community, they may also not be as ingrained in the social network as someone who has lived there their entire life. This could mean it would be important to specifically target older community members who just moved to the area in the engagement strategy.

In rural communities, older people are likely to be engaged with the community. However, this presents unique challenges due to generational differences, e.g., meetings not representing the entire community. Some community members may be difficult to engage with because of barriers to accessing community meetings (Griffin, 2013; Choi, 2019). For example, older community members' levels of engagement may also be impacted by transportation barriers (FDOT, 2018).

## ***2.5 Communication Campaigns for Engaging Rural Communities***

Florida's Rural Transportation Planning Process Phase 1, done in 2018, outlines two types of surveys common to community engagement: surveys given to community leaders, and surveys given to community members (FDOT, 2018). Surveys given to community leaders can be more detailed on policy and ask questions about whether the community is getting what it needs from state governments. In one study, the surveys of community leaders were not anonymous because the state wanted to be able to pinpoint where the data was coming from and provide an avenue for state officials to talk with community leaders. This survey did not have a good response rate, likely because of pressure felt from the lack of anonymity. Surveys of community members are outlined in the literature as being brief to reduce respondent burden and increase response rate (Public Participation Plan, 2019). They are also described as very specific,



so the respondents know the data they are providing will be used for projects that directly impact them (Griffin, 2014).

## ***2.6 Additional Considerations for Engaging Rural Communities***

Throughout the last few decades, transportation has faced deregulation (Kidder, 2006). This has given states and local governments more power in deciding what transportation projects they need to fund, but it has also given way to more safety concerns. This has led local and state governments to work on engagement plans for their communities (Stommes & Brown, 2002).

Events such as workshops can be valuable to engaging with the community. Workshops can provide opportunities for the community to interact with planners and organizational leaders (Appendix A: Community Engagement Plan). When engaging with rural communities it is important to ensure that the feedback from the community is representative. This includes people who are disabled and people whose primary language is not English (Public Participation Plan, 2019). An analytic hierarchy approach using comfort criterion as outlined in the article “Public engagement in strategic transportation planning: An analytic hierarchy process based approach,” could be useful because it would give community members a tangible way to interact with factors that would impact transportation. The criteria are accessibility, travel safety, travel comfort, environment, and landscape (de Luca, 2014).

Maps and models can be used to demonstrate what plans for the community are specifically. They can also be useful because community members can pinpoint specific areas they think need work (MnDOT, 2015; Griffin, 2013). These types of workshops can also be paired with data about crash sites so community members can talk about problematic or dangerous areas (Waldheim, 2010). For communities with access to some public transportation, community engagement can be used to measure where community members would want the system to expand. In these scenarios, community members are encouraged to work in groups and to keep in mind accessibility and transit times (Stewart, 2017). About 71% of all lane miles of public roads and 73% of bridges are in rural areas. This means rural roads are some of the most important ways to maintain connections to other locations (Graves, 2015).

## Chapter 3 Methodology

This research was guided by two research questions: 1) What are the best practices and strategies when engaging rural communities? 2) How can these practices be incorporated into current procedures and policies to better serve rural communities across the state in regards to transportation needs? To address these questions and make recommendations on engaging in Tennessee rural communities, a five-phase study was developed and implemented. In the first phase, an extensive literature review was conducted on best practices for engaging in rural communities. The literature review identified a number of major themes of public engagement in transportation planning. In the second phase, TDOT Office of Community Transportation (OCT) supervisors from each TDOT planning region were interviewed to gather existing practices of community engagement. In the third phase, four case communities of interest to TDOT were identified. A new interview instrument was developed using the major themes of the literature and information generated through OCT interviews, and a series of interviews were conducted with community leaders in the four case communities. In the fourth phase, the interview transcripts were analyzed to develop the Delphi community survey and two rounds of the survey were conducted to better understand the consensus regarding the recommendations made by community leaders. Finally, in the fifth phase, the findings of literature, interview findings, and survey results were combined to develop recommendations for rural community engagement in long range transportation planning. The findings and results are presented in Chapter 4 and the final recommendations are discussed in Chapter 5.

### ***3.1 Comprehensive Review of Literature***

The initial task involved a search of published literature focusing on the practices of public engagement. In particular, we reviewed literature on public engagement in community planning projects including but not limited to transportation planning, community engagement in rural communities, and literature that notes the particular nuances of engaging with rural populations. The research team employed standard techniques for a review of scientific literature including Google Scholar search, discipline specific database searches (like TRIS database and engineering databases), and reviewed applied reports and white papers for techniques utilized in rural communities that may not yet be present in peer-reviewed literature. The comprehensive review of the literature, both academic and technical, revealed that significant gaps and barriers exist to effective community engagement in rural settings. Several themes focusing on location, timing, and method for engaging rural communities, outreach media and channels, interacting with community leaders, and educating and informing rural communities through communication campaigns for knowledgeable decision-making emerged from literature review.

### ***3.2 OCT Supervisor Interviews***

The Office of Community Transportation (OCT) provides TDOT with a thorough understanding of local communities and the various transportation planning documents and policies. The OCT partners with local agencies to determine appropriate land-use and infrastructure, collaborates

with local partners on transportation decisions, and facilitates communication between TDOT and local partners through planning efforts. OCT has community transportation planners located in each of the four TDOT regions. OCT planners establish relationships with local partners and provide tools and resources to local partners to outline comprehensive, long-term transportation goals based on a vision for their communities. The OCT is also responsible for the development of rural regional transportation plans and major corridor and street plans and documents.

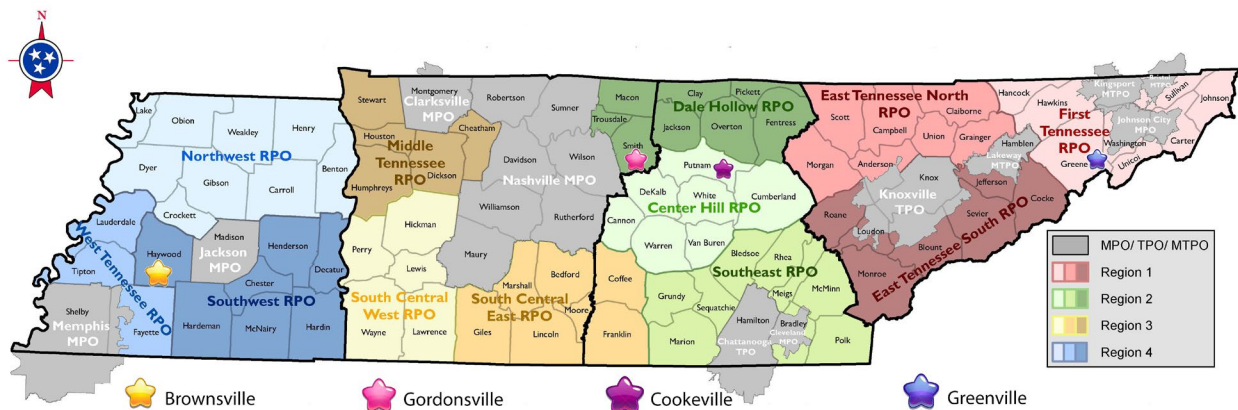
To learn existing best practices of rural community engagement, four regional OCT supervisors were interviewed via Zoom. A question guide was used to learn the engagement process, typical attendees, time, location, communication tools, technological barriers, logistical challenges, online vs in person engagement, empowering communities, and best practices of rural community engagements (Appendix A: Interview Guide for OCT Supervisors). Interviews with the OCT supervisors were transcribed and cleaned. Analysis of the data identified several meaningful insights of rural community engagement in Tennessee as illustrated in Figure 3-1.



Figure 3-1 Rural community meeting

### 3.3 Community Leader Interviews

Elected officials, leaders of public service organizations, agency administrators, service agency professionals and influential individuals within community play key roles in rural community development. These individuals have first-hand knowledge of and experience in the community. Because of their inside knowledge, they often serve as liaison with other government agencies, help building consensus among community members and offer solutions that respond to the local situation and the interests and values of the communities involved. Therefore, participation of rural community leaders in these processes is essential to show significant commitment to help make the projects happen. For this study, four case rural communities were identified and six community leaders from each community were interviewed. The four communities were Cookeville, Greeneville, Gordonsville, and Brownsville. Each of these communities represent one of TDOT’s four planning regions (Figure 3-2). These communities were identified by the OCT as communities of interest for future TDOT long range transportation planning.



**Figure 3-2: TDOT MPO/TPO/RPO planning regions**

To identify community leaders in each of the four communities, the research team used a list provided by OCT. All community leaders were contacted by email and/or phone, whether they accepted the preliminary invitation from OCT or did not respond, to request an interview. To identify additional interviewees, the Centers for Disease Control and Prevention’s (CDC) sustainability planning framework<sup>1</sup> was utilized to reach out to additional individuals.

- Corporate/Business representative (Chamber of Commerce)
- Local Government (mayor, local municipal planning board)
- Civic Organization/ Associations representative (Kiwanis Club, Rotary Club)
- Academic Representative (from higher education institution)
- Faith/Personal/Ethnic Organizations (pastor or large churches)

<sup>1</sup>[https://www.cdc.gov/nccdphp/dch/programs/healthycommunitiesprogram/pdf/sustainability\\_guide.pdf](https://www.cdc.gov/nccdphp/dch/programs/healthycommunitiesprogram/pdf/sustainability_guide.pdf)

- Other Key Individuals (may be specific to community)
- City Community Planning & Development
- Transportation Manager- City Public Works Department
- Department of Transportation representative

For each community, individuals holding any of these positions who accepted invitations to be interviewed were separated from the OCT list in order to identify individuals of unaccounted positions. A Google search was conducted to identify these individuals in each community. Once identified, they were contacted by phone/email for an interview. This process was continued until six community leaders agreed to be interviewed for each of the four communities.

An interview instrument consists of 16 questions was developed and were asked to each community leader (Appendix C). The questions were focused on five specific aims of this project: 1) location and timing of community meetings 2) outreach channels, 3) engagement practices of local community leaders 4) generational shifts in transportation practices and 5) communication strategies to improve engagement of the community. Community leaders interviewed for this study were three city/county mayors, five planner/planning directors, two public works directors, three business owners, two chamber of commerce directors, two academic administrators, two RPO coordinators and several other notable members in the communities, All interviews were conducted via Zoom. After agreeing to participate by phone, the research team confirmed the interviewees email address and sent them a calendar invitation with a Zoom link for the agreed upon time as set on the phone. Before recording the interviews to the Cloud, the research team read the informed consent document (ICD) to obtain oral consent, and then clicked "Record" in Zoom. The research team then conducted the semi-structured interview using the interview instrument. At the conclusion of the interview, the research team requested the interviewees assistance with disseminating the survey.

Using the Zoom auto-transcripts, based on the Cloud recording, all preliminary interview transcripts were cleaned for verbatim accuracy. This included the inclusion of pauses and non-word verbal cues. Using the audio and the transcript files, we ensured the accuracy of all files. The transcripts were then manually coded using the deductive themes outlined in Table 3-1. The data were then organized by these deductive codes to identify duplicate and related recommendations. Recommendations were organized by topic and supporting quotes were organized by recommendation.

### ***3.4 Delphi Community Survey***

The Delphi method is a process used to arrive at a group opinion or decision by surveying a panel of experts (Linstone & Turoff, 1975). Experts respond to several rounds of questionnaires, and the responses are aggregated and shared with the group after each round. The ultimate result is meant to be a true consensus of what the group thinks. The Delphi methodology enables the researcher to formulate a consensus about an issue in the field without the expense of bringing experts together physically, and with the added advantage of confidentiality and freedom from peer pressure or the undue influence of outspoken panel

members (Fish & Busby, 1996). The Delphi methodology is particularly well suited for bridging research and practice because it does not demand large samples, advanced statistical expertise, or a large amount of financial resources. In this study, literature reviews and community leaders' interviews provided a set of recommendations to improve rural community engagement; however, members of the communities need to evaluate these recommendations

**Table 3-1 Deductive Interview Codes**

Project Objective	Deductive Codes
1. Plan and conduct the study to identify appropriate locations for meetings and other planned activities as well as the best time of day to engage rural communities and any geographic or technological barriers.	<ul style="list-style-type: none"> <li>• Suggestions for locations for meetings</li> <li>• Best time of day for meetings</li> <li>• Geographic and technological barriers to engagement</li> </ul>
2. Develop guidelines for appropriate outreach channels including social media, newspapers, and radio.	<ul style="list-style-type: none"> <li>• Comments related to media (social media, newspapers, and radio)</li> </ul>
3. Identify best practices for working with rural community leaders including building consensus between county government and rural community, personnel and staffing shortages that may impact community engagement, and guidelines for interacting with community leaders who may not use community technology like emails or computers.	<ul style="list-style-type: none"> <li>• Suggestions for working with rural communities</li> <li>• Factors that may impact community engagement</li> <li>• Recommendations for interacting with community leaders</li> </ul>
4. Document generational differences in shifts in transportation best practices.	<ul style="list-style-type: none"> <li>• Differences by age group</li> <li>• Recommendations for working with different age groups</li> </ul>
5. Incorporate rural community engagement strategies within TDOT's existing public involvement plan.	<ul style="list-style-type: none"> <li>• Recommendations for communication campaigns</li> <li>• Recommendations/responses regarding delivery of survey to community</li> </ul>
6. Other comments of relevance	<ul style="list-style-type: none"> <li>• Any comments that are relevant to research but not coded elsewhere</li> </ul>

because they will directly or indirectly be impacted (positively or negatively) by these engagement policies when TDOT will ultimately implement them. As such, a Delphi method-based community survey deems appropriate to build consensus on the strategies that will be most effective in engaging rural communities.

Based on the recommendations coded from the community leader interview transcripts, a Delphi community survey was developed. The online self-administered survey was programmed into Qualtrics. The first-round survey included 131 statements focusing on 1) transportation planning meeting – in-person, virtual, 2) location, accessibility and time of meeting, 3) role and engagement of community leaders, 4) advertising of the meeting, 5) line of communication between TDOT and community, 6) use of digital tools and 7) educating and building trust with the community (Appendix E). The respondents were asked to indicate the extent to which they agreed or disagreed with the 131 statements on a Likert scale: Strongly agree, Agree, Neither agree nor disagree, Disagree, Strongly disagree. The first-round survey also included demographic questions, and open-ended questions to allow for additional recommendations. The survey was distributed to the members of the communities in two ways. First, community leaders who participated in the interviews were requested to distribute the survey in their respective community using their contacts and communication channels. Second, the survey was posted on social media site (mainly Facebook) that were specific to the four communities of interest. The OCT supervisors also distributed the survey among their contacts in the communities and posted it on TDOT social media sites. The survey remained open for two and half months. Several reminders were sent requesting members of the communities to complete the survey. At the end of the first-round of survey a total of 280 rural community members completed the survey.

As a Delphi survey, a threshold of 70% is used as a measure of agreement among the respondents. Thus, statements for which at least 70% of respondents “agreed” or “strongly agreed” are identified. These statements were then included on a second round of the survey. Any statements with less than a 70% agreed were removed from the survey to develop the second round of the instrument. A total of 43 recommendations made by the community leaders in the interview stage of the research did not meet the desired consensus threshold. The remaining 88 statements were included on the second-round survey instrument. All respondents who provided an email address at the end of the first survey were then invited by email to complete the second survey. The second survey remained open for four weeks and received a response rate of 48.2% (N=135). The level of agreement was again assessed against a 70% threshold and 7 additional statements were removed from the recommendations. It is noted, however, that these statements were specific to an individual community and received a low number of responses when not aggregated with the other communities. The remaining 81 statements that received a consensus across the two rounds of the survey were then used as the basis for recommendations made within this report.

## Chapter 4 Results and Discussion

Public participation helps to ensure that transportation decisions are made in consideration of and to benefit public needs and preferences. Frequent and effective public involvement brings diverse viewpoints and values into the decision-making process and helps to ensure that the public feels vested in the process going forward. Through early and effective public engagement, agencies can make better informed decisions through collaborative efforts and build mutual understanding and trust between the agencies and the public they serve. As small town and rural communities, which are often underserved or neglected, may hold a different array of views and concerns on issues pertaining to their own specific transportation needs, the purpose of this research was to better understand these needs and perceptions to make recommendations to TDOT. Conducting meaningful public participation with these communities can help TDOT access first-hand information about community-specific issues and concerns otherwise unknown to the agency.

This chapter begins with recommendations made by OCT supervisors and community leaders in the interview phase of this project. These recommendations have been coded and organized by five common themes. Next, the Delphi community survey respondent demographics are presented, followed by the level of agreement for each statement on the round one and round two surveys. The chapter concludes with a discussion of the results presented herein.

### ***4.1 OCT Supervisor Interview and Recommendations***

The four OCT supervisors have years of experiences working with rural communities in transportation planning and provided the research team effective engagement strategies based on their experiences working with the rural and small communities. OCT supervisors found that having a meeting location which is easily accessible through transit, ADA compliant, well known in the community and near project location helped meeting attendance. The central location used among all four groups was city halls, primarily since many smaller communities have no other place to conduct the meetings. Visual instruments such as digital map, poster and interactive exercise were more effective in engaging people than PowerPoint slides. Most OCT supervisors did not have much difficulty spreading the details of the meetings to the public via word of mouth and social media postings, which rural people use more nowadays. However, they mentioned that they still have trouble drawing in younger people. One other technological difficulty bemoaned by all is getting usable data from electronic surveys, which usually have poor response rates among both young and, older people in rural communities. An interesting factor brought up by one OCT supervisor is one's approachability based on how they dress; That is, to strike a balance between looking professional at the meetings and being casual enough not to intimidate or dissuade people from speaking their minds. All OCT supervisors mentioned that many people in rural communities have distrust about government agencies like TDOT and believe that their opinions or concerns do not matter, and TDOT would do whatever they think the best. Therefore, creating a trusting environment and demonstrating that their opinions matter would create better engagement. OCT supervisors identified the following as the best practices of rural community engagement:



- ✔ To engage rural communities, OCT had to go to them
- ✔ Having a two-way communication—providing options and seeking feedback from the community
- ✔ Empowering rural community in decision making
- ✔ Bringing allies like mayor, commissioner or a respected community leader
- ✔ Using visual media like posters and maps and hands-on activities as opposed to PowerPoint Slides
- ✔ Mixing of digital and traditional methods are required to reach the most people
- ✔ Having meeting during rural festivals
- ✔ Bringing foods

## ***4.2 Community Leader Interview and Recommendations***

Twenty-four community leaders, six in each community, were interviewed and the interviews were coded to identify recommendations for improving engagement with rural communities. Even though each community leader represented only one community, careful analysis revealed five common themes. Their recommendations have been organized by five themes: Plan and conduct of the meeting; location and timing of the meeting; outreach channels and media; community leader engagement with TDOT; and community engagement with TDOT.

### ***Theme 1: Recommendations pertaining to plan and conduct of the meeting***

Most community leaders agreed an in-person meeting is the best way to organize a public engagement meeting. They also believe having a virtual broadcast of the meeting will allow more members of the community to participate and comment/ask questions. Having a virtual broadcast of the meeting will also attract younger people to attend a meeting and engage in community development decisions. However, community leaders warned about the technological barriers of organizing a virtual meeting. Many rural communities lack reliable internet. Therefore, attendance at virtual meetings will be impacted by people's access to reliable Internet. Moreover, many low-income members

of the communities do not have the necessary technology such as computer, handheld device or cell phone coverage and are not technology savvy, which hinders their participation. The community leaders acknowledged that the future of public engagement is digital. Therefore, TDOT needs to come up with creative ways to use technology to engage a wide variety of demographic perspectives.

### ***Theme 2: Recommendations pertaining to meeting location and timing***

Community leaders recommended an easily accessible, centralized, and well-known place to hold the community meetings. Some examples provided were town/city hall, civic center, auditorium of a public school, chamber of commerce, community center, local church, or hotel conference room. Community leaders also preferred a meeting place with good parking accommodations, and within short travel distance or accessible through the public transit. As for timing, community leaders recommended that meetings should not be held during normal business hours (8am to 5pm) and late afternoon or early evening may be the best time to conduct the meeting. However, to engage the business community a lunch time meeting (12 to 2 pm) is preferred. Meetings can also be held on Saturday to engage people who work during the week. Most community leaders recommended a no more than two-hour long meeting.

### ***Theme 3: Recommendation pertaining to advertising and outreach media***

Community leaders agreed that social media is the best (and probably the least expensive) way to advertise meetings to the community. TV, news media, radio, local churches, and the website of local newspaper can be alternative outreach media. Sometimes, word of mouth and getting the information to the key community leader (e.g., the mayor) helps spread the meeting information. Even though many local newspapers are going out of print, older community members are still more likely to get their news from the newspaper. On the other hand, younger community members are more likely to get their news from social media. Therefore, TDOT needs to consider a combination of radio, newspaper, and social media to advertise meetings to the community. Also, giving multiple reminders and sharing information in multiple languages help reach broader sections of the community.

### ***Theme 4: Recommendations pertaining to engaging community leaders***

Because most community leaders are actively involved in many aspects of the community, they are better equipped to see the big picture of need and impact of a transportation project. So, TDOT officials should communicate with community leaders, secure their support, and follow the chain of command of local elected officials before communicating with the community. TDOT also needs to work closely with local planning departments, civic organizations, county commissioners, aldermen, chamber of commerce directors, public works, religious leaders and others, and hold educational workshops about TDOT's plan and vision of the community transportation to help community leaders understand TDOT's role.

### ***Theme 5: Recommendations pertaining to communication and rural community engagement***

Community leaders provided many recommendations to effectively communicate and engage rural communities. First, TDOT should focus on the positive impacts of their projects, such as economic development and opportunities when engaging with communities. TDOT should know that rural communities are often skeptical of government. In order to build trust and rapport, TDOT needs to have a presence in the community so they are treated less like an outsider. Most members of rural communities are reluctant to engage with government agencies like TDOT because they feel they are neglected, and their opinion or concerns do not matter. It is important to understand that the needs of rural communities are different than the needs of larger cities. TDOT should treat all communities with the same level of respect, regardless of their size. TDOT should explain the projects timeline to community members and follow-up with how they have incorporated feedback received at meetings. Before the meeting, TDOT should allow community members to submit questions and comments on their website or social media page. During the public engagement meeting, TDOT should have visual and interactive tools available to engage rural communities (for example, digital maps, scenario building, user-friendly interactive websites, and infographics).

#### ***4.3 Delphi Community Survey Respondent Demographics***

The recommendations from the interviews were then organized into the two round Delphi survey instrument. The demographics of respondents were as follows: The mean age of respondents for the first survey is 47 years of age, which is only one year lower than the mean age of respondents for the second survey at 48 years of age. A majority of respondents for both the first and second surveys were over the age of 40 and identify as white. 65% of respondents in survey 1 and 69% of respondents in survey 2 have at least an Associate's Degree and approximately a quarter of respondents from survey 1 (28%) and survey 2 (23%) have a Master's Degree or higher. For both the first and second survey, gender was almost evenly split between male and female (51% female in survey 1 and 52% female in survey 2).

When asked to identify if they live or work in the 4 target TDOT cities, 28% identified with Cookeville, 10% identified with Greeneville, 10% identified with Gordonsville, and 4% identified with Brownsville in survey 1. This question was not mutually exclusive, so respondents could select more than one city if applicable. Approximately half (within one respondent) or more of the respondents that identified with each of these cities in survey 1 came back to complete survey 2, with the exception of Gordonsville, which was less than half. See Table 4-1.

**Table 4-1 Basic Demographic Information for Surveys 1 & 2 Respondents**

	<b>Survey 1 (N=280)</b>	<b>Survey 2 (N=135)</b>
<b>Age</b>	<b>%</b>	<b>%</b>
Average Age	47	48
18-24	5%	4%
25-40	27%	27%
41-54	35%	37%
55+	33%	33%
<b>City</b>	<b>Count</b>	<b>Count</b>
Brownsville	12	5
Greeneville	29	14
Gordonsville	29	10
Cookeville	77	42
Other Tennessee Community	139	66
<b>Gender</b>	<b>%</b>	<b>%</b>
Female	51% (n=275)	52% (n=131)
<b>Race/Ethnicity</b>	<b>%</b>	<b>%</b>
Black or African American	2%	1%
White	94%	94%
<b>Education</b>	<b>%</b>	<b>%</b>
High school diploma/GED	13% (n=279)	10% (n=134)
Some college/no degree	23% (n=279)	21% (n=134)
Associates degree or higher	65% (n=279)	69% (n=134)
Masters degree or higher	28% (n=279)	23% (n=134)

\*N=280 S1, N=135 S2 unless otherwise noted)

#### **4.4 Delphi Community Survey Results**

Tables 4-2 to 4-11 provide the survey prompts (top row of each table), the statements that participants were asked to indicate their level of agreement with (left column), the percent of respondents who “agreed” or “strongly agreed” with the statement in the first round of the survey (middle column), and the percent of respondents who “agreed” or “strongly agreed” with the statement in the second round of the survey (right column). Statements with a consensus

of >70% on the second round of the survey were treated as recommendations for engaging rural communities in Tennessee.

**Table 4-2 Virtual Meetings**

<p>Prompt: We'd like to start by asking you a few questions about virtual meetings. Virtual town-hall meetings, also called "online" or "remote" meetings, are meetings that are held for community members through an online platform. Some of the more commonly used ones are Zoom, Facebook Live, or Webex. For these questions, we would like your thoughts about virtual town-hall meetings to discuss transportation planning or road projects in your community. Please tell me the extent to which you agree or disagree with each of the following statements.</p> <p>When thinking about holding virtual town hall meetings ...</p>		
<b>Statement:</b>	<b>Agree or Strongly Agree Survey 1</b>	<b>Agree or Strongly Agree Survey 2</b>
Attendance at virtual meetings would be impacted by people's access to reliable Internet.	91.4%	88.1%
Having a virtual broadcast of an in person meeting would allow more members of the community to participate and comment/ask questions.	87.2%	87.2%
Having a virtual broadcast of an in person meeting makes it difficult to hear questions and comments from participants.	50.7%	Drop
Facebook live meetings are well attended	30.7%	Drop
Community members make more comments when the meetings are done virtually.	42.2%	Drop
Local media outlets could help with engagement by streaming it on their platforms.	86.0%	86.7%
There are benefits to virtual meetings, but only during the pandemic.	25.0%	Drop
It is difficult to read a person's body language and vocal inflections in virtual meetings.	45.0%	Drop
The meeting host needs to be familiar and comfortable with using technology at the meeting.	96.1%	97.0%
Younger people are more likely to attend a virtual meeting than older people in the community.	63.2%	Drop

**Table 4-3 Physical Meetings**

Prompt: Now we would like to switch topics just a bit and ask about the same type of meetings – to discuss transportation planning in your community – but now we would like to get your thoughts on holding these meetings in-person. For questions about in-person meetings, please think about how you would feel in non-COVID-19 times. Please tell me the extent to which you agree or disagree with each of the following statements.

When thinking about places to hold town hall meetings in person, the following locations should be considered...

<b>Statement:</b>	<b>Agree or Strongly Agree Survey 1</b>	<b>Agree or Strongly Agree Survey 2</b>
Civic Center in Gordonsville	93.1%	80.0%
The auditorium of a public school	85.3%	88.9%
City Hall	68.6%	Drop
The Chamber of Commerce	55.3%	Drop
The Performing Arts Center in Brownsville	58.3%	Drop
Community Centers	86.8%	89.6%
The town boardroom in Greeneville	65.5%	Drop
The Agricultural Center in Gordonsville	86.2%	60.0%*
A lecture hall at a local college	70.7%	69.6%
Brownsville Community Justice Center	66.7%	Drop
The National Guard Armory in Brownsville	75.0%	66.6%*
Hotel conference room	46.0%	Drop
Local church	42.9%	Drop

\*Dropped after second survey

**Table 4-4 Meetings General**

<p>Prompt: Please tell me the extent to which you agree or disagree with each of the following statements.</p> <p>When thinking about hosting in-person town hall meetings ...</p>		
<b>Statement:</b>	<b>Agree or Strongly Agree Survey 1</b>	<b>Agree or Strongly Agree Survey 2</b>
My community does not have many places that will hold large crowds.	35.0%	Drop
Some people would be intimidated to go to a college for a community meeting.	37.5%	Drop
Multiple meetings would be good in more rural areas rather than having community members drive somewhere else.	73.2%	80.0%
If community members do not have reliable internet, they will find ways to be involved in community meetings.	28.9%	Drop
Lack of public transportation could prevent some members of the community from attending meetings.	61.1%	Drop
The location of the meeting should be accessible through public transit.	61.5%	Drop
People will come to meetings if they sense there will be a positive change made to their community.	84.3%	88.1%
People will come to meetings if the meeting is about something controversial in the community.	87.9%	85.9%
It is important to have insider knowledge of the community when advertising to the community.	83.9%	84.4%
The mayor's office should be contacted to obtain a meeting place.	61.5%	Drop
When community leaders are involved, more community members are involved.	73.2%	79.3%
TDOT meetings should be a part of existing city government meetings.	63.2%	Drop
TDOT should collaborate with existing events and meetings to provide information to the community	87.1%	83.7%

**Table 4-5 Meeting Times**

<p>Prompt: Please tell me the extent to which you agree or disagree with each of the following statements.</p> <p>When thinking about holding town hall meetings in-person ...</p>		
<b>Statement:</b>	<b>Agree or Strongly Agree Survey 1</b>	<b>Agree or Strongly Agree Survey 2</b>
Meetings for the community should not be held during normal business hours (8am-5pm).	72.8%	77.0%
Meetings should be held before parents pick their kids up from school.	5.3%	Drop
Meetings should be held during business hours from (8am -5pm) to engage businesses.	12.9%	Drop
Meetings should be held over lunch (12pm-2pm) hours to engage businesses.	25.0%	Drop
Meetings should be held on Saturdays to engage people who work during the week.	56.4%	Drop
Town hall meetings should be no more than two hours long.	85.7%	93.3%
Town hall meetings should be no more than one hour long.	41.8%	Drop
It is important to think about how long people will need between getting off from work and the meeting starting.	89.3%	94.1%
Attendance at town hall meetings will depend on advertisement of the meeting.	92.8%	88.1%



**Table 4-6 Media/Meeting Advertisement Section 1**

<p>Prompt: Please tell me the extent to which you agree or disagree with each of the following statements.</p> <p>When thinking about local media and advertising, TDOT should consider ...</p>		
<b>Statement:</b>	<b>Agree or Strongly Agree Survey 1</b>	<b>Agree or Strongly Agree Survey 2</b>
Newspapers are going out of print and would not be a good way to spread information about meetings.	37.4%	Drop
Newspapers should not be the only way community meetings are advertised.	90.0%	91.9%
Social media is the best way to advertise meetings to the community.	65.7%	Drop
People listen to radio stations from nearby cities more than local stations.	38.5%	Drop
Older community members are more likely to get their news from the newspaper.	80.7%	76.3%
Younger community members are more likely to get their news from social media.	92.9%	95.6%
The radio would be better than the newspaper in advertising community meetings.	32.1%	Drop
Social media reaches across socioeconomic statuses in the community.	72.1%	85.9%
A combination of radio, newspaper, and social media would be a good way to advertise meetings to the community.	95.4%	96.3%
Word of mouth would be a good way to advertise meetings to the community.	49.3%	Drop
Giving multiple reminders about community meetings.	96.4%	95.6%
Distributing information in multiple languages.	58.9%	Drop
Sharing general information in a digital newsletter.	76.8%	83.7%
Sharing meeting agendas and schedule information in a digital newsletter.	79.3%	85.9%
Using informational videos to promote meeting attendance.	75.0%	82.2%

**Table 4-7 Media/Meeting Advertisement Section 2**

<p>Prompt: Please tell me the extent to which you agree or disagree with each of the following statements.</p> <p>The following sources are a good way for TDOT to advertise town hall meetings ...</p>		
<b>Statement:</b>	<b>Agree or Strongly Agree Survey 1</b>	<b>Agree or Strongly Agree Survey 2</b>
The Smith County Insider	93.1%	100%
The local newspaper	81.5%	76.3%
The local radio station	82.5%	83.1%
The Upper Cumberland Business Journal in Gordonsville	44.8%	Drop
The Brownsville Press	66.7%	Drop
Advertising boxes around the community in Brownsville	75.0%	50.0%*
Facebook or other social media	92.9%	93.3%
104.1 radio station in Gordonsville	79.3%	70.0%
Cartridge Courier in Gordonsville	89.7%	100%
The Monday morning Chamber of Commerce memo	66.7%	Drop
Local churches	66.1%	Drop
The Haywood County Ministerial Alliance in Brownsville	83.3%	66.6%*
Putnam County Today radio show in Cookeville	75.3%	69.0%*
Elected officials can use their social media to advertise meetings	90.4%	88.9%
Email alerts	79.7%	82.2%
Text alerts	75.4%	70.6%
Billboards	63.2%	Drop
Robo calls	12.1%	Drop
The Library	52.1%	Drop
Community Centers	71.1%	74.1%

\*Dropped after second survey

**Table 4-8 Community Engagement with TDOT Section 1**

<p>Prompt: Please tell me the extent to which you agree or disagree with each of the following statements.</p> <p>In order to engage with community members, ...</p>		
<b>Statement:</b>	<b>Agree or Strongly Agree Survey 1</b>	<b>Agree or Strongly Agree Survey 2</b>
TDOT should keep lines of communication open between TDOT and the community.	97.5%	97.0%
TDOT should have a designated liaison between TDOT and community leaders.	91.5%	91.1%
Listening to feedback from the community is important to making sure the community is engaged with TDOT projects.	95.7%	94.8%
TDOT should treat all communities with the same level of respect, regardless of their size.	95.3%	94.8%
TDOT should focus on the positive impacts of their projects when engaging with communities.	89.6%	83.0%
It is important to understand the needs of rural communities are different than the needs of larger cities.	96.4%	97.0%
TDOT should advertise what the meetings are specifically about.	95.7%	95.6%
TDOT should pay attention to more than what the most influential people in rural communities want.	85.0%	84.4%
TDOT should think about what other rural areas will be impacted by projects.	96.5%	95.6%
TDOT should do more to seek community input on projects.	87.5%	91.9%
TDOT should do surveys within communities to get people's opinions.	89.3%	87.4%
TDOT should explain the projects timeline to community members.	96.8%	93.3%

**Table 4-9 Community Engagement with TDOT Section 2**

<p>Prompt: Please tell me the extent to which you agree or disagree with each of the following statements.</p> <p>In order to engage with community members, ...</p>		
<b>Statement:</b>	<b>Agree or Strongly Agree Survey 1</b>	<b>Agree or Strongly Agree Survey 2</b>
TDOT should know that rural communities are often skeptical of government.	69.8%	74.1%
TDOT should work with the community on the next steps of the project.	93.6%	92.6%
TDOT officials need to have a presence in the community so they are treated less like an outsider.	81.4%	82.2%
TDOT should follow the chain of command of local elected officials before communicating with the community.	58.6%	Drop
TDOT officials should communicate with community leaders because they have a better understanding than individual community members about what impacts the community.	56.8%	Drop
TDOT should use visual and interactive tools during meetings to engage rural communities (for example, digital maps, scenario building, user-friendly interactive websites, and infographics).	91.5%	91.1%
TDOT should have visual and interactive tools available on their website to engage rural communities (for example, digital maps, scenario building, user-friendly interactive websites, and infographics).	93.2%	94.8%
TDOT should follow-up with how they have incorporated feedback received at town hall meetings.	91.4%	94.1%
TDOT should allow community members to submit questions and comments on their website before town hall meetings.	92.5%	93.3%
TDOT should have separate town hall meetings for each specific issue/topic (instead of one longer meeting).	44.3%	Drop
TDOT should conduct short informal polls of community interests and perceptions.	74.7%	87.4%

**Table 4-10 Community Leadership Engagement with TDOT Section 1**

<p>Prompt: Please tell me the extent to which you agree or disagree with each of the following statements.</p> <p>In order to effectively engage with community leaders, TDOT should ...</p>		
<b>Statement:</b>	<b>Agree or Strongly Agree Survey 1</b>	<b>Agree or Strongly Agree Survey 2</b>
Have support from community leaders.	88.5%	83.7%
Hold educational workshops about what TDOT does to help community leaders understand TDOTs role.	82.8%	78.5%
Work closely with elected officials.	84.0%	91.1%
Communicate with the aldermen in Brownsville.	75.0%	75.0%
Communicate with the county commissioners.	88.2%	85.9%
Work closely with local planning departments.	92.5%	94.8%
Communicate with leaders of local civic organizations.	79.3%	79.3%
Communicate with leaders at the local NAACP in Brownsville.	50.0%	Drop
Work with the local Road Committee.	93.6%	97.8%

**Table 4-11 Community Leadership Engagement with TDOT Section 2**

<p>Prompt: Please tell me the extent to which you agree or disagree with each of the following statements.</p> <p>In order to be successful with transportation planning in your community, TDOT should work with the following groups ...</p>		
<b>Statement:</b>	<b>Agree or Strongly Agree Survey 1</b>	<b>Agree or Strongly Agree Survey 2</b>
Community leaders (nongovernment officials)	82.5%	91.1%
Elected officials	90.7%	90.4%
The Chamber of Commerce director	74.7%	74.8%
The staff of local government officials	85.0%	82.2%
The Public Works Director in Greeneville	96.6%	100%
The Senator and House Representative	76.4%	70.4%
The leader of the Greeneville EMA	82.8%	66.6%*
Religious leaders	38.2%	Drop

\*Dropped after second survey

## 4.5 Discussion

The following lists show statements which received greater than 70% consensus in both rounds of Delphi community survey and serve as recommendations for TDOT for engaging with rural communities.

Regarding virtual meetings, the statements that reached consensus led to the following recommendations:

- Be aware there may be limited internet access in rural communities and as such, virtual meetings may not be as accessible in these communities as more urban communities.
- Have a virtual broadcast of in person meetings to allow more members of the community to participate and comment/ask questions.
- Work with local media outlets to help with engagement by streaming it on their platforms.
- Ensure that meeting host needs are familiar and comfortable with using technology at the meeting.

Regarding physical meetings, the statements that reached consensus led to the following locations as recommendations for where TDOT could hold meetings. Location specific

venues are those that are unique and well known to a community (such as theatre, agricultural center, art center).

- Civic Center
- The auditorium of a public school
- Community Centers
- A lecture hall at a local college
- Location specific venues

Regarding general recommendations for community engagement meetings the statements that reached consensus led to the following recommendations:

- Hold multiple meetings in more rural areas rather than having community members drive somewhere else.
- Advertise and communicate how the project will have a positive impact on the community to promote attendance at meetings.
- Understand that people will come to meetings if the meeting is about something controversial in the community.
- Work to have insider knowledge of the community when advertising to the community.
- Work with community leaders to get more community members involved.
- Collaborate with existing events and meetings to provide information to the community.

Regarding meeting times, the statements that reached consensus led to the following recommendations:

- Avoid holding meetings for the community during normal business hours (8am-5pm).
- Town hall meetings should be no more than two hours long.
- Consider how long people will need between getting off from work and the meeting starting.
- Advertise meetings to improve attendance.

Regarding media and advertising, the statements that reached consensus led to the following recommendations:

- Avoid using newspapers as the only way community meetings are advertised.
- Advertise in the newspaper to reach older community members.
- Advertise on social media to reach younger community members.
- Advertise on social media to reach across socioeconomic statuses in the community.
- Advertise meetings using a combination of radio, newspaper, and social media.
- Give multiple reminders about community meetings.
- Share general information in a digital newsletter.
- Provide meeting agendas and schedule information in a digital newsletter.
- Use informational videos to promote meeting attendance.
- Advertise meetings on the social media of local elected officials.
- Advertise meetings at community centers.

- Use email alerts to advertise meetings.
- Use text alerts to advertise meetings.

Regarding how TDOT should engage in rural communities, the statements that reached consensus led to the following recommendations:

- Keep lines of communication open between TDOT and the community.
- Have a designated liaison between TDOT and community leaders.
- Listen to feedback from the community to make sure the community is engaged with TDOT projects.
- Treat all communities with the same level of respect, regardless of their size.
- Focus on the positive impacts of their projects when engaging with communities.
- Understand the needs of rural communities are different than the needs of larger cities.
- Advertise what the meetings are specifically about.
- Pay attention to more than what the most influential people in rural communities want.
- Think about what other rural areas will be impacted by projects.
- Do more to seek community input on projects.
- Do surveys within communities to get people's opinions.
- Explain the project's timeline to community members.
- Understand that rural communities are often skeptical of government.
- Work with the community on the next steps of the project.
- Have a presence in the community so TDOT is treated less like an outsider.
- Use visual and interactive tools during meetings to engage rural communities (for example, digital maps, scenario building, user-friendly interactive websites, and infographics).
- Have visual and interactive tools available on the TDOT website to engage rural communities (for example, digital maps, scenario building, user-friendly interactive websites, and infographics).
- Follow-up with how they have incorporated feedback received at town hall meetings.
- Allow community members to submit questions and comments on their website before town hall meetings.
- Conduct short informal polls of community interests and perceptions.

Regarding how TDOT should engage with community leaders, the statements that reached consensus lead to the following recommendations:

- Have support from community leaders.
- Hold educational workshops about what TDOT does to help community leaders understand TDOTs role.
- Work closely with elected officials.
- Communicate with the aldermen and county commissioners.
- Work closely with local planning departments.
- Communicate with leaders of local civic organizations.
- Work with the local Road Committee.
- Work with community leaders (nongovernment officials).



- Work with the Chamber of Commerce director.
- Work with the staff of local government officials.
- Work with the Public Works Director.
- Work with the Senator and House Representative.

## Chapter 5 Recommendations

As a rural state, Tennessee recognizes the importance of rural transportation systems and involves rural public during all phases of project development and delivery. Relative to the objectives that guided this project, (as presented in Chapter 1), the OCT interview, community leader interview and two rounds Delphi community survey was conducted (as presented in chapter 4). Based on the analysis of the data, we are proposing the following recommendations which reached the desired level of consensus in the survey phase. As appropriate, the statements presented on the survey have been reworded as recommendations to TDOT. By using a variety of methods to engage the rural communities, TDOT can enhance its ability to establish relationships, credibility and consensus throughout the course of the transportation decision-making process.

### ***5.1 Recommendations Pertaining to Rural Engagement Meetings and Communications***

TDOT should treat all communities with respect regardless of their size and understand that the needs of rural communities are different than larger/urban cities. It is of the utmost importance to keep the lines of communication open between TDOT and the community to build trust and credibility. It is essential that TDOT have strong presence in the community so as not to be seen as an outsider as it is important for the community to understand TDOT and its purpose. In this regard, TDOT can offer educational workshops on the role and positive impacts of TDOT projects periodically or that this information be included in community meetings. Besides informational meetings, TDOT needs to do more to seek community input on projects, such as conducting community surveys or short informational polls to assess opinions. The input should go beyond that of community leaders and should be received from the broader sections of the community. Rural communities are often skeptical of the government, but they still like to be asked for their input on projects. It is also recommended that TDOT follow up with how they have incorporated feedback from communities.

- **Meeting Format.** While community engagement meetings are often conducted in-person, due to COVID-19 pandemic, the option to conduct these meetings virtually was explored. While there is interest in virtual meetings, this format may not be accessible to everyone in rural communities given limited internet access. However, there is strong support in communities for TDOT to conduct these meetings in a hybrid format in which there would be a virtual broadcast of an in-person meeting. TDOT can work with local media outlets to help with engagement by streaming on their platforms or by using social media platforms such as Facebook to live broadcast the meetings. Technology can also be incorporated into the meetings by using visual and interactive tools such as digital maps, scenario building, user-friendly interactive websites, and infographics during meetings to engage rural communities. It is important for individuals hosting such meetings to be familiar and comfortable with using technology at the meeting.
- **Meeting Location.** It is recommended that community engagement meetings are conducted at a location that is a well-known, easily accessible through transit and near to the project. While there are some locations that are community specific, community centers, city/town halls, auditoriums at public schools, and lecture halls at local

colleges are preferred locations of meeting. TDOT also should consider holding multiple meetings in more rural areas to improve access for and attendance by community members.

- **Timing of the Meeting.** In addition to the location of the meeting, TDOT should consider the time of the meeting. It is recommended that community meetings should be held after 5 pm and take into consideration the average commute time to the meeting location. To engage business community, TDOT may consider a lunch time meeting. The meetings should be no more than two hours long.

## ***5.2 Recommendations Pertaining to Media outreach and Improving Attendance***

Appropriate advertisement and media outreach are key to successful community engagement. It is recommended that TDOT implements multifaceted advertisement strategies by taking into consideration generational difference. Articles in the local newspaper are more likely to reach older community members, while advertisements on social media are more likely to reach younger community members, as well as reach across socioeconomic statuses in the community. Word of mouth can also be effective in spreading meeting information in small communities. Thus, TDOT should use a combination of radio, newspaper, social media, and local news media to advertise meetings. Email alerts, text alerts, and flyers at community centers are also recommended for advertising meetings. Giving multiple reminders and sharing information in multiple languages helps reach broader sections of the community. Finally, the advertisements should include details about what will be addressed in the meeting.

Recommendations for improving attendance include communicating how the project will have a positive impact on the community. Currently, people are more likely to go to meetings if they feel the issue is controversial, so it is important to understand these perceptions in the community. One recommendation for approaching this is to allow community members to submit questions and comments through the TDOT website prior to community meetings. Moreover, it is recommended that TDOT work to have insider knowledge of the community before advertising the meeting so they can better understand the views of the project and create appropriate advertising message. Another recommendation for improving attendance is to collaborate with existing events and meetings.

Beyond community meetings, there are other ways that TDOT can engage in rural communities. It was recommended that TDOT develop and share a digital newsletter. The newsletter could provide meeting agendas and schedule information, as well as details like project timelines. Additionally, TDOT can use informational videos to promote meeting attendance and that TDOT make visual and interactive tools available on the website, such as digital maps, scenario building, user-friendly interactives, and infographics.

## ***5.3 Recommendations Pertaining to Engaging with Rural Community Leaders***

In rural communities, it is important for TDOT to work with and have the support of community leaders. This will get more community members involved and results in better engagement. It is recommended that TDOT work with elected officials, local planning departments and local road committees, leaders of civic organizations, the chamber of commerce, and city staff when planning community engagement activities. Because most community leaders are actively involved in many aspects of the community, they are able to see the big picture of need and impact of transportation projects in their community development. So, TDOT officials should follow the chain of command of local elected officials before communicating with the community. There were multiple recommendations for ways that TDOT can work with community leaders. For instance, TDOT can advertise meetings or share the digital newsletter on the social media of local elected officials. TDOT also can bring community leaders into the meeting to draw support and create a trusting environment.

#### ***5.4 Recommendations Pertaining to Generational Differences in Shifts in Transportation Planning***

Generational divide is prominent in rural communities with aging population and out-flux of younger members. In rural communities, baby boomer and Generation X are more likely to be engaged with TDOT projects. However, this presents unique challenges such as meetings not representing the entire community. Younger Millennials and Gen Z's preferences of more public and green transportation projects may not be well supported in the communities. Generational shift is also visible in technology use as younger generations are more tech-savvy. Therefore, TDOT needs to be creative in striking balance of the needs of the generational groups in the community in their transportation plans and designs. In every step of rural engagement, TDOT should thrive for multiple strategies to entice different generations in effective engagement.

#### ***5.5 Recommendations Pertaining to Incorporating Rural Community Engagement Strategies Within TDOT's Existing Public Involvement Plan***

TDOT has a "Public Involvement Plan." The goal of the plan is to develop TDOT's transportation products and services in partnership with stakeholders and constituents to ensure accountability for its actions, continuous communication, consistency in approach, and integrity in its dealings. The plan has identified five levels of public involvement, in order to establish minimum levels of required public involvement and allow for development of flexible public involvement programs for different projects. The rural engagement strategies identified in this study can be applied in all five levels of rural transportation planning, but these are especially applicable for level 5 projects which involves statewide or systems-level efforts undertaken by the TDOT, including the Statewide Long-Range Transportation Plan, the Statewide Transportation Improvement Plan (STIP), the Statewide Rail Plan, Statewide Aviation Plan and Statewide Transit Plan. It is recommended that in the next cycle of the update of the "Public Involvement Plan", TDOT includes the best practices and strategies identified in this document to enhance its rural engagement and help shape the future of the state's transportation infrastructure that is designed and developed for all.

## Chapter 6 Conclusion

Public involvement is a two-way communication aimed at providing information to the public and incorporating the views, concerns, and issues of the public in the transportation decision-making process. The public provides input on transportation needs, community concerns and environmental considerations. TDOT uses this input to help make decisions. By involving the public early in planning transportation projects and throughout the development and implementation of projects, TDOT delivers a statewide transportation system that meets the needs of, and is supported by, its stakeholders, the citizens of Tennessee. Transportation agencies often utilize the same public involvement techniques that work well in larger urbanized areas, hoping that those will work similarly to rural communities; even when scalable or adaptable approaches are identified. However, rural communities have unique differences and challenges. Rural communities are geographically dispersed with limited public transportation options. Even rural residents with motor vehicles often must still travel long distances to shop, to visit a doctor, to go to work, and to do any number of other activities. In rural communities, there is outflow of young adults and inflow of older adults resulting in an aging population with health issues and limited mobility. Many rural areas also lack the expansive access to technology and services (such as high-speed internet) that are present in more urbanized areas. In addition to this, there are also communication challenges with rural leadership who do not use current technology (email or computers) or who may not invest time and resources into social media engagement. Therefore, understanding the salient factors that support community engagement in rural environments and factors that inhibit it, is the primary goal of this study.

This study employed a five phased mixed method research design to answer two research questions: 1) What are the best practices and strategies when engaging rural communities? 2) How can these practices be incorporated into current procedures and policies to better serve rural communities across the state in regards to transportation needs? The five phases of the research method involved 1) literature review, 2) interviews with four regional OCT supervisors, 3) identification of four case rural communities and interviews with 24 community leaders 4) two rounds of Delphi community survey and 5) combination of results to identify the best practices and strategies as recommendations to TDOT to enhance rural engagement.

### **6.1 Summary Recommendations**

The study provides following recommendations to TDOT to improve its rural engagement effectiveness:

#### **1. Rural Engagement Meetings and Communications**

Keep open communications; have a strong presence in the community; educate community about TDOT's role; offer various options (technology based and non-technology based) to the community to provide opinions and feedback; follow-up and demonstrate how the feedback are incorporated; offer meetings in hybrid format; use interactive and hands-on activities to engage community; select a well-known and easily accessible place for the meeting; hold meetings after 5 pm; offer meetings at different times and in multiple locations to reach wider sections of the community.

## **2. Outreach and Improving Attendance**

Use a combination of radio, newspaper, social media, word of mouth and local news media to advertise meetings; provide reminders and share information in multiple languages; to improve attendance focus on positive impacts of the project and take into consideration people's sentiment; piggyback engagement activities with existing community events and meetings.

## **3. Engaging with Rural Community Leaders**

Secure the support of the community leaders and follow the chain of command of the local elected officials.

## **4. Considerations of Generational Differences in Shifts in Transportation Planning**

Strike balance in identifying needs of generational groups; employ multifaced strategies to entice different generations.

## **5. Incorporate Rural Community Engagement Strategies Within TDOT's Existing Public Involvement Plan**

Assess the effectiveness of the best practices and strategies identified in this document and then incorporate them in the TDOT's "Public Engagement Plan" for statewide implementation.

The project has significance to both TDOT and the communities that TDOT serves. Improved and effective rural engagement will increase the efficiency and effectiveness of the state's rural transportation infrastructure investments and increase the economic competitiveness of the state's rural regions. Proactive public involvement initiatives will create higher degrees of trust among rural communities, leading to more effective discussions and greater potential to build productive bridges between communities and TDOT. When rural communities and their leaders are invited to the table to participate in planning and project design processes "early and often," resulting projects are more likely to reflect the community's own plans and fit more harmoniously into the community. Improved rural transportation networks will contribute to rural economic development, including community development through improved access to services will increase quality of life of rural communities.

## **6.2 Limitations**

This study represents our best effort at engaging a variety of rural communities across the state of Tennessee. However, there are limitations to this project. First and foremost, this project was started shortly before the COVID-19 pandemic. The impact of this pandemic on the United States, Tennessee, and any research occurring cannot be overstated. This project required us to interact with individuals face-to-face and as such we had to reassess our protocol to work through this via Zoom and other electronic avenues in order to be safe and follow state orders. This impacted our timeline significantly but more importantly, there is little doubt that it impacted Tennesseans' response and likelihood to respond to our survey requests. During this project, we were asking questions about internet usage and resources during a time when many internet resources were changing. People were beginning to experience fatigue with online platforms, and this may have impacted their thoughts on how effective virtual meetings would be in the future. Second, though we selected rural

communities that are currently engaged in TDOT projects, there is no assurance that these communities are representative of all rural communities in Tennessee. Though we feel that they represent many of the rural communities in Tennessee, the responses to this survey do not constitute a probability-based sample so inferences beyond what we have presented are limited and should be approached with caution. Further research could consider approaching rural communities more broadly and delve deeper into the concerns and issues raised in the interviews and surveys.

# References

1. Adelstein, J. (2011). *Advancing Broadband: A Foundation for Strong Rural Communities*. Department of Agriculture.
2. Anderson, A., & Perrin, A. (2015). *Tech Adoption Climbs Among Older Adults*. Washington, D.C.: Pew Research Center.
3. Stewart, A. F. (2017). Mapping transit accessibility: Possibilities for public participation. *Transportation Research Part A: Policy and Practice*, 104:150-166. ISSN 0965-8564, <https://doi.org/10.1016/j.tra.2017.03.015>.
4. Antonson, H. (2014). Public participation and written submissions: A transport infrastructure planning case study. *Transportation Research Part A: Policy and Practice*, 70:59-66. ISSN 0965-8564. <https://doi.org/10.1016/j.tra.2014.09.015>.
5. MnDOT. (2015). Appendix A: Community Engagement Plan of the Minnesota Statewide Pedestrian System Plan: Community Engagement Report. pp. 1-48.
6. Barron, E., Peck, S., Venner, M., & Malley, W. G. (2013). *Potential Use of Social Media Impact in the NEPA Process*. NCHRP Project 25-25, Task 80, Washington, D. C.: Transportation Research Board.
7. Beaudoin, C. E., & Stephenson, M. T. (2016). Communication campaign evaluation. In D. K. Kim & J. W. Dearing (Eds.), *Health communication research measures* (pp. 33-44). New York, NY: Peter Lang Publishing Group.
8. Beinstein, J. (1977). Friends, the Media, and Opinion Formation. *Journal of Communication*, 27(4), 30-39.
9. Boase, J. (2010). The Consequences of Personal networks for Internet Use in Rural Areas. *American Behavioral Scientist*, 53(9), 1257-1267. DOI:10.1177/0002764210361681
10. Bolin, J. N., Bellamy, G. R., Ferdinand, A. O., Vuong, A. M., Kash, B. A., Schulze, A., & Helduser, J. W. (2015). Rural Healthy People 2020: New Decade, Same Challenges. *Rural Healthy People 2020: New Decade, Same Challenges*, 31(3), 326-333.
11. Caldwell, G. A. (2021). Putting the people back into the "smart": Developing a middle-out framework for engaging citizens, 239-266. DOI: 10.1016/B978-0-12-818636-7.00008-1
12. Choi, M., Schuster, A. (2019). Solutions to the Challenge of Meeting Rural Transportation Needs: Middle-Aged and Older Adults' Perspectives. *J Gerontol Soc Work*. 62(4), 415-431.
13. Early coordination, public involvement, and project development: 23 CFR 771.111. (2011). Code of Federal Regulations. Retrieved from <https://www.gpo.gov/fdsys/granule/CFR-2011-title23-vol1/CFR-2011-title2>
14. Evans-Cowley, J. S., & Griffin, G. (2012). Microparticipation with social media for community engagement in transportation planning. *Transportation Research Record: Journal of the Transportation Research Board*, 2307(1), 90-98. DOI:10.3141/2307-10
15. FHWA. (2017). Public Involvement/Public Participation. Retrieved from [https://www.fhwa.dot.gov/planning/public\\_involvement/](https://www.fhwa.dot.gov/planning/public_involvement/)
16. Fish, L. S., & Busby, D. M. (1996). The Delphi method. In D. H. Sprenkle & S. M. Moon (Eds.) *Research methods in family therapy*. New York, NY: The Guilford Press.
17. Florida's Rural Transportation Planning Process Phase 1, Discovery Final Report. (2018). Florida Department of Transportation. 1-121.



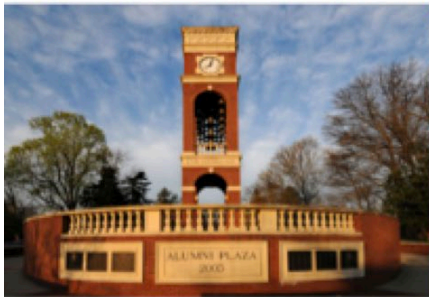
18. Fredericks, J., & Haeusler, M. (2020). Redefining Community Engagement in Smart Cities: Design Patterns for a Smart Engagement Ecosystem. *Citizen-Responsive Urban E-Planning: Recent Developments and Critical Perspectives*, 1-41. DOI:10.4018/978-1-7998-4018-3.ch002
19. Graves. Statement from Hearing on Rural Transportation Needs. States News Services. p. 2. February 26.
20. Griffin, G. (2014). Geographic specificity and positionality of public input in transportation: a rural transportation planning case from Central Texas. *Urban, Planning and Transportation Research: An Open Access Journal*, 2(1): 407-422.  
<https://www.tandfonline.com/doi/full/10.1080/21650020.2014.969442>
21. Hamilton-Pennell, C. (2008). Rural Research Report Public Libraries and Community Economic Development: Partnering for Success. Illinois Institute for Rural Affairs, 18(10), 1-8. Retrieved from <https://eric.ed.gov/?id=ED503804>.
22. Imagine Central Arkansas (2018). Public Outreach Summary, Appendix B.
23. INDOT. (2014). Best Practices in Public Involvement. Retrieved from [https://www.in.gov/indot/files/PI\\_BestPractices.pdf](https://www.in.gov/indot/files/PI_BestPractices.pdf)
24. Kentucky Transportation Cabinet Division of Planning. 2015. pp.1-44. February 11.
25. Kidder, B. (2006). The Challenges of Rural Transportation. Logan, Utah: Western Rural Development Center, Washington, D.C.: Department of Agriculture, p. 1-16, Rep. No. 84322-8335.
26. Linstone, H. A., & Turoff, M. (1975). *The Delphi Method- Techniques and Applications*. Addison-Wesley Educational Publishers Inc.
27. Lourenco, S. F., & Tasimi, A. (2020). No participant left behind: Conducting science during covid-19. *Trends in Cognitive Sciences*, 24(8), 583-584. DOI:10.1016/j.tics.2020.05.003
28. Matson, et. al. (2010). An Assessment of Demand for Rural Intercity Transportation Services in a Changing Environment. *Transportation Research Record*, 2145(1), 108-114. DOI: 10.3141/2145-13
29. Morris, A., & Fragala, L. (2010). *Effective Public Involvement Using Limited Resources*. NCHRP SYNTHESIS 407, Washington, D. C.: Transportation Research Board.
30. O'Connor, R., Schwartz, M., Schaad, J., & Boyd, D. (2000). *State of the Practice: White Paper on Public Involvement*. Washington, D. C.: Transportation Research Board.
31. Owens, S. (2000). 'Engaging the public': Information and Deliberation in Environmental Policy. *Environment and planning A*, 32, 1141-1148.
32. PBS&J. (2006). *How to Engage Low-Literacy and Limited-English-Proficiency Populations in Transportation Decision Making*. FHWA-HEP-06-009, Washington, DC: FHWA.
33. Piatkowski, Afzalan, N, and Marshall, W. (2016). Can Web-based community engagement inform equitable planning outcomes? A case study of bike sharing. *Journal of Urbanism International Research on Placemaking and Urban Sustainability*, p. 16.  
<http://dx.doi.org/10.1080/17549175.2016.1254672>
34. *Public Participation Plan: Pikes Peak Area Council of Governments*. (2019). Pikes Peak Area of Local Governments, pp. 1-29.
35. Pulsipher, Wilson, L. and Sanyal, N. (2013). The Best of Times, The Worst of Times: Antecedents for and Effectiveness of Community Engagement in Two Small Rural Towns. *Journal of Community Engagement and Scholarship*, 6(2), 70-83.

36. Rahimi, Alireza, Ghazaleh Azimi, Xia Jin. (2020). Investigating generational disparities in attitudes toward automated vehicles and other mobility options, *Transportation Research Part C: Emerging Technologies*. Volume 121. 102836 ISSN 0968-090X. <https://doi.org/10.1016/j.trc.2020.102836>.
37. Ramsetty, A., & Adams, C. (2020). Impact of the digital divide in the age of covid-19. *Journal of the American Medical Informatics Association*, 27(7), 1147-1148. DOI:10.1093/jamia/ocaa078
38. Ross, J. (2018). *The Role of Public Libraries in Rural Communication Infrastructure*. P. 58.
39. Smith, M., Prohaska, T., Macleod, K., Ory, M., Eisenstein, A., Ragland, D., Irmiter, C., Towne, Jr., S. & Satariano, W. (2017). Non-Emergency Medical Transportation Needs of Middle-Aged and Older Adults: A Rural-Urban Comparison in Delaware, USA. *International Journal of Environmental Research and Public Health*, 14(2), 174.
40. Statewide Transportation Planning Program Rural Consultation, Report 23. CFR 450.210(b).
41. Stefano de Luca. (2014). Public engagement in strategic transportation planning: An analytic hierarchy process based approach. *Transport Policy*, 33, 110-124. ISSN 0967-070X. <https://doi.org/10.1016/j.tranpol.2014.03.002>.
42. Stommes, E. S., & Brown, D. M. (2002). Transportation in Rural America Issues for the 21st Century. *Rural America*, 16(4), 1-10. DOI: 10.22004/ag.econ.289506
43. TDOT. (2012). *Public Involvement Plan*. Nashville.
44. Thiede, B., Greiman, L., Weiler, S., & Conroy, T. (2017). The divide between rural and urban America. *The Conversation*. Retrieved from <http://theconversation.com/six-charts-that-illustrate-the-divide-between-rural-and-urban-america-72934>
45. TN.gov. (2018). Rural Areas. Retrieved from <https://www.tn.gov/health/cedep/environmental/healthy-places/healthy-places/land-use/lu/rural-areas.html>
46. United States Department of Agriculture Broadband Initiatives Program Awards Report. (2011). United States Department of Agriculture. Retrieved from <https://www.rd.usda.gov/node/3356>
47. Vogels, E., Perrin, A., Rainie, L., & Anderson, M. (2020). 53% of Americans say the internet has been essential during the COVID-19 Outbreak. Pew Research Center. Retrieved March 29, 2021, from <https://www.pewresearch.org/internet/2020/04/30/53-of-americans-say-the-internet-has-been-essential-during-the-covid-19-outbreak/>
48. Von Reicher, C., Cromartie, J., and Arthun, R. (2013) Impacts of Return Migration on Rural U.S. Communities. *Rural Sociology*, 79(2), 200-226. DOI: 10.1111/ruso.12024
49. Wagner, Jason. (2013). Measuring Performance of Public Engagement in Transportation Planning Three Best Principles. *The Public Involvement in Transportation Committee*, 2397, 38-44. DOI: 10.3141/2397-05
50. Waldheim, N., Herbel, S., and Kissel, C. (2014). Integrating Safety in the Rural Transportation Planning Process. U.S. Department of Transportation Federal Highway Administration, p. 100. FHWA-SA-14-102.
51. Whitacre, Brian. (2010). The Diffusion of Internet Technologies to Rural Communities: A portrait of Broadband Supply and Demand. *American Behavioral Scientist*, 53(9), 1283-1303.
52. Wilmapco's 2008 Public Participation Plan. (Updated January 2010). Wilmapco.

53. Zhai, Y. (2020). A call for addressing barriers to telemedicine: Health disparities during the covid-19 pandemic. *Psychotherapy and Psychosomatics*, 90(1), 64-66.  
DOI:10.1159/000509000

# Appendices

## *Appendix A: Interview Protocol*



### Community Engagement in Rural Communities

Drs. Moin Uddin, Kelly N. Foster, and Candace Bright

#### **TDOT Interview Protocol- Summer 2020 ETSU Applied Social Research Lab**

**Purpose:** The purpose of this document is to outline a systematic protocol for conducting, transcribing, and cleaning the TDOT Community Engagement in Rural Communities interviews.

#### **Phase 1: Interviews with OCT Supervisors**

##### Interview Guide for OCT Supervisors

1. How rural community engagement meetings are organized and conducted in your region?
2. Typical who attends rural community meetings?
3. What are typical challenges of rural community engagement in your region?
4. Based on your past experience what worked and what did not work for rural engagement in your region?
5. Did you use any particular software or tool (communication, data gathering, etc.) for rural engagement?
6. What technological barriers and/or logistical challenges did you face during rural engagement in your region?
7. How are urban vs rural engagement different?
8. Does any social media platform work better in your region?
9. Please tell us effectiveness of online vs in-person methods of rural engagement

10. Empowering community can be an effective methods of rural community engagement. How TDOT or your office empower rural communities in transportation planning?
11. Which strategies did work in your region to meet the need for people with disabilities, older adults, and people with low incomes?
12. Were rural communities given the opportunities in decision making for rural transportation planning?

## **Phase 2: Interviews with Community Leaders**

### **1. Identify Interviewees**

We will interview six community leaders from each of the four communities: Cookeville, Greeneville, Gordonsville, and Brownsville. To identify these interviewees, we will first use the lists provided by TDOT. We will reach out to all individuals by email and/or phone, whether they accepted the preliminary invitation or did not respond to the preliminary invitation, to request an interview. If this first step yields six interviews, no additional interviews will be scheduled for that city. If this first step does not yield six interviews, then the CDC’s sustainability planning framework<sup>2</sup> will be utilized to reach out to additional individuals. To use the checklist below, we will identify if those who have accepted invitations to be interviewed hold any of these positions to identify additional interviewees. We will then seek to identify these individuals by conducting a search in Google. This process will continue until six individuals have agreed to be interviewed for each of the four communities.

- Corporate/Business representative (Chamber of Commerce)
- Local Government (mayor, local municipal planning board)
- Civic Organization/ Associations representative (Kiwanis Club, Rotary Club)
- Academic Representative (from higher education institution)
- Faith/Personal/Ethnic Organizations (pastor or large churches)
- Other Key Individuals (may be specific to community)
- City Community Planning & Development uu
- Transportation Manager- City Public Works Department
- Department of Transportation representative

Running notes on the progress of scheduling interviews will be stored in the “TDOT-Interviews” OneDrive in the “TDOTInterviewSchedulingNotes” folder. This file will also be

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<sup>2</sup>

[https://www.cdc.gov/nccdphp/dch/programs/healthycommunitiesprogram/pdf/sustainability\\_guide.pdf](https://www.cdc.gov/nccdphp/dch/programs/healthycommunitiesprogram/pdf/sustainability_guide.pdf)

used to assign each interview with a number between 1 and 24 that will be used to trace the data through the processes outlined in this document. In addition to the scheduling notes document, this folder will include the Excel sheet for identifying community members, labeled as "TDOTCommunityContactList."

All individuals identified using the CDC checklist will be entered as rows in a spreadsheet by Staff2. The spreadsheet will include a tab for each of the four communities and each tab will have columns for name, role, email, and phone number. After the interview process is complete, the remaining individuals (i.e., those who were not interviewed) will be contacted to request their help in disseminating the Delphi survey.

## **2. Scheduling and Conducting Interviews**

All interviews will be conducted by Dr. Candace Forbes Bright via Zoom. After agreeing to participate by phone, Dr. Bright will confirm the interviewees email address and send them a calendar invitation with a Zoom link for the agreed upon time as set on the phone. Before recording the interviews to the Cloud, Dr. Bright will read the informed consent document (ICD), obtain oral consent, and then click "Record" in Zoom. Dr. Bright will then conduct the semi-structured interview using the interview instrument included in this document. Interviews are expected to take about 30 minutes to complete, but an hour will be scheduled. At the conclusion of the interview, Dr. Bright will request the interviewees assistance with disseminating the survey. Within one week of completing the interviews, Staff1 will email the directions and code for a digital \$25 gift card to each interviewee.

## **3. Record and Transcribe Interviews**

Using the Zoom auto-transcripts, based on the Cloud recording, all preliminary interview transcripts will be uploaded by Dr. Bright to the OneDrive "TDOTZoomTranscripts" folder within 24 hours of completing the interview. The interviews will be labeled from TDOTZoomIntTran1 to TDOTZoomIntTran24. Dr. Bright will email Staff2 as each interview is uploaded. The "TDOTZoomTranscripts" will also include all Zoom video recordings. Audio will be labeled TDOTZoomRecord1 to TDOTZoomRecord24, with numbers corresponding to the Zoom transcript files.

Next, Staff2 will clean the transcripts for verbatim accuracy. This includes the inclusion of pauses and non-word verbal cues. Using the audio and the TDOTZoomIntTran files, Staff2 will ensure the accuracy of all files as they become available. All files should be cleaned within four business days of upload by Dr. Bright. The cleaned files should be uploaded to the OneDrive "TDOTCleanedTranscripts" folder using the file names TDOTCITran1 to TDOTCITran24, corresponding to the audio. These final files will be used as data for the next step in this protocol. After each file is uploaded to OneDrive, Staff2 will email Staff3 and CC Dr. Bright that the file is complete.

#### 4. Code Interviews

Using the files from “TDOTCleanedTranscripts,” Staff3 will hand-code the transcripts aligning to the following color codes (see table below). Staff3 will code the first transcript and send it to Dr. Bright for feedback within three business days of receiving it. Staff3 will then incorporate feedback into all subsequent coding. The documents will be coded and then uploaded to the OneDrive “TDOTCodedTranscripts” folder with the names TDOTCoTran1 to TDOTCoTran24 within four business days of receiving each cleaned transcript. Staff3 will email Dr. Bright and CC Staff2 when each file is uploaded.

Project Objective	What to Look For
1. Plan and conduct the study to identify appropriate locations for meetings and other planned activities as well as the best time of day to engage rural communities and any geographic or technological barriers.	<ul style="list-style-type: none"> <li>• Suggestions for locations for meetings</li> <li>• Best time of day for meetings</li> <li>• Geographic and technological barriers to engagement</li> </ul>
2. Develop guidelines for appropriate outreach channels including social media, newspapers, and radio.	<ul style="list-style-type: none"> <li>• Comments related to media (social media, newspapers, and radio)</li> </ul>
3. Identify best practices for working with rural community leaders including building consensus between county government and rural community, personnel and staffing shortages that may impact community engagement, and guidelines for interacting with community leaders who may not use community technology like emails or computers.	<ul style="list-style-type: none"> <li>• Suggestions for working with rural communities</li> <li>• Factors that may impact community engagement</li> <li>• Recommendations for interacting with community leaders</li> </ul>
4. Document generational differences in shifts in transportation best practices.	<ul style="list-style-type: none"> <li>• Differences by age group</li> <li>• Recommendations for working with different age groups</li> </ul>
5. Incorporate rural community engagement strategies within TDOT’s existing public involvement plan.	<ul style="list-style-type: none"> <li>• Recommendations for communication campaigns</li> <li>• Recommendations/responses regarding delivery of survey to community</li> </ul>

6. Other comments of relevance	<ul style="list-style-type: none"> <li>Any comments that are relevant to research but not coded elsewhere</li> </ul>
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In collaboration with Dr. Kelly Foster, Dr. Bright will then use Staff3's coded transcripts to develop the first-round survey instrument within one week of the final transcript being coded. The survey instrument will be drafted and uploaded to the OneDrive "TDOTInterviewSummaryTable" folder within five business days of the final transcript being coded.

## 5. Storing Files

In addition to the folder functions referenced above, the "TDOTInterviewSummaryTable" folder includes a tracking sheet for each of the steps, with columns for interview number, community, scheduled, completed, gift card sent, Zoom audio/transcript uploaded, transcript cleaned, and transcript coded. Dates will be entered into each cell by Dr. Bright for tracking purposes.



## ***Appendix B: Interview Informed Consent Document***

Hi, my name is \_\_\_\_\_ and I am calling from East Tennessee State University. We are doing research on behalf of Tennessee Department of Transportation on rural community engagement. You were identified as a community leader who has an impact in your community and who might be able to offer us some insight. If you have a few minutes now I can explain the study and continue.

- [If no] okay, is there a better time that I can call back?
- [If yes] Schedule call back time
  - [If no] Disposition call as soft refusal or hard refusal

[For Cell Phone Numbers] Once correct person online, go to script

[If yes] Okay, great. Thank you. Our records indicate that we are likely calling you on a cell phone. Are you in a place where you are safe to talk on the phone?

- [If yes] Once correct person online, go to script

- [If no] Okay, is there a better time that I can call you back?

- [If yes] Schedule call back time

- [If no] Disposition call as soft refusal or hard refusal

[SCRIPT] This study is being conducted by Dr. Uddin at East Tennessee State University to understand what helps and what hinders rural communities from engaging in transportation planning. The information we get from this survey will be used to provide the Tennessee Department of Transportation with best practices for engaging rural communities.

The telephone interview should take about 30 minutes depending on your answers and we will send you a \$25 gift card as a token of our appreciation of your time. If you like, we can continue now or we can schedule another time to call back.

[If continue] Go to script below

[If no] Okay, is there a better time that I can call you back?

- [If yes] Schedule call back time

- [If no] Disposition call as soft refusal or hard refusal

Your phone number or responses will not be linked in a way that identifies you but please be aware there is a potential loss of confidentiality if you identify yourself in the responses. **All information that can identify you will be removed from the data. This data will then be stored for possible use in future research studies. We will not ask for additional consent for those studies.** At the end, I can provide you the contact information for our research team if you have further questions. May I continue?

## Appendix C: Interview Instrument

Specific Aim	Proposed Interview Questions
<p>1. Plan and conduct the study to identify appropriate locations for meetings and other planned activities as well as the best time of day to engage rural communities and any geographic or technological barriers.</p>	<p>1.1. What locations would be best in your community for holding TDOT meetings?</p> <p>1.2. Do you think these locations would be equally accessible for all groups in the community?</p> <p>1.3. How accessible do you think virtual meetings would be for your community?</p> <p>1.4. Given the choice between virtual and in-person meetings, which would be more beneficial to your community?</p>
<p>2. Develop guidelines for appropriate outreach channels including social media, newspapers, and radio.</p>	<p>2.1. What would be the best way to advertise meetings in your community?</p> <p>2.2. How effective do you think (social media/newspaper/radio) would be for advertising?</p> <p>2.3. Between social media, newspaper, and radio, which would be most effective for reaching the community?</p> <p>2.4. Are there any other ways that TDOT should communicate with your community?</p>
<p>3. Identify best practices for working with rural community leaders including building consensus between county government and rural community, personnel and staffing shortages that may impact community engagement, and guidelines for interacting with community leaders who may not use community technology like emails or computers.</p>	<p>3.1. Are there leaders in this community that TDOT should remain in contact with as representatives of the community?</p> <p>3.2. What is the best way to identify the leaders in this community?</p> <p>3.3. Are there any marginalized groups in this community? If yes, how might we reach those groups?</p>

<p>4. Document generational differences in shifts in transportation best practices.</p>	<p>4.1. How would you describe the availability of transportation in this community?</p> <p>4.2. Do you see any differences in transportation preferences by age group?</p>
<p>5. Incorporate rural community engagement strategies within TDOT's existing public involvement plan.</p>	<p>5.1. Can you think of any examples of communication campaigns in your community that you would consider effective?</p> <p>5.2. Do you have any overall recommendations for how TDOT could better work with your community?</p> <p>5.3. The recommendations from these interviews will be used to develop an online survey. (a) Would you be willing to assist in sending that out to your community? (b) Do you have any recommendations for other ways to send this out to the community?</p>

## Appendix D: Community Survey Social Media Announcement

Figure D-1 Community Survey Social Media Announcement



# Community Survey

ON BEHALF OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION, THE EAST TENNESSEE STATE UNIVERSITY APPLIED SOCIAL RESEARCH LAB IS CONDUCTING A 10 MIN SURVEY WITH TENNESSEE RESIDENTS ON HOW TDOT CAN BEST ENGAGE WITH OUR COMMUNITIES IN TRANSPORTATION PLANNING.

WE WANT TO HEAR FROM YOU!

CLICK THE LINK IN THE POST TO TAKE THE SURVEY

**TN** TDOT  
Department of Transportation

  
APPLIED SOCIAL RESEARCH LAB  
EAST TENNESSEE STATE UNIVERSITY

## ***Appendix E: Round One Survey***

# **TDOT Survey 1 2020**

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### Intro

Thank you for your interest in completing this survey.

We are doing research on behalf of Tennessee Department of Transportation on rural community engagement. This study is being conducted by Drs. Uddin, Foster, and Bright at East Tennessee State University to understand what helps and what hinders rural communities from engaging in transportation planning. The information we get from this survey will be used to provide the Tennessee Department of Transportation with best practices for engaging rural communities.

We are asking Tennessee residents to complete 2 online surveys: one now and one later using Qualtrics. Your confidentiality will be protected as best we can. Direct quotes may be used from your responses, but no identifying information will be used. Since we are using technology, no guarantees can be made about the interception of data sent over the Internet by any third parties, just like with emails. Qualtrics has security features that will be used: IP addresses will not be collected and Qualtrics is GDPR (General Data Protection Regulation) compliant. Although your rights and privacy will be protected, the East Tennessee State University (ETSU)/VA IRB and members of the research team can view the study records.

Your responses will not be linked in a way that identifies you, but please be aware there is a potential loss of confidentiality if you identify yourself in the responses. All information that can identify you will be removed from the data. This data will then be stored for possible use in future research studies. We will not ask for additional consent for those studies. The survey should take about 10 minutes to complete depending on your answers and after this survey we will send you an additional follow-up survey in approximately 2-4 weeks.

At the end of the survey, you will be directed to a separate page where you will be asked to enter your email address so that we may send you the link to complete the second survey. You will also have the opportunity to enter into a drawing to receive a \$10 Amazon gift card. We will be giving away 100 of these to survey respondents for each of the two surveys. If you would like to be entered into the gift card drawings, you can then enter your contact information so we can contact you if you win. This entry form is completely separate and will not be linked back to your survey responses in any way.

At the end of the survey, we will also provide you with the contact information for our research team if you have further questions.

Consent Clicking the AGREE button below and hitting next will give you access to the survey. By clicking next and completing the survey, you agree to participate in this research study. Clicking DO NOT AGREE, will direct you out of the survey.

I am 18 years of age or older, have read the consent information above, and **AGREE** to participate. (1)

I am under 18 years of age or have read the consent information above and **DO NOT AGREE** to participate (2)

Q1 Thank you for agreeing to participate in this survey regarding transportation planning and the best way to gather community input on planning.

Q2 What year were you born?

Q3 Have you had your birthday yet this year?

Yes (1)

No (2)

Q4 What is your zip code? We need this information to better understand the community for which your answers represent.

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Q5 Do you live or work in any of these communities?

- Brownsville (1)
- Greeneville (2)
- Gordonsville (3)
- Cookeville (4)
- Other Tennessee community (5)
- I don't live or work in Tennessee (6)

Q6 What is your gender?

- Male (1)
- Female (2)
- I identify as: (3) \_\_\_\_\_

Q7 What is your race?

- White (1)
- Black or African American (2)
- Native American/Alaska Native (3)
- Asian (4)
- Native Hawaiian/Other Pacific Islander (5)
- I identify as two or more races. (6)
- Other race (please specify): (7) \_\_\_\_\_



Q8 Are you Hispanic or Latino/a?

- Yes (1)
- No (2)

Q9 Do you hold any formal leadership roles in the community? This could be an elected official, religious leader, leader of local organization, etc.

- Yes (1)
- No (2)

Q10 What is your highest level of education?

- Less than high school (1)
- High school diploma/GED (2)
- Some college/no degree (3)
- Associates degree (4)
- Bachelors degree (5)
- Masters degree (6)
- Ph.D. or other professional terminal degree (7)

Q11 We'd like to start by asking you a few questions about virtual meetings. Virtual town-hall meetings, also called "online" or "remote" meetings, are meetings that are held for community members through an online platform. Some of the more commonly used ones are Zoom, Facebook Live, or Webex. For these questions, we would like your thoughts about virtual town-hall meetings to discuss transportation planning or road projects in your community.

Please tell me the extent to which you agree or disagree with each of the following statements. When thinking about holding virtual town hall meetings ...

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
Attendance at virtual meetings would be impacted by people's access to reliable Internet. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having a virtual broadcast of an <u>in person</u> meeting would allow more members of the community to participate and comment/ask questions. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having a virtual broadcast of an <u>in person</u> meeting makes it difficult to hear questions and comments from participants. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facebook live meetings are well attended. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
Community members make more comments when the meetings are done virtually. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local media outlets could help with engagement by streaming it on their platforms. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are benefits to virtual meetings, but only during the pandemic. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is difficult to read a person's body language and vocal inflections in virtual meetings. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The meeting host needs to be familiar and comfortable with using technology at the meeting. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Younger people are more likely to attend a virtual meeting than older people in the community. (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q12 Now we would like to switch topics just a bit and ask about the same type of meetings – to discuss transportation planning in your community – but now we would like to get your thoughts on holding these meetings in-person. For questions about in-person meetings, please think about how you would feel in non-COVID-19 times.

Please tell me the extent to which you agree or disagree with each of the following statements. When thinking about places to hold town hall meetings in person, the following locations should be considered...

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
<i>Display This Choice:</i> <i>If Do you live or work in any of these communities? = Gordonsville</i> Civic Center in Gordonsville (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The auditorium of a public school (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
City Hall (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Chamber of Commerce (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>Display This Choice:</i> <i>If Do you live or work in any of these communities? = Brownsville</i> The Performing Arts Center in Brownsville (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Community Centers (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>Display This Choice:</i> <i>If Do you live or work in any of these communities? = Greeneville</i> The town boardroom in Greeneville (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
<p><i>Display This Choice:</i></p> <p><i>If Do you live or work in any of these communities? = Gordonsville</i></p> <p>The Agricultural Center in Gordonsville (8)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A lecture hall at a local college (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i></p> <p><i>If Do you live or work in any of these communities? = Brownsville</i></p> <p>Brownsville Community Justice Center (10)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i></p> <p><i>If Do you live or work in any of these communities? = Brownsville</i></p> <p>The National Guard Armory in Brownsville (11)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hotel conference room (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local church (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q13 Are there any other locations you would recommend for a town hall meeting?

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Q14 **Meetings in General** Please tell me the extent to which you agree or disagree with each of the following statements. When thinking about hosting in-person town hall meetings ...

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
My community does not have many places that will hold large crowds. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Some people would be intimidated to go to a college for a community meeting. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Multiple meetings would be good in more rural areas rather than having community members drive somewhere else. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If community members do not have reliable internet, they will find ways to be involved in community meetings. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of public transportation could prevent some members of the community from attending meetings. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The location of the meeting should be accessible through public transit. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People will come to meetings if they sense there will be a positive change made to their community. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People will come to meetings if the meeting is about something controversial in the community. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important to have insider knowledge of the community when advertising to the community. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The mayor's office should be contacted to obtain a meeting place. (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
When community leaders are involved, more community members are involved. (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT meetings should be a part of existing city government meetings. (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should collaborate with existing events and meetings to provide information to the community (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q15 Meeting Times Please tell me the extent to which you agree or disagree with each of the following statements. When thinking about holding town hall meetings in-person ...

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
Meetings for the community should not be held during normal business hours (8am-5pm). (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Meetings should be held before parents pick their kids up from school. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Meetings should be held during business hours from (8am -5pm) to engage businesses. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Meetings should be held over lunch (12pm-2pm) hours to engage businesses. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Meetings should be held on Saturdays to engage people who work during the week. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Town hall meetings should be no more than two hours long. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Town hall meetings should be no more than one hour long. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important to think about how long people will need between getting off from work and the meeting starting. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attendance at town hall meetings will depend on advertisement of the meeting. (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Q16 Media/Meeting Advertising Please tell me the extent to which you agree or disagree with each of the following statements. When thinking about local media and advertising, TDOT should consider ...

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
Newspapers are going out of print and would not be a good way to spread information about meetings. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Newspapers should not be the only way community meetings are advertised. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social media is the best way to advertise meetings to the community. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People listen to radio stations from nearby cities more than local stations. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Older community members are more likely to get their news from the newspaper. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Younger community members are more likely to get their news from social media. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The radio would be better than the newspaper in advertising community meetings. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social media reaches across socioeconomic statuses in the community. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A combination of radio, newspaper, and social media would be a good way to advertise meetings to the community. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
Word of mouth would be a good way to advertise meetings to the community. (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Giving multiple reminders about community meetings. (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Distributing information in multiple languages. (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sharing general information in a digital newsletter. (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sharing meeting agendas and schedule information in a digital newsletter. (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Using informational videos to promote meeting attendance. (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q17 Media/Meeting Advertising Please tell me the extent to which you agree or disagree with each of the following statements. The following sources are a good way for TDOT to advertise town hall meetings ...

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
<p><i>Display This Choice:</i>  <i>If Do you live or work in any of these communities? = Gordonsville</i></p> <p>The Smith County Insider (1)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i>  <i>If Do you live or work in any of these communities? = Greeneville</i>  <i>Or Do you live or work in any of these communities? = Cookeville</i>  <i>Or Do you live or work in any of these communities? = Other Tennessee community</i></p> <p>The local newspaper (2)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i>  <i>If Do you live or work in any of these communities? = Brownsville</i>  <i>Or Do you live or work in any of these communities? = Greeneville</i>  <i>Or Do you live or work in any of these communities? = Other Tennessee community</i></p> <p>The local radio station (3)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i>  <i>If Do you live or work in any of these communities? = Gordonsville</i></p> <p>The Upper Cumberland Business Journal in Gordonsville (4)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i>  <i>If Do you live or work in any of these communities? = Brownsville</i></p> <p>The Brownsville Press (5)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
<p><i>Display This Choice:</i> If Do you live or work in any of these communities? = Brownsville</p> <p>Advertising boxes around the community in Brownsville (6)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facebook or other social media (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i> If Do you live or work in any of these communities? = Gordonsville</p> <p>104.1 radio station in Gordonsville (8)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i> If Do you live or work in any of these communities? = Gordonsville</p> <p>Cartridge Courier in Gordonsville (9)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i> If Do you live or work in any of these communities? = Brownsville</p> <p>The Monday morning Chamber of Commerce memo (10)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local churches (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i> If Do you live or work in any of these communities? = Brownsville</p> <p>The Haywood County Ministerial Alliance in Brownsville (12)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<p><i>Display This Choice:</i></p> <p><i>If Do you live or work in any of these communities? = Cookeville</i></p> <p>Putnam County Today radio show in Cookeville (13)</p>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
<p>Elected officials can use their social media to advertise meetings (14)</p>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
<p>Email alerts (15)</p>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
<p>Text alerts (16)</p>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
<p>Billboards (17)</p>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
<p>Robo calls (18)</p>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
<p>The Library (19)</p>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
<p>Community Centers (20)</p>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>

Q18 Community Engagement with TDOT Please tell me the extent to which you agree or disagree with each of the following statements. In order to engage with community members, ...

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
TDOT should keep lines of communication open between TDOT and the community. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should have a designated liaison between TDOT and community leaders. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Listening to feedback from the community is important to making sure the community is engaged with TDOT projects. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should treat all communities with the same level of respect, regardless of their size. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should focus on the positive impacts of their projects when engaging with communities. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important to understand the needs of rural communities are different than the needs of larger cities. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should advertise what the meetings are specifically about. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should pay attention to more than what the most influential people in rural communities want. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should think about what other rural areas will be impacted by projects. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should do more to seek community input on projects. (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
TDOT should do surveys within communities to get people's opinions. (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should explain the projects timeline to community members. (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i></p> <p><i>If Do you live or work in any of these communities? = Brownsville</i></p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should know that even though it is a rural community, Brownsville is diverse. (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q19 Community Engagement with TDOT Please tell me the extent to which you agree or disagree with each of the following statements. In order to engage with community members, ...

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
TDOT should know that rural communities are often skeptical of government. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should work with the community on the next steps of the project. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT officials need to have a presence in the community so they are treated less like an outsider. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should follow the chain of command of local elected officials before communicating with the community. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT officials should communicate with community leaders because they have a better understanding than individual community members about what impacts the community. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should use visual and interactive tools <b>during meetings</b> to engage rural communities (for example, digital maps, scenario building, user-friendly interactive websites, and infographics). (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should have visual and interactive tools <b>available on their website</b> to engage rural communities (for example, digital maps, scenario building, user-friendly interactive websites, and infographics). (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
TDOT should follow-up with how they have incorporated feedback received at town hall meetings. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should allow community members to submit questions and comments on their website before town hall meetings. (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should have separate town hall meetings for each specific issue/topic (instead of one longer meeting). (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should conduct short informal polls of community interests and perceptions. (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q20 Community Leadership Engagement with TDOT Please tell me the extent to which you agree or disagree with each of the following statements. In order to effectively engage with community leaders, TDOT should ...

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
Have support from community leaders. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hold educational workshops about what TDOT does to help community leaders understand TDOT's role. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work closely with elected officials. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>Display This Choice:</i> <i>If Do you live or work in any of these communities? = Brownsville</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communicate with the aldermen in Brownsville. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communicate with the county commissioners. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work closely with local planning departments. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communicate with leaders of local civic organizations. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>Display This Choice:</i> <i>If Do you live or work in any of these communities? = Brownsville</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communicate with leaders at the local NAACP in Brownsville. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>Display This Choice:</i> <i>If Do you live or work in any of these communities? = Cookeville</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work with the local Road Committee. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q21 Community Leadership Engagement with TDOT Please tell me the extent to which you agree or disagree with each of the following statements.

In order to be successful with transportation planning in your community, TDOT should work with the following groups ...

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
Community leaders (non-government officials) (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Elected officials (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Chamber of Commerce director (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The staff of local government officials (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<div style="background-color: #4F81BD; color: white; padding: 5px; margin-bottom: 5px;"> <i>Display This Choice:</i>  <i>If Do you live or work in any of these communities? = Greenville</i> </div> The Public Works Director in Greenville (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Senator and House Representative (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<div style="background-color: #4F81BD; color: white; padding: 5px; margin-bottom: 5px;"> <i>Display This Choice:</i>  <i>If Do you live or work in any of these communities? = Greenville</i> </div> The leader of the Greenville EMA (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Religious leaders (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q22 On a scale of 1-7, with one being not very well and 7 being excellent, how well do you think TDOT has done engaging with your community in the past? If you do not have an opinion of TDOT's engagement, please select "I don't know."

	Not Very Well 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Excellent 7 (7)	I don't know (8)
How well do you think TDOT has done engaging with your community in the past? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q23 Are there any recommendations you have for TDOT when interacting with communities or conducting community meetings?

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End of Block: End of Survey

## ***Appendix F: Round Two Survey***

# **TDOT Survey 2 2021**

Intro Thank you for your interest in completing this survey.

We are doing research on behalf of Tennessee Department of Transportation on rural community engagement. This study is being conducted by Drs. Uddin, Foster, and Bright at East Tennessee State University to understand what helps and what hinders rural communities from engaging in transportation planning. The information we get from this survey will be used to provide the Tennessee Department of Transportation with best practices for engaging rural communities.

We are asking Tennessee residents to complete 2 online surveys using Qualtrics. This is the second survey. Your confidentiality will be protected as best we can. Direct quotes may be used from your responses, but no identifying information will be used. Since we are using technology, no guarantees can be made about the interception of data sent over the Internet by any third parties, just like with emails. Qualtrics has security features that will be used: IP addresses will not be collected and Qualtrics is GDPR (General Data Protection Regulation) compliant. Although your rights and privacy will be protected, the East Tennessee State University (ETSU)/VA IRB and members of the research team can view the study records.

Your responses will not be linked in a way that identifies you, but please be aware there is a potential loss of confidentiality if you identify yourself in the responses. All information that can identify you will be removed from the data. This data will then be stored for possible use in future research studies. We will not ask for additional consent for those studies. The survey should take about 10 minutes to complete depending on your answers.

At the end of the survey, you will be directed to a separate page where you will have the opportunity to enter into a drawing to receive a \$10 Amazon gift card. We will be giving away 100 of these to survey respondents for each of the two surveys. If you would like to be entered into the gift card drawings, you can then enter your contact information so we can contact you if you win. This entry form is completely separate and will not be linked back to your survey responses in any way.

At the end of the survey, we will also provide you with the contact information for our research team if you have further questions.

Consent Clicking the AGREE button below and hitting next will give you access to the survey. By clicking next and completing the survey, you agree to participate in this research study. Clicking DO NOT AGREE, will direct you out of the survey.

I am 18 years of age or older, have read the consent information above, and **AGREE** to participate. (1)

I am under 18 years of age or have read the consent information above and **DO NOT AGREE** to participate (2)

Q1 Thank you for participating in the second round of the TDOT Community Survey. Based on your responses to the first round, many recommendations have been removed. This survey includes a shortened list of the original recommendations, so the questions will look familiar.

Q2 We'd like to start by asking you a few questions about virtual meetings. Virtual town-hall meetings, also called "online" or "remote" meetings, are meetings that are held for community members through an online platform. Some of the more commonly used ones are Zoom, Facebook Live, or Webex. For these questions, we would like your thoughts about virtual town-hall meetings to discuss transportation planning or road projects in your community.

Please tell me the extent to which you agree or disagree with each of the following statements. When thinking about holding virtual town hall meetings ...

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
Attendance at virtual meetings would be impacted by people's access to reliable Internet. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having a virtual broadcast of an <u>in person</u> meeting makes it difficult to hear questions and comments from participants. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local media outlets could help with engagement by streaming it on their platforms. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The meeting host needs to be familiar and comfortable with using technology at the meeting. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q3 Now we would like to switch topics just a bit and ask about the same type of meetings – to discuss transportation planning in your community – but now we would like to get your thoughts on holding these meetings in-person. For questions about in-person meetings, please think about how you would feel in non-COVID-19 times.

Please tell me the extent to which you agree or disagree with each of the following statements. When thinking about places to hold town hall meetings in person, the following locations should be considered...

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
<i>Display This Choice:</i> <i>If City Contains Gordonsville</i> Civic Center in Gordonsville (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The auditorium of a public school (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
City Hall (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Community Centers (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>Display This Choice:</i> <i>If City Contains Gordonsville</i> The Agricultural Center in Gordonsville (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A lecture hall at a local college (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>Display This Choice:</i> <i>If City Contains Brownsville</i> The National Guard Armory in Brownsville (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q4 Are there any other locations you would recommend for a town hall meeting?

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Q5 **Meetings in General** Please tell me the extent to which you agree or disagree with each of the following statements. When thinking about hosting in-person town hall meetings ...

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
Multiple meetings would be good in more rural areas rather than having community members drive somewhere else. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People will come to meetings if they sense there will be a positive change made to their community. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People will come to meetings if the meeting is about something controversial in the community. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important to have insider knowledge of the community when advertising to the community. (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When community leaders are involved, more community members are involved. (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should collaborate with existing events and meetings to provide information to the community (16)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



**Q6 Meeting Times** Please tell me the extent to which you agree or disagree with each of the following statements. When thinking about holding town hall meetings in-person ...

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
Meetings for the community should not be held during normal business hours (8am-5pm). (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Town hall meetings should be no more than two hours long. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important to think about how long people will need between getting off from work and the meeting starting. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attendance at town hall meetings will depend on advertisement of the meeting. (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Q7 Media/Meeting Advertising** Please tell me the extent to which you agree or disagree with each of the following statements. When thinking about local media and advertising, TDOT should consider ...

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
Newspapers should not be the only way community meetings are advertised. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Older community members are more likely to get their news from the newspaper. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Younger community members are more likely to get their news from social media. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social media reaches across socioeconomic statuses in the community. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A combination of radio, newspaper, and social media would be a good way to advertise meetings to the community. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Giving multiple reminders about community meetings. (16)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sharing general information in a digital newsletter. (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sharing meeting agendas and schedule information in a digital newsletter. (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Using informational videos to promote meeting attendance. (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Q8 Media/Meeting Advertising** Please tell me the extent to which you agree or disagree with each of the following statements. The following sources are a good way for TDOT to advertise town hall meetings ...

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
<p><i>Display This Choice:</i>  <i>If City Contains Gordonsville</i></p> <p>The Smith County Insider (1)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i>  <i>If City Contains Greeneville</i>  <i>Or City Contains Cookeville</i>  <i>Or City Contains Other Tennessee community</i></p> <p>The local newspaper (2)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i>  <i>If City Contains Brownsville</i>  <i>Or City Contains Greeneville</i>  <i>Or City Contains Other Tennessee community</i></p> <p>The local radio station (3)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i>  <i>If City Contains Brownsville</i></p> <p>The Brownsville Press (5)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i>  <i>If City Contains Brownsville</i></p> <p>Advertising boxes around the community in Brownsville (6)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>Facebook or other social media (7)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<p><i>Display This Choice:</i></p> <p><i>If City Contains Gordonsville</i></p> <p>104.1 radio station in Gordonsville (8)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i></p> <p><i>If City Contains Gordonsville</i></p> <p>Cartridge Courier in Gordonsville (9)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local churches (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i></p> <p><i>If City Contains Brownsville</i></p> <p>The Haywood County Ministerial Alliance in Brownsville (12)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i></p> <p><i>If City Contains Cookeville</i></p> <p>Putnam County Today radio show in Cookeville (13)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Elected officials can use their social media to advertise meetings (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Email alerts (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Text alerts (16)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Community Centers (20)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q9 **Community Engagement with TDOT** Please tell me the extent to which you agree or disagree with each of the following statements. In order to engage with community members,  
...

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
TDOT should keep lines of communication open between TDOT and the community. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should have a designated liaison between TDOT and community leaders. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Listening to feedback from the community is important to making sure the community is engaged with TDOT projects. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should treat all communities with the same level of respect, regardless of their size. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should focus on the positive impacts of their projects when engaging with communities. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important to understand the needs of rural communities are different than the needs of larger cities. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should advertise what the meetings are specifically about. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should pay attention to more than what the most influential people in rural communities want. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should think about what other rural areas will be impacted by projects. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should do more to seek community input on projects. (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<p>TDOT should do surveys within communities to get people's opinions. (11)</p>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
<p>TDOT should explain the projects timeline to community members. (12)</p>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
<p><i>Display This Choice:</i> <i>If City Contains Brownsville</i></p> <p>TDOT should know that even though it is a rural community, Brownsville is diverse. (13)</p>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>

Q10 **Community Engagement with TDOT** Please tell me the extent to which you agree or disagree with each of the following statements. In order to engage with community members,  
...



	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
TDOT should know that rural communities are often skeptical of government. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should work with the community on the next steps of the project. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT officials need to have a presence in the community so they are treated less like an outsider. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should use visual and interactive tools <b>during meetings</b> to engage rural communities (for example, digital maps, scenario building, user-friendly interactive websites, and infographics). (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should have visual and interactive tools <b>available on their website</b> to engage rural communities (for example, digital maps, scenario building, user-friendly interactive websites, and infographics). (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should follow-up with how they have incorporated feedback received at town hall meetings. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should allow community members to submit questions and comments on their website before town hall meetings. (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TDOT should conduct short informal polls of community interests and perceptions. (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Q11 Community Leadership Engagement with TDOT** Please tell me the extent to which you agree or disagree with each of the following statements. In order to effectively engage with community leaders, TDOT should ...

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
Have support from community leaders. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hold educational workshops about what TDOT does to help community leaders understand TDOTs role. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work closely with elected officials. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>Display This Choice:</i> <i>If City Contains Brownsville</i>					
Communicate with the aldermen in Brownsville. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communicate with the county commissioners. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work closely with local planning departments. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>Display This Choice:</i> <i>If City Contains Brownsville</i>					
Communicate with leaders at the local NAACP in Brownsville. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>Display This Choice:</i> <i>If City Contains Cookeville</i>					
Work with the local Road Committee. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Q12 Community Leadership Engagement with TDOT** Please tell me the extent to which you agree or disagree with each of the following statements. In order to be successful with transportation planning in your community, TDOT should work with the following groups ...

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
Community leaders (non-government officials) (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Elected officials (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Chamber of Commerce director (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The staff of local government officials (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>Display This Choice:</i> <i>If City Contains Greeneville</i>					
The Public Works Director in Greeneville (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Senator and House Representative (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>Display This Choice:</i> <i>If City Contains Greeneville</i>					
The leader of the Greeneville EMA (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Q13** Are there any recommendations you have for TDOT when interacting with communities or conducting community meetings?

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